

**Table 8.2**  
**Intersection Analysis Summary – Five-Year No-Project**

Intersection	Control	A.M. Peak Hour		Midday Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Whitendale / County Center	Signals	24.6	C	17.7	B	22.1	C
Whitendale / Mooney	Signals	19.3	B	27.0	C	23.7	C
Sunnyside / Mooney	Signals	13.4	B	21.5	C	23.1	C
Orchard / Mooney	Signals	9.9	A	16.1	B	15.6	B
Caldwell / Demaree	Signals	26.6	C	23.1	C	29.5	C
Caldwell / Dans	TWS	<u>45.6</u>	<u>E</u>	25.5	D	<u>42.7</u>	<u>E</u>
Caldwell / County Center	Signals	16.9	B	19.9	B	22.5	C
Caldwell / Shady	Signals	13.3	B	14.3	B	14.6	B
Caldwell / Mooney	Signals	19.5	B	29.9	C	31.0	C
Caldwell / Fairway	Signals	13.2	B	16.6	B	19.3	B
Caldwell / Stonebrook	Signals	8.0	A	7.9	A	7.0	A
Cameron / County Center	OWS	16.2	C	18.5	C	21.8	C
Cameron / Mooney	Signals	16.3	B	28.3	C	25.4	C
Cameron / Stonebrook	OWS	<u>77.3</u>	<u>F</u>	<u>47.9</u>	<u>E</u>	<u>56.6</u>	<u>F</u>
Cameron / West	TWS	<u>39.0</u>	<u>E</u>	<u>47.0</u>	<u>E</u>	<u>79.8</u>	<u>F</u>
Visalia Pwy / Demaree	Signals	25.3	C	18.9	B	21.9	C
Visalia Pwy / Dans	TWS	<u>42.1</u>	<u>E</u>	17.0	C	24.0	C
Visalia Pwy / County Center	OWS	29.6	D	23.4	C	<u>41.4</u>	<u>E</u>
Visalia Pwy / Outlot 1	DNE						
Visalia Pwy / Main Site	OWS	12.4	B	16.0	C	19.7	C
Visalia Pwy / East Site	DNE						
Visalia Pwy / Mooney	Signals	25.1	C	31.8	C	36.1	D
Visalia Pwy / Stonebrook	OWS	10.1	B	9.3	A	9.2	A
North Site / Mooney	DNE						
South Site / Mooney	DNE						
Midvalley / Mooney	Signals	5.8	A	6.1	A	5.6	A
Ave 272 / Road 108	Signals	13.1	B	11.7	B	13.3	B
Ave 272 / Mooney	TWS	<u>127.5</u>	<u>F</u>	<u>244.4</u>	<u>F</u>	<u>261.8</u>	<u>F</u>
Ave 268 / Mooney	Signals	8.4	A	9.8	A	15.3	B

**Table 8.3**  
**Queuing Analysis Summary – Five-Year No-Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Whitendale / County Center	Storage	100+	*	35	100+	*	35	100+	*	50	100+	*	50
	A.M.	137	224	23	47	196	0	104	151	0	64	148	29
	Midday	47	184	0	49	174	0	53	177	0	63	157	0
	P.M.	78	285	8	66	214	0	68	194	0	60	180	3
Whitendale / Mooney	Storage	150	*	260	250	*	240	335	740	125	465	*	190
	A.M.	48	78	41	71	88	17	42	126	38	33	122	0
	Midday	71	95	70	127	100	23	115	267	57	86	334	3
	P.M.	60	125	63	109	117	0	114	242	60	69	294	0
Sunnyside / Mooney	Storage	170	*	S	100	*	S	400	*	S	290	750	S
	A.M.	69	22		8	24		98	152		88	158	
	Midday	211	52		25	49		234	314		124	450	
	P.M.	278	55		18	59		132	306		112	391	
Orchard / Mooney	Storage	125+	125+	S	105	780	S	125	540	100	275	*	100
	A.M.	9	6		27	19		10	145	0	64	99	0
	Midday	48	38		83	56		34	337	0	236	295	0
	P.M.	38	32		87	49		47	276	0	184	291	0
Caldwell / Demaree	Storage	260	*	S	265	*	135	240	*	125	255	*	S
	A.M.	195	236		72	243	46	100	225	0	78	258	
	Midday	149	208		86	181	45	60	152	43	77	172	
	P.M.	248	357		120	284	64	100	243	55	131	236	
Caldwell / Dans	Storage	+	DNS	S	+	DNS	S	S	*	S	S	P	S
	A.M.	3			5				95			10	
	Midday	0			3				18			18	
	P.M.	3			5				38			33	
Caldwell / County Center	Storage	105+	*	S	145+	*	S	105+	*	45	100+	*	50
	A.M.	67	173		16	140		98	101	0	57	110	26
	Midday	64	236		18	174		148	130	0	101	122	11
	P.M.	102	295		26	202		146	151	0	116	146	21
Caldwell / Shady	Storage	250	*	S	250	700	S	S	*	S	S	500	125
	A.M.	37	137		28	120			38			11	0
	Midday	58	155		63	142			35			27	0
	P.M.	63	191		77	161			50			25	0
Caldwell / Mooney	Storage	350	715	S	350	750	S	300	*	165	275	535	270
	A.M.	65	93		49	100		44	120	19	33	102	13
	Midday	170	180		154	136		172	251	36	128	380	43
	P.M.	170	234		142	179		156	252	38	126	354	14
Caldwell / Fairway	Storage	200	750	S	290	*	S	120	375	S	55	*	S
	A.M.	54	86		70	110		19	30		27	21	
	Midday	82	115		107	125		51	66		56	50	
	P.M.	112	185		148	160		64	73		112	50	
Caldwell / Stonebrook	Storage	255	*	100	300	*	NS	S	175	S	S	540	540
	A.M.	24	84	0	13	145	0		0			38	0
	Midday	28	144	0	11	141	0		0			16	0
	P.M.	49	213	0	10	182	6		23			30	7

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

See Section 1.5 for a list of abbreviations

**Table 8.3 (Continued)**  
**Queuing Analysis Summary – Five-Year No-Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Cameron / County Center	Storage	DNE	DNE	DNE	*	DNE	105	DNE	DNS	DNS	150	DNS	DNE
	A.M.				13		18				15		
	Midday				13		43				20		
	P.M.				20		48				25		
Cameron / Mooney	Storage	155+	*	S	300	*	S	240	*	150	210	*	150
	A.M.	70	63		87	77		8	126	16	44	84	0
	Midday	283	152		153	110		56	250	0	194	266	62
	P.M.	198	161		160	116		46	227	38	162	217	41
Cameron / Stonebrook	Storage	DNE	DNS	DNS	S	*	DNE	150+	DNE	890	DNE	DNE	DNE
	A.M.						28	48		30			
	Midday						18	25		48			
	P.M.						20	13		88			
Cameron / West	Storage	100+	DNS	DNS	95+	DNS	DNS	S	550	NS	110+	*	NS
	A.M.	5			0				25	0	3	3	25
	Midday	8			0				15	0	0	3	18
	P.M.	10			0				23	0	5	5	28
Visalia Pwy/ Demaree	Storage	190	*	250	145	*	NS	300	*	S	300	*	S
	A.M.	48	222	0	76	78	3	66	180		117	138	
	Midday	33	121	0	101	53	19	43	135		130	121	
	P.M.	28	183	0	73	74	31	67	185		150	162	
Visalia Pwy/ Dans	Storage	195	DNS	S	75+	DNS	S	S	350	S	S	*	S
	A.M.	18			0				8			125	
	Midday	3			0				0			13	
	P.M.	3			0				3			23	
Visalia Pwy/ County Center	Storage	200+	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	195+	DNE	775
	A.M.	10									38		35
	Midday	5									35		15
	P.M.	10									53		23
Visalia Pwy/ Outlot 1	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
	P.M.												
Visalia Pwy/ Main Site	Storage	S	*	DNE	DNE	DNS	S	DNE	DNE	DNE	P	DNE	S
	A.M.		3								3		
	Midday		5								25		
	P.M.		5								35		
Visalia Pwy/ East Site	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
	P.M.												
Visalia Pwy/ Mooney	Storage	180	*	S	175	*	S	240	*	S	295	*	215
	A.M.	103	248		260	186		118	339		31	131	0
	Midday	166	319		295	248		133	376		121	192	5
	P.M.	162	388		316	246		153	443		89	239	0

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

See Section 1.5 for a list of abbreviations

**Table 8.3 (Continued)**  
**Queuing Analysis Summary – Five-Year No-Project**

Intersection	Storage and Queue Length (feet)												
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Visalia Pwy/ Stonebrook	Storage	TBD	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	S	DNE	TBD
	A.M.	10											35
	Midday	10											18
	P.M.	15											18
North Site / Mooney	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
	P.M.												
South Site / Mooney	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
	P.M.												
Midvalley / Mooney	Storage	S	*	25	S	*	S	475	*	S	470	*	145
	A.M.		35	0		0		14	183		14	160	1
	Midday		34	0		0		18	222		22	224	10
	P.M.		37	0		0		15	246		17	246	15
Ave 272 / Road 108	Storage	185	*	S	175	*	S	230	*	S	260	*	S
	A.M.	21	71		17	50		29	210		72	157	
	Midday	19	38		24	48		17	134		44	132	
	P.M.	25	34		29	102		25	202		29	194	
Ave 272 / Mooney	Storage	S	*	S	S	*	S	470	DNS	S	480	DNS	S
	A.M.		65			95		5			0		
	Midday		165			70		5			3		
	P.M.		98			40		28			3		
Ave 268 / Mooney	Storage	S	800	NS	S	*	S	480	*	S	475	*	S
	A.M.		26	0		35		70	185		47	189	
	Midday		91	4		23		70	193		49	230	
	P.M.		144	35		26		124	313		75	352	

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

See Section 1.5 for a list of abbreviations

### 8.6 – Five-Year Cumulative No-Project Deficiencies

The following intersections are expected to operate at levels of service worse than the target LOS D in the five-year no-Project scenario:

- Caldwell Avenue / Dans Street
- Cameron Avenue / Stonebrook Street
- Cameron Avenue / West Street
- Visalia Parkway / Dans Street
- Visalia Parkway / County Center Drive
- Avenue 272 / Mooney Boulevard.

The calculated 95<sup>th</sup>-percentile queues at the following intersections exceed the storage capacity as described:

- Sunnyside Avenue / Mooney Boulevard (left-turn lane on eastbound approach during the midday and p.m. peak hours);
- Caldwell Avenue / Fairway Street (left-turn lane on southbound approach during the midday and p.m. peak hours);
- Visalia Parkway / Mooney Boulevard (left-turn lane on the westbound approach during all three peak hours).

## **9.0 – FIVE-YEAR CUMULATIVE WITH PROJECT CONDITIONS**

The five-year cumulative with Project analyses include the assumption that both Phases 1 and 2 of the Project are constructed, as well as senior housing on Outlot 2 as described in Section 4.5 of this report.

### **9.1 – Five-Year Cumulative With Project Lane Configurations and Intersection Control**

The five-year cumulative with Project lane configurations and intersection control are presented in Figure 9.1, Five-Year Cumulative With Project Lane Configurations and Intersection Control.

### **9.2 – Five-Year Cumulative With Project Traffic Volumes**

The five-year cumulative with Project peak-hour traffic volumes are presented in the following figures:

- Figure 9.2a: Five-Year Cumulative With Project Peak Hour Traffic Volumes (A.M. and P.M. Peak Hours)
- Figure 9.2b: Five-Year Cumulative With Project Peak Hour Traffic Volumes (Midday Peak Hour)

### **9.3 – Five-Year Cumulative With Project Intersection LOS Analysis**

The results of the five-year with Project intersection LOS analyses are summarized in Table 9.1. The intersection analysis sheets are presented in Appendix C. Project significant impacts are identified in bold type and are underlined.

### **9.4 – Five-Year Cumulative With Project Queuing Analysis**

The results of the five-year with Project queuing analyses are summarized in Table 9.2. Calculated 95<sup>th</sup>-percentile queues exceeding the storage capacity are identified in bold type and are underlined. The intersection analysis sheets presented in Appendix C include the queue analysis results.

**Table 9.1**  
**Intersection Analysis Summary – Five-Year With Project**

Intersection	Control	A.M. Peak Hour		Midday Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Whitendale / County Center	Signals	24.7	C	17.9	B	22.4	C
Whitendale / Mooney	Signals	19.9	B	28.7	C	24.5	C
Sunnyside / Mooney	Signals	13.5	B	22.2	C	23.8	C
Orchard / Mooney	Signals	10.1	B	16.6	B	16.2	B
Caldwell / Demaree	Signals	27.3	C	24.0	C	30.5	C
Caldwell / Dans	TWS	<u>53.3</u>	<u>F</u>	29.1	D	<u>50.1</u>	<u>F</u>
Caldwell / County Center	Signals	17.5	B	22.6	C	25.2	C
Caldwell / Shady	Signals	13.3	B	14.2	B	14.6	B
Caldwell / Mooney	Signals	20.5	C	34.4	C	34.2	C
Caldwell / Fairway	Signals	13.2	B	16.8	B	19.6	B
Caldwell / Stonebrook	Signals	8.0	A	7.9	A	7.1	A
Cameron / County Center	OWS	16.9	C	20.3	C	23.5	C
Cameron / Mooney	Signals	17.0	B	30.6	C	27.1	C
Cameron / Stonebrook	OWS	<u>109.5</u>	<u>F</u>	<u>69.8</u>	<u>F</u>	<u>75.6</u>	<u>F</u>
Cameron / West	TWS	<u>52.4</u>	<u>F</u>	<u>70.3</u>	<u>F</u>	<u>121.5</u>	<u>F</u>
Visalia Pwy / Demaree	Signals	27.0	C	20.4	C	23.1	C
Visalia Pwy / Dans	TWS	<u>63.7</u>	<u>F</u>	20.0	C	27.3	D
Visalia Pwy / County Center	OWS	<u>46.4</u>	<u>E</u>	<u>49.8</u>	<u>E</u>	<u>103.0</u>	<u>F</u>
Visalia Pwy / Outlot 1	OWS	11.1	B	12.4	B	12.8	B
Visalia Pwy / Main Site	TWS	<u>81.8</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>
Visalia Pwy / East Site	OWS	14.3	B	30.8	D	23.6	C
Visalia Pwy / Mooney	Signals	27.6	C	50.3	D	47.3	D
Visalia Pwy / Stonebrook	OWS	10.2	B	9.5	A	9.3	A
North Site / Mooney	OWS	12.1	B	17.5	C	17.1	C
South Site / Mooney	OWS	12.2	B	23.2	C	21.5	C
Midvalley / Mooney	Signals	5.9	A	6.5	A	5.9	A
Ave 272 / Road 108	Signals	13.2	B	11.8	B	13.4	B
Ave 272 / Mooney	TWS	<u>270.9</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>
Ave 268 / Mooney	Signals	8.4	A	10.0	B	17.0	B

**Table 9.2**  
**Queuing Analysis Summary – Five-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Whitendale / County Center	Storage	100+	*	35	100+	*	35	100+	*	50	100+	*	50
	A.M.	137	233	23	47	200	0	104	151	0	64	148	29
	Midday	47	192	0	49	184	0	53	177	0	63	157	0
	P.M.	78	297	8	66	227	0	68	194	0	60	180	3
Whitendale / Mooney	Storage	150	*	260	250	*	240	335	740	125	465	*	190
	A.M.	50	82	43	76	92	17	46	137	39	34	136	0
	Midday	75	101	92	142	105	23	128	297	67	91	371	2
	P.M.	63	133	68	121	124	0	126	268	70	73	328	0
Sunnyside / Mooney	Storage	170	*	S	100	*	S	400	*	S	290	750	S
	A.M.	72	23		13	25		103	166		90	176	
	Midday	211	53		31	49		236	353		124	500	
	P.M.	278	55		30	59		135	340		112	429	
Orchard / Mooney	Storage	125+	125+	S	105	780	S	125	540	100	275	*	100
	A.M.	10	10		32	20		12	159	0	65	113	0
	Midday	52	44		100	61		41	398	0	258	343	0
	P.M.	40	36		97	52		53	317	0	195	328	0
Caldwell / Demaree	Storage	260	*	S	265	*	135	240	*	125	255	*	S
	A.M.	198	255		73	258	46	105	231	0	79	266	
	Midday	155	242		90	208	44	65	162	44	80	185	
	P.M.	249	391		121	310	64	105	250	55	132	242	
Caldwell / Dane	Storage	+	DNS	S	+	DNS	S	S	*	S	S	200	S
	A.M.	3			5				105			10	
	Midday	0			3				20			20	
	P.M.	3			5				43			38	
Caldwell / County Center	Storage	105+	*	S	145+	*	S	105+	*	45	100+	*	50
	A.M.	67	183		16	149		114	107	0	71	118	26
	Midday	64	270		19	195		174	140	0	133	134	10
	P.M.	102	321		26	219		165	161	0	141	158	21
Caldwell / Shady	Storage	250	*	S	250	700	S	S	*	S	S	500	125
	A.M.	37	145		28	127			38			11	0
	Midday	58	169		63	156			35			28	0
	P.M.	63	205		77	173			50			25	0
Caldwell / Mooney	Storage	350	715	S	350	750	S	300	*	165	275	535	270
	A.M.	67	104		61	105		56	135	37	35	121	12
	Midday	176	199		183	131		206	289	50	131	445	44
	P.M.	172	253		165	177		183	286	55	128	411	62
Caldwell / Fairway	Storage	200	750	S	290	*	S	120	375	S	55	*	S
	A.M.	56	90		70	117		19	30		27	22	
	Midday	87	125		109	136		53	67		58	53	
	P.M.	117	197		150	172		65	74		114	55	
Caldwell / Stonebrook	Storage	255	*	100	300	*	NS	S	175	S	S	540	540
	A.M.	26	87	0	14	151	0		0			38	0
	Midday	33	153	0	11	152	0		0			18	4
	P.M.	53	223	0	10	193	6		24			31	11

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.  
 + Connects to a two-way left-turn lane that provides additional storage.  
 See Section 1.5 for a list of abbreviations



**Table 9.2 (Continued)**  
**Queuing Analysis Summary – Five-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Cameron / County Center	Storage	DNE	DNE	DNE	*	DNE	105	DNE	DNS	DNS	150	DNS	DNE
	A.M.				13		18				15		
	Midday				15		48				23		
	P.M.				25		50				28		
Cameron / Mooney	Storage	155+	*	S	300	*	S	240	*	150	210	*	150
	A.M.	76	73		112	84		16	159	26	48	119	0
	Midday	292	164		203	113		70	342	22	201	351	86
	P.M.	215	184		206	123		59	308	49	178	289	56
Cameron / Stonebrook	Storage	DNE	DNS	DNS	S	*	DNE	150+	DNE	890	DNE	DNE	DNE
	A.M.					33		60		35			
	Midday					23		38		65			
	P.M.					25		18		115			
Cameron / West	Storage	100+	DNS	DNS	95+	DNS	DNS	S	550	NS	110+	*	NS
	A.M.	8			0				35	3	3	3	28
	Midday	10			0				23	0	0	3	25
	P.M.	13			0				33	0	8	8	35
Visalia Pwy/ Demaree	Storage	190	*	250	145	*	NS	300	*	S	300	*	S
	A.M.	48	248	0	84	82	8	66	182		132	138	
	Midday	33	135	0	116	58	29	43	137		157	121	
	P.M.	28	195	0	86	79	39	67	191		160	162	
Visalia Pwy/ Dans	Storage	195	DNS	S	75+	DNS	S	S	350	S	S	*	S
	A.M.	20			0				8			168	
	Midday	3			0				0			20	
	P.M.	3			0				3			30	
Visalia Pwy/ County Center	Storage	200+	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	195+	DNE	775
	A.M.	10									80		38
	Midday	5									115		18
	P.M.	13									145		25
Visalia Pwy/ Outlot 1	Storage	DNE	DNS	S	DNE	DNS	DNE	DNE	DNE	P	DNE	DNE	DNE
	A.M.									0			
	Midday									5			
	P.M.									8			
Visalia Pwy/ Main Site	Storage	S	*	DNE	DNE	725	S	S	P	S	S	P	S
	A.M.		5			10			293			10	
	Midday		8			18			>1000			620	
	P.M.		8			15			210			615	
Visalia Pwy/ East Site	Storage	DNE	DNS	S	DNE	DNS	DNE	DNE	DNE	P	DNE	DNE	DNE
	A.M.									25			
	Midday									103			
	P.M.									68			
Visalia Pwy/ Mooney	Storage	180	*	TBD	175	*	S	240	*	S	295	*	215
	A.M.	306	160	44	275	257		144	319		31	186	14
	Midday	587	215	50	273	370		210	402		147	327	58
	P.M.	578	249	59	288	356		235	410		89	310	44

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

See Section 1.5 for a list of abbreviations

**Table 9.2 (Continued)**  
**Queuing Analysis Summary – Five-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Visalia Pwy/ Stonebrook	Storage	TBD	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	S	DNE	TBD
	A.M.	13											40
	Midday	13											20
	P.M.	18											20
North Site / Mooney	Storage	DNE	DNE	P	DNE	DNE	DNE	DNE	DNS	DNE	DNE	DNS	DNS
	A.M.			10									
	Midday			35									
	P.M.			25									
South Site / Mooney	Storage	DNE	DNE	P	DNE	DNE	DNE	TBD	DNS	DNE	DNE	DNS	DNS
	A.M.			15				25					
	Midday			48				103					
	P.M.			35				78					
Midvalley / Mooney	Storage	S	*	25	S	*	S	475	*	S	470	*	145
	A.M.		42	0		0		15	218		15	188	3
	Midday		44	0		0		18	293		22	293	15
	P.M.		45	0		0		15	305		17	304	19
Ave 272 / Road 108	Storage	185	*	S	175	*	S	230	*	S	260	*	S
	A.M.	21	75		17	52		29	212		72	159	
	Midday	19	43		24	51		17	137		44	135	
	P.M.	25	36		29	107		25	205		29	197	
Ave 272 / Mooney	Storage	S	*	S	S	*	S	470	DNS	S	480	DNS	S
	A.M.		123			133		5			0		
	Midday		273			168		5			3		
	P.M.		158			73		33			3		
Ave 268 / Mooney	Storage	S	800	NS	S	*	S	480	*	S	475	*	S
	A.M.		28	0		37		73	213		50	222	
	Midday		97	3		24		73	238		51	281	
	P.M.		147	35		26		124	378		75	426	

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

See Section 1.5 for a list of abbreviations

### **9.5 – Five-Year Cumulative With Project Transit, Bicycle, and Pedestrian Facilities**

The proposed Project is not expected to impede or interfere with existing transit, bicycle, and pedestrian facilities.

### **9.6 – Five-Year Cumulative With Project Potentially-Significant Impacts and Mitigation Measures**

The cumulative five-year potentially-significant impacts are described below, followed by the recommended mitigation measure or action.

#### **Impact 5-1**

At the intersection of Caldwell Avenue and Dans Street, the cumulative effect of the Project and regional growth will cause LOS F during the a.m. and p.m. peak hours.

#### **Recommendation 5-1**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted and if the City desires traffic signals closely spaced from County Center Drive. If the City anticipates installation of traffic signals in the future, the Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

#### **Impact 5-2**

At the intersection of Cameron Avenue and Stonebrook Street, the cumulative effect of the Project and regional growth will cause LOS F during the peak hours.

#### **Recommendation 5-2**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. The Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

#### **Impact 5-3**

At the intersection of Cameron Avenue and West Street, the cumulative effect of the Project and regional growth will cause LOS F during the peak hours.

#### **Recommendation 5-3**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. The Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

#### **Impact 5-4**

At the intersection of Visalia Parkway and Dans Street, the cumulative effect of the Project and regional growth will cause LOS F during the a.m. peak hour.

#### **Recommendation 5-4**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted and if the City desires traffic signals closely spaced from County Center Drive. If the City anticipates installation of traffic signals in the future, the Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

#### **Impact 5-5**

At the intersection of Visalia Parkway and County Center Drive, the cumulative effect of the Project and regional growth will cause LOS E during the a.m. and midday peak hours and LOS F during the p.m. peak hour.

#### **Recommendation 5-5**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. The Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

### **Impact 5-6**

At the intersection of Visalia Parkway and the Main Site Access, the intersection would operate at LOS F during all three peak hours with two-way stop control.

### **Recommendation 5-6**

Considering the anticipated heavy minor street volumes and heavy turning movements over numerous hours per day, and that the peak-hour traffic signal warrant is expected to be satisfied in the existing-plus-Project condition, it is recommended that traffic signals be installed at the intersection. The proposed driveway should be aligned with the existing driveway on the north side of Visalia Parkway to facilitate signalization. The intersection should be designed to accommodate the ultimate lane configurations based on the 20-year analyses; however, the minimum lane configurations required in the five-year condition are as follows:

Eastbound: one left-turn lane, one through lane, and one right-turn lane

Westbound: one left-turn lane and one through lane with a shared right turn

Northbound: one shared left-turn/through and one right-turn lane

Southbound: one shared left-turn/through/right-turn lane (existing driveway)

### **Impact 5-7**

At the intersection of Visalia Parkway and Mooney Boulevard, the cumulative effect of the Project and regional growth will cause the calculated 95<sup>th</sup> percentile queues to exceed the existing storage capacity in the left-turn lanes on the eastbound and westbound approaches.

### **Recommendation 5-7**

The intersection will require widening to accommodate the calculated queues. The intersection construction should accommodate the ultimate lane configurations based on the 20-year analyses; however, the minimum lane configurations required in the five-year with Project condition are as follows:

Eastbound: two left-turn lanes, one through lane, and one right-turn lane

Westbound: two left-turn lanes and one through lane with a shared right turn

Northbound: one left-turn lane and two through lanes with a shared right turn

Southbound: one left-turn lane, three through lanes, and one right-turn lane

### **Impact 5-8**

At the intersection of Avenue 272 and Mooney Boulevard, the cumulative effect of the Project and regional growth will exacerbate delays associated with the existing LOS F during all three peak hours.

### **Recommendation 5-8**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. A roundabout would also mitigate the intersection to acceptable levels of service. An Intersection Control Evaluation Report (ICE) will eventually be required by Caltrans to identify the preferred control; it is recommended that the ICE report not be required as part of the environmental review. The ICE may be deferred until such time as

the intersection improvements are imminent. It is noted that Caltrans typically prefers that Sidra software be utilized to analyze roundabouts. In our experience, the Synchro software typically provides delay results that are greater the Sidra results. It is our opinion that, if the Synchro software indicates an acceptable LOS for a roundabout, then a roundabout may be considered as a feasible improvement. The ICE report, when prepared, should utilize Sidra software or the software required by Caltrans at that time. The Project may be required to pay an equitable share of the cost of the future traffic signals or roundabout at the discretion of the City of Visalia.

**9.7 – Summary of Five-Year Cumulative With Project Mitigated Conditions**

Tables 9.3 and 9.4 present a summary of the mitigated conditions. The mitigated intersection analyses sheets are presented in Appendix F.

**Table 9.3  
 Mitigated Intersection Analysis Summary – Five-Year With Project**

Intersection	Control	A.M. Peak Hour		Midday Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Caldwell / Dans	Signals	10.3	B	8.7	A	9.8	A
Cameron / Stonebrook	Signals	13.7	B	14.7	B	16.4	B
Cameron / West	Signals	10.6	B	12.4	B	13.9	B
Visalia Pwy / Dans	Signals	15.4	B	9.7	A	10.4	B
Visalia Pwy / County Center	Signals	12.8	B	10.7	B	13.3	B
Visalia Pwy / Main Site	Signals	14.0	B	20.1	C	19.7	B
Visalia Pwy / Mooney	Signals	23.0	C	32.9	C	32.3	C
Ave 272 / Mooney	Signals	10.4	B	10.9	B	11.5	B
	Round	8.9	A	12.8	B	15.8	C

**Table 9.4**  
**Mitigated Queuing Analysis Summary – Five-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Caldwell / Dans	A.M.	35	167		47	154			41			0	
	Midday	17	225		23	171			23			1	
	P.M.	27	303		35	193			5			7	
Cameron / Stoncrook	A.M.		173	10	244	145		29		35			
	Midday		330	14	198	188		24		43			
	P.M.		450	16	209	211		15		53			
Cameron / West	A.M.	63	186	0	4	202	0		27	0	6	6	27
	Midday	102	401	0	11	302	0		18	0	3	6	32
	P.M.	143	477	0	17	307	0		20	0	10	11	41
Visalia Pwy/ Dans	A.M.	142	175		7	285			0			47	
	Midday	33	223		14	236			6			32	
	P.M.	33	347		12	378			0			32	
Visalia Pwy/ County Center	A.M.	83	109			274					55		28
	Midday	61	132			305					88		29
	P.M.	117	159			435					76		33
Visalia Pwy/ Main Site	A.M.	60	167	12	88	160			59	44		16	
	Midday	101	171	29	172	157			110	49		119	
	P.M.	109	269	18	138	221			83	44		110	
Visalia Pwy/ Mooney	A.M.	147	153	43	125	225		130	276		29	169	35
	Midday	265	214	50	142	297		176	323		121	277	52
	P.M.	243	234	55	151	299		199	364		89	291	42
Ave 272 / Mooney (Signals)	A.M.		45			39		48	242		8	179	
	Midday		45			25		34	327		25	424	
	P.M.		30			20		161	361		27	439	
Ave 272 / Mooney (Round)	A.M.		25			0			75			50	
	Midday		25			0			125			150	
	P.M.		0			0			200			200	

Lanes should be designed to accommodate the calculated queues and should consider the calculated queues in the 20-year scenario. The City of Visalia requires a minimum storage length of 300 feet.  
 See Section 1.5 for a list of abbreviations

## **10.0 – 10-YEAR CUMULATIVE NO-PROJECT CONDITIONS**

### **10.1– 10-Year Cumulative No-Project Lane Configurations and Intersection Control**

The 10-year cumulative no-Project lane configurations and intersection control are presented in Figure 10.1, 10-Year Cumulative No-Project Lane Configurations and Intersection Control.

### **10.2 – 10-Year Cumulative No-Project Traffic Volumes**

The 10-year cumulative traffic volumes without the Project were estimated by adding the traffic volumes that are expected to occur as a result of the pending projects to the pending projects and, where applicable, also applying a growth rate based on a review of the growth projected by the Tulare County travel model (described in Section 12 of this report). The 10-year cumulative no-Project traffic volumes are presented in the following figures:

Figure 10.2a: 10-Year Cumulative No-Project Peak Hour Traffic Volumes (A.M. and P.M. Peak Hours)

Figure 10.2b: 10-Year Cumulative No-Project Peak Hour Traffic Volumes (Midday Peak Hour)

### **10.3 – 10-Year Cumulative No-Project Intersection LOS Analysis**

The results of the 10-year cumulative no-Project intersection LOS analyses are summarized in Table 10.1. The intersection analysis sheets are presented in Appendix C. Levels of service and delays worse than the target LOS D or indicated in bold type.

### **10.4 – 10-Year Cumulative No-Project Queuing Analysis**

The results of the 10-year cumulative no-Project queuing analyses are summarized in Table 10.2. Calculated 95<sup>th</sup>-percentile queues exceeding the storage capacity are identified in bold type and are underlined. The intersection analysis sheets presented in Appendix C include the queue analysis results.

