Alameda County EXPRESS LANES
1333 BROADWAY, SUITE 220, PHONE (510) 836-2560 . FAX (510) 836-2185

Agenda Item 4.1
April 11, 2011

SUNOL SMART CARPOOL LANE JOINT POWERS AUTHORITY GOVERNING BOARD MINUTES OF MARCH 14, 2011

Chair Supervisor Haggerty convened the Sunol Smart Carpool Lane JPA at 9:44 a.m.

1.0 PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by Board member Art Dao.

2.0 ROLL CALL

Muller conducted the roll call and confirmed a quorum.

3.0 PUBLIC COMMENT

There was no public comment.

4.0 MINUTES OF FEBRUARY 14, 2011

A motion was made by Harrison to approve the Minutes of February 14, 2011; a second was made by McHugh. The motion passed unanimously.

5.0 ADMINISTRATIVE MATTERS

5.1 1st Quarter Financial Update

Patricia Reavey, Director of Finance reviewed the Sunol Smart Carpool Lane First Quarter Operating Statement of Revenue and Expenditures. She noted that the statement summarized expenditures and revenue related to the Express Lane operations from September 20, 2010 through December 31, 2010. Most operating expenditures through June, 2012 are being paid with grant funding through the ACCMA/ACTC I-680 Southbound Hot Lane Project which has eliminated operating expenditures charged against toll revenue in the first quarter Statement of Revenues and Expenditures. In addition to the summary of toll revenue and expenditures, Reavey provided a summary of expenditures that will be charged against grant funds. Furger discussed the CHP enforcement along the corridor and addressed questions from the Board Members on CHP enforcement. Furger will provide an update at the next meeting. A motion was made to approve the Sunol Smart Carpool Lane First Quarter Operating Statement of Revenue and Expenditures; a second was made by McHugh. The motion passed unanimously.

6.0 HOV/ EXPRESS LANE PROJECT STATUS UPDATE

6.1 HOV Widening Status Update

Emily Landin-Lowe advised the JPA Board that the last roadway contract and the mitigation contract are both still on weather suspension. Both projects will start back up in the spring.

A.0 JOINT MEETING WITH I-580 POLICY ADVISORY COMMITTEE

A.1 Convene joint meeting with I-580 Express Lane Policy Advisory Committee (PAC)

A.2 PAC Roll Call – Confirm PAC Quorum (no action by JPA Board)

A.3 I-680 Express Lane Status Update

Furger provided a power point presentation reflecting operating activities through February, 2011.

A.4 Northbound HOV/Express Lane Project – Project Delivery Plan

Akkawi advised the JPA Board and the I-580 PAC that staff continues to work with Caltrans and VTA on a project delivery plan. Staff will present the delivery plan in April.

A.5 Recess Joint Meeting

7.0 ADJOURNMENT/ NEXT MEETING: APRIL 11, 2011

Alameda County EXPRESS LANES
1333 Broadway, Suite 220, Phone (510) 836-2560 . Fax (510) 836-2185

SUNOL SMART CARPOOL LANE
JOINT POWERS AUTHORITY
GOVERNING BOARD

March 14, 2011
ACTIA/CTC Board Room
1333 Broadway, Suite 300, Oakland, CA

MEMBERS	Initials	CMA STAFF	Initials
Supervisor Scott Haggerty, ACTIA Chair JPA		Art Dao, ACTC Executive Director	
Council Member Bill Harrison, ACTIA Vice Chair		Frank Furger, JPA Executive Director	
Mayor Mark Green, ACCMA		Ray Akkawi, Mgr of Project Delivery	
Mayor Jennifer Hosterman, ACCMA		Christina Muller, Secretary	
Vice Mayor Pete McHugh, VTA		Claudia Leyva, Administrative Assistant	

LEGAL COUNSEL/OTHERS	Initials		
Zack Wasserman - WRBD Pamela Mintz		James O'Brien, Alt CTC PCT	
Neal Parish, - WRBD			
Pamela Schock Mintzer, WRBD			
Emily Landin-Lowe - Caltrans			
Mark Zabaneh - Caltrans			
Leo Scott – Gray-Bowen, Inc			

NAME	JURISDICTION/ORGANIZATION	PHONE #	E-MAIL
1. Patricia Reavey	ACTC	(510) 208-7422	preavey@alamedactc.org
2. Carlos Contreras	C&H	(916) 760-7418	cmcontreras@camin-associates.com
3. Dan Angelo	Alameda Boat #1	925 551-6995	
4. Scott Haywood	VTA	408/321-7544	scott.haywood@vta.org
5. Steve Chan	Milpitas	408-586-3324	SCHAN@CI.MILPITAS.CA.GOV
6. Bob Vinn	Livermore	925 960 4516	
7. Ramsey Hasson	URS	408-297-9585	
8.			
9.			
10.			

This page intentionally left blank

Alameda County EXPRESS LANES
1333 BROADWAY, SUITE 220, PHONE (510) 836-2560 FAX (510) 836-2185

Memorandum

Agenda Item 6.2
April 11, 2011

Date: April 4, 2011

To: **Sunol Smart Carpool Lane JPA**

From: Ray Akkawi, Manager of Project Delivery

Subject: **Approval of the I-680 Northbound Sunol Express Lane Project Delivery Plan**

Recommendation
It is recommended that the JPA Board approve the attached project delivery plan for a Northbound I-680 Sunol Express Lane Project.

Further actions are required by Alameda County Transportation Commission to implement this project delivery plan.

Summary
The implementation of the southbound express lane on I-680 was completed in September 2010 and allowed for the first express lane facility in northern California to be put into operation and begin collecting toll revenues. It is anticipated there will be unused Measure B funds that were allocated for the delivery of the I-680 Southbound Express Lane that could be used for project development activities to advance the delivery of the express lane on the northbound of I-680.

Staff has prepared a project delivery plan which includes the required steps to initiate project development and to establish a corridor implementation plan which identifies project phasing options that could be implemented using potential available funding in the future.

Discussion and Background
The I-680 Corridor is a primary north-south transportation corridor between Alameda and Santa Clara Counties, which serves commuter, commercial, and recreation traffic. Previously the corridor was considered the second most congested corridor in the Bay area. Recently constructed improvements to southbound I-680 along with the slower economy have reduced the southbound congestion levels between Route 84 in Alameda County and Route 237 in Santa Clara County. The improvements include the interim HOV lane which was followed by the more standard HOV lane combined with the Express Lane. There are now three general-purpose lanes, one HOV/Express Lane, a truck climbing lane, and auxiliary lanes in the southbound direction.

In 2005, Caltrans approved a Project Report/Environmental Document for a northbound HOV lane project with limits similar to the limits of the recently constructed southbound HOV/Express Lane project. The scope of the northbound project included in the 2005 Project Report has been changed by the late inclusion of the southbound Express Lane with the southbound HOV lane

Environmental Document did not assume the addition of the southbound Express Lane, which may require a new environmental document to be developed for the I-680 Northbound Express Lane Project.

Given the 2005 timeframe for completion of the previous environmental studies related to the northbound HOV project and the undetermined extent of the impacts due to expanding the southbound HOV to include the Express Lane, it is anticipated that some of the preliminary engineering and environmental work will have to be revisited, and perhaps reworked. The recommended project delivery plan includes an assumption that a combined Project Study Report/Project Report (PSR/PR) will be acceptable to Caltrans as a project approval document. The PSR/PR approach is intended to streamline the typical Caltrans approach of the PSR being a separate document from the PR, but the approach is subject to approval by Caltrans. In effect, the recommended project delivery plan involves reevaluating the PE/Env work performed for the northbound HOV project by Caltrans for the 2005 PR/ED and adding the requirements related to developing a combined HOV/Express Lane in the northbound direction.

The northbound direction currently has three general-purpose lanes and a short truck climbing lane. The 2005 Project Report prepared by Caltrans included adding an HOV Lane within the project limits and paving the median. In most areas, the paved median would allow for the extra width required for an Express Lane; however there are areas within the project limits in which the northbound roadway alignment will need to change to accommodate the "as-built" condition of the southbound roadway and areas in which the requirements for the Express Lane features may require additional roadway width. The specifics of including an Express Lane and any reevaluation required due to the age of the 2005 PR/ED will need to be addressed in the project approval document for any project moving forward.

The recommended northbound Express Lane project is intended to improve safety, relieve congestion and provide the opportunity to generate revenues by tolling for the use of excess capacity in the HOV lane by non-HOV vehicles. It is possible to implement incremental improvements along the northbound roadway to provide the intended benefits, but any smaller projects within the larger corridor project will require analysis and approval by Caltrans to secure environmental clearance and project approval within the larger project. It is recommended that the PE/Env work be performed for the entire length of the project and include developing an implementation strategy for incremental improvements. The analysis and approval for any smaller projects can be secured in the context of the overall corridor analysis and approval.

