

III. PROJECT CONDITIONS

The following is a description of the proposed project, an estimate of the project trip generation quantities, an assignment of the project trips to SR 227 and an evaluation of the potential impacts associated with the "existing plus project" conditions.

Description

Cold Canyon Landfill is located at 2268 Carpenter Canyon Road. The proposed project will increase the existing landfill facility to a total of approximately 206 acres. The proposed hours of operation for various on-site activities will be extended to 7:00 AM-5:00 PM, except processing at the material recovery facility which will operate until 10:00 PM (2 shifts). Proposed project improvements to the existing facility include the expansion of landfill area and daily operational capacity. The expansion will include the areas devoted to the resource recovery park, composting operations and the material recovery facility. The expansion will also require 41 new employees for daily operations (increase from 79 to 120). On-site project improvements include a new entrance driveway located about 2,800' south of the existing driveway. The new driveway will be located about 175' north of Patchett Road. A new scale house with 3 scales will be constructed about 1,200' from SR 227. Once the new driveway is constructed, the existing driveway will be closed and all traffic (ingress and egress) will use the new driveway. Off-site project improvements proposed by the applicant include a southbound left turn lane and northbound acceleration lane on SR 227 at the new driveway. Off-site improvements would be constructed within the State right-of-way (R/W). A copy of the Project Site Plan is provided on Figure 3.

Trip Generation and Assignment

All traffic associated with current operations uses the existing facility driveway on SR 227. The landfill traffic is comprised of employee trips, local contractor trucks and trailers, municipal garbage trucks and vehicles transporting recycled commodities. The existing permit allows up to 542 vehicles per day (1,084 two way trip ends). Data provided by the existing landfill operators demonstrates that the 7-day average was approximately 300 vehicles per day in 2006. Monday through Friday the average was 330 vehicles per day (typical weekday). Trip generation on Saturdays was 76% of the weekday average (250 vehicles) and on a Sunday was 54% of the average (178 vehicles). The busiest day of 2006 was in June. A total of 439 vehicles entered the landfill facility. June was also the busiest month in 2006 (weekday average of 385). Peak month operations are about 15-20% higher than average month conditions.

The new turning movement count data collected at the existing driveway also included vehicle classification information (number of small, medium and large vehicles). Small vehicles include passenger cars and pickup trucks, while medium sized vehicles include pickup trucks with trailers and small commercial trucks (2 or 3 axel). All local municipal trucks and trucks with 3 or more axels were considered large vehicles. A breakdown of the weekday trip generation associated with the existing operations is presented in Table 2A (annual average). A copy of the 2006 traffic volume data provided by the landfill operators is included with the Appendix Material.

