TRAFFIC IMPACT ANALYSIS

MAMMOTH LAKES-YOSEMITE VALLEY AIRPORT

MAMMOTH LAKES, CALIFORNIA

This traffic study has been prepared under the supervision of
Leslie E. Card, P.E.

Signed Leslie E. Card

LSA

February 5, 2008

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MAMMOTH LAKES-YOSEMITE VALLEY AIRPORT

MAMMOTH LAKES, CALIFORNIA

August 31, 2001

Revised February 5, 2008

Prepared for:

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LSA Project No. (TML030A)

LSA

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MAMMOTH LAKES-YOSEMITE VALLEY AIRPORT TRAFFIC IMPACT STUDY

EXECUTIVE SUMMARY

This report is an update to the traffic study prepared in 2001 as part of the Town of Mammoth Lakes' California Environmental Quality Act (CEQA) process. This traffic study has been prepared to assess the airport specific short-range and long-range impacts, and to consider the cumulative impacts of two adjacent development projects: Hot Creek Resort and Sierra Business Park. The study examines conditions in 2007 and 2025 and considers growth in through traffic on United States Route 395 (US-395). Information for the Sierra Business Park is taken from the traffic study dated May 2000, and November 2000, prepared by Traffic Safety Engineers.

Several different development combinations are considered in order to isolate substantial impacts and to consider proportionate share responsibilities.

When the intersection of US-395 at Hot Creek Road drops below level of service (LOS) D, mitigation is recommended. In this case, a traffic signal is not considered acceptable by Caltrans due in part to the high vehicular speeds; therefore, minor intersection channelization is recommended.

The tables on the following page illustrate the various land use and access alternatives and provide the LOS results.

Mitigation in the form of restriping the center median lanes to provide separate eastbound and westbound left and through lanes would be required to reduce the impacts. The costs of the improvement should be spread to the contributing projects on a proportionate basis in relation to their respective peak hour trip generation.

If the Sierra Business Park is not approved or otherwise is not developed, no mitigation is necessary in the short range and long range for the Airport and Hot Creek Resort.

Year 2006: US-395/Hot Creek Road

Scenario	US-395/Hot Creek Road[1]						
	Intersection Delay/LOS			NB/SB Queue Lengths		EB/WB Queue Lengths	
	Max Delay[2]	Approach	LOS	Max Queue[2]	Movement[3]	Max Queue[2]	Movement[3]
WITH EXISTING CIRCULATION SYSTEM							
Existing Year 2006 Conditions[4]	11.6 sec.	westbound	B	0.05 veh.	SB-L	0.10 veh.	WB-LTR
Existing + Airport	11.4 sec.	westbound	B	0.22 veh.	SB-L	0.37 veh.	WB-LTR
Existing + Airport + Hot Creek Resort	19.8 sec.	westbound	C	0.61 veh.	SB-L	3.25 veh.	WB-LTR
Existing + Sierra Business Park	15.4 sec.	eastbound	B	0.05 veh.	SB-L	1.56 veh.	EB-LTR
Existing + Airport + Hot Creek Resort + Sierra Business Park	28.2 sec.	eastbound	D	0.61 veh.	SB-L	3.38 veh.	EB-LTR

Note: See Table A for footnotes.

Year 2025: US-395/Hot Creek Road

Scenario	US-395/Hot Creek Road[1]						
	Intersection Delay/LOS			NB/SB Queue Lengths		EB/WB Queue Lengths	
	Max Delay[2]	Approach	LOS	Max Queue[2]	Movement[3]	Max Queue[2]	Movement[3]
WITH EXISTING CIRCULATION SYSTEM							
Year 2025 Baseline Conditions[4]	12.5 sec.	westbound	B	0.04 veh.	SB-L	0.12 veh.	WB-LTR
2025 + Airport	12.2 sec.	westbound	B	0.26 veh.	SB-L	0.41 veh.	WB-LTR
2025 + Airport + Hot Creek Resort	24.8 sec.	westbound	C	0.70 veh.	SB-L	4.28 veh.	WB-LTR
2025 + Sierra Business Park	17.6 sec.	eastbound	C	0.06 veh.	NB-L	1.88 veh.	EB-LTR
2025 + Hot Creek Resort + Airport + Sierra Business Park	***41.2 sec.***	***eastbound***	***E***	0.70 veh.	SB-L	5.07 veh.	EB-LTR
- with Mitigation	***33.5 sec.***	***eastbound***	***D***	0.70 veh.	SB-L	3.82 veh.	EB-L

Note: See Table C for footnotes.

INTRODUCTION

Project Description and Location

The project proposes to conduct two daily flights from Los Angeles International Airport (LAX) to the existing Mammoth Lakes-Yosemite Valley Airport (MMH). Figure 1 illustrates the location of the project.

As stated in the Draft Environmental Impact Statement (EIS) (United States Department of Transportation Federal Aviation Administration [FAA], November 2007), "Horizon Air is proposing to begin scheduled regional air carrier service to MMH beginning in December 2008 with two flights per day from LAX during the winter ski season (approximately December to April). The Town of Mammoth Lakes has prepared and submitted to FAA a forecast of future commercial aviation activity at MMH. The FAA has reviewed and approved this forecast. Winter ski service is projected to increase to a maximum of eight flights per day by the year 2011."

It should be noted that each proposed flight can carry up to 78 passengers. The applicable sections of the Draft EIS are provided in Appendix A.

In addition, two other development projects surrounding the existing Mammoth Lakes-Yosemite Valley Airport are proposed: the Hot Creek Aviation Mixed-Use Development and the Sierra Business Park Specific Plan. Figure 1 illustrates the locations of these projects.

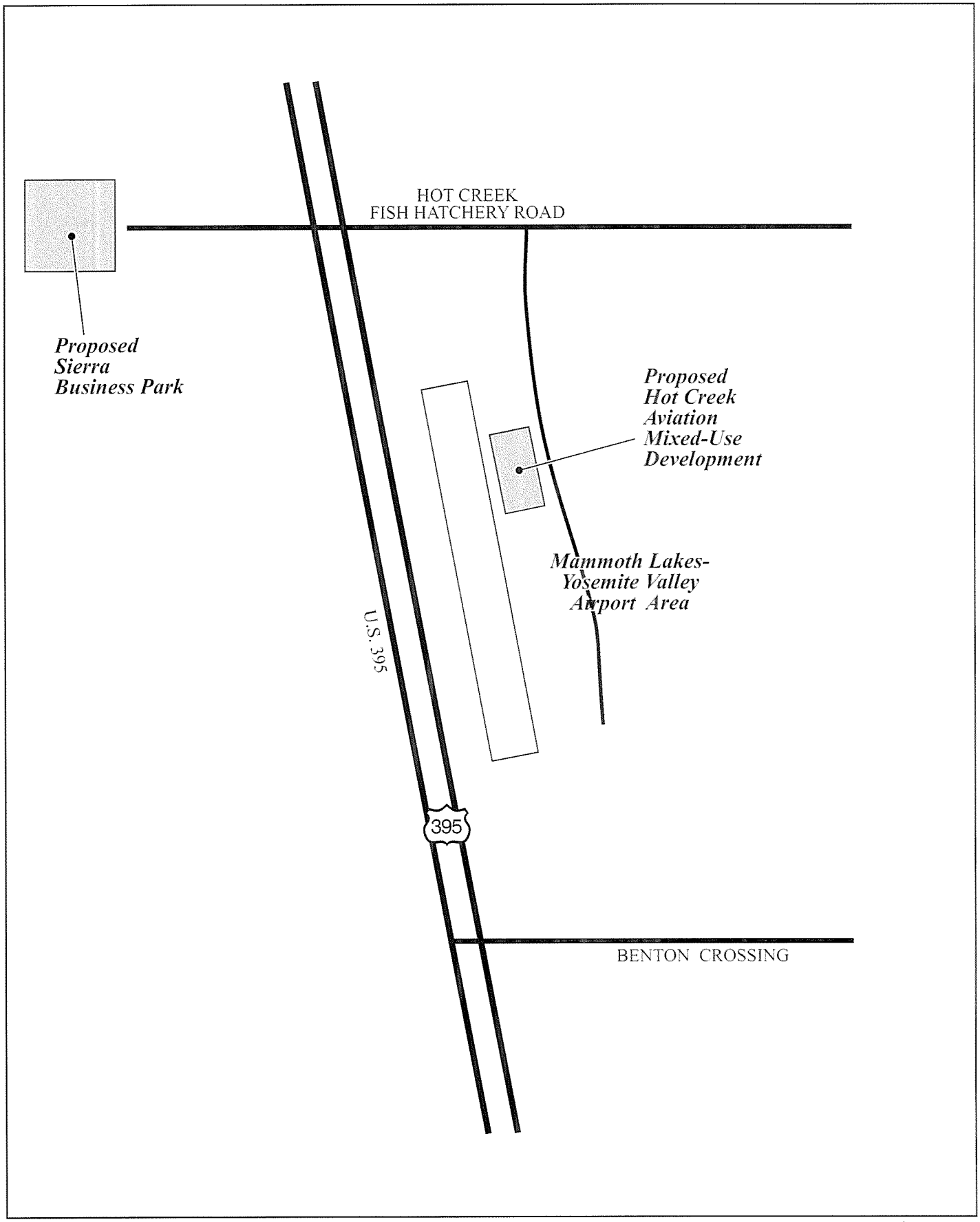
The Hot Creek Aviation Mixed-Use Development is an approved mixed retail/residential use development. This project would occur only with the expansion of the existing airport. Planned land uses include: 24 pump gasoline service station, 188 units of townhouses, a 62-room hotel, a recreation vehicle park with 100 sites, and sit-down restaurants totaling 100 seats. This project would be located north of and adjacent to the airport.

The proposed Sierra Business Park Specific Plan is planned to be developed as a light industrial use park; the existing concrete batch plant would remain as part of the development. The entire Specific Plan area will consist of 36 acres. This project is located directly across from the airport, on the west side of US-395. This project will upgrade its current access on US-395 to Caltrans standards. Traffic data used for the Sierra Business Park Specific Plan are based on the traffic analysis and the addendum traffic analysis for this project prepared by Traffic Safety Engineers in May and November 2000.[1]

Methodology

The traffic analysis for the Mammoth Lakes-Yosemite Valley Airport expansion has been prepared to be generally consistent with the Guide for the Preparation of Traffic Impact Studies (Caltrans, December 2002). The Highway Capacity Software (HCS2000) was utilized to determine the intersection LOS at the unsignalized US-395/Hot Creek Road. The

[1] Traffic Impact Study for the Sierra Business Park Specific Plan, Traffic Safety Engineers (TSE), May 2000. Addendum to the Traffic Impact Study for the Sierra Business Park Specific Plan, TSE, November 2000.



2/4/08(TML030)

Figure 1

LSA Schematic - Not to Scale

Project Study Area and
Future Project Locations

HCS2000 software is consistent with the 2000 *Highway Capacity Manual* (HCM) methodology for the analysis of unsignalized intersections.

In previous traffic analyses dated November 2000, the 1997 HCM method was used to analyze the US-395/Hot Creek Road intersection. As a limitation of the 1997 HCM, the US-395/Hot Creek Road intersection was analyzed as two separate intersections due to the width of the existing median. However, the current HCS2000 software package is able to analyze US-395/Hot Creek Road as a single intersection with a "two-stage gap acceptance" process (Chapter 17 of the HCM2000).

The existing median is approximately 70 feet in width. Assuming a standard vehicle length of 22 feet per vehicle, which includes front and rear clearance space, approximately three vehicles can be stored in the median. A vehicle queuing analysis has been conducted consistent with the HCM2000 methodology. The queuing analysis will determine the length of forecast vehicle queues at the US-395/Hot Creek Fish Hatchery Road intersection, specifically within the 70-foot wide median storage lanes. In particular, the northbound and southbound left turn queues from US-395 were analyzed to ensure that vehicles already stored within the median would not be blocked from their intended maneuvers. The time period analyzed for both intersections is the winter Friday p.m. peak hour, since this period would yield the greatest amount of traffic from all three projects as a whole.

Project impacts for the proposed project (airport), Hot Creek Development, Sierra Business Park, and all three developments were analyzed for the following scenarios:

Existing + Project Scenario

1. Existing conditions (2006)
2. Existing + airport expansion
3. Existing + airport expansion + Hot Creek Aviation
4. Existing + Sierra Business Park
5. Existing + airport expansion + Hot Creek Aviation + Sierra Business Park

Year 2025 + Project Scenario

1. Year 2025 baseline conditions
2. Year 2025 + airport expansion
3. Year 2025 + airport expansion + Hot Creek Aviation
4. Year 2025 + Sierra Business Park
5. Year 2025 + airport expansion + Hot Creek Aviation + Sierra Business Park

According to Caltrans guidelines, the minimum acceptable LOS for intersections is LOS D. Therefore, when an intersection is forecast to operate at LOS E or LOS F, mitigation would be required to bring the intersection to LOS D or better.

EXISTING CONDITIONS

Circulation Network

Figure 1 illustrates the local and regional circulation networks of the project area. Regional access to the proposed project is from US-395. North of the project site, US-395 provides access to the Town of Mammoth Lakes and the Lake Tahoe region. South of the project site, US-395 provides access to Crowley Lake, Bishop, and Southern California. Local access to the airport is provided via Hot Creek Fish Hatchery Road (Hot Creek Road). Hot Creek Road is an undivided, two lane road with an at-grade intersection with US-395. An approximately 70 foot wide median exists on US-395 at its intersection with Hot Creek Road. This intersection is characterized with high vehicle speeds on US-395 (60 to 70 mph), and stop control along Hot Creek Road, including the vehicle storage lanes within the median.

Volumes and Levels of Service

Figure 2 presents the existing intersection geometrics and weekday p.m. peak hour traffic volumes for a typical winter condition. The existing traffic volumes for the US-395 mainline were provided by the Caltrans 2006 Traffic and Vehicle Data Systems Unit. Peak hour traffic volumes on Hot Creek Road were based on a manual count collected by the Town on January 18, 2008, and are provided in Appendix B. Table A presents the existing intersection levels of service for the intersection of US-395 at Hot Creek Road. According to the table, the US-395 intersection at Hot Creek Road currently operates with a satisfactory LOS B (10.8 seconds). Appendix C contains the level of service worksheets.

PROJECT TRIP GENERATION AND ASSIGNMENT

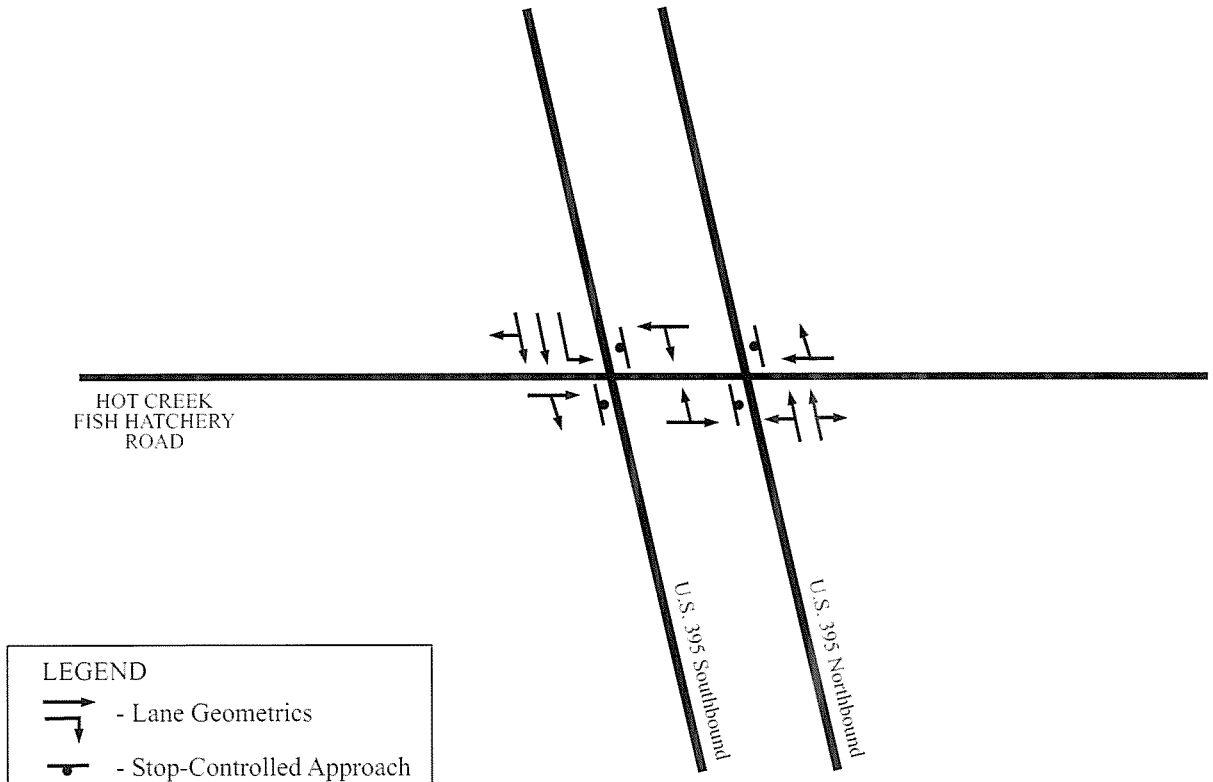
Mammoth Lakes-Yosemite Valley Airport

Table B presents the trip generation for the three projects within the airport area (airport expansion, Hot Creek Resort, and Sierra Business Park). The project proposes to conduct two daily flights, with flights carrying up to 78 passengers. Service in 2025 is projected to increase to a maximum of eight flights per day. To provide a most conservative analysis, two flights are considered to occur during the p.m. peak hour (two flights arriving and two flights departing). This results in a maximum of 312 passengers (156 arrivals/156 departures) in the peak hour.

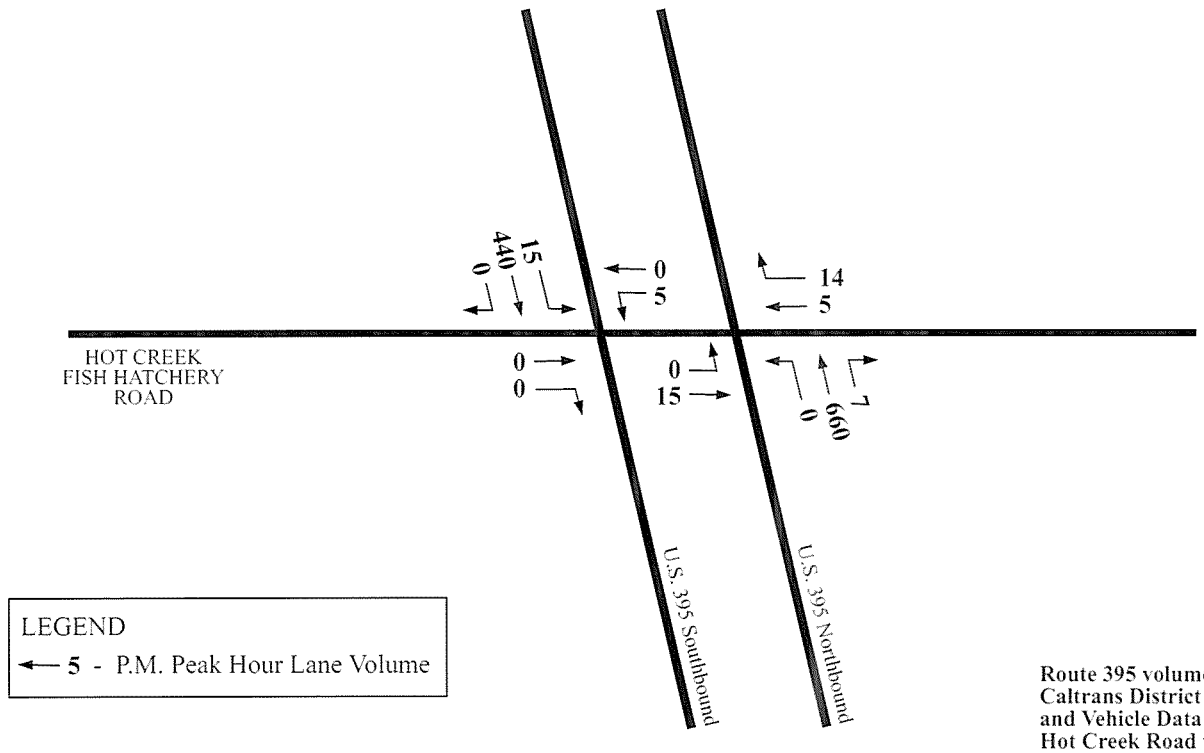
The introduction of commercial flights would generate approximately 100 p.m. peak hour trips. The traffic generated by these arriving and departing passengers will be accommodated by a combination of private vehicles, buses, shuttles/vans from major hotels, rental cars, and pick-up/drop-off private vehicles. For a conservative estimate, an overall passenger occupancy of 3.0 is projected for all vehicles, resulting in approximately 50 inbound and 50 outbound vehicles to service two fully loaded 78-passenger planes in the peak hour.

Figure 3 illustrates the airport's trip assignment. It is anticipated that all p.m. peak hour trips associated with the airport would originate from and be destined to the Town of Mammoth Lakes.

EXISTING GEOMETRICS



EXISTING P.M. PEAK HOUR VOLUMES



Route 395 volumes provided by Caltrans District 9. 2006 Traffic and Vehicle Data Systems Unit. Hot Creek Road volumes per 1/19/2008 traffic count.