An important element of the PE/Env work will be a traffic operational analysis report (TOAR). The TOAR will be used to establish the limits of any smaller, incremental improvements and to analyze the benefits of such improvements. The TOAR will also be the basis of the analysis to determine the feasibility of the Express Lane including a revenue study.

The PE/Env work will include updating the project cost estimate. The 2005 PR/ED prepared by Caltrans included a cost estimate of $132.5 million. The cost estimate will need to be revised to reflect the recommended project scope, including the Express Lane, and to be updated to reflect the current project implementation schedule and the current cost environment.
The attached project delivery plan addresses the scope, schedule, cost, risks and issues that may impact the delivery of the northbound project. While the limits and footprint of the project have not been determined yet, the plan is constructed based on timelines for certain milestones

(Traffic Operational Analysis, Environmental Clearance Process, Project Approval Process, Project Design, Execution of necessary agreements, Construction Time, and System Integration). Staff is presenting this project delivery plan to Alameda County Transportation Commission. Once the delivery plan and other actions related to funding are approved by ACTC, staff will move forward with the implementing the plan.

Attachments

Attachment A: Project Delivery Plan – I-680 Northbound HOV/Express Lane
Attachment B: I-680 Northbound HOV/Express Lane Funding Plan
Attachment C: I-680 NB Express Lane Implementation Schedule

This page intentionally left blank

PROJECT DELIVERY PLAN

I-680 NORTHBOUND HOV/EXPRESS LANE

PRIMARY OBJECTIVE

Construct a Northbound HOV and Express Lane that will bring balance between congestion relief, revenue generation, safety, and availability of funds.

PROJECT LIMITS

The 2005 Caltrans approved Project Report calls for constructing an HOV lane between State Route 237 in Santa Clara County to State Route 84 in Alameda County. However, the exact limits of the project will be determined by the Traffic Operations Analysis Report (TOAR) and accompanying Project Approval Document. These reports will define the bottleneck and the limits of the project.

PROJECT SPONSOR

Alameda County Transportation Commission

PROJECT PARTNERS

Sunol Smart Lane Joint Powers Authority, Caltrans, Metropolitan Transportation Commission, FHWA

PROJECT SCOPE

The 2005 approved Project Report calls for widening the median and the outside of the freeway to provide an HOV lane with enough width to convert into express lane. The scope included the widening of several structures and replacing Sheridan Interchange. The scope will also provide additional improvements to bring certain locations in the southbound direction to full standards.

The scope of the project as proposed by the plan for I-680 Northbound HOV / Express Lane Project (Project) is to construct an HOV / Express Lane and to and rehabilitate the existing pavement (Caltrans element). The limits of the project will be determined by the TOAR, which will define the location of the bottleneck and recommend project limits. The Project Approval Document will further refine the limits and the footprint of the project.

PROJECT NEED AND PURPOSE

Project Need:

I-680 NB currently experiences recurrent congestion during the PM peak period. Existing lanes do not provide sufficient capacity and the lack of an HOV lane reduces incentive for carpooling and limits the effectiveness of bus service in the corridor.

Constructing an HOV/Express Lane facility would allow the excess capacity in the HOV lane to be used productively. Single occupancy vehicles (SOVs) traveling in the mixed flow lanes of the freeway would have the option to pay a toll to utilize the express lanes. To maintain the integrity of the HOV lane facility, the toll price will be adjusted based on current traffic conditions in the express and mixed flow lanes to control the number of SOV drivers who choose to pay a toll and enter the express lanes facility.

AB 574 requires operations in the express lane facility to be at Level of Service (LOS) C or better, except where there is a written agreement with Caltrans that LOS D or better is permitted.

Project Purpose:
The purpose of the project is to:

- Provide additional congestion relief through more effective use of roadways
- Provide enhanced operational and safety improvements
- Expand the available capacity for carpoolers
- Expand the mobility options in this congested corridor

Provide an additional funding source for transportation improvements including public transit.
The Need and Purpose will be further refined during the Project Approval process.

PROJECT COST

The cost of the I-680 Northbound HOV project as defined in the 2005 approved project report is $132.5 million in 2005 dollars. The estimate is for the capital cost only and does not include the cost to convert to express lane and the rehabilitation of the existing pavement.

The cost of the project defined in this plan is dependent on the limits of the project. The Project Approval Document will provide an estimate of the capital and support cost of the project.
The report will provide estimates to construct the HOV lane with enough widening to convert to Express Lane (the buffer), construct enforcement zone(s) if needed, install Electronic Toll System components including, electrical networks, overhead sign structures, tolling gantries, and rehabilitate the existing pavement.

The cost to prepare the TOAR, Revenue Forecast, and Project Approval Documents (Project Study Report/Project Report and Environmental Document) is shown on the Attachment B “Funding Plan”.

PROJECT SCHEDULE AND MILESTONES

A preliminary schedule to deliver the project (HOV /EL) is shown in Attachment C. The schedule may be modified based on the projects limits and physical constraints.

The project approval process will be through re-validation of the environmental document. The appropriate Project Approval Document will be selected through consultation with Caltrans. It is

expected that a Supplement to the approved I-680 NB HOV Lane Project Report would be the appropriate document.

MILESTONES:

- Agreement w/ CT for Project Development — August 2011
- System Manager on board — August 2011
- TOAR/ Revenue Forecast Completed — March 2012
- Project Approval and Environmental Document — May 2012
  This phase includes preparation of;
  - Concept of Operations
  - Enforcement Plan
  - Expression of Interest
  - Implementation Plan
  - Public Meeting
- System Engineering Management Plan — April 2012
- Begin PS&E * — April 2012
- System Integrator on Board * — July 2012
- Complete PS&E * — October 2013
- RTL* — February 2014
- Advertise* — March 2014
- Award* — June 2014
- Open* — Fall 2016

* Dates are dependent on the Project Limits and related complexity

AGREEMENTS NEEDED

Expression of Interest
Tolling Agreement
BATA
CHP
Caltrans – Various

TOLLING POLICY

Tolling Policy defining the maximum and minimum toll price, and the hours of operations are needed to prepare the TOAR and the revenue forecast report.
These parameters could be refined and changed during the design of the Electronic Toll System and during the bench testing of the algorithm.

ISSUES and RISKS

1. Air Quality PM2.5 requirements: Will impact the delivery of the Environmental document.
2. Congressional Resistance to Congestion Pricing: Approval of Tolling Agreement may be delayed.
3. Rehabilitation of the existing pavement: Caltrans needs to program the funds for this scope element. An agreement with Caltrans for rehabilitation funding should be executed prior to bringing preparation of the PS&E.
4. Potential for Legal challenges: Delay the approval of the environmental document.
5. Outside widening is required at certain sections to accomplish the assumed minimum typical section. This may propagate into additional widening to accomplish standards designs.
6. Caltrans Headquarters geometrician may not approve the design exceptions and may demand additional widening to correct design exceptions in the southbound direction that were granted to the southbound express lane project.
7. New draft express lanes guidelines prefer four-foot buffer.

COST and FUNDING

TOAR and Revenue Forecast	$ 500,000
System Manager*	$1,000,000
Project Approval Document and Environmental Document	$4,000,000

*System Manager Scope includes:
Preparing Concept of Operations
Assisting with Revenue Study
Preparing Enforcement Plan
Preparing System Engineering Management Plan
Preparing System Integrator RFP
Oversight of the System Integrator

I-680 Northbound HOV / Express Lane Project - Funding Plan Summary

ACTC Proj.