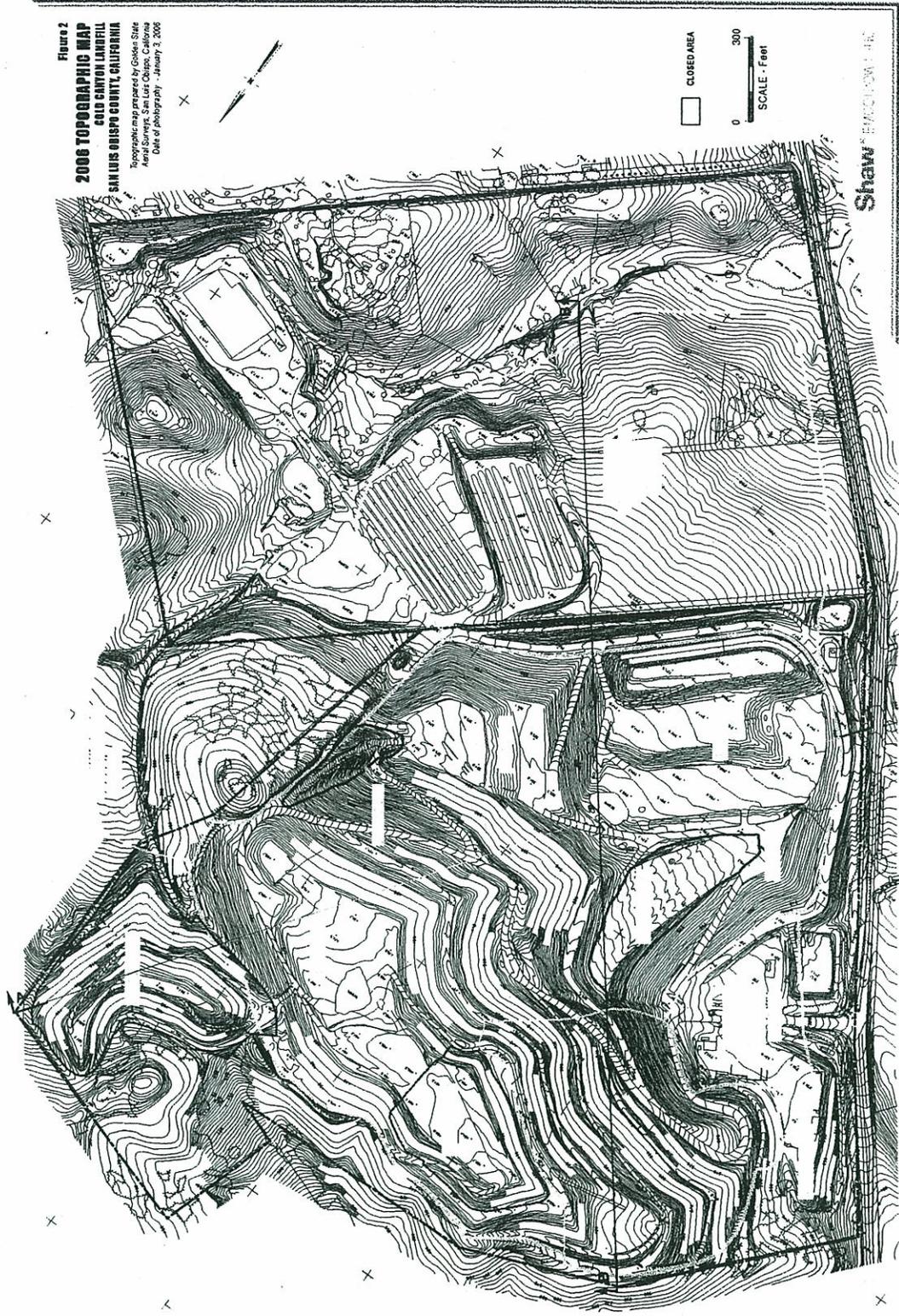


Table 2A - Existing Landfill Trip Generation (Average Weekday)

Project Site Components	Number of Vehicle Trips				Daily
	AM Peak Hour		PM Peak Hour		
	IN	OUT	IN	OUT	
Existing Average Weekday:					
Small Vehicles (a)	21	2	1	29	-
Medium Vehicles (b)	7	3	0	0	-
Large Vehicles (c)	17	15	0	1	-
Totals:	45	20	1	30	660

