

**FINAL REPORT
(Replaces July 2002 Report)**

**STANFORD UNIVERSITY
2002 TRAFFIC MONITORING REPORT**

Prepared for:

**Santa Clara County
Department of Planning Development**



December 2002

Revised October 15, 2003

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Introduction

This report presents the traffic and parking data that has been collected at Stanford University by Korve Engineering during the spring and fall monitoring periods of 2002. Traffic volumes were collected for six weeks during the spring and two weeks during the fall. The spring counts were conducted the weeks of April 15, April 22, April 29, May 6, May 13, and May 20. The fall counts were conducted the weeks of October 21 and October 28. The week of October 28 was substituted for the week of October 14 because of the occurrence of Homecoming on October 19. The data include vehicle counts at all of the access points to the campus and parking lots. Parking lot counts and cut-through percentages were used to adjust the raw traffic counts in order to determine the total amount of peak hour traffic generated by Stanford University. The parking data were used to add in campus traffic that park outside of the count area and subtract out hospital traffic that parks inside the count area. License plate surveys were used to calculate the amount of traffic that cuts through the campus and thus is not University-generated traffic. Data collection methodology is described in greater detail in Task 1. A description of the data analysis procedures is presented in Task 2. The data collected in calendar year 2002 is compared to the baseline counts collected in calendar year 2001. Differences between the two years are then analyzed to determine if traffic is increasing to a significant degree.

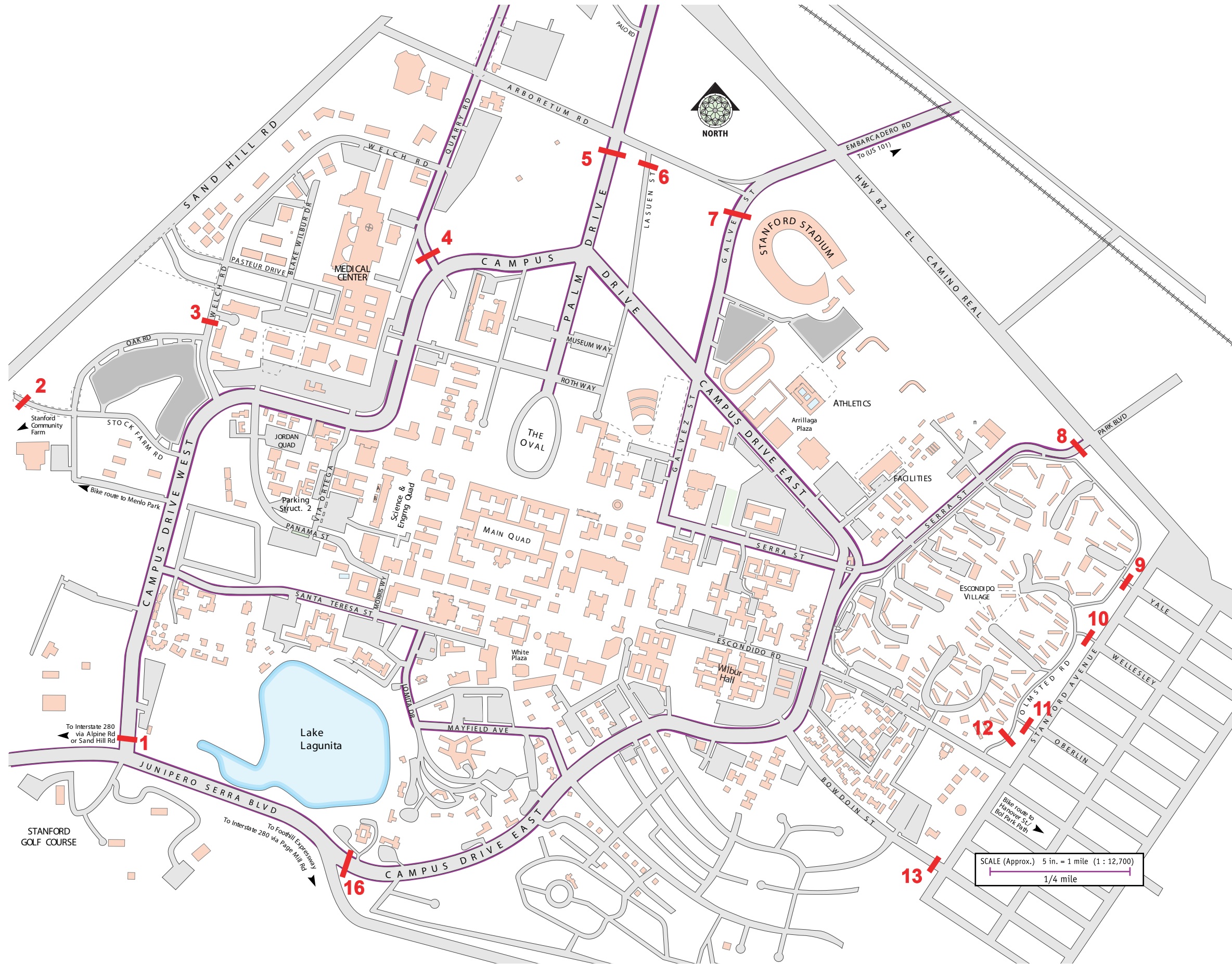
Task 1.0 Traffic Monitoring Data Collection Methodology

Data collection is a critical component of the traffic monitoring program. The following work elements were conducted to collect all relevant traffic data for the monitoring program.