EA:

Last Update: March 28, 2011

Item Number	Project Component	Contracts Ex./ Prop to Date	Cost to Date	Forecast to Completion	Est. at Completion	Measure B				Funding - TDB	Total Funding Amount
1.0	Project Feasibility Study	$500,000		$0	$0	$500,000		$0	$0	$0	$500,000
1.1	TOAR and Revenue Forecast Report	$450,000				$450,000					$450,000
1.2	Staff	$50,000	$0			$50,000					$50,000
1.3											$0
1.4											$0
1.9		$0	$0	$0	$0	$0					$0
2.0	PE, Env. & Project Approval (PA&ED)	$4,000,000	$0	$0	$0	$4,000,000	$0	$0	$0	$0	$4,000,000
2.1	PA&ED Contract	$3,500,000	$0			$3,500,000					$3,500,000
2.2			$0	$0							$0
2.3	STAFF	$500,000	$0			$500,000					$500,000
2.9	Uncommitted		$0	$0							$0
3.0	Plans, Specs & Estimate (PS&E)		$0	$0	$0	$0	$0	$0	$0	$0	$0
3.1	PS&E Contract (Future)		$0								$0
3.2			$0	$0							$0
3.3	STAFF		$0								$0
3.9			$0	$0							$0
3.5	System Integrator/ System Manager	$1,000,000	$0	$0	$0	$1,000,000	$0	$0	$0	$0	$1,000,000
4.1	System Manager	$900,000	$0			$900,000					$900,000
4.2	System Integrator		$0	$0							$0
4.3	STAFF	$100,000	$0			$100,000					$100,000
4.9			$0	$0							$0
4.0	Right of Way	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4.1	Utilities		$0								$0
4.2			$0	$0							$0
4.3	STAFF		$0	$0							$0
4.9			$0	$0							$0
5.0	Construction Engineering		$0	$0	$0	$0	$0	$0	$0	$0	$0
5.1	Construction Management (Future)		$0								$0
5.2	Design Consultant Support		$0								$0
5.3	STAFF		$0								$0
5.9			$0	$0							$0
6.0	Major Contract Capital Payments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6.1	Civil Improvements (Future)		$0								
6.2			$0	$0							$0
6.3	STAFF		$0	$0							$0
6.9			$0	$0							$0
99.0	TOTAL	$5,500,000	$0	$0	$0	$5,500,000	$0	$0	$0	$0	$5,500,000

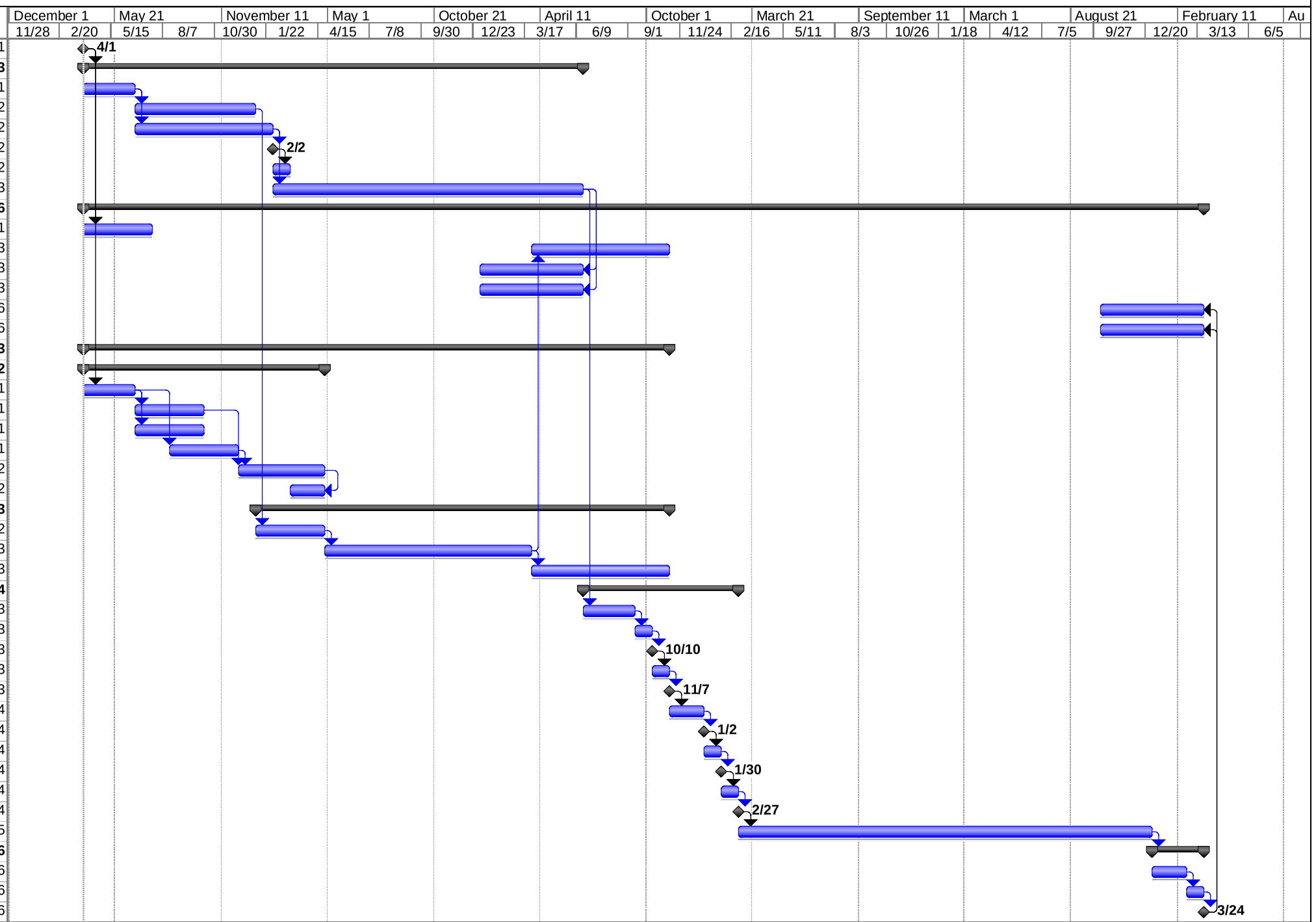
Assumptions

Project cost assumes use of existing pavement with no additional widening other than that done by 424.0 - I-580 WB HOV Lane Project.

This page intentionally left blank

I-680 Northbound Express Lane Implementation

ID	Task Name	Duration	Start	Finish
1	Begin I-680 NB Express Lane Project	0 days	Fri 4/1/11	Fri 4/1/11
2	**Project Development**	**580 days**	**Fri 4/1/11**	**Thu 6/20/13**
3	RFP for Project Development	3 mons	Fri 4/1/11	Thu 6/23/11
4	TOAR/Revenue Analysis	7 mons	Fri 6/24/11	Thu 1/5/12
5	Draft Environmental & Project Approval Doc.	8 mons	Fri 6/24/11	Thu 2/2/12
6	Public Meeting	0 days	Thu 2/2/12	Thu 2/2/12
7	Final Environmental & Project Approval Doc.	1 mon	Fri 2/3/12	Thu 3/1/12
8	Plans Specifications & Estimate	18 mons	Fri 2/3/12	Thu 6/20/13
9	**Agreements**	**1300 days**	**Fri 4/1/11**	**Thu 3/24/16**
10	Caltrans Design Cooperative Agreement	4 mons	Fri 4/1/11	Thu 7/21/11
11	FHWA Tolling Agreement	8 mons	Fri 3/29/13	Thu 11/7/13
12	Construction Cooperative Agreement	6 mons	Fri 1/4/13	Thu 6/20/13
13	Caltrans Maintenance & Operations Agreemer	6 mons	Fri 1/4/13	Thu 6/20/13
14	BATA Toll Collection Agreement	6 mons	Fri 10/9/15	Thu 3/24/16
15	CHP Enforcement Agreement	6 mons	Fri 10/9/15	Thu 3/24/16
16	**Tolling System Development**	**680 days**	**Fri 4/1/11**	**Thu 11/7/13**
17	**System Manager**	**280 days**	**Fri 4/1/11**	**Thu 4/26/12**
18	RFP for System Manager	3 mons	Fri 4/1/11	Thu 6/23/11
19	Concept Of Operations Report	4 mons	Fri 6/24/11	Thu 10/13/11
20	Enforcement Plan	4 mons	Fri 6/24/11	Thu 10/13/11
21	Develop Tolling Policy	4 mons	Fri 8/19/11	Thu 12/8/11
22	Systems Engineering Management Plan (	5 mons	Fri 12/9/11	Thu 4/26/12
23	Expression of Interest	2 mons	Fri 3/2/12	Thu 4/26/12
24	**System Integrator**	**480 days**	**Fri 1/6/12**	**Thu 11/7/13**
25	RFP for System Integrator	4 mons	Fri 1/6/12	Thu 4/26/12
26	Electronic Tolling System (ETS) Design	12 mons	Fri 4/27/12	Thu 3/28/13
27	Tolling Agreement	8 mons	Fri 3/29/13	Thu 11/7/13
28	**Civil Construction Contract Preparation**	**180 days**	**Fri 6/21/13**	**Thu 2/27/14**
29	Prepare Draft Contract (DC)	3 mons	Fri 6/21/13	Thu 9/12/13
30	District Response	1 mon	Fri 9/13/13	Thu 10/10/13
31	Ready to List (RTL)	0 days	Thu 10/10/13	Thu 10/10/13
32	Listing Period	1 mon	Fri 10/11/13	Thu 11/7/13
33	Advertise	0 days	Thu 11/7/13	Thu 11/7/13
34	Advertising Period	2 mons	Fri 11/8/13	Thu 1/2/14
35	Bid Opening	0 days	Thu 1/2/14	Thu 1/2/14
36	Award Period	1 mon	Fri 1/3/14	Thu 1/30/14
37	Award	0 days	Thu 1/30/14	Thu 1/30/14
38	Approval Period	1 mon	Fri 1/31/14	Thu 2/27/14
39	Begin Construction	0 days	Thu 2/27/14	Thu 2/27/14
40	End Construction	24 mons	Fri 2/28/14	Thu 12/31/15
41	**Tolling Equipment**	**60 days**	**Fri 1/1/16**	**Thu 3/24/16**
42	Install Tolling Equipment	2 mons	Fri 1/1/16	Thu 2/25/16
43	Test Tolling Equipment	1 mon	Fri 2/26/16	Thu 3/24/16
44	Open Express Lane	0 days	Thu 3/24/16	Thu 3/24/16



Project: I-680 NB HOT Implementatior
Date: Thu 3/31/11

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

This page intentionally left blank

Alameda County EXPRESS LANES
1333 BROADWAY, SUITE 220, PHONE (510) 836-2560 . FAX (510) 836-2185

Memorandum

April 11, 2011
Agenda Item 6.3

Date: **April 4, 2011**

To: **Sunol Smart Carpool Lane JPA**

From: **Frank R. Furger, Executive Director**

Subject: **Authorization to Execute a Contract Extension with the California Highway Patrol for Enforcement of the Express Lane**

Recommendation
It is recommended that the JPA Board authorize the Executive Director to execute a one year extension to the existing agreement with the CHP for enforcement of the I-680 Express Lane for an amount not to exceed $300,000 for fiscal year 2011/2012. Funding for this service is available through existing grant funds.