**Table 10.1**  
**Intersection Analysis Summary – 10-Year No-Project**

Intersection	Control	A.M. Peak Hour		Midday Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Whitendale / County Center	Signals	26.3	C	18.6	B	23.3	C
Whitendale / Mooney	Signals	20.0	C	29.4	C	24.3	C
Sunnyside / Mooney	Signals	13.4	B	22.0	C	23.4	C
Orchard / Mooney	Signals	9.9	A	16.2	B	15.7	B
Caldwell / Demaree	Signals	28.1	C	24.5	C	32.1	C
Caldwell / Dans	TWS	<u>61.0</u>	<u>F</u>	30.2	D	<u>57.7</u>	<u>F</u>
Caldwell / County Center	Signals	17.4	B	22.0	C	26.1	C
Caldwell / Shady	Signals	13.2	B	14.2	B	14.5	B
Caldwell / Mooney	Signals	20.2	C	32.4	C	33.5	C
Caldwell / Fairway	Signals	13.2	B	16.6	B	19.4	B
Caldwell / Stonebrook	Signals	7.9	A	7.7	A	7.0	A
Cameron / County Center	OWS	16.8	C	20.3	C	24.8	C
Cameron / Mooney	Signals	16.7	B	31.3	C	26.9	C
Cameron / Stonebrook	OWS	<u>84.7</u>	<u>F</u>	<u>55.6</u>	<u>F</u>	<u>63.2</u>	<u>F</u>
Cameron / West	TWS	<u>57.2</u>	<u>F</u>	<u>58.8</u>	<u>F</u>	<u>111.5</u>	<u>F</u>
Visalia Pwy / Demaree	Signals	26.3	C	19.5	B	22.4	C
Visalia Pwy / Dans	TWS	<u>52.0</u>	<u>F</u>	18.1	C	26.7	D
Visalia Pwy / County Center	OWS	<u>36.8</u>	<u>E</u>	26.1	D	<u>77.6</u>	<u>F</u>
Visalia Pwy / Outlot 1	DNE						
Visalia Pwy / Main Site	OWS	12.8	B	16.6	C	21.7	C
Visalia Pwy / East Site	DNE						
Visalia Pwy / Mooney	Signals	29.9	C	37.7	D	42.6	D
Visalia Pwy / Stonebrook	OWS	10.1	B	9.4	A	9.1	A
North Site / Mooney	DNE						
South Site / Mooney	DNE						
Midvalley / Mooney	Signals	5.8	A	6.1	A	5.6	A
Ave 272 / Road 108	Signals	13.5	B	11.9	B	13.8	B
Ave 272 / Mooney	TWS	<u>255.7</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>
Ave 268 / Mooney	Signals	8.6	A	10.1	B	17.1	B



**Table 10.2**  
**Queuing Analysis Summary – 10-Year No-Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Whitendale / County Center	Storage	100+	*	35	100+	*	35	100+	*	50	100+	*	50
	A.M.	150	275	23	47	235	0	107	166	0	66	161	33
	Midday	51	200	0	52	191	3	57	194	0	68	170	0
	P.M.	87	301	12	79	232	0	79	214	0	61	196	4
Whitendale / Mooney	Storage	150	*	260	250	*	240	335	740	125	465	*	190
	A.M.	53	88	43	76	101	18	45	139	39	35	134	0
	Midday	81	108	97	144	114	28	131	294	66	98	369	6
	P.M.	63	131	66	117	133	0	120	255	64	72	315	0
Sunnyside / Mooney	Storage	170	*	S	100	*	S	400	*	S	290	750	S
	A.M.	70	22		8	24		99	159		89	164	
	Midday	211	52		25	49		234	331		124	481	
	P.M.	278	55		18	59		132	323		112	413	
Orchard / Mooney	Storage	125+	125+	S	105	780	S	125	540	100	275	*	100
	A.M.	9	6		28	20		10	151	0	65	103	0
	Midday	48	39		85	58		34	358	0	243	313	0
	P.M.	39	33		89	51		48	292	0	188	308	0
Caldwell / Demaree	Storage	260	*	S	265	*	135	240	*	125	255	*	S
	A.M.	215	252		77	257	49	110	247	0	84	286	
	Midday	172	242		98	211	52	68	175	50	89	200	
	P.M.	290	395		129	306	81	108	251	57	146	257	
Caldwell / Dana	Storage	+	DNS	S	+	DNS	S	S	*	S	S	P	S
	A.M.	3			5				115			13	
	Midday	0			3				20			20	
	P.M.	3			5				48			40	
Caldwell / County Center	Storage	105+	*	S	145+	*	S	105+	*	45	100+	*	50
	A.M.	69	175		17	144		100	113	0	61	122	32
	Midday	71	276		19	194		165	140	0	112	131	14
	P.M.	113	336		30	219		176	161	0	129	148	25
Caldwell / Shady	Storage	250	*	S	250	700	S	S	*	S	S	500	125
	A.M.	37	149		28	131			38			11	0
	Midday	58	169		63	155			35			28	0
	P.M.	63	210		77	175			50			25	0
Caldwell / Mooney	Storage	350	715	S	350	750	S	300	*	165	275	535	270
	A.M.	70	105		54	106		46	135	6	36	116	14
	Midday	184	201		169	152		187	275	42	138	427	45
	P.M.	185	257		154	183		171	280	54	140	376	44
Caldwell / Fairway	Storage	200	750	S	290	*	S	120	375	S	55	*	S
	A.M.	54	89		70	115		19	30		27	21	
	Midday	83	124		109	135		53	67		58	51	
	P.M.	113	194		150	167		65	73		114	51	
Caldwell / Stonebrook	Storage	255	*	100	300	*	NS	S	175	S	S	540	540
	A.M.	24	87	0	14	151	0		0			38	0
	Midday	28	158	0	11	155	0		0			17	0
	P.M.	50	225	0	10	191	6		24			31	7

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.  
 + Connects to a two-way left-turn lane that provides additional storage.  
 See Section 1.5 for a list of abbreviations

**Table 10.2 (Continued)**  
**Queuing Analysis Summary – 10-Year No-Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Cameron / County Center	Storage	DNE	DNE	DNE	*	DNE	105	DNE	DNS	DNS	150	DNS	DNE
	A.M.				13		18				15		
	Midday				50		23				15		
	P.M.				30		53				28		
Cameron / Mooney	Storage	155+	*	S	300	*	S	240	*	150	210	*	150
	A.M.	74	71		91	91		9	140	18	48	96	0
	Midday	319	170		173	123		63	286	0	225	309	79
	P.M.	221	191		189	143		55	281	47	186	245	47
Cameron / Stonebrook	Storage	DNE	DNS	DNS	S	*	DNE	150+	DNE	890	DNE	DNE	DNE
	A.M.					30		50		30			
	Midday					18		30		53			
	P.M.					20		15		93			
Cameron / West	Storage	100+	DNS	DNS	95+	DNS	DNS	S	550	NS	110+	*	NS
	A.M.	8			0				40	3	3	3	28
	Midday	8			0				18	0	0	3	20
	P.M.	13			3				33	0	10	8	30
Visalia Pwy/ Demaree	Storage	190	*	250	145	*	NS	300	*	S	300	*	S
	A.M.	51	270	0	47	86	7	71	190		120	145	
	Midday	34	130	0	105	56	22	44	142		137	127	
	P.M.	29	239	0	42	76	40	72	195		156	171	
Visalia Pwy/ Dana	Storage	195	DNS	S	75+	DNS	S	S	350	S	S	*	S
	A.M.	20			0				8			145	
	Midday	3			0				0			15	
	P.M.	3			0				3			25	
Visalia Pwy/ County Center	Storage	200+	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	195+	DNE	775
	A.M.	10									55		40
	Midday	5									43		18
	P.M.	13									113		30
Visalia Pwy/ Outlot 1	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
	P.M.												
Visalia Pwy/ Main Site	Storage	S	*	DNE	DNE	DNS	S	DNE	DNE	DNE	P	DNE	S
	A.M.		3								5		
	Midday		5								25		
	P.M.		5								40		
Visalia Pwy/ East Site	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
	P.M.												
Visalia Pwy/ Mooney	Storage	180	*	S	175	*	S	240	*	S	295	*	215
	A.M.	104	273		336	205		123	386		39	147	0
	Midday	185	369		332	270		144	422		139	210	8
	P.M.	179	430		339	260		159	570		108	254	0

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

See Section 1.5 for a list of abbreviations

**Table 10.2 (Continued)**  
**Queuing Analysis Summary – 10-Year No-Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Visalia Pwy/ Stonebrook	Storage	TBD	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	S	DNE	TBD
	A.M.	10											35
	Midday	13											18
	P.M.	15											18
North Site / Mooney	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
South Site / Mooney	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
Midvalley / Mooney	Storage	S	*	25	S	*	S	475	*	S	470	*	145
	A.M.		37	0		0		15	201		15	175	0
	Midday		34	0		0		18	249		22	252	10
	P.M.		37	0		0		15	277		17	278	15
Ave 272 / Road 108	Storage	185	*	S	175	*	S	230	*	S	260	*	S
	A.M.	21	77		19	52		31	233		75	173	
	Midday	21	42		25	52		19	145		48	143	
	P.M.	26	35		30	112		25	223		30	214	
Ave 272 / Mooney	Storage	S	*	S	S	*	S	470	DNS	S	480	DNS	S
	A.M.		105			138		5			0		
	Midday		223			123		5			3		
	P.M.		140			70		35			3		
Ave 268 / Mooney	Storage	S	800	NS	S	*	S	480	*	S	475	*	S
	A.M.		28	0		37		75	204		50	210	
	Midday		100	5		24		75	213		52	253	
	P.M.		151	35		27		129	354		78	398	

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

See Section 1.5 for a list of abbreviations

**10.5 – 10-Year Cumulative No-Project Deficiencies**

The following intersections are expected to operate at levels of service worse than the target LOS D in the 10-year no-Project scenario:

- Caldwell Avenue / Dans Street
- Cameron Avenue / Stonebrook Street
- Cameron Avenue / West Street
- Visalia Parkway / Dans Street
- Visalia Parkway / County Center Drive
- Avenue 272 / Mooney Boulevard.

The calculated 95<sup>th</sup>-percentile queues at the following intersections exceed the storage capacity as described:

- Sunnyside Avenue / Mooney Boulevard (left-turn lane on eastbound approach during the midday and p.m. peak hours);
- Caldwell Avenue / Demaree Street (left-turn lane on eastbound approach during the p.m. peak hour);
- Caldwell Avenue / Fairway Street (left-turn lane on southbound approach during the midday and p.m. peak hours);
- Cameron Avenue / Mooney Boulevard (left-turn lane on southbound approach during the midday peak hour);
- Visalia Parkway / Mooney Boulevard (left-turn lane on the westbound approach during all three peak hours and left-turn lane on eastbound approach during the midday peak hour).

## **11.0 – 10-YEAR CUMULATIVE WITH PROJECT CONDITIONS**

The 10-year cumulative with Project analyses include the assumption that both Phases 1 and 2 of the Project are constructed, as well as senior housing on Outlot 2 as described in Section 4.5 of this report.

### **11.1 – 10-Year Cumulative With Project Lane Configurations and Intersection Control**

The 10-year cumulative with Project lane configurations and intersection control are presented in Figure 11.1, 10-Year Cumulative With Project Lane Configurations and Intersection Control.

### **11.2 – 10-Year Cumulative With Project Traffic Volumes**

The 10-year cumulative with Project peak-hour traffic volumes are presented in the following figures:

Figure 11.2a: 10-Year Cumulative With Project Peak Hour Traffic Volumes (A.M. and P.M. Peak Hours)

Figure 11.2b: 10-Year Cumulative With Project Peak Hour Traffic Volumes (Midday Peak Hour)

### **11.3 – 10-Year Cumulative With Project Intersection LOS Analysis**

The results of the 10-year with Project intersection LOS analyses are summarized in Table 11.1. The intersection analysis sheets are presented in Appendix C. Project significant impacts are identified in bold type and are underlined.

### **11.4 – 10-Year Cumulative With Project Queuing Analysis**

The results of the 10-year with Project queuing analyses are summarized in Table 11.2. Calculated 95<sup>th</sup>-percentile queues exceeding the storage capacity are identified in bold type and are underlined. The intersection analysis sheets presented in Appendix C include the queue analysis results.

**Table 11.1**  
**Intersection Analysis Summary – 10-Year With Project**

Intersection	Control	A.M. Peak Hour		Midday Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Whitendale / County Center	Signals	26.6	C	18.8	B	23.7	C
Whitendale / Mooney	Signals	20.6	C	31.4	C	25.1	C
Sunnyside / Mooney	Signals	13.5	B	22.6	C	24.1	C
Orchard / Mooney	Signals	10.1	B	16.7	B	16.3	B
Caldwell / Demaree	Signals	28.8	C	25.5	C	33.3	C
Caldwell / Dans	TWS	<u>72.9</u>	<u>F</u>	<u>35.0</u>	<u>E</u>	<u>67.1</u>	<u>F</u>
Caldwell / County Center	Signals	18.1	B	25.4	C	30.1	C
Caldwell / Shady	Signals	13.2	B	14.2	B	14.5	B
Caldwell / Mooney	Signals	21.5	C	38.0	D	37.5	D
Caldwell / Fairway	Signals	13.2	B	16.8	B	19.7	B
Caldwell / Stonebrook	Signals	7.9	A	7.8	A	7.0	A
Cameron / County Center	OWS	17.5	C	22.6	C	27.3	D
Cameron / Mooney	Signals	17.5	B	33.9	C	28.6	C
Cameron / Stonebrook	OWS	<u>121.0</u>	<u>F</u>	<u>84.6</u>	<u>F</u>	<u>84.9</u>	<u>F</u>
Cameron / West	TWS	<u>81.4</u>	<u>F</u>	<u>93.6</u>	<u>F</u>	<u>180.5</u>	<u>F</u>
Visalia Pwy / Demaree	Signals	28.0	C	21.2	C	23.9	C
Visalia Pwy / Dans	TWS	<u>80.8</u>	<u>F</u>	21.7	C	30.6	D
Visalia Pwy / County Center	OWS	<u>64.9</u>	<u>F</u>	<u>65.2</u>	<u>F</u>	<u>234.5</u>	<u>F</u>
Visalia Pwy / Outlot 1	OWS	11.4	B	12.8	B	13.3	B
Visalia Pwy / Main Site	TWS	<u>109.4</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>
Visalia Pwy / East Site	OWS	14.8	B	33.4	D	25.2	D
Visalia Pwy / Mooney	Signals	30.9	C	<u>60.0</u>	<u>E</u>	54.5	D
Visalia Pwy / Stonebrook	OWS	10.2	B	9.6	A	9.3	A
North Site / Mooney	OWS	12.5	B	19.0	C	18.4	C
South Site / Mooney	OWS	12.7	B	27.6	D	25.3	D
Midvalley / Mooney	Signals	5.9	A	6.7	A	6.1	A
Ave 272 / Road 108	Signals	13.6	B	12.0	B	13.9	B
Ave 272 / Mooney	TWS	<u>&gt;300</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>
Ave 268 / Mooney	Signals	8.6	A	10.4	B	19.3	B

**Table 11.2**  
**Queuing Analysis Summary – 10-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Whitendale / County Center	Storage	100+	*	35	100+	*	35	100+	*	50	100+	*	50
	A.M.	150	283	23	47	244	0	107	166	0	66	161	33
	Midday	51	213	0	52	199	3	57	194	0	68	170	0
	P.M.	87	313	12	79	257	0	79	214	0	61	196	4
Whitendale / Mooney	Storage	150	*	260	250	*	240	335	740	125	465	*	190
	A.M.	55	92	45	82	104	18	49	152	40	36	149	0
	Midday	84	110	119	158	116	28	142	333	79	102	414	6
	P.M.	67	138	71	129	140	0	132	279	73	76	347	0
Sunnyside / Mooney	Storage	170	*	S	100	*	S	400	*	S	290	750	S
	A.M.	72	23		13	25		103	173		92	183	
	Midday	211	53		31	49		236	372		124	542	
	P.M.	278	55		30	59		135	358		112	454	
Orchard / Mooney	Storage	125+	125+	S	105	780	S	125	540	100	275	*	100
	A.M.	10	10		33	20		12	166	0	67	117	0
	Midday	54	45		102	61		42	419	0	264	363	0
	P.M.	40	37		100	53		54	335	0	201	346	0
Caldwell / Demaree	Storage	260	*	S	265	*	135	240	*	125	255	*	S
	A.M.	217	274		78	274	49	115	252	0	84	293	
	Midday	182	292		105	243	56	77	190	52	94	216	
	P.M.	293	435		130	336	83	113	254	57	148	262	
Caldwell / Dens	Storage	+	DNS	S	+	DNS	S	S	*	S	S	200	S
	A.M.	3			5				130			13	
	Midday	0			3				23			25	
	P.M.	3			5				53			45	
Caldwell / County Center	Storage	105+	*	S	145+	*	S	105+	*	45	100+	*	50
	A.M.	68	186		17	155		118	118	0	81	130	32
	Midday	75	314		20	243		192	151	0	146	143	14
	P.M.	113	361		30	262		196	172	0	154	159	25
Caldwell / Shady	Storage	250	*	S	250	700	S	S	*	S	S	500	125
	A.M.	38	157		29	137			39			12	0
	Midday	58	184		63	169			35			28	0
	P.M.	63	223		77	188			50			25	0
Caldwell / Mooney	Storage	350	715	S	350	750	S	300	*	165	275	535	270
	A.M.	74	119		68	113		60	151	37	37	138	14
	Midday	191	220		196	144		220	315	59	141	494	45
	P.M.	188	279		178	182		200	308	68	143	424	44
Caldwell / Fairway	Storage	200	750	S	290	*	S	120	375	S	55	*	S
	A.M.	57	94		71	122		19	30		27	22	
	Midday	89	135		112	147		55	69		60	54	
	P.M.	120	207		154	180		67	75		118	56	
Caldwell / Stonebrook	Storage	255	*	100	300	*	NS	S	175	S	S	540	540
	A.M.	26	91	0	13	158	0		0			39	0
	Midday	34	167	0	11	165	0		0			18	4
	P.M.	55	235	0	11	202	6		25			32	11

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

See Section 1.5 for a list of abbreviations

**Table 11.2 (Continued)**  
**Queuing Analysis Summary – 10-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Cameron / County Center	Storage	DNE	DNE	DNE	*	DNE	105	DNE	DNS	DNS	150	DNS	DNE
	A.M.				13		18				15		
	Midday				18		55				25		
	P.M.				35		58				28		
Cameron / Mooney	Storage	155+	*	S	300	*	S	240	*	150	210	*	150
	A.M.	81	82		117	100		17	175	29	53	132	0
	Midday	319	177		224	123		75	384	29	225	403	104
	P.M.	222	200		223	142		65	359	52	187	312	62
Cameron / Stonebrook	Storage	DNE	DNS	DNS	S	*	DNE	150+	DNE	890	DNE	DNE	DNE
	A.M.					33		65		38			
	Midday					23		43		73			
	P.M.					25		18		125			
Cameron / West	Storage	100+	DNS	DNS	95+	DNS	DNS	S	550	NS	110+	*	NS
	A.M.	10			0				58	3	3	3	33
	Midday	10			0				33	0	0	3	28
	P.M.	15			3				48	0	10	10	38
Visalia Pwy/ Demaree	Storage	190	*	250	145	*	NS	300	*	S	300	*	S
	A.M.	51	283	0	51	88	11	71	192		135	145	
	Midday	34	144	0	121	62	31	44	144		163	127	
	P.M.	29	259	0	49	81	44	72	205		167	171	
Visalia Pwy/ Dana	Storage	195	DNS	S	75+	DNS	S	S	350	S	S	*	S
	A.M.	20			0				10			193	
	Midday	3			0				0			23	
	P.M.	3			0				3			35	
Visalia Pwy/ County Center	Storage	200+	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	195+	DNE	775
	A.M.	10									113		43
	Midday	8									145		20
	P.M.	15									248		35
Visalia Pwy/ Outlot 1	Storage	DNE	DNS	S	DNE	DNS	DNE	DNE	DNE	P	DNE	DNE	DNE
	A.M.									0			
	Midday									5			
	P.M.									8			
Visalia Pwy/ Main Site	Storage	S	*	DNE	DNE	725	S	S	P	S	S	P	S
	A.M.		5			10			240			10	
	Midday		8			18			>1000			630	
	P.M.		10			15			963			638	
Visalia Pwy/ East Site	Storage	DNE	DNS	S	DNE	DNS	DNE	DNE	DNE	P	DNE	DNE	DNE
	A.M.									25			
	Midday									110			
	P.M.									73			
Visalia Pwy/ Mooney	Storage	180	*	TBD	175	*	S	240	*	S	295	*	215
	A.M.	307	175	45	367	297		147	366		39	205	15
	Midday	604	230	51	298	408		227	471		163	364	58
	P.M.	601	266	60	300	384		248	540		108	327	47

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

See Section 1.5 for a list of abbreviations



**Table 11.2 (Continued)**  
**Queuing Analysis Summary – 10-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Visalia Pwy/ Stonebrook	Storage	TBD	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	S	DNE	TBD
	A.M.	13											40
	Midday	15											23
	P.M.	18											20
North Site / Mooney	Storage	DNE	DNE	P	DNE	DNE	DNE	DNE	DNS	DNE	DNE	DNS	DNS
	A.M.			10									
	Midday			38									
	P.M.			28									
South Site / Mooney	Storage	DNE	DNE	P	DNE	DNE	DNE	TBD	DNS	DNE	DNE	DNS	DNS
	A.M.			15				28					
	Midday			53				123					
	P.M.			40				93					
Midvalley / Mooney	Storage	S	*	25	S	*	S	475	*	S	470	*	145
	A.M.		42	0		0		15	241		15	206	3
	Midday		44	0		0		18	325		22	326	15
	P.M.		45	0		0		15	342		17	341	19
Ave 272 / Road 108	Storage	185	*	S	175	*	S	230	*	S	260	*	S
	A.M.	21	80		119	54		31	235		75	174	
	Midday	21	46		25	56		19	148		48	146	
	P.M.	26	38		30	116		25	226		30	216	
Ave 272 / Mooney	Storage	S	*	S	S	*	S	470	DNS	S	480	DNS	S
	A.M.		213			175		8			0		
	Midday		330			XX		5			3		
	P.M.		198			XX		43			3		
Ave 268 / Mooney	Storage	S	800	NS	S	*	S	480	*	S	475	*	S
	A.M.		30	0		40		79	231		54	245	
	Midday		101	4		24		75	262		53	311	
	P.M.		154	36		28		129	427		78	527	

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

XX Where Synchro calculates very high delays and volume-to-capacity ratios, the software is unable to calculate a meaningful queue length. A specific threshold is not indicated as the analysis incorporates various variables.

See Section 1.5 for a list of abbreviations

**11.5 – 10-Year Cumulative With Project Transit, Bicycle, and Pedestrian Facilities**

The proposed Project is not expected to impede or interfere with existing transit, bicycle, and pedestrian facilities.

**11.6 – 10-Year Cumulative With Project Potentially-Significant Impacts and Mitigation Measures**

The cumulative 10-year potentially-significant impacts are described below, followed by the recommended mitigation measure or action.

### **Impact 10-1**

At the intersection of Caldwell Avenue and Dans Street, the cumulative effect of the Project and regional growth will cause LOS F during the a.m. and p.m. peak hours and LOS E during the midday peak hour.

### **Recommendation 10-1**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted and if the City desires traffic signals closely spaced from County Center Drive. If the City anticipates installation of traffic signals in the future, the Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

### **Impact 10-2**

At the intersection of Cameron Avenue and Stonebrook Street, the cumulative effect of the Project and regional growth will cause LOS F during the peak hours.

### **Recommendation 10-2**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. The Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

### **Impact 10-3**

At the intersection of Cameron Avenue and West Street, the cumulative effect of the Project and regional growth will cause LOS F during the peak hours.

### **Recommendation 10-3**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. The Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

### **Impact 10-4**

At the intersection of Visalia Parkway and Dans Street, the cumulative effect of the Project and regional growth will cause LOS F during the a.m. peak hour.

### **Recommendation 10-4**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted and if the City desires traffic signals closely spaced from County Center Drive. If the City anticipates installation of traffic signals in the future, the Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

### **Impact 10-5**

At the intersection of Visalia Parkway and County Center Drive, the cumulative effect of the Project and regional growth will cause LOS F during the peak hours.

### **Recommendation 10-5**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. The Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

### **Impact 10-6**

At the intersection of Visalia Parkway and the Main Site Access, the intersection would operate at LOS F during all three peak hours with two-way stop control.

### **Recommendation 10-6**

Considering the anticipated heavy minor street volumes and heavy turning movements over numerous hours per day, and that the peak-hour traffic signal warrant is expected to be satisfied in the existing-plus-Project condition, it is recommended that traffic signals be installed at the intersection. The proposed driveway should be aligned with the existing driveway on the north side of Visalia Parkway to facilitate signalization. The intersection should be designed to accommodate the ultimate lane configurations based on the 20-year analyses; however, the minimum lane configurations required in the 10-year condition are as follows:

Eastbound: one left-turn lane, one through lane, and one right-turn lane

Westbound: one left-turn lane and one through lane with a shared right turn

Northbound: one shared left-turn/through and one right-turn lane

Southbound: one shared left-turn/through/right-turn lane (existing driveway)

### **Impact 10-7**

At the intersection of Avenue 272 and Mooney Boulevard, the cumulative effect of the Project and regional growth will exacerbate delays associated with the existing LOS F during all three peak hours.

### **Recommendation 10-7**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. A roundabout would also mitigate the intersection to acceptable levels of service. An Intersection Control Evaluation Report (ICE) will eventually be required by Caltrans to identify the preferred control; it is recommended that the ICE report not be required as part of the environmental review. The ICE may be deferred until such time as the intersection improvements are imminent. It is noted that Caltrans typically prefers that Sidra software be utilized to analyze roundabouts. In our experience, the Synchro software typically provides delay results that are greater the Sidra results. It is our opinion that, if the Synchro software indicates an acceptable LOS for a roundabout, then a roundabout may be considered as a feasible improvement. The ICE report, when prepared, should utilize Sidra software or the software required by Caltrans at that time. The Project may be required to pay an equitable share of the cost of the future traffic signals or roundabout at the discretion of the City of Visalia.

**Impact 10-8**

At the intersection of Visalia Parkway and Mooney Boulevard, the cumulative effect of the Project and regional growth will cause LOS E during the midday peak hour and will cause the calculated 95<sup>th</sup> percentile queues to exceed the existing storage capacity in the left-turn lanes on the eastbound, westbound, and northbound approaches.

**Recommendation 10-8**

The intersection will require widening to operate at acceptable levels of service. The intersection construction should accommodate the ultimate lane configurations based on the 20-year analyses; however, the minimum lane configurations required in the 10-year with Project condition are as follows:

- Eastbound: two left-turn lanes, one through lane, and one right-turn lane
- Westbound: two left-turn lanes and one through lane with a shared right turn
- Northbound: one left-turn lane and two through lanes with a shared right turn
- Southbound: one left-turn lane, three through lanes, and one right-turn lane

**11.7 – Summary of 10-Year Cumulative With Project Mitigated Conditions**

Tables 11.3 and 11.4 present a summary of the mitigated conditions. The mitigated intersection analyses sheets are presented in Appendix F.

**Table 11.3**  
**Mitigated Intersection Analysis Summary – 10-Year With Project**

Intersection	Control	A.M. Peak Hour		Midday Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Caldwell / Dans	Signals	10.4	B	9.0	A	10.3	B
Cameron / Stonebrook	Signals	13.8	B	15.9	B	17.1	B
Cameron / West	Signals	10.4	B	13.5	B	15.4	B
Visalia Pwy / Dans	Signals	16.1	B	9.8	A	11.1	B
Visalia Pwy / County Center	Signals	14.2	B	11.3	B	17.3	B
Visalia Pwy / Main Site	Signals	14.3	B	20.8	C	21.2	C
Visalia Pwy / Mooney	Signals	25.1	C	36.5	D	36.2	D
Ave 272 / Mooney	Signals	11.2	B	12.5	B	13.3	B
	Round	9.7	A	14.6	B	19.0	C

**Table 11.4**  
**Mitigated Queuing Analysis Summary – 10-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Caldwell / Dans	A.M.	35	184		47	170			41			0	
	Midday	17	284		23	188			23			1	
	P.M.	27	343		35	218			5			7	
Cameron / Stonebrook	A.M.		180	10	244	153		29		35			
	Midday		347	15	207	199		25		44			
	P.M.		478	16	209	224		15		53			
Cameron / West	A.M.	92	136	0	0	228	0		29	0	7	6	28
	Midday	106	446	0	11	338	0		19	0	3	6	32
	P.M.	151	535	0	22	323	0		22	0	11	12	42
Visalia Pwy/ Dans	A.M.	142	190		7	312			0			47	
	Midday	33	247		14	292			6			32	
	P.M.	33	384		12	418			0			32	
Visalia Pwy/ County Center	A.M.	95	113			299					61		28
	Midday	64	139			324					92		30
	P.M.	138	166			487					90		35
Visalia Pwy/ Main Site	A.M.	59	179	12	93	177			58	44		16	
	Midday	101	187	29	172	173			110	49		119	
	P.M.	109	286	17	150	275			84	45		110	
Visalia Pwy/ Mooney	A.M.	161	177	46	158	264		144	326		39	191	35
	Midday	271	229	51	152	325		187	371		139	302	53
	P.M.	250	250	56	156	334		212	438		108	307	44
Ave 272 / Mooney (Signals)	A.M.		48			42		52	303		8	195	
	Midday		47			28		35	390		26	474	
	P.M.		32			21		178	450		28	485	
Ave 272 / Mooney (Round)	A.M.		50			25			100			75	
	Midday		25			0			150			200	
	P.M.		0			0			250			250	

Lanes should be designed to accommodate the calculated queues and should consider the calculated queues in the 20-year scenario. The City of Visalia requires a minimum storage length of 300 feet. See Section 1.5 for a list of abbreviations

## **12.0 – 20-YEAR CUMULATIVE NO-PROJECT CONDITIONS**

### **12.1– 20-Year Cumulative No-Project Lane Configurations and Intersection Control**

The 20-year cumulative no-Project lane configurations and intersection control are presented in Figure 12.1, 20-Year Cumulative No-Project Lane Configurations and Intersection Control. The 20-year analyses include the assumption that Stonebrook Avenue is constructed between Visalia Parkway and Caldwell Avenue because it is identified as an 11 to 25-year arterial in the 2014 City of Visalia General Plan, suggesting that it is expected to be constructed prior to the year 2039.

### **12.2 – 20-Year Cumulative No-Project Traffic Volumes**

The Tulare County Association of Governments (TCAG) maintains a travel model that is typically used to forecast future traffic volumes. An increment method was utilized to forecast traffic volumes for future conditions by determining the growth projected by the model between the base year and the analysis year. This growth is added to the existing traffic volumes and the result is the predicted future traffic volume. The TCAG travel model output is included in Appendix E. Where travel model data is not directly available, such as locations where streets are not included in the model or where the analysis scenario (midday) are not included in the model, an annual growth rate was applied to the existing volumes based on information available in the model. The results were reviewed to ensure that the pending and approved projects are accommodated in the 20-year traffic volumes.

Where the increment method was applied, forecasts of future turning movements were based on the methods presented in Chapter 8 of the Transportation Research Board National Cooperative Highway Research Program Report 255 entitled “*Highway Traffic Data for Urbanized Area Project Planning and Design.*”

The 20-year cumulative no-Project traffic volumes are presented in the following figures:

Figure 12.2a: 20-Year Cumulative No-Project Peak Hour Traffic Volumes (A.M. and P.M. Peak Hours)

Figure 12.2b: 20-Year Cumulative No-Project Peak Hour Traffic Volumes (Midday Peak Hour)

### **12.3 – 20-Year Cumulative No-Project Intersection LOS Analysis**

The results of the 20-year cumulative no-Project intersection LOS analyses are summarized in Table 12.1. The intersection analysis sheets are presented in Appendix C. Levels of service and delays worse than the target LOS D or indicated in bold type.

### **12.4 – 20-Year Cumulative No-Project Queuing Analysis**

The results of the 20-year cumulative no-Project queuing analyses are summarized in Table 12.2. Calculated 95<sup>th</sup>-percentile queues exceeding the storage capacity are identified in bold type and are underlined. The intersection analysis sheets presented in Appendix C include the queue analysis results.

**Table 12.1**  
**Intersection Analysis Summary – 20-Year No-Project**

Intersection	Control	A.M. Peak Hour		Midday Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Whitendale / County Center	Signals	28.2	C	19.5	B	24.5	C
Whitendale / Mooney	Signals	20.5	C	30.5	C	24.5	C
Sunnyside / Mooney	Signals	13.5	C	22.1	C	23.6	C
Orchard / Mooney	Signals	9.9	A	16.2	B	15.7	B
Caldwell / Demaree	Signals	28.9	C	25.6	C	34.9	C
Caldwell / Dans	TWS	<u>74.9</u>	<u>F</u>	34.4	D	<u>71.4</u>	<u>F</u>
Caldwell / County Center	Signals	17.8	B	24.1	C	30.0	C
Caldwell / Shady	Signals	13.2	B	14.2	B	14.5	B
Caldwell / Mooney	Signals	20.6	C	34.6	C	34.8	C
Caldwell / Fairway	Signals	13.2	B	16.7	C	19.5	B
Caldwell / Stonebrook	Signals	25.3	C	14.9	B	29.0	C
Cameron / County Center	OWS	17.4	C	21.5	C	29.8	D
Cameron / Mooney	Signals	16.8	B	32.8	C	27.8	C
Cameron / Stonebrook	OWS	<u>&gt;300</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>
Cameron / West	TWS	<u>78.8</u>	<u>F</u>	<u>66.0</u>	<u>F</u>	<u>144.9</u>	<u>F</u>
Visalia Pwy / Demaree	Signals	27.5	C	19.8	B	23.8	C
Visalia Pwy / Dans	TWS	<u>54.0</u>	<u>F</u>	18.1	C	27.3	D
Visalia Pwy / County Center	OWS	<u>42.9</u>	<u>E</u>	27.5	D	<u>156.0</u>	<u>F</u>
Visalia Pwy / Outlot 1	DNE						
Visalia Pwy / Main Site	OWS	12.9	B	17.1	C	22.1	C
Visalia Pwy / East Site	DNE						
Visalia Pwy / Mooney	Signals	33.8	C	40.6	D	48.6	D
Visalia Pwy / Stonebrook	OWS	<u>46.5</u>	<u>E</u>	<u>98.1</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>
North Site / Mooney	DNE						
South Site / Mooney	DNE						
Midvalley / Mooney	Signals	5.5	A	6.2	A	5.7	A
Ave 272 / Road 108	Signals	14.0	B	12.2	B	14.3	B
Ave 272 / Mooney	TWS	<u>&gt;300</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>	<u>&gt;300</u>	<u>F</u>
Ave 268 / Mooney	Signals	8.7	A	10.4	B	18.8	B

**Table 12.2**  
**Queuing Analysis Summary – 20-Year No-Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Whitendale / County Center	Storage	100+	*	35	100+	*	35	100+	*	50	100+	*	50
	A.M.	162	299	23	47	263	0	107	178	0	69	174	34
	Midday	54	213	0	55	202	7	59	210	0	79	184	0
	P.M.	96	313	15	87	250	2	86	257	0	62	211	4
Whitendale / Mooney	Storage	150	*	260	250	*	240	335	740	125	465	*	190
	A.M.	58	98	44	79	113	18	47	148	39	36	135	0
	Midday	89	114	111	147	124	34	139	306	69	108	378	11
	P.M.	65	132	67	118	143	0	120	256	64	73	317	2
Sunnyside / Mooney	Storage	170	*	S	100	*	S	400	*	S	290	750	S
	A.M.	71	22		8	24		100	163		89	168	
	Midday	211	52		25	49		234	343		124	508	
	P.M.	278	55		18	59		132	336		112	430	
Orchard / Mooney	Storage	125+	125+	S	105	780	S	125	540	100	275	*	100
	A.M.	9	6		28	20		10	151	0	65	106	0
	Midday	48	39		85	58		34	357	0	243	315	0
	P.M.	39	33		89	51		48	296	0	190	313	0
Caldwell / Demaree	Storage	260	*	S	265	*	135	240	*	125	255	*	S
	A.M.	227	256		78	262	52	113	255	0	85	299	
	Midday	195	269		109	239	61	74	190	53	100	218	
	P.M.	356	429		136	322	96	111	251	57	162	265	
Caldwell / Dana	Storage	+	DNS	S	+	DNS	S	S	*	S	S	P	S
	A.M.	3			5				133			13	
	Midday	0			3				23			23	
	P.M.	3			5				55			45	
Caldwell / County Center	Storage	105+	*	S	145+	*	S	105+	*	45	100+	*	50
	A.M.	68	176		19	147		103	120	0	64	132	38
	Midday	82	305		20	231		181	149	0	124	139	18
	P.M.	125	362		32	232		207	169	0	136	151	31
Caldwell / Shady	Storage	250	*	S	250	700	S	S	*	S	S	500	125
	A.M.	38	155		29	137			39			11	0
	Midday	58	179		63	164			35			28	0
	P.M.	63	220		77	183			50			25	0
Caldwell / Mooney	Storage	350	715	S	350	750	S	300	*	165	275	535	270
	A.M.	71	112		56	108		47	136	6	37	123	15
	Midday	192	216		179	161		198	281	45	145	454	45
	P.M.	193	273		162	186		181	300	69	150	392	46
Caldwell / Fairway	Storage	200	750	S	290	*	S	120	375	S	55	*	S
	A.M.	54	89		70	116		19	30		28	21	
	Midday	84	130		109	142		53	67		59	52	
	P.M.	113	195		150	168		65	74		116	51	
Caldwell / Stonebrook	Storage	255	*	100	300	*	NS	S	*	S	S	540	540
	A.M.	27	100	18	253	155	0		62			56	3
	Midday	51	179	27	133	168	25		76			51	5
	P.M.	82	586	33	216	214	24		223			97	13

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.  
 + Connects to a two-way left-turn lane that provides additional storage.  
 See Section 1.5 for a list of abbreviations



**Table 12.2 (Continued)**  
**Queuing Analysis Summary – 20-Year No-Project**

Intersection	Storage and Queue Length (feet)												
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Cameron / County Center	Storage	DNE	DNE	DNE	*	DNE	105	DNE	DNS	DNS	150	DNS	DNE
	A.M.				13		18				15		
	Midday				18		53				25		
	P.M.				45		58				30		
Cameron / Mooney	Storage	155+	*	S	300	*	S	240	*	150	210	*	150
	A.M.	75	75		93	95		9	144	20	49	105	0
	Midday	344	178		192	127		69	301	0	237	339	92
	P.M.	223	202		201	153		60	319	50	187	251	50
Cameron / Stonebrook	Storage	TBD	DNS	S	TBD	DNS	S	150+	890	S	TBD	*	S
	A.M.	3			35			XX	613		XX	473	
	Midday	5			20			XX	555		XX	460	
	P.M.	10			25			XX	270		XX	715	
Cameron / West	Storage	100+	DNS	DNS	95+	DNS	DNS	S	550	NS	110+	*	NS
	A.M.	13			0				58	3	3	3	30
	Midday	8			0				23	0	0	3	23
	P.M.	13			3				43	3	10	10	33
Visalia Pwy/ Demaree	Storage	190	*	250	145	*	NS	300	*	S	300	*	S
	A.M.	54	282	0	48	87	7	77	193		123	147	
	Midday	35	130	0	109	57	23	46	144		142	128	
	P.M.	29	271	0	48	76	41	77	197		160	174	
Visalia Pwy/ Dans	Storage	195	DNS	S	75+	DNS	S	S	350	S	S	*	S
	A.M.	20			0				8			148	
	Midday	3			0				0			15	
	P.M.	3			0				3			25	
Visalia Pwy/ County Center	Storage	200+	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	195+	DNE	775
	A.M.	10									70		43
	Midday	5									50		18
	P.M.	15									200		35
Visalia Pwy/ Outlot 1	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
	P.M.												
Visalia Pwy/ Main Site	Storage	S	*	DNE	DNE	DNS	S	DNE	DNE	DNE	P	DNE	S
	A.M.		3								5		
	Midday		5								28		
	P.M.		5								40		
Visalia Pwy/ East Site	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
	P.M.												
Visalia Pwy/ Mooney	Storage	180	*	S	175	*	S	240	*	S	295	*	215
	A.M.	113	283		383	214		126	409		48	161	0
	Midday	186	382		346	277		161	435		154	220	8
	P.M.	189	450		342	283		164	647		130	237	0

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

See Section 1.5 for a list of abbreviations

**Table 12.2 (Continued)**  
**Queuing Analysis Summary – 20-Year No-Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Visalia Pwy/ Stonebrook	Storage	TBD	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	TBD	DNE	TBD
	A.M.	23									85		103
	Midday	20									175		28
	P.M.	30									395		40
North Site/ Mooney	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
	P.M.												
South Site/ Mooney	Storage	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
	A.M.												
	Midday												
	P.M.												
Midvalley / Mooney	Storage	S	*	25	S	*	S	475	*	S	470	*	145
	A.M.		37	0		0		15	208		15	182	0
	Midday		34	0		0		18	259		22	267	10
	P.M.		37	0		0		15	295		17	294	15
Ave 272 / Road 108	Storage	185	*	S	175	*	S	230	*	S	260	*	S
	A.M.	25	83		19	56		32	248		78	177	
	Midday	21	44		28	56		20	146		50	143	
	P.M.	29	37		31	122		26	228		31	220	
Ave 272 / Mooney	Storage	S	*	S	S	*	S	470	DNS	S	480	DNS	S
	A.M.		145			168		8			0		
	Midday		270			168		5			3		
	P.M.		173			105		43			3		
Ave 268 / Mooney	Storage	S	800	NS	S	*	S	480	*	S	475	*	S
	A.M.		30	0		39		78	210		53	219	
	Midday		104	5		25		79	221		54	268	
	P.M.		157	36		27		133	378		80	423	

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

XX Where Synchro calculates very high delays and volume-to-capacity ratios, the software is unable to calculate a meaningful queue length. A specific threshold is not indicated as the analysis incorporates various variables.