Task 1.1 Machine Cordon Line Traffic Counts

Directional traffic counts were collected at Stanford University for eight weeks in 2002 on each of the 16 roadways that provide access to and from the campus. The location of the 16 cordon counts are listed below and shown graphically in Figures 1 and 2.

1. Campus Drive West, north of Junipero Serra Boulevard
2. Stock Farm Road, east of Sand Hill Road
3. Welch Road, north of Oak Road
4. Quarry Road, north of Campus Drive West
5. Palm Drive, south of Arboretum Road
6. Lasuen Street, south of Arboretum Road
7. Galvez Street, south of Arboretum Road
8. Serra Street, southwest of El Camino Real
9. Yale Street, west of Stanford Avenue
10. Wellesley Street, west of Stanford Avenue
11. Oberlin Street, west of Stanford Avenue



Cordon Count Locations

1. Campus Drive West north of Junipero Serra Blvd.
2. Stock Farm Road east of Sand Hill Road
3. Welch Road north of Oak Road
4. Quarry Road north of Campus Drive
5. Palm Drive south of Arboretum Road
6. Lasuen Street south of Arboretum Road
7. Galvez Street south of Arboretum Road
8. Serra Street southwest of El Camino Real
9. Yale Street west of Stanford Avenue
10. Wellesley Street west of Stanford Avenue
11. Oberlin Street west of Stanford Avenue
12. Olmsted Road north of Escondido Road
13. Bowdoin west of Stanford Avenue
14. Raimundo west of Stanford Avenue
15. Santa Maria Avenue north of Junipero Serra Blvd.
16. Campus Drive East east of Junipero Serra Blvd.

For count locations 14 and 15 see Figure 2

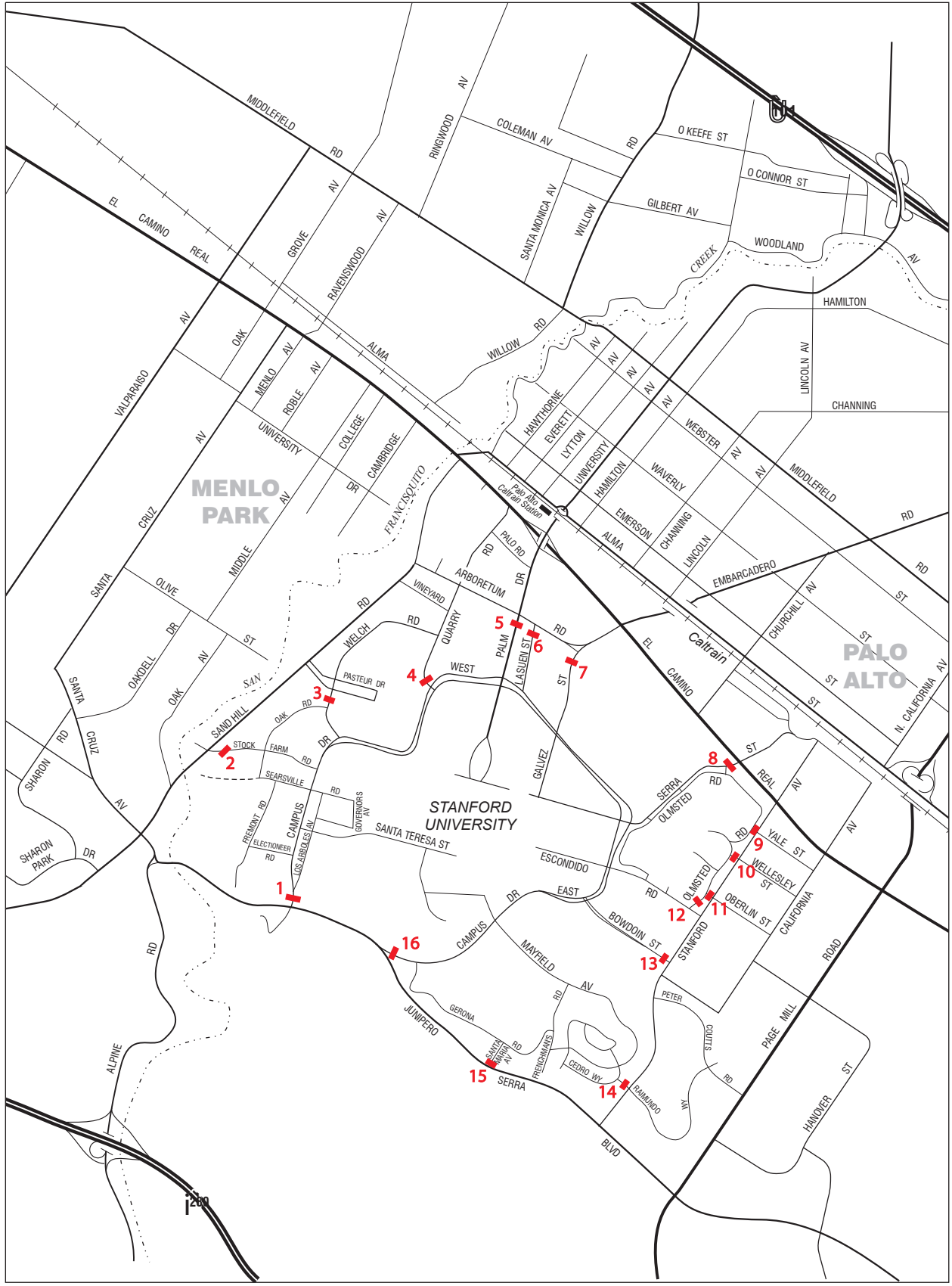


Figure 2
Daily Machine Cordon Count Locations

12. Olmsted Road, north of Escondido Road
13. Bowdoin Street, west of Stanford Avenue
14. Raimundo Way, west of Stanford Avenue
15. Santa Maria Avenue, north of Junipero Serra Boulevard
16. Campus Drive East, east of Junipero Serra Boulevard

