FINAL ENVIRONMENTAL IMPACT REPORT NO. 573 FOR THE CIVILIAN REUSE OF MCAS EL TORO AND THE AIRPORT SYSTEM MASTER PLAN FOR JOHN WAYNE AIRPORT AND PROPOSED ORANGE COUNTY INTERNATIONAL AIRPORT

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EIR TEXT VOLUME 2B

Section 8, Alternatives

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8.0 ALTERNATIVES

8.1 INTRODUCTION

8.1.1 Final EIR No. 563 Alternatives

Final Environmental Impact Report (EIR) No. 563 for the Community Reuse Plan (CRP) for the Marine Corps Air Station (MCAS) El Toro considered a number of possible reuse alternatives including:

i) Reuse Alternative A, which proposed a commercial passenger and cargo airport at El Toro, surrounded by nonaviation uses including a Habitat Reserve,[1] educational and institutional uses, residential uses, recreation and open space uses, research and development/light industrial uses, a meeting center, mixed retail/office/commercial uses, office and conference center uses, and multimodal surface transportation center. Reuse Alternative A assumed commercial operations at JWA would cease. The County of Orange Local Redevelopment Authority (LRA) adopted Reuse Alternative A as the CRP.

ii) Reuse Alternative B, which proposed a commercial airport limited to cargo and general aviation operations at the MCAS El Toro site, surrounded by nonaviation uses including a Habitat Reserve, educational and institutional uses, residential uses, recreation and open space uses, research and development/light industrial uses, office and conference center uses, and a multimodal surface transportation center. Reuse Alternative B assumed all commercial passenger operations would be provided by JWA.

iii) Reuse Alternative C, which proposed a wide range of nonaviation uses at El Toro, including a Habitat Reserve, visitor oriented attractions, residential uses, recreation and open space uses, research and development/light industrial uses, educational and institutional uses, mixed retail/office/commercial uses and a multimodal surface transportation center. Reuse Alternative C assumed all commercial, cargo and general aviation passenger operations would be provided by JWA.

iv) No Project Alternative D, which assumed the military would retain ownership and operation of the MCAS El Toro site and that operations would continue at 1994 levels.

v) No Development Alternative E, which assumed the military would leave the site and the site would be vacant and unplanned.

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[1] The 970 acre Habitat Reserve in Planning Area 6 is subject to a federal agency to federal agency transfer, and is not part of the Proposed Project.

Final EIR No. 563 also considered secondary alternatives to Alternatives A and B, which essentially considered different airport configurations or operating conditions compared to Alternatives A and B. Final EIR No. 563 also considered alternative sites for the proposed airport use, as described in detail later in Section 8.12.5.1 (Alternative Sites Evaluated in Final EIR No. 563). Section 15126.6(f)(2)(c) of the CEQA Guidelines permits reliance in this document on the analysis provided in EIR No. 563:

> *"Limited new analysis required. Where a previous document has sufficiently analyzed a range of reasonable alternative locations and environmental impacts for projects with the same basic purpose, the lead agency should review the previous document. The EIR may rely on the previous document to help it assess the feasibility of potential project alternatives to the extent the circumstances remain substantially the same as they relate to the alternative."*

8.1.2 ASMP Alternatives

With the starting point of the CRP and the Board's direction to develop a two airport system, the Airport System Master Plan (ASMP) analyzed a broad range of airport development options for MCAS El Toro and JWA. Preliminary screening of these options described "families" of potential airport system solutions, and consisted of two components for each airport:

i) an airport role (type of service provided) and
ii) airport facility improvements.

Technical Report 6, Alternatives Definition Report, developed in April, 1998, was prepared to analyze preliminary screening scenarios that cover a broad range of possible airport system options for Orange County. Other documents used to conduct the alternatives analysis include: Working Paper 2, *List of Preliminary Project Planning Issues*; Technical Report 1, *Airport System Feasibility*; Technical Report 2, *Planning and Performance Parameters;* Technical Report 3, *Existing Facilities;* and Technical Report 4, *Aviation Demand Forecasts*. The selection of alternatives analyzed by the ASMP (and also the present EIR) focused on alternatives to the Proposed Project which meet the planning goals and criteria established by the following:

i) Orange County Board of Supervisors December 11, 1996, Resolution No. LRA R96-02, which adopted the Community Reuse Plan (CRP) for MCAS El Toro and initiated the ASMP.
ii) Policies established in the Orange County General Plan by Measure A, approved in 1994.
iii) The need, as part of the Master Development Program (MDP) planning process, to address issues of unique importance to the planning of an airport system in Orange County.

iv) The need to address issues of special importance to the public and the Board of Supervisors.
v) California Environmental Quality Act (CEQA) criteria for the definition of alternatives.

Please see the ASMP (Technical Report 17) for a complete description of the ASMP alternatives evaluation.