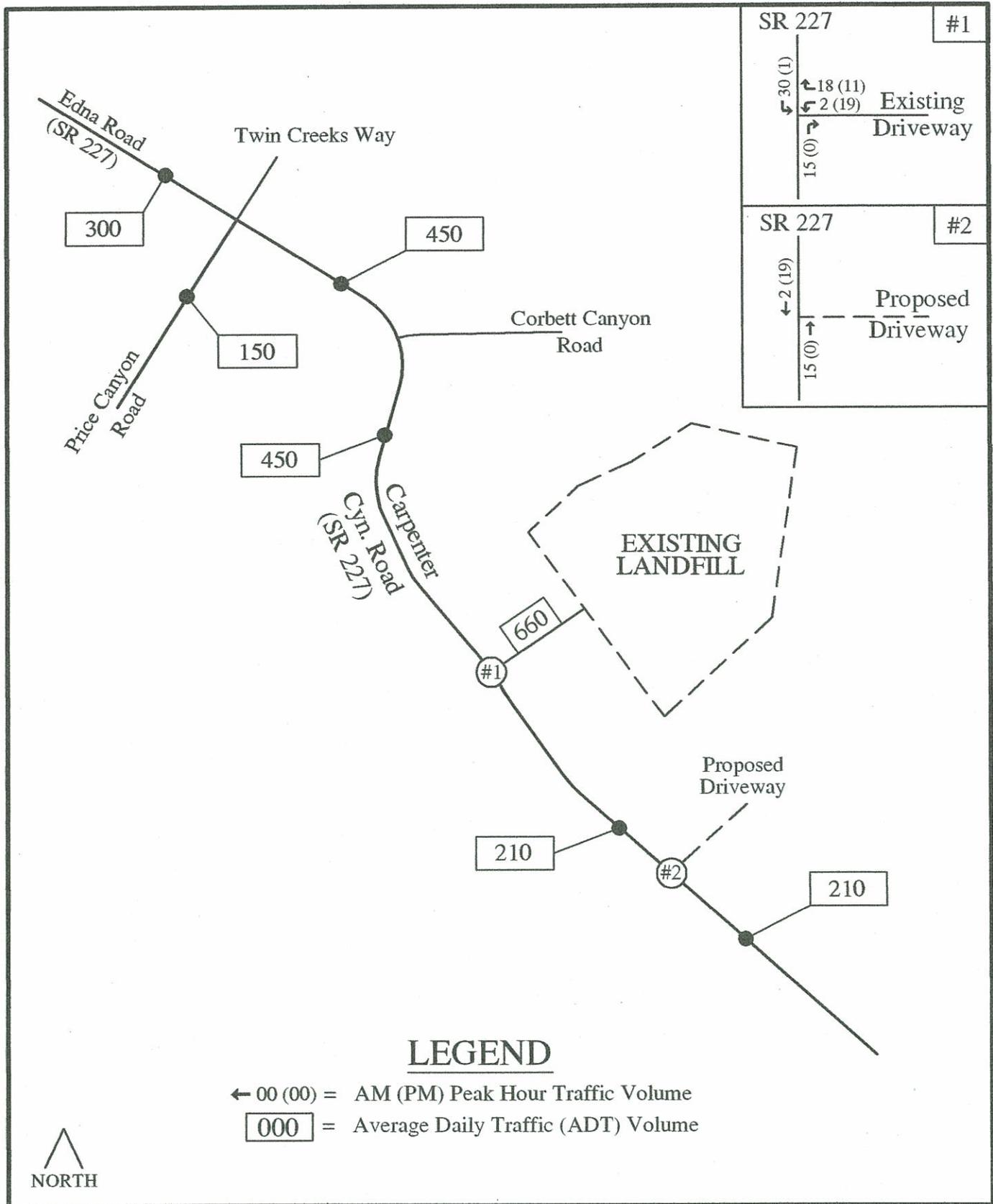
- (a) Passenger vehicles and pickup trucks
- (b) Trucks with trailers and/or small commercial trucks (2 or 3 axel)
- (c) Municipal trucks and trucks with more than 3 axels
- (d) Daily trip rate of 1.5 trips per employee (79 employees)

The data in Table 2A demonstrates that the existing landfill generates about 660 vehicle trips on an average weekday (2 way trip ends). Approximately 10% of the daily traffic occurs during the AM peak hour, while only 5% occurs during the PM peak hour. The data also indicates that about 70% of the total AM peak hour trips are inbound and approximately 95% of the total PM peak hour trips are outbound. The existing landfill service area includes the north coast and southern San Luis Obispo County, between San Simeon and Nipomo. A review of the new data and information in Cold Canyon Landfill Expansion Final EIR (October 1991) indicates that about 65-70% of the total daily traffic travels to and from the north on SR 227. Figure 4A illustrates the existing weekday traffic volumes associated with the current landfill operations.

The expansion of the landfill disposal area will not necessarily increase traffic volumes (permanent disposal daily tonnage limit will remain at 1,200 tons per day). However, traffic to and from the landfill will increase as a result of the expanded processing limits for the resource recovery park, composting operation and materials recovery facility (MRF). The extended hours and additional employees (41) will also generate new trips to and from the landfill. The hours of operation for some on-site activities will increase by 30-60 minutes per day (ie: 7:30 to 7:00 AM and 4:30 to 5:00 PM). The hours allowed for the receipt of material at the landfill (general public) and composting area will increase by 3 hours per day. The MRF hours will extend between 7:00 AM and 10:00 PM (two employee shifts). Employee shifts at the landfill are expected to occur as follows:

- Approximately 51% of the new employees will be assigned to the MRF (21 employees)
- Approximately 15-20 employees will work the second shift at the MRF (3:00 PM-10:00 PM).
- There will be approximately 100 day shift employees at the landfill (7:00 AM to 5:00 PM)