The detailed traffic counts at the 16 cordon locations are presented in Appendix A and are summarized in Table 1. Table 1 shows the a.m. inbound and p.m. outbound peak hour volumes for each day that traffic was monitored. As indicated in Table 1, the a.m. peak hour usually occurred from 8:00 to 9:00 and the p.m. peak hour generally occurred between 5:00 to 6:00. The unadjusted a.m. inbound traffic volumes ranged from a low of 2,816 on Friday, May 24 to a high of 4,784 on Wednesday, May 8. The p.m. peak hour traffic volumes ranged from a low of 3,629 on Monday, October 28 to a high of 4,813 on Monday, April 15.

Midway through the fall count, it became apparent that a new parking lot for Escondido Elementary School was in use just inside the Olmstead Road cordon line. The count location was subsequently moved northward to the far side of the parking lot so that vehicle traffic attributable to the elementary school would not be counted. The a.m. counts after relocation were much lower than those that occurred prior to relocation. For this reason, the a.m. numbers obtained after relocation of Location 12 (Olmstead Road) were averaged and used for all a.m. fall counts. These minor adjustments to the a.m. volumes are reflected in Table 1. Counts during the p.m. peak did not need to be adjusted because they showed little difference before and after relocation, presumably because most elementary school traffic occurs before 4:00-6:00 p.m.

Task 1.2 Parking Lot Driveway Counts

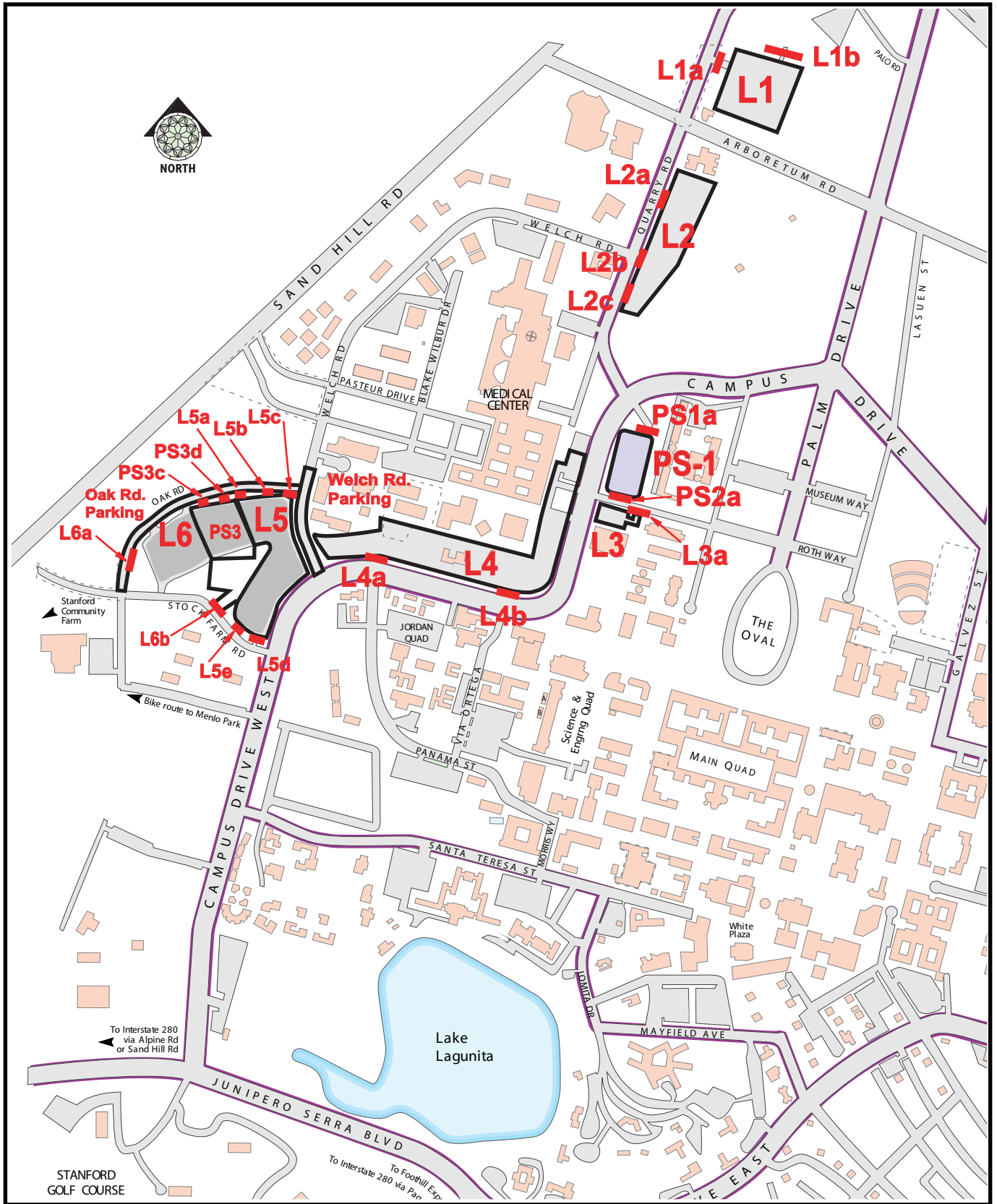
There are two parking lots (L1 – Rectangle Lot and L2 – Quarry Lot) outside the cordon line that serve some campus uses. There are also several parking lots (L3 – Mudd Lot, L4 – Beckman Lot, L5 – Stock Farm Road Lot, and L6) along with parking structures 1 (PS1) and 3 (PS3) that are inside the established cordon line and serve some hospital uses. Traffic was counted by direction into and out of these parking lots during the entire count period. The detailed count sheets for the driveway traffic at these lots are included in Appendix B.