8.1.3 Introduction to EIR Alternatives

Section 15126.6(a) of the CEQA Guidelines indicates the scope of alternatives to a Proposed Project that must be evaluated:

> *"An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decisionmaking and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."*

As described in detail earlier in Chapter 4.0, the Proposed Project is anticipated to result in significant adverse impacts that cannot be mitigated to below a level of significance after implementation of relevant standard conditions of approval, regulations, and mitigation measures. In summary, these unavoidable impacts are as follows:

- Significant adverse noise impacts due to increased aircraft operations and nighttime aircraft operations.
- Significant unavoidable adverse noise impacts to the use of 1) the proposed on-site recreational facilities; 2) existing local parks and open space areas in the northern part of the City of Lake Forest; 3) future off-site trails, including portions of the future Borrego Canyon Bikeway, the future Jeffrey Road Bikeway, and the future Hicks Canyon Trail; and 4) portions of Class II on-road bikeways on Alton Parkway, Portola Parkway, Bake Parkway, and Lake Forest Drive.
- Significant loss of agricultural resources.
- Short-term air quality impacts during construction.

- Significant adverse impact to public health due to potential toxic air contaminant emissions during operation.
- Significant adverse impacts related to the demand for all types and prices of housing, including low and moderate income housing, and impacts of inducing substantial growth or concentration of non-resident employee population, and reducing the supply of available housing in the County.

The Proposed Project will contribute to potentially significant cumulative adverse impacts related to: land use related to the change in the area covered by the 65 dBA CNEL contour; noise; air quality; water quality; energy resources; water; and socioeconomic impacts related to low and moderate income housing; and impacts of inducing substantial growth or concentration of non-resident employee population, and reducing the supply of available housing in the County to low and moderate income housing.

In this light, this chapter presents a reasonable range of alternatives to the Proposed Project. These alternatives include the following:

i) No Project/No Activity
ii) ETRPA Nonaviation Plan Alternative
iii) Alternative A: JWA – Status Quo Aviation Roles (Reduction to 6 Million Annual Passengers or MAP); OCX – Full Domestic Service Airport (19 MAP)
iv) Alternative C: JWA Short-Haul Domestic (10.1 MAP); OCX – Full International Service Airport, excluding Short-Haul Domestic (23.4 MAP)
v) Alternative F: JWA – Short, Medium and Limited Long Haul Passenger and Cargo Service with No Operational Limitations and No General Aviation Use (14 MAP); OCX – No Aviation Reuse
vi) Alternative G: JWA – General Aviation and Cargo/Passenger Service from Short Haul to Limited International (25 MAP); OCX – No Aviation Reuse
vii) Alternative H: JWA – Status Quo (10.8 MAP); OCX – Limited Use (10 MAP) Domestic Service Airport
viii) Alternative I: JWA – Status Quo Aviation Roles (7 MAP); OCX – Limited Use (15 MAP) Domestic Service Airport
ix) Alternative J: JWA – Reduced Service (5.4 MAP); OCX – Full International Service Airport at OCX at (28.8 MAP) with Widely Separated North/South (N/S) Runways
x) Alternative OCX Airport Runway Layout (Wildlands Ranch Plan Alternative)
xi) Land Use Alternatives at OCX – Nonaviation Land Use Component
xii) Alternative K: Off-Site Alternatives (JWA 8.4 MAP)
xiii) Alternatives Considered, But Rejected
xiv) For comparison purposes, the data regarding the CRP, as adopted in December, 1996, are carried forward.

As indicated above, this section also presents a number of alternatives to the Proposed Project not carried forward for further analysis and the rationale for their exclusion. Table 8.1-1 provides a summary comparison of the aviation characteristics, trip generation, vehicle miles traveled, aircraft noise impacts, and air quality emissions for existing conditions and each alternative analyzed herein. In addition, the last part of this section presents a matrix comparison of the environmental impacts of the alternatives considered in detail.

A summary of the aviation activity under the Proposed Project and the aviation alternatives to be carried forward is provided in Table 8.1-2.

Table 8.1-1
Summary Comparison of Principal Aviation Characteristics and Major Impacts for the CRP, Existing Conditions and Alternatives