Beginning the day shift at 7:00 AM (in lieu of 7:30 AM) may slightly reduce employee demands during the AM peak commuter period (7-9 AM). Ending the day shift at 5:00 PM (in lieu of 4:30 PM) should not significantly increase the number of employee trips during PM peak commuter period (4-6 PM). It was concluded that on an average weekday peak hour demands associated with employee trips will increase by about 25-30% (21 new day shift employees / 79 existing day



SR 227	#1
↑ 30 (1) ↑ 18 (11) ↓ 2 (19) ↓ 15 (0)	Existing Driveway
SR 227	#2
↓ 2 (19) ↓ 15 (0)	Proposed Driveway

LEGEND

← 00 (00) = AM (PM) Peak Hour Traffic Volume
 [000] = Average Daily Traffic (ADT) Volume



shift employees). Second shift employees will not increase typical AM or PM peak hour demands, but will increase total weekday traffic demands (estimated at 50%). The employee increases are expected to occur incrementally over the life of the landfill as the local demand for the landfill services increase.

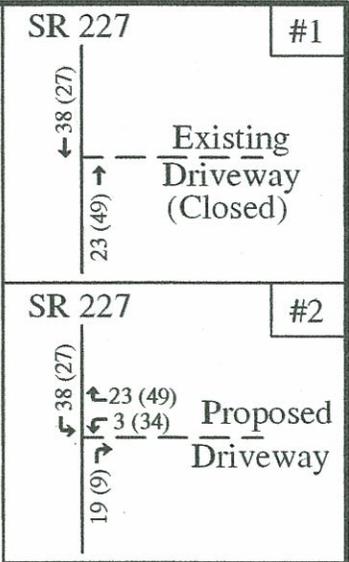
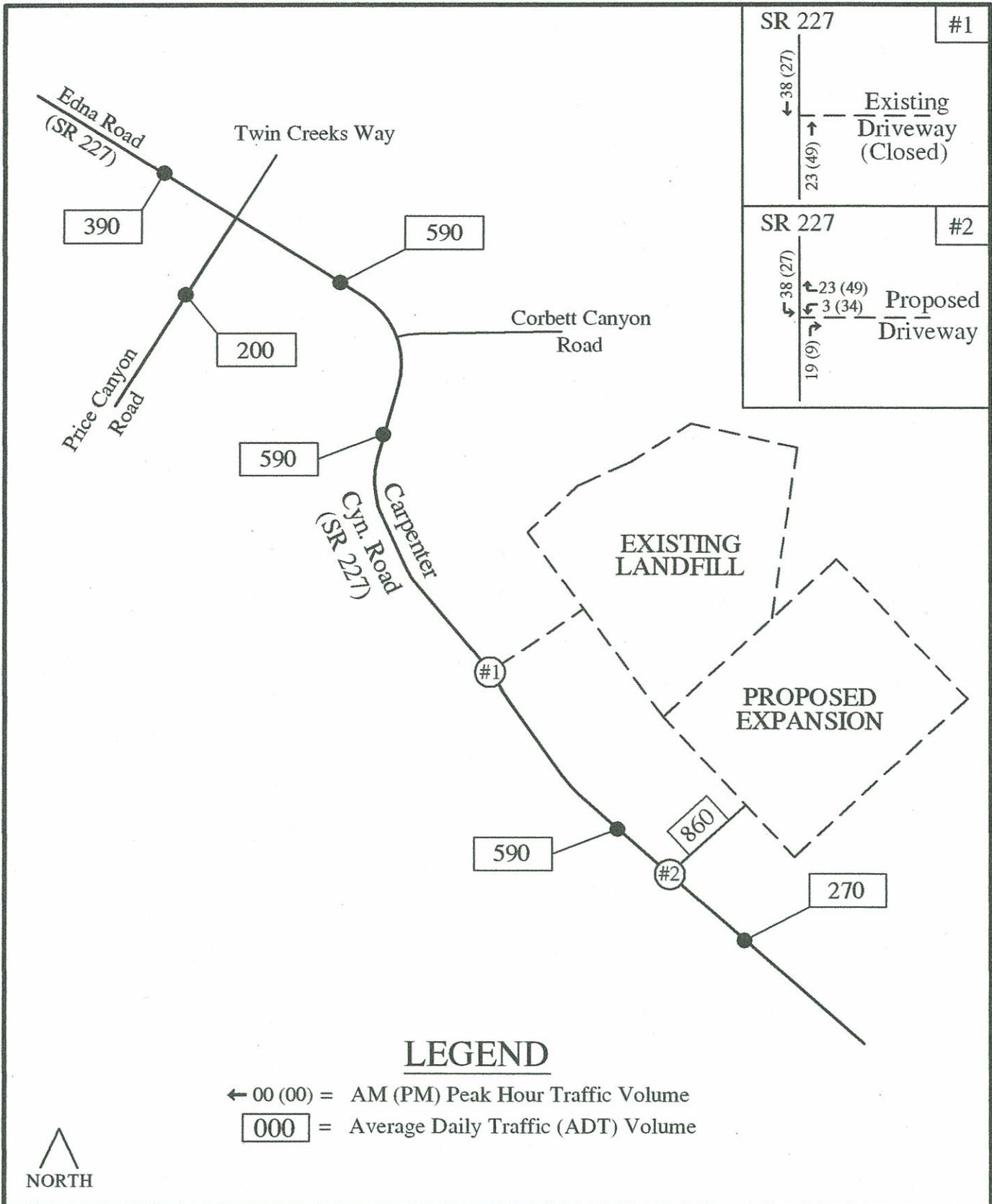
The expanded hours for the receipt of material and increased processing limits at the resource recovery park, composting area and materials recovery facility will increase AM and PM peak hour demands on an average weekday. Data provided by the landfill operators demonstrates that beginning the day shift at 7:00 AM (in lieu of 8:00 AM) will increase the morning demands by 5-10%. Therefore, it was estimated that the expanded hours and increased processing limits will increase weekday AM peak hour demands at the facility by at least 25% (medium and large vehicles). Data also illustrates that the afternoon peak hour of generation is about 30-65% higher than the morning peak hour (peak day; $1.28=73/57$ and average day; $1.66=53/32$). Since only 2 medium-to-large sized vehicles were recorded between 4:00-6:00 PM it was estimated that the project trips during the PM peak hour trips will be at least 50% greater than the AM peak hour. Traffic associated with the expanded hours and increased processing limits will also increase daily demands by about 25%. The expanded landfill trip generation estimates are presented in Table 2B.