See Section 1.5 for a list of abbreviations

### **12.5 – 20-Year Cumulative No-Project Deficiencies**

The following intersections are expected to operate at levels of service worse than the target LOS D in the 20-year no-Project scenario:

- Caldwell Avenue / Dans Street
- Cameron Avenue / Stonebrook Street
- Cameron Avenue / West Street
- Visalia Parkway / Dans Street
- Visalia Parkway / County Center Drive
- Visalia Parkway / Stonebrook Street
- Avenue 272 / Mooney Boulevard.

The calculated 95<sup>th</sup>-percentile queues at the following intersections exceed the storage capacity as described:

- Sunnyside Avenue / Mooney Boulevard (left-turn lane on eastbound approach during the midday and p.m. peak hours);
- Caldwell Avenue / Demaree Street (left-turn lane on eastbound approach during the p.m. peak hour);
- Caldwell Avenue / Fairway Street (left-turn lane on southbound approach during the midday and p.m. peak hours);
- Cameron Avenue / Mooney Boulevard (left-turn lane on southbound approach during the midday peak hour);
- Cameron Avenue / Stonebrook Street (northbound approach during the p.m. peak hour);
- Visalia Parkway / Mooney Boulevard (left-turn lane on the westbound approach during all three peak hours and left-turn lane on eastbound approach during the midday and p.m. peak hours);
- Visalia Parkway / Stonebrook Street (left-turn lane on the southbound approach during the p.m. peak hour).

### **13.0 – 20-YEAR CUMULATIVE WITH PROJECT CONDITIONS**

The 20-year cumulative with Project analyses include the assumption that both Phases 1 and 2 of the Project are constructed, as well as senior housing on Outlot 2 as described in Section 4.5 of this report.

#### **13.1 – 20-Year Cumulative With Project Lane Configurations and Intersection Control**

The 20-year cumulative with Project lane configurations and intersection control are presented in Figure 13.1, 20-Year Cumulative With Project Lane Configurations and Intersection Control.

#### **13.2 – 20-Year Cumulative With Project Traffic Volumes**

The 20-year cumulative with Project peak-hour traffic volumes are presented in the following figures:

Figure 13.2a: 20-Year Cumulative With Project Peak Hour Traffic Volumes (A.M. and P.M. Peak Hours)

Figure 13.2b: 20-Year Cumulative With Project Peak Hour Traffic Volumes (Midday Peak Hour)

#### **13.3 – 20-Year Cumulative With Project Intersection LOS Analysis**

The results of the 20-year with Project intersection LOS analyses are summarized in Table 13.1. The intersection analysis sheets are presented in Appendix C. Project significant impacts are identified in bold type and are underlined.

#### **13.4 – 20-Year Cumulative With Project Queuing Analysis**

The results of the 20-year with Project queuing analyses are summarized in Table 13.2. Calculated 95<sup>th</sup>-percentile queues exceeding the storage capacity are identified in bold type and are underlined. The intersection analysis sheets presented in Appendix C include the queue analysis results.

**Table 13.1**  
**Intersection Analysis Summary – 20-Year With Project**

Intersection	Control	A.M. Peak Hour		Midday Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Whitendale / County Center	Signals	28.6	C	19.8	B	24.9	C
Whitendale / Mooney	Signals	21.0	C	32.4	C	25.3	C
Sunnyside / Mooney	Signals	13.6	B	22.7	C	24.3	C
Orchard / Mooney	Signals	10.0	B	16.7	B	16.3	B
Caldwell / Demaree	Signals	29.6	C	26.6	C	36.1	D
Caldwell / Dans	TWS	<b>93.6</b>	<b>F</b>	<b>39.6</b>	<b>E</b>	<b>83.1</b>	<b>F</b>
Caldwell / County Center	Signals	18.6	B	28.4	C	35.1	D
Caldwell / Shady	Signals	13.1	B	14.1	B	14.5	B
Caldwell / Mooney	Signals	21.9	C	40.7	D	38.9	D
Caldwell / Fairway	Signals	13.3	B	16.9	B	19.8	B
Caldwell / Stonebrook	Signals	26.1	C	15.3	B	32.9	C
Cameron / County Center	OWS	18.2	C	23.8	C	33.2	D
Cameron / Mooney	Signals	17.8	B	35.8	D	29.8	C
Cameron / Stonebrook	OWS	<b>&gt;300</b>	<b>F</b>	<b>&gt;300</b>	<b>F</b>	<b>&gt;300</b>	<b>F</b>
Cameron / West	TWS	<b>122.5</b>	<b>F</b>	<b>107.6</b>	<b>F</b>	<b>261.5</b>	<b>F</b>
Visalia Pwy / Demaree	Signals	29.4	C	21.7	C	25.4	C
Visalia Pwy / Dans	TWS	<b>85.1</b>	<b>F</b>	21.7	C	31.2	D
Visalia Pwy / County Center	OWS	<b>81.9</b>	<b>F</b>	<b>72.7</b>	<b>F</b>	<b>&gt;300</b>	<b>F</b>
Visalia Pwy / Outlot 1	OWS	11.4	B	12.8	B	13.3	B
Visalia Pwy / Main Site	TWS	<b>116.5</b>	<b>F</b>	<b>&gt;300</b>	<b>F</b>	<b>&gt;300</b>	<b>F</b>
Visalia Pwy / East Site	OWS	13.8	B	24.9	C	21.1	C
Visalia Pwy / Mooney	Signals	33.3	C	<b>60.3</b>	<b>E</b>	<b>60.4</b>	<b>E</b>
Visalia Pwy / Stonebrook	OWS	<b>55.4</b>	<b>F</b>	<b>142.4</b>	<b>F</b>	<b>&gt;300</b>	<b>F</b>
North Site / Mooney	OWS	12.7	B	19.9	C	19.4	C
South Site / Mooney	OWS	13.0	B	30.9	D	28.0	D
Midvalley / Mooney	Signals	5.9	A	6.9	A	6.3	A
Ave 272 / Road 108	Signals	14.1	B	12.2	B	14.4	B
Ave 272 / Mooney	TWS	<b>&gt;300</b>	<b>F</b>	<b>&gt;300</b>	<b>F</b>	<b>&gt;300</b>	<b>F</b>
Ave 268 / Mooney	Signals	8.7	A	10.8	B	21.7	C

**Table 13.2**  
**Queuing Analysis Summary – 20-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Whitendale / County Center	Storage	100+	*	35	100+	*	35	100+	*	50	100+	*	50
	A.M.	162	306	23	47	269	0	107	178	0	69	174	34
	Midday	54	241	0	55	213	7	59	210	0	79	184	0
	P.M.	96	324	15	87	263	2	86	257	0	62	211	4
Whitendale / Mooney	Storage	150	*	260	250	*	240	335	740	125	465	*	190
	A.M.	60	102	46	85	116	18	51	160	43	37	150	0
	Midday	90	114	129	159	124	34	148	346	83	109	424	11
	P.M.	68	139	72	130	150	0	132	281	74	77	348	1
Sunnyside / Mooney	Storage	170	*	S	100	*	S	400	*	S	290	750	S
	A.M.	73	24		13	25		104	178		92	188	
	Midday	211	53		31	49		237	384		124	562	
	P.M.	278	55		30	59		135	372		112	471	
Orchard / Mooney	Storage	125+	125+	S	105	780	S	125	540	100	275	*	100
	A.M.	10	10		33	20		12	166	0	67	120	0
	Midday	54	45		102	61		42	419	0	264	364	0
	P.M.	41	38		100	54		54	340	0	202	349	0
Caldwell / Demaree	Storage	260	*	S	265	*	135	240	*	125	255	*	S
	A.M.	229	280		79	279	52	117	258	0	86	303	
	Midday	205	307		114	270	64	82	204	54	105	234	
	P.M.	358	465		136	349	100	116	255	57	163	271	
Caldwell / Dans	Storage	+	DNS	S	+	DNS	S	S	*	S	S	200	S
	A.M.	3			5				150			15	
	Midday	0			3				28			28	
	P.M.	3			5				63			53	
Caldwell / County Center	Storage	105+	*	S	145+	*	S	105+	*	45	100+	*	50
	A.M.	68	187		19	157		120	126	0	86	140	38
	Midday	84	342		21	266		207	160	0	157	150	17
	P.M.	125	387		32	272		226	180	0	162	162	31
Caldwell / Shady	Storage	250	*	S	250	700	S	S	*	S	S	500	125
	A.M.	38	164		29	144			40			12	0
	Midday	58	194		63	178			35			28	0
	P.M.	63	235		77	195			50			25	0
Caldwell / Mooney	Storage	350	715	S	350	750	S	300	*	165	275	535	270
	A.M.	76	127		71	115		62	155	38	39	148	15
	Midday	199	236		208	152		234	321	63	148	522	50
	P.M.	197	293		187	182		210	333	90	152	441	46
Caldwell / Fairway	Storage	200	750	S	290	*	S	120	375	S	55	*	S
	A.M.	57	94		71	122		19	30		29	22	
	Midday	91	141		113	154		56	70		61	55	
	P.M.	120	208		154	181		67	75		120	56	
Caldwell / Stonebrook	Storage	255	*	100	300	*	NS	S	*	S	S	540	540
	A.M.	30	104	18	261	162	0		65			58	4
	Midday	55	190	27	136	181	25		78			52	10
	P.M.	86	531	26	275	236	25		230			98	17

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

See Section 1.5 for a list of abbreviations

**Table 13.2 (Continued)**  
**Queuing Analysis Summary – 20-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Cameron / County Center	Storage	DNE	DNE	DNE	*	DNE	105	DNE	DNS	DNS	150	DNS	DNE
	A.M.				15		18				15		
	Midday				20		60				25		
	P.M.				50		63				30		
Cameron / Mooney	Storage	155+	*	S	300	*	S	240	*	150	210	*	150
	A.M.	82	87		118	104		17	180	32	54	142	0
	Midday	344	186		251	127		81	402	34	237	439	117
	P.M.	225	210		240	152		70	401	55	188	318	65
Cameron / Stonebrook	Storage	TBD	DNS	S	TBD	DNS	S	150+	890	S	TBD	*	S
	A.M.	3			40			XX	720		XX	515	
	Midday	8			25			XX	715		XX	513	
	P.M.	10			30			XX	≥1000		XX	748	
Cameron / West	Storage	100+	DNS	DNS	95+	DNS	DNS	S	550	NS	110+	*	NS
	A.M.	13			0				78	3	3	3	35
	Midday	10			0				38	0	0	3	30
	P.M.	15			3				63	3	13	13	40
Visalia Pwy/ Demaree	Storage	190	*	250	145	*	NS	300	*	S	300	*	S
	A.M.	54	296	0	54	90	12	77	195		139	147	
	Midday	35	144	0	125	62	33	46	145		168	128	
	P.M.	29	290	0	55	81	44	77	210		169	174	
Visalia Pwy/ Dans	Storage	195	DNS	S	75+	DNS	S	S	350	S	S	*	S
	A.M.	20			0				10			198	
	Midday	3			0				0			23	
	P.M.	3			0				3			35	
Visalia Pwy/ County Center	Storage	200+	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	195+	DNE	775
	A.M.	10									140		48
	Midday	8									160		20
	P.M.	15									365		40
Visalia Pwy/ Outlot 1	Storage	DNE	DNS	S	DNE	DNS	DNE	DNE	DNE	P	DNE	DNE	DNE
	A.M.									0			
	Midday									5			
	P.M.									8			
Visalia Pwy/ Main Site	Storage	S	*	DNE	DNE	725	S	S	P	S	S	P	S
	A.M.		5			10			350			10	
	Midday		8			18			≤1000			635	
	P.M.		10			15			975			643	
Visalia Pwy/ East Site	Storage	DNE	DNS	S	DNE	DNS	DNE	DNE	DNE	P	DNE	DNE	DNE
	A.M.									23			
	Midday									83			
	P.M.									60			
Visalia Pwy/ Mooney	Storage	180	*	TBD	175	*	S	240	*	S	295	*	215
	A.M.	312	176	45	414	315		151	388		48	221	19
	Midday	652	253	58	294	416		259	436		190	326	55
	P.M.	643	271	60	364	441		241	593		133	332	53

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.  
 + Connects to a two-way left-turn lane that provides additional storage.  
 See Section 1.5 for a list of abbreviations

**Table 13.2 (Continued)**  
**Queuing Analysis Summary – 20-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Visalia Pwy/ Stonebrook	Storage	TBD	DNS	DNE	DNE	DNS	S	DNE	DNE	DNE	TBD	DNE	TBD
	A.M.	25									98		118
	Midday	25									210		35
	P.M.	33									425		48
North Site / Mooney	Storage	DNE	DNE	P	DNE	DNE	DNE	DNE	DNS	DNE	DNE	DNS	DNS
	A.M.			13									
	Midday			40									
	P.M.			30									
South Site / Mooney	Storage	DNE	DNE	P	DNE	DNE	DNE	TBD	DNS	DNE	DNE	DNS	DNS
	A.M.			15				28					
	Midday			55				135					
	P.M.			43				103					
Midvalley / Mooney	Storage	S	*	25	S	*	S	475	*	S	470	*	145
	A.M.		42	0		0		15	248		15	214	3
	Midday		44	0		0		18	337		22	345	15
	P.M.		45	0		0		15	362		17	361	19
Ave 272 / Road 108	Storage	185	*	S	175	*	S	230	*	S	260	*	S
	A.M.	25	85		19	57		32	253		78	179	
	Midday	21	49		28	58		20	150		50	147	
	P.M.	29	40		31	125		26	232		31	223	
Ave 272 / Mooney	Storage	S	*	S	S	*	S	470	DNS	S	480	DNS	S
	A.M.		295			208		3			0		
	Midday		373			XX		8			3		
	P.M.		XX			XX		53			5		
Ave 268 / Mooney	Storage	S	800	NS	S	*	S	480	*	S	475	*	S
	A.M.		32	0		42		84	237		57	255	
	Midday		104	5		25		79	272		54	330	
	P.M.		159	37		28		133	454		80	560	

\* Greater than 1,000 feet to next signalized or all-way stop controlled intersection.

+ Connects to a two-way left-turn lane that provides additional storage.

XX Where Synchro calculates very high delays and volume-to-capacity ratios, the software is unable to calculate a meaningful queue length. A specific threshold is not indicated as the analysis incorporates various variables.

See Section 1.5 for a list of abbreviations

### **13.5 – 20-Year Cumulative With Project Transit, Bicycle, and Pedestrian Facilities**

The proposed Project is not expected to impede or interfere with existing transit, bicycle, and pedestrian facilities.

### **13.6 – 20-Year Cumulative With Project Potentially-Significant Impacts and Mitigation Measures**

The cumulative 20-year potentially-significant impacts are described below, followed by the recommended mitigation measure or action.



**Impact 20-1**

At the intersection of Caldwell Avenue and Dans Street, the cumulative effect of the Project and regional growth will cause LOS F during the a.m. and p.m. peak hours and LOS E during the midday peak hour.

**Recommendation 20-1**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted and if the City desires traffic signals closely spaced from County Center Drive. If the City anticipates installation of traffic signals in the future, the Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

**Impact 20-2**

At the intersection of Cameron Avenue and Stonebrook Street, the cumulative effect of the Project and regional growth will cause LOS F during the peak hours.

**Recommendation 20-2**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. The Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

**Impact 20-3**

At the intersection of Cameron Avenue and West Street, the cumulative effect of the Project and regional growth will cause LOS F during the peak hours.

**Recommendation 20-3**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. The Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

**Impact 20-4**

At the intersection of Visalia Parkway and Dans Street, the cumulative effect of the Project and regional growth will cause LOS F during the a.m. peak hour.

**Recommendation 20-4**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted and if the City desires traffic signals closely spaced from County Center Drive. If the City anticipates installation of traffic signals in the future, the Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

**Impact 20-5**

At the intersection of Visalia Parkway and County Center Drive, the cumulative effect of the Project and regional growth will cause LOS F during the peak hours.

### **Recommendation 20-5**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. The Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

### **Impact 20-6**

At the intersection of Visalia Parkway and the Main Site Access, the intersection would operate at LOS F during all three peak hours with two-way stop control.

### **Recommendation 20-6**

Considering the anticipated heavy minor street volumes and heavy turning movements over numerous hours per day, and that the peak-hour traffic signal warrant is expected to be satisfied in the existing-plus-Project condition, it is recommended that traffic signals be installed at the intersection. The proposed driveway should be aligned with the existing driveway on the north side of Visalia Parkway to facilitate signalization. The intersection should be designed to accommodate the ultimate planned lane configurations; however, the minimum lane configurations required in the 20-year condition are as follows:

Eastbound: one left-turn lane, one through lane, and one right-turn lane

Westbound: one left-turn lane and one through lane with a shared right turn

Northbound: one shared left-turn/through and one right-turn lane

Southbound: one shared left-turn/through/right-turn lane (existing driveway)

The main site access intersection was analyzed as a full opening as proposed by the Project; and preventing left turns at the intersection is not recommended. It is noted that the proposed main site access is opposite an existing driveway at the Target Shopping Center to the north, and there is another existing Target Shopping Center driveway located east of the proposed main site access. These two existing driveways are currently full access openings with a total left-turn volume exiting the shopping center and turning left to eastbound Visalia Parkway of 153 vehicles during the midday peak hour and 135 vehicles during the p.m. peak hour. The proposed median on Visalia Parkway will eliminate left turns from the eastern existing Target driveway, and a  $\frac{3}{4}$  access opening at the main site access would also eliminate left turns out from a second Target driveway. Completely eliminating left turns out of both Target driveways will redirect the vehicles currently turning left, and is likely to result in a very high number of U-turns at the main site access from westbound to eastbound. The U-turn volume is likely to be on the order of 150 vehicles per hour, and since U-turns generally occur more slowly than left turns, the equivalent left turn volume may be on the order of 225 to 300 vehicles. This would be in addition to the Project trips that are expected to turn left into the proposed Project at the main site access (203 during the midday peak hour and 161 during the p.m. peak hour). It is our opinion that a  $\frac{3}{4}$  access at the proposed main site access would result in an overwhelming number of left and U-turns from westbound Visalia Parkway.

Furthermore, preventing lefts out from all of the proposed Project driveways would likely result in a substantial number of additional U-turns at Mooney Boulevard from eastbound to westbound on Visalia Parkway. There are currently 102 and 107 left turns from

eastbound Visalia Parkway to northbound Mooney Boulevard during the midday and p.m. peak hours, respectively. With the Project as proposed, it is estimated that these volumes will be on the order of 575 and 474, respectively, in the 20-year scenario, requiring two left turn lanes. Preventing left turns from the proposed Project to westbound Visalia Parkway would likely add 131 and 169 U-turns, respectively, resulting in projected totals of 706 and 643, respectively. Considering that U-turns occur more slowly, these values could operate at conditions equivalent to left-turn volumes as high as 837 and 812, respectively. The queue lengths associated with left-turn volumes in excess of 300 per hour per lane are expected to be substantial. Therefore, a full opening with traffic signals is recommended at the proposed main site access/Target driveway intersection.

#### **Impact 20-7**

At the intersection of Visalia Parkway and Stonebrook Street, the cumulative effect of the Project and regional growth will cause LOS F during the peak hours.

#### **Recommendation 20-7**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. The Project may be required to pay an equitable share of the cost of the future traffic signals if they are not already included in the development fee program.

#### **Impact 20-8**

At the intersection of Visalia Parkway and Mooney Boulevard, the cumulative effect of the Project and regional growth will cause LOS E during the midday peak hour and will cause the calculated 95<sup>th</sup> percentile queues to exceed the existing storage capacity in the left-turn lanes on the eastbound, westbound, and northbound approaches.

#### **Recommendation 20-8**

The intersection will require widening to the following minimum lane configurations to operate at acceptable levels of service:

- Eastbound: two left-turn lanes, one through lane, and one right-turn lane
- Westbound: two left-turn lanes, one through lane, and one right-turn lane
- Northbound: one left-turn lane, two through lanes, and one right-turn lane
- Southbound: one left-turn lane, three through lanes, and one right-turn lane

#### **Impact 20-9**

At the intersection of Avenue 272 and Mooney Boulevard, the cumulative effect of the Project and regional growth will exacerbate delays associated with the existing LOS F during all three peak hours.

#### **Recommendation 20-9**

Traffic signals are expected to mitigate the intersection to acceptable levels of service, if warranted. A roundabout would also mitigate the intersection to acceptable levels of service. An Intersection Control Evaluation Report (ICE) will eventually be required by Caltrans to identify the preferred control; it is recommended that the ICE report not be required as part of the environmental review. The ICE may be deferred until such time as

the intersection improvements are imminent. It is noted that Caltrans typically prefers that Sidra software be utilized to analyze roundabouts. In our experience, the Synchro software typically provides delay results that are greater the Sidra results. It is our opinion that, if the Synchro software indicates an acceptable LOS for a roundabout, then a roundabout may be considered as a feasible improvement. The ICE report, when prepared, should utilize Sidra software or the software required by Caltrans at that time. The Project may be required to pay an equitable share of the cost of the future traffic signals or roundabout at the discretion of the City of Visalia.

**13.7 – Summary of 20-Year Cumulative With Project Mitigated Conditions**

Tables 13.3 and 13.4 present a summary of the mitigated conditions. The mitigated intersection analyses sheets are presented in Appendix F.

**Table 13.3**  
**Mitigated Intersection Analysis Summary – 20-Year With Project**

Intersection	Control	A.M. Peak Hour		Midday Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Caldwell / Dans	Signals	10.5	B	9.2	A	10.8	B
Cameron / Stonebrook	Signals	23.3	C	20.1	C	26.0	C
Cameron / West	Signals	14.2	B	13.2	B	15.9	B
Visalia Pwy / Dans	Signals	18.9	B	9.8	A	10.0	A
Visalia Pwy / County Center	Signals	14.5	B	11.7	B	18.6	B
Visalia Pwy / Main Site	Signals	14.3	B	20.1	C	20.9	C
Visalia Pwy / Mooney	Signals	24.5	C	31.6	C	31.1	C
Visalia Pwy / Stonebrook	Signals	23.2	C	17.7	B	22.4	C
	Round	10.1	B	15.8	C	21.9	C

**Table 13.4**  
**Mitigated Queuing Analysis Summary – 20-Year With Project**

Intersection		Storage and Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Caldwell / Dans	A.M.	35	194		47	180			42			0	
	Midday	17	311		23	201			23			1	
	P.M.	27	370		35	226			5			7	
Cameron / Stonebrook	A.M.	50	143		278	130		77	81	45	39	158	
	Midday	85	214		196	186		86	76	58	60	162	
	P.M.	115	259		234	167		107	74	57	58	153	
Cameron / West	A.M.	123	194	0	4	244	0		31	0	7	6	28
	Midday	112	458	0	12	341	0		22	0	3	8	36
	P.M.	159	569	0	29	325	0		26	0	12	14	45
Visalia Pwy/ Dans	A.M.	145	192		7	312			0			48	
	Midday	33	245		14	292			6			32	
	P.M.	35	373		13	413			0			35	
Visalia Pwy/ County Center	A.M.	103	113			275					73		30
	Midday	64	139			332					95		29
	P.M.	158	164			567					139		43
Visalia Pwy/ Main Site	A.M.	59	184	12	93	179			58	44		16	
	Midday	101	187	29	172	174			110	49		119	
	P.M.	109	292	17	150	278			84	45		111	
Visalia Pwy/ Mooney	A.M.	159	182	47	161	247	0	143	273	38	48	206	40
	Midday	268	241	55	155	252	15	196	272	57	131	305	52
	P.M.	254	264	58	160	263	0	201	367	57	99	325	52
Visalia Pwy/ Stonebrook	A.M.	195	40			259					62		42
	Midday	250	87			153					89		42
	P.M.	275	125			288					116		48
Ave 272 / Mooney (Signals)	A.M.		51			44		54	318		9	202	
	Midday		58			34		41	345		31	494	
	P.M.		38			26		204	416		33	517	
Ave 272 / Mooney (Round)	A.M.		50			25			100			75	
	Midday		25			0			150			225	
	P.M.		25			0			275			300	

Lanes should be designed to accommodate the calculated queues and should consider the calculated queues in the 20-year scenario. The City of Visalia requires a minimum storage length of 300 feet. See Section 1.5 for a list of abbreviations

#### **14.0 – SITE CIRCULATION AND ACCESS**

As required by the City Procedures, a review of the proposed site plan is performed to identify potential issues related to on-site circulation and site access. The proposed plan appears to provide adequate circulation throughout the site.

Potential concerns include:

- The proximity of the northernmost convenience store internal driveway to the eastern site access driveway at Visalia Parkway, and
- The presence of parking stalls within the throat at the northern access on Mooney Boulevard.

Per the City Procedures, each site access driveway will require a right-turn deceleration lane based on the speed limits and traffic volumes on both Mooney Boulevard and Visalia Parkway.

A detailed analysis of each site access intersection is included in the intersection analysis sections of this report.

## 15.0 – SUMMARY OF POTENTIALLY-SIGNIFICANT IMPACTS AND RECOMMENDATIONS

Table 15.1 presents the study intersections at which the Project will either cause or contribute to a potentially-significant impact, and presents a summary of the recommendations determined for each analysis scenario.

**Table 15.1**  
**Summary of Recommendations**

Intersection	Project Scenario			
	Existing Plus Project*	Five-Year	10-Year	20-Year
Caldwell / Dans	2-1: Signals not warranted. Construct no improvements.	5-1: Equitable share if City chooses future signalization.	10-1: Same as Five-Year	20-1: Same as Five-Year
Cameron / Stonebrook	2-2: Signals not warranted. Construct no improvements.	5-2: Equitable share of traffic signals.	10-2: Same as Five-Year	20-2: Same as Five-Year
Cameron / West	2-3: Signals not warranted. Construct no improvements.	5-3: Equitable share of traffic signals.	10-3: Same as Five-Year	20-3: Same as Five-Year
Visalia Pwy / Dans	2-4: Signals not warranted. Construct no improvements.	5-4: Equitable share if City chooses future signalization.	10-4: Same as Five-Year	20-4: Same as Five-Year
Visalia Pwy / County Center	2-5: Signals not warranted. Construct no improvements.	5-5: Equitable share of traffic signals.	10-5: Same as Five-Year	20-5: Same as Five-Year
Visalia Pwy / Main Site	2-6: Install traffic signals.	5-6: Same as Five-Year	10-6: Same as Five-Year	20-6: Same as Five-Year
Visalia Pwy / Stonebrook				20-7: Equitable share of traffic signals.
Visalia Pwy / Mooney	2-7: Install median and widen intersection.	5-7: Same as Five-Year	10-7: Same as Five-Year	20-8: Same as Five-Year with additional lane.
Ave 272 / Mooney	2-8: Signals not warranted. Construct no improvements.	5-8: Equitable share of traffic signals or roundabout.	10-8: Same as Five-Year	20-9: Same as Five-Year

\* The conclusions for the existing-plus-Phase 1 scenario are the same as the existing-plus-Phases 1 and 2 scenario.

Where required cumulative improvements are not included in a traffic impact fee to be paid by the Project and the Project is not 100-percent responsible for the improvement, the Project's financial responsibility for the improvement can be determined based on equitable share calculations. Caltrans recommends the following equation as presented in the Caltrans

*Guide for the Preparation of Traffic Impact Studies* to determine a project’s equitable share of the cost of improvements to State facilities:

$$P = \frac{T}{T_B - T_E}$$

where:

- P = The equitable share of the project’s traffic impact;
- T = The project trips generated during the peak hour of the adjacent State Highway facility;
- T<sub>B</sub> = The forecasted (cumulative with project) traffic volume on the impacted State highway facility;
- T<sub>E</sub> = The existing traffic on the State Highway facility plus approved projects traffic.

Table 15.2 presents equitable share responsibility calculations for the 20-year recommendations based on p.m. peak hour trips.

**Table 15.2**  
**Equitable Share Responsibility Calculations – P.M. Peak Hour**

Location	Project Trips	Existing Volume	20-Year Volume	Equitable Share
Caldwell / Dans	91	1,856	2,326	19.4%
Cameron / Stonebrook	117	1,543	2,501	12.2%
Cameron / West	117	1,425	1,790	32.1%
Visalia Pwy / Dans	96	932	1,247	30.5%
Visalia Pwy / County Center	167	1,043	1,597	30.1%
Visalia Pwy / Main Site				100%
Visalia Pwy / Mooney	638	2,640	3,927	49.6%
Visalia Pwy / Stonebrook	53	416	1,501	4.9%
Ave 272 / Mooney	321	2,346	3,226	36.5%



## **16.0 – CONCLUSIONS**

Generally-accepted traffic engineering principles and methods were employed to estimate the number of trips expected to be generated by the Project, to analyze the existing traffic conditions, and to analyze the traffic conditions projected to occur in the future.

The conclusion of the traffic impact analysis is that the Project is likely to cause or contribute to potentially-significant traffic impacts as identified in this report. Recommended mitigation measures or actions are summarized in Table 15.1.

In general, it is recommended that the Project construct traffic signals at the main site access driveway on Visalia Parkway and widening at the intersection of Visalia Parkway and Mooney Boulevard. The Project may also be required to contribute an equitable share to future intersections improvements if those improvements are not included in the City of Visalia development fee program.

**DEPARTMENT OF TRANSPORTATION****DISTRICT 6**

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a California Way of Life.*

November 12, 2019

06-TUL-63-5.45

TIA

VISALIA PARKWAY DEVELOPMENT (6)

**SENT VIA EMAIL**

Mr. Cristobal Carrillo, Associate Planner  
City of Visalia – Community Development Dept., Planning Division  
315 East Acequia Avenue  
Visalia, CA 93291

Dear Mr. Carrillo:

Thank you for the opportunity to review the Transportation Impact Analysis (TIA) that was prepared for a proposed retail commercial development. The TIA indicates the proposed development will be constructed in 2 phases. Phase 1 of the Project covers approximately 14.68 acres and will include a total of 136,900 square feet (sq. ft.) of building area as follows:

- Buildings A (Shop) with drive through at 10,000 sq. ft.;
- Buildings B (Shop) with drive through at 10,000 sq. ft.;
- Convenience Store at 3,100 sq. ft., with 6 gas pumps (12 dispensers);
- Restaurant at 7,200 sf. ft.;
- Quick Serve Restaurant with drive through at 3,000 sq. ft.;
- Quick Serve Restaurant with drive through at 5,000 sq. ft.;
- Automotive Building at 12,000 sq. ft.;
- Major Retail Building #1 at 56,800 sq. ft.;
- Major Retail Building #2 at 29,800 sq. ft.