	CRP Alt. A	Existing Conditions	No Project	Alternatives: Proposed Project	ETRPA	A	C	F	G	H	I	J	Alternative OCX Runway Design	Land Use	K
SUMMARY OF AVIATION CHARACTERISTICS															
Million Annual Passengers (MAP)															
OCX	38.3	0	0	28.8	0	19	23.4	0	0	10	15	28.8	See	28.8	0
JWA	0	7.5	8.4	5.4	8.4	6	10.1	14	25	10.8	7	5.4	Analysis	5.4	8.4
Total	38.3	7.5	8.4	34.2	8.4	25	33.5	14	25	20.8	22	34.2		34.2	8.4
Annual Aircraft Operations															
OCX	447,000	30,217	0	300,600	0	252,400	191,800	0	0	314,200	209,900	300,600	See	300,600	0
JWA	375,000	417,725	462,000	426,700	462,000	432,300	464,200	172,100	347,600	319,800	448,100	426,700	Analysis	426,700	462,000
Total	822,000	447,942	462,000	727,300	462,000	684,700	656,000	172,100	347,600	634,000	658,000	727,300		727,300	462,000
SUMMARY OF MAJOR IMPACTS															
Transportation															
El Toro Site ADT Generated	305,240[1]	25,400	0	176,123	391,322	138,157	152,273	391,322[2]	391,322	109,800	142,400	176,123	See	150,222[3]	0
JWA ADT Generated	0	47,450	51,706	32,690	51,706	36,274	48,876	83,943	116,424	48,390	44,000	32,690	Analysis	32,690	51,706
Regional Vehicles Miles Travelled	NA	321,922,797	442,831,642	442,069,732	442,787,665	442,115,204	See	442,679,260	442,351,639	442,289,168	442,158,695	See		See	See No
Regional Transit Miles Travelled	NA	404,798	494,777	502,388	506,371	501,478	Project	494,777	498,585	501,478	501,478	Project		Project	Project
Noise (No. of Residences Within Each CNEL)															
OCX CNEL 70	0	0	0	0	0	0	0	0	0	0	0	0	See	0	0
OCX CNEL 65	318	0	0	0	0	0	0	0	0	0	0	525	Analysis	0	0
OCX CNEL 60	2,034	0	0	1,837	0	1,312	787	0	0	394	787	3,411		1,837	0
JWA CNEL 70	0	0	0	0	0	0	0	0	446	0	0	0	NA	0	0
JWA CNEL 65	0	134	236	79	236	79	236	184	1,863	236	236	79	NA	79	236
JWA CNEL 60	0	682	997	577	997	557	1,023	997	6,954	1,023	997	577	NA	577	997
Total CNEL 70	0	0	0	0		0	0	0	446	0	0	0	See	0	0
Total CNEL 65	318	134	236	79	NA	79	236	184	1,863	236	236	604	Analysis	79	236
Total CNEL 60	2,034	682	997	2,414	NA	1,869	1,810	997	6,954	1,417	1,784	3,988		2,414	997
Air Quality (Data are the change from No Project)*															
Air Quality Regional Pollutant Emissions (lbs/day)															
CO	-598[4]	1,521,279	2,971,017	-34,789	-42,954[5]	-31,068	-35,724	-8,522	-20,958	No New	No New	See	See	See	See
NOx	-4,220	488,451	597,999	-5,310	-7,931	-6,585	-5,098	-2,459	-5,319	Data	Data	Project	Analysis	Project	No Project
ROC	3,636	100,255	86,629	-3,690	9,440	-3,269	-3,546	-1,007	-2,530	Available	Available	Data		Data	Data
SOx	-53,499	44,067	57,002	49	-52,485	-139	85	-99	-273						
PM10	-1,100	8,863	11,428	-225	1,836	-240	-320	-10	20						

* This information has been updated from the *Draft* EIR to reflect the analyses in the DSA.

[1] CRP impacts are for the El Toro site only. JWA is not included.

[2] Alternatives F and G would result in a mitigation plan at El Toro such as the ETRPA Alternative.

[3] ADT for LU2. LU1 ADT is estimated at 153,494.

[4] Source: FEIR No. 563 - these data are not directly comparable due to differences in methodology.

[5] Includes emissions at other regional airports for the No Project scenario.

Table 8.1-2
Summary of Aviation Activity at Orange County Airports Under Alternative Airport System Development Scenarios

Type of Operation	Proposed Project[1] 2020 OCX	JWA	Total	Alternative A 2020 OCX	JWA	Total	Alternative C 2020 OCX	JWA	Total	Alternative E 2020 OCX	JWA	Total
Air Passengers (millions)												
Domestic	20.6	5.4	26.0	18.7	6.0	24.7	14.0	10.1	24.1	--	8.4	8.4
International	8.2	--	8.2	0.3	--	0.3	9.4	--	9.4	--	-	--
Total	28.8	5.4	34.2	19.0	6.0	25.0	23.4	10.1	33.5	--	8.4	8.4
Air Cargo (millions U.S. tons)												
Domestic	1.19	0.02	1.21	1.21	0.02	1.23	1.18	0.05	1.23	--	0.05	0.05
International	0.82	--	0.82	0.04	--	0.04	0.84	--	0.84	--	--	--
Total	2.01	0.02	2.03	1.25	0.02	1.28	2.02	0.05	2.07	--	0.05	0.05
Based Aircraft	14	570	584	20	567	587	9	503	512	--	582	582
Aircraft Operations												
Passenger	251,100	67,500	318,600	196,000	75,100	271,100	150,200	147,000	297,200	--	95,100	95,100
All-Cargo	26,600	--	26,600	22,600	--	22,600	26,000	--	26,000	--	--	--
General Aviation	22,000	359,000	381,000	33,000	357,000	390,000	15,000	317,000	332,000	--	366,700	366,700
Military	900	200	1,100	800	200	1,000	600	200	800	--	200	200
Total	300,600	426,700	727,300	252,400	432,300	684,700	191,800	464,200	656,000	--	462,000	462,000

[1] Alternative J has the same activity levels as the Proposed Project.