2/4/08(TML030)

Figure 2

LSA

Schematic - Not to Scale

Existing Geometrics and Weekday P.M. Peak Hour Traffic Volumes for Typical Winter Conditions

Table A - Existing and Existing Plus Project Intersection Level of Service Summary

Scenario	US-395/Hot Creek Road[1]						
	Intersection Delay/LOS			NB/SB Queue Lengths		EB/WB Queue Lengths	
	Max Delay[2]	Approach	LOS	Max Queue[2]	Movement[3]	Max Queue[2]	Movement[3]
WITH EXISTING CIRCULATION SYSTEM							
Existing Year 1999/2000 Conditions[4]	11.6 sec.	westbound	B	0.05 veh.	SB-L	0.10 veh.	WB-LTR
Existing + Airport	11.4 sec	westbound	B	0.22 veh.	SB-L	0.37 veh.	WB-LTR
Existing + Airport + Hot Creek Resort	19.8 sec.	westbound	C	0.61 veh.	SB-L	3.25 veh.	WB-LTR
Existing + Sierra Business Park	15.4 sec.	eastbound	B	0.05 veh.	SB-L	1.56 veh.	EB-LTR
Existing + Airport + Hot Creek Resort + Sierra Busi	28.2 sec.	eastbound	D	0.61 veh.	SB-L	3.38 veh.	EB-LTR

Notes:

[1] Due to the current intersection configuration, the northbound and southbound approaches on US-395 are separate intersections. However, HCS 2000 software allows for analysis of single intersection with a "two-stage" gap acceptance with 3 vehicles stored in median.

[2] Intersections are analyzed through the Highway Capacity Manual (HCM) 2000 Operations Analysis. Delay is expressed in seconds of average delay per vehicle. LOS = Level of Service. Vehicle queues are expressed in numbers of vehicles.

[3] SB-L movement consists of vehicles travelling south on US-395 turning left at Hot Creek Road destined to Airport, Hot Creek Resort and/or hot springs. EB- and WB-LTR movements consists of vehicles on Hot Creek Fish Hatchery Road destined towards its intersection with US-395.

[4] Existing conditions are based on Caltrans 2006 counts on mainline segments, and manual p.m. peak hour counts on Hot Creek Fish Hatchery Road conducted in January, 2008.

Table B - Mammoth Lakes -Yosemite Valley Airport Area Trip Generation

Land Use	Size	Units	ADT	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total
TRIP RATES						
Mammoth Lakes-Yosemite Valley Airport[1]	*based on data provided by Mammoth Lakes-Yosemite Valley Airport*					
Hot Creek Aviation Mixed-Used Development[2]						
Gasoline/Service Station w/ Convenience Market	per fueling position (FP)		162.78	6.69	6.69	13.38
Residential High Density (MF) Seasonal	per dwelling unit (DU)		8.00	0.50	0.25	0.75
Hotel	per occupied room		8.92	0.35	0.36	0.71
Campground/Recreational Vehicle Park	per occupied campsite		4.00	0.20	0.20	0.39
High Turnover Sit-Down Restaurant	per seat		4.83	0.24	0.18	0.42
Sierra Business Park Specific Plan[3]	*based on data provided in Morgan Industrial Park Specific Plan TIA*					
TRIP GENERATION						
Mammoth Lakes-Yosemite Valley Airport	312	passengers	400	50	50	100
Hot Creek Aviation Mixed-Used Development						
Gasoline/Service Station w/ Convenience Market	24	FPs	3,907	161	161	321
Residential High Density (MF) Seasonal[4]	150	DUs	1,203	76	37	113
Hotel[4]	50	rooms	442	17	18	35
Campground/Recreational Vehicle Park[4]	80	campsites	320	16	16	31
High Turnover Sit-Down Restaurant	100	seats	483	24	18	42
Sierra Business Park Specific Plan	36	acres	1,487	48	181	229
Total Trip Generation			**8,242**	**391**	**480**	**871**
TRIP REDUCTIONS						
Hot Creek Aviation Mixed-Use Development						
Gasoline/Service Station w/ Convenience Market[5]	(90 percent reduction)		-3,516	-145	-145	-289
Residential High Density (MF) Seasonal[6]	(60 percent reduction)		-722	-45	-22	-68
Hotel[7]	(75 percent reduction)		-332	-13	-13	-26
Campground/Recreational Vehicle Park	*no trip reductions anticipated*					
High Turnover Sit-Down Restaurant[8]	(100 percent reduction)		-483	-24	-18	-42
Total Trip Reductions			**-5,053**	**-227**	**-198**	**-425**
NET EFFECTIVE TRIP GENERATION			**3,190**	**164**	**282**	**446**

[1] Year 2020 airport trip generation data provided by Mammoth Lakes-Yosemite Valley Airport staff (Tom Cornell-Ricondo).

[2] Trip rates for Hot Creek Mixed-Use Development provided in *Trip Generation*, 6th Edition, Institute of Transportation Engineers (ITE), 1997. Trip rates for the Residential High Density (MF) Seasonal are based on the Mammoth Lakes Transportation Model (MTM). Daily trip rate for RV Park based on SANDAG rates for campsite uses; p.m. peak hour rates for RV Park are based on ITE rates.

[3] Trip generation data provided in *Traffic Impact Study Addendum for Sierra Business Park Specific Plan*, Traffic Safety Engineers (TSE), Novem

[4] Unit counts for residential/lodging components are based on 80% occupancy rate which is consistent with Town of Mammoth "typical" winter conditions. Build out unit counts are 188 multi-family homes, 62 hotel rooms, and 100 campsites.

[5] A 90% reduction was applied due to a majority of pass-by trip making for vehicles travelling on Highway 395. Approximately 10% (new trips) may originate from existing communities south of the Airport.

[6] A 60% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area. A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.

[7] A 75% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area. A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.

[8] A 75% internal trip capture, and 25% pass-by trip reduction was applied for vehicles travelling on Highway 395. No new trips are anticipated for this land use.

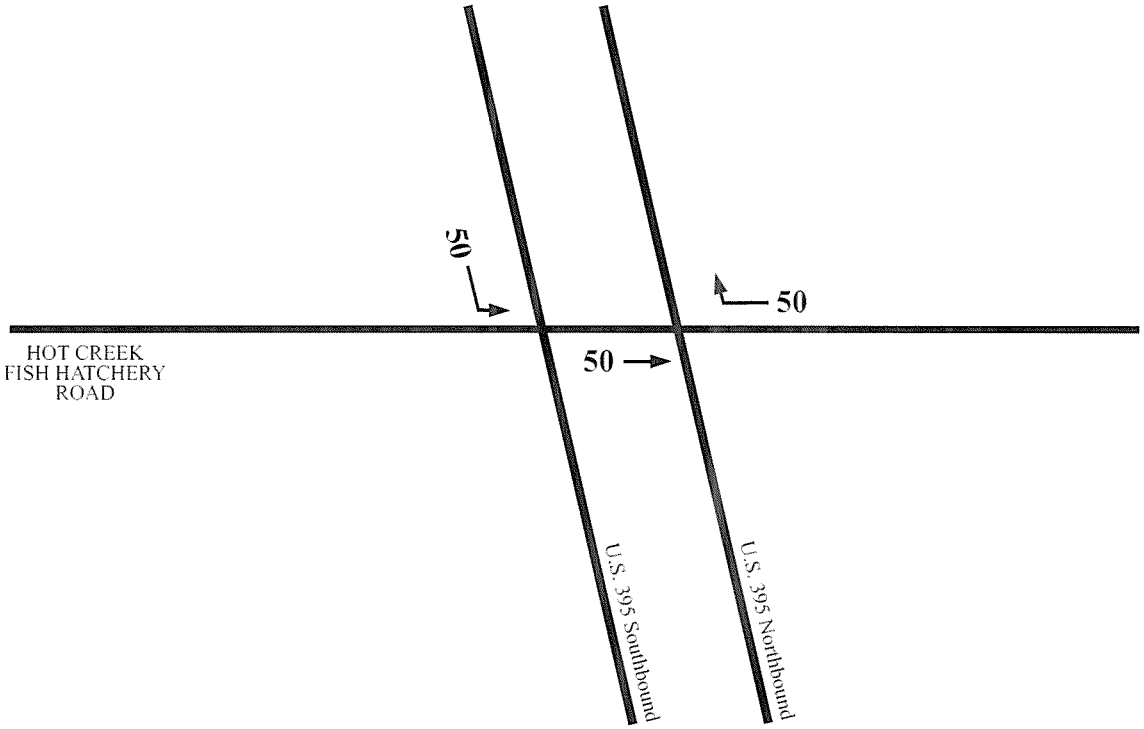
Hot Creek Aviation Mixed-Use Development

The trip generation estimates for the approved Hot Creek Development are based on trip rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation*, 6th Edition (1997). Based on the project description of the lodging component of the Hot Creek resort, a total of 188 multifamily townhomes, a 62-room hotel, and a 100-site RV park would be developed. An 80 percent occupancy rate was factored for these lodging type land uses to account for the "typical" winter conditions consistent with Town of Mammoth Lakes methodology. Therefore, trips were generated for Hot Creek resort's lodging component, which consisted of 150 multifamily townhomes, a 50-room hotel, and an 80-site RV park during the "typical" winter condition. According to Table B, the approved Hot Creek resort would generate a total of 6,355 daily trips and 542 p.m. peak hour trips.

In addition to the 80 percent occupancy factor for the lodging components, trip reductions for the multifamily rental townhomes and hotel were applied due to the available shuttle service for residents of the townhomes and hotel guests to the resort areas of the Town (i.e., Mammoth Mountain Ski Area - MMSA). The planned shuttle service would be available to guests of the townhomes and hotel on a regular basis throughout the day, and would be operated to minimize passenger vehicle traffic between the Hot Creek resort and the MMSA. A 60 percent reduction was applied to the trip generation of the townhomes; a 75 percent reduction was applied to the hotel's trip generation estimates.

To account for the pass-by trip making for the retail components of Hot Creek, a 90 percent reduction in new trips generated by the gas station and a 25 percent reduction in new trips generated by the restaurant were applied. In addition, a 75 percent reduction in restaurant trips was applied for the internal trip capture of lodging residents and airport patrons who would utilize the restaurants on site. It should be noted that 100 percent of the restaurant trips were removed from the overall trip generation (75 percent via internal trip capture and 25 percent via pass-by trips). Based on the reductions for occupancy, shuttle service, pass-by trip making, and internal trip capture, a total of 5,053 daily and 425 p.m. peak hour trips were removed from the total Hot Creek resort total trip generation. Therefore, according to Table B the Hot Creek resort would generate approximately 1,302 new daily trips and a 117 new p.m. peak hour trips.

Figure 4 illustrates the trip assignment for the Hot Creek Development. It should be noted that reductions on the northbound and southbound through movements on US-395 were made to account for the pass-by trips of the gas station and restaurant components. In other words, a pass-by trip is a through trip that is diverted into the project via southbound left or northbound right turn and then reassigned to US-395 via another right or left turn back onto US-395.



LEGEND
← 5 - P.M. Peak Hour Trip Assignment

1/31/08(TML030)

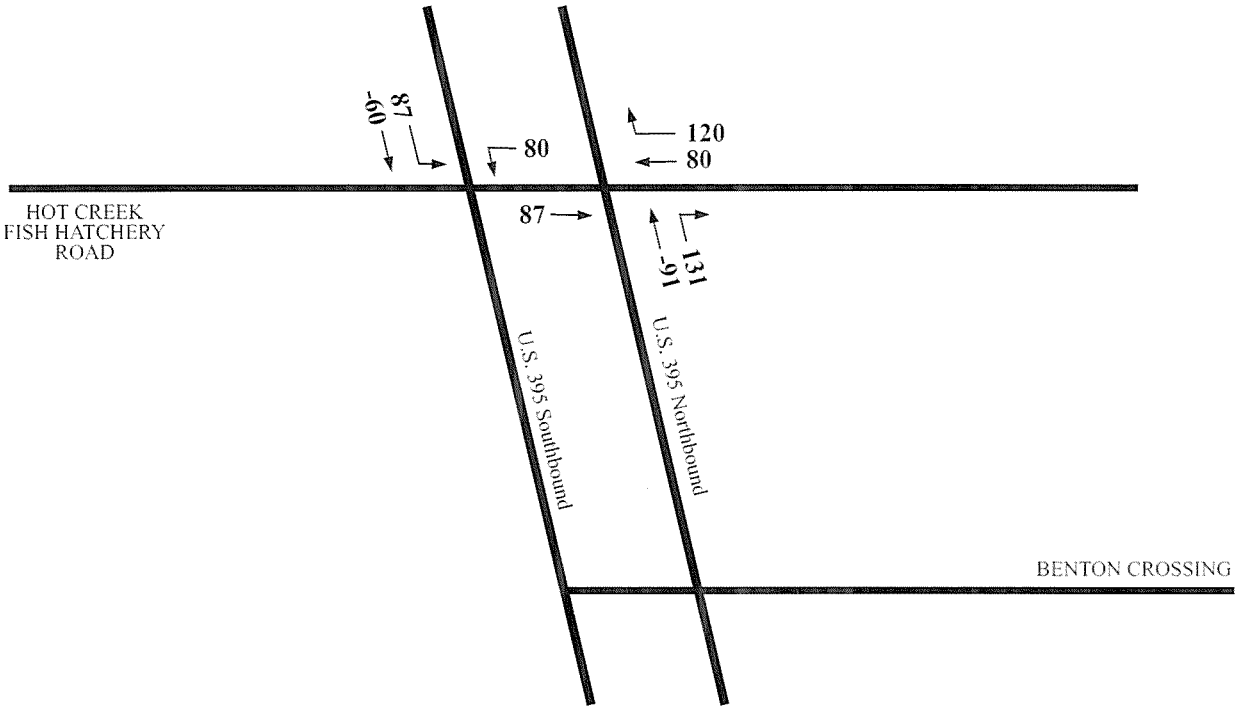
Figure 3

N

LSA

Schematic - Not to Scale

Mammoth Lakes-Yosemite Valley
Airport Trip Assignment



LEGEND

← 5 - P.M. Peak Hour Trip Assignment

Negative volumes represent diverted trips.

1/31/08(TML030)

Figure 4

LSA

Schematic - Not to Scale

Hot Creek Aviation Mixed-Use Development
Trip Assignment

Sierra Business Park

Trip generation estimates and the trip assignment for the Sierra Business Park were obtained from the traffic impact study addendum completed by Traffic Safety Engineers (TSE). Appendix D contains the trip generation and trip assignment completed by TSE for this specific project. Based on Table B, the Sierra Business Park would generate 1,487 daily trips, and 229 p.m. peak hour trips. Figure 5 presents the trip assignment as prepared by TSE.

According to Table B, when trip generation estimates for all three development projects are added together, the projects would generate a total of 8,241 daily trips and 871 p.m. peak hour trips (391 inbound and 480 outbound). With the trip reductions for the occupancy, shuttle service, pass-by trip making, and internal trip capture for the components of the Hot Creek resort development applied to the total trip generation, the new trips generated by all three projects are 3,189 daily trips and 446 p.m. peak hour trips (164 inbound and 282 outbound). Figure 6 illustrates the trip assignment for all three development projects.

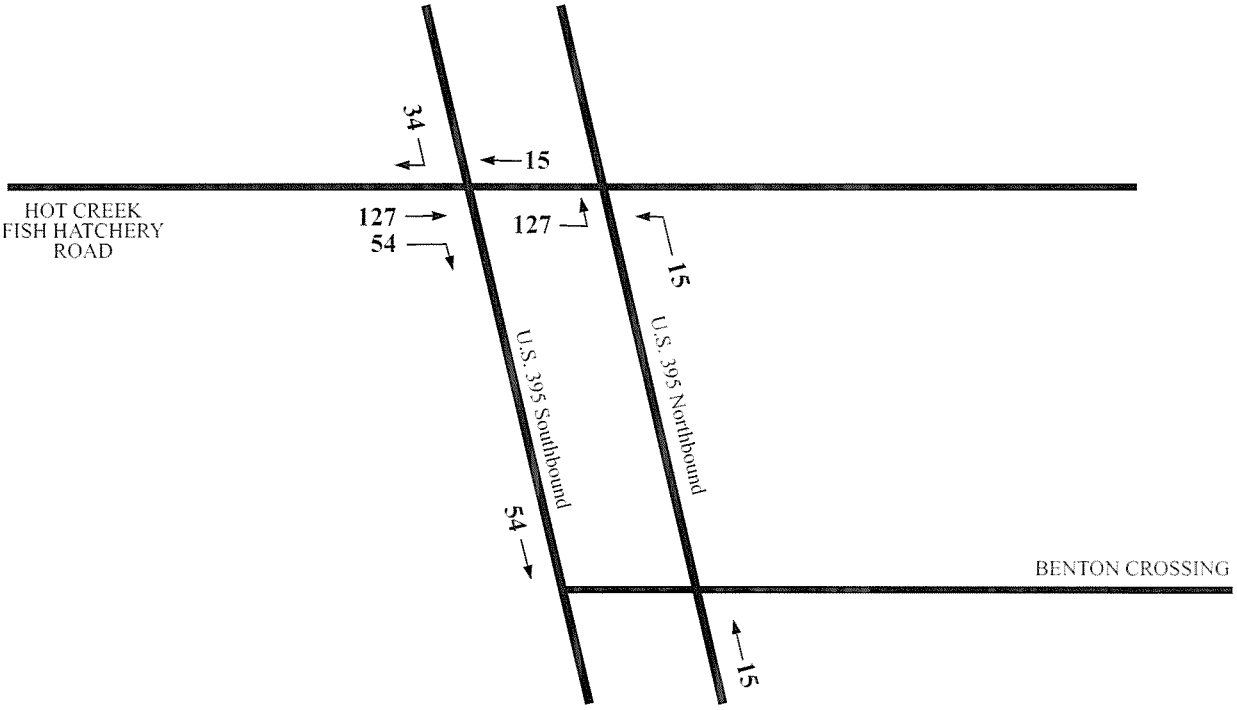
Existing + Project Levels of Service

The existing traffic volumes at the US-395/Hot Creek Road intersection were added to the project trip assignments discussed above, and intersection levels of service were determined for the existing + airport expansion; existing + airport expansion + Hot Creek resort existing + Sierra Business Park; and existing + airport expansion + Hot Creek resort + Sierra Business Park scenarios. Figures 7, 8, 9, and 10 illustrate the existing plus project(s) scenarios p.m. peak hour traffic volumes at the US-395/Hot Creek Road intersection. Appendix C contains the level of service worksheets.

Based on the LOS analysis results provided in Table A, all of the analysis scenarios are forecast to operate with satisfactory levels of service (LOS D or better) in the existing conditions.

Year 2025 Baseline Conditions

Per direction by Caltrans staff (Tom Meyers - District 9), a 1.0 percent annual growth rate, compounded, was applied to the northbound and southbound through volumes for US-395. This rate constitutes a growth of 21 percent from 2006 to 2025. Figure 11 presents the 2025 weekday p.m. peak hour traffic volumes for a typical winter condition. Existing geometrics were assumed for the 2025 baseline scenario. Table C presents the 2025 baseline intersection levels of service for the northbound and southbound intersections of US-395 at Hot Creek Road. According to the table, the US-395 intersection at Hot Creek Road is forecast to continue to operate with a satisfactory LOS B (12.5 seconds). Appendix C contains the level of service worksheets.



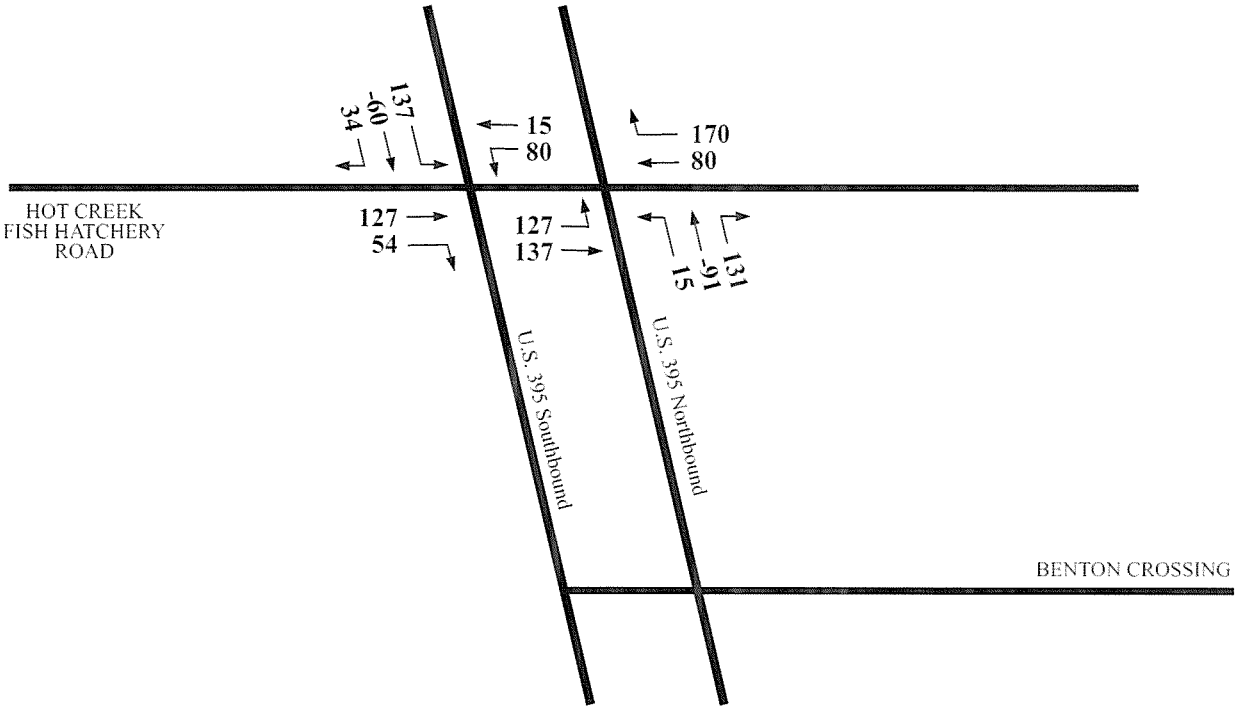
LEGEND
← 5 - P.M. Peak Hour Trip Assignment

11/30/00(TML030)

Figure 5

LSA Schematic - Not to Scale

Sierra Business Park Trip Assignment



LEGEND

← 5 - P.M. Peak Hour Trip Assignment

Negative volumes represent diverted trips.