Table 2B - Expanded Landfill Trip Generation (Average Weekday)

Project Site Components	Number of Vehicle Trips				Daily
	AM Peak Hour		PM Peak Hour		
	IN	OUT	IN	OUT	
Proposed Average Weekday:					
Small Vehicles (a & b)	27	3	2	38	180
Medium and Large Vehicles (c & d)	30	23	34	45	680
Proposed Project Totals :	57	26	36	83	860
Existing Facility Total :	45	20	1	30	660
Net Project Increase :	+12	+6	+35	+53	+200

- (a) Project trips increase by 30% during peak periods and 50% on a daily basis
- (b) Daily trip rate of 1.5 trips per employee (120 employees)
- (c) Project AM peak hour demands will increased by 25%
- (d) Project PM peak hour demands will be 50% greater than AM peak hour

The data in Table 2B indicates that the expanded landfill facility will generate about 860 daily trips, with 83 trips during the AM peak hour (57 inbound and 26 outbound) and 119 trips during the PM peak hour (36 inbound and 83 outbound). The proposed project will result in a net increase of approximately 200 daily trips, with 18 new trips during the AM peak hour and 88 new trips during the PM peak hour. The new project trips were assigned to SR 227 using distribution percentages similar to those documented for existing conditions. Approximately 60% of the employee trips and 75% of the truck trips (medium and large vehicles) will be oriented to and from the north on SR 227. As previously discussed, the existing driveway will be closed and all landfill traffic will use the new entrance (2,800' south of existing driveway). Figure 4B illustrates the weekday traffic volumes associated with the proposed project. The trip generation quantities in Table 2B do not include a reduction for the recently established employee vanpool program.



**PINNACLE
TRAFFIC
ENGINEERING**

Cold Canyon Landfill Expansion
- Traffic Impact Report -

**FIGURE 4B
PROPOSED
WEEKDAY PROJECT
TRAFFIC VOLUMES**

Levels of Service Analysis

The evaluation of “project” conditions is an analysis of existing plus project traffic operations. A review of the project traffic volumes on Figures 4A and 4B demonstrates that the proposed landfill expansion will increase traffic volumes by 140 ADT on SR 227 (north of landfill). Existing plus project daily traffic along this segment of SR 227 will remain within acceptable limits (LOS C or better). Similar to the existing conditions analysis, the peak hour LOS values were calculated for proposed driveway intersection on SR 227. The results of the existing plus project LOS analysis are presented in Table 3. Copies of the LOS worksheets are included with the Appendix Material.