Table 8.1-2
Summary of Aviation Activity at Orange County Airports Under Alternative Airport System Development Scenarios

Type of Operation	Alternative F 2020 OCX	JWA	Total	Alternative G 2020 OCX	JWA	Total	Alternative H 2020 OCX	JWA	Total	Alternative I 2020 OCX	JWA	Total
Air Passengers (millions)												
Domestic	--	14.0	14.0	--	24.7	24.7	9.9	10.8	20.7	14.8	7.0	21.9
International	--	--	--	--	0.3	0.3	0.1	--	0.1	0.2	-	0.2
Total	--	14.0	14.0	--	25.0	25.0	10.0	10.8	20.8	15.0	7.0	22.0
Air Cargo (millions U.S. tons)												
Domestic	--	0.18	0.18	--	1.23	1.23	1.06	0.05	1.11	1.15	0.03	1.18
International	--	--	--	--	0.04	0.04	0.03	--	0.03	0.04	--	0.04
Total	--	0.18	0.18	--	1.28	1.28	1.09	0.05	1.14	1.19	0.03	1.22
Based Aircraft	--	--	--	--	20	20	294	293	587	12	567	579
Aircraft Operations												
Passenger	--	161,700	161,700	--	273,900	273,900	106,300	135,100	241,400	159,400	90,700	250,100
All-Cargo	--	3,700	3,700	--	28,300	28,300	22,600	--	22,600	22,600	--	22,600
General Aviation	--	6,600	6,600	--	45,300	45,300	185,200	184,600	369,800	27,300	357,200	384,500
Military	--	100	100	--	100	100	100	100	200	600	200	800
Total	--	172,100	172,100	--	347,600	347,600	314,200	319,800	634,000	209,900	448,100	658,000

8.2 NO PROJECT/NO ACTIVITY ALTERNATIVE (ALTERNATIVE E): JWA – STATUS QUO AVIATION ROLES; NO AVIATION REUSE AT FORMER MCAS EL TORO

This section presents the potential impacts of the No Project/No Activity Alternative as measured against the existing setting, as well as a comparison of the alternative's impacts to those of the Proposed Project at build out. In those instances in which the comparison of the alternative to the Proposed Project is materially affected by the phasing of the project, i.e., in those instances in which the impacts of the Proposed Project during the phasing years are materially different from those impacts at year 2020, a comparison of the alternative's impacts to those of the Proposed Project for the applicable phasing year is also provided.

8.2.1 Aviation Uses

Under the No Project/No Activity Alternative, JWA would continue to operate as it does presently, providing general aviation service, short- and medium-haul domestic passenger service (with limited long-haul service), and very limited all-cargo service. JWA would be constrained to 8.4 MAP in the year 2020 under this alternative. There would be no aviation reuse of MCAS El Toro, and the site would remain vacant and undeveloped. Therefore, aviation demand projected to use Orange County airports under the Proposed Project would need to use other airports in the region. This is discussed further in Section 8.2.4.1 below.

8.2.2 Nonaviation Revenue Support Uses

Under the No Project/No Activity Alternative, the MCAS El Toro would remain vacant and undeveloped, with no nonaviation uses.

8.2.3 Attainment of Project Objectives

This alternative would not meet any of the general project objectives identified in Chapter 2, Section 2.3 ~~3.0~~ regarding base redevelopment. This alternative would not meet the aviation objectives relating to passenger and cargo demand, service opportunities, industry competition, economic growth, business activities, existing land use restrictions, or General Plan implementation. The No Project/No Activity Alternative would meet or partially meet the aviation objective relating to general aviation by maintaining GA uses at JWA.

8.2.4 Environmental Impacts of the No Project/No Activity Alternative

8.2.4.1 Land Use

A vacant and undeveloped site at MCAS El Toro would be incompatible with adjacent or nearby land uses. No activity at the El Toro site would be inconsistent with the Base Realignment and Closure (BRAC) objectives to transfer closed bases and mitigate economic loses in the community. No activity would eliminate revenue to the United States Department of Defense (DOD) to offset maintenance. No activity would lead to decay and vandalism. This alternative is comparable to the Proposed Project at JWA in that no significant adverse impacts to land use would occur. This alternative would not avoid or lessen impacts compared to the project.

As discussed at the outset of this section, under the No Project/No Activity alternative, aviation demand projected to use Orange County airports under the Proposed Project would need to use other airports in the region. To evaluate the ability of the regional aviation system to accommodate this additional demand, the allocation model used to project commercial aviation demand at each airport in the region for the Proposed Project in 2020 was used to forecast and analyze the redistribution of regional demand under the No Project/No Activity Alternative. The model and assumptions used to project demand under the Proposed Project is documented in *Appendix B, Technical Report 6, Alternatives Definition Report*, April 17, 1998, revised October 15, 1999.