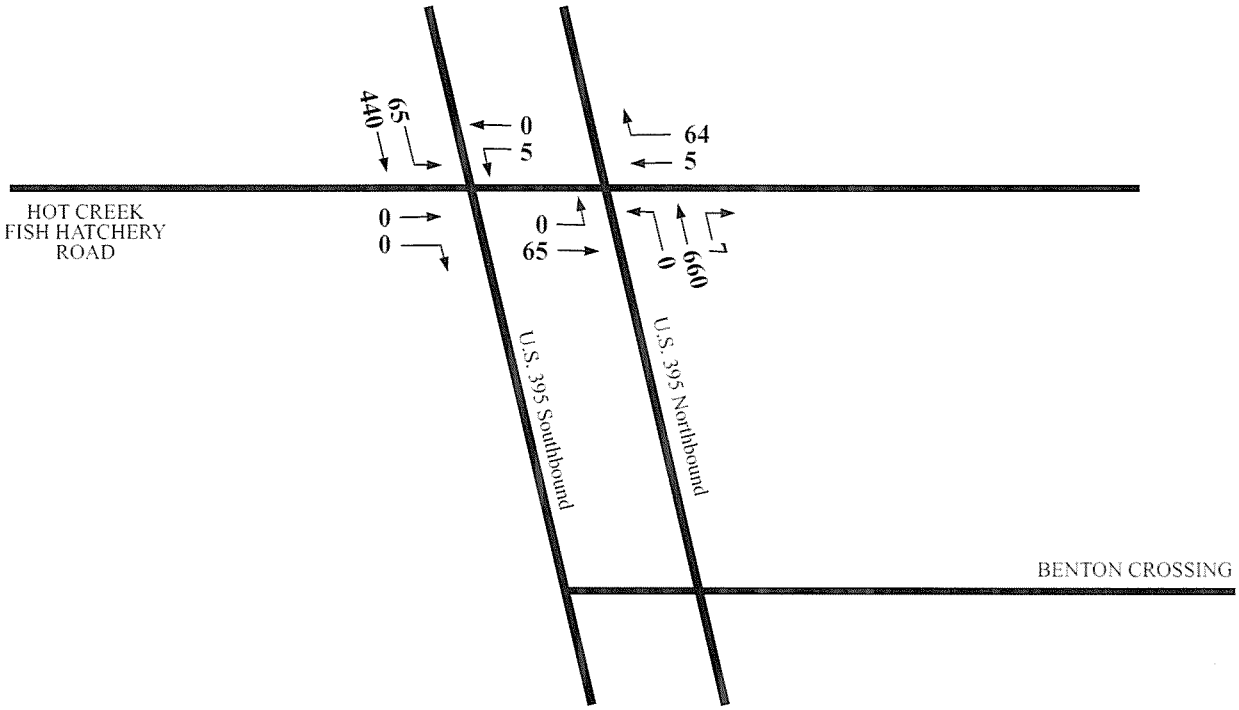
01/31/08(TML030)

Figure 6

N

LSA Schematic - Not to Scale

Cumulative Projects Trip Assignment



LEGEND
← **5** - P.M. Peak Hour Lane Volume

01/31/08(TML030)

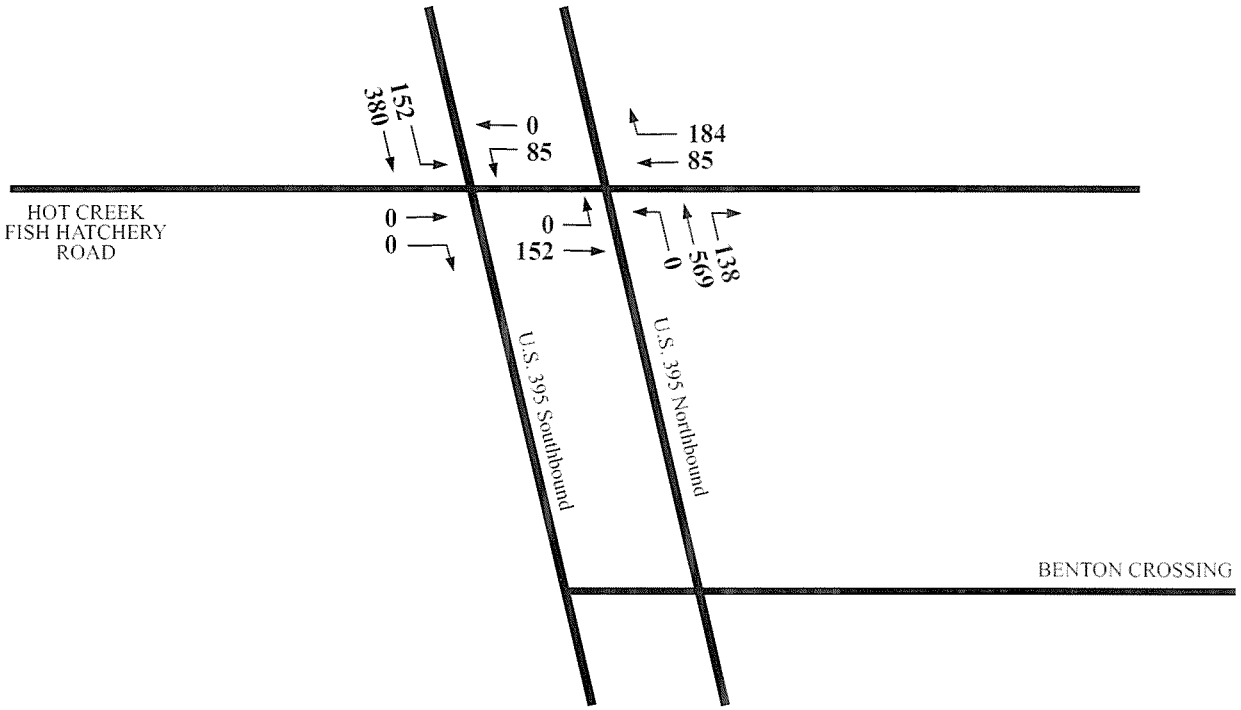
Figure 7

N

LSA

Schematic - Not to Scale

Existing + Airport P.M. Peak Hour Traffic Volumes



LEGEND
← 5 - P.M. Peak Hour Lane Volume

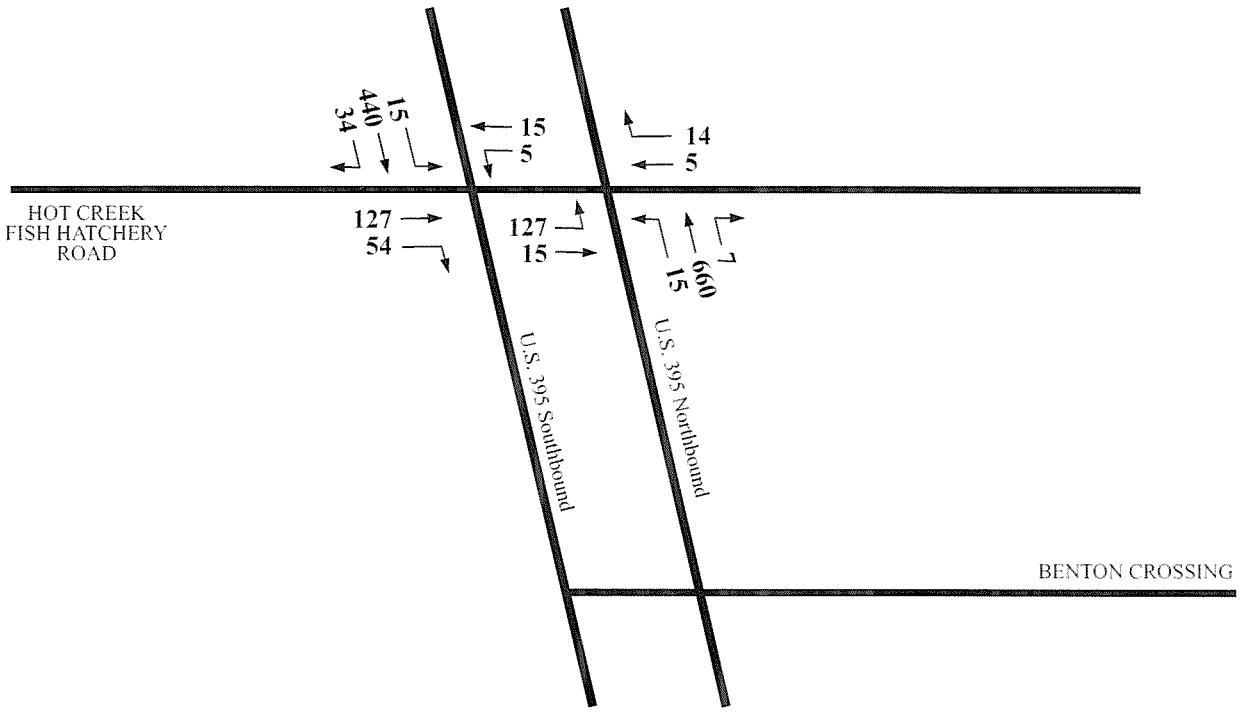
01/31/08(TML030)

Figure 8

LSA

Schematic - Not to Scale

Existing + Airport + Hot Creek
P.M. Peak Hour Traffic Volumes



LEGEND
← 5 - P.M. Peak Hour Lane Volume

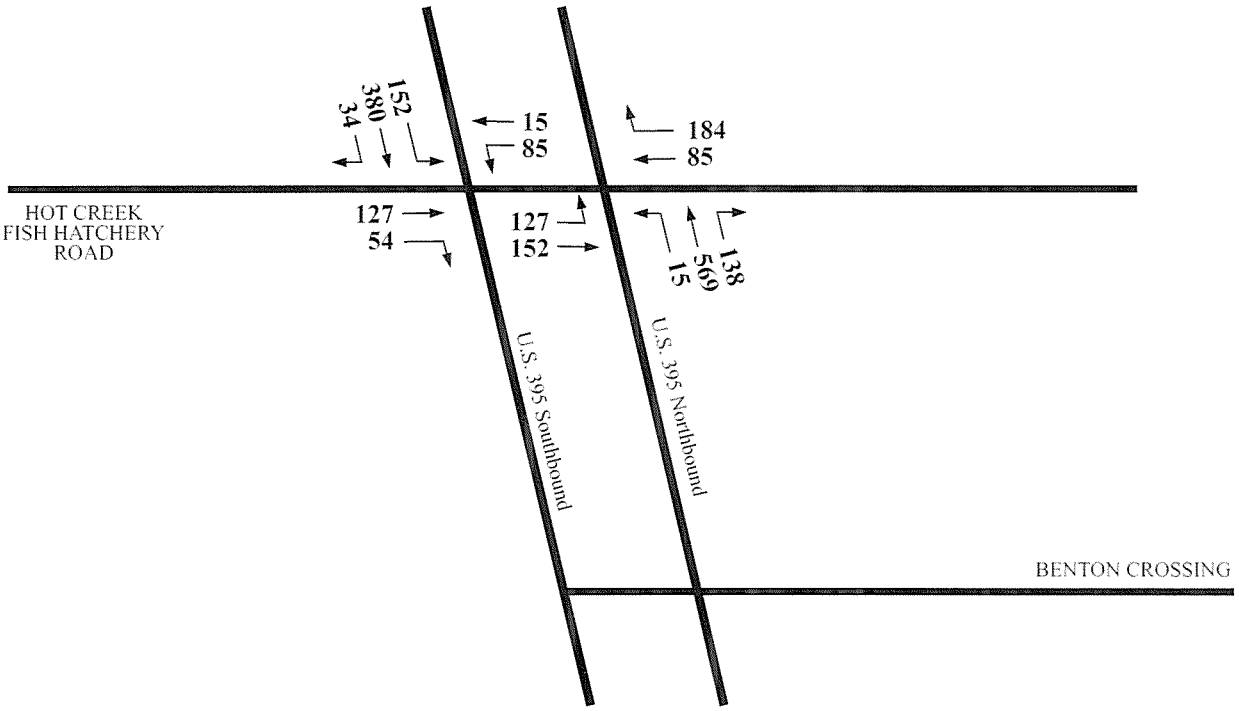
1/31/08(TML030)

Figure 9

LSA

Schematic - Not to Scale

Existing + Industrial Park
P.M. Peak Hour Traffic Volumes



LEGEND
← 5 - P.M. Peak Hour Lane Volume

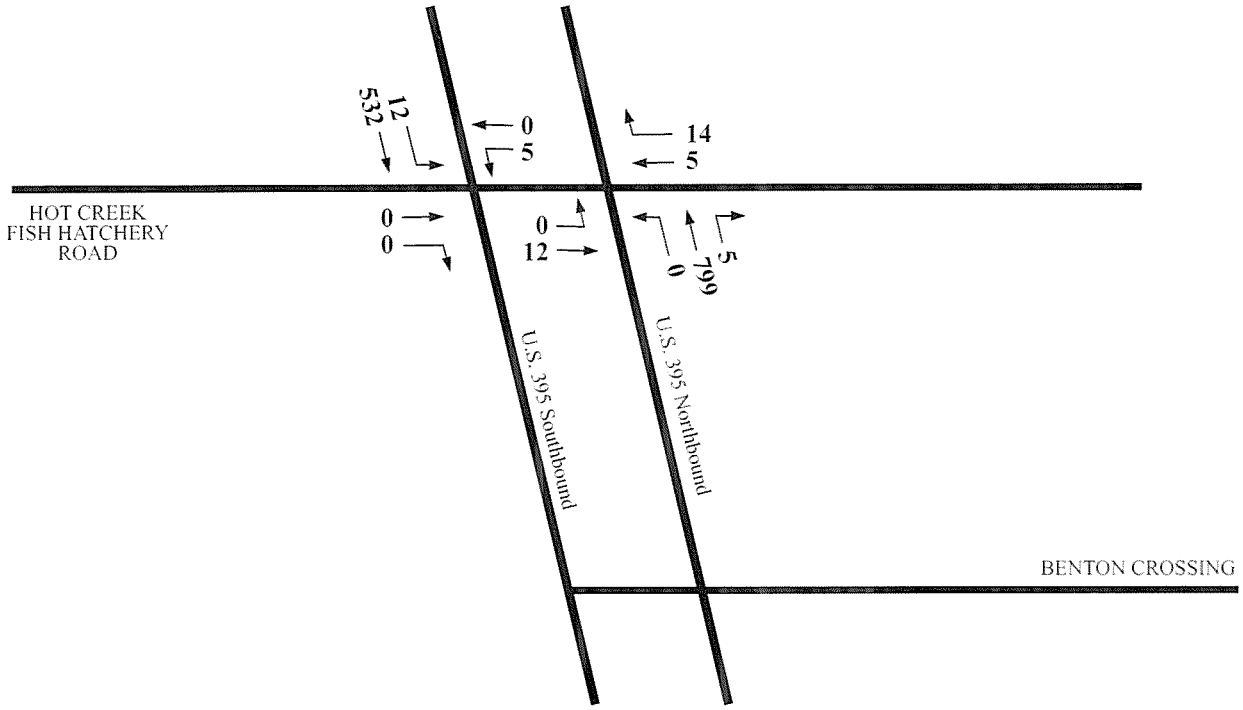
1/31/08(TML030)

Figure 10

LSA

Schematic - Not to Scale

Existing + Airport + Hot Creek + Industrial Park
P.M. Peak Hour Traffic Volumes



LEGEND

← 5 - P.M. Peak Hour Lane Volume

2/4/08(TML030)

Figure 11

LSA

Schematic - Not to Scale

Year 2025 Baseline P.M. Peak Hour Traffic Volumes for Typical Winter Conditions

Table C - Year 2025 Baseline and Year 2025 Plus Project Intersection Level of Service Summary

Scenario	US-395/Hot Creek Road[1]						
	Intersection Delay/LOS			NB/SB Queue Lengths		EB/WB Queue Lengths	
	Max Delay[2]	Approach	LOS	Max Queue[2]	Movement[3]	Max Queue[2]	Movement[3]
WITH EXISTING CIRCULATION SYSTEM							
Year 2025 Baseline Conditions4	12.5 sec.	westbound	B	0.04 veh.	SB-L	0.12 veh.	WB-LTR
2025 + Airport	12.2 sec.	westbound	B	0.26 veh.	SB-L	0.41 veh.	WB-LTR
2025 + Airport + Hot Creek Resort	24.8 sec.	westbound	C	0.70 veh.	SB-L	4.28 veh.	WB-LTR
2025 + Sierra Business Park	17.6 sec.	eastbound	C	0.06 veh.	NB-L	1.88 veh.	EB-LTR
2025 + Hot Creek Resort + Airport + Sierra Busines	***41.2 sec.***	***eastbound***	***E***	0.70 veh.	SB-L	5.07 veh.	EB-LTR
- with Mitigation	***33.5 sec.***	***eastbound***	***D***	0.70 veh.	SB-L	3.82 veh.	EB-L

Notes:

[1] Due to the current intersection configuration, the northbound and southbound approaches on US-395 are separate intersections. However, HCS 2000 software allows for analysis of single intersection with a "two-stage" gap acceptance with 3 vehicles stored in median.

[2] Intersections are analyzed through the Highway Capacity Manual (HCM) 2000 Operations Analysis. Delay is expressed in seconds of average delay per vehicle. LOS = Level of Service. Vehicle queues are expressed in numbers of vehicles.

[3] SB-L movement consists of vehicles travelling south on US-395 turning left at Hot Creek Road destined to Airport, Hot Creek Resort and/or hot springs. EB- and WB-LTR movements consists of vehicles on Hot Creek Fish Hatchery Road destined towards its intersection with US-395.

[4] Per Caltrans, District 9, a 1.0% per year growth rate compounded annually was used to determine the 2025 baseline volumes on US-395. This rate constitutes a growth of 21.0% from 2006 to 2025.

Year 2025 + Project Levels of Service

The 2025 baseline traffic volumes at the US-395/Hot Creek Road intersection (northbound and southbound) were added to the project trip assignments discussed previously, and intersection levels of service were determined for the 2025 + airport expansion; 2025 + airport expansion + Hot Creek resort; 2025 + Sierra Business Park; and 2025 + airport expansion + Hot Creek resort + Sierra Business Park scenarios. Figures 12, 13, 14, and 15 illustrate the 2025 plus project(s) scenarios p.m. peak hour traffic volumes at the US-395/Hot Creek Road intersection. Appendix C contains the level of service worksheets.

Based on the LOS analysis results provided in Table C, most of the analysis scenarios are forecast to operate with satisfactory levels of service (LOS D or better) in the cumulative conditions except for the 2025 + airport expansion + Hot Creek resort) + Sierra Business Park scenario. This scenario is forecast to operate at LOS E (36.3 seconds) due to the volume and delay of eastbound left turning vehicles from the Sierra Business Park, and eastbound through traffic volumes destined to the airport and the Hot Creek resort. Mitigation measures are required for this scenario to bring the US-395/Hot Creek Road intersection to LOS D or better.

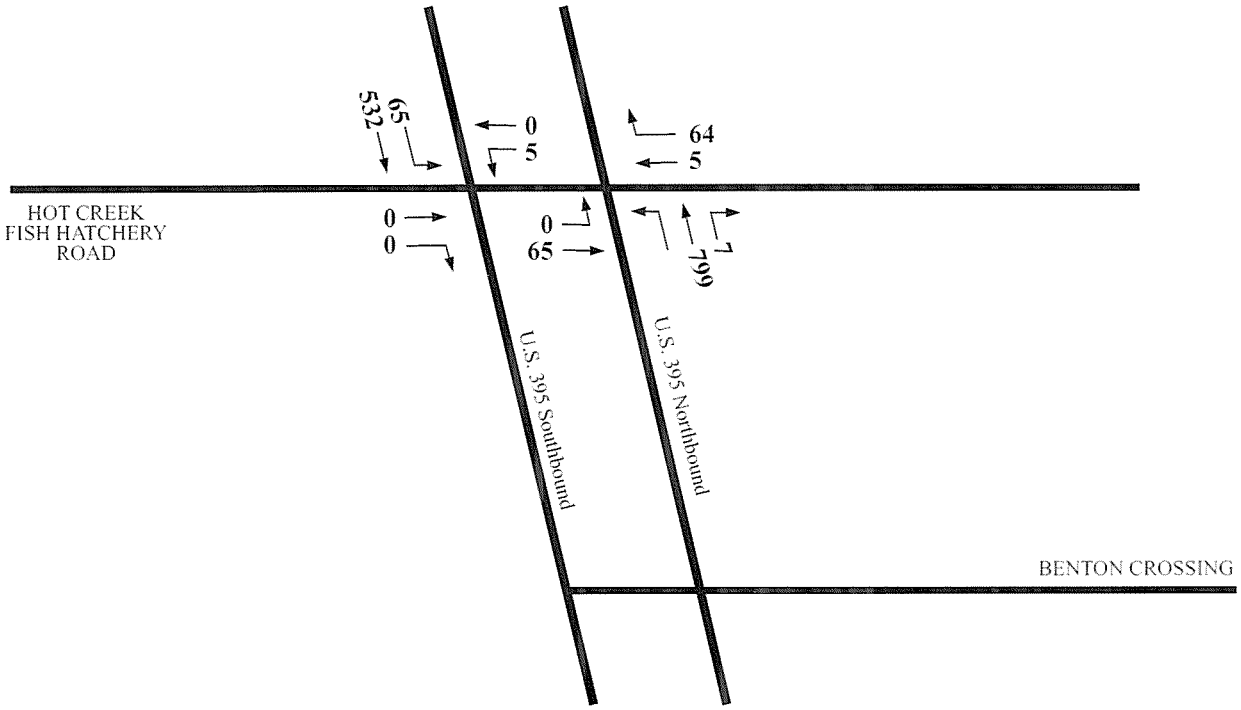
CONCLUSIONS AND MITIGATION MEASURES

In summary, in the short range (existing conditions) minor mitigation measures are committed for the intersection of US-395/Hot Creek Road as described in the Executive Summary. In the long range (2025) additional mitigation measures are necessary when all three projects are developed.

Mitigation in the form of restriping the center median lanes to provide separate eastbound and westbound left and through lanes would be required to reduce the impacts and maintain LOS D or better conditions. The resultant LOS in the full project development scenario is shown on Tables A and C.