Table 3 - Existing Plus Project Peak Hour LOS Analysis

Study Intersection	Vehicle Delay - LOS Value	
	AM Peak Hour	PM Peak Hour
<u>SR 227 / Proposed Driveway (a)</u> Westbound Approach (b)	<u>1.4 - A</u> (13.2 - B)	<u>1.9 - A</u> (11.7 - B)

(a) Total average delay - LOS value

(b) Stop sign controlled, approach delay - LOS value

The data in Table 3 demonstrates that total average delays at the SR 227 / proposed driveway intersection will remain within the LOS A range during the AM and PM peak hour periods. Vehicle delays on the westbound approach (landfill exit traffic) will be within the LOS B range. Existing plus project traffic at the proposed landfill driveway will be below that the minimum peak hour traffic signal warrant criteria defined in the California MUTCD (Warrant #3). A copy of the California MUTCD traffic signal warrant criteria is included with the Appendix Material.

Conclusions

The project traffic volumes will not substantially increase traffic in relation to existing load and capacity, or exceed the established LOS standard (LOS C or better). Therefore, it is concluded that the project traffic will not significantly impact existing operations provided that the off-site project improvements are constructed in conjunction with the landfill expansion. Discussions regarding any potential safety impacts are presented in Section V, Project Access.

IV. CUMULATIVE CONDITIONS

Cumulative traffic conditions are typically comprised of existing volumes, plus traffic generated by other known approved and/or pending projects. Contact with the San Luis County Planning Department did not identify any future projects that will significantly increase weekday traffic volumes on SR 227 (adjacent to landfill). However, data in the 2005 Regional Transportation Plan (RTP) does demonstrate that 20 year traffic projections could increase traffic volumes by about 40% between Printz Road and Price Canyon Road (2% per year). Future improvements identified in the Route 227 PSR (Caltrans) include the widening of SR 227 to a 4 lane facility north of Price Canyon Road. No future roadway improvements for SR 227 adjacent to the landfill are identified in the other reference documents.

Traffic Volumes

Background traffic demands on SR 227 adjacent to the landfill were derived by increasing the existing traffic volumes 40% to account for future background traffic growth (over the next 20 years). The total cumulative traffic volumes were then estimated by combining the background traffic demands and the new project trips resulting from the proposed landfill expansion. The total cumulative weekday traffic projections are illustrated on Figure 5.