Phase 2 will encompass approximately 12.48 acres (Outlots 1, 2, 3) located west of Phase 1. For the purpose of this TIA, a 70,000 square-foot retail building is assumed to be developed in phase 2, as it represents the worst-case scenario. Outlot 2 is not considered part of the Project. Any future development of Outlot 2 would share access with Phase 1. For the purpose of the cumulative analyses, an assumption is made that 100 units of senior housing would be developed on Outlot 2 in the future. The TIA states that the senior housing development on Outlot 2 is included in the Five-Year Cumulative with Project analyses.

The 27.16-acre project site is located at the southwest corner of State Route (SR) 63 and Visalia Parkway (Avenue 276) intersection.

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Local Development -Intergovernmental Review (LD-IGR) Program reviews land use projects and plans through the lenses of our mission and state planning priorities of infill, conservation, and travel-efficient development. To ensure a safe and efficient transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all development projects that utilize the multimodal transportation network.

*"Provide a safe, sustainable, integrated and efficient transportation system  
to enhance California's economy and livability"*

Caltrans provides the *following comments* consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities:

1. The Project will have frontage along SR 63 and Visalia Parkway. SR 63 in the vicinity of the project is currently a 4-lane conventional highway with a curbed median and a posted speed limit of 45 mph.
2. Regarding Phase 2, Caltrans could not identify the trips generated by the development of Outlot 2, when comparing the turning movement data on Figures 9.2a, 8.2a, 4.4a and 4.5a. Please provide the information for review.
3. Regarding Project Trip Generation: The TIA indicates that the building area is used to calculate the trip generation for the Super Convenience Market/Gas Station. Caltrans acknowledges that the proposed convenience store is large (3,100 sq. ft.) and will accept the provided trip generation trips for this land use (Land Use 960). However, Caltrans recommends that for future developments like this where the number of fueling positions are high (in this case 12 fueling positions), the trip generation should be based on the fueling positions since this will yield the highest trip generation outcome.
4. Regarding the Five-Year Cumulative Conditions:
  - a. A commercial and residential development (97.5-acres) is being proposed on the southeast corner of SR 63/Mooney Boulevard and Visalia Parkway (directly across SR 63 to the east of the Project) and was reviewed by Caltrans in September 2019. Please note that this commercial and residential development is not included on the Pending and Approved Projects list (Table 8.1). Was this project proposed at the time the traffic counts were performed?
  - b. The Project is expected to widen Visalia Parkway along their frontage. Even though the analysis calls for one (1) westbound through-lane, Caltrans recommends the analysis should account for two (2) westbound through-lanes. Please note that the commercial and residential project identified in 3a is expected to be a high trip generator and Caltrans predicts that two left-turn lanes would be needed for northbound SR 63 at the Visalia Parkway intersection.
5. Regarding the Mitigated Intersection Analysis sheets (Appendix F): For the intersection of SR 63/Mooney Boulevard and Visalia Parkway (Intersection # 22), the TIA indicates that for the: Existing Plus Project Phase 1-PM-Mitigated, Existing Plus Project 1 and 2-AM-Mitigated, and Existing Plus Project 1 and 2-Midday-Mitigated scenarios have been analyzed with a *single* westbound left-turn lane. However, the analysis calls for *two* westbound left-turn lanes. Please revise.
6. Regarding the Site Plan:
  - a. The site plan shows two proposed driveways connected to SR 63 and two driveways connecting to Visalia Parkway. However, the TIA indicates that potentially another driveway would be connected to Visalia Parkway on the western edge of the site (Outlot 2).

**Mr. Cristobal Carrillo – TIA VISALIA PARKWAY DEVELOPMENT**

**November 12, 2019**

**Page 3**

- b. Currently, the Project proposes a driveway connected to SR 63 near the southern property line, which would have a median opening to allow left turns into the site. The northern driveway connected to SR 63 will be right-in/right-out only.**
  
- c. The Project should widen and improve SR 63 along its frontage to accommodate three (3) southbound through lanes, turn lanes, standard shoulders, plus additional width for bike facilities. Caltrans recommends these improvements should be mentioned in the TIA analysis as part of Project's opening day improvements, in addition, to the proposed mitigation measures identified under Existing-Plus Project Phase 1 and 2 conditions.**

**If you have any other questions, please call me at (559) 488-7396.**

**Sincerely,**



**DAVID DEEL**  
**Associate Transportation Planner**  
**Transportation Planning – North**

**DEPARTMENT OF TRANSPORTATION****DISTRICT 6**

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*Making Conservation  
a California Way of Life.*

December 12, 2019

06-TUL-63-5.45  
RESPONSE TO COMMENTS ON TIA  
VISALIA PARKWAY DEVELOPMENT (7)

**SENT VIA EMAIL**

Mr. Cristobal Carrillo, Associate Planner  
City of Visalia – Community Development Dept., Planning Division  
315 East Acequia Avenue  
Visalia, CA 93291

Dear Mr. Carrillo:

Caltrans *concur*s with the Response to Comments technical memo dated November 26, 2019 regarding Caltrans comment letter dated November 12, 2019 on the Traffic Impact Analysis for the proposed Commons Retail Shopping Center at Visalia Parkway.

If you have any other questions, please call me at (559) 488-7396.

Sincerely,

A handwritten signature in black ink, appearing to read "David Deel".

DAVID DEEL  
Associate Transportation Planner  
Transportation Planning – North

# CarMax Development

## Noise Study Report September 2019

**Prepared for:**

QK

901 East Main Street

Visalia, CA. 93292

**Prepared by:**

VRPA Technologies, Inc.

4630 W. Jennifer, Suite 105

Fresno, CA 93722

Project Manager: Jason Ellard



---

# **CarMax Development Noise Study Report**

## **Study Team**

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  - ✓ **Jason Ellard, Transportation Engineer, VRPA Technologies, Inc., [jellard@vrpatechnologies.com](mailto:jellard@vrpatechnologies.com), (559) 271-1200**
-

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## Executive Summary

This Noise Study Report (NSR) has been prepared for the purpose of identifying potential noise impacts that may result from the proposed CarMax Development, which seeks to develop an auto dealership on a 5-acre parcel in the City of Visalia. The Project is located at the southwest corner of the Mooney Boulevard (SR 63) and Visalia Parkway intersection. The Project will be located to the east of the Westlake Village Senior Community.

The Project building areas would comprise approximately 8,526 square feet and would accommodate sales, presentation, and retail areas, supporting auto service/repair facilities and a dealership service carwash. The main dealership sales and service/repair building would be centrally located within the Project site, with the proposed dealership carwash located along the western boundary of the site. Vehicle inventory areas would be located along the Project site's northerly Visalia Parkway frontage. Customer and employee parking areas would be located in the easterly portion of the Project site. Access to the Project would be provided by Stop-controlled driveways connecting to Visalia Parkway and Mooney Boulevard.

### IMPACTS

#### Exterior Noise Analysis

##### Traffic Noise

Traffic volumes associated with the Project in addition to existing traffic along roadway segments in the study area were entered into the model to estimate noise levels at various receivers that would be affected by the Project. Tables E-1 and E-2 show the predicted noise levels at sensitive receivers in the Project area that could potentially be exposed to high noise levels due to the Project's proximity to existing street traffic. Results of the analysis show that none of the sensitive receivers will exceed Tulare County's Land Use Compatibility for Community Noise Environments. As a result, the Project will not create a significant impact at sensitive receptors in the study area.

##### Stationary Noise

Major noise sources identified on the Project site are related to the operation of the carwash and vehicle maintenance area. Table E-3 shows the predicted noise generation of the individual on-site noise sources at the nearest residence. Based on the decibel addition methodology found in Caltrans' Technical Noise Supplement, it was determined that the maximum noise level experienced at the nearest residence is approximately 65 dBA. It was also determined that the hourly equivalent sound level experienced at the nearest residence is approximately 50 dBA. Therefore, on-site operations from the Project will have a less than significant impact on the nearest residence west of the Property's boundary.



**Table E-1**  
**Existing Plus Project Noise Levels**

Receiver ID No.	Location	Distance from Noise Source-Roadway Centerline (feet)	Existing Plus Project Noise Level Leq(h) dBA	City of Visalia's Transportation Noise Source Criterion	Impact
1	Open Area located along Visalia Parkway, west of Mooney Boulevard	15	69.0	--	--
2	Residential (Westlake Village) area located south of Visalia Parkway	200	52.0	65.0	None

Source: VRPA Technologies, 2019

**Table E-2**  
**Cumulative Year 2040 Noise Levels**

Receiver ID No.	Location	Distance from Noise Source-Roadway Centerline (feet)	Cumulative Year 2040 Without Project Noise Level Leq(h) dBA	Cumulative Year 2040 Plus Project Noise Level Leq(h) dBA	Noise Increase (+) or Decrease (-)	City of Visalia's Transportation Noise Source Criterion	Impact
1	Open Area located along Visalia Parkway, west of Mooney Boulevard	15	70.0	70.0	0.0	--	--
2	Residential (Westlake Village) area located south of Visalia Parkway	200	54.0	54.0	0.0	65.0	None

Source: VRPA Technologies, 2019

**Table E-3**  
**Project On-Site Noise Sources**

Area	Hourly Equivalent Sound Level Leq dBA	Maximum Sound Level, dBA	City of Visalia's Stationary Noise Source Criterion	Impact
Westlake Village Senior Community	50.0	65.0	50 L <sub>eq</sub> (h) / 70 L <sub>max</sub>	No / No

Source: VRPA Technologies, 2019

## CEQA ENVIRONMENTAL CHECKLIST

In accordance with the California Environmental Quality Act (CEQA), the effects of a Project were evaluated to determine if they will result in significant adverse impacts on the environment. The criteria used to determine the significance of a noise impact are based on the following thresholds of significance, which come from Appendix G of the CEQA Guidelines. Accordingly, noise impacts resulting from the Project are considered significant if the Project would result in:

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

### Short-Term Impacts

Implementation of the Project has the potential to result in short-term construction noise impacts to surrounding land uses due to construction activities. Construction noise represents a short-term impact on ambient noise levels. Although most of the types of exterior construction activities associated with the Project will not generate continually high noise levels, occasional single-event disturbances from grading and construction activities are possible. Table 5 depicts typical construction equipment noise. Construction equipment noise is controlled by the EPA's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations).

During the construction phase of the Project, noise from construction activities will add to the ambient noise environment in the immediate area. Activities involved in construction would generate maximum noise levels, as indicated in Table 5, ranging from 77 to 85dB at a distance of 50 feet. Construction activities will be temporary in nature and are expected to occur during normal daytime working hours in compliance with the City Noise Ordinance. Therefore, noise resulting from short-term, transient construction activity will not result in significant adverse impacts to nearby sensitive receptors.

***MM Noise 1 - Compliance with Section 8.36 of the City's Municipal Code and City Noise Ordinance.***

### Long-Term Impacts

#### Traffic Noise

Tables E-1 and E-2 show the predicted noise levels at sensitive receivers in the study area as a result of adding traffic associated with the Project. Results of the analysis show that none of the sensitive receivers will exceed the Tulare County's Land Use Compatibility for Community Noise Environments criteria for the Existing Plus Project and Cumulative Year



2040 scenarios. As a result, Project traffic will not create a significant impact at sensitive receptors in the study area. The Project generates an increase of less than 1 dB with the addition of Project traffic to the surrounding roadway network considering the Cumulative Year 2040 scenario. Implementation of the Project will not result in significant adverse impacts from traffic noise levels within the Project study area. Therefore, no mitigation measures are needed.

#### Stationary Noise

Table E-3 indicates that that maximum noise levels at the sensitive receivers (Westlake Village) directly to the west of the Project site would not exceed 65 dBA considering noise generated by the air cannon dryer system and the vehicle maintenance area. In addition, results of the analysis show that hourly noise levels at the sensitive receivers directly to the west of the Project site would not exceed 50 dBA considering noise generated by the carwash and the vehicle maintenance area.

b) Generation of excessive ground-borne vibration or ground-borne noise levels?

Vibration levels from various types of construction equipment are shown in Table 6. The primary concern with construction vibration is building damage. Therefore, construction vibration is generally assessed in terms of peak particle velocity (PPV). It should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provides a reasonable estimate for a wide range of soil conditions.

Despite the perceptibility threshold of about 65 VdB, human reaction to vibration is not significant unless the vibration exceeds 75 VdB according to the United States Department of Transportation. The City of Visalia Municipal Code does not specifically identify vibration level impact standards. Caltrans has established vibration thresholds in terms of human annoyance of 0.04 in/sec PPV as documented in Caltrans' Transportation and Construction Vibration Guidance Manual. The vibration threshold of 0.04 in/sec PPV was used to estimate the impact of vibrations from construction activities associated with the Project.

Using the vibratory roller vibration level shown in Table 6 (PPV 0.210), the anticipated vibration velocity levels at the nearest residence of the Westlake Village are expected to approach 0.031 in/sec PPV. Based on the vibration velocity levels provided in Table 6, vibrations generated by the construction phase of the Project are considered less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive



**noise levels?**

The Project is not located within the vicinity of a private airstrip or an airport land use plan or within two miles of a public airport or public use airport. The Visalia Municipal Airport (VIS) is the closest public use airport and is located approximately 4.5 miles northwest of the Project site. Therefore, the Project will not result in the stated impact.

# 1.0 Introduction

## 1.1 Description of the Region/Project

This Noise Study Report (NSR) has been prepared for the purpose of identifying potential noise impacts that may result from the proposed CarMax Development, which seeks to develop an auto dealership on a 5-acre parcel in the City of Visalia. The Project is located at the southwest corner of the Mooney Boulevard (SR 63) and Visalia Parkway intersection. The Project will be located to the east of the Westlake Village Senior Community. Figures 1 and 2 show the location of the Project along with major roadways and highways. Figure 3 provides the site plan prepared for the Project.

The Project building areas would comprise approximately 8,526 square feet and would accommodate sales, presentation, and retail areas, supporting auto service/repair facilities and a dealership service carwash. The main dealership sales and service/repair building would be centrally located within the Project site, with the proposed dealership carwash located along the western boundary of the site. Vehicle inventory areas would be located along the Project site's northerly Visalia Parkway frontage. Customer and employee parking areas would be located in the easterly portion of the Project site. Access to the Project would be provided by Stop-controlled driveways connecting to Visalia Parkway and Mooney Boulevard.

CarMax dealerships physically separate inventory areas from customer and employee parking areas. This facilitates loss prevention and improves operational efficiency and safety. All inventory display areas would be separated from the general public by means of guardrails, gates and fencing. Ornamental wrought-iron fencing or other means acceptable to the City would be used to separate customer and employee parking areas from vehicle display areas.

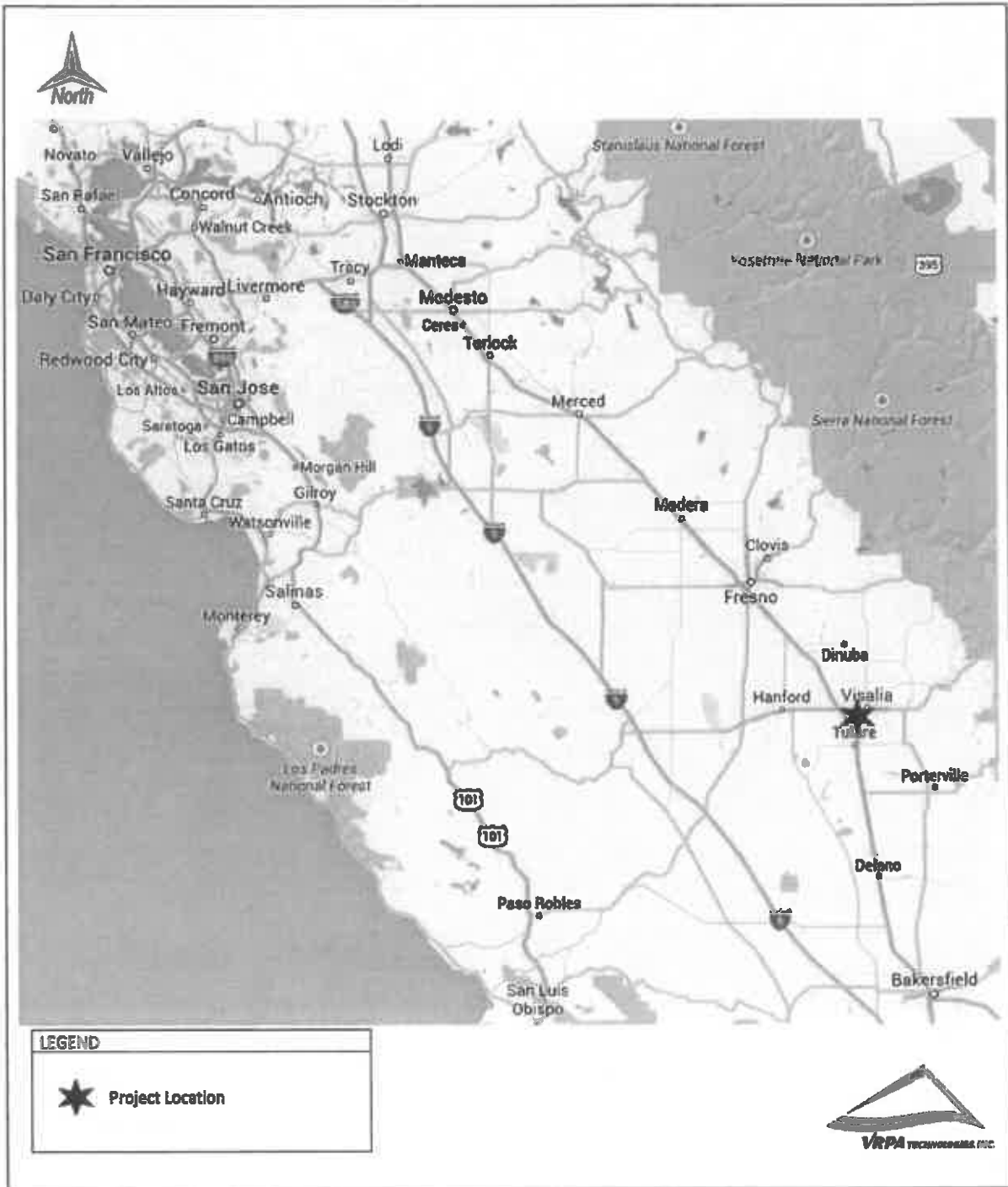
The Project will offer retail vehicle service (primarily routine maintenance, tires, diagnostics, and mileage services). Vehicles repairs covered under service plans is also provided. All service work would be performed inside fully air-conditioned buildings equipped with rollup doors, eliminating the need to conduct operations with open bay doors.

Retail service vehicles and vehicles awaiting disposition off-site would be stored in a secured non-public staging area on a temporary basis. The staging area would be secured and screened by screening/security features considered appropriate by the City. A proposed dealership carwash would be located southwest of the main dealership/service building, adjacent to the dealership vehicle sales staging area. This carwash would be available for washing of inventory and serviced vehicles but would not be accessible to the general public.



CarMax Development  
Regional Location

Figure  
1



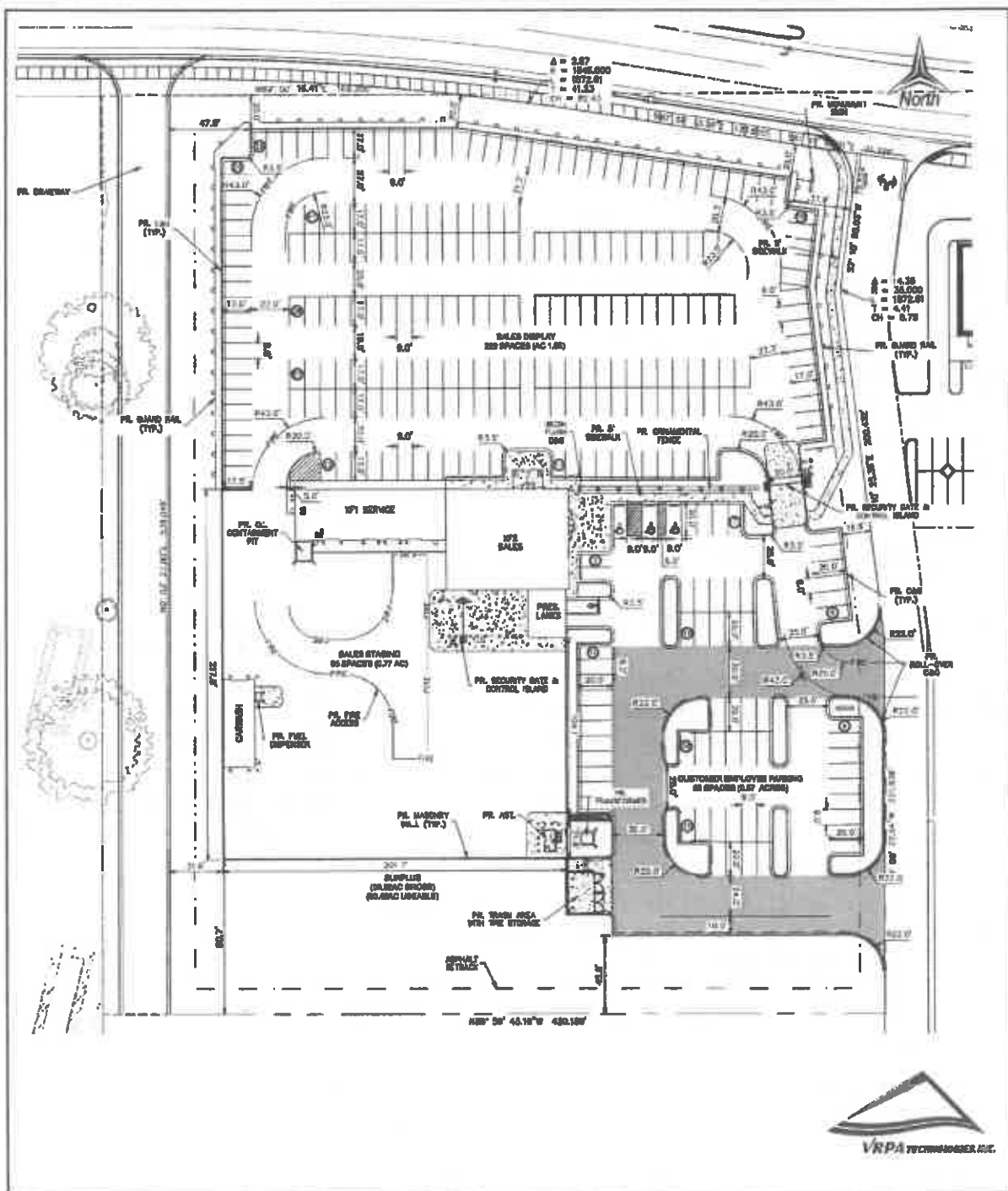
**CarMax Development  
Project Location**

**Figure  
2**



CarMax Development  
Project Site Plan

Figure  
3



When preparing an NSR, guidelines set by the City of Visalia must be followed. In analyzing noise levels, the guidelines and policies in the Noise section of the City of Visalia's Noise adopted General Plan was utilized. Unless otherwise stated, all sound levels reported are in A-weighted decibels (dBA). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards use A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

## 1.2 Sound and the Human Ear

Sound levels are presented on a logarithmic scale to account for the large range of acoustic pressures that the human ear is exposed to and is expressed in units of decibels (dB). A decibel is defined as the ratio between a measured value and a reference value usually corresponding to the lower threshold of human hearing defined as 20 micropascals ( $\mu\text{Pa}$ ). Noise can generally be described as unwanted sound and has been cited as being a health problem, not just in terms of actual physiological damages such as hearing impairment, but also in terms of inhibiting general wellbeing and contributing to stress and annoyance. Long or repeated exposure to sounds at or above 85 dB can cause hearing loss. The louder the sound, the shorter the time period before hearing loss can occur. Sounds of less than 75 dB are unlikely to cause hearing loss even after long exposure.<sup>1</sup>

### 1.2.1 A-Weighted Decibels

Sound pressure level alone is not a reliable indicator of loudness. The frequency, or pitch, of a sound also has a substantial effect on how humans will respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear. Human hearing is limited not only in the range of audible frequencies but also in the way it perceives the SPL in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, and it perceives a sound within that range as being more intense than a sound of higher or lower frequency with the same magnitude. To approximate the frequency response of the human ear, a series of SPL adjustments is usually applied to the sound measured by a sound level meter. The adjustments (referred to as a weighting network) are frequency dependent. The A-scale weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-scale, C-scale, D-scale), but these scales are rarely, if ever, used in conjunction with highway traffic noise. Noise levels for traffic noise reports are typically reported in terms of A-weighted dBAs. In environmental noise studies, A-weighted SPLs are commonly referred to as noise levels.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise, or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of

---

<sup>1</sup> Source: National Institute on Deafness and Other Hearing Disorders



the wide variation in individual thresholds of annoyance, and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment, referred to as the "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the hearers. Regarding increases in A-weighted noise level, knowledge of the following relationships will be helpful in understanding this report:

1. Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans.
2. Outside of the laboratory, a 3 dB change is considered a just-perceivable difference.
3. A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
4. A 10 dB change is subjectively heard as approximately a doubling in loudness.

### **1.2.2 Sound Pressure Levels and Decibels**

Because of the ability of the human ear to detect a wide range of sound pressure fluctuations, sound pressure levels are expressed in logarithmic units called decibels. The sound pressure level in decibels is calculated by taking the log of the ratio between the actual sound pressure and the reference sound pressure squared. The reference sound pressure is considered the absolute hearing threshold. In addition, because the human ear is not equally sensitive to all sound frequencies, a specific frequency-dependent rating scale was devised to relate noise to human sensitivity. A dBA scale performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. The basis for comparison is the faintest sound audible to the average ear at the frequency of maximum sensitivity. This dBA scale has been chosen by most authorities for purposes of environmental noise regulation. Typical indoor and outdoor noise levels are presented in Figure 4 (Common Environmental Sound Levels).

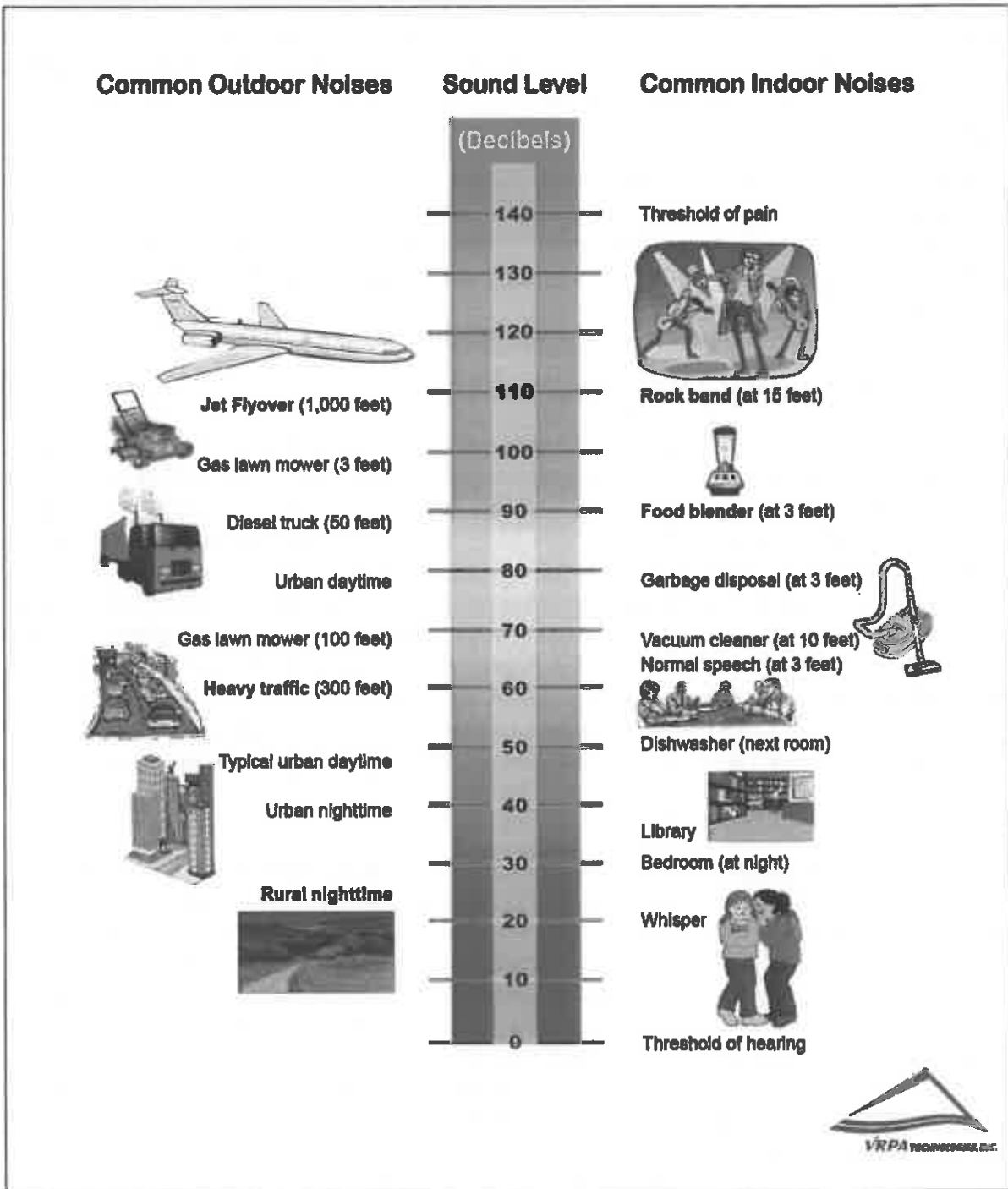
### **1.2.3 Sound, Noise, and Acoustics**

Sound is a disturbance created by a moving or vibrating source in a gaseous or liquid medium or the elastic stage of a solid and is capable of being detected by the hearing organs. Sound may be thought of as the mechanical energy of a vibrating object transmitted by pressure waves through a medium to a hearing organ, such as a human ear. For traffic sound, the medium of concern is air. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired. Sound is actually a process that consists of three components: the sound source, the sound path, and the sound receiver. All three components must be present for sound to exist. Without a source to produce sound, there is no sound. Likewise, without a medium to transmit sound pressure waves, there is also no sound. Finally, sound must be received; a hearing organ, sensor, or object must be present to perceive, register, or be affected by sound or noise. In most situations, there are many different sound sources, paths, and receivers rather than just one of each. Acoustics is the field of science that deals with the production, propagation, reception, effects, and control of sound.



CarMax Development  
Common Environmental Sound Levels

Figure  
4



#### 1.2.4 Frequency and Hertz

A continuous sound can be described by its frequency (pitch) and its amplitude (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch, like the low notes on a piano, whereas high-frequency sounds are high in pitch, like the high notes on a piano. Frequency is expressed in terms of oscillations, or cycles, per second. Cycles per second are commonly referred to as Hertz (Hz). A frequency of 250 cycles per second is referred to as 250 Hz. High frequencies are sometimes more conveniently expressed in units of kilo-Hertz (kHz), or thousands of Hertz. The extreme range of frequencies that can be heard by the healthiest human ear spans from 16–20 Hz on the low end to about 20,000 Hz (or 20 kHz) on the high end.

#### 1.2.5 Addition of Decibels

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces an SPL of 70 dBA as it passes an observer, two cars passing simultaneously would not produce 140 dBA; they would, in fact, combine to produce 73 dBA. When two sounds of equal SPL are combined, they will produce a combined SPL 3 dBA greater than the original individual SPL. In other words, sound energy must be doubled to produce a 3 dBA increase. If two sound levels differ by 10 dBA or more, the combined SPL is equal to the higher SPL; in other words, the lower sound level does not increase the higher sound level.

### 1.3 Characteristics of Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations.

Noise generated by mobile sources typically attenuates (is reduced) at a rate between 3.0 and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance.

Noise generated by stationary sources typically attenuates at a rate between 6.0 and about 7.5 dBA per doubling of distance. Sound levels can be reduced by placing barriers between the noise source and the receiver (commonly called the “receptor”). In general, barriers contribute to decreasing noise levels only when the structure breaks the “line of sight” between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise, but are less effective than solid barriers.

### 1.3.1 Noise Descriptors

Noise in the daily environment fluctuates over time. Some of the fluctuations are minor; some are substantial. Some noise levels occur in regular patterns; others are random. Some noise levels fluctuate rapidly, others slowly. Some noise levels vary widely; others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following is a list of the noise descriptors most commonly used in traffic noise analysis:

1. **Equivalent Sound Level (Leq)** - Leq represents an average of the sound energy occurring over a specified period. Leq is, in effect, the steady-state sound level that, in a stated period, would contain the same acoustical energy as the time-varying sound that actually occurs during the same period. The one-hour A-weighted equivalent sound level, Leq(h), is the energy average of the A-weighted sound levels occurring during a one-hour period and is the basis for the Noise Abatement Criteria (NAC) used by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA).
2. **Percentile-Exceeded Sound Level (Lx)** - Lx represents the sound level exceeded for a given percentage of a specified period. For example, L10 is the sound level exceeded 10 percent of the time, and L90 is the sound level exceeded 90 percent of the time.
3. **Maximum Sound Level (Lmax)** - Lmax is the highest instantaneous sound level measured during a specified period.

### 1.3.2 Sound Propagation

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise reduces with distance depends on the following factors:

1. **Geometric Spreading** - Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of six dBA for each doubling of distance. Highway noise is not a single, stationary point source of sound. The movement of the vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a line source) rather than a point. This line source results in cylindrical spreading rather than the spherical spreading that results from a point source. The change in sound level from a line source is 3 dBA per doubling of distance.
2. **Ground Absorption** - Most often, the noise path between the highway and the observer is very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is done for simplification only; for distances of less than 60 m (200 ft), prediction results based on this scheme are sufficiently accurate. For acoustically hard sites (i.e., those sites with a reflective surface, such as a parking lot or a smooth body of water, between the source and the receiver), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface, such



as soft dirt, grass, or scattered bushes and trees, between the source and the receiver), an excess ground attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.

3. **Atmospheric Effects** - Research by Caltrans and others has shown that atmospheric conditions can have a significant effect on noise levels within 60 m (200 ft) of a highway. Wind has been shown to be the most important meteorological factor within approximately 150 m (500 ft) of the source, whereas vertical air temperature gradients are more important for greater distances. Other factors such as air temperature, humidity, and turbulence also have significant effects. Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lower noise levels. Increased sound levels can also occur as a result of temperature inversion conditions (i.e., increasing temperature with elevation).
4. **Shielding by Natural and Human-Made Features** - A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by this shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dBA of noise reduction.