The driveway count locations are presented below and on Figure 3.

1. PS1a – Parking Structure 1 North Access to Campus Drive
2. PS1b – Parking Structure 1 South Access to Roth Way
3. PS3a – Parking Structure 3 Southeast Access
4. PS3b – Parking Structure 3 Southwest Access

Table 1 2002 Raw Traffic Count Summary

Date	Weather	AM Inbound		PM Outbound	
		Volume	Period	Volume	Period
Week 1					
April 15	Sunny	3883	8:00 to 9:00	4813	5:00 to 6:00
April 16	Partly Cloudy	4162	8:00 to 9:00	4583	5:00 to 6:00
April 17	Cloudy	4333	8:00 to 9:00	4781	5:00 to 6:00
April 18	Partly Cloudy	4135	8:00 to 9:00	4369	5:00 to 6:00
April 19	Sunny	3726	8:00 to 9:00	4392	4:45 to 5:45
Week 2					
April 22	Sunny	4511	8:00 to 9:00	4562	5:00 to 6:00
April 23	Sunny	4590	8:00 to 9:00	4665	5:00 to 6:00
April 24	Sunny	4628	8:00 to 9:00	4649	5:00 to 6:00
April 25	Cloudy	4714	8:00 to 9:00	4555	5:00 to 6:00
April 26	Cloudy	4311	8:00 to 9:00	4504	4:45 to 5:45
Week 3					
April 29	Cloudy, Showers	4469	8:00 to 9:00	4520	5:00 to 6:00
April 30	Cloudy, Showers	4709	8:00 to 9:00	4583	5:00 to 6:00
May 1	Partly Cloudy	4659	8:00 to 9:00	4727	5:00 to 6:00
May 2	Sunny	4540	8:00 to 9:00	4678	5:00 to 6:00
May 3	Partly Cloudy	4373	8:00 to 9:00	4466	5:00 to 6:00
Week 4					
May 6	Sunny	4533	7:30 to 8:30	4690	5:00 to 6:00
May 7	Sunny	4702	7:45 to 8:45	4459	5:00 to 6:00
May 8	Sunny	4784	7:45 to 8:45	4614	5:00 to 6:00
May 9	Sunny	4724	8:00 to 9:00	4473	5:00 to 6:00
May 10	Sunny	4651	8:00 to 9:00	4661	4:45 to 5:45
Week 5					
May 13	Sunny	4582	8:00 to 9:00	4339	5:00 to 6:00
May 14	Sunny	4738	8:00 to 9:00	4584	5:00 to 6:00
May 15	Sunny	4617	8:00 to 9:00	4493	5:00 to 6:00
May 16	Sunny	4385	8:00 to 9:00	4429	5:00 to 6:00
May 17	Sunny	4287	8:00 to 9:00	4184	5:00 to 6:00
Week 6					
May 20	Sunny	4197	8:00 to 9:00	4070	5:00 to 6:00
May 21	Sunny	4441	8:00 to 9:00	4286	5:00 to 6:00
May 22	Sunny	4292	8:00 to 9:00	3913	5:00 to 6:00
May 23	Sunny	4135	8:00 to 9:00	3979	4:45 to 5:45
May 24	Sunny	2816	8:00 to 9:00	3784	5:00 to 6:00
Week 7					
Oct 21	Sunny	4126	8:00 to 9:00	4116	5:00 to 6:00
Oct 22	Partly Cloudy	4221	8:00 to 9:00	4402	5:00 to 6:00
Oct 23	Partly Cloudy	4068	8:00 to 9:00	4369	5:00 to 6:00
Oct 24	Partly Cloudy	4085	8:00 to 9:00	4418	5:00 to 6:00
Oct 25	Partly Cloudy	3962	8:00 to 9:00	4284	5:00 to 6:00
Week 8					
Oct 28	Partly Cloudy	3421	8:00 to 9:00	3629	5:00 to 6:00
Oct 29	Partly Cloudy	3245	8:00 to 9:00	3704	5:00 to 6:00
Oct 30	Partly Cloudy	3267	8:00 to 9:00	3898	5:00 to 6:00
Oct 31	Cloudy	3244	8:00 to 9:00	4416	5:00 to 6:00
Nov 1	Sunny	3636	8:00 to 9:00	4189	5:00 to 6:00



5. PS3c – Parking Structure 3 Northwest Access
6. PS3d – Parking Structure 3 Northeast Access
7. L1a – Rectangle Lot (Lot 1) Quarry Road Access
8. L1b – Rectangle Lot (Lot 1) North Access
9. L2a – Quarry Lot (Lot 2) North Access to Quarry Road
10. L2b – Quarry Lot (Lot 2) Middle Access to Quarry Road
11. L2c – Quarry Lot (Lot 2) South Access to Quarry Road
12. L3a – Mudd Lot (Lot 3) Access to Roth Way
13. L4a – Roth Way west on Campus Drive West (Lot 4)
14. L4b – Driveway to Lot 4 from Campus Drive West opposite Via Ortega
15. L5a – West Driveway to Lot 5 from Oak Road
16. L5b – Center Driveway to Lot 5 from Oak Road
17. L5c – East Driveway to Lot 5 from Oak Road
18. L5d – East Driveway to Lot 5 from Stock Farm Road
19. L5e – West Driveway to Lot 5 from Stock Farm Road
20. L6a – West Driveway to Lot 6 from Oak Road
21. L6b – South Driveway to Lot 6 from Stockfarm Road
22. L6c – Central Driveway to Lot 6 from Stockfarm Road
23. L6d – North Driveway to Lot 6 from Stockfarm Road

Hospital trips from parking lots inside the cordon line were subtracted from the cordon counts, while campus trips from lots outside the cordon line were added to the raw counts. This was done to properly identify all trips generated by Stanford University and not by other adjacent land uses.