Discussion
Enforcement of the I-680 Express Lane is currently being performed by California Highway Patrol (CHP) officers patrolling the facility in CHP vehicles on overtime shifts. The existing contract with the CHP was approved by the JPA in January 2010 for the first year of the Express Lane operations for an amount not to exceed $375,000.

Because of state budget constraints, initiation of the planned CHP enforcement was not fully implemented until November 2010. As a result, the anticipated cost for CHP enforcement for 2010/11 will be approximately $175,000.

Based on the current level of enforcement, it is anticipated that $300,000 should be sufficient for the 2010/11 activities. Staff is pursuing automated enforcement options in the corridor to supplement the CHP enforcement effort.

This page intentionally left blank

Alameda County EXPRESS LANES
1333 BROADWAY, SUITE 220, PHONE (510) 836-2560 . FAX (510) 836-2185

Memorandum

April 11, 2011
Agenda Item A.3

Date: **April 4, 2011**

To: **Sunol Smart Carpool Lane JPA**

From: **Frank R. Furger, Executive Director**

Subject: **Express Lane Operations Summary**

The following summarizes the operations of the I-680 Express Lane through the end of March 2011, totaling 28 weeks of operations.

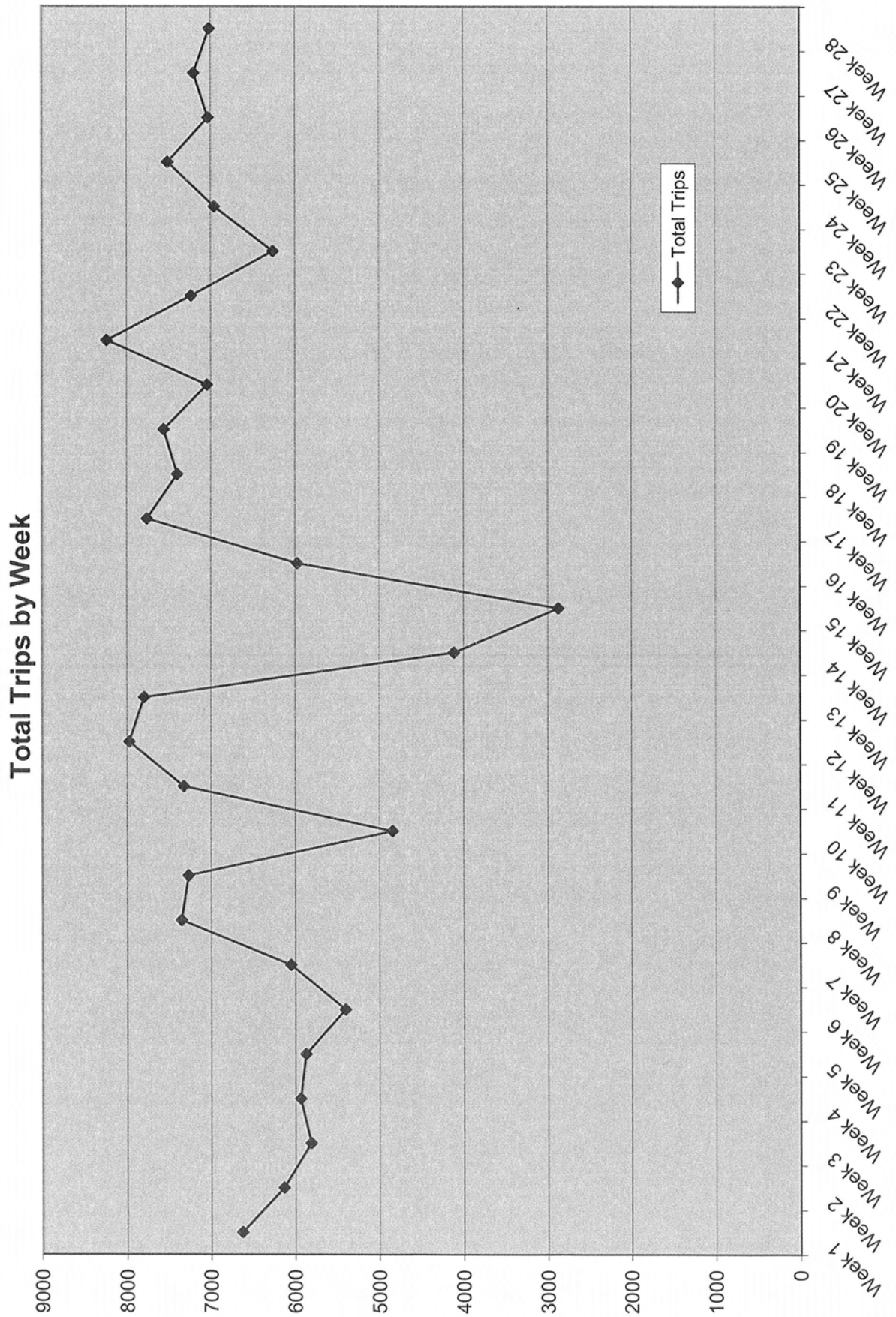
I-680 Express Lane Summary

	Through Week 28 Sept 20, 2010 through Week 28	Last Month	Last Week
Total Revenue	$434,271.05	$90,728.05	$18,926.30
Average Daily Revenue	$3,101.94	$3,944.70	$3,785.26
Highest Daily Revenue - February 8th	$11,372.65		
Total Trips	184,551	33,018	7,018
Average Number of Trips Per Day	1,318	1,436	1,404
Highest Number of Trips Per Day - February 8th	2,324		
Average Toll	$2.35	$2.75	$2.70
Min Toll	$0.30	$0.30	$0.30
Max Toll	$7.50	$7.50	$7.50
Average Peak Period Toll	$2.99	$3.22	$3.21
Average Off-Peak Period Toll	$0.48	$0.45	$0.42

- The ramp up for average daily trips and revenue has flattened over the last month.
- Daily Trips are averaging just over 1400
- Daily Revenue averaging approximately $4000
- Revenue is projected to be $622,000 for current fiscal year

Attachments:
Total Trips by Week
Total Trips by Day
Total Revenue by Week
Cumulative Revenue by Week
Projected Current Year Revenue by Week
Typical Daily Revenue by Hour
Typical Daily Trips by Hour