## 1.4 Ground-borne Vibration

Annoyance to humans and damage to buildings are the two ground-borne vibration impacts of general concern. The two measurements corresponding to human annoyance and building damage for evaluating ground-borne vibration are peak particle velocity (PPV) and root-mean square (RMS) velocity. PPV is the maximum instantaneous positive or negative peak of the vibration signal, measured as a distance per time (such as millimeters or inches per second). This measurement has been used historically to evaluate shock-wave type vibrations from actions like blasting, pile driving, and mining activities, and their relationship to building damage. RMS is an average, or smoothed, vibration amplitude, commonly measured over 1-second intervals. It is expressed on a log scale in decibels (VdB) referenced to  $0.000001 \times 10^{-6}$  inch per second and is not to be confused with noise decibels. It is more suitable for addressing human annoyance and characterizing background vibration conditions because it better represents the response time of humans to ground vibration signals.

## 1.5 Methodology

When preparing an NSR, guidelines set by affected agencies must be followed. Acoustical terminology used for this NSR is documented in Appendix A. In analyzing traffic noise levels, the FHWA Highway Traffic Noise Prediction methodology must be applied. Safety concerns must also

be analyzed to determine the need for appropriate mitigation resulting from increased noise due to increased traffic and other evaluations such as the need for noise barriers and other noise abatement improvements. Stationary noise levels were evaluated using Section 2.1.4 of the California Department of Transportation's (Caltrans) Technical Noise Supplement which evaluates the decrease in noise as distance from the noise source increases. Unless otherwise stated, all sound levels reported are in A-weighted decibels (dBA). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards use A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

### 1.5.1 California Environmental Quality Act (CEQA)

CEQA requires environmental impact reports to evaluate whether and to what extent a proposed project may result in significant effects on the environment. If a project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are also evaluated and determined to not be feasible. An EIR is also required to evaluate a reasonable range of alternatives to the proposed Project that could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. An EIR must also evaluate a "No Project" Alternative. CEQA Guidelines Appendix G suggests the following as potential thresholds for determining whether a project will result in significant impacts on the environment:

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- b) Generation of excessive ground-borne vibration or ground-borne noise levels?
- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

### 1.5.2 City of Visalia

The Safety and Noise section of the City of Visalia's currently adopted 2014 General Plan serves as the primary policy statement for the City for implementing policies to maintain and improve the noise environment in the City of Visalia. The Safety and Noise section presents Goals and Objectives relative to planning for the noise environment within the City. Section 8.36 of the City's Municipal Code establishes exterior and interior noise standards. Future noise/land use incompatibilities can be avoided or reduced with implementation of City of Visalia's noise criteria and standards. The City of Visalia realizes that it may not always be possible to avoid constructing noise-sensitive developments in existing noisy areas and therefore provides noise reduction strategies to be implemented in situations with potential noise/land use conflicts. It should be

noted that the City of Visalia does not have specific zoning or general plan requirements related to vibration.

Table 1 shows the City of Visalia’s maximum allowable noise exposure from Transportation Noise Sources as depicted in the City of Visalia General Plan. Table 2 shows the City of Visalia’s maximum allowable noise exposure from Stationary Noise Sources. The information presented in Table 2 comes from Chapter 8.36 of the City of Visalia’s Municipal Code which contains the City of Visalia’s noise ordinance. It should be noted that the City of Visalia’s Municipal Code does not include criteria related to transportation noise sources.

**Table 1**  
**Transportation Noise Sources**

Noise-Sensitive Land Use	Outdoor Activity Areas <sup>1</sup>	Interior Spaces	
	DNL/CNEL <sup>2</sup> , dB	DNL/CNEL <sup>2</sup> , dB	L <sub>eq</sub> , dB <sup>3</sup>
Residential	65	45	--
Transient Lodging	65	45	--
Hospitals, Nursing Homes	65	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	65	--	45
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45

**Notes:**

(1) Outdoor activity areas generally include backyards of single-family residences and outdoor patios, decks or common recreation area of multi-family developments.

(2) The CNEL is used for quantification of aircraft noise exposure as required by CAC Title 21.

(3) As determined for a typical worst-case hour during periods of use.

-- = not applicable

DNL = Day-Night Average Level

CNEL = Community Noise Equivalent Level

dB = Decibels

L<sub>eq</sub> = Noise Equivalent Level



**Table 2**  
**Stationary Noise Sources<sup>1</sup>**

	Daytime (6:00 a.m. - 7:00 p.m.)	Nighttime (7:00 p.m. - 6:00 a.m.)
Hourly Equivalent Sound Level ( $L_{eq}$ ), dBA	50	45
Maximum Sound Level ( $L_{max}$ ), dBA	70	65

**Notes:**

(1) As determined at the property line of the receiving noise-sensitive use.

$L_{eq}$  = Noise Equivalent Level

$L_{max}$  = Maximum noise level recorded during a noise event

### 1.5.3 Study Methods and Procedures

#### Site Selection

Developed and undeveloped land uses in the project vicinity were identified through land use maps, aerial photography, and site inspection. Within each land use category, sensitive receptors were then identified. Land uses in the Project vicinity include agricultural, residential, and commercial uses. The generalized land use data and location of sensitive receptors were the basis for the selection of the noise monitoring and analysis sites.

#### Noise Level Measurement Program

Existing noise levels in the project vicinity were sampled during the PM peak hour because traffic counts conducted in the study area show a greater volume of traffic in the PM peak hour than the AM peak hour. All measurements were made using an Extech Type 2 sound level meter datalogger.

The following measurement procedure was utilized:

1. Calibrate sound level meter.
2. Set up sound level meter at a height of 1.5 m (5 ft).
3. Commence noise monitoring.
4. Collect site-specific data such as date, time, direction of traffic, and distance from sound level meter to the center of the roadway.
5. Stop measurement after 15 minutes.
6. Proceed to next monitoring site and repeat.



## 2.0 Existing Conditions

Existing noise levels in the City are principally generated by transportation noise sources. Vehicular traffic noise is the dominant source in most areas, but aircraft and rail activity are also significant sources of environmental noise in the local areas surrounding these operations. Noise is generated by either mobile or stationary sources.

- ✓ **Mobile source** noise is typically associated with transportation, such as cars, trains, and aircraft. The most significant sources of mobile noise in the City of Visalia are SR-198 and other major arterial roadways, the Visalia Municipal Airport, and the Burlington Northern and Union Pacific railroad lines.
- ✓ **Stationary** noise is that generated by any 'fixed' noise source. Examples of stationary sources include outdoor machinery (i.e. such as heating/air conditioning systems and power generators), farming activities, high voltage power lines, and industrial areas within the City. Noise generated from construction sites also falls into the category of stationary sources.

### 2.1 Traffic Noise

Highway and roadway traffic noise levels are generally dependent upon three primary factors, which include the traffic volume, the traffic speed, and the percent of heavy vehicles on the roadway. Traffic generated noise is the result of vehicle engines, exhaust, tires, and wind generated by taller vehicles. Vehicles with defective mufflers or faulty equipment have the propensity to increase traffic noise. Traffic noise levels are reduced by distance, terrain, vegetation, and natural/manmade obstacles between a noise receptor and the highway/roadway.

To assess existing noise conditions, VRPA Technologies staff conducted noise level measurements at one (1) location (called receivers) in the vicinity of the Project site and tabulated the results. The weather during the time of the noise measurements taken consisted of sunshine and wind speeds of less than 5 mph. The purpose of the measurements was to determine baseline existing noise levels in the Project area and to calibrate the FHWA Traffic Noise model, which will be used to then predict and assess future year conditions.

The receiver evaluated for this Project was located near residential uses along Visalia Parkway. The receiver locations are shown in Figure 5. One (1) additional receiver (2) was incorporated into the analysis to assess impacts of the Project to the backyard area of the residential area located to the west of the Project. The additional receiver is also reflected in Figure 5.

**CarMax Development  
Noise Receiver Locations**

**Figure  
5**



Table 3 characterizes the results of the existing noise conditions at the two (2) receivers evaluated in the study area.

**Table 3**  
**Existing Noise Levels**

Receiver ID No.	Location	Distance from Noise Source- Roadway Centerline (feet)	Existing Noise Level Leq(h) dBA
1	Open Area located along Visalia Parkway, west of Mooney Boulevard	15	68.0
2	Residential (Westlake Village) area located south of Visalia Parkway	200	52.0

Source: VRPA Technologies, 2019

Traffic noise exposure is mainly a function of the number of vehicles on a given roadway per day, the speed of those vehicles, the percentage of medium and heavy trucks in the traffic volume, and the receiver's proximity to the roadway. Every vehicle passage on every roadway in the City radiates noise.

Existing high noise levels along major streets and highways are generally caused by traffic and congestion. Potential impacts along these facilities are generally classified as follows:

- ✓ Low - Ldn 59 dB or below
- ✓ Moderate - Ldn 60 dB to 65 dB
- ✓ High - Ldn 66 dB or greater

The potential for adverse noise impacts is generally moderate to high along most segments of State highways and is generally low to moderate along most segments of City streets and highways.

## 2.2 Railroad Noise

The Union Pacific (UP), Burlington Northern & Santa Fe (BNSF), and San Joaquin Valley Railroad (SJVRR) provide freight service to Visalia, connecting Visalia and Tulare County to other major markets and destinations throughout California. Passenger rail service in Tulare County is provided by Amtrak on its San Joaquin service, with the nearest rail station located in the City of Hanford, approximately 22 miles west of the site. Railroad noise will not impact the Project study area since the nearest rail line is located 2 miles away.

## 2.3 Airport Noise

The Visalia Municipal Airport (VIS), located in the southeast quadrant of the SR 198 and SR 99 interchange, serves Tulare and eastern Kings County. The airport is primarily used for general aviation operations, including local and itinerant services. The airport, which is owned and operated by the City of Visalia, is home to over 150 aircraft, which generate approximately 80,000 annual operations. Noise generated from the airport will not impact the Project study area since the Project is located nearly 4.5 miles away and falls outside of the airport noise contour zones. The Project site occasionally experiences transient overflight noise which is not considered significant or adverse.

## 2.4 Stationary Noise

There are a wide variety of industrial and other non-transportation noise sources throughout the City of Visalia, including heavy industrial or manufacturing operations, food packaging and processing facilities, lumber mills, and car washes to name a few. Stationary noise generated from the Project could potentially impact the surrounding area.

The change in noise level due to distance for point sources is determined by the following formula, which comes from the California Department of Transportation's (Caltrans) Technical Noise Supplement to the Traffic Noise Analysis Protocol.

$$dBA_2 = dBA_1 + 10\log_{10}[(D_1/D_2)]^2 = dBA_1 + 20\log_{10}(D_1/D_2)$$

Where:

$dBA_1$  = noise level at distance  $D_1$

$dBA_2$  = noise level at distance  $D_2$

Stationary noise impacts to the Project will be developed considering the formula above and the closest distance between the Project site and stationary noise sources in the surrounding area.

## 2.6 Ground-borne Vibration

Ambient vibration levels in residential areas are typically 50 VdB, which is well below human perception. The operation of heating/air conditioning systems and slamming of doors produce typical indoor vibrations that are noticeable to humans. The most common exterior sources of ground vibration that can be noticeable to humans inside residences include construction activities, train operations, and street traffic. Table 4 provides some common sources of ground vibration and the relationship to human perception. This information comes from the Federal Transit Administration's "Basic Ground-Borne Vibration Concepts."



**Table 4**  
**Typical Levels of Ground-Borne Vibration**

Human/Structural Response	Velocity Level*, VdB	Typical Events (50 ft. Setback)
Threshold, minor cosmetic damage fragile buildings	100	Blasting from construction projects  Bulldozers, vibratory rollers, and other heavy tracked construction equipment
Difficulty with tasks such as reading a video or computer screen	90	Commuter rail, upper range
Residential annoyance, infrequent events (e.g commuter rail)	80	Rapid transit, upper range  Commuter rail, typical
Residential annoyance, infrequent events (e.g rapid transit)	70	Bus or truck over bump  Rapid transit, typical
Limit for vibration sensitive equipment. Approx. threshold for human perception of vibration	60	Bus or truck, typical
	50	Typical background vibration

\* RMS velocity in decibels (VdB) are  $10^{-8}$  inches/second



## 3.0 Short-Term Impacts

### 3.1 Construction Noise Impacts

The Project has the potential to result in short-term noise impacts to surrounding land uses due to construction activity noise (collectively referred to hereafter as just “construction” noise). Construction noise represents a short-term impact on ambient noise levels and includes activities such as demolition, site preparation, grading, and other construction-related activities. Noise generated from the transport of workers and the movement of materials to and from the construction site and the physical activities associated with any construction-related activities could potentially impact neighboring sensitive land uses. Although most of the types of exterior construction activities associated with the Project will not generate continually high noise levels, occasional single-event disturbances from grading and construction activities are possible. The Project will also include other components as follows:

- ✓ Sales building;
- ✓ Presentation and Retail Service building; and
- ✓ Car Wash

Table 5 depicts typical construction equipment noise levels, based upon a distance of 50 feet between the noise source and the noise receptor. Noise emitted by construction equipment is controlled by the Environmental Protection Agency’s (EPA’s) Noise Control Program (Part 204 of Title 40, Code of Federal Regulations).

During construction of various components of the Project, noise from construction activities will add to the noise environment in the immediate area. Activities involved in building construction would generate maximum noise levels, as indicated in Table 5, ranging from 77 to 85 dBA at 50 feet. Construction activities will be temporary in nature and are expected to occur during normal daytime working hours. Construction noise impacts could result in annoyance or sleep disruption for nearby residences if nighttime operations occurred, or if unusually noisy equipment was used. It is not anticipated that any portion of the construction phase will take place during nighttime hours. Based on information provided in Table 5 and the noise attenuation formula provided in Section 2.2, the nearest residence adjacent to the western boundary of the Project site may be subject to short-term noise reaching 65 to 75 dBA L<sub>max</sub> generated by construction activities. Considering the maximum sound level of 70 dBA L<sub>max</sub> from the City of Visalia’s Stationary Noise Source criteria (Table 2), construction of the Project will, more likely than not, impact the neighboring residences directly west of the Project site. Mitigation Measure 1 is recommended in Section 5.0 to attenuate this noise exposure from construction of the Project.

**Table 5**  
**Construction Equipment Noise**

TYPE OF EQUIPMENT	Sound Levels Measured (dBA of 50 feet)
Rock Drills	85
Jack Hammers	85
Pneumatic Tools	85
Pumps	77
Dozers	85
Tractor	84
Vibratory Rollers <sup>1</sup>	80
Front-End Loaders	80
Hydraulic Backhoe	80
Hydraulic Excavators	85
Graders	85
Air Compressors	80
Trucks	84

Source: Noise Control for Buildings and Manufacturing Plants (Bolt, Beranek and Newman, 1987).

1 - Federal Highway Administration Roadway Construction Noise Model, FHWA 2006

### 3.2 Ground-borne Vibration

Construction activity can result in ground vibration, depending upon the types of equipment used. Operation of construction equipment causes ground vibrations, which spread through the ground and diminish in strength with distance from the source generating the vibration. Building structures that are founded on the soil in the vicinity of the construction site respond to these vibrations, with varied results. Ground vibrations as a result of construction activities very rarely reach vibration levels that will damage structures but can cause low rumbling sounds and detectable vibrations for buildings very close to the site.

Vibration levels from various types of construction equipment are shown in Table 6. The primary concern with construction vibration is building damage. Therefore, construction vibration is generally assessed in terms of peak particle velocity (PPV). It should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provides a reasonable estimate for a wide range of soil conditions.

Despite the perceptibility threshold of about 65 VdB, human reaction to vibration is not



significant unless the vibration exceeds 75 VdB according to the United States Department of Transportation. The City of Visalia Municipal Code does not specifically identify vibration level impact standards. Caltrans has established vibration thresholds in terms of human annoyance of 0.04 in/sec PPV as documented in Caltrans' *Transportation and Construction Vibration Guidance Manual*. The vibration threshold of 0.04 in/sec PPV was used to estimate the impact of vibrations from construction activities associated with the Project. The following formula was used to estimate the human response (annoyance) at the Westlake Village located to the west of the Project site.

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

Using the vibratory roller vibration level shown in Table 6 (PPV 0.210) and the formula shown above, the anticipated vibration velocity levels at the nearest residence of the Westlake Village are expected to approach 0.031 in/sec PPV. Based on the vibration velocity levels provided in Table 6, vibrations generated by the construction phase of the Project are considered less than significant.

**Table 6**  
**Vibration Source Levels for Construction Equipment**

Equipment	PPV at 25 ft (in/sec)	PPV Levels at Westlake Village homes <sup>1</sup> (in/sec)	Threshold (in/sec)	Threshold Exceeded
Vibratory roller	0.210	0.031	0.040	No
Large bulldozer	0.089	0.013	0.040	No
Caisson drilling	0.089	0.013	0.040	No
Loaded trucks	0.076	0.011	0.040	No
Jackhammer	0.035	0.005	0.040	No
Small bulldozer	0.003	0.000	0.040	No

<sup>1</sup> The nearest Westlake Village homes are located approximately 90 feet from Project site boundary



## 4.0 Long-Term Impacts

### 4.1 Traffic Noise Impacts

This section provides an assessment of the anticipated noise conditions in the future as it relates to the Project and the impact of increased traffic noise generated by the Project on the surrounding land uses within the study area. The noise impacts from the Project were analyzed considering Existing Plus Project, Cumulative Year 2040 No Project, and Cumulative Year 2040 Plus Project Conditions.

#### Existing Plus Project Conditions

Existing Plus Project traffic noise levels were established based on previously collected traffic data and using the Traffic Noise Model (TNM) Version 2.5. Existing Plus Project levels, which are based on expected Project trip distribution, are calculated and compared to both the existing noise level and the maximum allowable noise exposure for transportation noise sources as described in the Tulare County's General Plan. Referencing Table 1, Tulare County's criteria shows that mitigation must be considered when the exterior noise exposure level of 60 Ldn/CNEL for single family residential uses has been exceeded. Levels reported in this section are in terms of A-weighted levels. The Ldn is estimated to be within +/- 2 dBA of the peak hour  $L_{eq}$  under normal traffic conditions based upon Caltrans' Traffic Analysis Noise Protocol.

Traffic volumes associated with the Project in addition to existing traffic along roadway segments in the study area were entered into the model to estimate noise levels at various receivers that would be affected by the Project. In order to calibrate the TNM 2.5 model, the existing counts, lane geometry, and any other pertinent existing conditions were added to the model. The noise level measurements taken in the study area were then compared to the noise levels computed by the model. The difference between the measured and modeled noise levels, referred to as the "K constant", is then added to any additional receivers to be evaluated in the TNM 2.5 model.

Table 7 shows the predicted noise levels at sensitive receivers in the study area as a result of adding traffic associated with the Project. As shown in Table 7, the highest peak hour sound level expected at the Westlake Village is 52.0 Leq(h) dBA. When it comes to noise levels, the Ldn is determined to be within +/- 2 dBA of the peak hour  $L_{eq}$  under normal traffic conditions based upon Caltrans' Traffic Analysis Noise Protocol. Therefore, none of the Existing Plus Project noise levels exceed Tulare County's Land Use Compatibility for Community Noise Environments. TNM 2.5 printouts included are provided in the Appendix B.



**Table 7**  
**Existing Plus Project Noise Levels**

Receiver ID No.	Location	Distance from Noise Source Roadway Centerline (feet)	Existing Plus Project Noise Level Leq(h) dBA	City of Visalia's Transportation Noise Source Criterion	Impact
1	Open Area located along Visalia Parkway, west of Mooney Boulevard	15	69.0	-	-
2	Residential (Westlake Village) area located south of Visalia Parkway	200	52.0	65.0	None

Source: VRPA Technologies, 2019

### Cumulative Year 2040 Conditions

This section provides an assessment of the anticipated noise conditions in the future as it relates to the Project and the impact of increased traffic noise generated by the Project on the surrounding land uses within the study area. The noise impacts from the development of the Project was analyzed considering Cumulative Year 2040 Conditions as a result of the Tulare County General Plan. Future development within the planning area will result in increased traffic volumes, thus increasing noise levels in some areas. While there will be increases in some noise levels, efforts can be taken to help minimize such instances. For example, siting noise sensitive uses away from high-noise areas (e.g., major traffic routes) and buffering noise through design will help minimize future noise-related land use conflicts.

The levels of traffic expected in the year 2040 relate to the cumulative effect of traffic increases resulting from the implementation of the general plans of local agencies and pending development projects. Traffic conditions for the Cumulative Year 2040 scenario was determined by the Tulare County Association of Governments (TCAG) regional travel model and Caltrans' SR 63 TCR were used to develop Cumulative Year 2040 traffic volumes as documented in the TIS. Traffic volumes, truck mix, and vehicle speeds were used as inputs to the TNM 2.5 model for the Cumulative Year 2040 modeled scenarios consistent with generally-accepted engineering principles and methods.

Table 8 shows the predicted noise levels at the modeled receivers evaluated in the study area for the Cumulative Year 2040 No Project and Cumulative Year 2040 Plus Project conditions. Results of the analysis show that none of the sensitive receivers will exceed Tulare County's Land Use Compatibility for Community Noise Environments. As a result, the Project will not create a significant impact at sensitive receptors in the study area. Table 8 also shows the increase in noise levels for the Cumulative Year 2040 scenario once Project trips are added to the surrounding roadway system. Results show that the greatest increase in noise levels as a result of the Project is less than 1 Leq(h) dBA. Section 1.2.1 above indicates that a 3 dB change is considered a just-perceivable difference outside of the laboratory and that a change in level of at least 5 dB is required before any noticeable change in community response would be expected.

**Table 8**  
**Cumulative Year 2040 Noise Levels**

Receiver ID No.	Location	Distance from Noise Source-Roadway Centerline (feet)	Cumulative Year 2040 Without Project Noise Level (Leq) dBA	Cumulative Year 2040 Plus Project Noise Level (Leq) dBA	Noise Increase (+) or Decrease (-)	City of Visalia's Transportation Noise Source Criterion	Impact
1	Open Area located along Visalia Parkway, west of Mooney Boulevard	15	70.0	70.0	0.0	-	-
2	Residential (Westlake Village) area located south of Visalia Parkway	200	54.0	54.0	0.0	65.0	None

Source: VRPA Technologies, 2019

## 4.2 Stationary Noise Impacts

The City of Visalia's maximum allowable noise exposure from Stationary Noise Sources is reflected in Table 2. The hourly and maximum sound level allowed during daytime (6:00am to 7:00pm) hours is 50 dBA and 70 dBA respectively. This section evaluates the noise generated by on-site sources. This section provides a description of the reference noise level measurements shown on Table 9 used to estimate the stationary noise impacts.

**Table 9**  
**Reference Noise Level Measurements**

Noise Source	Distance from Noise Source (feet)	Noise Source Height (feet)	Reference Noise Level (dBA Leq)
Carwash Tunnel Exit (Air Dryer) <sup>1</sup>	80	7	77.0
Vehicle Maintenance Activity <sup>2</sup>	15	5	78.7

1: 30 HP Air Cannon Dryer Reference Noise Levels

2 Urban Crossroads, Inc. / Lake Forest Discount Tire Center

### 4.2.1 On-Site Operational Noise

The air dryer located at the carwash tunnel exit is the most dominant noise source generated by the carwash operation. The carwash located at this site will use the 3 Nozzle / 30 HP Air Cannon Dryer system. System specifications are provided in Appendix C. The registered noise levels for the 30 HP Air Cannon Dryer system, presented in Appendix D, show noise levels of 77dBA at a distance of 80 feet. Figure 6 shows the approximate distances of the carwash tunnel exit to the sensitive receivers (residences) to the west of the Project site in addition to the approximate distances of the vehicle maintenance area. The residences to the west of the Project site are the closest sensitive receivers to the Project site. As noted in Figure 6, the Project proposes to construct a 6-foot block wall along a portion of the eastern border of the Westlake Village in addition to a 6-foot block wall around the southwest corner of the of the Project site.

Results of the analysis, as depicted in Table 10, shows that maximum noise levels at the sensitive



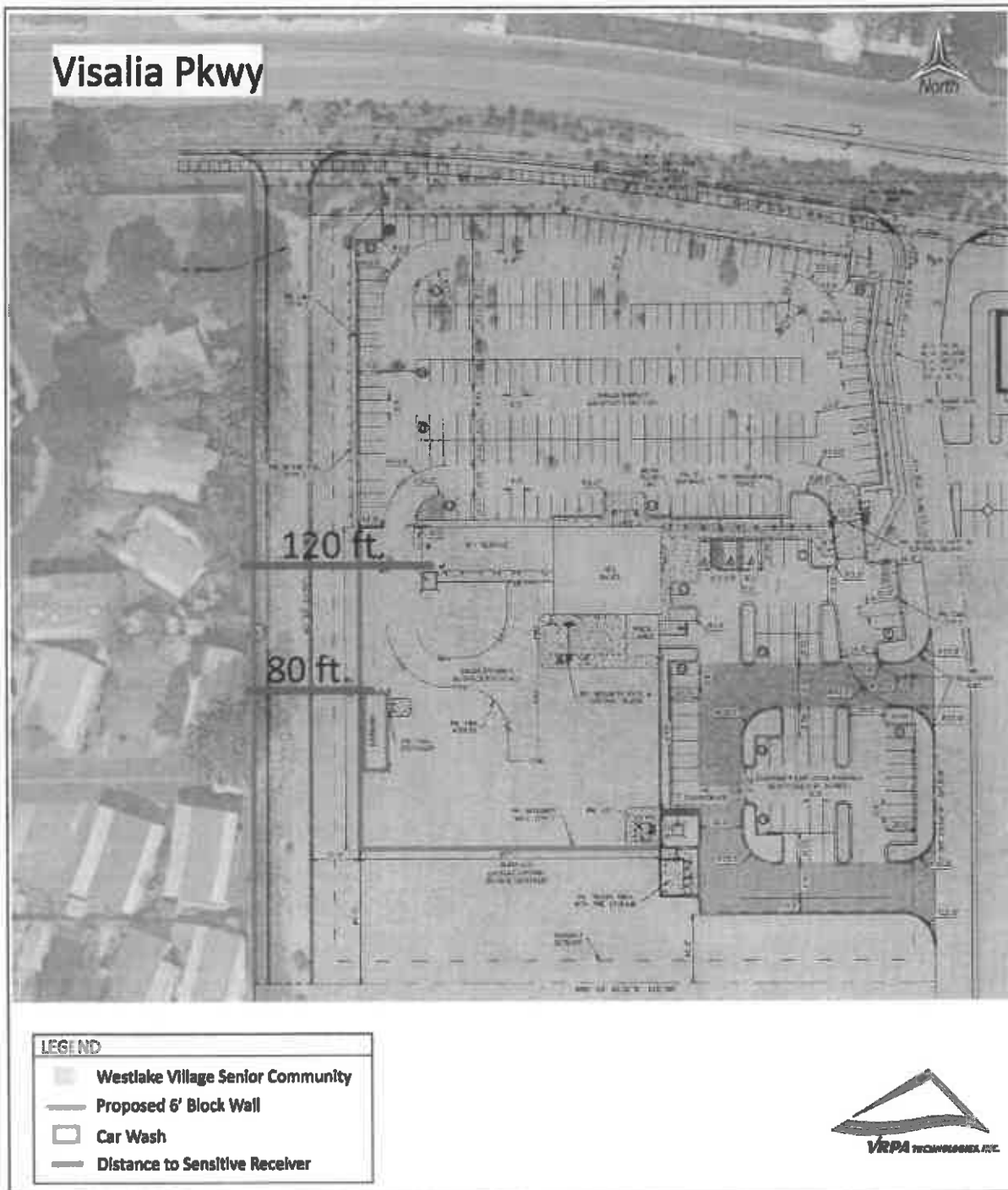
receivers (Westlake Village) directly to the west of the Project site would not exceed 65 dBA considering noise generated by the air cannon dryer system and the vehicle maintenance area. In the absence of either proposed block wall, maximum noise levels at the Westlake Village would exceed the City of Visalia's Stationary Noise Source criteria.

The hourly sound level allowed during daytime (6:00am to 7:00pm) hours is 50 dBA according to the City of Visalia's maximum allowable noise exposure from Stationary Noise Sources criteria. To determine if operational noise from the carwash would impact the sensitive receivers (Westlake Village) directly to the west of the Project site, it was assumed that the 3 Nozzle / 30 HP Air Cannon Dryer system was operational for 20 minutes out of every hour, during continuous operation. It was also assumed that noise generated by an impact wrench in the vehicle maintenance area was operational for 20 minutes out of every hour. Results of the analysis shows that hourly noise levels at the sensitive receivers directly to the west of the Project site would not exceed 50 dBA considering noise generated by the carwash and the vehicle maintenance area. If the Air Cannon Dryer system was operational for 30 minutes out of every hour, the hourly noise levels at the Westlake Village would exceed the City of Visalia's Stationary Noise Source criteria. An 8-foot block wall around the southwest corner of the Project site would be required to eliminate noise impacts at the Westlake Village if the Air Cannon Dryer system was operational for 30 minutes out of every hour.



CarMax Development  
Sensitive Receiver Boundary vs On-Site Noise Sources

Figure  
6



**Table 10**  
**On-Site Noise Source Impacts**

Area	Hourly Equivalent Sound Level Leq dBA	Maximum Sound Level, dBA	City of Visalia's Stationary Noise Source Criterion	Impact
Westlake Village Senior Community	50.0	65.0	50 Leq (h) / 70 L <sub>max</sub>	No / No

Source: VRPA Technologies, 2019

## 5.0 Impact Determinations and Recommended Mitigation

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impacts on the environment. The criteria used to determine the significance of a noise impact are based on the following thresholds of significance, which come from Appendix G of the CEQA Guidelines. Accordingly, noise impacts resulting from the Project are considered significant if the Project would result in:

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- b) Generation of excessive ground-borne vibration or ground-borne noise levels?
- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Each of these thresholds are evaluated individually below to determine whether the Project will cause a significant effect on the environment. Where impacts are found to be significant, mitigation measures are recommended that would avoid or reduce the impact to less than significant.

### 5.1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies

#### 5.1.1 Short-Term Impacts

Implementation of the Project has the potential to result in short-term construction noise impacts to surrounding land uses due to construction activities. Construction noise represents a short-term impact on ambient noise levels. Although most of the types of exterior construction activities associated with the Project will not generate continually high noise levels, occasional single-event disturbances from grading and construction activities are possible. Table 5 depicts typical construction equipment noise. Construction equipment noise is controlled by the EPA's

### Noise Control Program (Part 204 of Title 40, Code of Federal Regulations).

During the construction phase of the Project, noise from construction activities will add to the ambient noise environment in the immediate area. Activities involved in construction would generate maximum noise levels, as indicated in Table 5, ranging from 77 to 85dB at a distance of 50 feet. Construction activities will be temporary in nature and are expected to occur during normal daytime working hours in compliance with the City Noise Ordinance. Therefore, noise resulting from short-term, transient construction activity will not result in significant adverse impacts to nearby sensitive receptors.

***MM Noise 1 - Compliance with Section 8.36 of the City's Municipal Code and City Noise Ordinance.***

#### 5.1.2 Long-Term Impacts

##### Traffic Noise

Tables 7 and 8 show the predicted noise levels at sensitive receivers in the study area as a result of adding traffic associated with the Project. Results of the analysis show that none of the sensitive receivers will exceed the Tulare County's Land Use Compatibility for Community Noise Environments criteria for the Existing Plus Project and Cumulative Year 2040 scenarios. As a result, Project traffic will not create a significant impact at sensitive receptors in the study area. The Project generates an increase of less than 1 dB with the addition of Project traffic to the surrounding roadway network considering the Cumulative Year 2040 scenario. Implementation of the Project will not result in significant adverse impacts from traffic noise levels within the Project study area. Therefore, no mitigation measures are needed.

##### Stationary Noise

Section 4.2 above indicates that that maximum noise levels at the sensitive receivers (Westlake Village) directly to the west of the Project site would not exceed 65 dBA considering noise generated by the air cannon dryer system and the vehicle maintenance area. In addition, results of the analysis show that hourly noise levels at the sensitive receivers directly to the west of the Project site would not exceed 50 dBA considering noise generated by the carwash and the vehicle maintenance area.

#### 5.2 Generation of excessive ground-borne vibration or ground-borne noise levels

Vibration levels from various types of construction equipment are shown in Table 6. The primary concern with construction vibration is building damage. Therefore, construction vibration is generally assessed in terms of peak particle velocity (PPV). It should be noted that there is a



considerable variation in reported ground vibration levels from construction activities. The data provides a reasonable estimate for a wide range of soil conditions.

Despite the perceptibility threshold of about 65 VdB, human reaction to vibration is not significant unless the vibration exceeds 75 VdB according to the United States Department of Transportation. The City of Visalia Municipal Code does not specifically identify vibration level impact standards. Caltrans has established vibration thresholds in terms of human annoyance of 0.04 in/sec PPV as documented in Caltrans' Transportation and Construction Vibration Guidance Manual. The vibration threshold of 0.04 in/sec PPV was used to estimate the impact of vibrations from construction activities associated with the Project.

Using the vibratory roller vibration level shown in Table 6 (PPV 0.210), the anticipated vibration velocity levels at the nearest residence of the Westlake Village are expected to approach 0.031 in/sec PPV. Based on the vibration velocity levels provided in Table 6, vibrations generated by the construction phase of the Project are considered less than significant.

**5.3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels**

The Project is not located within the vicinity of a private airstrip or an airport land use plan or within two miles of a public airport or public use airport. The Visalia Municipal Airport (VIS) is the closest public use airport and is located approximately 4.5 miles northwest of the Project site. Therefore, the Project will not result in the stated impact.

## **APPENDIX A**

### **Acoustical Terminology**

## ACOUSTICAL TERMINOLOGY

The following terminology has been used for purposes of this NSR:

<b>Ambient Noise Level:</b>	The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
<b>CNEL:</b>	Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7 p.m. to 10p.m. and ten decibels to sound levels in the night before 7 a.m. and after 10 p.m.
<b>Decibel, dBA:</b>	A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micro-newtons per square meter).
<b>DNL/<math>L_{dn}</math>:</b>	Day/Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.
<b><math>L_{eq}</math>:</b>	Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. $L_{eq}$ is typically computed over 1, 8 and 24-hour sample periods.
<b><math>L_{eq}(h)</math>:</b>	The hourly value of $L_{eq}$ .
<b><math>L_{max}</math>:</b>	The maximum noise level recorded during a noise event
<b><math>L_n</math>:</b>	The sound level exceeded "n" percent of the time during a sample interval ( $L_{90}$ , $L_{50}$ , $L_{10}$ , etc.). $L_{10}$ equals the level exceeded 10 percent of the time.
<b><math>L_n(h)</math>:</b>	The hourly value of $L_n$ .
<b>Noise Exposure Contours:</b>	Lines drawn about a noise source indicating constant levels

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of noise exposure. CNEL and DNL contours are frequently utilized to describe community exposure to noise.