Task 1.3 Parking Permit Scanning/Count

At the beginning and end of both the morning and evening peak period, the number of vehicles in each of the lots identified in Figure 3 was counted. Each vehicle permit was also scanned to determine if it was related to campus or hospital uses. During the spring count, Medical Center vehicles were identified by a parking sticker with a white background, and campus vehicles were identified by a sticker with a colored background. Stanford changed the parking stickers in September 2002 such that the coloring was reversed for Medical Center and campus permits. Thus, during the fall count period, Medical Center stickers had a colored background and campus stickers had a white background.

On-street parking on Oak Road between Stock Farm Road and Welch Road, and on Welch Road between Campus Drive West and the cordon station just north of Oak Road was counted and classified in the same manner as described above. Since these on-street parking facilities are located within the cordon line, hospital vehicles were subtracted out of the cordon count and no adjustment was made to add in campus trips. The parking lot and on-street parking occupancy data is included in Appendix B along with the parking counts.

Korve Engineering used the traffic counts in Task 1.1 and the parking counts in Tasks 1.2 and 1.3 to adjust the raw traffic counts. If campus parking permits were observed in lots outside the cordon area, they were added back into the cordon count. If hospital trips were observed inside the cordon area, they were subtracted from the cordon count. All vehicles without a parking permit were assumed to be campus trips.

Task 1.4 License Plate Survey

The purpose of the license plate survey was to identify vehicles that are only passing through the Stanford campus, not beginning or ending their trip there. License plate numbers were recorded for vehicles entering and leaving each cordon location. Vehicles that entered the cordon and left within a period of 15 minutes were considered to be “cut-through” vehicles. Surveys were done during one day each week for both of the peak hours. The license plate matching process showed that during the spring counts the a.m. and p.m. cut-through percentages were 9.0% and 10.2%, respectively. During the fall count period, the a.m. cut-through percentage was 9.7%, while the p.m. was 10.4%. The spring and fall percentages were used to adjust their respective vehicle counts.

Task 2.0 Traffic Monitoring Data Analysis

Task 2.1 Daily Cordon Count Spreadsheets

First, the raw cordon count numbers were entered into spreadsheets. Two spreadsheets – one for the a.m. peak period and one for the p.m. peak period – were created for each weekday that a cordon count was conducted. Each spreadsheet shows the a.m. inbound and p.m. outbound vehicles passing all 16 cordon locations during five hourly increments. For the a.m. peak, the hours were 7:00-8:00, 7:15-8:15, 7:30-8:30, 7:45-8:45, and 8:00-9:00. For the p.m. peak, the hours were 4:00-5:00, 4:15-5:15, 4:30-5:30, 4:45-5:45, and 5:00-6:00. Since cordon counts were collected for eight weeks, there are a total of 80 daily cordon count spreadsheets (40 a.m. and 40 p.m.). These sheets are included in Appendix C of this report.

Task 2.2 Daily Parking Spreadsheets

The number of vehicles coming in and out of the parking lots in the vicinity of the Stanford Medical Center was also monitored during the eight-week period. The a.m. inbound and p.m. outbound volumes at all lot entrances were entered into spreadsheets for the a.m. and p.m. peak periods of each day just as described for the cordon counts in Task 2.1. All 80 daily parking spreadsheets are included in Appendix D.

Task 2.3 Adjustments For Parking and Cut-Through Vehicles

The parking sticker counts performed at the lots were used to compute the percentage of campus and hospital vehicles present in each lot during the a.m. and p.m. peak hours.

Since a sticker survey was done at the beginning and end of each two-hour peak period count, the two values for every lot were averaged. Sticker surveys were completed for both peak hours of one day during each week.

The parking lot a.m. inbound and p.m. outbound volumes were used along with the averaged campus and hospital vehicle percentages in order to adjust the cordon count spreadsheets. Since Lots 1 and 2 are outside of the cordon boundary, some campus-related vehicles will park in those lots and not get counted in the cordon count. To add them in, the average percentage of campus vehicles in those lots was multiplied by the a.m. inbound and p.m. outbound volumes at each corresponding lot entrance (from Task 2.2), and then added to the cordon counts.

Lots 3, 4, 5, and 6, as well as the two parking structures (PS-1 and PS-3) are located inside the cordon boundary. Thus, hospital-related vehicles parking in these lots need to be subtracted out of the cordon counts. To do this, the average percentage of hospital-related vehicles was multiplied by the a.m. inbound and p.m. outbound volumes at each respective lot entrance (from Task 2.2), and then subtracted from the cordon counts.

A parking sticker survey was also conducted at two on-street locations during the same days as the surveys for the parking lots. The streets surveyed were Oak Road and the portion of Welch Road between Campus Drive West and the cordon location just north of Oak Road. Since both streets were inside the cordon, only the hospital vehicles were of importance. If more hospital vehicles were present at the end of the period than at the beginning, the change in vehicles was subtracted from the inbound totals for that period. If fewer hospital vehicles were present at the end of the period, the difference was subtracted from the outbound totals.