A minimum nose to nose width of 48 feet in the median is required to provide separate eastbound and westbound left and through lanes. A figure illustrating the median lanes is provided in Appendix E. The costs of the improvement (restriping the center median) should be spread to the contributing projects on a proportionate basis in relation to their respective peak hour trip generation. With the mitigation measure constructed, long-term levels of service for the baseline + airport expansion + Hot Creek Aviation + Sierra Business Park scenarios would operate with satisfactory levels of service (LOS D or better).

The specific phasing and absorption of each cumulative project cannot be reasonably projected at this time and, therefore, specific timing for the implementation of the alternative mitigation measures cannot be specified. However, to provide assurance that adequate LOS is maintained for capacity and safety benefits, an annual monitoring program is recommended.



LEGEND
← **5** - P.M. Peak Hour Lane Volume

2/4/08(TML030)

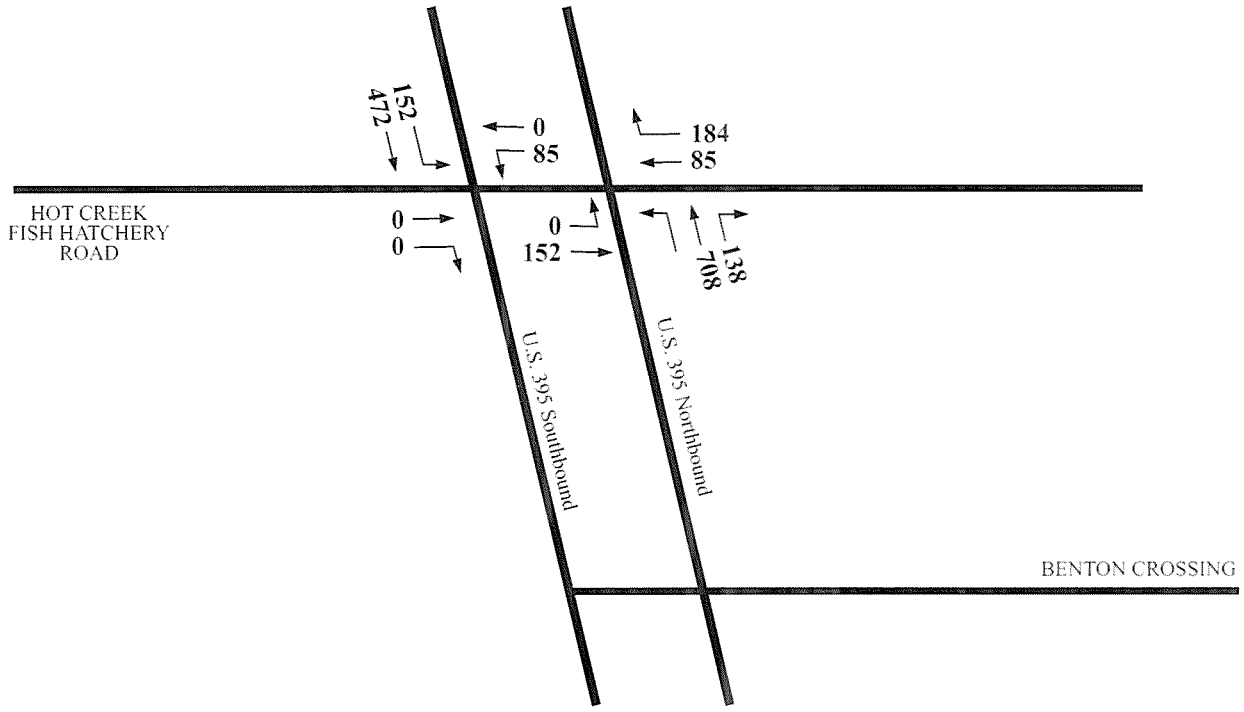
Figure 12

N

LSA

Schematic - Not to Scale

Year 2025 + Airport P.M. Peak Hour Traffic Volumes



LEGEND
← 5 - P.M. Peak Hour Lane Volume

2/4/08(TML030)

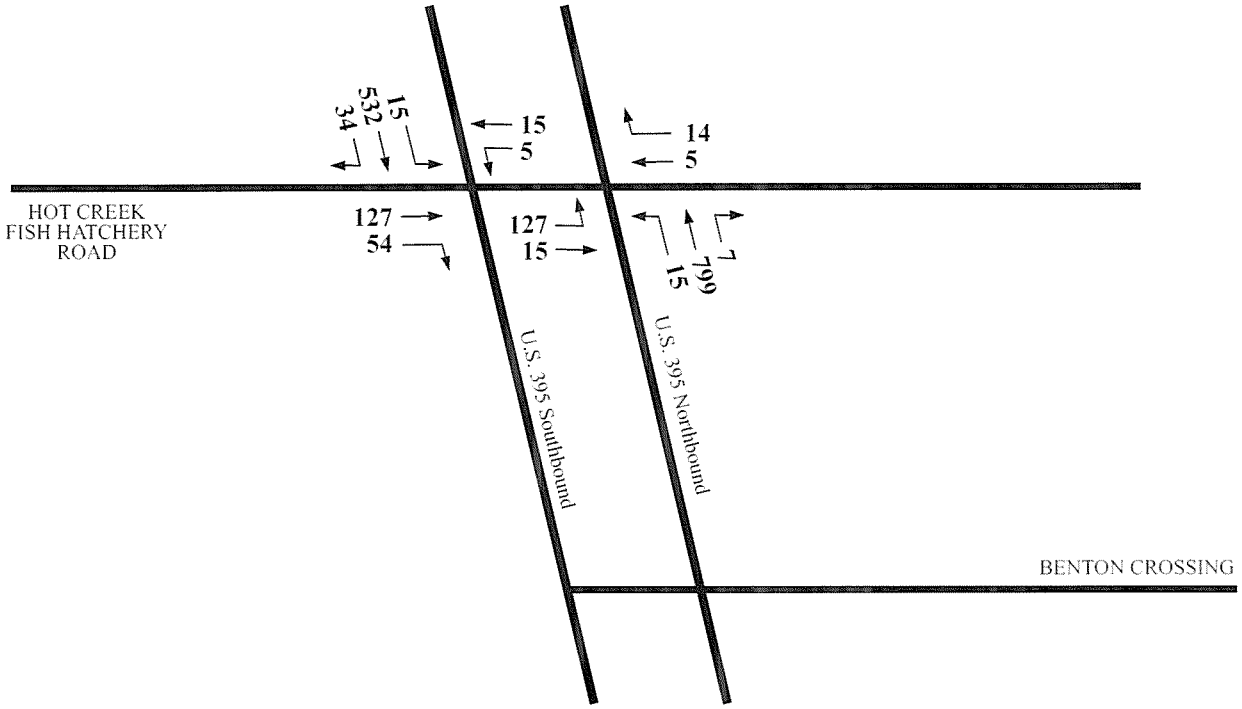
Figure 13

N

LSA

Schematic - Not to Scale

Year 2025 + Airport + Hot Creek
P.M. Peak Hour Traffic Volumes



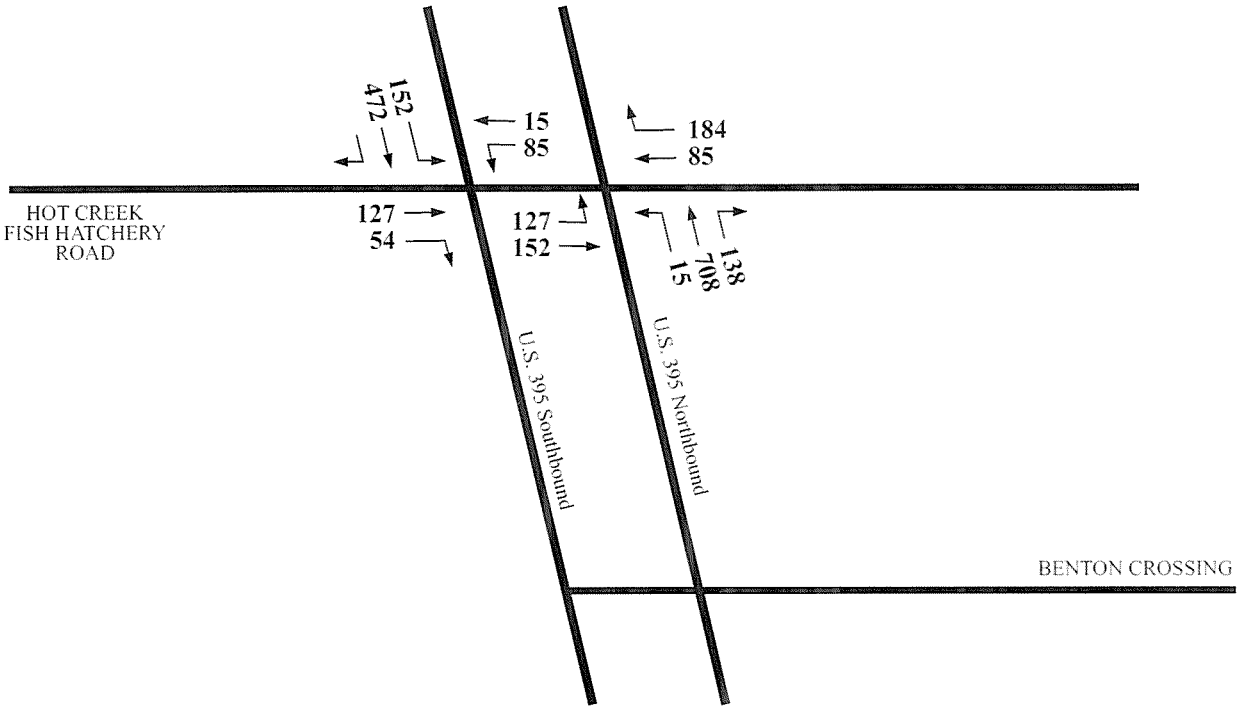
LEGEND
← 5 - P.M. Peak Hour Lane Volume

2/4/08(TML030)

Figure 14

LSA Schematic - Not to Scale

Year 2025 + Industrial Park
P.M. Peak Hour Traffic Volumes



LEGEND
← 5 - P.M. Peak Hour Lane Volume

02/4/08(TML030)

Figure 15

Z

LSA

Schematic - Not to Scale

Year 2025 + Airport + Hot Creek + Industrial Park
P.M. Peak Hour Traffic Volumes

The annual monitoring reports would begin at the onset of commercial airport service and report the traffic counts and LOS at the Hot Creek Fish Hatchery Road intersection with US-395. The objective of the monitoring reports is to implement mitigation measures prior to reaching LOS E. To achieve this, Caltrans project development activities for either mitigation measure would be initiated when LOS D is reached.

It is further recommended that both summer and winter conditions be reported and that the monitoring program objective be aimed at collecting peak and/or design level traffic data.

If the Sierra Business Park is not approved or otherwise is not developed, no mitigation is necessary.

APPENDIX A

SECTIONS OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

As Lead Federal Agency pursuant to the National Environmental Policy Act of 1969

DRAFT ENVIRONMENTAL IMPACT STATEMENT

REQUEST FOR OPERATIONS SPECIFICATIONS AMENDMENT BY HORIZON AIR TO PROVIDE SCHEDULED AIR SERVICE TO MAMMOTH YOSEMITE AIRPORT
Mammoth Lakes, Mono County, California

As indicated in the Federal Aviation Administration's (FAA) Notice of Intent published in the Federal Register on July 24, 2006, 71 FR 41859, the FAA, as the lead agency, prepared this DEIS to disclose the potential environmental impacts of FAA approval of Horizon Air's request for amendment of their Operations Specifications to accommodate proposed scheduled commercial air service into Mammoth Yosemite Airport (MMH). Horizon Air's proposed service includes two daily flights beginning in the winter ski season of 2008/2009, increasing to no more than eight daily flights in 2011. The proposed scheduled commercial air service would be provided using a Bombardier DHC 8-402 (Q400 Dash 8) aircraft. No changes to the existing MMH airport runways or facility locations are proposed.

The establishment of scheduled commercial air service into MMH also necessitates a change in the airport's Operating Certificate from Class IV to Class I, pursuant to Title 14, Code of Federal Regulations, Part 139. The proposed scheduled commercial air service would utilize the existing airport runway and facilities.

The Proposed Action and the No-Action Alternative have been assessed in detail and the potential impacts are disclosed within this document. The FAA presents this EIS for agency and public review pursuant to the following public law requirements: Section 102(2)(c) of the National Environmental Policy Act of 1969, Section 4(f) of the Department of Transportation Act, and special purpose laws that apply to the Proposed Action.

Volume I: Documentation

November 2007

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1.0 INTRODUCTION

1.1 PROPOSED AIR SERVICE AND FAA RESPONSIBILITY

This document is the Draft Environmental Impact Statement (EIS) by the Federal Aviation Administration (FAA) prepared to analyze potential environmental impacts of the proposed operations specifications amendment approval related to the scheduled commercial air service into Mammoth Yosemite Airport (MMH) by Horizon Air.

1.1.1 The Proposed Air Service at MMH

Horizon Air initially proposes to conduct two-daily flights from Los Angeles International Airport (LAX) to MMH using their Bombardier DHC 8-402 (Q400 Dash 8) aircraft. The Q400 Dash 8 is part of the Bombardier Dash 8 family of turbo-propeller driven passenger aircraft. A depiction of a Horizon Air Q400 aircraft is presented in **Figure 1.1-1**. The Q400 Dash 8 can seat up to 78 people. Horizon Air has provided the FAA with a letter of intent to initiate winter ski season passenger service into MMH. **Appendix A** includes a copy of the Horizon Air letter of intent. The winter ski season service would be subsidized by the Mammoth Mountain Ski Resort. The projected summer service would not be subsidized.

Horizon Air is proposing to begin scheduled regional air carrier service to MMH beginning in December 2008 with two flights per day from LAX during the winter ski season (approximately December to April). The Town of Mammoth Lakes has prepared and submitted to FAA a forecast of future commercial aviation activity at MMH. The FAA has reviewed and approved this forecast, which is discussed further in **Section 1.3.** Winter ski service is projected to increase to a maximum of eight flights per day by the year 2011. The aviation activity forecast for MMH also considers the addition of two flights per day during the summer months beginning in 2012.

1.1.2 FAA's Responsibilities

Certification Responsibilities

Title 14 Code of Federal Regulations (CFR) Part 119 governs the operations of all U.S. air carriers and commercial operators in air commerce. A person wishing to provide air carrier services must obtain an Air Carrier Certificate. Air Carrier Certificates include operations specifications that establish the authorizations, limitations, and certain procedures under which each kind of operation, if applicable, is to be conducted; and certain other procedures under which each class and size of aircraft is to be operated. Proposed amendments to an air carrier's operations specifications require approval by the FAA. The Administrator of the FAA may amend any operations specifications issued under 14 CFR Part 119 if:

- The Administrator determines that safety in air commerce and the public interest require the amendment; or
- The certificate holder applies for the amendment, and the Administrator determines that safety in air commerce and the public interest allows the amendment.

The tourist season in Inyo County stretches from May through September when hotel/motel occupancy rates countywide can exceed 90 percent. Tourism is estimated to represent 25 percent of the local economy (Interview with the Bishop Area Chamber of Commerce and Visitors Bureau, May 21, 2004). The City of Bishop's economy has been steady over the past several years, relying primarily on the summer tourist recreation trade and the winter tourism spillover from Mammoth Lakes.

4.3.2.2 Surface Transportation

Surface transportation facilities/services within the STSA (see **Figure 4-2**) have been identified based on a review of available mapping, aerial photographs, data from the California Department of Transportation (CALTRANS), and a review of the General Plans from the Town of Mammoth Lakes, Mono County, Inyo County, and the City of Bishop. The following section provides a summary of surface transportation facilities/services within the STSA.

STSA Roadway Facilities - Regional travelers to and through the STSA use US 395, which is the major transportation corridor into the Town of Mammoth Lakes. US 395 runs adjacent and parallel to Runway 9/27 at MMH and provides access to the airport. Links to US 395 are from SR 167 north of Lee Vining; SR 120 through the Yosemite National Park Tioga Pass on the west and from Benton on the east; and US 6 when poor weather conditions affect the efficient movement of residents and visitors on US 395. With the exception of a roadway segment in the City of Bishop, there are no capacity-related issues affecting the volume or flow of vehicular traffic on US 395 within the STSA.

In the summertime, traffic concerns occur on SR 120 due to the east/west access into California's Central Valley through Yosemite National Park. Existing capacity problems are also experienced on SR 203 in the Town of Mammoth Lakes and on SR 158 in June Lake Village within the STSA. During the winter months, east/west travel is severely restricted due to heavy snows in the area. SR 120 at Tioga Pass, the northern portion of SR 158, the extreme western portion SR 203, and the western portion SR 120 to Benton are all closed, while the southern portion of SR 158 is typically closed during heavy snowfall events. Mammoth Scenic Loop Road provides a secondary access point to the Town of Mammoth Lakes from US 395, approximately 6 miles to the north of SR 203. Recreational vehicles account for about 3.9 percent of the traffic on US 395 in the summer and about 1.0 percent of the traffic in the winter (Mono RTP, 2001).

Existing traffic demand within the Town of Mammoth Lakes is a function of resident and visitor activity. Combining resident and weekend winter visitor activities produces the worst-case scenario for congestion within the Town during the winter months. During this period the highest traffic volumes within the Town are experienced on SR 203, between Old Mammoth Road and Minaret Road with 1,700 vehicles per hour on a typical winter Saturday. The second busiest road segment is Old Mammoth Road, between Chateau Road and SR 203, with 1,250 vehicles per hour on a typical winter Saturday; while the third busiest road within the Town is Minaret Road, north of SR 203 with 1,090 vehicles per hour on a typical winter Saturday. All other roads within the Town experience fewer than 1,000 vehicles per hour on a typical winter Saturday (Mammoth Lakes, 2005).

Inyo County roads are not as restricted during the winter months as are those in Mono County. Within the STSA, two routes allow westbound travel into Nevada, while eastbound travel ends at the base of the Sierra Nevada Mountains. Winter snow events do not typically cause travel restrictions on the roads within the county due to lower elevations

Alteration of Surface Traffic Patterns

Implementation of the Proposed Action would not require the closure or relocation of any existing roadways within the STSA. The primary surface roadway providing access to and egress from MMH is U.S. 395. The level of service along U.S. 395 in the vicinity of MMH is rated "A" (excellent operations) by CALTRANS with no capacity-related issues (see **Appendix E-4, Table E4.1**). Based on the MMH aviation forecast (see **Table 1.3-1**), implementation of the Proposed Action would result in approximately 160 daily enplanements while the proposed service is in operation (approximately 10,000 annually), and approximately 640 daily enplanements (approximately 67,000 annually) in 2015. Implementation of regional air carrier service into MMH would also necessitate the 8 to 10 additional airport employees. The projected increase in passengers and employees accessing the airport in 2009 and 2015 is not expected to significantly degrade the existing level of service along U.S. 395 or other local roads. Town of Mammoth Lakes transportation officials anticipate that airline passengers will be transported to their final destinations by a mixture of hotel vans, rental cars, taxicabs, or other private transportation (Town of Mammoth Lakes, 2007).

Disruption of Orderly Planned Development

The Proposed Action would involve no new construction or associated development actions at MMH. The Proposed Action would not adversely impact characteristics of non-airport development within the SSA.

Environmental Justice Considerations

The Proposed Action would have no significant impacts. There would be no impacts to minority or low-income populations residing in areas adjacent to or in the vicinity of the airport. No residential properties, minority or Hispanic businesses, or tribal nation properties would be acquired as a result of the Proposed Action. The year 2009 and 2015 CNEL 65 dBA noise contour for the Proposed Action are located primarily on airport property and any off-airport land is compatible in terms of FAA land use compatibility guidelines. There would be no disproportionately high and adverse direct impacts to minorities, ethnic groups, tribal nations, or low-income households.

Environmental Health and Safety Risks to Children

The Proposed Action would not result in the acquisition or relocation of any schools or child care centers. The Proposed Action is not anticipated to increase environmental health and safety risks or exposures to children in the surrounding community. There would be no disproportionate health and safety risks to children resulting from the Proposed Action.

Appendix E-4

Traffic Information

This appendix contains traffic information for U.S. 395 within Mono and Inyo counties.

Table	Title
E-4.1	U.S. 395 Traffic Conditions
E-4.2	Level of Service Description

TABLE E-4.1
U.S. 395 TRAFFIC CONDITIONS

County	Segment (Post Mile)	1997		Percent Trucks/ Percent Bus
		LOS	AADT	
Mono	0 - 7.5	A	5,200	6 / 6
Mono	7.5 - 25.8	A	5,500	6 / 6
Mono	25.8 - 44.2	A	4,100	12 / 6
Mono	44.2 - 51.3	A	4,200	13 / 6
Inyo	118.8 - 129.5	A	6,300	4 / 8
Inyo	115.2 - 118.8	E	15,700	6 / 8
Inyo	100.6 - 115.2	A	6,800	10 / 8

Source: CALTRANS, 2000.

1 See Table E-3.2 for level of service (LOS) information.

TABLE E-4.2
LEVEL OF SERVICE DESCRIPTION

Level of Service	Description	Volume to Capacity
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	0-0.60
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	0.61-0.70
C	Good operation. Occasionally, drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	0.71-0.80
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues. This level is typically associated with design practice for peak periods.	0.81-0.90
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	0.81-0.90
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	0.91-1.00

Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, Washington, D.C., 1985 Interim Materials on Highway Capacity, NCHRP Circular 212, 1982.