**SEL or SENEL:**

**Sound Exposure Level or Single Event Noise Exposure Level.** The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to the duration of one second. More specifically, it is the time-integrated A-weighted squared sound pressure for a stated time interval or event, based on a reference pressure of 20 micropascals and the reference duration of one second

**Sound Level:**

The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

*Note: CNEL and DNL represent daily levels of noise exposure averaged on an annual basis, while  $L_n$  represents the average noise exposure for a shorter time period, typically one hour.*

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**APPENDIX B**  
**TNM 2.5 Sound Level Worksheets**

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**RESULTS: SOUND LEVELS**

**CarMax Development**

City of Visalia  
VRPA Technologies, Inc.

11 September 2019  
TNM 2.5  
Calculated with TNM 2.5

**RESULTS: SOUND LEVELS**

**PROJECT/CONTRACT:**

CarMax Development

**RUN:**

Existing Conditions

**BARRIER DESIGN:**

INPUT HEIGHTS

Average pavement type shall be used unless  
a State highway agency substantiates the use  
of a different type with approval of FHWA.

**ATMOSPHERICS:**

68 deg F, 60% RH

Receiver

Receiver Name	No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal
			LAeq1h	Crit'n	LAeq1h	Crit'n	Calculated	Sub'l Inc		Calculated	Noise Reduction	
			dBA	dBA	dBA	dBA	dB	dB		dB	dB	dB
Receiver1	1	1	0.0	68.2	68.2	68.2	68.2	10	Snd Lvl	68.2	0.0	-8.0
Westlake Village	3	1	0.0	51.7	51.7	51.7	51.7	10		51.7	0.0	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		2	0.0	0.0	0.0							
All Impacted		1	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

**RESULTS: SOUND LEVELS**

**CarliMax Development**

City of Visalia  
VRPA Technologies, Inc.

11 September 2019  
TNM 2.5  
Calculated with TNM 2.5

**RESULTS: SOUND LEVELS**

**PROJECT/CONTRACT:** CarliMax Development  
**RUN:** Existing Plus Project Conditions  
**BARRIER DESIGN:** INPUT HEIGHTS

Average pavement type shall be used unless  
a State highway agency substantiates the use  
of a different type with approval of FHWA.

68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing		No Barrier		Increase over existing		With Barrier		Noise Reduction		Calculated minus Goal dB
			LAeq1h dBA	Crit'n	LAeq1h dBA	Crit'n	Calculated dBA	Crit'n	Calculated dBA	Crit'n	Calculated dB	Goal dB	
Receiver1	1	1	0.0	68.6	0.0	68.6	10	68.6	10	68.6	0.0	8	-8.0
Westlake Village Dwelling Units	3	1	0.0	52.1	0.0	52.1	10	52.1	10	52.1	0.0	8	-8.0
# DUs			Noise Reduction		Noise Reduction								
			Min dB	Avg dB	Min dB	Avg dB	Max dB						
All Selected	2		0.0	0.0	0.0	0.0	0.0						
All Impacted	1		0.0	0.0	0.0	0.0	0.0						
All that meet NR Goal	0		0.0	0.0	0.0	0.0	0.0						

**RESULTS: SOUND LEVELS**

**Carlmax Development**

City of Visalia  
VRPA Technologies, Inc.

11 September 2019  
TNM 2.5  
Calculated with TNM 2.5

**RESULTS: SOUND LEVELS**

**PROJECT/CONTRACT:**

Carlmax Development

**RUN:**

Cumulative Year No Project Conditions

**BARRIER DESIGN:**

INPUT HEIGHTS

**ATMOSPHERICS:**

68 deg F, 50% RH

Average pavement type shall be used unless  
a State highway agency substantiates the use  
of a different type with approval of FHWA.

Receiver Name	No. #DUs	Existing		No Barrier		Increase over existing		With Barrier		Type Impact	Noise Reduction		Calculated minus Goal dB
		LAeq1h	LAeq1h	LAeq1h	LAeq1h	Calculated	Crit'n	Calculated	LAeq1h		Calculated	Goal	
Receiver1	1	1	0.0	70.0	66	70.0	10	70.0	70.0	0.0	8	8	-8.0
Westlake Village Dwelling Units	3	1	0.0	53.5	65	53.5	10	53.5	53.5	0.0	8	8	-8.0
# DUs		Noise Reduction											
		Min	Avg	Max									
		dB	dB	dB									
All Selected	2	0.0	0.0	0.0	0.0								
All Impacted	1	0.0	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0	0.0								

**Carimax Development**

**RESULTS: SOUND LEVELS**

City of Visalia  
 VRPA Technologies, Inc.  
 11 September 2019  
 TNM 2.5  
 Calculated with TNM 2.5

**RESULTS: SOUND LEVELS**  
 PROJECT/CONTRACT:  
 RUN:  
 BARRIER DESIGN:  
 ATMOSPHERICS:

Carimax Development  
 Cumulative Year Plus Project Conditions  
 INPUT HEIGHTS

68 deg F, 50% RH

Average pavement type shall be used unless  
 a State highway agency substantiates the use  
 of a different type with approval of FHWA.

Receiver Name	No. #DUs	Existing		No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB	
		L <sub>Aeq1h</sub> dBA	L <sub>Aeq1h</sub> dBA	L <sub>Aeq1h</sub> Calculated dBA	Crit'n	Calculated dB	Crit'n Sub'l Inc		Calculated L <sub>Aeq1h</sub> dBA	Noise Reduction Calculated dB		Noise Reduction Goal dB
Receiver1	1	0.0	70.3	66		70.3		10	70.3	0.0	8	-8.0
Weestlake Village	3	0.0	53.8	65		53.8		10	53.8	0.0	8	-8.0
Dwelling Units		# DUs		Noise Reduction								
		Min dB	Avg dB	Max dB								
All Selected	2	0.0	0.0	0.0								
All Impacted	1	0.0	0.0	0.0								
All that meet NFR Goal	0	0.0	0.0	0.0								

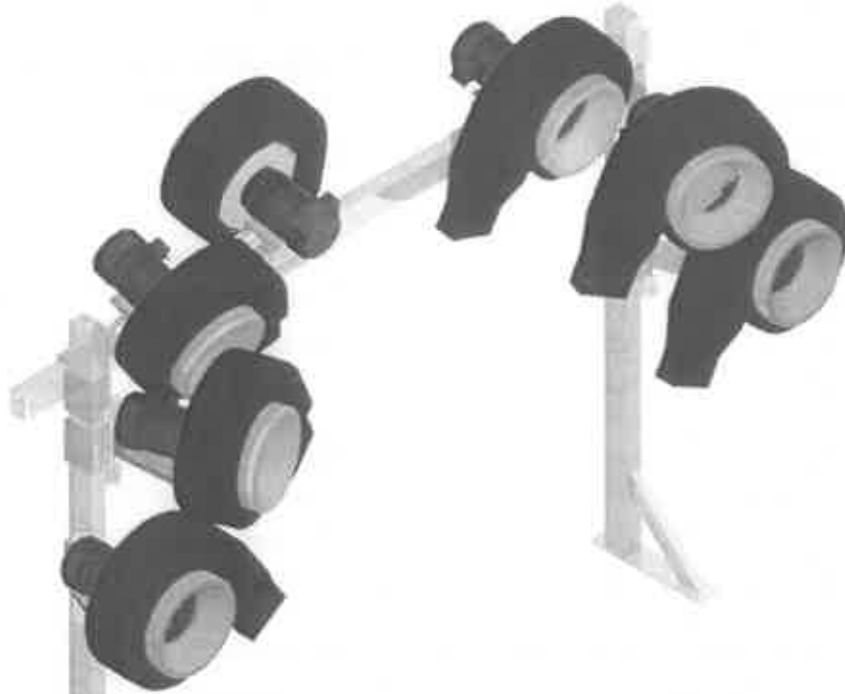
## **APPENDIX C**

### **Air Cannon Dryer Specifications**

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**ISO 9001  
CERTIFIED**

# Owners Manual



# Air Cannon™ Dryer



Belanger, Inc.  
P.O. Box 5470  
Northville, MI 48167-5470  
Customer Service Phone (248) 374-4700  
Fax (248) 380-9681  
[www.belangerinc.com](http://www.belangerinc.com)

1MANUL008

REV 04

# AIR CANNON™ DRYER



## Specifications

### Physical Dimensions

#### 3 Nozzle / 30 HP

Tunnel space required	60"
Unit height overall	132"
Unit width overall	164"

#### 3 Nozzle / 30 HP with Silencers

Tunnel space required	72"
Unit height overall	132"
Unit width overall	164"

#### 5 Nozzle / 50 HP

Tunnel space required	70"
Unit height overall	136"
Unit width overall	164"

#### 5 Nozzle / 50 HP with Silencers

Tunnel space required	106"
Unit height overall	136"
Unit width overall	164"

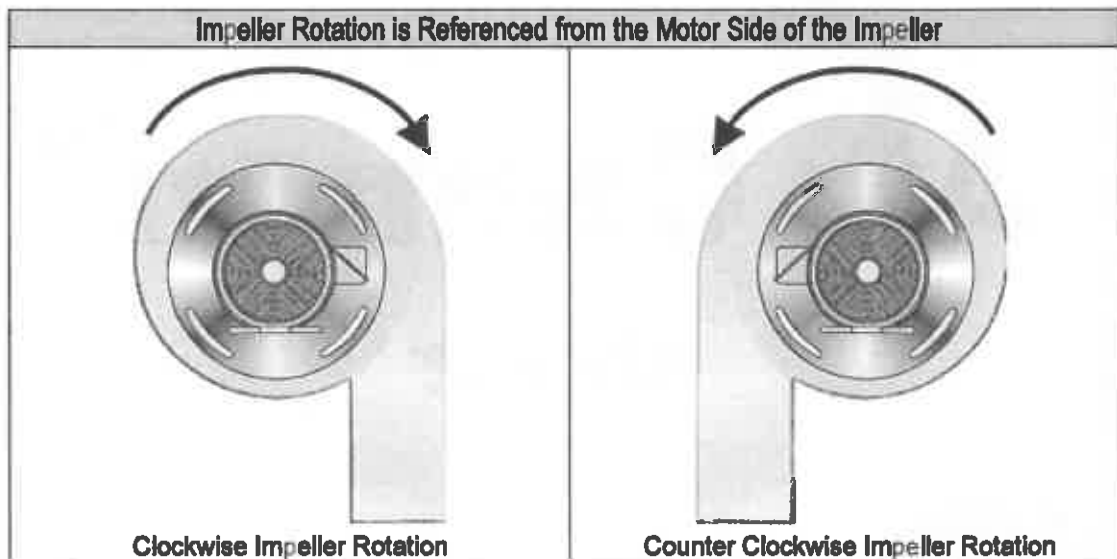
#### 7 Nozzle / 70 HP

Tunnel space required	70"
Unit height overall	136"
Unit width overall	190"

#### 7 Nozzle / 70 HP with Silencers

Tunnel space required	106"
Unit height overall	136"
Unit width overall	190"

The following is important in understanding how to determine Impeller rotation.





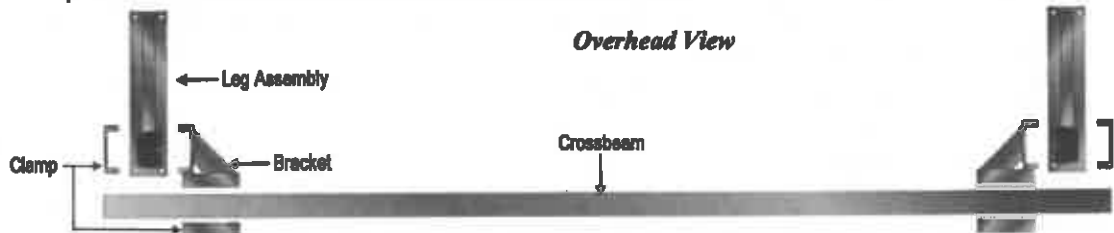


# AIR CANNON™ DRYER

## Installation

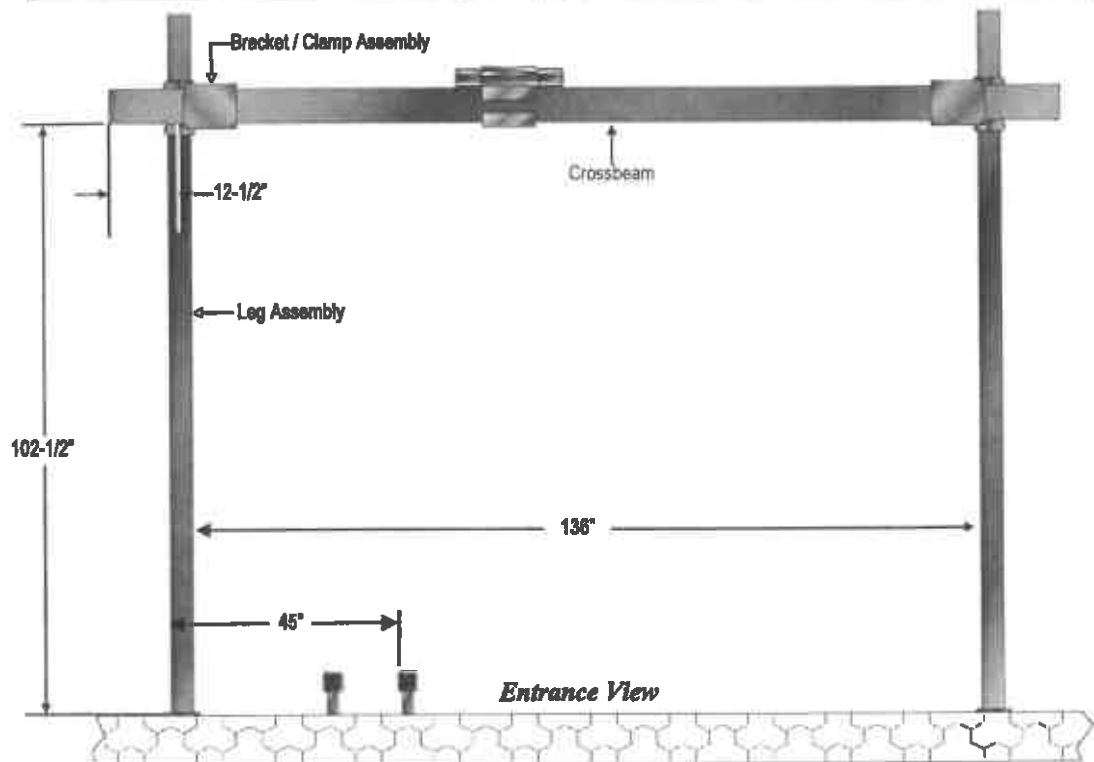
### Frame Assembly

- 1) Assemble the frame as shown in the overhead view below.



- 2) Be sure that the crossbeam is on the entrance side of the frame as shown in the entrance side view below.
- 3) Position the assembled frame in its proper bay location keeping in mind the required operating envelope as shown below and lag it to the floor.

**Note:** Drip space is the distance between the last Rinse Arch and the Dryer. Typically, the larger the drip space, the better the Dryer can perform.



**Note:** 45" dimension is taken from the outside of the driver side leg to the inside of the passenger side Guide Rail. Actual tunnel depth will vary according to available building space.



## Installation

### **Motor / Nozzle Mounts**

There are 2 types of mounts. Crossbeam Mounts and Leg Mounts. Both mount styles can be configured and mounted in a number of ways. It is very important that they are mounted as shown in the following diagrams.

There are also 3 complete Dyer configurations:

- 3 Nozzle
- 5 Nozzle
- 7 Nozzle

The 3-nozzle system is a completely different setup from the other two styles. The 7-nozzle system is identical to the 5-nozzle system with two added nozzles. This document will show all mount positions starting with the 3-nozzle system.

It is very important to notice if a mount is facing the entrance or exit side of the Dryer.

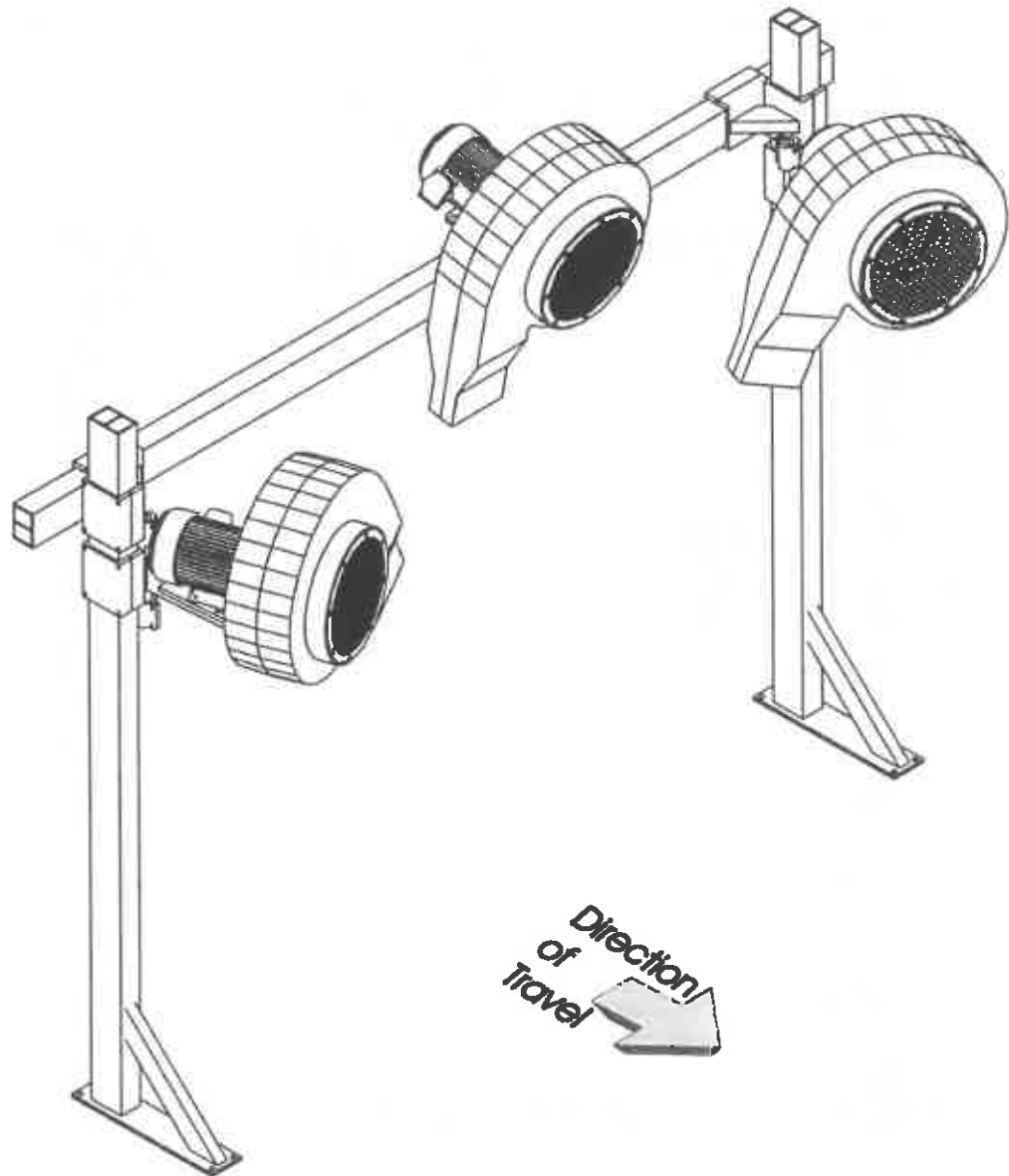
- 1) Locate and identify all of the clamps supplied with your system. Secure them to the appropriate locations on the frame as shown in the following two drawings. Adjustments will follow.



# AIR CANNON™ DRYER

## Installation

### 3-Nozzle System Overview



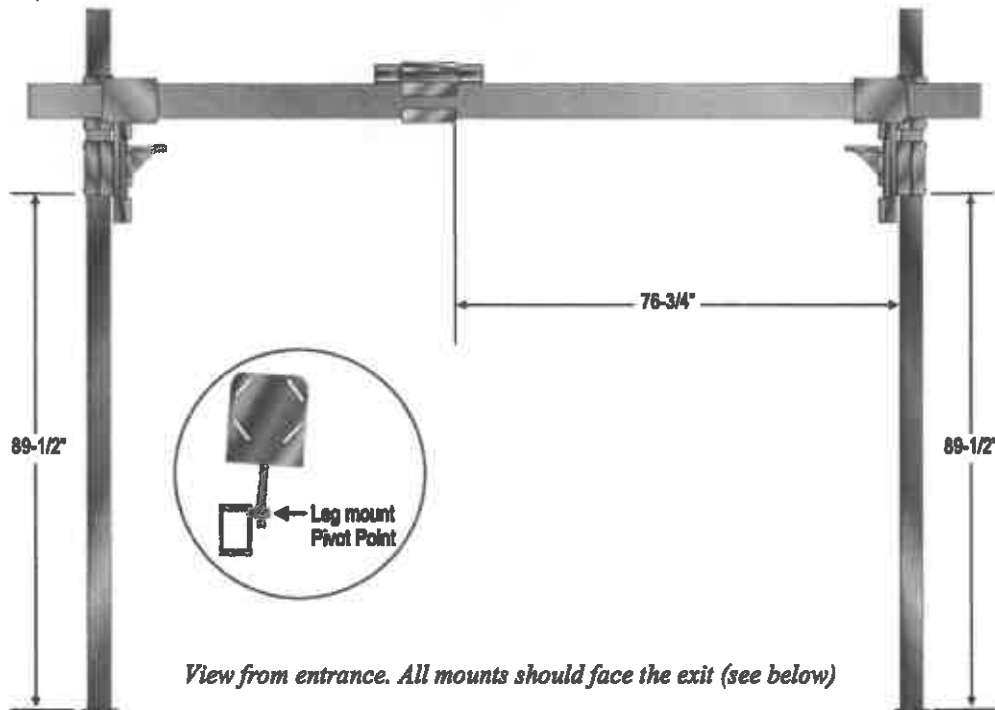
## Installation

### 3-Nozzle Frame Mounts

The following will show the correct positions and orientations of all Mounts. Before proceeding, be sure all Mounts are tightly secured to the frame.

All adjustments are done at the pivot points of the Mounts.

- 1) Secure the Mounts to the frame at the locations shown below.



- 2) Adjust the Leg Mounts horizontally as shown below. All horizontal adjustments are done at the pivot points of the Mounts.



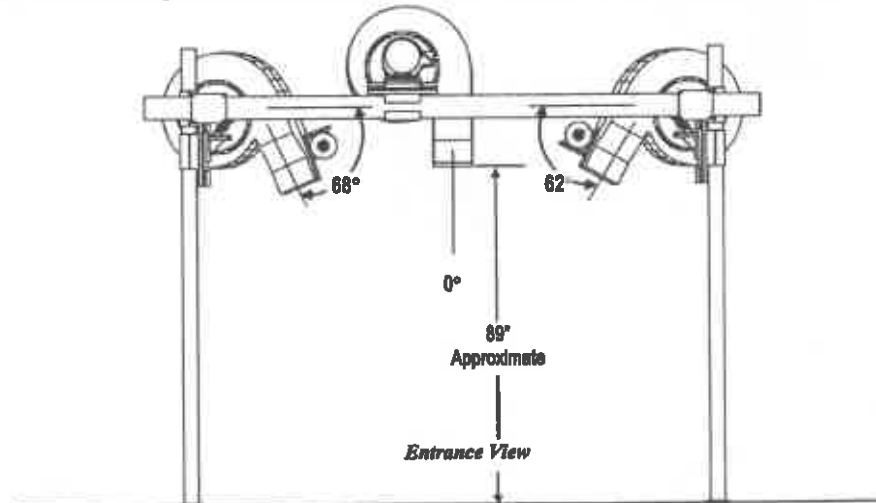
- 3) Once all Mounts are properly set, securely tighten all fasteners.

## Installation

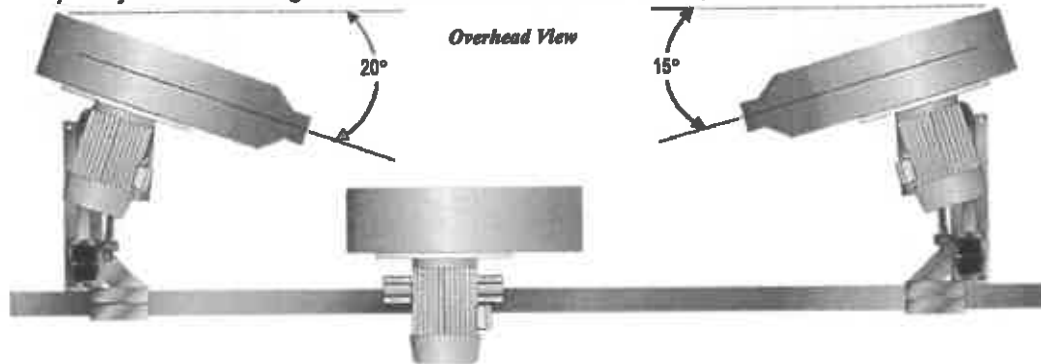
### 3 Nozzle Frame Housings

The following will assist in setting the proper angles of the Housings.

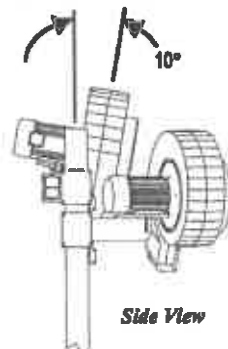
- 1) Secure the Motor/Impeller assemblies to the appropriate Mounts. Use your leveler to achieve the angles shown below. The center Nozzle is to point straight down.



- 2) Adjust the Housings with the Motor Mount bolts to the positions shown below.



- 3) Set the center Nozzle angle as shown below.



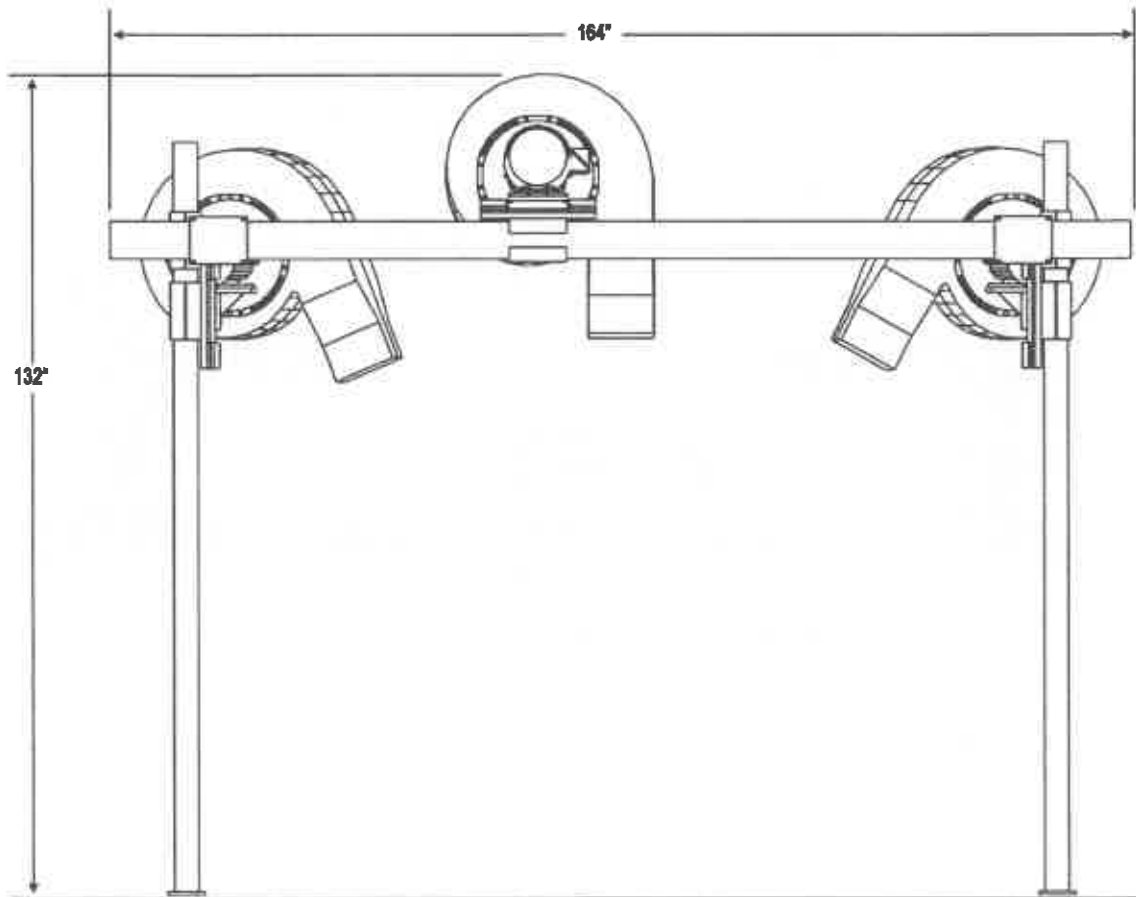
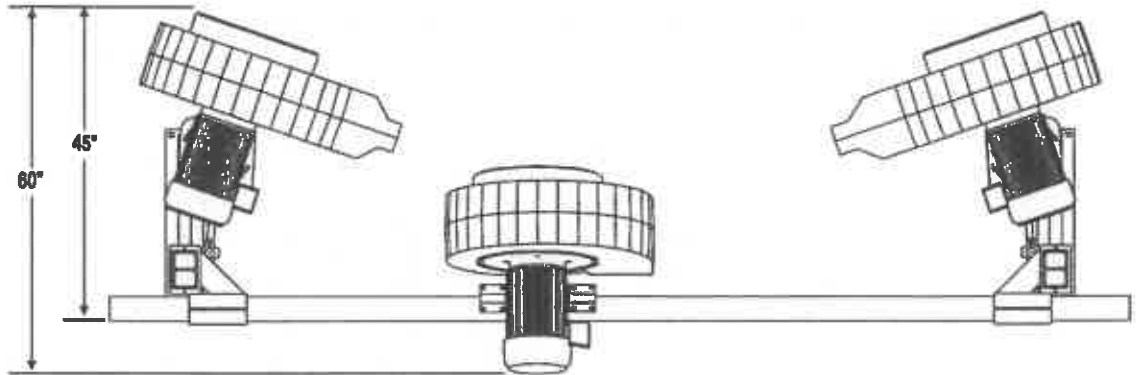
- 4) Once all Nozzles are properly set, securely tighten all fasteners.



# AIR CANNON™ DRYER

## Installation

### 3 Nozzle Completed Assembly





Belanger, Inc. \* P.O. Box 5470 \* Northville, MI 48167-5470  
Customer Service Phone (248) 347-4700 \* Fax (248) 380-9681

## **APPENDIX D**

### **Air Cannon Dryer Registered Noise Levels**

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Distance	Noise Level (DbA)
0 ft.	100.0
10 ft.	96.5
20 ft.	95.0
30 ft.	94.0
40 ft.	88.0
50 ft.	84.0
60 ft.	81.0
70 ft.	78.0
80 ft.	77.0
90 ft.	75.5
100 ft.	75.5



September 13, 2019

Steve Brandt  
901 E. Main St.  
Visalia, CA 93292

**Site Plan Review No. 2019-078**

Pursuant to Zoning Ordinance Chapter 17.28 the Site Plan Review process has found that your application complies with the general plan, municipal code, policies, and improvement standards of the city.

Based upon Zoning Ordinance Section 17.28.070, this is your Site Plan Review determination. However, your project requires discretionary action as stated on the attached Site Plan Review comments. You may now proceed with filing discretionary applications to the Planning Division.

This is your Site Plan Review Permit; your Site Plan Review became effective **August 21, 2019**. A site plan review permit shall lapse and become null and void one year following the date of approval unless, prior to the expiration of one year, a building permit is issued by the building official and construction is commenced and diligently pursued toward completion.

If you have any questions regarding this action, please call the Community Development Department at (559) 713-4359.

Respectfully,

A handwritten signature in black ink, appearing to read 'Paul Bernal', is written over a large, faint circular stamp or watermark.

Paul Bernal  
City Planner/Acting Community Development Director  
315 E. Acequia Ave.  
Visalia, CA 93291

**Attachment(s):**

- Site Plan Review Comments



#4

MEETING DATE: August 21, 2019  
SITE PLAN NO. 19-078 2nd Resubmittal  
PARCEL MAP NO.  
SUBDIVISION:  
LOT LINE ADJUSTMENT NO.

Enclosed for your review are the comments and decisions of the Site Plan Review committee. Please review all comments since they may impact your project.

**RESUBMIT** Major changes to your plans are required. Prior to accepting construction drawings for building permit, your project must return to the Site Plan Review Committee for review of the revised plans.

During site plan design/policy concerns were identified, schedule a meeting with  
 Planning  Engineering prior to resubmittal plans for Site Plan Review.

Solid Waste  Parks and Recreation  Fire Dept.

**REVISE AND PROCEED** (see below)

A revised plan addressing the Committee comments and revisions must be submitted for Off-Agenda Review and approval prior to submitting for building permits or discretionary actions.

Submit plans for a building permit between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday.

Your plans must be reviewed by:

CITY COUNCIL

REDEVELOPMENT

PLANNING COMMISSION

PARK/RECREATION

CUP + ZTA

HISTORIC PRESERVATION

OTHER: \_\_\_\_\_

**ADDITIONAL COMMENTS :**

If you have any questions or comments, please call (559) 713-4444.