The average observed cut-through traffic percentages during the spring monitoring period were about 9.0% percent during the a.m. peak hour and 10.2% percent during the p.m. peak hour. These numbers were 9.7% and 10.4%, respectively, during the fall monitoring period. The traffic counts were reduced by these percentages in order to subtract out vehicles lacking a destination within the Stanford University campus. Spreadsheets showing the detailed license plate matching data are shown in Appendix E. A summary table showing the 80 daily cordon counts adjusted for parking lot factors and cut-through traffic is shown in Table 2 along with the average a.m. inbound and p.m. outbound traffic volume. Table 3 shows the traffic data collected in the 2001 baseline Stanford Traffic Monitoring Program, including the baseline average and the 90% confidence interval.

Table 2 2002 Adjusted Traffic Totals

Date	AM Inbound		PM Outbound	
	Volume	Period	Volume	Period
Week 1				
April 15, 2002	3020	8:00 to 9:00	4113	5:00 to 6:00
April 16, 2002	3220	8:00 to 9:00	3981	5:00 to 6:00
April 17, 2002	3397	8:00 to 9:00	4099	5:00 to 6:00
April 18, 2002	3212	8:00 to 9:00	3731	5:00 to 6:00
April 19, 2002	2909	8:00 to 9:00	3737	4:45 to 5:45
Week 2				
April 22, 2002	3569	8:00 to 9:00	3922	5:00 to 6:00
April 23, 2002	3625	8:00 to 9:00	4020	5:00 to 6:00
April 24, 2002	3620	8:00 to 9:00	3975	5:00 to 6:00
April 25, 2002	3648	8:00 to 9:00	3960	5:00 to 6:00
April 26, 2002	3407	8:00 to 9:00	3892	4:45 to 5:45
Week 3				
April 29, 2002	3622	8:00 to 9:00	3909	5:00 to 6:00
April 30, 2002	4151	8:00 to 9:00	3968	5:00 to 6:00
May 1, 2002	3768	8:00 to 9:00	4091	5:00 to 6:00
May 2, 2002	3710	8:00 to 9:00	4067	5:00 to 6:00
May 3, 2002	3537	8:00 to 9:00	3828	5:00 to 6:00
Week 4				
May 6, 2002	3552	7:30 to 8:30	3962	5:00 to 6:00
May 7, 2002	3679	7:45 to 8:45	3738	5:00 to 6:00
May 8, 2002	3732	7:45 to 8:45	3858	5:00 to 6:00
May 9, 2002	3665	8:00 to 9:00	3774	5:00 to 6:00
May 10, 2002	3572	8:00 to 9:00	3946	4:45 to 5:45
Week 5				
May 13, 2002	3645	8:00 to 9:00	3541	5:00 to 6:00
May 14, 2002	3806	8:00 to 9:00	3869	5:00 to 6:00
May 15, 2002	3672	8:00 to 9:00	3835	5:00 to 6:00
May 16, 2002	3507	8:00 to 9:00	3794	5:00 to 6:00
May 17, 2002	3468	8:00 to 9:00	3571	5:00 to 6:00
Week 6				
May 20, 2002	3350	8:00 to 9:00	3481	5:00 to 6:00
May 21, 2002	3522	8:00 to 9:00	3655	5:00 to 6:00
May 22, 2002	3444	8:00 to 9:00	3330	5:00 to 6:00
May 23, 2002	3226	8:00 to 9:00	3382	4:45 to 5:45
May 24, 2002	2117	8:00 to 9:00	3064	5:00 to 6:00
Week 7				
Oct 21, 2002	3064	8:00 to 9:00	2965	5:00 to 6:00
Oct 22, 2002	3098	8:00 to 9:00	3220	5:00 to 6:00
Oct 23, 2002	2994	8:00 to 9:00	3232	5:00 to 6:00
Oct 24, 2002	3018	8:00 to 9:00	3235	5:00 to 6:00
Oct 25, 2002	2883	8:00 to 9:00	3052	5:00 to 6:00
Week 8				
Oct 28, 2002	2534	8:00 to 9:00	2614	5:00 to 6:00
Oct 29, 2002	2382	8:00 to 9:00	2709	5:00 to 6:00
Oct 30, 2002	2404	8:00 to 9:00	2884	5:00 to 6:00
Oct 31, 2002	2397	8:00 to 9:00	3069	5:00 to 6:00
Nov 1, 2002	2343	8:00 to 9:00	2829	5:00 to 6:00
Average	3287		3598	