APPENDIX B

HOT CREEK ROAD COUNT DATA

Table A: Summary of Traffic Volume Data - (1/15/2008 - 1/20/2008)					
Location	Day	Date	Average Daily Traffic		
			EB	WB	Total
Station 1 - Hot Creek Hatchery Road	Tuesday	1/15/2008	132	131	263
	Wednesday	1/16/2008	129	132	261
	Thursday	1/17/2008	143	140	283
	Friday	1/18/2008	192	168	360
	Saturday	1/19/2008	183	178	361
	Sunday	1/20/2008	160	180	340
	ADT		157	155	311

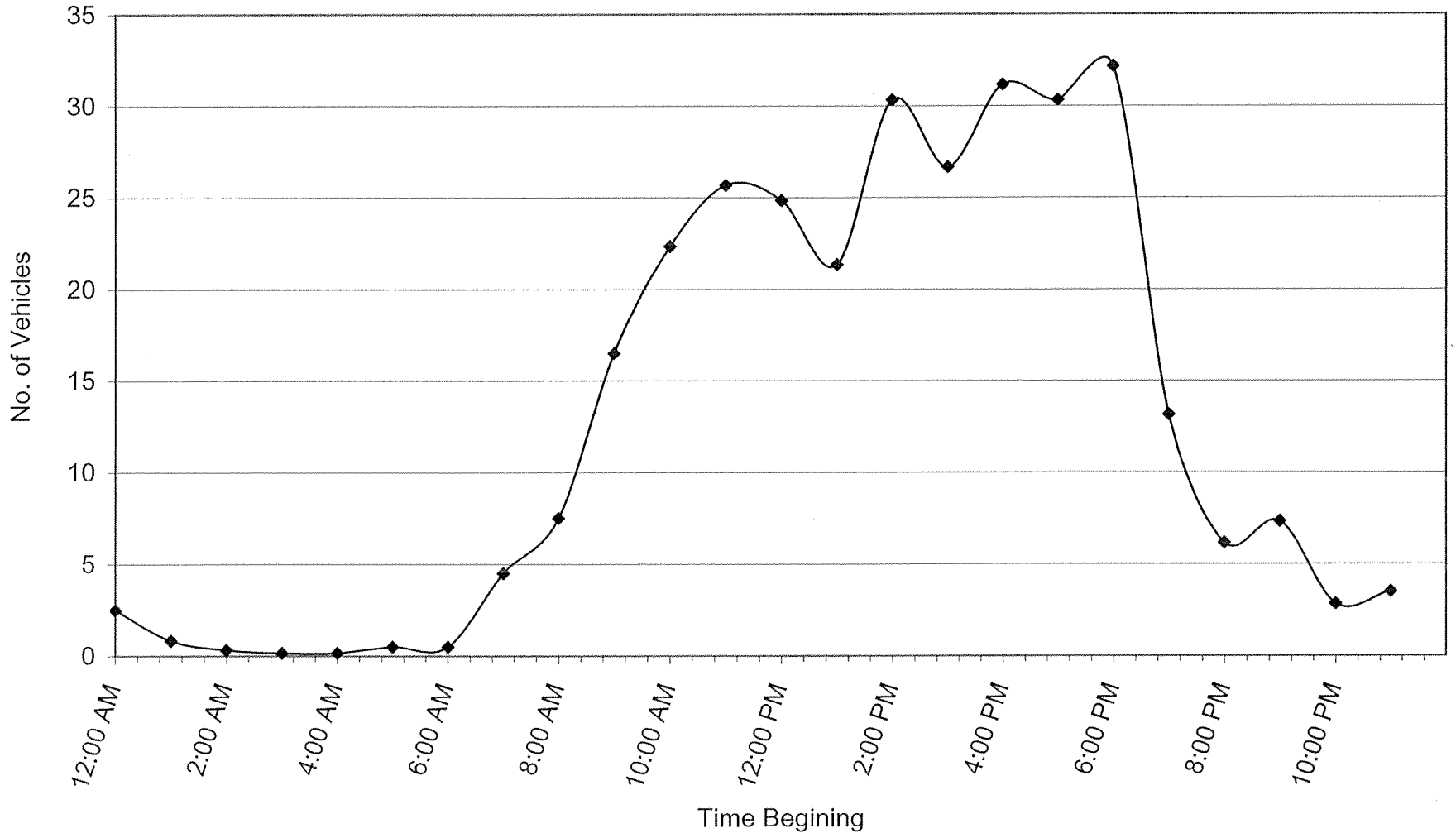
Table B: Summary of Traffic Volumes - Peak D						
Location	ADT			Peak D		
				EB		W
	EB	WB	Total	Volume	Day	Volume
Station 1 - Hot Creek Hatchery Road	157	155	311	192	1/18/2008	180

)ay & Hour ADT - (1/15/2008 - 1/20/2008)								
ay ADT			Peak Hour ADT					
/B	Total		EB			WB		
Day	Volume	Day	Volume	Day	Hour	Volume	Day	Hour
1/20/2008	361	1/19/2008	27	1/19/2008	6:00 PM	28	1/20/2008	2:00 PM

Table C: Summary of Combined Speed Data - (1/15/2008 - 1/20/2008)					
Location	Date	Day of Week	Avg Speed	85th %	Max Speed
Station 1 - Hot Creek Hatchery Road	1/15/2008	Tuesday	44.9	57.5	72.5
	1/16/2008	Wednesday	44.7	52.5	72.5
	1/17/2008	Thursday	43.4	52.5	72.5
	1/18/2008	Friday	45.4	57.5	72.5
	1/19/2008	Saturday	44.4	57.5	72.5
	1/20/2008	Sunday	45.0	57.5	72.5
	Average		44.6	55.8	72.5

Table D: MMSA Skier Visitor Data (1/15/2008 - 1/20/2008)		
Day of Week	Date	Number of Visitors
Tuesday	1/15/2008	4658
Wednesday	1/16/2008	4181
Thursday	1/17/2008	3817
Friday	1/18/2008	6452
Saturday	1/19/2008	19122
Sunday	1/20/2008	14637

Figure 1 - Average Hourly Peak Traffic Volumes
Station 01 - Hot Creek Hatchery Rd.



Combined EB and WB

	Time Begining	EB	WB	Total	Hourly Average
1/15/2008	12:00 AM	1	2	3	3
1/15/2008	1:00 AM	1	0	1	1
1/15/2008	2:00 AM	0	0	0	0
1/15/2008	3:00 AM	0	0	0	0
1/15/2008	4:00 AM	0	0	0	0
1/15/2008	5:00 AM	0	0	0	1
1/15/2008	6:00 AM	0	0	0	1
1/15/2008	7:00 AM	2	4	6	5
1/15/2008	8:00 AM	8	6	14	8
1/15/2008	9:00 AM	7	9	16	17
1/15/2008	10:00 AM	16	10	26	22
1/15/2008	11:00 AM	6	10	16	26
1/15/2008	12:00 PM	10	6	16	25
1/15/2008	1:00 PM	2	4	6	21
1/15/2008	2:00 PM	8	17	25	30
1/15/2008	3:00 PM	8	8	16	27
1/15/2008	4:00 PM	18	15	33	31
1/15/2008	5:00 PM	18	16	34	30
1/15/2008	6:00 PM	9	11	20	32
1/15/2008	7:00 PM	10	5	15	13
1/15/2008	8:00 PM	6	2	8	6
1/15/2008	9:00 PM	1	2	3	7
1/15/2008	10:00 PM	0	3	3	3
1/15/2008	11:00 PM	1	1	2	4
1/16/2008	12:00 AM	3	3	6	
1/16/2008	01:00 AM	1	0	1	
1/16/2008	02:00 AM	0	0	0	
1/16/2008	03:00 AM	0	0	0	
1/16/2008	04:00 AM	0	0	0	
1/16/2008	05:00 AM	1	0	1	
1/16/2008	06:00 AM	1	0	1	
1/16/2008	07:00 AM	4	3	7	
1/16/2008	08:00 AM	2	7	9	
1/16/2008	09:00 AM	8	9	17	
1/16/2008	10:00 AM	8	7	15	
1/16/2008	11:00 AM	7	8	15	
1/16/2008	12:00 PM	10	7	17	
1/16/2008	01:00 PM	14	15	29	
1/16/2008	02:00 PM	12	16	28	
1/16/2008	03:00 PM	13	17	30	
1/16/2008	04:00 PM	12	11	23	
1/16/2008	05:00 PM	14	17	31	
1/16/2008	06:00 PM	10	5	15	
1/16/2008	07:00 PM	5	2	7	
1/16/2008	08:00 PM	1	0	1	
1/16/2008	09:00 PM	0	2	2	
1/16/2008	10:00 PM	2	2	4	
1/16/2008	11:00 PM	1	1	2	
1/17/2008	12:00 AM	1	0	1	

	EB	WB	TOTAL
1/17/2008 01:00 AM	0	0	0
1/17/2008 02:00 AM	0	0	0
1/17/2008 03:00 AM	0	0	0
1/17/2008 04:00 AM	0	0	0
1/17/2008 05:00 AM	1	1	2
1/17/2008 06:00 AM	1	1	2
1/17/2008 07:00 AM	2	3	5
1/17/2008 08:00 AM	5	5	10
1/17/2008 09:00 AM	10	12	22
1/17/2008 10:00 AM	6	12	18
1/17/2008 11:00 AM	19	14	33
1/17/2008 12:00 PM	11	8	19
1/17/2008 01:00 PM	6	8	14
1/17/2008 02:00 PM	15	12	27
1/17/2008 03:00 PM	6	10	16
1/17/2008 04:00 PM	15	13	28
1/17/2008 05:00 PM	10	9	19
1/17/2008 06:00 PM	18	14	32
1/17/2008 07:00 PM	8	5	13
1/17/2008 08:00 PM	5	0	5
1/17/2008 09:00 PM	1	5	6
1/17/2008 10:00 PM	1	4	5
1/17/2008 11:00 PM	2	4	6
1/18/2008 12:00 AM	2	1	3
1/18/2008 01:00 AM	0	0	0
1/18/2008 02:00 AM	1	0	1
1/18/2008 03:00 AM	0	0	0
1/18/2008 04:00 AM	0	1	1
1/18/2008 05:00 AM	0	0	0
1/18/2008 06:00 AM	0	0	0
1/18/2008 07:00 AM	1	1	2
1/18/2008 08:00 AM	4	4	8
1/18/2008 09:00 AM	9	7	16
1/18/2008 10:00 AM	12	17	29
1/18/2008 11:00 AM	15	11	26
1/18/2008 12:00 PM	17	19	36
1/18/2008 01:00 PM	12	12	24
1/18/2008 02:00 PM	7	11	18
1/18/2008 03:00 PM	10	15	25
1/18/2008 04:00 PM	22	19	41
1/18/2008 05:00 PM	22	10	32
1/18/2008 06:00 PM	24	19	43
1/18/2008 07:00 PM	14	7	21
1/18/2008 08:00 PM	6	9	15
1/18/2008 09:00 PM	12	1	13
1/18/2008 10:00 PM	0	2	2
1/18/2008 11:00 PM	2	2	4
1/19/2008 12:00 AM	0	0	0
1/19/2008 01:00 AM	0	1	1
1/19/2008 02:00 AM	0	1	1
1/19/2008 03:00 AM	1	0	1
1/19/2008 04:00 AM	0	0	0

1/19/2008	05:00 AM	0	0	0
1/19/2008	06:00 AM	0	0	0
1/19/2008	07:00 AM	2	2	4
1/19/2008	08:00 AM	2	1	3
1/19/2008	09:00 AM	6	13	19
1/19/2008	10:00 AM	13	12	25
1/19/2008	11:00 AM	11	17	28
1/19/2008	12:00 PM	15	18	33
1/19/2008	01:00 PM	15	11	26
1/19/2008	02:00 PM	22	16	38
1/19/2008	03:00 PM	21	17	38
1/19/2008	04:00 PM	15	21	36
1/19/2008	05:00 PM	19	22	41
1/19/2008	06:00 PM	27	15	42
1/19/2008	07:00 PM	7	4	11
1/19/2008	08:00 PM	4	1	5
1/19/2008	09:00 PM	2	4	6
1/19/2008	10:00 PM	0	0	0
1/19/2008	11:00 PM	1	2	3
1/20/2008	12:00 AM	1	1	2
1/20/2008	01:00 AM	0	2	2
1/20/2008	02:00 AM	0	0	0
1/20/2008	03:00 AM	0	0	0
1/20/2008	04:00 AM	0	0	0
1/20/2008	05:00 AM	0	0	0
1/20/2008	06:00 AM	0	0	0
1/20/2008	07:00 AM	2	1	3
1/20/2008	08:00 AM	0	1	1
1/20/2008	09:00 AM	3	6	9
1/20/2008	10:00 AM	9	12	21
1/20/2008	11:00 AM	18	18	36
1/20/2008	12:00 PM	17	11	28
1/20/2008	01:00 PM	11	18	29
1/20/2008	02:00 PM	18	28	46
1/20/2008	03:00 PM	19	16	35
1/20/2008	04:00 PM	6	20	26
1/20/2008	05:00 PM	12	13	25
1/20/2008	06:00 PM	22	19	41
1/20/2008	07:00 PM	9	3	12
1/20/2008	08:00 PM	2	1	3
1/20/2008	09:00 PM	7	7	14
1/20/2008	10:00 PM	1	2	3
1/20/2008	11:00 PM	3	1	4

2.5	12:00 AM
0.833333	1:00 AM
0.333333	2:00 AM
0.166667	3:00 AM
0.166667	4:00 AM
0.5	5:00 AM
0.5	6:00 AM
4.5	7:00 AM
7.5	8:00 AM
16.5	9:00 AM
22.33333	10:00 AM
25.66667	11:00 AM
24.83333	12:00 PM
21.33333	1:00 PM
30.33333	2:00 PM
26.66667	3:00 PM
31.16667	4:00 PM
30.33333	5:00 PM
32.16667	6:00 PM
13.16667	7:00 PM
6.166667	8:00 PM
7.333333	9:00 PM
2.833333	10:00 PM
3.5	11:00 PM

Combined Speed Data

Date	Time	1-15	16-20	21-25	26-30	31-35	36-40	41-45
1/14/2008	01:00 PM	0	0	0	2	1	7	10
1/14/2008	02:00 PM	1	0	0	0	3	4	5
1/14/2008	03:00 PM	0	0	0	2	1	3	9
1/14/2008	04:00 PM	0	0	0	0	0	2	9
1/14/2008	05:00 PM	0	0	0	2	2	3	8
1/14/2008	06:00 PM	0	0	0	0	0	2	6
1/14/2008	07:00 PM	0	0	1	0	0	0	1
1/14/2008	08:00 PM	0	0	0	0	0	1	0
1/14/2008	09:00 PM	0	0	0	0	1	0	0
1/14/2008	10:00 PM	0	0	0	0	0	0	0
1/14/2008	11:00 PM	0	0	0	0	0	0	1
1/15/2008	12:00 AM	0	0	0	0	0	1	1
1/15/2008	01:00 AM	0	0	0	0	0	0	0
1/15/2008	02:00 AM	0	0	0	0	0	0	0
1/15/2008	03:00 AM	0	0	0	0	0	0	0
1/15/2008	04:00 AM	0	0	0	0	0	0	0
1/15/2008	05:00 AM	0	0	0	0	0	0	0
1/15/2008	06:00 AM	0	0	0	0	0	0	0
1/15/2008	07:00 AM	0	0	1	0	2	1	2
1/15/2008	08:00 AM	0	0	0	0	0	0	4
1/15/2008	09:00 AM	1	1	0	0	1	0	4
1/15/2008	10:00 AM	0	0	0	1	0	7	9
1/15/2008	11:00 AM	0	0	0	0	0	4	4
1/15/2008	12:00 PM	0	0	0	1	1	1	6
1/15/2008	01:00 PM	0	0	0	0	0	1	2
1/15/2008	02:00 PM	0	0	0	0	1	5	10
1/15/2008	03:00 PM	0	0	0	0	1	3	3
1/15/2008	04:00 PM	0	0	0	1	0	3	10
1/15/2008	05:00 PM	0	0	1	1	3	7	9
1/15/2008	06:00 PM	0	0	0	2	2	2	7
1/15/2008	07:00 PM	0	0	0	0	0	1	3
1/15/2008	08:00 PM	0	0	0	0	1	1	1
1/15/2008	09:00 PM	0	0	0	0	1	0	0
1/15/2008	10:00 PM	0	0	0	0	1	1	0
1/15/2008	11:00 PM	0	0	0	0	0	0	0
1/16/2008	12:00 AM	0	0	0	1	1	1	2
1/16/2008	01:00 AM	0	0	0	0	0	0	1
1/16/2008	02:00 AM	0	0	0	0	0	0	0
1/16/2008	03:00 AM	0	0	0	0	0	0	0
1/16/2008	04:00 AM	0	0	0	0	0	0	0
1/16/2008	05:00 AM	0	0	0	0	0	0	1
1/16/2008	06:00 AM	0	0	0	0	0	0	0
1/16/2008	07:00 AM	0	0	0	0	1	1	2
1/16/2008	08:00 AM	0	0	0	1	1	1	1
1/16/2008	09:00 AM	0	0	0	1	1	1	5
1/16/2008	10:00 AM	0	0	2	0	0	4	1
1/16/2008	11:00 AM	0	0	0	0	0	4	5
1/16/2008	12:00 PM	1	0	0	0	1	4	1
1/16/2008	01:00 PM	0	0	0	2	1	6	11
1/16/2008	02:00 PM	0	0	0	0	2	5	7

1/16/2008	03:00 PM	0	0	0	1	1	8	11
1/16/2008	04:00 PM	1	0	0	0	0	4	8
1/16/2008	05:00 PM	0	0	0	0	2	5	7
1/16/2008	06:00 PM	0	0	0	0	1	0	5
1/16/2008	07:00 PM	0	0	0	0	0	1	1
1/16/2008	08:00 PM	0	0	0	0	0	0	0
1/16/2008	09:00 PM	0	0	0	0	0	0	0
1/16/2008	10:00 PM	0	0	0	0	0	1	0
1/16/2008	11:00 PM	0	0	0	1	0	1	0
1/17/2008	12:00 AM	0	0	0	0	0	0	0
1/17/2008	01:00 AM	0	0	0	0	0	0	0
1/17/2008	02:00 AM	0	0	0	0	0	0	0
1/17/2008	03:00 AM	0	0	0	0	0	0	0
1/17/2008	04:00 AM	0	0	0	0	0	0	0
1/17/2008	05:00 AM	0	0	0	0	0	0	0
1/17/2008	06:00 AM	0	0	0	0	1	1	0
1/17/2008	07:00 AM	0	0	0	0	2	0	2
1/17/2008	08:00 AM	0	1	0	0	1	1	3
1/17/2008	09:00 AM	0	0	0	0	2	0	2
1/17/2008	10:00 AM	0	0	0	0	1	3	4
1/17/2008	11:00 AM	0	0	0	4	3	7	9
1/17/2008	12:00 PM	6	0	0	0	2	4	2
1/17/2008	01:00 PM	0	0	0	0	0	0	4
1/17/2008	02:00 PM	0	0	0	2	1	2	10
1/17/2008	03:00 PM	0	0	0	1	2	1	4
1/17/2008	04:00 PM	0	0	0	0	1	6	11
1/17/2008	05:00 PM	0	0	0	0	1	4	6
1/17/2008	06:00 PM	0	0	0	0	2	5	8
1/17/2008	07:00 PM	0	0	0	1	1	3	3
1/17/2008	08:00 PM	0	0	0	0	0	1	1
1/17/2008	09:00 PM	0	0	0	0	1	2	2
1/17/2008	10:00 PM	0	0	0	1	0	1	2
1/17/2008	11:00 PM	0	0	0	2	1	0	1
1/18/2008	12:00 AM	0	0	0	0	1	0	0
1/18/2008	01:00 AM	0	0	0	0	0	0	0
1/18/2008	02:00 AM	0	0	0	0	0	0	0
1/18/2008	03:00 AM	0	0	0	0	0	0	0
1/18/2008	04:00 AM	0	0	0	1	0	0	0
1/18/2008	05:00 AM	0	0	0	0	0	0	0
1/18/2008	06:00 AM	0	0	0	0	0	0	0
1/18/2008	07:00 AM	0	0	0	0	1	0	1
1/18/2008	08:00 AM	0	0	1	0	1	0	2
1/18/2008	09:00 AM	0	0	0	0	0	0	3
1/18/2008	10:00 AM	0	0	0	0	1	1	9
1/18/2008	11:00 AM	0	0	1	1	1	2	7
1/18/2008	12:00 PM	0	0	2	2	0	6	6
1/18/2008	01:00 PM	1	0	1	1	0	4	3
1/18/2008	02:00 PM	0	0	0	0	1	4	5
1/18/2008	03:00 PM	0	0	1	0	0	3	12
1/18/2008	04:00 PM	0	0	0	1	0	6	10
1/18/2008	05:00 PM	0	0	0	1	2	4	11
1/18/2008	06:00 PM	2	0	0	0	1	7	11