Additional research was undertaken in late 1998 to identify potential constraints at commercial service airports in the region that might affect their ability to accommodate future commercial aviation demand. This research found that capacity at three other airports in the region could be limited due to existing airfield or other constraints, as follows:

(i) LAX: limited to 96 MAP based on alternatives under consideration in the LAX Master Plan.

(ii) Ontario International Airport: limited to 20 MAP based on potential existing airfield capacity.

(iii) Burbank Airport: limited to 15 MAP based on potential runway capacity and other information provided by airport staff.

No other airports in the region were determined to be capacity limited when compared to potential levels of demand. These assumptions were incorporated into the No Project forecast and the model was rerun. The No Project forecast shows that demand at other airports would increase to absorb demand not accommodated at OCX.

The increase in passenger demand at other airports in the region over the level anticipated under the Proposed Project will increase the number of commercial aircraft operations at

these airports, causing associated increases in the noise from these aircraft operations (see Table 8.2-1 below). The increased travel distances and times required for some passengers to reach these alternative airports would also affect regional transportation and circulation, as well as air quality. These issues are discussed below.

Table 8.2-1
Residential and School Land Uses Within 65 CNEL

Airport	Residential Units	Number of People	Schools
San Diego (1998)	10,300	25,400	8
Burbank	1,400 (Dec. 1998)	4,140 (Dec. 1998)	4 (mid-1989 forecast for 2000)
Oxnard (forecast for 2003)	56	193	0
John Wayne Airport	134	300	0
LAX	31,335	84,054	36[1]
OCX (2020)	0	0	0

Sources: JWA: Noise Abatement Quarterly Report, June 30, 1998.
LAX: Quarterly Report, Second Quarter 1998

[1] Total schools estimated from land use map, 1 not insulated, 35 are sound insulated.

8.2.4.2 General Plan Consistency

This alternative would be incompatible with Policies 13.1 through 13.7 of the County Land Use Element and Policy 5 of the County Public Services and Facilities Element regarding MCAS El Toro as regulated by Measure A. Amendments to the AELUP, Noise Element, Safety Element, and possibly the Land Use Element would be necessary to reflect that the aviation noise contours and associated land use restrictions would no longer be applicable around the El Toro site. Therefore, this alternative would have greater adverse impacts related to General Plan consistency than the Proposed Project. This alternative would not avoid or lessen impacts compared to the project.

8.2.4.3 Transportation and Circulation

The transportation and circulation impacts for the No Project/No Activity Alternative were analyzed based on existing roadway conditions plus committed improvements and OCP-96 development growth for 2020. The AM and PM peak hour and ADT traffic generated by JWA and the former MCAS El Toro site under 2020 No Project/No Activity conditions is summarized in Table 8.2-2. Refer to Section 14.0 in the Traffic Analysis Technical Report (Appendix D) for detailed information on the methodology applied to produce trip generation estimates for the No Project/No Activity Alternative, and for detailed summaries of the No Project/No Activity Alternative traffic volumes and associated LOS for the circulation system in the traffic analysis study area.

Table 8.2-2
Trip Generation Summary - No Project/No Activity Alternative

Project Component	AM Peak Hour			PM Peak Hour			ADT	Existing ADT
	In	Out	Total	In	Out	Total		
El Toro Site	0	0	0	0	0	0	0	25,400
JWA	1,552	1,037	2,589	2,047	2,050	4,097	51,706	47,450
Total	1,552	1,037	2,589	2,047	2,050	4,097	51,706	72,850

In conclusion, the No Project/No Activity Alternative would result in no new or additional local impacts related to transportation and circulation. In comparison, as discussed in detail in Section 4.3.6.6 of this Draft EIR No. 573, as supplemented, under the Proposed Project phasing years, four intersection locations, two arterial roadway segments, one continuous freeway mainline segment, and one freeway ramp would be significantly impacted under Phase 1 conditions (2005); five intersection locations, two arterial roadway segments, one continuous freeway mainline segment, and one freeway ramp would be significantly impacted under Phase 2 conditions (2010); and nine intersection locations, two arterial roadway segments, one continuous freeway mainline segment, and two freeway ramps would be significantly impacted under Phase 3 conditions (2015). At Phase 4 build out, the Proposed Project would result in significant impacts not previously identified at four freeway/tollway mainline segments and four freeway tollway ramps. See Supplemental Analysis, Section 4.3.6.5. In each case, however, the identified impacts will be mitigated to a level below significant during the applicable phasing year (see Section 4.3.7.2, Table 4.3-20).

This alternative would avoid the transportation and circulation impacts of the Proposed Project at the El Toro and JWA sites. However, regional vehicle miles traveled would be greater than the Proposed Project under this alternative. Since the impacts of the Proposed Project would be mitigated to a level of insignificance, this alternative would not avoid a significant impact; however, this alternative would reduce less than significant highway impacts near the El Toro site. In conclusion, the increase in VMT due to this alternative would result in a worse impact than the Proposed Project, and this impact would not be mitigatable except through expansion of airport facilities in the County.