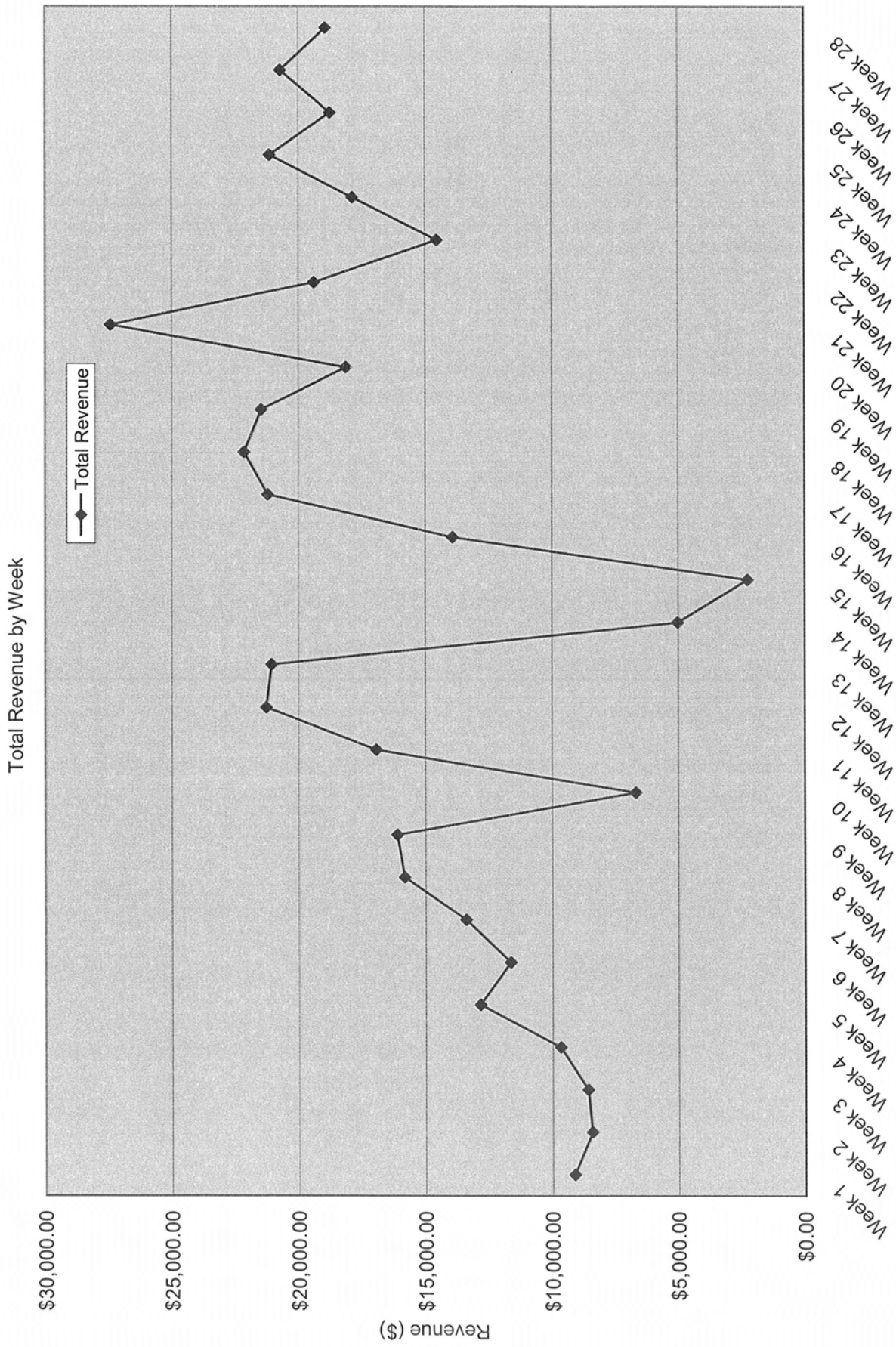
This page intentionally left blank


Total Trips by Week
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Total Trips
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Week 20
Week 21
Week 22
Week 23
Week 24
Week 25
Week 26
Week 27
Week 28

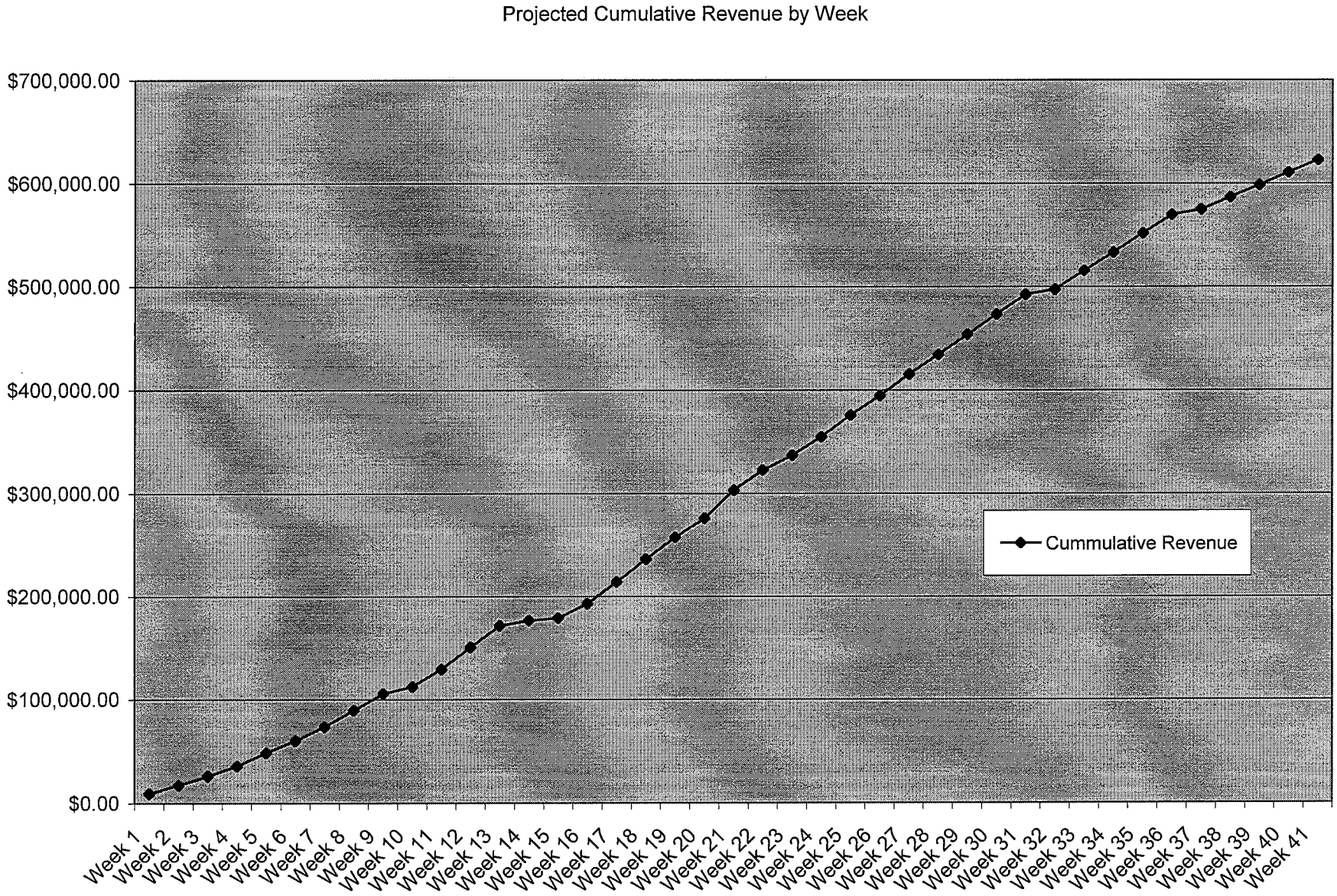
This page intentionally left blank

Total Trips By Day
Daily Trips
2500
2000
1500
1000
500
0
Daily Trips
Mon 9/20
Wed 9/22
Fri 9/24
Tue 9/28
Thur 9/30
Mon 10/4
Wed 10/6
Fri 10/8
Tue 10/12
Thur 10/14
Mon 10/18
Wed 10/20
Fri 10/22
Tues 10/26
Thurs 10/28
Mon 11/1
Wed 11/3
Fri 11/5
Tues 11/9
Thurs 11/11
Mon 11/15
Wed 11/17
Fri 11/19
Tues 11/23
Thur 11/25
Mon 11/29
Wed 12/1
Fri 12/3
Tues 12/7
Thur 12/9
Mon 12/13
Wed 12/15
Fri 12/17
Tues 12/21
Thur 12/23
Mon 12/27
Wed 12/29
Fri 12/31
Tue 1/04
Thur 1/06
Mon 1/10
Wed 1/12
Fri 1/14
Tue 1/18
Thur 1/20
Mon 1/24
Wed 1/26
Fri 1/28
Tue 2/1
Thur 2/3
Mon 2/7
Wed 2/9
Fri 2/11
Tue 2/15
Thur 2/17
Mon 2/21
Wed 2/23
Fri 2/25
Tue 3/1
Thur 3/3
Mon 3/7
Wed 3/9
Fri 3/11
Tue 3/15
Thur 3/17
Mon 3/21
Wed 3/23
Fri 3/25
Tue 3/29
Thur 3/31