*Site Plan Review Committee*



**BUILDING/DEVELOPMENT PLAN  
REQUIREMENTS  
ENGINEERING DIVISION**

Adrian Rubalcaba 713-4271  
 Diego Corvera 713-4209  
 Lupe Garcia 713-4197

ITEM NO: 4 DATE: AUGUST 21, 2019

SITE PLAN NO.: 19-078 2<sup>ND</sup> RESUBMITTAL  
PROJECT TITLE: CARMAX  
DESCRIPTION: CONSTRUCTION OF A USED CARS DEALERSHIP INCLUDING PARKING LOTS AND SITE ACCESS  
APPLICANT: CENTERPOINT INTEGRATED SOLUTIONS, LLC  
PROP OWNER: CARMAX AUTO SUPERSTORES, INC  
LOCATION: VISALIA PARKWAY  
APN: 126-960-001

**SITE PLAN REVIEW COMMENTS**

- REQUIREMENTS (indicated by checked boxes)
- Install curb return with ramp, with \_\_\_\_\_ radius;
- Install curb;  gutter **PER DESIGN ONSITE**
- Drive approach size:  Use radius return; **REFER TO CITY COMMERCIAL STANDARDS**
- Sidewalk: \_\_\_\_\_ width;  \_\_\_\_\_ parkway width at \_\_\_\_\_
- Repair and/or replace any sidewalk across the public street frontage(s) of the subject site that has become uneven, cracked or damaged and may constitute a tripping hazard.
- Replace any curb and gutter across the public street frontage(s) of the subject site that has become uneven and has created areas where water can stand.
- Right-of-way dedication required. A title report is required for verification of ownership.
- Deed required prior to issuing building permit;
- City Encroachment Permit Required. FOR ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY**  
Insurance certificate with general & auto liability (\$1 million each) and workers compensation (\$1 million), valid business license, and appropriate contractor's license must be on file with the City, and valid Underground Service Alert # provided prior to issuing the permit. Contact Encroachment Tech. at 713-4414.
- CalTrans Encroachment Permit required.  CalTrans comments required prior to issuing building permit. Contacts: David Deel (Planning) 488-4088;
- Landscape & Lighting District/Home Owners Association required prior to approval of Final Map. Landscape & Lighting District will maintain common area landscaping, street lights, street trees and local streets as applicable. Submit completed Landscape and Lighting District application and filing fee a min. of 75 days before approval of Final Map.
- Landscape & Irrigation improvement plans to be submitted for each phase. Landscape plans will need to comply with the City's street tree ordinance. The locations of street trees near intersections will need to comply with Plate SD-1 of the City improvement standards. A street tree and landscape master plan for all phases of the subdivision will need to be submitted with the initial phase to assist City staff in the formation of the landscape and lighting assessment district.
- Grading & Drainage plan required. If the project is phased, then a master plan is required for the entire project area that shall include pipe network sizing and grades and street grades.  Prepared by registered civil engineer or project architect.  All elevations shall be based on the City's benchmark network. Storm run-off from the project shall be handled as follows: a)  directed to the City's existing storm drainage system; b)  directed to a permanent on-site basin; or c)  directed to a temporary on-site basin is required until a connection with adequate capacity is available to the City's storm drainage system. On-site basin: \_\_\_\_\_ : \_\_\_\_\_ maximum side slopes, perimeter fencing required, provide access ramp to bottom for maintenance. **SEE COMMENTS FOR PHASE ONE IMPROVEMENTS**
- Grading permit is required for clearing and earthwork performed prior to issuance of the building permit.
- Show finish elevations. (Minimum slopes: A.C. pavement = 1%, Concrete pavement = 0.25%. Curb & Gutter = .020%, V-gutter = 0.25%)
- Show adjacent property grade elevations. A retaining wall will be required for grade differences greater than 0.5 feet at the property line.
- All public streets within the project limits and across the project frontage shall be improved to their full width, subject to available right of way, in accordance with City policies, standards and specifications. **SEE COMMENTS FOR PHASE ONE IMPROVEMENTS**

- Traffic indexes per city standards:
- Install street striping as required by the City Engineer.
- Install landscape curbing (typical at parking lot planters).
- Minimum paving section for parking: 2" asphalt concrete paving over 4" Class 2 Agg. Base, or 4" concrete pavement over 2" sand.
- Design Paving section to traffic index of 5.0 min. for solid waste truck travel path.
- Provide "R" value tests: each at
- Written comments required from ditch company                      Contacts: James Silva 747-1177 for Modoc, Persian, Watson, Oakes, Flemming, Evans Ditch and Peoples Ditch; Jerry Hill 686-3425 for Tulare Irrigation Canal, Packwood and Cameron Creeks; Bruce George 747-5601 for Mill Creek and St. John's River.
- Access required on ditch bank, 15' minimum     Provide                      wide riparian dedication from top of bank.
- Show Valley Oak trees with drip lines and adjacent grade elevations.     Protect Valley Oak trees during construction in accordance with City requirements.
- A permit is required to remove Valley Oak trees. Contact Public Works Admin at 713-4428 for a Valley Oak tree evaluation or permit to remove.     A pre-construction conference is required.
- Relocate existing utility poles and/or facilities.
- Underground all existing overhead utilities within the project limits. Existing overhead electrical lines over 50kV shall be exempt from undergrounding.
- Subject to existing Reimbursement Agreement to reimburse prior developer:
- Fugitive dust will be controlled in accordance with the applicable rules of San Joaquin Valley Air District's Regulation VIII. Copies of any required permits will be provided to the City.
- If the project requires discretionary approval from the City, it may be subject to the San Joaquin Valley Air District's Rule 9510 Indirect Source Review per the rule's applicability criteria. A copy of the approved AIA application will be provided to the City.
- If the project meets the one acre of disturbance criteria of the State's Storm Water Program, then coverage under General Permit Order 2009-0009-DWQ is required and a Storm Water Pollution Prevention Plan (SWPPP) is needed. A copy of the approved permit and the SWPPP will be provided to the City.
- Comply with prior comments.     Resubmit with additional information.     Redesign required.

**Additional Comments:**

- 1. Proposed Carmax facility will be subject to the underlying master planned development. Phase One of the master plan is slated to install all infrastructure and road widening improvements required by the City. They shall include all work on Visalia Parkway from Mooney Blvd to Dans Way.**
- 2. New used car facility will be required to connect to onsite utility services and install onsite improvements as required. Landscaping shall include the public street frontage parkway along the parcel limits and comply with CA MWELo regulations. Commercial developments shall maintain public parkway landscaping.**
- 3. Propose site layout shall conform to the underlying master planned design for ingress/egress on east parcel limits. Revise as necessary.**
- 4. Site Plan will need to include a cross section of the Visalia Pkwy street frontage adjacent to project site; to show new proposed improvements in proper alignment with future Visalia Pkwy improvements. Refer to master plan for ultimate street layout.**
- 5. The refuse enclosure location appears adequate however modifications to the parking lot landscape planters may be necessary to allow adequate maneuverability for direct Solid Waste vehicle service. The proposed tire storage will not be allowed within refuse enclosure and will need to be separately contained. Refer to Solid Waste comments for further comments and requirements.**
- 6. Proposed facility will incur development impact fees associated with site development and building construction. Refer to page 4 for applicable fees and estimate.**
- 7. Building permits are required. Standard plan check and inspection fees will apply.**

**8. Facility permit final or occupancy will be contingent upon the completion of Phase One Improvements required by the master planned development.**

**9. Refer to Traffic Safety comments and requirements.**

**10. The drive approach onto Visalla Parkway shall accommodate 3 lanes (12 foot lanes) and shall align with the drive approach across the street. It is crucial this alignment is depicted on site plan layout in order to allow the proposed full median opening at this location. Due to the inadequate drive way width at the north shopping center, if/when signalization is necessary, their approach would need to be widened most likely to the west given the existing improvements onsite. This will change the proposed alignment shown on Site Plan - shifting the drive way geometry to CarMax. Redesign accordingly and submit to City Site Plan Review official for an "OFF AGENDA" review.**

**11. Install oil and grease separator for vehicle wash areas.**

**12. Proposed new automatic car wash facility will incur additional impact fees.**

**13. The service drive along west side of project site is recommended to remain unimproved until such time the parcel to the south develops or other development within commercial site requires this access. Required improvements per the master plan, such as the block wall requirement along the existing mobile home park, will be conditioned to be a part of this project completion. Coordinate with master plan developer.**

**SUMMARY OF APPLICABLE DEVELOPMENT IMPACT FEES**

Site Plan No: 19-078 2<sup>nd</sup> RESUBMITTAL

Date: 8/21/2019

**Summary of applicable Development Impact Fees to be collected at the time of building permit:**

**(Preliminary estimate only! Final fees will be based on the development fee schedule in effect at the time of building permit issuance.)**

(Fee Schedule Date:8/3/2019)

(Project type for fee rates:RETAIL)

Existing uses may qualify for credits on Development Impact Fees.

<u>FEE ITEM</u>	<u>FEE RATE</u>
<input checked="" type="checkbox"/> Groundwater Overdraft Mitigation Fee	\$1,293/AC X 5 = \$6,465
<input checked="" type="checkbox"/> Transportation Impact Fee	\$14,878/1000SF X 7.6 = \$113,073
<input checked="" type="checkbox"/> Trunk Line Capacity Fee	\$26/1000SF X 7.6 = \$198 + CARWASH \$20,002/EACH TREATMENT PLANT FEE: \$56/1000SF X 7.6 = \$426 + CARWASH \$21,781/EACH
<input checked="" type="checkbox"/> Sewer Front Foot Fee	\$44/LF X 400 (VISALIA PKWY) = \$17,600
<input checked="" type="checkbox"/> Storm Drain Acq/Dev Fee	\$7,468/AC X 5 = \$37,340
<input type="checkbox"/> Park Acq/Dev Fee	
<input type="checkbox"/> Northeast Specific Plan Fees	
<input checked="" type="checkbox"/> Waterways Acquisition Fee	\$5,483/AC X 5 = \$27,415
<input checked="" type="checkbox"/> Public Safety Impact Fee: Police	\$8,849/AC X 5 = \$44,245
<input checked="" type="checkbox"/> Public Safety Impact Fee: Fire	\$1,936/AC X 5 = \$9,680
<input checked="" type="checkbox"/> Public Facility Impact Fee	\$340/1000SF X 7.6 = \$2,584
<input type="checkbox"/> Parking In-Lieu	

**Reimbursement:**

- 1.) No reimbursement shall be made except as provided in a written reimbursement agreement between the City and the developer entered into prior to commencement of construction of the subject facilities.
- 2.) Reimbursement is available for the development of arterial/collector streets as shown in the City's Circulation Element and funded in the City's transportation impact fee program. The developer will be reimbursed for construction costs and right of way dedications as outlined in Municipal Code Section 16.44. Reimbursement unit costs will be subject to those unit costs utilized as the basis for the transportation impact fee.
- 3.) Reimbursement is available for the construction of storm drain trunk lines and sanitary sewer trunk lines shown in the City's Storm Water Master Plan and Sanitary Sewer System Master Plan. The developer will be reimbursed for construction costs associated with the installation of these trunk lines.

  
 \_\_\_\_\_  
**Adrian Rubalcaba**

# SITE PLAN REVIEW COMMENTS

Paul Schelbel, Planning Division, 559-713-4369

Date: August 21, 2019

SITE PLAN NO: 2019-078 - C  
PROJECT: CARMAX  
DESCRIPTION: CONSTRUCTION OF A USED CAR DEALERSHIP INCLUDING PARKING LOTS AND SITE ACCESS  
APPLICANT: CENTERPOINT INTEGRATED SOLUTIONS, LLC  
PROP. OWNER: CARMAX AUTO SUPERSTORES, INC.  
LOCATION TITLE: VISALIA PARKWAY  
APN TITLE: 126-960-001  
GENERAL PLAN: Regional Commercial  
ZONING: C-R (Regional Commercial)

**Rule 9510** - This project is subject to the Rule 9510 requirements of the San Joaquin Valley Air Pollution Control District - see District web-site for information.

## Planning Division Recommendation:

- Revise and Proceed  
 Resubmit

## Project Requirements

- File a letter requesting authorization to initiate a Zoning Text Amendment to allow car sales in the C-R (Regional Commercial) Zone District, or,
- Zone Change to C-S (Service Commercial)
- Conditional Use Permit (CUP) for auto sales facility
- Parcel Map/Tentative Subdivision Map

## **PROJECT SPECIFIC INFORMATION: August 21, 2019**

1. Recommend closing off the drive aisle on west side of site, leave undeveloped and fence to preclude person and vehicle entry on both ends.
2. Carwash should be moved to interior of site. In any case it must be included in Noise analysis relative to sensitive receptors (homes) to the west.
3. Staff recommends the applicant pursue a Zoning Text Amendment to allow auto sales in the C-R Zone, subject to a five acre minimum project size and, single-user, and subject to CUP.
4. It is anticipated that the project will be processed with a mitigated negative declaration (MND). The CUP (and Parcel Map/ Tentative Subdivision Map) should include technical studies addressing noise and light. City Standards are included herein. Also, the MND may require preparation of an urban decay analysis.
5. Move project footprint to align with the drive approach facing on the north side of Visalia Parkway.
6. Recommend that the "outparcel" adjacent to the west be improved as a drive aisle with landscaping for a total width of up to 40 feet.
7. Avoid direct light visibility as viewed from residences to the west. Consider light standards and wall packs at 20 feet or less in height, and with light elements with shield coverings to project light downward.
8. Incorporate a midpoint landscape finger on the eastern customer parking stall line.
9. Provide taller landscape screening along the western portion of the project parcel and along the west portion of a drive aisle along the west side of the project parcel.
10. The project may require completion of a solid wall along the shopping center's western boundary, coinciding with the existing residences to the west.
11. Show walls/barriers details along the perimeter streets.
12. Show display and service area light locations and light standards poles). These need to be consistent with the required light study for the project and CEQA document.



13. Show the final layout of the east drive way with three lanes (two out, one in) and clearly delineate the drive aisle from the adjacent landscaping, sidewalks, etc. along the eastern portion of the Carmax facility.
14. Please show the site relative to Mooney blvd. to ensure for context of the facility relative to the proposed shopping center.
15. Show method of vehicle barriers and dust control for unused part of the site.

**PROJECT SPECIFIC INFORMATION: July 24, 2019**

1. Staff recommends the applicant pursue a Zoning Text Amendment to allow auto sales in the C-R Zone, subject to a five acre minimum project size and, single-user, and subject to CUP.
2. It is anticipated that the project will be processed with a mitigated negative declaration (MND). The CUP (and Parcel Map/ Tentative Subdivision Map) should include technical studies addressing noise and light. City Standards are included herein. Also, the MND may require preparation of an urban decay analysis.
3. Move project footprint to align with the drive approach facing on the north side of Visalia Parkway.
4. Recommend that the "outparcel" adjacent to the west be improved as a drive aisle with landscaping for a total width of up to 40 feet.
5. Avoid direct light visibility as viewed from residences to the west. Consider light standards and wall packs at 20 feet or less in height, and with light elements with shield coverings to project light downward.
6. Incorporate a midpoint landscape finger on the eastern customer parking stall line.
7. Provide taller landscape screening along the western portion of the project parcel and along the west portion of a drive aisle along the west side of the project parcel.
8. The project may require completion of a solid wall along the shopping center's western boundary, coinciding with the existing residences to the west.
9. Show walls/barriers details along the perimeter streets.
10. Show display and service area light locations and light standards poles). These need to be consistent with the required light study for the project and CEQA document.
11. Show the final layout of the east drive way with three lanes (two out, one in) and clearly delineate the drive aisle from the adjacent landscaping, sidewalks, etc. along the eastern portion of the Carmax facility.
12. Please show the site relative to Mooney blvd. to ensure for context of the facility relative to the proposed shopping center.
13. Show method of vehicle barriers and dust control for unused part of the site.

**PROJECT SPECIFIC INFORMATION: May 1, 2019**

1. Staff recommends the applicant pursue a Zoning Text Amendment to allow auto sales in the C-R Zone, subject to a five acre minimum project size and, single-user, and subject to CUP.
2. It is anticipated that the project will be processed with a mitigated negative declaration (MND). The CUP (and Parcel Map/ Tentative Subdivision Map) should include technical studies addressing noise and light. City Standards are included herein. Also, the MND may require preparation of an urban decay analysis.
3. Move project footprint to align with the drive approach facing on the north side of Visalia Parkway.
4. Recommend that the "outparcel" adjacent to the west be improved as a drive aisle with landscaping for a total width of up to 40 feet.
5. Avoid direct light visibility as viewed from residences to the west. Consider light standards and wall packs at 20 feet or less in height, and with light elements with shield coverings to project light downward.
6. Incorporate a midpoint landscape finger on the eastern customer parking stall line.
7. Provide taller landscape screening along the western portion of the project parcel and along the west portion of a drive aisle along the west side of the project parcel.
8. The project may require completion of a solid wall along the shopping center's western boundary, coinciding with the existing residences to the west.

**17.18.070 Development standards in the C-R zone.**

The following development standards shall apply to property located in the C-R zone:

- A. Minimum site area: five (5) acres.
- B. Maximum building height: fifty (50) feet.
- C. Minimum required yards (building setbacks):
  - 1. Front: twenty (20) feet;
  - 2. Rear: zero (0) feet;
  - 3. Rear yards abutting an R-1 or R-M zone district: fifteen (15) feet;
  - 4. Side: zero (0) feet;
  - 5. Side yards abutting an R-1 or R-M zone district: fifteen (15) feet;
  - 6. Street side yard on corner lot: ten (10) feet.
- D. Minimum required landscaped yard (setback) areas:
  - 1. Front: twenty (20) feet;
  - 2. Rear: five (5) feet;
  - 3. Rear yards abutting an R-1 or R-M zone district: five (5) feet;
  - 4. Side: five (5) feet (except where a building is located on side property line);
  - 5. Side yards abutting an R-1 or R-M zone district: five (5) feet;
  - 6. Street side on corner lot: ten (10) feet.

**Parking:**

- 1. THE AUTO DISPLAY LOT WILL NOT BE EVALUATED BY OR SUBJECT TO THE PARKING ORDINANCE PROVISIONS BELOW.
- 2. Provide parking spaces based Zoning Ordinance Section 17.34.020
- 3. 30% of the required parking stalls may be compact and shall be evenly distributed in the lot.
- 4. Provide handicapped space(s).
- 5. An 80 sq. ft. minimum landscape well is required every 10 contiguous parking.
- 6. A planter is required every other row. (5-9 feet in width containing trees on twenty (20) foot centers.
- 7. No repair work or vehicle servicing allowed in a parking area.
- 8. It is highly recommended that bicycle rack(s) be provided on site plan.
- 9. No parking shall be permitted in a required front/rear/side yard.
- 10. Design/locate parking lot lighting to deflect any glare away from abutting residential areas.
- 11. Parking lot to be screened from view by a 3-foot tall solid wall or shrubs when located adjacent to a public street or when across from residential property.
- 12. Front carport area to have a 3 to 6-foot tall screening wall.
- 13. Provide shopping cart storage areas on site plan.
- 14. Provide transit facilities on site plan.
- 15. Provide shared parking/access agreements
- 16. Provide off-street loading facility.
- 17. The project should provide preferential parking spaces for carpools and vanpools to decrease the number of single occupant vehicle work trips. The preferential treatment could include covered parking spaces or close-in parking spaces, or designated free parking, or a guaranteed space for the vehicle.
- 18. Provide a "No Parking" (dead-head) stall at the end of the parking row (for rows over 6 stalls deep with no outlet) to allow vehicles to turn around rather than backing out if no stalls are available.

### **Fencing and Screening:**

1. Provide screening for roof mounted equipment (Zoning Ordinance Section 17.30.130.F).
2. Provide second-story screening for all windows that may intrude into adjacent residential properties. Details and cross-sections will be required to be reviewed and approved prior to issuance of building permits (Zoning Ordinance Section 17.30.130.F).
3. Provide screened trash enclosure with solid screening gates (Zoning Ordinance Section 17.30.130.F).
4. Provide solid screening of all outdoor storage areas. Outdoor storage to be screened from public view with solid material (Zoning Ordinance Section 17.30.130.F).
5. Outdoor retail sales prohibited.
6. Cross Sections need to be provided for site Plan Review if there is greater than an 18-inch difference between the elevation of the subject site and the adjacent properties, and the sections would be required for the public hearing process also.
7. All outdoor storage areas are to be identified on the site plan and they are to be shown with screening (fencing). No materials may be stored above the storage area fence heights (Zoning Ordinance Section 17.30.130.F).
8. Provide minimum of \_\_\_\_\_-foot high concrete block wall or masonry wall along/around the following: \_\_\_\_\_
9. Provide minimum of \_\_\_\_\_-foot high solid wooden residential fence along/around the following: \_\_\_\_\_
10. Provide minimum of \_\_\_\_\_-foot high chain-link fence \_\_\_\_\_ with \_\_\_\_\_ without slats along/around the following: \_\_\_\_\_
11. If there is an anticipated grade difference of more than 12-inches between this site and the adjacent sites, a cross section of the difference and the walls must be provided as a part of the Subdivision and/or CUP application package.
12. NOTE: The maximum height of block walls and fences is 7-feet in the appropriate areas; this height is measured on the tallest side of the fence. If the height difference is such that the fence on the inside of the project site is not of sufficient height, the fence height should be discussed with Planning Staff prior to the filing of applications to determine if an Exception to fence/wall height should also be submitted.

### **Landscaping:**

1. The City has adopted the State Water Efficient Landscape Ordinance. The ordinance applies to projects installing 2,500 square feet or more of landscaping. It requires that landscaping and irrigation plans be certified by a qualified entity (i.e., Landscape Architect) as meeting the State water conservation requirements. The City's implementation of this new State law will be accomplished by self-certification of the final landscape and irrigation plans by a California licensed landscape architect or other qualified entity with sections signed by appropriately licensed or certified persons as required by the ordinance. **NOTE: Prior to a final for the project, a signed Certificate of Compliance for the MWELo standards is required indicating that the landscaping has been installed to MWELo standards.**
2. Provide street trees at an average of 20-feet on center along street frontages. All trees to be 15-gallon minimum size (Zoning Ordinance Section 17.30.015-2).
3. In the P(R-M) multi-family residential zone, all multiple family developments shall have landscaping including plants, and ground cover to be consistent with surrounding landscaping in the vicinity. Landscape plans to be approved by city staff prior to installation and occupancy of use and such landscaping to be permanently maintained. (Zoning Ordinance Section 17.16.180)
4. All landscape areas to be protected with 6-inch concrete curbs (Zoning Ordinance Section 17.30.130.F).
5. All parking lots to be designed to provide a tree canopy to provide shade in the hot seasons and sunlight in the winter months.
6. Provide a detailed landscape and irrigation plan as a part of the building permit package (Zoning Ordinance Section 17.34.040).

7. An 80 sq. ft. minimum landscape well is required every 10 contiguous parking stalls (Zoning Ordinance Section 17.30.130.C).
8. Provide a detailed landscape and irrigation plan for review prior to issuance of building permits. Please review Zoning Ordinance section 17.30.130-C for current landscaping and irrigation requirements.
9. Provide a conceptual landscape plan for resubmittal or planning commission review.
10. Locate existing oak trees on site and provide protection for all oak trees greater than 2" diameter (see Oak Tree Preservation Ordinance).
11. Maintenance of landscaped areas. - A landscaped area provided in compliance with the regulations prescribed in this title or as a condition of a use permit or variance shall be planted with materials suitable for screening or ornamenting the site, whichever is appropriate, and plant materials shall be maintained and replaced as needed, to screen or ornament the site. (Prior code § 7484)

**Lighting:**

1. All lighting is to be designed and installed so as to prevent any significant direct or indirect light or glare from falling upon any adjacent residential property. This will need to be demonstrated in the building plans and prior to final on the site.
2. Parking lot and drive aisle lighting adjacent to residential units or designated property should consider the use of 15-foot high light poles, with the light element to be completely recessed into the can. A reduction in the height of the light pole will assist in the reduction/elimination of direct and indirect light and glare which may adversely impact adjacent residential areas.
3. Building and security lights need to be shielded so that the light element is not visible from the adjacent residential properties, if any new lights are added or existing lights relocated.
4. NOTE: Failure to meet these lighting standards in the field will result in no occupancy for the building until the standards are met.
5. In no case shall more than 0.5 lumens be exceeded at any property line, and in cases where the adjacent residential unit is very close to the property line, 0.5 lumens may not be acceptable.

**Noise Standards:**

**Visalia Municipal Code Chapter 8.36  
NOISE**

**8.36.010 Purpose.**

A. The city council of the city declares and finds that excessive levels of noise are detrimental to the public health, welfare and safety and are contrary to the public interest as follows:

1. By interfering with sleep, communication, relaxation and the full use of one's property;
  2. By interfering with noise sensitive land uses;
  3. By contributing to hearing impairment and a wide range of adverse physiological stress conditions;
- and
4. By adversely affecting the value of real property.

B. It is the intent of this chapter to protect persons from excessive levels of noise within or near noise sensitive land uses such as residences, schools, churches, hospitals or public libraries, or other uses as may be determined by the city council of the city. (Prior code § 5090.1)

A. Any noise measurement made pursuant to the provisions of this chapter shall be made with a sound level meter using the "A" weighted network (scale) at slow meter response. Fast meter response shall be used for impulsive type sounds. Calibration of the measurement equipment utilizing an acoustical calibrator certified by its manufacturer to be in compliance with National Bureau of Standards (NBS) reference calibration levels shall be performed immediately prior to recording noise level data.

B. Exterior noise levels shall be measured within fifty (50) feet of the affected residence, school, hospital, church or public library. Where practical, the microphone shall be positioned three to five feet above the ground and away from reflective surfaces.

C. Interior noise levels shall be measured within the affected dwelling unit, at points at least four feet from the wall, ceiling or floor nearest the noise source, with windows in the normal seasonal configuration. Reported interior noise levels shall be determined by taking the arithmetic average of the readings taken at the various microphone locations. (Prior code § 5090.3)

**8.36.040 Exterior noise standards--Fixed noise sources.**

A. It is unlawful for any person at any location within the city to create any noise, or to allow the creation of any noise, on property owned, leased, occupied or otherwise controlled by such person which causes the exterior noise level, when measured at the property line of any affected noise sensitive land use, to exceed any of the categorical noise level standards as set forth in the following table:

**NOISE LEVEL STANDARDS, dBA**

Category	Cumulative Number of minutes in any one-hour time period	Evening and Daytime 6 a.m. to 7 p.m.	Nighttime 7 p.m. to 6 a.m.
1	30	50	45
2	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65

B. In the event the measured ambient noise level without the alleged offensive source in operation exceeds an applicable noise level standard in any category above, the applicable standard or standards shall be adjusted so as to equal the ambient noise level.

C. Each of the noise level standards specified above shall be reduced by five dB for pure tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.

D. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level without the source can be measured, the noise level measured while the source is in operation shall be compared directly to the noise level standards. (Prior code § 5090.4.1)

**8.36.050 Exterior noise standards--Mobile noise sources prohibition against use.**

It is unlawful to operate any of the below-listed devices, appliances, equipment or vehicles on public or private property abutting noise sensitive land uses between the weekday hours of seven p.m. and six a.m., and between the weekend hours of seven p.m. and nine a.m.

A. Power-assisted leaf blowers, lawn mowers, edgers or other power equipment used for the maintenance of property;

B. Vehicle equipment, which equipment is not expressly regulated by state or federal statute, such as car radios or sound amplification equipment which is audible more than twenty-five (25) feet from the exterior of the vehicle;

C. Construction equipment including jackhammers, portable generators, pneumatic equipment, trenchers, or other such equipment, except for emergency repair purposes as provided in Section 8.36.070;

D. Any other noises made by crying, shouting, or by means of whistle, rattle, bell, gong whether or not for the purpose of advertising or other such purposes. (Prior code § 5090.4.2)

**8.36.060 Residential interior noise standards.**

A. It is unlawful for any person, at any location within the city, to operate or cause to be operated, any source of sound or to allow the creation of any noise which causes the noise level when measured

inside a dwelling unit to exceed any of the categorized noise level standards as set forth in the following table:

**NOISE LEVEL STANDARDS, dBA**

<b>Category</b>	<b>Cumulative Number of minutes in any one-hour time period</b>	<b>Evening and Daytime 6 a.m. to 7 p.m.</b>	<b>Nighttime 7 p.m. to 6 a.m.</b>
1	5	45	35
2	1	50	40
3	0	55	45

B. In the event the measured ambient noise level without the alleged offensive source in operation exceeds an applicable noise level standard in any category above, the applicable standard or standards shall be adjusted so as to equal the ambient noise level.

C. Each of the noise level standards specified above shall be reduced by five dB for pure tone noises, noises consisting primarily of speech or music, or four recurring impulsive noises.

D. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level without the source can be measured, the noise level measured while the source is in operation shall be compared directly to the noise level standards.

E. If the source of noise is of an impulse or voluntary nature such as shouting, loud conversation, playing or operation of audio and video equipment and is audible in a dwelling unit, the noise level in the above table shall conclusively be determined to be exceeded. (Prior code § 5090.6)

**8.36.070 Noise source exemptions.**

The following activities shall be exempted from the provisions of this chapter:

A. Activities conducted in public parks, public playgrounds and public or private school grounds, including but not limited to school athletic and school entertainment events during normal hours of instruction;

B. Any mechanical device, apparatus or equipment used, related to, or connected with emergency activities or emergency work;

C. Noise sources associated with the infrequent, occasional and unusual maintenance of residential property provided such activities take place between the hours of six a.m. and nine p.m. on any day except Saturday or Sunday, or between the hours of eight a.m. and nine p.m. on Saturday or Sunday;

D. Noise sources associated with a lawful commercial or industrial activity caused by installed mechanical devices or equipment, including air conditioning or refrigeration systems, installed prior to the effective date of this chapter; that this exception shall expire twelve months after the effective date of the chapter. This exception shall not apply to such mechanical devices which are not in good repair;

E. Noise sources associated with the collection of waste or garbage from commercially zoned or industrially zoned property by the city or its authorized franchisee;

F. Any activity to the extent regulation thereof has been preempted by state or federal law;

G. Notwithstanding the provisions of Sections 8.36.040 and 8.36.050, where the intruding noise source when measured as provided in Section 8.36.030 is an existing residential air conditioning or refrigeration system or associated equipment, the exterior noise level at the property line shall not exceed fifty-five (55) dBA. For residential air conditioning or refrigeration systems or associated equipment installed after the effective date of this chapter, the exterior noise level at the property line when measured as provided in Section 8.36.030 shall not exceed fifty (50) dBA;

H. Notwithstanding the provisions of Sections 8.36.040 and 8.36.050, the collection of waste or garbage from residentially zoned property or from persons authorized to engage in such activity, and

who are operating truck-mounted loading or compacting equipment, shall not take place before six a.m. or after seven p.m. The noise level created by such activities when measured at a distance of fifty (50) feet in an open area shall not exceed the following standard:

1. Eighty-five (85) dBA for equipment in use, purchased or leased prior to the effective date of this chapter,

2. Eighty (80) dBA for new equipment purchased or leased after the effective date of this chapter;

I. Notwithstanding the provisions of Sections 8.36.040 and 8.36.050, noise sources associated with the operation of electrical substations shall not exceed fifty (50) dBA when measured as provided in Section 8.36.030. (Prior code § 5090.6)

#### **8.36.080 Warning signs in places of public entertainment.**

It is unlawful for any person to permit the operation or playing of any loudspeaker, musical instrument, motorized racing vehicle, or other source of sound for public entertainment within a building or structure wherein the noise level exceeds ninety-five (95) dBA as determined using the slow response of a sound level meter at any point normally occupied by a customer, without a conspicuous and legible sign stating "WARNING! SOUND LEVELS WITHIN MAY CAUSE HEARING IMPAIRMENT."  
(Prior code § 5090.7)

#### **8.36.090 Variances.**

A. The owner or operator of a noise source for which it has been determined violates any of the provisions of this chapter may file an application for variance from strict compliance with any particular provisions of this chapter where such variance will not result in a hazardous condition or a nuisance and strict compliance would be unreasonable in view of all the circumstances. The owner or operator shall set forth all actions taken to comply with such provisions, and the reasons why immediate compliance cannot be achieved. A separate application shall be filed for each noise source; provided, however, that several mobile sources under common ownership or fixed sources under common ownership on a single property may be combined into one application.

B. Upon receipt of the application and within thirty (30) days, the community development director shall either: (1) approve such request in whole or in part; (2) deny the request; or (3) refer the request directly to the city council for action thereon in accordance with the provisions of this chapter. In the event the variance is approved, reasonable conditions may be imposed which may include restrictions on noise level, noise duration and operating hours, an approved method of achieving compliance and a time schedule for its implementation. The decision of the community development director is subject to appeal to the city council upon recommendation of the planning commission by filing a written appeal not later than fifteen (15) days following the mailing of the decision to the applicant.

C. Factors which the community development director or city council must consider shall include but not be limited to the following:

1. Uses of property within the area affected by the noise;
2. Factors related to initiating and completing all remedial work;
3. Age and useful life of the existing noise source;
4. The general public interest, welfare and safety.

D. The city council may grant variances from provisions of this chapter subject to such term, conditions and requirement as may be deemed reasonable to achieve compliance with the provisions and intent of this chapter.

E. A fee may be charged to recover the actual costs in processing such variances.

F. The approved noise ordinance variance must be in the possession of any operator of mobile noise sources during otherwise prohibited by the provisions of this chapter. An approved noise ordinance variance shall also be in the possession of a fixed noise source which would otherwise violate the provisions of this chapter. Failure to have the variance in the possession of the operator or property occupant when the provisions of this chapter are violated, as indicated above, shall constitute a violation of this chapter, enforceable as provided in Section 8.36.100. (Prior code § 5090.8)

#### **8.36.100 Violation--Enforcement.**

A. The violation of any of the provisions of this chapter shall be a misdemeanor punishable as provided in Section 1.12.010. Each hour of activity which violated the provisions herein shall constitute a sole and separate violation. The provisions of this chapter may also be enforced by an injunction issued out of the court of jurisdiction. Any violation of the provisions of this chapter shall be deemed to be a public nuisance.

