

APPENDIX K

ENERGY DATA

Existing and Future No Build VMT and VHT Calculations

The following Tables present the distance and ADT of different segments on I-15 from Victorville Station to the proposed South Station location in Las Vegas.

Table 1 Existing and Future I-15 Mainline ADT for California Segments

Segment	Distance (Miles)	ADT		
		2,007	2013	2030
From No. Jct. Stoddard Wells to Jct. I-40	30	63,388	71,113	93,000
From Jct. I-40 to Nevada State Line	110	41,838	48,663	68,000

Table 2 Existing and Future I-15 Mainline ADT for Nevada Segments

Segment	Distance (Miles)	ADT		
		2007	2013	2030
Primm to Sloan	31	77,888	109,922	200,685
Sloan to I-215	12	95,102	154,750	323,750

The corresponding daily VMT is obtained by multiplying the distances by the ADTs. Based on the posted speed limit of 70mph, the daily VHT is obtained by dividing the VMT by 70. The results are shown below.

Table 3 Daily Vehicle Miles Traveled

Segment	VMT		
	2007	2013	2030
From No. Jct. Stoddard Wells to Jct. I-40	1,901,640	2,133,390	2,790,000
From Jct. I-40 to Nevada State Line	4,602,180	5,352,930	7,480,000
Primm to Sloan	2,414,528	3,407,582	6,221,235
Sloan to I-215	1,141,224	1,857,000	3,885,000
Total Daily VMT	10,059,572	12,750,902	20,376,235
Daily VHT	143,708	182,156	291,089

Table 4: Net Energy Consumption

System Parameters	Journey from/to	Interstation motion time (min)	Stop time at end of interstation journey (min)	Net energy taken from source during interstation journey (kWh)	Net energy taken from source during journey w/dwell (kWh)	kWh/pass km
125 mph @70% powered	Vic to LV	98.08		7870		
	LV to Vic	94.44		8220		
	RT total	192.52	36.67	16090	16396	0.0412
150 mph @ 70% powered	Vic to LV	85.45		8701		
	LV to Vic	80.79		9306		
	RT total	166.24	36.67	18008	18314	0.0461

@70% powered	125 mph @70%	150 mph @70%	delta	
Avg speed	96.3	132	36	37%
RT energy	16396 kwh/RT	18314 kwh/RT	1918 kwh/RT	12%