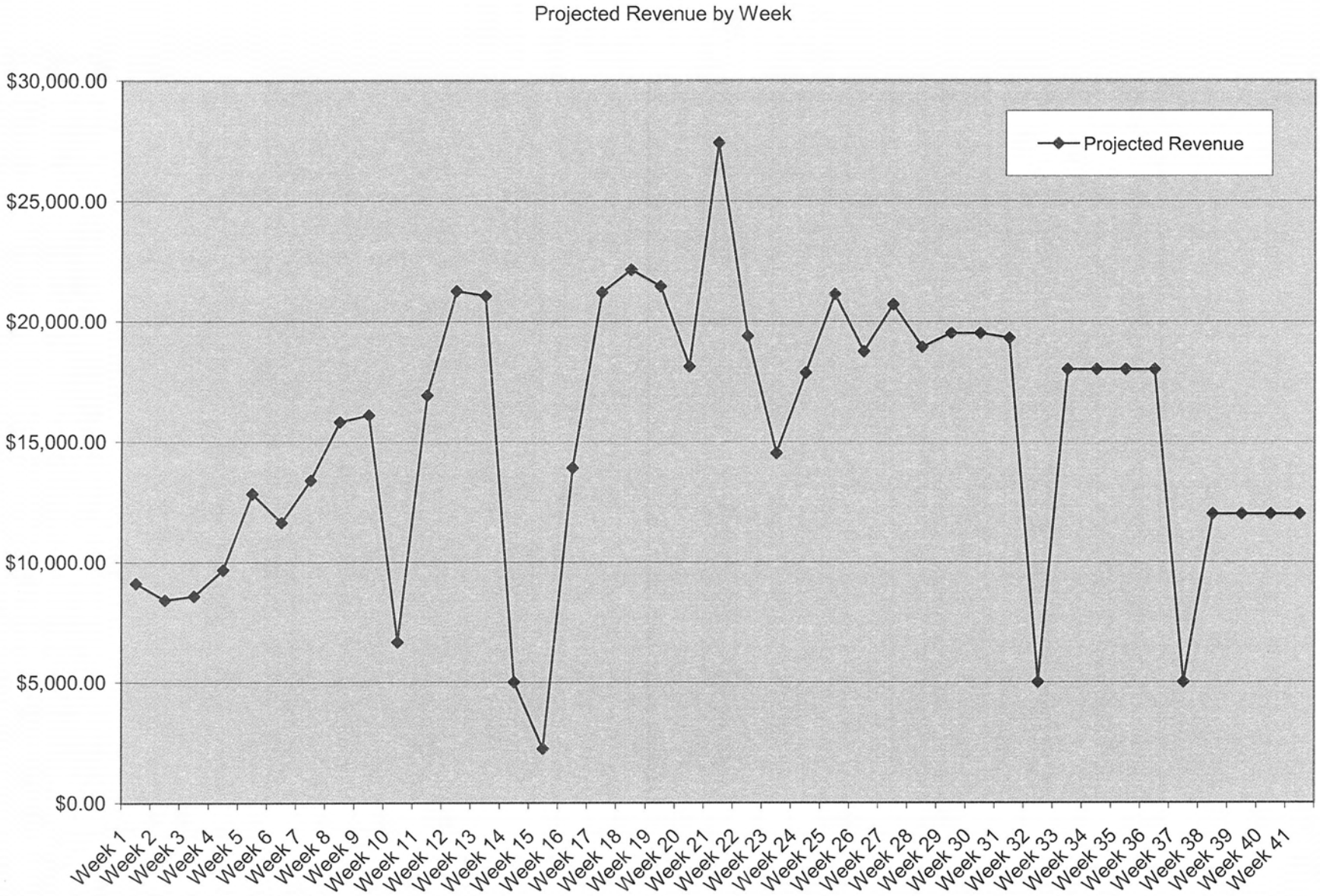
This page intentionally left blank


Total Revenue by Week
Total Revenue
Revenue ($)
$30,000.00
$25,000.00
$20,000.00
$15,000.00
$10,000.00
$5,000.00
$0.00
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Week 20
Week 21
Week 22
Week 23
Week 24
Week 25
Week 26
Week 27
Week 28

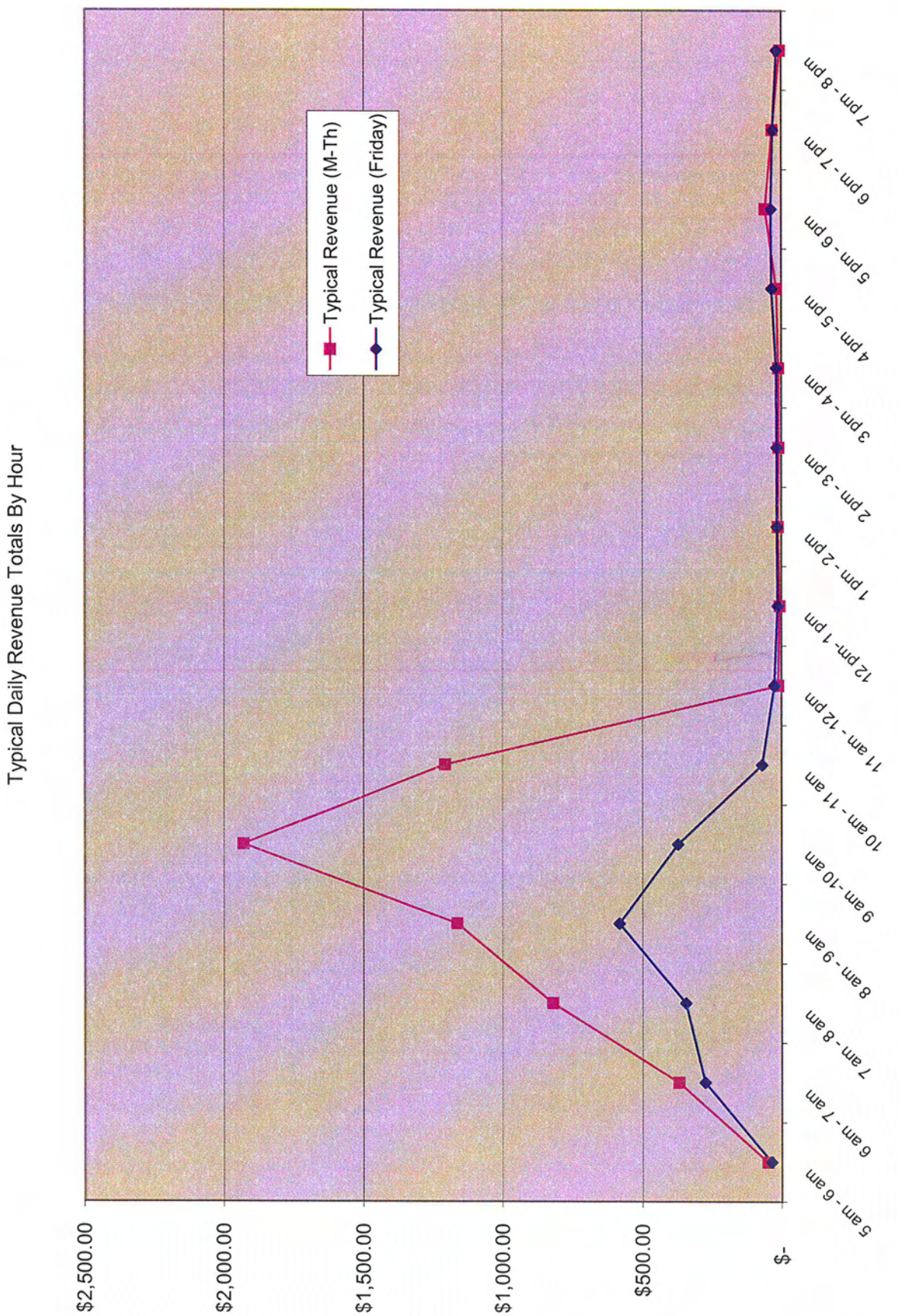
This page intentionally left blank


Projected Cumulative Revenue by Week
$700,000.00
$600,000.00
$500,000.00
$400,000.00
$300,000.00
$200,000.00
$100,000.00
$0.00
Cummulative Revenue
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Week 20
Week 21
Week 22
Week 23
Week 24
Week 25
Week 26
Week 27
Week 28
Week 29
Week 30
Week 31
Week 32
Week 33
Week 34
Week 35
Week 36
Week 37
Week 38
Week 39
Week 40
Week 41