8.2.4.4 Noise

Aircraft Noise

This alternative will not result in an increase in aircraft generated CNEL or SENEL contours at the MCAS El Toro site since no airport would be developed on the MCAS El Toro site. No airport expansion would occur at JWA, and the CNEL contours would be expected to increase over 1998 conditions in proportion to the anticipated growth in activity to JWA's currently authorized service level. This alternative would, however, lead to an increase in the 65 dB CNEL contour at regional airports (see Section 8.2.4.1), which would increase the existing adverse impacts of these airports on noise sensitive land uses (Table 8.2-1).

Therefore, compared to the Proposed Project, this alternative would avoid aviation noise at the El Toro site, but would increase aviation noise impacts on a regional basis.

Ground Transportation

The Proposed Project Noise Study analyzed the potential increase in noise on the road network surrounding the El Toro site and JWA for this alternative. The Federal Highway Administration standard (an increase of 1.5 dB) for a significant noise increase was used in this study. This alternative would not increase noise levels for any roadway link. In comparison, under the Proposed Project, while roadway noise impacts at two roadway links will be significant, these impacts will be reduced to a level below significance with project mitigation.

8.2.4.5 Air Quality

The air quality impacts of the No Project/No Activity Alternatives were identified by analyzing the short-term impacts (construction), regional air quality impacts (total air pollutants emissions), local air quality impacts due to traffic carbon monoxide (CO), and local impacts due to aircraft and associated operations under each development scenario (i.e., Phase 1, Phase 2, Phase 3, and Phase 4).

As summarized below, the No Project/No Activity Alternative would result in greater regional air quality impacts caused by motor vehicle, aircraft, and aviation related activity emissions when compared to the Proposed Project. These impacts would be greater in all phasing years than under the Proposed Project's development scenarios. The reason for these increased air quality impacts results primarily because aviation related activity would reach or exceed the operating capability of many regional airports producing significant delay. Under the Proposed Project condition, air traffic would be efficiently accommodated at JWA and OCX. The No Project/No Activity Alternative, however, would avoid the significant and unavoidable construction impacts of the Proposed Project, the significant and unavoidable local air quality impacts due to aircraft operations at OCX and JWA, and the significant and unavoidable toxic air contaminant impacts of the Proposed Project.

Short-Term Air Quality Impacts (Construction)

Under this alternative, no runway improvements at JWA would be necessary, and there would be no aviation reuse of MCAS El Toro. Additionally, no nonaviation land uses are planned for the El Toro and JWA sites under this alternative. Therefore, short-term construction emissions under this alternative would be less than those of the Proposed Project during any development phase and would not be significant. Similarly, peak daily local emissions, including both equipment exhaust and fugitive dust, would be less than those of the Proposed Project under all development phases and would not be significant. Therefore, compared to all phases of the Proposed Project, this alternative would avoid significant and unavoidable local construction emission impacts of the Proposed Project.

Operational Air Quality Impacts

Emissions Inventories

Emissions projected to occur under the No Project/No Activity Alternative in Phase 2 and Phase 4 of project development in comparison to the Proposed Project are shown in Tables 8.2-3A and 8.2-3B, respectively. As can be seen from the tables provided, the No Project/No Activity Alternative would result in operational emissions impacts that exceed the Proposed Project. Although there is sufficient existing capacity at airports in the region to absorb the projected unconstrained demand without expansion of runway capacity in Orange County, the failure to provide sufficient airport capacity in Orange County to meet the locally generated demand will result in greater average highway trip lengths and, therefore, increased vehicle miles traveled (VMT) by air passengers and shippers. In addition, accommodating future demand without the project at other Basin airports would increase average delay time at those airports. This would result in increased aircraft emissions due to longer taxi times and LTO cycle times. Longer aircraft taxi times generate major increases in the amount of aircraft emissions. Therefore, for the No Project/No Activity Alternative, emissions at other regional airports would be higher per operation than at OCX. All of these factors would result in significant regional air quality emissions for the No Project/No Activity Alternative that exceed the Proposed Project in all phasing years.

Dispersion Analysis

An airport emissions dispersion analysis was conducted for JWA for the No Project/No Activity Alternative. Tables 8.2-4 and 8.2-5 show that no local criteria pollutant hot spots from airport operations were found under this project alternative in Phase 2. In Phase 4, however, there would be one exceedance of the State 1-hour NO_2 standard of Executive Park. Therefore, the No Project/No Activity Alternative would result in a significant local air quality impacts in Phase 4. In comparison, under the Proposed Project, there will several exceedances of the 1-hour State standard for NO_2 projected at OCX and JWA and continued exceedances of the State 24-hour standard for PM_{10} projected at OCX and JWA. Therefore, the No Project/No Activity Alternative would avoid a number of significant and unavoidable local air quality impacts due to aircraft operations at OCX and JWA.