1/18/2008	07:00 PM	0	0	0	0	1	8	6
1/18/2008	08:00 PM	0	0	0	2	1	3	5
1/18/2008	09:00 PM	0	0	0	0	0	2	3
1/18/2008	10:00 PM	0	0	0	0	0	1	0
1/18/2008	11:00 PM	0	0	0	0	0	0	1
1/19/2008	12:00 AM	0	0	0	0	0	0	0
1/19/2008	01:00 AM	0	0	0	0	0	0	0
1/19/2008	02:00 AM	0	0	0	0	0	0	0
1/19/2008	03:00 AM	0	0	0	0	0	1	0
1/19/2008	04:00 AM	0	0	0	0	0	0	0
1/19/2008	05:00 AM	0	0	0	0	0	0	0
1/19/2008	06:00 AM	0	0	0	0	0	0	0
1/19/2008	07:00 AM	0	0	0	0	0	0	0
1/19/2008	08:00 AM	0	0	0	0	0	0	1
1/19/2008	09:00 AM	0	0	0	0	0	5	1
1/19/2008	10:00 AM	3	2	0	1	0	6	6
1/19/2008	11:00 AM	0	0	1	1	0	3	6
1/19/2008	12:00 PM	0	0	0	0	2	6	10
1/19/2008	01:00 PM	0	1	0	0	0	7	6
1/19/2008	02:00 PM	0	0	0	1	3	4	11
1/19/2008	03:00 PM	0	0	0	0	1	6	9
1/19/2008	04:00 PM	0	0	0	0	1	6	8
1/19/2008	05:00 PM	0	0	0	0	3	6	9
1/19/2008	06:00 PM	0	0	0	0	6	4	5
1/19/2008	07:00 PM	0	0	1	0	0	2	5
1/19/2008	08:00 PM	0	0	0	0	0	1	1
1/19/2008	09:00 PM	0	0	0	0	0	1	0
1/19/2008	10:00 PM	0	0	0	0	0	0	0
1/19/2008	11:00 PM	0	0	0	0	0	1	0
1/20/2008	12:00 AM	0	0	0	0	0	0	1
1/20/2008	01:00 AM	0	0	0	0	0	2	0
1/20/2008	02:00 AM	0	0	0	0	0	0	0
1/20/2008	03:00 AM	0	0	0	0	0	0	0
1/20/2008	04:00 AM	0	0	0	0	0	0	0
1/20/2008	05:00 AM	0	0	0	0	0	0	0
1/20/2008	06:00 AM	0	0	0	0	0	0	0
1/20/2008	07:00 AM	0	0	0	0	0	0	0
1/20/2008	08:00 AM	0	0	0	0	0	0	0
1/20/2008	09:00 AM	0	0	0	0	0	0	3
1/20/2008	10:00 AM	0	0	0	0	2	2	8
1/20/2008	11:00 AM	1	0	0	2	2	7	13
1/20/2008	12:00 PM	0	1	0	0	4	7	5
1/20/2008	01:00 PM	0	0	0	0	0	6	10
1/20/2008	02:00 PM	0	0	1	1	5	10	11
1/20/2008	03:00 PM	0	0	1	0	2	5	7
1/20/2008	04:00 PM	0	0	0	2	1	3	8
1/20/2008	05:00 PM	1	0	0	0	2	6	6
1/20/2008	06:00 PM	0	0	0	0	2	7	12
1/20/2008	07:00 PM	1	0	0	0	0	1	3
1/20/2008	08:00 PM	0	0	0	0	0	0	1
1/20/2008	09:00 PM	0	0	0	0	1	2	3
1/20/2008	10:00 PM	0	0	0	1	0	0	1

1/20/2008	11:00 PM	1	0	0	0	0	1	0
1/21/2008	12:00 AM	0	0	0	2	0	2	1
1/21/2008	01:00 AM	0	0	0	0	0	0	0
1/21/2008	02:00 AM	0	0	0	0	0	0	0
1/21/2008	03:00 AM	0	0	0	0	0	0	0
1/21/2008	04:00 AM	0	0	0	0	0	0	0
1/21/2008	05:00 AM	0	0	0	0	0	0	0
1/21/2008	06:00 AM	0	0	0	0	0	0	0
1/21/2008	07:00 AM	0	0	0	0	0	2	1
1/21/2008	08:00 AM	0	0	0	0	0	1	2
1/21/2008	09:00 AM	0	0	0	0	0	2	1
1/21/2008	10:00 AM	0	0	0	0	0	4	11

46-50	51-55	56-60	61-65	66-70	71-75	76-999	7.5	17.5	22.5
9	4	3	0	0	0	0	0	0	0
7	2	3	1	0	0	0	7.5	0	0
13	4	3	0	1	0	0	0	0	0
10	3	2	1	0	0	0	0	0	0
8	6	1	0	0	1	0	0	0	0
3	2	1	0	0	0	0	0	0	0
3	1	2	1	0	0	0	0	0	22.5
0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0
0	0	0	1	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	22.5
5	3	1	1	0	0	0	0	0	0
3	5	0	0	0	0	0	7.5	17.5	0
4	4	1	0	0	0	0	0	0	0
6	1	1	0	0	0	0	0	0	0
4	0	2	0	0	0	0	0	0	0
1	1	0	0	1	0	0	0	0	0
6	3	0	0	0	0	0	0	0	0
3	4	0	2	0	0	0	0	0	0
11	5	2	0	0	0	0	0	0	0
7	4	1	0	0	0	0	0	0	22.5
4	2	0	0	0	0	0	0	0	0
5	1	3	1	1	0	0	0	0	0
2	1	0	0	2	0	0	0	0	0
1	1	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
0	0	1	0	0	1	0	0	0	0
0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0	0
3	1	1	0	0	0	0	0	0	0
3	4	2	0	0	0	0	0	0	0
2	5	0	1	0	0	0	0	0	45
1	5	0	0	0	0	0	0	0	0
6	3	1	0	0	0	0	7.5	0	0
5	3	1	0	0	0	0	0	0	0
4	7	2	0	0	0	0	0	0	0

4	3	1	0	0	0	0	0	0	0
6	2	1	0	0	0	0	7.5	0	0
9	7	0	0	0	0	0	0	0	0
4	3	1	0	0	0	0	0	0	0
2	2	1	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	0	0	0
0	1	0	2	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	2	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0
3	0	0	0	0	1	0	0	17.5	0
9	5	3	0	0	0	0	0	0	0
5	3	0	0	1	0	0	0	0	0
3	3	2	0	0	0	0	0	0	0
2	3	0	0	0	0	0	45	0	0
5	3	1	0	1	0	0	0	0	0
7	3	0	0	2	0	0	0	0	0
4	3	1	0	0	0	0	0	0	0
7	2	0	0	1	0	0	0	0	0
3	2	2	1	0	0	0	0	0	0
9	6	0	1	1	0	0	0	0	0
1	3	1	0	0	0	0	0	0	0
1	1	1	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0
1	0	0	1	0	0	0	0	0	0
0	1	0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
2	1	0	0	1	0	0	0	0	22.5
5	5	2	0	0	1	0	0	0	0
8	6	4	0	0	0	0	0	0	0
7	5	1	0	1	0	0	0	0	22.5
9	6	3	0	1	1	0	0	0	45
8	4	1	1	0	0	0	7.5	0	22.5
2	3	3	0	0	0	0	0	0	0
2	6	1	0	0	0	0	0	0	22.5
14	7	1	3	0	0	0	0	0	0
8	4	1	0	0	0	0	0	0	0
13	7	2	0	0	0	0	15	0	0

3	3	0	0	0	0	0	0	0	0
3	1	0	0	0	0	0	0	0	0
1	2	2	2	0	1	0	0	0	0
0	1	0	0	0	0	0	0	0	0
1	0	0	0	2	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
3	1	0	0	0	0	0	0	0	0
1	0	1	0	0	0	0	0	0	0
5	4	2	2	0	0	0	0	0	0
5	2	0	0	0	0	0	22.5	35	0
11	3	3	0	0	0	0	0	0	22.5
11	2	2	0	0	0	0	0	0	0
7	3	0	2	0	0	0	0	17.5	0
16	1	1	0	0	0	0	0	0	0
7	9	1	2	1	2	0	0	0	0
6	8	5	1	0	0	0	0	0	0
14	9	0	0	0	0	0	0	0	0
15	8	3	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0	22.5
2	1	0	0	0	0	0	0	0	0
1	3	0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	1	0	0	0	0
1	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
1	4	1	0	0	0	0	0	0	0
6	2	0	1	0	0	0	0	0	0
6	3	1	1	0	0	0	7.5	0	0
8	3	0	0	0	0	0	0	17.5	0
9	3	1	0	0	0	0	0	0	0
12	4	1	1	0	0	0	0	0	22.5
11	6	2	1	0	0	0	0	0	22.5
7	4	1	0	0	0	0	0	0	0
5	5	0	0	0	0	0	7.5	0	0
11	7	2	0	0	0	0	0	0	0
3	2	0	2	0	0	0	7.5	0	0
0	0	0	2	0	0	0	0	0	0
2	2	2	1	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0

0	2	0	0	0	0	0
0	0	0	1	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	1	0	0	0
0	1	2	0	0	0	0
4	3	1	0	0	0	0
6	1	0	0	0	0	0

7.5	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

27.5	32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	77.5
55	32.5	262.5	425	428	210	173	0	0	0	0
0	97.5	150	213	333	105	173	62.5	0	0	0
55	32.5	112.5	383	618	210	173	0	67.5	0	0
0	0	75	383	475	158	115	62.5	0	0	0
55	65	112.5	340	380	315	57.5	0	0	72.5	0
0	0	75	255	143	105	57.5	0	0	0	0
0	0	0	42.5	143	52.5	115	62.5	0	0	0
0	0	37.5	0	0	0	0	0	0	0	0
0	32.5	0	0	0	52.5	0	0	0	0	0
0	0	0	0	0	0	0	62.5	0	0	0
0	0	0	42.5	0	0	57.5	0	0	0	0
0	0	37.5	42.5	0	0	0	62.5	0	0	0
0	0	0	0	0	52.5	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	65	37.5	85	0	0	0	0	0	0	0
0	0	0	170	238	158	57.5	62.5	0	0	0
0	32.5	0	170	143	263	0	0	0	0	0
27.5	0	262.5	383	190	210	57.5	0	0	0	0
0	0	150	170	285	52.5	57.5	0	0	0	0
27.5	32.5	37.5	255	190	0	115	0	0	0	0
0	0	37.5	85	47.5	52.5	0	0	67.5	0	0
0	32.5	187.5	425	285	158	0	0	0	0	0
0	32.5	112.5	128	143	210	0	125	0	0	0
27.5	0	112.5	425	523	263	115	0	0	0	0
27.5	97.5	262.5	383	333	210	57.5	0	0	0	0
55	65	75	298	190	105	0	0	0	0	0
0	0	37.5	128	238	52.5	173	62.5	67.5	0	0
0	32.5	37.5	42.5	95	52.5	0	0	135	0	0
0	32.5	0	0	47.5	52.5	0	0	0	0	0
0	32.5	37.5	0	47.5	0	0	0	0	0	0
0	0	0	0	0	0	57.5	0	0	72.5	0
27.5	32.5	37.5	85	0	52.5	0	0	0	0	0
0	0	0	42.5	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	42.5	0	0	0	0	0	0	0
0	0	0	0	47.5	0	0	0	0	0	0
0	32.5	37.5	85	95	52.5	0	0	0	0	0
27.5	32.5	37.5	42.5	143	52.5	57.5	0	0	0	0
27.5	32.5	37.5	213	143	210	115	0	0	0	0
0	0	150	42.5	95	263	0	62.5	0	0	0
0	0	150	213	47.5	263	0	0	0	0	0
0	32.5	150	42.5	285	158	57.5	0	0	0	0
55	32.5	225	468	238	158	57.5	0	0	0	0
0	65	187.5	298	190	368	115	0	0	0	0

0-15	16-20	21-25	26-30
			27.5
7.5			
			27.5
			27.5
		22.5	
		22.5	
7.5	17.5		
			27.5
			27.5
			27.5
		22.5	27.5
			27.5
			27.5
			27.5
			27.5
		22.5	
7.5			
			27.5

27.5	32.5	300	468	190	158	57.5	0	0	0	0
0	0	150	340	285	105	57.5	0	0	0	0
0	65	187.5	298	428	368	0	0	0	0	0
0	32.5	0	213	190	158	57.5	0	0	0	0
0	0	37.5	42.5	95	105	57.5	0	0	0	0
0	0	0	0	47.5	0	0	0	0	0	0
0	0	0	0	47.5	52.5	0	0	0	0	0
0	0	37.5	0	0	52.5	0	125	0	0	0
27.5	0	37.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	67.5	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	105	0	0	0	0	0
0	32.5	37.5	0	0	0	0	0	0	0	0
0	65	0	85	0	52.5	0	0	0	0	0
0	32.5	37.5	128	143	0	0	0	0	72.5	0
0	65	0	85	428	263	173	0	0	0	0
0	32.5	112.5	170	238	158	0	0	67.5	0	0
110	97.5	262.5	383	143	158	115	0	0	0	0
0	65	150	85	95	158	0	0	0	0	0
0	0	0	170	238	158	57.5	0	67.5	0	0
55	32.5	75	425	333	158	0	0	135	0	0
27.5	65	37.5	170	190	158	57.5	0	0	0	0
0	32.5	225	468	333	105	0	0	67.5	0	0
0	32.5	150	255	143	105	115	62.5	0	0	0
0	65	187.5	340	428	315	0	62.5	67.5	0	0
27.5	32.5	112.5	128	47.5	158	57.5	0	0	0	0
0	0	37.5	42.5	47.5	52.5	57.5	0	0	0	0
0	32.5	75	85	47.5	0	0	0	0	0	0
27.5	0	37.5	85	0	0	57.5	0	0	0	0
55	32.5	0	42.5	47.5	0	0	62.5	0	0	0
0	32.5	0	0	0	52.5	0	62.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	47.5	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
27.5	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	32.5	0	42.5	0	0	0	0	0	0	0
0	32.5	0	85	95	52.5	0	0	67.5	0	0
0	0	0	128	238	263	115	0	0	72.5	0
0	32.5	37.5	383	380	315	230	0	0	0	0
27.5	32.5	75	298	333	263	57.5	0	67.5	0	0
55	0	225	255	428	315	173	0	67.5	72.5	0
27.5	0	150	128	380	210	57.5	62.5	0	0	0
0	32.5	150	213	95	158	173	0	0	0	0
0	0	112.5	510	95	315	57.5	0	0	0	0
27.5	0	225	425	665	368	57.5	188	0	0	0
27.5	65	150	468	380	210	57.5	0	0	0	0
0	32.5	262.5	468	618	368	115	0	0	0	0

			27.5
7.5			
			27.5
	17.5		
			27.5
7.5			
			27.5
			27.5
			27.5
			27.5
			27.5
			27.5
		22.5	
		22.5	27.5
		22.5	27.5
7.5		22.5	27.5
		22.5	
			27.5
			27.5
7.5			

0	32.5	300	255	143	158	0	0	0	0	0
55	32.5	112.5	213	143	52.5	0	0	0	0	0
0	0	75	128	47.5	105	115	125	0	72.5	0
0	0	37.5	0	0	52.5	0	0	0	0	0
0	0	0	42.5	47.5	0	0	0	135	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	47.5	0	0	0	0	0	0
0	0	0	0	0	52.5	0	0	0	0	0
0	0	37.5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	143	52.5	0	0	0	0	0
0	0	0	42.5	47.5	0	57.5	0	0	0	0
0	0	187.5	42.5	238	210	115	125	0	0	0
27.5	0	225	255	238	105	0	0	0	0	0
27.5	0	112.5	255	523	158	173	0	0	0	0
0	65	225	425	523	105	115	0	0	0	0
0	0	262.5	255	333	158	0	125	0	0	0
27.5	97.5	150	468	760	52.5	57.5	0	0	0	0
0	32.5	225	383	333	473	57.5	125	67.5	145	0
0	32.5	225	340	285	420	288	62.5	0	0	0
0	97.5	225	383	665	473	0	0	0	0	0
0	195	150	213	713	420	173	0	0	0	0
0	0	75	213	95	52.5	0	0	0	0	0
0	0	37.5	42.5	95	52.5	0	0	0	0	0
0	0	37.5	0	47.5	158	0	62.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	37.5	0	0	0	57.5	0	0	72.5	0
0	0	0	42.5	47.5	0	0	0	0	0	0
0	0	75	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	95	52.5	0	0	0	0	0
0	0	0	0	47.5	0	0	0	0	0	0
0	0	0	128	47.5	210	57.5	0	0	0	0
0	65	75	340	285	105	0	62.5	0	0	0
55	65	262.5	553	285	158	57.5	62.5	0	0	0
0	130	262.5	213	380	158	0	0	0	0	0
0	0	225	425	428	158	57.5	0	0	0	0
27.5	163	375	468	570	210	57.5	62.5	0	0	0
0	65	187.5	298	523	315	115	62.5	0	0	0
55	32.5	112.5	340	333	210	57.5	0	0	0	0
0	65	225	255	238	263	0	0	0	0	0
0	65	262.5	510	523	368	115	0	0	0	0
0	0	37.5	128	143	105	0	125	0	0	0
0	0	0	42.5	0	0	0	125	0	0	0
0	32.5	75	128	95	105	115	62.5	0	0	0
27.5	0	0	42.5	47.5	0	0	0	0	0	0

			27.5
7.5	17.5		27.5
		22.5	27.5
	17.5		
			27.5
		22.5	
7.5			27.5
	17.5		
		22.5	27.5
		22.5	
			27.5
7.5			
7.5			
			27.5

0	0	37.5	0	0	105	0	0	0	0	0
55	0	75	42.5	0	0	0	62.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	75	42.5	0	0	0	62.5	0	0	0
0	0	37.5	85	0	52.5	115	0	0	0	0
0	0	75	42.5	190	158	57.5	0	0	0	0
0	0	150	468	285	52.5	0	0	0	0	0

7.5			
			27.5

31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76+
32.5	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5	57.5	62.5			
32.5	37.5	42.5	47.5	52.5	57.5		67.5		
	37.5	42.5	47.5	52.5	57.5	62.5			
32.5	37.5	42.5	47.5	52.5	57.5			72.5	
	37.5	42.5	47.5	52.5	57.5				
		42.5	47.5	52.5	57.5	62.5			
	37.5								
32.5				52.5					
						62.5			
		42.5			57.5				
	37.5	42.5				62.5			
				52.5					
32.5	37.5	42.5							
		42.5	47.5	52.5	57.5	62.5			
32.5		42.5	47.5	52.5					
	37.5	42.5	47.5	52.5	57.5				
	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5		57.5				
	37.5	42.5	47.5	52.5			67.5		
32.5	37.5	42.5	47.5	52.5					
32.5	37.5	42.5	47.5	52.5		62.5			
	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5					
	37.5	42.5	47.5	52.5	57.5	62.5	67.5		
32.5	37.5	42.5	47.5	52.5			67.5		
32.5			47.5	52.5					
32.5	37.5		47.5						
					57.5			72.5	
32.5	37.5	42.5		52.5					
		42.5							
		42.5							
			47.5						
32.5	37.5	42.5	47.5	52.5					
32.5	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5	57.5				
	37.5	42.5	47.5	52.5		62.5			
	37.5	42.5	47.5	52.5					
32.5	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5	57.5				

32.5	37.5	42.5	47.5	52.5	57.5				
	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5					
32.5		42.5	47.5	52.5	57.5				
	37.5	42.5	47.5	52.5	57.5				
			47.5						
			47.5	52.5					
	37.5			52.5		62.5			
	37.5								
							67.5		
				52.5					
32.5	37.5								
32.5		42.5		52.5					
32.5	37.5	42.5	47.5					72.5	
32.5		42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5			67.5		
32.5	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5					
		42.5	47.5	52.5	57.5		67.5		
32.5	37.5	42.5	47.5	52.5			67.5		
32.5	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5			67.5		
32.5	37.5	42.5	47.5	52.5	57.5	62.5			
32.5	37.5	42.5	47.5	52.5		62.5	67.5		
32.5	37.5	42.5	47.5	52.5	57.5				
	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5						
	37.5	42.5			57.5				
32.5		42.5	47.5			62.5			
32.5				52.5		62.5			
			47.5						
32.5		42.5							
32.5		42.5	47.5	52.5			67.5		
		42.5	47.5	52.5	57.5			72.5	
32.5	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5	57.5		67.5		
	37.5	42.5	47.5	52.5	57.5		67.5	72.5	
	37.5	42.5	47.5	52.5	57.5	62.5			
32.5	37.5	42.5	47.5	52.5	57.5				
	37.5	42.5	47.5	52.5	57.5				
	37.5	42.5	47.5	52.5	57.5	62.5			
32.5	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5	57.5				

32.5	37.5	42.5	47.5	52.5					
32.5	37.5	42.5	47.5	52.5					
	37.5	42.5	47.5	52.5	57.5	62.5		72.5	
	37.5			52.5					
		42.5	47.5				67.5		
			47.5						
				52.5					
	37.5								
			47.5	52.5					
		42.5	47.5		57.5				
	37.5	42.5	47.5	52.5	57.5	62.5			
	37.5	42.5	47.5	52.5					
	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5	57.5				
	37.5	42.5	47.5	52.5		62.5			
32.5	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5	57.5	62.5	67.5	72.5	
32.5	37.5	42.5	47.5	52.5	57.5	62.5			
32.5	37.5	42.5	47.5	52.5					
32.5	37.5	42.5	47.5	52.5	57.5				
	37.5	42.5	47.5	52.5					
	37.5	42.5	47.5	52.5					
	37.5		47.5	52.5		62.5			
	37.5				57.5			72.5	
		42.5	47.5						
	37.5								
			47.5	52.5					
			47.5						
		42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5		62.5			
32.5	37.5	42.5	47.5	52.5	57.5	62.5			
32.5	37.5	42.5	47.5	52.5					
	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5	57.5	62.5			
32.5	37.5	42.5	47.5	52.5	57.5	62.5			
32.5	37.5	42.5	47.5	52.5	57.5				
32.5	37.5	42.5	47.5	52.5					
32.5	37.5	42.5	47.5	52.5	57.5				
	37.5	42.5	47.5	52.5		62.5			
		42.5				62.5			
32.5	37.5	42.5	47.5	52.5	57.5	62.5			
		42.5	47.5						

	37.5			52.5					
	37.5	42.5				62.5			
	37.5	42.5				62.5			
	37.5	42.5		52.5	57.5				
	37.5	42.5	47.5	52.5	57.5				
	37.5	42.5	47.5	52.5					

APPENDIX C

LEVEL OF SERVICE WORKSHEETS

APPENDIX C

1. EXISTING AND EXISTING + PROJECT(S) SCENARIOS

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Mike Arizabal*
Agency/Co.	*Town of Mammoth Lakes*
Date Performed	*01/31/2008*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US395/Hot Creek Road*
Jurisdiction	*Caltrans*
Analysis Year	*Existing*