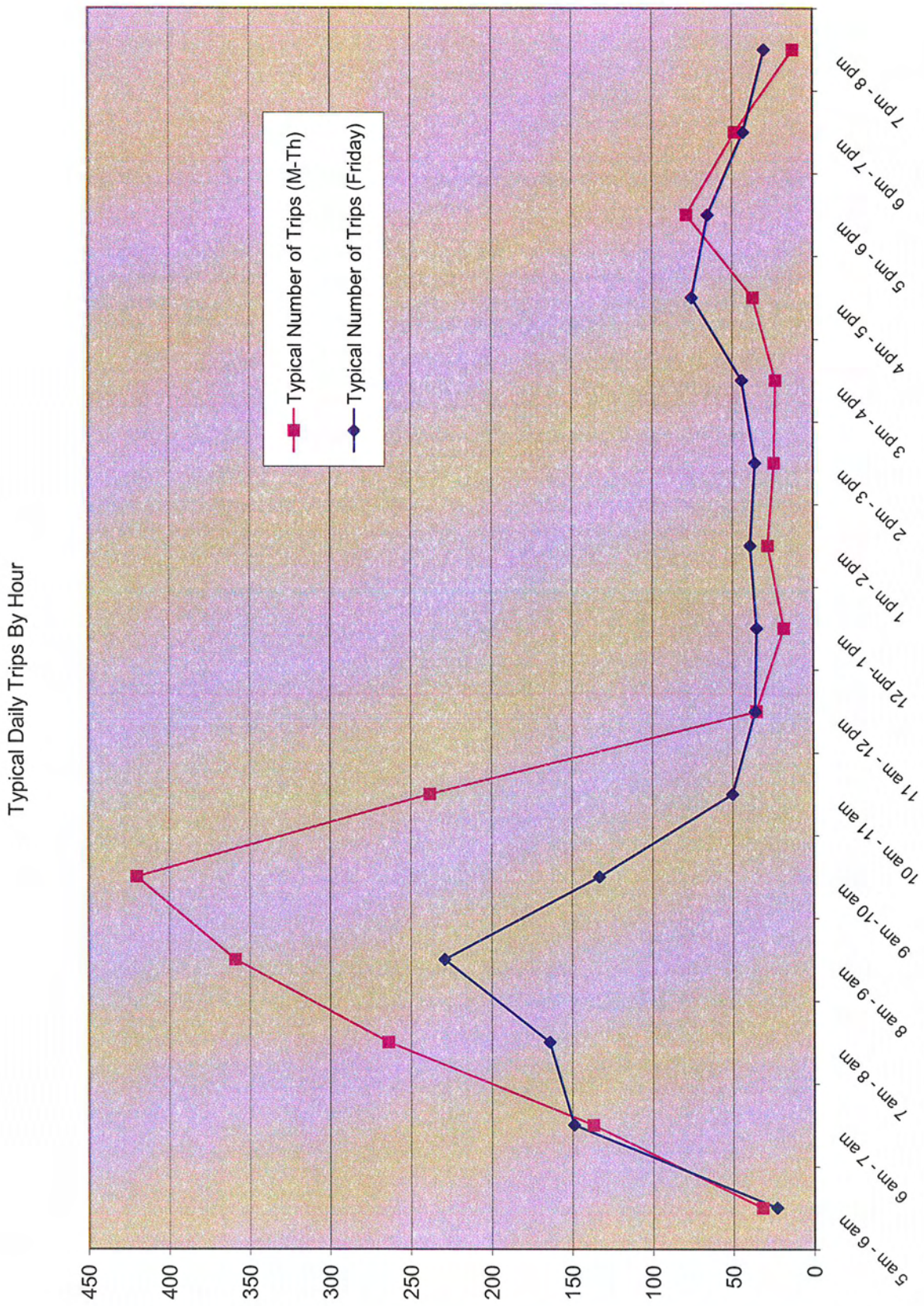
This page intentionally left blank


Projected Revenue by Week
$30,000.00
$25,000.00
$20,000.00
$15,000.00
$10,000.00
$5,000.00
$0.00
Projected Revenue
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18
Week 19
Week 20
Week 21
Week 22
Week 23
Week 24
Week 25
Week 26
Week 27
Week 28
Week 29
Week 30
Week 31
Week 32
Week 33
Week 34
Week 35
Week 36
Week 37
Week 38
Week 39
Week 40
Week 41

This page intentionally left blank


Typical Daily Revenue Totals By Hour
Typical Revenue (M-Th)
Typical Revenue (Friday)
$2,500.00
$2,000.00
$1,500.00
$1,000.00
$500.00
$-
5 am - 6 am
6 am - 7 am
7 am - 8 am
8 am - 9 am
9 am - 10 am
10 am - 11 am
11 am - 12 pm
12 pm - 1 pm
1 pm - 2 pm
2 pm - 3 pm
3 pm - 4 pm
4 pm - 5 pm
5 pm - 6 pm
6 pm - 7 pm
7 pm - 8 pm

This page intentionally left blank


Typical Daily Trips By Hour
Typical Number of Trips (M-Th)
Typical Number of Trips (Friday)
450
400
350
300
250
200
150
100
50
0
5 am - 6 am
6 am - 7 am
7 am - 8 am
8 am - 9 am
9 am - 10 am
10 am - 11 am
11 am - 12 pm
12 pm - 1 pm
1 pm - 2 pm
2 pm - 3 pm
3 pm - 4 pm
4 pm - 5 pm
5 pm - 6 pm
6 pm - 7 pm
7 pm - 8 pm

This page intentionally left blank

Alameda County EXPRESS LANES
1333 BROADWAY, SUITE 220, PHONE (510) 836-2560 . FAX (510) 836-2185

Memorandum

April 11, 2011
Agenda Item A.4

Date: **April 4, 2011**

To: **Sunol Smart Carpool Lane JPA**

From: **Frank R. Furger, Executive Director**

Subject: **Review of Express Lane Toll Policy**

Recommendation
The I-680 JPA is requested to approve the changes outlined below to the existing Toll Policy for the I-680 Express Lane.

Discussion
In advance of the opening of the I-680 Express Lane, the JPA Board approved several actions related to the operations of the facility. These actions, which included policy regarding hours of operation, time of day toll rate parameters and minimum/maximum toll, comprised the Toll Policy for the facility. The JPA requested that staff review the adopted Toll Policy after six months of operation to determine if any modifications should be made.

The following summarizes some key elements of the Toll Policy, along with recommendations for modifications where appropriate.

Hours of Operation
Current policy calls for hours of operations between 5 am and 8 pm, Monday through Friday. In adopting these hours of operation, the JPA requested that staff evaluate the operating hours after six months of operations. Staff does not believe any changes to the hours of operation are warranted at this point. The hours of operation should be revisited upon development of the I-580 toll policy to evaluate consistency between the two corridors.

Dynamic Pricing Strategy
The adopted policy calls for the emphasis in the first months of operations to be on maximizing throughput and to minimize any required closure of the facility to toll customers due to breach of the Level of Service requirement. The JPA delegated the authority to staff to modify the toll rate parameters as necessary to manage traffic flow in the corridor. The parameters of the dynamic pricing algorithm are reviewed routinely and adjusted based on changing traffic conditions in the corridor. No changes to this policy are recommended.

Toll Rate Parameters
Current policy establishes the minimum toll rate during various periods of the day.

5 am to 10 am – Minimum $1 toll
10 am to 8 pm – Minimum 30 cents

Staff recommends that the minimum toll from 5 am to 10 am be reduced to 30 cents. This change in toll policy would *allow* the toll to be lower but will not *require* the toll to be lower.

The current policy of a $1 minimum toll at 5 am was established based on the modeling that was done before the facility was opened, using the anticipated traffic volumes. While staff does not anticipate an immediate change to the dynamic pricing parameters, this change in policy would allow for more flexibility in toll pricing during periods of lower traffic volumes such as holidays and summer months.

No other changes to toll policy are recommended at this time.

Alameda County EXPRESS LANES
1333 BROADWAY, SUITE 220, PHONE (510) 836-2560 . FAX (510) 836-2185

Memorandum

April 11, 2011
Agenda Item A.5

Date: **April 4, 2011**

To: **Sunol Smart Carpool Lane JPA**

From: Frank R. Furger, Executive Director

Subject: **Occupancy and Toll Violation Study**

On March 29th, a vehicle occupancy and classification study was conducted on the I-680 Express Lane. The data was collected during the AM Peak Period between 7:00 a.m. to 10:00 a.m. near the Sheridan Road overcrossing. The results of this study, summarized below, will be used to modify toll violation enforcement strategies.

The following outlines the methodology used in conducting the study:

The study utilized four people, each one assigned to record the vehicle count and vehicle occupancy for each of the four lanes of the facility. Additionally, the counts in the Express Lane differentiated the vehicle occupancy/class type in more detail, distinguishing between vehicle types: number of vehicles for HOV, SOV, motorcycle, hybrid, and bus were recorded separately. Counts were conducted in 15-minute time intervals for a total of three hours.

Image 1: Observation Point Location

The vehicle occupancy/classification data collected are presented in Tables 1 and 2, below.