Table 3 2001 Baseline Adjusted Traffic Totals

Date	AM Inbound		PM Outbound	
	Volume	Period	Volume	Period
Week 1				
April 2, 2001	3036	7:45 to 8:45	3323	5:00 to 6:00
April 3, 2001	3059	7:45 to 8:45	3285	4:45 to 5:45
April 4, 2001	2884	8:00 to 9:00	3334	4:45 to 5:45
April 5, 2001	3000	7:45 to 8:45	3216	5:00 to 6:00
April 6, 2001	2610	8:00 to 9:00	3092	4:45 to 5:45
Week 2				
April 9, 2001	3265	8:00 to 9:00	3329	5:00 to 6:00
April 10, 2001	3141	8:00 to 9:00	3362	5:00 to 6:00
April 11, 2001	3107	8:00 to 9:00	3473	4:45 to 5:45
April 12, 2001	3081	8:00 to 9:00	3397	5:00 to 6:00
April 13, 2001	2973	8:00 to 9:00	3413	4:45 to 5:45
Week 3				
April 23, 2001	3285	7:45 to 8:45	3311	4:30 to 5:30
April 24, 2001	3322	7:45 to 8:45	3281	5:00 to 6:00
April 25, 2001	3186	7:30 to 8:30	3326	4:45 to 5:45
April 26, 2001	3129	7:45 to 8:45	3286	5:00 to 6:00
April 27, 2001	2723	8:00 to 9:00	3154	4:45 to 5:45
Week 4				
May 6, 2001	2502	7:30 to 8:30	2681	4:15 to 5:15
May 7, 2001	2826	7:45 to 8:45	2967	5:00 to 6:00
May 8, 2001	2742	7:45 to 8:45	2912	5:00 to 6:00
May 9, 2001	2632	8:00 to 9:00	2861	5:00 to 6:00
May 10, 2001	2595	8:00 to 9:00	2744	4:45 to 5:45
Week 5				
April 30, 2001	3604	8:00 to 9:00	3410	4:45 to 5:45
May 1, 2001	3559	8:00 to 9:00	3422	5:00 to 6:00
May 2, 2001	3455	8:00 to 9:00	3326	5:00 to 6:00
May 3, 2001	3478	8:00 to 9:00	3396	4:45 to 5:45
May 4, 2001	3393	8:00 to 9:00	3090	5:00 to 6:00
Week 6				
May 7, 2001	3479	8:00 to 9:00	3235	4:45 to 5:45
May 8, 2001	3756	8:00 to 9:00	3450	5:00 to 6:00
May 9, 2001	3830	8:00 to 9:00	3374	5:00 to 6:00
May 10, 2001	3533	8:00 to 9:00	3456	5:00 to 6:00
May 11, 2001	3246	8:00 to 9:00	3386	4:45 to 5:45
Week 7				
October 22, 2001	3221	8:00 to 9:00	3505	5:00 to 6:00
October 23, 2001	3835	8:00 to 9:00	3805	5:00 to 6:00
October 24, 2001	3550	8:00 to 9:00	3959	5:00 to 6:00
October 25, 2001	3908	7:45 to 8:45	3991	5:00 to 6:00
October 26, 2001	3371	8:00 to 9:00	4072	4:45 to 5:45
Week 8				
October 29, 2001	4241	8:00 to 9:00	4115	5:00 to 6:00
October 30, 2001	4251	8:00 to 9:00	4217	5:00 to 6:00
October 31, 2001	4139	8:00 to 9:00	4394	5:00 to 6:00
November 1, 2001	4037	8:00 to 9:00	4193	5:00 to 6:00
November 2, 2001	3789	7:45 to 8:45	4277	5:00 to 6:00
Average	3319		3446	
90% Confidence Interval	+/- 120		+/- 109	

The 2001 baseline counts determined that an average of 3,439 vehicles during the a.m. peak hour would constitute a significant increase in traffic at the 90% confidence level. The baseline counts identified 3,555 vehicles as the p.m. threshold. The 2002 a.m. average of 3,287 is lower than the baseline average of 3,319, and therefore does not result in a statistically significant increase. The 2002 p.m. total of 3,598 vehicles does constitute a statistically significant increase, however, since it is higher than 3,555 and higher by 7 vehicles than the 1% trigger over the 3,555 statistically significant upper limit of 3,591. Scatter plots of the 2002 a.m. inbound and p.m. outbound data are shown in Figures 4 and 5, respectively. Lines representing the baseline average, baseline 90% confidence interval, and 2002 average are also shown in these figures.