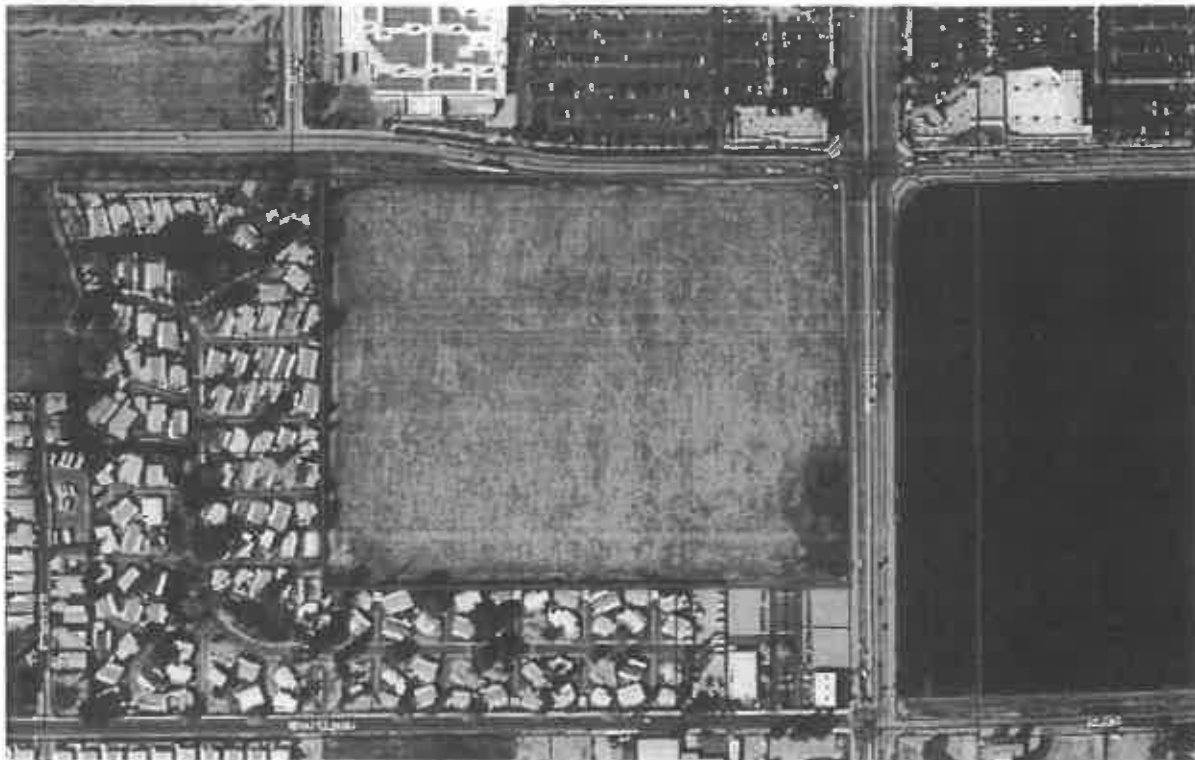
B. The community development director, or a designee, shall be responsible for the enforcement of Section 8.36.040 and Section 8.36.060(A) through (D) inclusive. The chief of police shall be responsible for the enforcement of Sections 8.36.050 and 8.36.060(E). (Prior code § 5090.9)

**8.36.110 Emergency equipment.**

The provisions of this chapter shall have no application to the sounding of a siren or the making of other usual signal or signals by any police or other peace officers in the performance of their duties, nor to the sounding of any siren or the making of any other usual signal upon any ambulance or firefighting equipment in the usual and customary manner. (Prior code § 5091)

**NOTE: Staff recommendations contained in this document are not to be considered support for a particular action or project unless otherwise stated in the comments. The comments found on this document pertain to the site plan submitted for review on the above referenced date. Any changes made to the plan submitted must be submitted for additional review.**

Signature 





SPR19078  
CAR MAX  
VISALIA PARKWAY

**City of Visalia**  
**Building: Site Plan**  
**Review Comments**

NOTE: These are general comments and DO NOT constitute a complete plan check for your specific project  
Please refer to the applicable California Code & local ordinance for additional requirements.

- A building permit will be required. *For information call (559) 713-4444*
- Submit 1 digital set of professionally prepared plans and 1 set of calculations. *(Small Tenant Improvements)*
- Submit 1 digital set of plans prepared by an architect or engineer. Must comply with 2016 California Building Code Sec. 2308 for conventional light-frame construction or submit 1 digital set of engineered calculations.
- Indicate abandoned walls, septic systems and excavations on construction plans.
- You are responsible to ensure compliance with the following checked items:  
Meet State and Federal requirements for accessibility for persons with disabilities.
- A path of travel, parking and common area must comply with requirements for access for persons with disabilities.
- All accessible units required to be adaptable for persons with disabilities.
- Maintain sound transmission control between units minimum of 50 STC.
- Maintain fire-resistive requirements at property lines.
- A demolition permit & deposit is required. *For information call (559) 713-4444*
- Obtain required permits from San Joaquin Valley Air Pollution Board. *For information call (661) 392-5300*
- Plans must be approved by the Tulare County Health Department. *For information call (559) 624-9011*
- Project is located in flood zone \_\_\_\_\_ •  Hazardous materials report.
- Arrange for an on-site inspection. *(Fee for inspection \$157.00)* *For information call (559) 713-4444*
- School Development fees. Commercial \$0.61 per square foot. Residential \$3.79 per square foot.
- Park Development fee \$ \_\_\_\_\_ per unit collected with building permits.
- Existing address must be changed to be consistent with city address. *For information call (559) 713-4820*
- Acceptable as submitted
- No comments at this time

Additional comments: ALL NEW LANDSCAPING SHALL MEET THE MWELD REQUIREMENTS. EACH STRUCTURE SHALL BE BY SEPARATE PERMIT. PROVIDE SAND INTERCEPTOR AT THE CAR WASH. INDICATE UNDERGROUND FUEL TANKS.

VAL GARCIA 8/21/19  
Signature



**Site Plan Review Comments For:**  
**Visalia Fire Department**  
**Corbin Reed, Fire Marshal**  
**420 N. Burke**  
**Visalia, CA 93292**  
**559-713-4272 Office**  
**559-713-4808 Fax**

**Date: 08/21/2019**  
**Item # 4**  
**Site Plan # 19-078 Resubmittal**  
**APN:126-960-001**  
**Location: Visalia Parkway**

**The following comments are applicable when checked:**

- The Site Plan Review comments are issued as general overview of your project. With further details, additional requirements will be enforced at the Plan Review stage. Please refer to the 2016 California Fire Code (CFC), 2016 California Building Codes (CBC) and City of Visalia Municipal Codes.
- All fire detection, alarm, and extinguishing systems in existing buildings shall be maintained in an operative condition at all times and shall be replaced or repaired where defective. If building has been vacant for a significant amount of time, the fire detection, alarm, and or extinguishing systems may need to be evaluated by a licensed professional. *2016 CFC 901.6*
- No fire protection items required for parcel map or lot line adjustment; however, any future projects will be subject to fire & life safety requirements including fire protection systems and fire hydrants in accordance with all applicable sections of the California Fire Code.
- Construction and demolition sites prior to and during construction shall comply with the following:
  - Water Supply for fire protection, either temporary or permanent, shall be made available as soon as combustible materials arrive on the site. *2016 CFC 3312*
  - An all-weather, 20 feet width Construction Access Road capable of holding a 75,000 pound fire apparatus. Fire apparatus access shall be provided within 100 feet of temporary or permanent fire department connections. *2016 CFC 3310*
- More information is needed before a Site Plan Review can be conducted. Please submit plans with more detail. Please include information on

**General:**

- Address numbers must be placed on the exterior of the building in such a position as to be clearly and plainly visible from the street. Numbers will be at least four inches (4") high and shall be of a color to contrast with their background. If multiple addresses served are by a common driveway, the range of numbers shall be posted at the roadway/driveway. *2016 CFC 505.1*
- All hardware on exit doors, illuminated exit signs and emergency lighting shall comply with the 2016 California Fire Code. This includes all locks, latches, bolt locks, panic hardware, fire exit hardware and gates.
- Commercial dumpsters with 1.5 cubic yards or more shall not be stored or placed within 5 feet of combustible walls, openings, or a combustible roof eave line except when protected by a fire sprinkler system. *2016 CFC 304.3.3*

- A Knox Box key lock system is required. Where access to or within a structure or area is restricted because of secured openings (doors and/or gates), a key box is to be installed in an approved location. The key box shall be ordered using an approved Knox Authorization Order Form. The forms are located at the fire department administration office located at 420 N Burke, Visalia, CA 93292. Please allow adequate time for shipping and installation. *2016 CFC 506.1*
- If your business handles hazardous material in amounts that exceed the Maximum Allowable Quantities listed on *Table 5003.1.1(1), 5003.1.1(2), 5003.1.1(3) and 5003.1.1(4) of the 2016 California Fire Code*, you are required to submit an emergency response plan to the Tulare County Health Department. Also you shall indicate the quantities on your building plans and prior to the building final inspection a copy of your emergency response plan and Safety Data Sheets shall be submitted to the Visalia Fire Department.

### Water Supply for Residential, Commercial & Industrial:

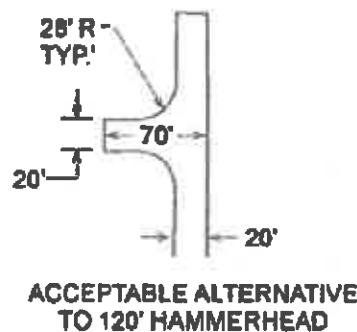
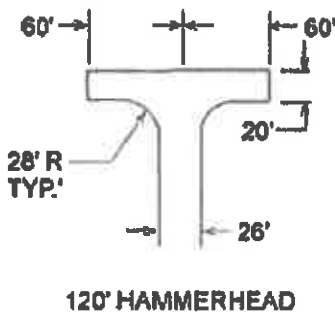
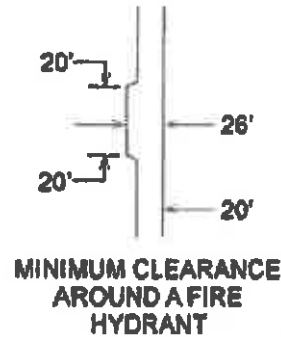
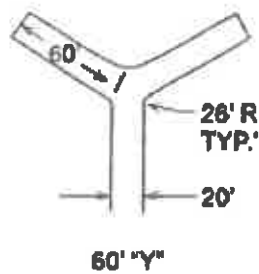
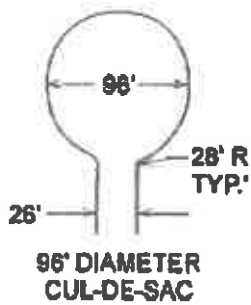
#### Commercial & Industrial

- Where a portion of the facility or building is more than 400 feet from a hydrant on a fire apparatus access road, on-site fire hydrant(s) shall be provided. *2016 CFC 507.5.1*
- Due to insufficient building information, the number and distance between fire hydrants cannot be determined by the Site Plan Review process. The number of fire hydrants and distance between required fire hydrants shall be determined by utilizing type of construction and square footage in accordance with *CFC 2016 Appendix C102 & C103 & CFC 507.5.1*
- To determine fire hydrant location(s) and distribution the following information was provided to the Site Plan Review committee: Type of construction \_\_\_\_\_ Square footage \_\_\_\_\_

### Emergency Access

- A fire apparatus access roads shall be provided and must comply with the 2016 CFC and extend within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet. Minimum turning radius for emergency fire apparatus shall be 20 feet inside radius and 43 feet outside radius. *2016 CFC 503.1.1*
- Buildings or portions of buildings or facilities with a vertical distance between the grade plan and the highest roof surface that exceed 30 feet shall provide an approved fire apparatus access roads capable of accommodating fire department aerial apparatus.
- Access roads shall have a minimum unobstructed width of 26 feet, exclusive of shoulders.
  - Access routes shall be located within a minimum of 15 feet and maximum of 30 feet from the building, and shall be positioned parallel to one entire side of the building.
  - Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building.

- ☒ Fire apparatus access roads in excess of 150 feet and dead end shall be provided with a turnaround. Fire apparatus access roads with a length of 151-500 feet shall be a minimum of 20 feet in width. Length of 501-750 feet shall be 26 feet in width. *2016 CFC Table D103.4*



- ☒ Approved No PARKING – FIRE LANE signs shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Signs shall have a minimum dimension of 12 inches wide by 18 inches high and have red letters on a white reflective background. *2013 CFC 503.3/D103.6*



- ☒ On site Fire Apparatus Access Roads shall be provided and have an unobstructed width of not less than the following;
  - 20 feet width, exclusive of shoulders (No Parking)
  - More than 26 feet width, exclusive of shoulders (No Parking one side)
  - More than 32 feet wide, exclusive of shoulders (Parking permitted on both sides)
- ☒ Marking- approved signs, other approved notices or marking that include the words "NO PARKING- FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. *CFC 503.3*

**Gates on access roads** shall be a minimum width of 20 feet and shall comply with the following:

*2016 CFC D103.5*

- Gates shall be of the swinging or sliding type.
- Gates shall allow manual operation by one person (power outages).
- Gates shall be maintained in an operative condition at all times.
- Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. (Note: Knox boxes shall be ordered using an approved Knox Authorization Order Form. The forms are located at the fire department administration office located at 420 N Burke, Visalia, CA 93292. Please allow adequate time for shipping and installation.)

Streets shall meet the City of Visalia's Design & Improvement Standards for streets to ensure that fire apparatus can make access to all structures in the event of an emergency.

**Fire Protection Systems**

An automatic fire sprinkler system will be required for this building. Also, a fire hydrant is required within 50 feet of the Fire Department Connection (FDC). Where an existing building is retrofitted with a sprinkler system (NFPA 13 or NFPA 13R) a fire hydrant shall be provided within 75 feet of the FDC. An additional 25 feet of distance between a fire hydrant and FDC may be granted when a fire sprinkler Density is designed with an additional 25%. *2016 CFC 912 and Visalia Municipal Code 8.20.010 subsection C103.4*

Locking fire department connection (FDC) caps are required. The caps shall be ordered using an approved Knox Authorization Order Form. The forms are located at the fire department administration office located at 420 N Burke, Visalia, CA 93292. *2016 CFC 912.4.1*

Commercial cooking appliances and domestic cooking appliances used for commercial purposes that produces grease laden vapors shall be provided with a Type 1 Hood, in accordance with the California Mechanical Code, and an automatic fire extinguishing system. *2016 CFC 904.12 & 609.2*

**Special Comments:**

One fire hydrant shall be provided behind the service area and a minimum of one in the sale display area.

Hammer head behind service area shall be permanently designated as "No Parking", shall not be used as vehicle staging, parking or loading.

Sprinklers may be required depending on size and use of building.

  
\_\_\_\_\_  
Corbin Reed  
Fire Marshal

SPR-19-078

Almax

VISALIA PARKWAY/

City of Visalia  
Police Department  
303 S. Johnson St.  
Visalia, Ca. 93292  
(559) 713-4370

### Site Plan Review Comments

- No Comment at this time.
- Request opportunity to comment or make recommendations as to safety issues as plans are developed.
- Public Safety Impact fee:  
Ordinance No. 2001-11 Chapter 16.48 of Title 16 of the Visalia Municipal Code  
Effective date - August 17, 2001

Impact fees shall be imposed by the City pursuant to this Ordinance as a condition of or in conjunction with the approval of a development project. "New Development or Development Project" means any new building, structure or improvement of any parcels of land, upon which no like building, structure of improvement previously existed. \*Refer to Engineering Site Plan comments for fee estimation.

- Not enough information provided. Please provide additional information pertaining to:  
\_\_\_\_\_
- Territorial Reinforcement: Define property lines (private/public space).  
\_\_\_\_\_
- Access Controlled / Restricted etc:  
\_\_\_\_\_
- Lighting Concerns:  
\_\_\_\_\_
- Landscaping Concerns:  
\_\_\_\_\_
- Traffic Concerns:  
\_\_\_\_\_
- Surveillance Issues:  
\_\_\_\_\_
- Line of Sight Issues:  
\_\_\_\_\_

Other Concerns: REFER TO ORIGINAL COMMENTS \*

K. GRANT A20

# SITE PLAN REVIEW COMMENTS

CITY OF VISALIA TRAFFIC SAFETY DIVISION

August 21, 2019

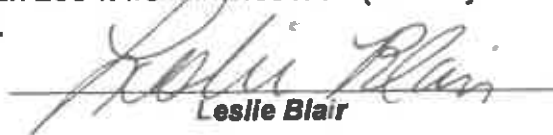
ITEM NO. <u>2</u>	RESUBMITTAL
SITE PLAN NO	SPR19-078
PROJECT TITLE	CARMAX
DESCRIPTION	Construction of a Used Car Dealership Including Parking Lots and Site Access
APPLICANT	CenterPoint Integrated Solutions, LLC
OWNER	CarMax Auto Superstores, Inc
APN	126-090-001
LOCATION	Visalia Parkway

**THE TRAFFIC DIVISION WILL PROHIBIT ON-STREET PARKING AS DEEMED NECESSARY**

- No Comments
- See Previous Site Plan Comments
- Install Street Light(s) per City Standards.
- Install Street Name Blades at            Locations.
- Install Stop Signs at *driveway exit* Locations.
- Construct parking per City Standards PK-1 through PK-4.
- Construct drive approach per City Standards.
- Traffic Impact Analysis required (CUP)
  - Provide more traffic information such as            Depending on development size, characteristics, etc., a TIA may be required.
- Additional traffic information required (Non Discretionary)
  - Trip Generation - Provide documentation as to concurrence with General Plan.
  - Site Specific - Evaluate access points and provide documentation of conformance with COV standards. If noncomplying, provide explanation.
  - Traffic Impact Fee (TIF) Program - Identify improvements needed in concurrence with TIF.

### Additional Comments:

- Visalia Pkwy is an arterial status roadway. Per COV Design and Improvement Standard C-32 Drive Approach Locations, minimum distance between driveways is 500-ft and from intersection is 200-ft. The most westerly and easterly driveways will be restricted to right in, right out only access. Note that both driveways are less than 200-ft from intersection (westerly driveway from Woodland, and easterly driveway from Mooney).

  
Leslie Blair

- A TIA will be required to be performed for the overall site which will include the CARMAX development.

---

**Leslie Blair**



**Site Plan Review Comments From:**  
California Water Service  
Stuart Skoglund, Superintendent  
216 N. Valley Oaks Dr.  
Visalia, CA 93292  
559-624-1662 Office  
559-735-3189 Fax

Date: 08/21/2019  
Item # 4  
Site Plan # 19-078  
Project: Carmax  
Description:  
Applicant:  
Location: Visalia Pkwy east of Mooney Blvd  
APN:

**The following comments are applicable when checked:**

No Comments at this time

Fire Hydrants  
Comments-

Services  
Comments-

Mains  
Comments-

Backflow requirements  
Comments-

**Additional Comments:**

---

Stuart Skoglund  
Superintendent

**DEPARTMENT OF TRANSPORTATION****DISTRICT 6**

1352 WEST OLIVE AVENUE

P.O. BOX 12616

FRESNO, CA 93778-2616

PHONE (559) 488-7396

FAX (559) 488-4088

TTY 711

[www.dot.ca.gov](http://www.dot.ca.gov)Making Conservation  
a California Way of Life.

May 20, 2019

06-TUL-63-5.48  
SPR 19078  
USED AUTO SALES  
AGENDA: 5/1/2019**SENT VIA EMAIL**

Ms. Susan Currier, Sr. Administrative Assistant  
City of Visalia – Community Development – Site Plan Review  
315 East Acequia Avenue  
Visalia, CA 93291

Dear Ms. Currier:

Thank you for the opportunity to review Site Plan Review (SPR) 19078 proposing a Used Auto Sales operation. The project site is located approximately 900 feet west of the State Route (SR) 63/Visalia Parkway intersection, adjacent to the Visalia Parkway Commercial Development (SPR 19055).

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. To ensure a safe and efficient transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all development projects that utilize the multimodal transportation network. Caltrans provides the *following comments* consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities:

1. The proposed Used Auto Sales project is adjacent to the west of the Visalia Parkway Commercial Development. The proposed site plan indicates 2 driveways accessing Visalia Parkway, one of which will be shared by the Visalia Parkway Commercial Development.
2. The proposed Project was initially included as part The Visalia Parkway Commercial Development - which is currently in the process of preparing a Transportation Impact Study (TIA). Caltrans recommends that the proposed Used Auto Sales project should be included in the TIA for the Visalia Parkway Commercial Development.
3. If the Used Auto Sale operation is approved prior to the TIA being completed for the Visalia Parkway Commercial Development, Caltrans recommends that the Used Auto Sales project pay its fair share into the City's Developer Fee Impact program to mitigate cumulative impacts of development to the State highway and local road systems.

If you have any other questions, please call me at (559) 488-7396.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Deel".

DAVID DEEL

Associate Transportation Planner  
Transportation Planning – North

## **Cristobal Carrillo**

---

**From:** Susan Currier  
**Sent:** Thursday, March 19, 2020 4:31 PM  
**To:** Paul Bernal; Cristobal Carrillo  
**Subject:** FW: Property Development

Susan Currier  
Sr. Administrative Assistant  
City of Visalia  
315 E. Acequia Ave.  
Visalia, CA 93291  
(559) 713-4436  
Fax (559) 713-4813  
Email [susan.currier@visalia.city](mailto:susan.currier@visalia.city)  
Website [www.visalia.city](http://www.visalia.city)

---

**From:** Rodger Marty [<mailto:rpmarty2@yahoo.com>]  
**Sent:** Thursday, March 19, 2020 2:48 PM  
**To:** Susan Currier; Jim Burr  
**Subject:** Property Development

Dear MS. Currier,

I am writing this in regard to the development of the property on the SW. corner of Visalia Parkway and Mooney Blvd.

Being a resident of Westlake Village mobile home park, located at 2400 W. Midvalley Ave. Space LD44, I live directly adjacent to the proposed CarMax facility. The developers have been very willing to address our concerns, and I willingly support their efforts to build on the property.

My only concern to their build is the proposed height of the adjacent block wall along the West perimeter. We have had thieves jump over the existing 6 ft. wooden fence into our yard, and have had several homes broken into in the past few years. Security is therefore my number one priority, and a wall, in my opinion, should be at least 8 ft.

I feel that sound abatement has been appropriately addressed by the developer, and appreciate their efforts to be a good neighbor. Please consider their plans and my comments in light of past break-ins.

Respectfully yours,

Rodger Marty  
559-967-6920

-----  
This e-mail (and attachments, if any) may be subject to the California Public Records Act, and as such may therefore be subject to public disclosure unless otherwise exempt under the Act.

## **Cristobal Carrillo**

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**From:** Susan Currier  
**Sent:** Monday, March 23, 2020 8:24 AM  
**To:** Cristobal Carrillo  
**Subject:** FW: Carmax development

FYI

Susan Currier  
Sr. Administrative Assistant  
City of Visalia  
315 E. Acequia Ave.  
Visalia, CA 93291  
(559) 713-4436  
Fax (559) 713-4813  
Email [susan.currier@visalia.city](mailto:susan.currier@visalia.city)  
Website [www.visalia.city](http://www.visalia.city)

---

**From:** peggy berner [<mailto:bernerpeggy@msn.com>]  
**Sent:** Thursday, March 19, 2020 5:41 PM  
**To:** Susan Currier  
**Subject:** Carmax development

As a resident and President of Westlake Village HOA I wanted to say that we are impressed with the way Carmax does business. They have met with the residents here several times and listened to our concerns. Carmax has answered our questions and asked for our input. They wanted our opinion on the height of the wall. We took a survey and the majority went with 8 feet for the wall. We appreciate the fact that they want to be good neighbors.

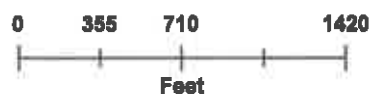
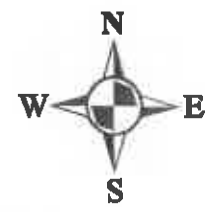
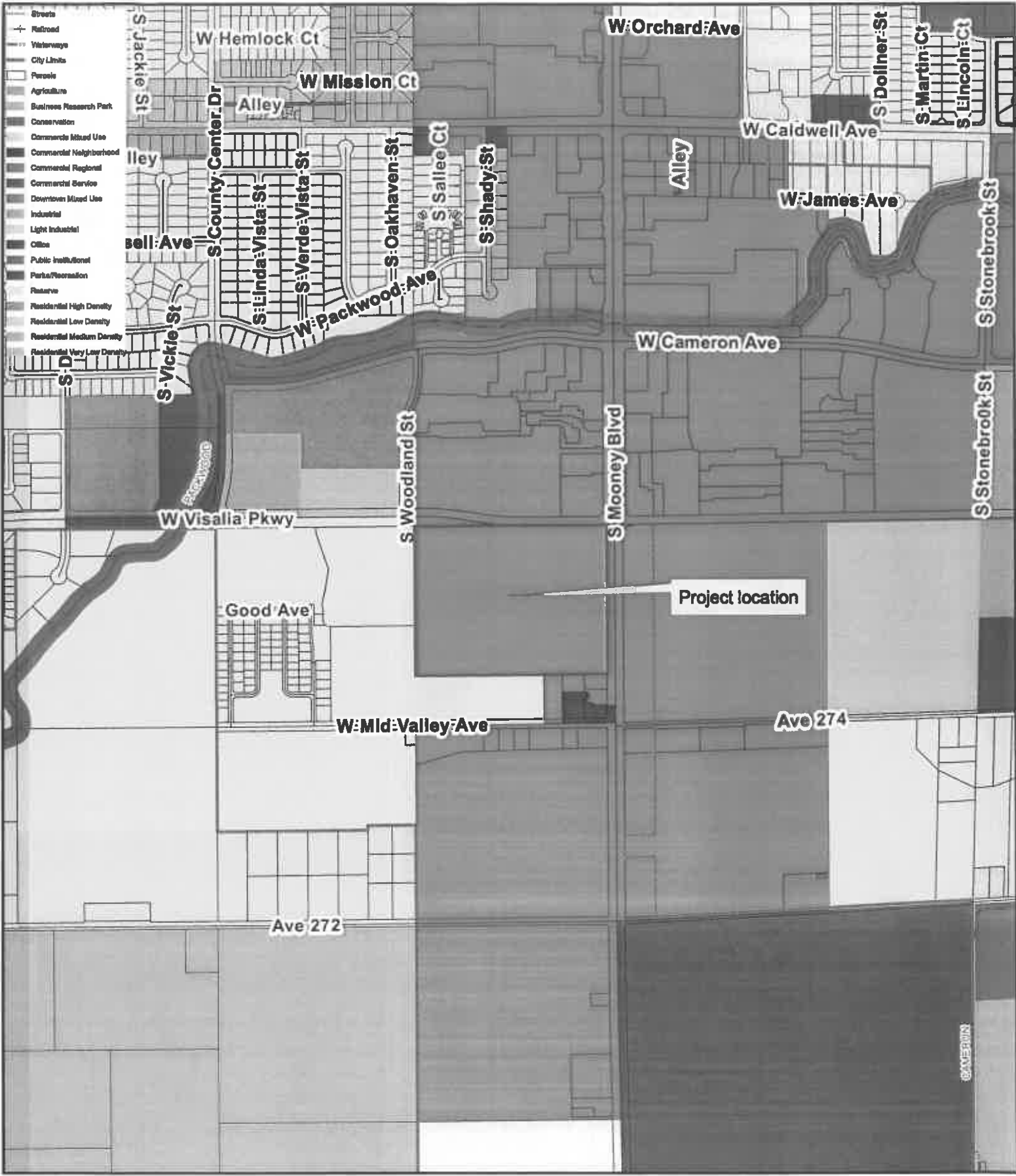
Thank you for listening.

Peggy Berner  
Westlake Village HOA  
Get [Outlook for Android](#)

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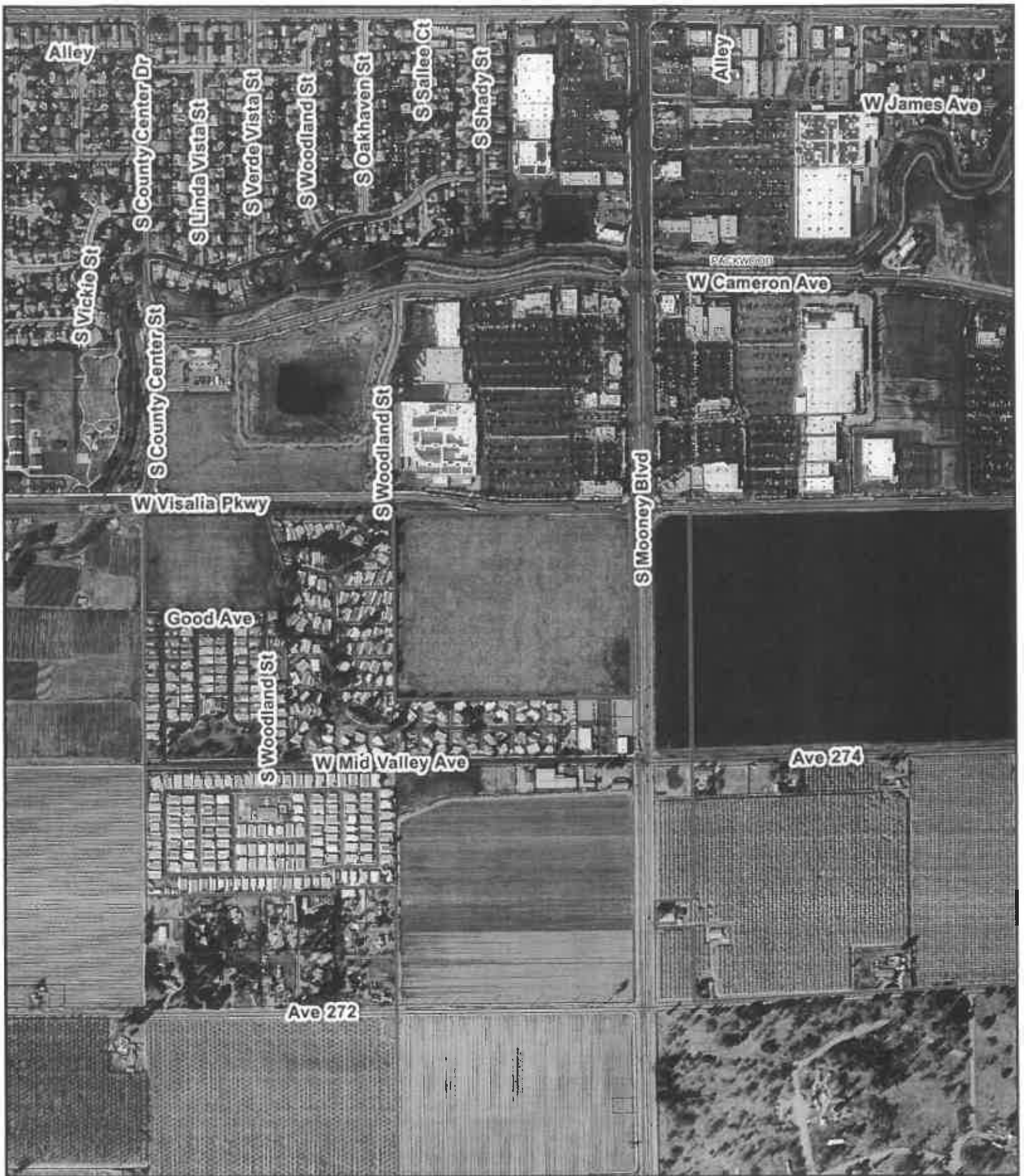
This e-mail (and attachments, if any) may be subject to the California Public Records Act, and as such may therefore be subject to public disclosure unless otherwise exempt under the Act.





**Zoning Text Amendment No. 2019-13**  
**Conditional Use Permit No. 2019-42**  
 General Plan Map





**Zoning Text Amendment No. 2019-13**  
**Conditional Use Permit No. 2019-42**

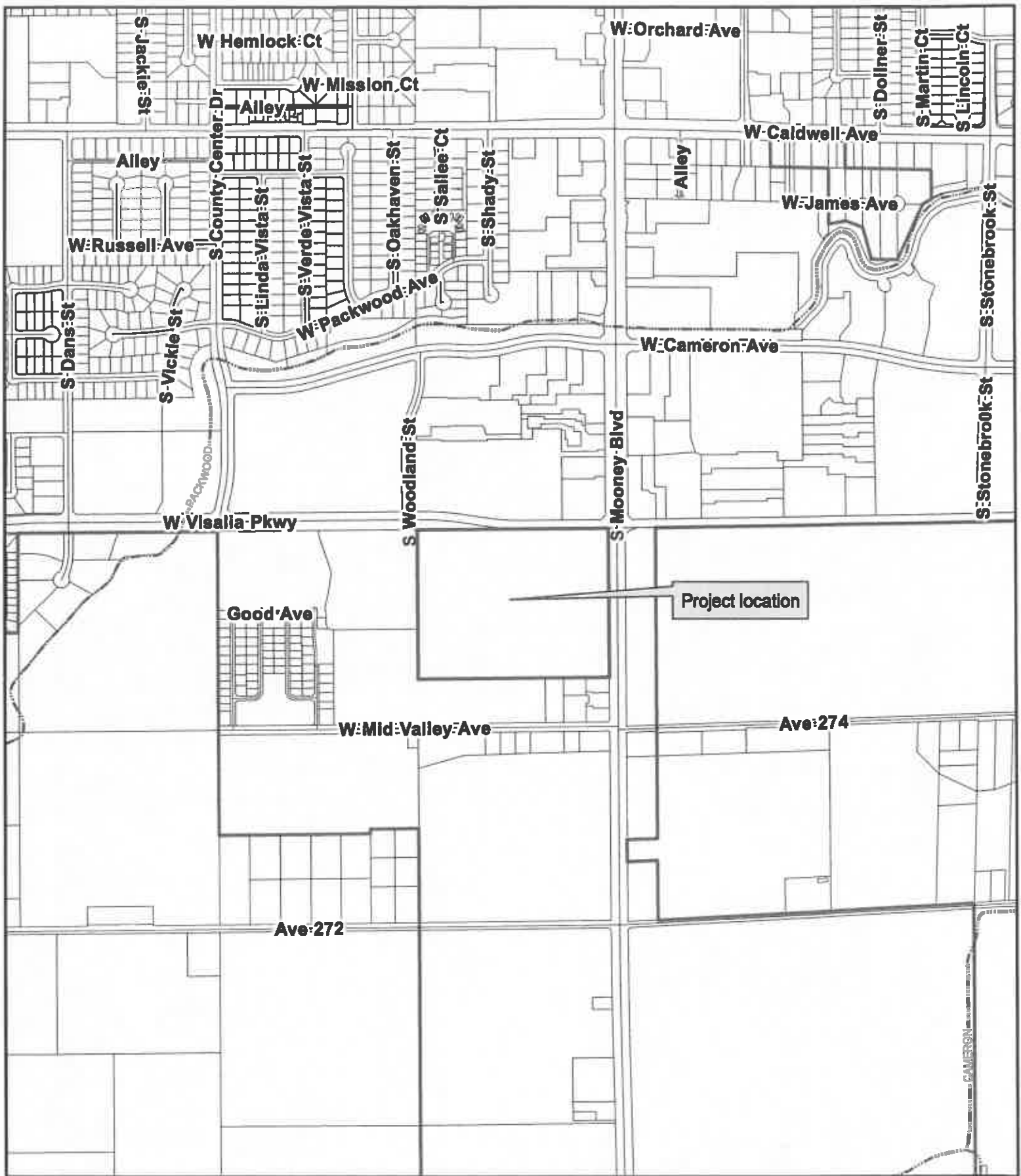
Aerial Map



- Streets
- - - Railroad
- ..... Waterways
- City Limits
- Parcels

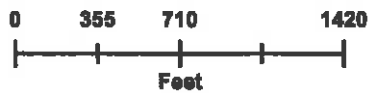






**Zoning Text Amendment No. 2019-13**  
**Conditional Use Permit No. 2019-42**

Vicinity Map



- Streets
- Railroad
- Waterways
- City Limits
- Parcels