For the No Project/No Activity Alternative, at intersections in the vicinity of JWA, the CAL3QHC model was used to assess the CO concentration.

Tables 8.2-6 and 8.2-7 show that the 1-hour and 8-hour CO concentrations would be below the State and federal CO standards. Therefore, no CO hot spots would occur from vehicular traffic trips under this alternative. Similarly, under the Proposed Project, no CO hot spots would occur from vehicular traffic trips.

Table 8.2-3A
Regionwide Emissions Inventory Phase 2 Proposed Project/No Project (Pounds/Day Unless Noted)

		No Project (Phase 2)							Proposed Project (Phase 2)				
		CO	NO_X	ROC	SO_X	PM_{10}			CO	NO_X	ROC	SO_X	PM_{10}
Aircraft	El Toro	--	--	--	--	--	Aircraft	El Toro	5,175.48	7,877.30	790.56	548.57	96.08
	JWA	7,237.35	3,117.14	415.07	246.83	45.72		JWA	5,749.19	1,267.48	279.81	107.33	22.53
	Other Airports	64,338.22	70,647.13	9,401.21	5,385.93	768.34		Other Airports	57,217.05	62,802.79	8,350.06	4,785.16	683.42
	Total Regional	71,575.57	73,764.27	9,816.28	5,632.76	814.06		Total Regional	68,141.72	71,947.57	9,420.43	5,439.67	802.03
GSE	El Toro	--	--	--	--	--	GSE	El Toro	12,598.35	1,115.99	366.61	55.33	44.04
	JWA	5,914.70	634.43	181.56	16.21	28.08		JWA	3,055.02	422.61	104.15	11.35	18.62
	Other Airports	90,189.58	9,056.56	2,668.50	586.59	332.10		Other Airports	80,258.25	8,059.30	2,374.68	522.02	295.52
	Total Regional	96,104.28	9,690.99	2,850.06	602.80	360.18		Total Regional	95,911.62	9,597.90	2,845.44	588.70	358.18
Energy	El Toro	--	--	--	--	--	Energy	El Toro	70.90	407.70	3.80	41.80	14.00
	JWA	20.30	117.10	1.10	12.00	4.00		JWA	14.70	84.60	0.80	8.70	2.90
	Others	492.00	2,832.00	26.00	290.00	97.00		Others	438.00	2,522.00	24.00	257.10	86.00
	Total Regional	512.30	2,949.10	27.10	302.00	101.00		Total Regional	523.60	3,014.30	28.60	307.60	102.90
Fuel	El Toro	--	--	--	--	--	Fuel	El Toro	--	--	48.94	--	--
	JWA	--	--	10.23	--	--		JWA	--	--	4.76	--	--
	Other Airports	--	--	472.61	--	--		Other Airports	--	--	420.57	--	--
	Total Regional	--	--	482.84	--	--		Total Regional	--	--	474.27	--	--
Airport Roadways	El Toro	--	--	--	--	--	Airport Roadways	El Toro	475.88	87.12	29.98	4.16	4.87
	JWA	147.64	18.07	8.41	0.55	1.15		JWA	70.22	8.96	4.04	0.30	0.56
	Other Airports	3,864.54	803.26	271.90	37.98	51.60		Other Airports	4,811.43	871.30	311.48	38.49	47.16
	Total Regional	4,012.18	821.33	280.31	38.53	52.75		Total Regional	5,357.53	967.38	345.50	42.95	52.59
Airport Parking	El Toro	--	--	--	--	--	Airport Parking	El Toro	335.87	30.36	9.89	2.98	2.77
	JWA	120.73	9.92	16.28	3.01	0.28		JWA	56.58	4.66	7.63	1.41	0.13
	Other Airports	2,492.05	226.97	43.40	51.64	20.38		Other Airports	2,217.64	201.98	38.63	45.95	18.14
	Total Regional	2,612.78	236.89	59.68	54.65	20.66		Total Regional	2,610.09	237.00	56.15	50.34	21.04
Roads	El Toro	--	--	--	--	--	Roads	El Toro[1]	17,062.00 ~~15,350.00~~	5,280.00 ~~4,602.00~~	1,548.00 ~~1,421.00~~	305.00 ~~296.00~~	2,233.00 ~~1,930.00~~
	JWA	6,937.00	2,238.00	600.00	112.00	952.00		JWA	3,244.00	1,047.00	280.00	53.00	445.00
	Other Airports[2]	2,965,980.00 ~~2,960,002.00~~	559,703.00 ~~558,499.00~~	111,572.00 ~~110,864.00~~	45,643.00 ~~45,755.00~~	8,228.00 ~~8,243.00~~		Other Airports[2]	2,947,548.00 ~~2,928,553.00~~	554,910.00 ~~551,497.00~~	110,200.00 ~~107,936.00~~	45,328.00 ~~45,683.00~~	6,487.00 ~~6,536.00~~
	Total Regional[2]	2,972,917.00 ~~2,966,939.00~~	561,941.00 ~~560,737.00~~	112,172.00 ~~111,464.00~~	45,755.00 ~~45,867.00~~	9,180.00 ~~9,195.00~~		Total Regional[2]	2,967,854.00 ~~2,947,147.00~~	561,237.00 ~~557,146.00~~	112,028.00 ~~109,637.00~~	45,682.00 ~~46,032.00~~	9,165.00 ~~8,911.00~~
TOTAL (pounds/day)		**3,147,734.11** ~~**3,141,756.11**~~	**649,403.58** ~~**648,199.58**~~	**125,688.27** ~~**124,980.27**~~	**52,385.74** ~~**52,497.74**~~	**10,528.65** ~~**10,543.65**~~	**TOTAL (pounds/day)**		**3,140,398.56** ~~**3,119,691.56**~~	**647,001.15** ~~**642,910.15**~~	**125,198.39** ~~**122,807.39**~~	**52,111.26** ~~**52,461.26**~~	**10,501.74** ~~**10,247.74**~~
							Change from No Project (pounds/day)		(7,335.55) ~~22,064.55~~	(2,402.43) ~~(5,289.43)~~	(489.88) ~~(2,172.88)~~	(274.48) ~~(36.48)~~	(26.91) ~~(295.91)~~
							Change from No Project (tons/year)		(1,338.74) ~~(4,026.78)~~	(434.44) ~~(965.32)~~	(89.40) ~~(396.55)~~	(50.09) ~~(6.66)~~	(4.91) ~~(54.00)~~
							SCAQMD Threshold for Operation (pounds/day)		550	55	55	150	150