Project Description *Mammoth Lakes - Yosemite Valley Airport*

East/West Street: *Hot Creek Road* | North/South Street: *US395*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*660*	*7*	*15*	*440*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*5*	*0*	*14*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*1*	*2*	*0*
Configuration	*LT*		*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*5*	*0*	*14*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*15*	*440*	*0*	*0*	*660*	*7*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*L*		*LTR*			*LTR*	
v (veh/h)	*0*	*15*		*19*			*0*	
C (m) (veh/h)	*1131*	*932*		*568*				
v/c	*0.00*	*0.02*		*0.03*				
95% queue length	*0.00*	*0.05*		*0.10*				
Control Delay (s/veh)	*8.2*	*8.9*		*11.6*				
LOS	*A*	*A*		*B*				
Approach Delay (s/veh)	--	--	*11.6*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Mike Arizabal*
Agency/Co.	*Town of Mammoth Lakes*
Date Performed	*01/31/08*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US395/Hot Creek Road*
Jurisdiction	*Caltrans*
Analysis Year	*Existing + Airport*

Project Description *Mammoth Lakes - Yosemite Valley Airport*

East/West Street: *Hot Creek Road* | North/South Street: *US395*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*660*	*7*	*65*	*440*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*5*	*0*	*64*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*1*	*2*	*0*
Configuration	*LT*		*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*5*	*0*	*64*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*65*	*440*	*0*	*0*	*660*	*7*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*L*		*LTR*			*LTR*	
v (veh/h)	*0*	*65*		*69*			*0*	
C (m) (veh/h)	*1131*	*932*		*635*				
v/c	*0.00*	*0.07*		*0.11*				
95% queue length	*0.00*	*0.22*		*0.37*				
Control Delay (s/veh)	*8.2*	*9.2*		*11.4*				
LOS	*A*	*A*		*B*				
Approach Delay (s/veh)	--	--	*11.4*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Mike Arizabal*
Agency/Co.	*Town of Mammoth Lakes*
Date Performed	*01/31/08*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US395/Hot Creek Road*
Jurisdiction	*Caltrans*
Analysis Year	*Existing + Airport + Hot Creek*

Project Description *Mammoth Lakes - Yosemite Valley Airport*

East/West Street: *Hot Creek Road* | North/South Street: *US395*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*569*	*138*	*152*	*380*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*85*	*0*	*184*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*1*	*2*	*0*
Configuration	*LT*		*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*85*	*0*	*184*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*152*	*380*	*0*	*0*	*569*	*138*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*L*		*LTR*			*LTR*	
v (veh/h)	*0*	*152*		*269*			*0*	
C (m) (veh/h)	*1190*	*901*		*511*				
v/c	*0.00*	*0.17*		*0.53*				
95% queue length	*0.00*	*0.61*		*3.25*				
Control Delay (s/veh)	*8.0*	*9.8*		*19.8*				
LOS	*A*	*A*		*C*				
Approach Delay (s/veh)	--	--	*19.8*					
Approach LOS	--	--	*C*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Mike Arizabal*
Agency/Co.	*Town of Mammoth Lakes*
Date Performed	*01/31/08*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US395/Hot Creek Road*
Jurisdiction	*Caltrans*
Analysis Year	*Existing + Industrial*

Project Description *Mammoth Lakes - Yosemite Valley Airport*

East/West Street: *Hot Creek Road* | North/South Street: *US395*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*15*	*660*	*7*	*15*	*440*	*34*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*127*	*0*	*54*	*5*	*0*	*14*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*1*	*2*	*0*
Configuration	*LT*		*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*127*	*0*	*54*	*5*	*0*	*14*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*15*	*440*	*34*	*15*	*660*	*7*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*L*		*LTR*			*LTR*	
v (veh/h)	*15*	*15*		*19*			*181*	
C (m) (veh/h)	*1099*	*932*		*555*			*526*	
v/c	*0.01*	*0.02*		*0.03*			*0.34*	
95% queue length	*0.04*	*0.05*		*0.11*			*1.56*	
Control Delay (s/veh)	*8.3*	*8.9*		*11.7*			*15.4*	
LOS	*A*	*A*		*B*			*C*	
Approach Delay (s/veh)	--	--	*11.7*			*15.4*		
Approach LOS	--	--	*B*			*C*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Mike Arizabal*
Agency/Co.	*Town of Mammoth Lakes*
Date Performed	*01/31/08*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US395/Hot Creek Road*
Jurisdiction	*Caltrans*
Analysis Year	*Exist+Airprt+HotCrk+Industrial*

Project Description *Mammoth Lakes - Yosemite Valley Airport*

East/West Street: *Hot Creek Road* | North/South Street: *US395*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*15*	*569*	*138*	*152*	*380*	*34*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*127*	*0*	*54*	*85*	*0*	*184*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*1*	*2*	*0*
Configuration	*LT*		*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*127*	*0*	*54*	*85*	*0*	*184*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*152*	*380*	*34*	*15*	*569*	*138*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*L*		*LTR*			*LTR*	
v (veh/h)	*15*	*152*		*269*			*181*	
C (m) (veh/h)	*1156*	*901*		*492*			*335*	
v/c	*0.01*	*0.17*		*0.55*			*0.54*	
95% queue length	*0.04*	*0.61*		*3.51*			*3.38*	
Control Delay (s/veh)	*8.2*	*9.8*		*21.1*			*28.2*	
LOS	*A*	*A*		*C*			*D*	
Approach Delay (s/veh)	--	--	*21.1*			*28.2*		
Approach LOS	--	--	*C*			*D*		

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APPENDIX C

2. YEAR 2025 AND YEAR 2025 + PROJECT(S) SCENARIOS

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Mike Arizabal*
Agency/Co.	*Town of Mammoth Lakes*
Date Performed	*01/31/08*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US395/Hot Creek Road*
Jurisdiction	*Caltrans*
Analysis Year	*2025 Baseline*

Project Description *Mammoth Lakes - Yosemite Valley Airport*

East/West Street: *Hot Creek Road* | North/South Street: *US395*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*799*	*5*	*12*	*532*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*5*	*0*	*14*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*1*	*2*	*0*
Configuration	*LT*		*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*5*	*0*	*14*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*12*	*532*	*0*	*0*	*799*	*5*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*L*		*LTR*			*LTR*	
v (veh/h)	*0*	*12*		*19*			*0*	
C (m) (veh/h)	*1046*	*829*		*497*				
v/c	*0.00*	*0.01*		*0.04*				
95% queue length	*0.00*	*0.04*		*0.12*				
Control Delay (s/veh)	*8.4*	*9.4*		*12.5*				
LOS	*A*	*A*		*B*				
Approach Delay (s/veh)	--	--	*12.5*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Mike Arizabal*
Agency/Co.	*Town of Mammoth Lakes*
Date Performed	*01/31/08*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US395/Hot Creek Road*
Jurisdiction	*Caltrans*
Analysis Year	*2025 + Airport*

Project Description *Mammoth Lakes - Yosemite Valley Airport*

East/West Street: *Hot Creek Road* | North/South Street: *US395*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*799*	*7*	*65*	*532*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*5*	*0*	*64*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*1*	*2*	*0*
Configuration	*LT*		*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*5*	*0*	*64*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*65*	*532*	*0*	*0*	*799*	*7*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*L*		*LTR*			*LTR*	
v (veh/h)	*0*	*65*		*69*			*0*	
C (m) (veh/h)	*1046*	*828*		*567*				
v/c	*0.00*	*0.08*		*0.12*				
95% queue length	*0.00*	*0.26*		*0.41*				
Control Delay (s/veh)	*8.4*	*9.7*		*12.2*				
LOS	*A*	*A*		*B*				
Approach Delay (s/veh)	--	--	*12.2*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Mike Arizabal*
Agency/Co.	*Town of Mammoth Lakes*
Date Performed	*01/31/08*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US395/Hot Creek Road*
Jurisdiction	*Caltrans*
Analysis Year	*2025 + Airport + Hot Creek*

Project Description *Mammoth Lakes - Yosemite Valley Airport*

East/West Street: *Hot Creek Road* | North/South Street: *US395*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*708*	*138*	*152*	*472*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*85*	*0*	*184*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*1*	*2*	*0*
Configuration	*LT*		*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*85*	*0*	*184*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*152*	*472*	*0*	*0*	*708*	*138*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*L*		*LTR*			*LTR*	
v (veh/h)	*0*	*152*		*269*			*0*	
C (m) (veh/h)	*1100*	*800*		*449*				
v/c	*0.00*	*0.19*		*0.60*				
95% queue length	*0.00*	*0.70*		*4.28*				
Control Delay (s/veh)	*8.3*	*10.6*		*24.8*				
LOS	*A*	*B*		*C*				
Approach Delay (s/veh)	--	--	*24.8*					
Approach LOS	--	--	*C*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Mike Arizabal*
Agency/Co.	*Town of Mammoth Lakes*
Date Performed	*01/31/08*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US395/Hot Creek Road*
Jurisdiction	*Caltrans*
Analysis Year	*2025 + Industrial*

Project Description *Mammoth Lakes - Yosemite Valley Airport*

East/West Street: *Hot Creek Road* | North/South Street: *US395*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*15*	*799*	*7*	*15*	*532*	*34*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*127*	*0*	*54*	*5*	*0*	*14*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*0*
Configuration	*L*	*T*	*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*127*	*0*	*54*	*5*	*0*	*14*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*15*	*532*	*34*	*15*	*799*	*7*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*			*LTR*	
v (veh/h)	*15*	*15*		*19*			*181*	
C (m) (veh/h)	*1016*	*828*		*484*			*466*	
v/c	*0.01*	*0.02*		*0.04*			*0.39*	
95% queue length	*0.04*	*0.06*		*0.12*			*1.88*	
Control Delay (s/veh)	*8.6*	*9.4*		*12.7*			*17.6*	
LOS	*A*	*A*		*B*			*C*	
Approach Delay (s/veh)	--	--	*12.7*			*17.6*		
Approach LOS	--	--	*B*			*C*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Mike Arizabal*
Agency/Co.	*Town of Mammoth Lakes*
Date Performed	*01/31/08*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US395/Hot Creek Road*
Jurisdiction	*Caltrans*
Analysis Year	*2025+Airprt+HotCrk+Industrial*

Project Description *Mammoth Lakes - Yosemite Valley Airport*

East/West Street: *Hot Creek Road* | North/South Street: *US395*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*15*	*708*	*138*	*152*	*472*	*34*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*127*	*0*	*54*	*85*	*0*	*184*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*1*	*2*	*0*
Configuration	*LT*		*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*127*	*0*	*54*	*85*	*0*	*184*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*152*	*472*	*34*	*15*	*708*	*138*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*L*		*LTR*			*LTR*	
v (veh/h)	*15*	*152*		*269*			*181*	
C (m) (veh/h)	*1069*	*800*		*431*			*278*	
v/c	*0.01*	*0.19*		*0.62*			*0.65*	
95% queue length	*0.04*	*0.70*		*4.71*			*5.07*	
Control Delay (s/veh)	*8.4*	*10.6*		*26.9*			*41.2*	
LOS	*A*	*B*		*D*			*E*	
Approach Delay (s/veh)	--	--	*26.9*			*41.2*		
Approach LOS	--	--	*D*			*E*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Mike Arizabal*
Agency/Co.	*Town of Mammoth Lakes*
Date Performed	*01/31/08*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US395/Hot Creek Road*
Jurisdiction	*Caltrans*
Analysis Year	*2025+Airport+HotCrk+Ind w/ MIT*

Project Description *Hot Creek Aviation Mixed-Use Development*

East/West Street: *Hot Creek Road* | North/South Street: *US395*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*15*	*708*	*138*	*152*	*472*	*34*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*127*	*0*	*54*	*85*	*0*	*184*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*1*	*2*	*0*
Configuration	*LT*		*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*127*	*0*	*54*	*85*	*0*	*184*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*152*	*472*	*34*	*15*	*708*	*138*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*	*L*	*L*		*TR*	*L*		*TR*
v (veh/h)	*15*	*152*	*85*		*184*	*127*		*54*
C (m) (veh/h)	*1069*	*800*	*275*		*585*	*219*		*753*
v/c	*0.01*	*0.19*	*0.31*		*0.31*	*0.58*		*0.07*
95% queue length	*0.04*	*0.70*	*1.32*		*1.37*	*3.82*		*0.23*
Control Delay (s/veh)	*8.4*	*10.6*	*23.9*		*14.0*	*43.5*		*10.2*
LOS	*A*	*B*	*C*		*B*	*E*		*B*
Approach Delay (s/veh)	--	--	*17.1*			*33.5*		
Approach LOS	--	--	*C*			*D*		

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APPENDIX D

TSE REVISED TRIP GENERATION AND TRIP ASSIGNMENT

TRAFFIC SAFETY ENGINEERS

November 27, 2000

Ms. Sandra Bauer
Bauer Environmental Services
15901 Red Hill Avenue, Suite 210
Irvine, CA 92614

Subject: Sierra Business Park Specific Plan

Dear Ms. Bauer:

In response to Caltrans' letter of comments dated November 8, 2000 for the subject development, our responses to the specific traffic comments are as follows:

1. Comment: Based on our preliminary review of the submitted traffic analysis, we do not agree with the conclusions for the full buildout because of other developments within this vicinity.

   Response: In conjunction with the future Mammoth Lakes/ Yosemite Airport Expansion Plan, the Hot Creek Aviation Mixed-use Development is also proposed. This development is to be located immediately adjacent to the airport. Anticipated site uses include a 24-fuel pump gasoline/service station with convenience market, 188 units of high-density residential/lodging, a 62-room hotel, a 100-campsite recreational park and a 100-seat restaurant. The Airport Expansion Plan and the Hot Creek Aviation Mixed-use Project are the only two known significant developments within the vicinity of the proposed Sierra Business Park Project.

   According to LSA's traffic impact study, both the Airport Expansion and Hot Creek Mixed-use Developments will generate a total of 3,688 daily trips and 504 trips during the P.M. peak traffic hour (see Exhibit "A"). Figure 1 shows the project trips assigned to the intersection of Highway 395 and Hot Creek Fish Hatchery Road.

2. Comment: A thorough traffic intersection operation study needs to be completed to assess the potential impacts to and remediation measures required for U.S. Highway 395.

   Response: Figure 2 shows the existing P.M. peak hour traffic turning movements at the intersection of Highway 395 and Sierra Business Park Project Entrance/Hot Creek Fish Hatchery Road.

   Traffic volume data for Highway 395 were provided by Caltrans. These traffic volumes represent the existing P.M. peak hour counts during the peak traffic season of the year, i.e. winter months.

   Future project traffic volumes for the proposed Sierra Business Park Project were forecasted based on trip generation rate established by the Institute of Transportation Engineers (ITE) for Land Use Code (130), Industrial Park. Traffic counts were recently conducted at an existing industrial/business park center located in the Town of Mammoth Lake. Results of this traffic survey indicate that the derived trip rate from this industrial site is consistent with the trip generation rate established by ITE for an industrial park land use. For this reason, ITE's trip generation rate for Land Use Code (130), Industrial Park is determined to be most appropriate for forecasting future traffic for the proposed Sierra Business Park Project.

Table A, below, shows the trip generation forecasts for the proposed Sierra Business Park Project .

TABLE A

Site Use	A.M. Peak Hour			P.M. Peak Hour			Daily Traffic
	Inbound	Outbound	Total	Inbound	Outbound	Total	
Generation Rate: Industrial Park (Trips/Acre)	8.88	1.82	10.7	2.35	8.82	11.17	72.7
Traffic Generated: Industrial Park 36.7 - 12.64(*) = 24.06 acres	215	44	259	56	213	269	1,749
** Less 15% pass-by and work trips	-32	-7	-39	-8	-32	-40	-262
Net Project Traffic	183	37	220	48	181	229	1,487

(*) Total unbuildable areas = 4.1 acres for internal streets, plus 2.8 acres for existing concrete plant plus 1.04 acres for Lot 15 which is reserved for utility and water wells plus 4.7 acres for perimeter maintenance zone.

** A 15% reduction was applied due to pass-by trips and existing employment trips originated from communities south of the Town of Mammoth Lakes that no longer need to work in the Town because of the proposed project.

Figure 3 shows the project trips assigned to the intersection of Highway 395 and project entrance/Hot Creek Fish Hatchery Road.

Intersection Traffic Impact Analysis

Exhibit "B" shows the detailed volume-to-capacity ratio and level of service calculations for existing traffic, existing traffic plus Sierra Business Park traffic, and existing traffic plus Sierra Business Park traffic plus Airport Expansion traffic plus Hot Creek Mixed-use Project traffic including Year 2020 traffic analysis at the intersection of Highway 395 and Project Entrance/Hot Creek Fish Hatchery Road. These detailed volume-to-capacity and level of service calculations were provided by LSA, traffic consultant for the Airport Expansion and Hot Creek Projects, and are re-outlined below for comparison.

TABLE B

Scenario	Highway 395/Hot Creek Fish Hatchery Road[1] Northbound Delay[2]	LOS	Southbound Delay	LOS
WITH EXISTING CIRCULATION SYSTEM				
Existing Year 1999/2000 Conditions[3]	13.3 sec.	B	9.6 sec.	A
Existing + Sierra Business Park	12.7 sec.	B	13.2 sec.	C
Existing + Airport Expansion	15.2 sec.	C	10.7 sec.	B
Existing + Airport Expansion + Hot Creek	19.6 sec.	C	13.1 sec.	B
Existing + Sierra Business Park + Airport Expansion+ Hot Creek	36.8 sec.	E	21.9 sec	C
Existing + Sierra Business Park + Airport Expansion+ Hot Creek (with median mitigation)	19.6 sec.	C	-	-
WITH CONNECTION TO BENTON CROSSING[4]				
Existing + Airport Expansion + Hot Creek	16.1 sec.	C	11.9 sec.	B
Existing + Airport Expansion + Hot Creek + Sierra Business Park	23.4sec.	C	17.6 sec.	C

Notes:

[1] Due to the current intersection configuration, the northbound and southbound approaches on US-395 can be analyzed as separate intersections.

[2] Intersections are analyzed through the Highway Capacity Manual (HCM) 1997 Operations Analysis. Delay is expressed in seconds of average delay per vehicle, LOS = Level of Service.

[3] Existing conditions are based on Caltrans 1999 counts on mainline segments, and manual p.m. peak hour counts on Hot Creek Fish Hatchery Road conducted in November , 2000

[4] A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation Mixed-use and Airport Expansion projects.

TABLE C

Scenario	Highway 395/Hot Creek Fish hatchery Road[1] Northbound Delay[2]	LOS	Southbound Delay	LOS
WITH EXISTING CIRCULATION SYSTEM				
Year 2020 Baseline[3]	14.8 sec.	B	9.9 sec.	A
2020 + Sierra Business Park	13.8 sec.	B	14.4 sec.	B
2020 + Airport Expansion	17.4 sec.	C	11.0 sec.	B
2020 + Airport Expansion + Hot Creek	24.3 sec.	C	13.7 sec.	B
2020 + Sierra Business Park + Airport Expansion + Hot Creek	58.7 sec.	F	24.7 sec	C
Existing + Sierra Business Park + Airport Expansion+ Hot Creek (with median mitigation)	24.0 sec.	C	-	-
WITH CONNECTION TO BENTON CROSSING[4]				
2020 + Sierra Business park + Airport Expansion + Hot Creek	19.2 sec.	C	12.3 sec.	B
2020 + Sierra Business park+ Airport Expansion + Hot Creek	31.7 sec.	D	19.8 sec.	C

Notes:

[1] Due to the current intersection configuration, the northbound and southbound approaches on US-395 can be analyzed as separate intersections.

[2] Intersections are analyzed through the Highway Capacity Manual (HCM) 1997 Operations Analysis. Delay is expressed in seconds of average delay per vehicle, LOS = Level of Service.

[3] Per Caltrans, District 9, a 1.0% per year growth rate compounded annually was used to determine the 2020 baseline volumes on US-395. This rate constitutes a growth of 22.0% from 2000 to 2020.

[4] A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation Mixed-use and Airport Expansion projects.

As indicated in Tables B and C, the intersection of Highway 395 and Project Entrance/Hot Creek Fish Hatchery Road will continue to maintain an acceptable 'C" level of service or better with the addition of traffic from the proposed Sierra Business Park Project for both Current Year and Year 2020 traffic conditions. However, with additional traffic from the Sierra Business Park Project, the Airport Expansion Project and the Hot Creek Aviation Mixed-use Project, the intersection will operate at an unacceptable "E" level of service for current traffic condition and "F" for Year 2020 traffic conditions. To mitigate traffic impacts, installation of separate left-turn and through traffic lanes in the median opening area of Highway 395 or construction of a connector road to the Benton

Crossing with Highway 395 from the airport developments would be required (see Figure 4). With either mitigation improvements implemented, the intersection level of service would operate with a satisfactory D or better.

We trust that the above information/clarifications will be of assistance to Caltrans. If you have any questions or need additional information, please do not hesitate to call us.