Levels of Service Analysis

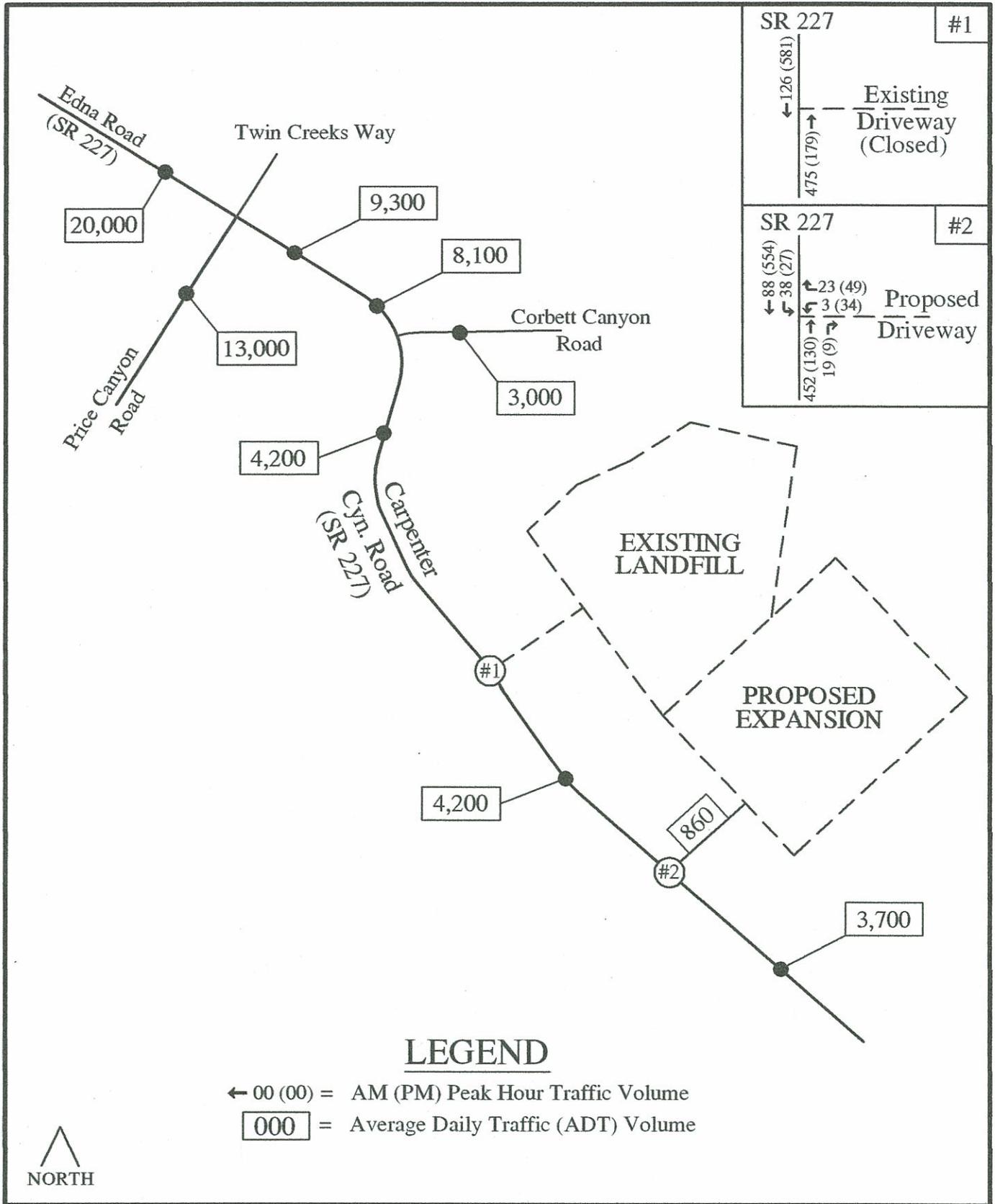
A review of the data on Figure 5 demonstrates that total cumulative daily traffic volumes on SR 227 adjacent to the landfill will be within the LOS B range (4,000 to 8,000 ADT). Similar to the existing and project conditions analysis, the cumulative LOS values were calculated for the SR 227 / proposed driveway intersection. The intersection LOS analysis was conducted with and without the new project trips. The results of the cumulative LOS analysis are presented in Table 4. Copies of the LOS worksheets are included with the Appendix Material. The without project scenario is comprised of traffic volumes associated with the existing landfill facility.

Table 4 - Cumulative Peak Hour LOS Analysis

Study Intersection	Peak Hour	Vehicle Delay - LOS Value	
		Without Project	With Project
<u>SR 227 / Proposed Driveway (a)</u> Westbound Approach (b)	AM	<u>1.0 - A</u> (15.3 - C)	<u>1.2 - A</u> (15.8 - C)
	PM	<u>0.6 - A</u> (13.5 - B)	<u>1.7 - A</u> (13.6 - B)

(a) Total average delay - LOS value

(b) Stop sign controlled, approach delay - LOS value



**PINNACLE
 TRAFFIC
 ENGINEERING**

Cold Canyon Landfill Expansion
 - Traffic Impact Report -

**FIGURE 5
 TOTAL CUMULATIVE
 WEEKDAY
 TRAFFIC VOLUMES**

The data in Table 4 demonstrates that total average vehicle delays at the SR 227 / proposed driveway intersection will be within the LOS A range during the AM and PM peak hour periods (without or with the expanded landfill facility new trips). Delays on the proposed driveway (westbound approach) will be within the LOS B-C range. Total cumulative peak hour traffic demands at the proposed landfill driveway will remain below that the minimum California MUTCD signal warrant criteria (Warrant #3). A copy of the California MUTCD traffic signal warrant criteria is included with the Appendix Material.

Conclusions

The project traffic volumes will not substantially increase traffic in relation to existing load and capacity, or exceed the established LOS standard (LOS C or better). Therefore, it is concluded that the project traffic will not significantly impact cumulative traffic operations provided that the off-site project improvements are constructed in conjunction with the landfill expansion. Discussions regarding any potential safety impacts are presented in Section V, Project Access.