Table 1: Vehicle Classification Counts by Time Intervals

Intervals		Lane # 1 (Express Lane)					Lane # 2			Lane # 3			Lane # 4		
Start Time	End Time	Motorcycle	Hybrid	HOV	SOV	BUS	HDV	HOV	SOV	HDV	HOV	SOV	HDV	HOV	SOV
07:00 AM	07:15 AM	3	5	84	85	0	5	8	357	5	3	531	38	9	294
07:15 AM	07:30 AM	7	5	114	100	2	2	4	338	4	4	527	34	12	323
07:30 AM	07:45 AM	9	5	100	101	0	0	5	338	6	5	543	34	20	347
07:45 AM	08:00 AM	6	7	119	128	2	3	12	328	4	4	525	47	16	320
08:00 AM	08:15 AM	20	9	111	147	0	1	6	284	3	5	516	47	6	299
08:15 AM	08:30 AM	11	7	90	138	1	1	2	257	5	3	485	34	12	317
08:30 AM	08:45 AM	10	10	126	136	0	2	2	397	2	4	523	51	11	310
08:45 AM	09:00 AM	9	7	97	129	0	0	0	298	3	5	490	45	9	289
09:00 AM	09:15 AM	6	6	111	120	1	1	1	265	1	5	467	51	18	298
09:15 AM	09:30 AM	3	6	82	105	2	1	0	251	7	5	431	56	11	246
09:30 AM	09:45 AM	11	9	95	100	0	0	0	338	4	6	507	63	14	232
09:45 AM	10:00 AM	4	2	26	37	1	4	2	255	5	4	412	52	12	159
	Total	99	78	1,155	1,326	9	20	42	3,706	49	53	5,957	552	150	3,434

Note: HDV = Heavy Duty Vehicle; SOV= Single Occupancy Vehicle; HOV = High Occupancy Vehicle

Table 2: Hourly Vehicle Classification Counts

Hourly Counts		Lane # 1 (Express Lane)					Lane # 2			Lane # 3			Lane # 4		
Start Time	End Time	Motorcycle	Hybrid	HOV	SOV	BUS	HDV	HOV	SOV	HDV	HOV	SOV	HDV	HOV	SOV
07:00 AM	08:00 AM	25	22	417	414	4	10	29	1,361	19	16	2,126	153	57	1,284
07:15 AM	08:15 AM	42	26	444	476	4	6	27	1,288	17	18	2,111	162	54	1,289
07:30 AM	08:30 AM	46	28	420	514	3	5	25	1,207	18	17	2,069	162	54	1,283
07:45 AM	08:45 AM	47	33	446	549	3	7	22	1,266	14	16	2,049	179	45	1,246
08:00 AM	09:00 AM	50	33	424	550	1	4	10	1,236	13	17	2,014	177	38	1,215
08:15 AM	09:15 AM	36	30	424	523	2	4	5	1,217	11	17	1,965	181	50	1,214
08:30 AM	09:30 AM	28	29	416	490	3	4	3	1,211	13	19	1,911	203	49	1,143
08:45 AM	09:45 AM	29	28	385	454	3	2	1	1,152	15	21	1,895	215	52	1,065
09:00 AM	10:00 AM	24	23	314	362	4	6	3	1,109	17	20	1,817	222	55	935

Note: HDV = Heavy Duty Vehicle; SOV= Single Occupancy Vehicle; HOV = High Occupancy Vehicle

Vehicle composition of the express lane is summarized in Table 3. Qualified toll free vehicles (buses, hybrid, motorcycle, high occupancy vehicles) consist of approximately 50% of the traffic in the lane.

Table 3: Express Lane Vehicle Composition

Intervals		Lane # 1 (Express Lane)				
Start Time	End Time	Total	Toll Free	Toll Veh	Toll Free %	Toll Veh %
07:00 AM	07:15 AM	177	92	85	52%	48%
07:15 AM	07:30 AM	228	128	100	56%	44%
07:30 AM	07:45 AM	215	114	101	53%	47%
07:45 AM	08:00 AM	262	134	128	51%	49%
08:00 AM	08:15 AM	287	140	147	49%	51%
08:15 AM	08:30 AM	247	109	138	44%	56%
08:30 AM	08:45 AM	282	146	136	52%	48%
08:45 AM	09:00 AM	242	113	129	47%	53%
09:00 AM	09:15 AM	244	124	120	51%	49%
09:15 AM	09:30 AM	198	93	105	47%	53%
09:30 AM	09:45 AM	215	115	100	53%	47%
09:45 AM	10:00 AM	70	33	37	47%	53%
	Total	2,667	1,341	1,326	50%	50%

Note: HDV = Heavy Duty Vehicle; SOV= Single Occupancy Vehicle; HOV = High Occupancy Vehicle

Other observations:

- *A total of 16,630 vehicles passed by the data collection point (Sheridan Road) from 7:00 AM to 10:00 AM on March 29th. Figure 2 shows the lane utilization data for all the lanes on I-680 southbound.*

- *Lane No. 3 carried the highest volume (6,059) in the three hour AM peak period near the data collection location.*

- *The percentage of high occupancy vehicles of the general purpose lanes was small (around 1%) compared to that of the express lane (43%). Most of the high occupancy vehicles used the express lane when passing through the data collection point.*

- *Hybrid vehicles were hard to identify in the field given the high volume and travel speed on the freeway. As a result, the observed number of hybrid vehicles MAY be lower than in reality.*

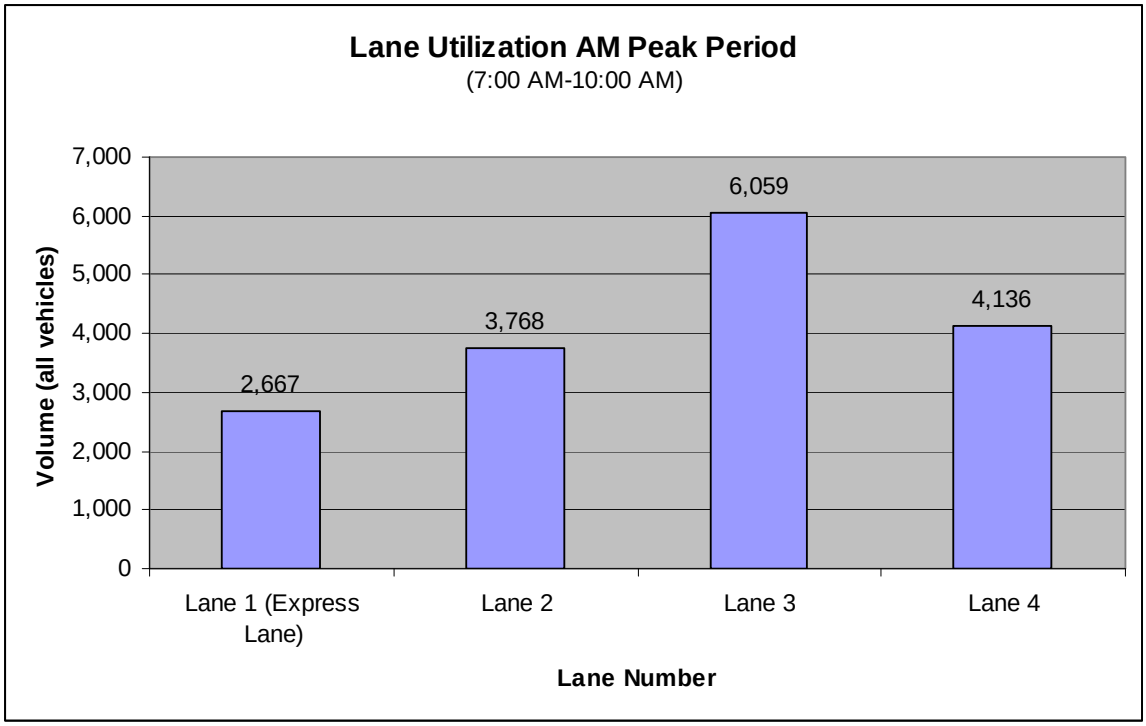


Figure 1: Lane Utilization AM Peak Period

Table 4 compares the manual traffic counts with the Express Lane automated (RTMS) counts collected near Andrade Road during the same time observation period. The counts that were recorded by the EL system equipment and what was manually counted for total vehicles in both the express lane and the general purpose lanes are close – 2,706 vs 2,667 in the EL and 14,124 vs 13,963 in the GP Lane.

There is however, a large discrepancy between the vehicles that were recorded as paying a toll (543) in the three hour period and the vehicles that should have paid a toll based on visual counts (1,326) Based on these counts, a total of 783 vehicles were in violation over the three hour observation period.

Table 4 Traffic Count Comparison

Time Interval		Express Lane Total		Toll Vehicle		GP Lane Total	
Start Time	End Time	EL Syst	Count	EL Syst	Count	EL Syst	Count
7:00	7:30	422	405	76	185	2,418	2,498
7:30	8:00	459	477	83	229	2,454	2,557
8:00	8:30	548	534	116	285	2,376	2,283
8:30	9:00	525	524	105	265	2,343	2,441
9:00	9:30	455	442	98	225	2,247	2,115
9:30	0:00	297	285	65	137	2,286	2,069
Total		2,706	2,667	543	1,326	14,124	13,963
Difference		39		783		161	

EL Syst – Automated counts by EL system equip.

Count – Visual count by field personnel.

Staff continues to work with CHP on enforcement procedures to reduce the number of violators on the facility. Additional information will be provided at the meetin

This page intentionally left blank