Respectfully submitted,

C. Hui Lai, P.E.
Traffic Engineer

FIGURES

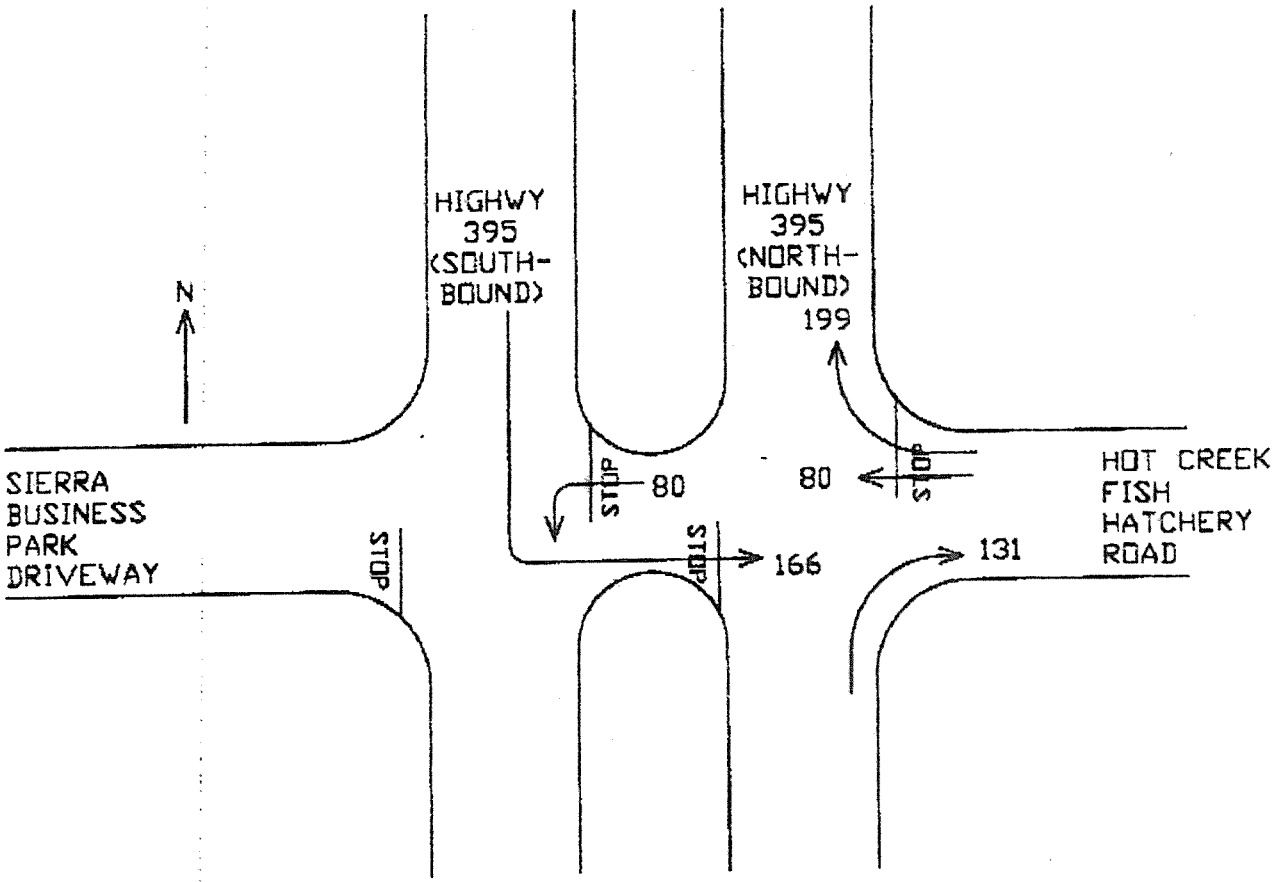


FIGURE 1

CUMULATIVE MAMMOTH LAKES/YOSEMITE AIRPORT
EXPANSION PROJECT TRAFFIC PLUS HOT CREEK
MIXED-USE PROJECT TRAFFIC (P.M. PEAK TRAFFIC HOUR)

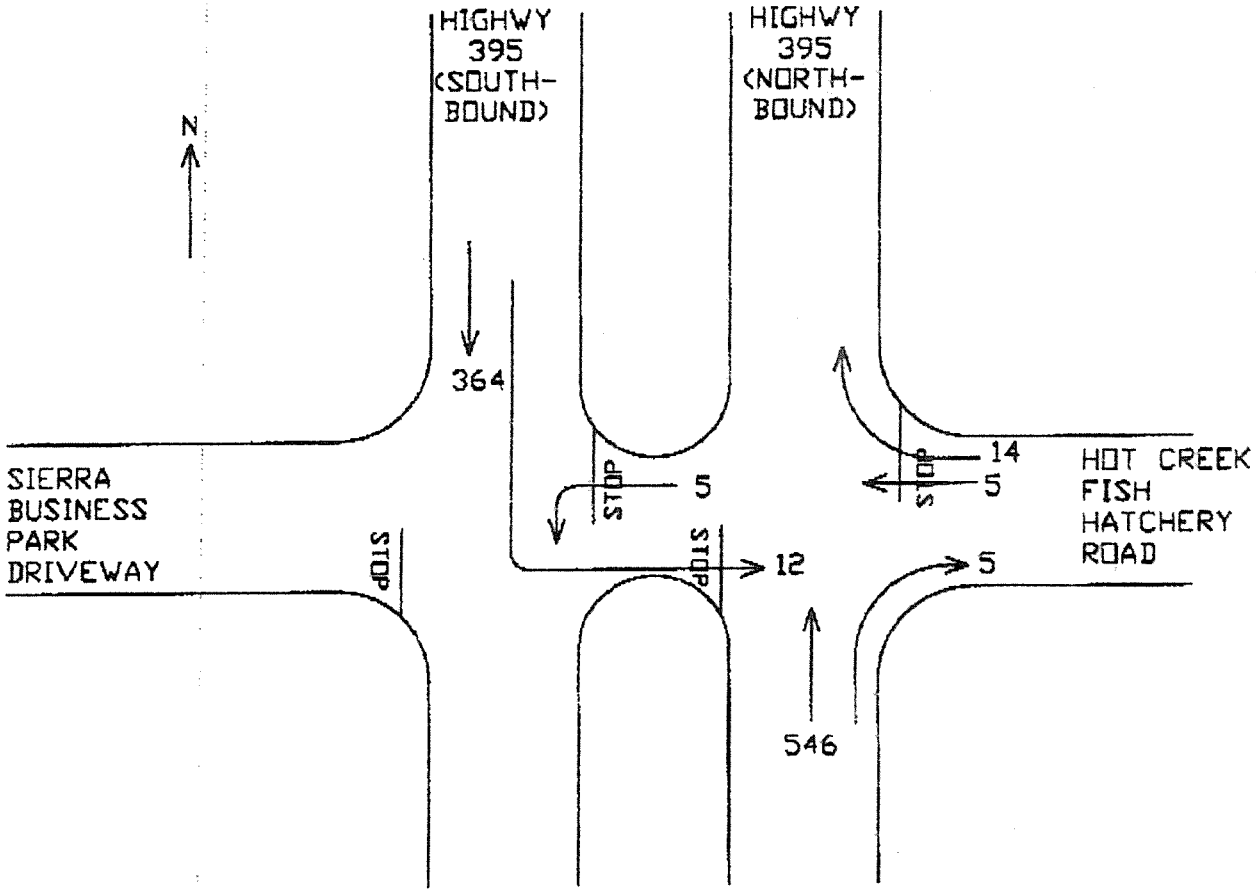


FIGURE 2

EXISTING P.M. PEAK HOUR TRAFFIC

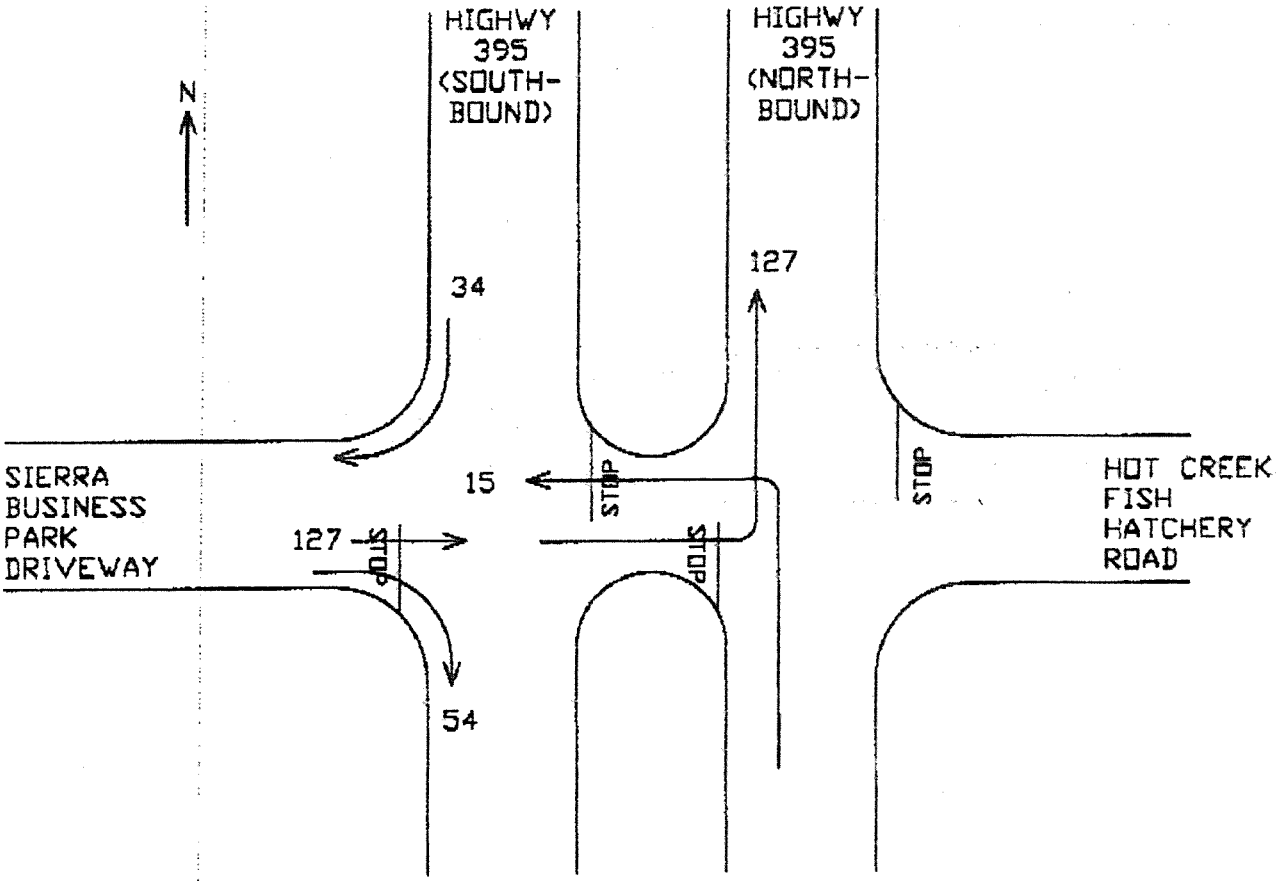


FIGURE 3

P.M. PEAK TRAFFIC HOUR
SIERRA BUSINESS PARK TRAFFIC

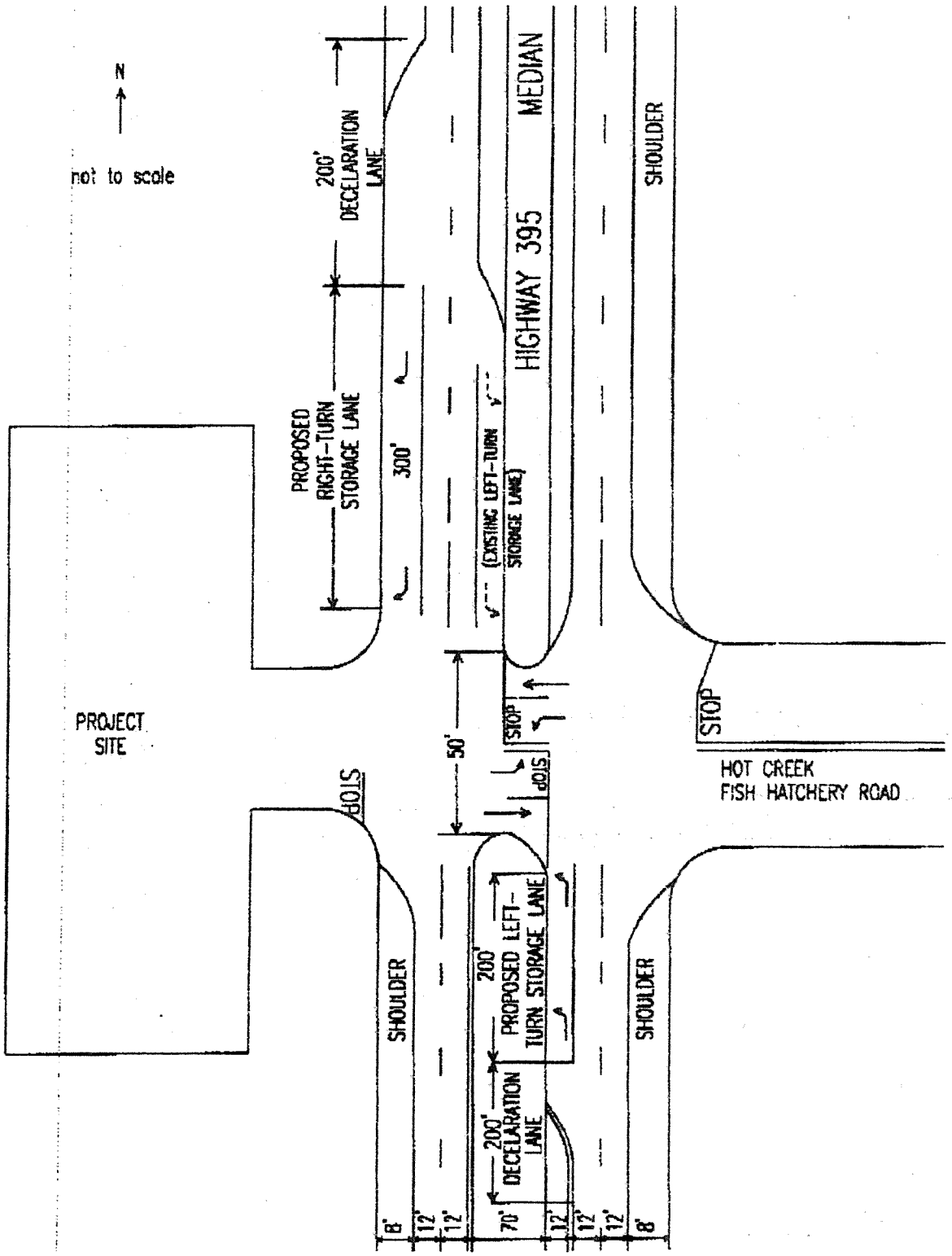


FIGURE 4
PROPOSED INTERSECTION TRAFFIC TURN LANE CONFIGURATIONS

EXHIBIT "A"

AIRPORT EXPANSION AND HOT CREEK MIXED-USE PROJECT TRIP GENERATION

Table B - Mammoth Lakes -Yosemite Valley Airport Area Trip Generation

Land Use	Size	Units	ADT	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total
TRIP RATES						
Mammoth Lakes-Yosemite Valley Airport[1]	*based on data provided by Mammoth Lakes-Yosemite Valley Airport*					
Hot Creek Aviation Mixed-Used Development[2]						
Gasoline/Service Station w/ Convenience Market	per fueling position (FP)		162.78	6.69	6.69	13.38
Residential High Density (MF) Seasonal	per dwelling unit (DU)		8.00	0.50	0.25	0.75
Hotel	per occupied room		8.92	0.35	0.36	0.71
Campground/Recreational Vehicle Park	per occupied campsite		4.00	0.20	0.20	0.39
High Turnover Sit-Down Restaurant	per seat		4.83	0.24	0.18	0.42
Sierra Business Park Specific Plan[3]	*based on data provided in Morgan Industrial Park Specific Plan TIA*					
TRIP GENERATION						
Mammoth Lakes-Yosemite Valley Airport	702	passengers	898	79	79	158
Hot Creek Aviation Mixed-Used Development						
Gasoline/Service Station w/ Convenience Market	24	FPs	3,907	161	161	321
Residential High Density (MF) Seasonal[4]	150	DUs	1,203	76	37	113
Hotel[4]	50	rooms	442	17	18	35
Campground/Recreational Vehicle Park[4]	80	campsites	320	16	16	31
High Turnover Sit-Down Restaurant	100	seats	483	24	18	42
Sierra Business Park Specific Plan	36	acres	1,487	48	181	229
Total Trip Generation			**8,740**	**428**	**509**	**929**
TRIP REDUCTIONS						
Hot Creek Aviation Mixed-Use Development						
Gasoline/Service Station w/ Convenience Market[5]	(90 percent reduction)		-3,516	-145	-145	-289
Residential High Density (MF) Seasonal[6]	(60 percent reduction)		-722	-45	-22	-68
Hotel[7]	(75 percent reduction)		-332	-13	-13	-26
Campground/Recreational Vehicle Park	*no trip reductions anticipated*					
High Turnover Sit-Down Restaurant[8]	(100 percent reduction)		-483	-24	-18	-42
Total Trip Reductions			**-5,053**	**-227**	**-198**	**-425**
NET EFFECTIVE TRIP GENERATION			**3,688**	**193**	**311**	**504**

[1] Year 2020 airport trip generation data provided by Mammoth Lakes-Yosemite Valley Airport staff (Tom Cornell-Ricondo).

[2] Trip rates for Hot Creek Mixed-Use Development provided in *Trip Generation*, 6th Edition, Institute of Transportation Engineers (ITE), 1997. Trip rates for the Residential High Density (MF) Seasonal are based on the Mammoth Lakes Transportation Model (MTM). Daily trip rate for RV Park based on SANDAG rates for campsite uses; p.m. peak hour rates for RV Park are based on ITE rates.

[3] Trip generation data provided in *Traffic Impact Study Addendum for Sierra Business Park Specific Plan*, Traffic Safety Engineers (TSE), Novem

[4] Unit counts for residential/lodging components are based on 80% occupancy rate which is consistent with Town of Mammoth "typical" winter conditions. Build out unit counts are 188 multi-family homes, 62 hotel rooms, and 100 campsites.

[5] A 90% reduction was applied due to a majority of pass-by trip making for vehicles travelling on Highway 395. Approximately 10% (new trips) may originate from existing communities south of the Airport.

[6] A 60% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area. A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.

[7] A 75% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area. A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.

[8] A 75% internal trip capture, and 25% pass-by trip reduction was applied for vehicles travelling on Highway 395. No new trips are anticipated for this land use.

11/30/2000 (P:\TML030\model.xls\tgen)

EXHIBIT "B"

H.C.M. CALCULATIONS

REFER TO APPENDIX B OF LSA REPORT

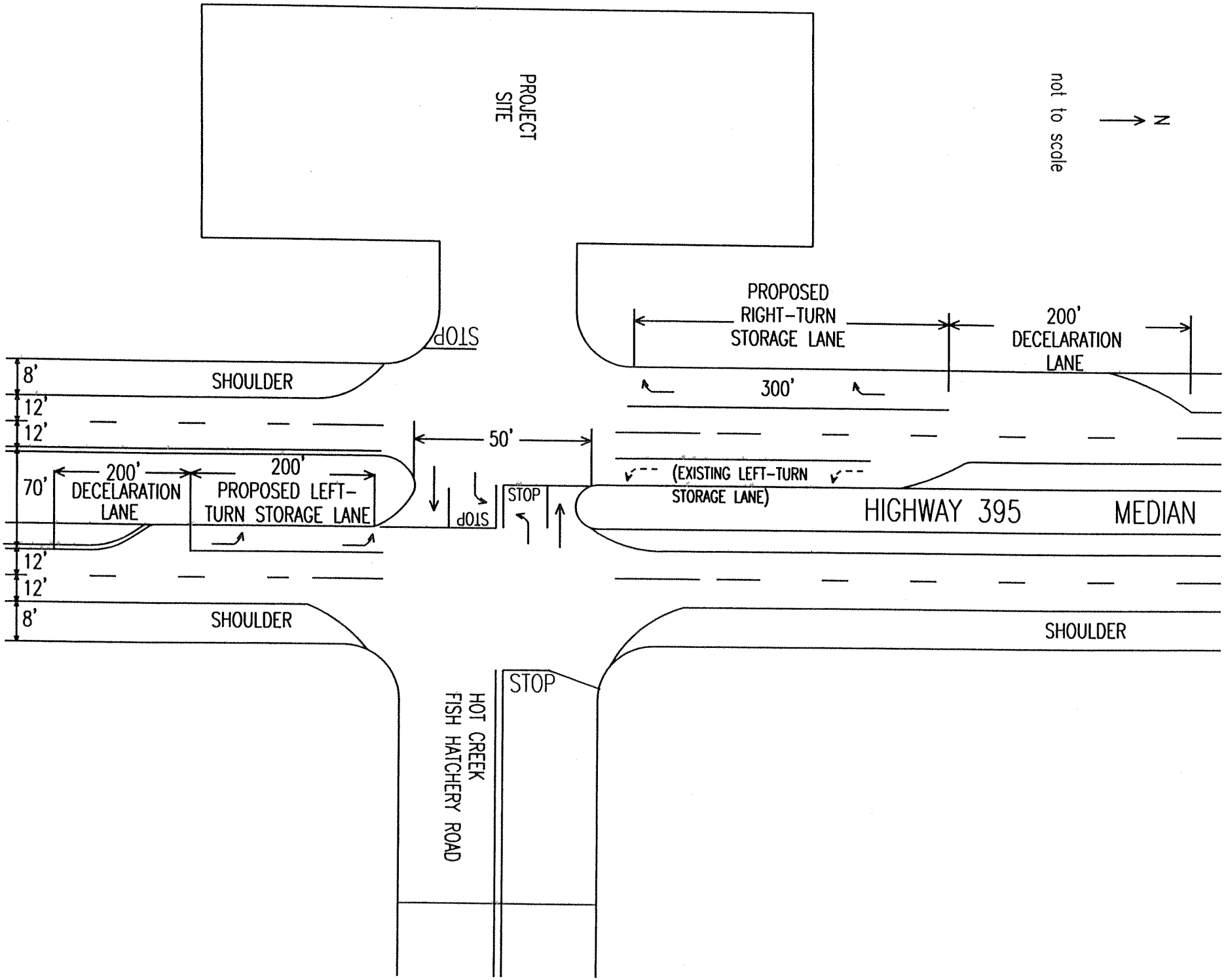
EXHIBIT "C"

H.C.M. CALCULATION WITH TRAFFIC MITIGATION

REFER TO APPENDIX B OF LSA REPORT

APPENDIX E

MEDIAN IMPROVEMENTS


PROJECT SITE
not to scale
N
PROPOSED RIGHT-TURN STORAGE LANE
200' DECELARATION LANE
300'
STOP
8'
SHOULDER
12'
12'
50'
70'
200' DECELARATION LANE
200' PROPOSED LEFT-TURN STORAGE LANE
STOP
STOP
(EXISTING LEFT-TURN STORAGE LANE)
HIGHWAY 395
MEDIAN
12'
12'
8'
SHOULDER
SHOULDER
STOP
HOT CREEK FISH HATCHERY ROAD