Figure 4 2002 AM Peak Inbound vs. 2001 Baseline

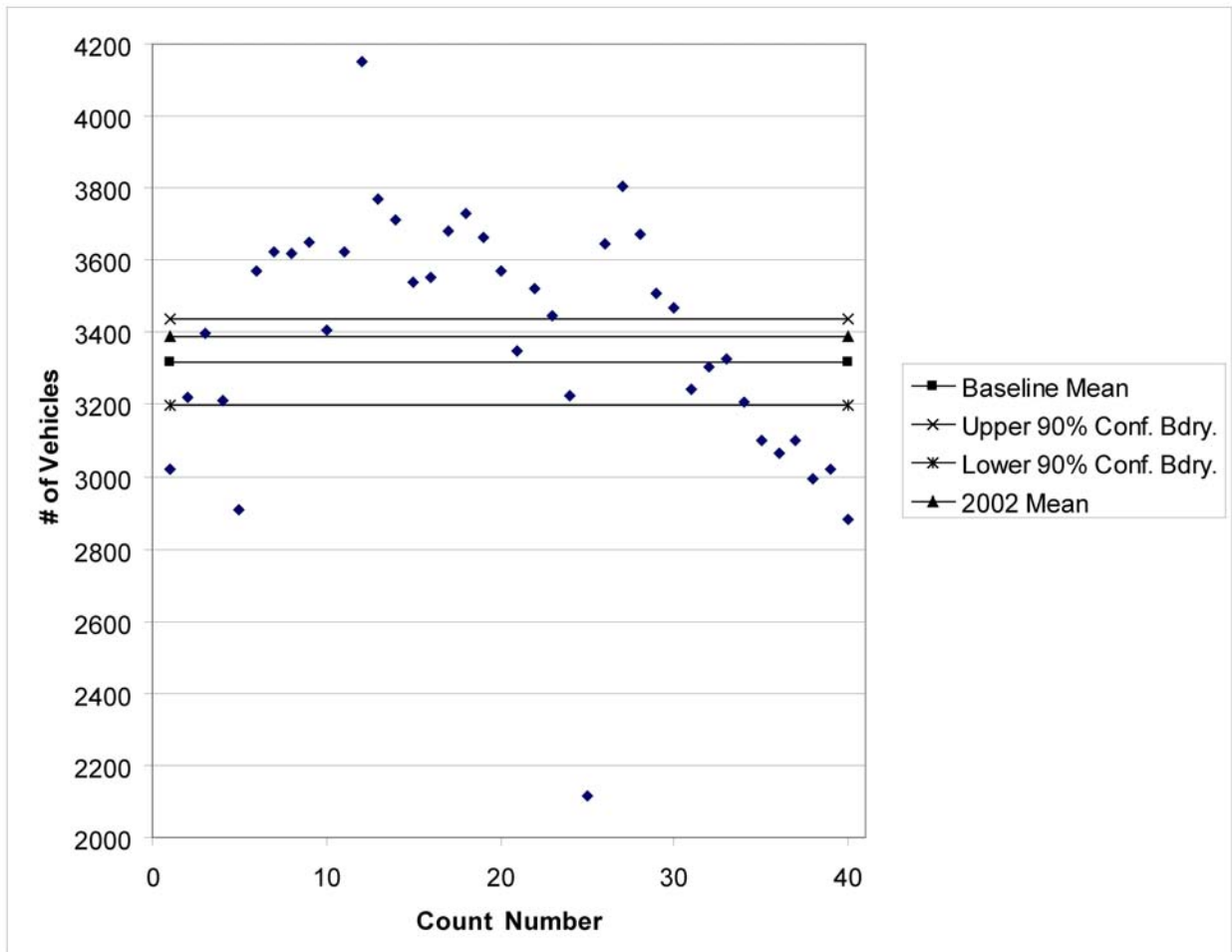
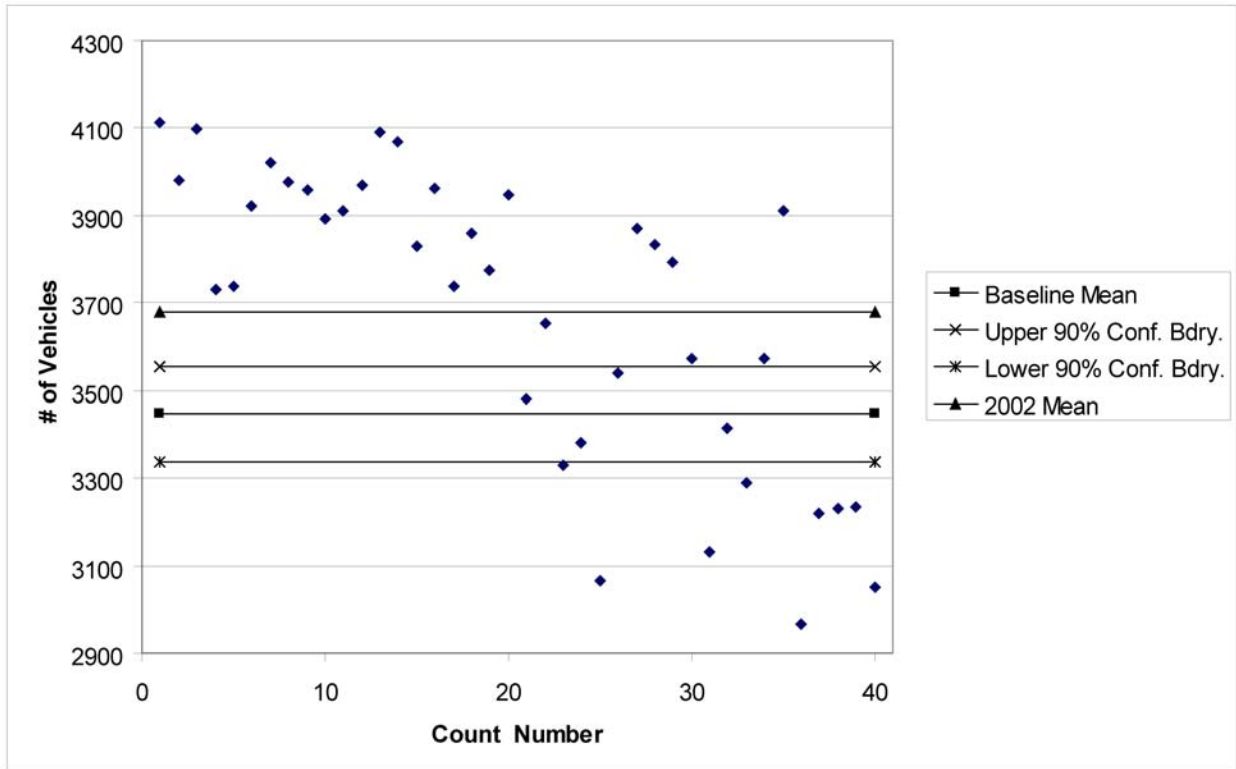


Figure 5 2002 PM Peak Outbound Vs. 2001 Baseline



Conclusion

The a.m. inbound adjusted average shows a decrease of 32 vehicles from the baseline count to the 2002 count, therefore, no additional mitigation is warranted. The p.m. peak outbound adjusted average increased by 152 vehicles from the baseline p.m. counts. This increase is significant because it results in a 2002 mean that is higher than the upper 90% confidence boundary plus the 1% trigger determined by the baseline counts. The upper 90% confidence boundary plus the 1% trigger for the baseline counts is 3,591. The 3,598 p.m. outbound arithmetic mean exceeds this total by 7 vehicles.