1 Revised calculation of average trip length. This revision does not impact any of the significance determinations made in connection with the project.

2 Typographical correction.

Source: CH2M HILL, P&D Consultants, and LSA Associates, Inc. 2001

Table 8.2-3B
Regionwide Emissions Inventory Phase 4 Proposed Project/No Project (Pounds/Day Unless Noted)

		No Project (Phase 4)						Proposed Project (Phase 4)				
		CO	NO_x	ROC	SO_x	PM_{10}		CO	NO_x	ROC	SO_x	PM_{10}
Aircraft	El Toro	--	--	--	--	--	Aircraft El Toro	7,358.95	13,629.82	1,029.16	859.23	130.05
	JWA	7,061.00	3,025.85	402.78	239.64	44.48	JWA	6,014.95	1,800.92	302.24	146.18	29.64
	Other Airports	76,353.47	83,463.81	11,136.94	6,362.99	908.97	Other Airports	64,573.57	70,877.49	9,423.64	5,400.40	771.29
	Total Regional	83,414.47	86,489.66	11,539.72	6,602.63	953.45	Total Regional	77,947.47	86,308.23	10,755.04	6,405.81	930.98
GSE	El Toro	--	--	--	--	--	GSE El Toro	17,053.53	1,573.31	506.85	75.93	63.69
	JWA	5,610.84	597.89	171.83	14.93	26.54	JWA	4,001.17	481.47	128.31	12.64	21.23
	Other Airports	106,529.38	10,697.31	3,151.94	692.84	391.71	Other Airports	90,572.75	9,095.58	2,679.98	589.11	333.50
	Total Regional	112,140.22	11,295.20	3,323.77	707.77	418.28	Total Regional	111,627.45	11,150.36	3,315.14	677.68	418.42
Energy	El Toro	--	--	--	--	--	Energy El Toro	108.60	624.60	5.80	64.10	21.40
	JWA	31.60	182.20	1.70	18.70	6.20	JWA	20.30	117.10	1.10	12.00	4.00
	Others	641.00	3,691.00	34.00	376.70	126.00	Others	544.00	3,132.00	29.00	319.90	107.00
	Total Regional	672.60	3,873.20	35.70	395.40	132.20	Total Regional	672.90	3,873.70	35.90	396.00	132.40
Fuel	El Toro	--	--	--	--	--	Fuel El Toro	--	--	89.31	--	--
	JWA	--	--	9.14	--	--	JWA	--	--	5.87	--	--
	Other Airports	--	--	558.24	--	--	Other Airports	--	--	474.65	--	--
	Total Regional	--	--	567.38	--	--	Total Regional	--	--	569.83	--	--
Airport Roadways	El Toro	--	--	--	--	--	Airport Roadways El Toro	587.85	119.27	27.04	7.16	9.76
	JWA	117.92	13.70	3.99	0.56	1.17	JWA	75.34	9.02	2.59	0.38	0.76
	Other Airports	3,673.64	745.48	169.04	44.86	60.95	Other Airports	4,370.07	772.62	185.01	43.44	53.23
	Total Regional	3,791.56	759.18	173.03	45.42	62.12	Total Regional	5,033.26	900.91	214.64	50.98	63.75
Airport Parking	El Toro	--	--	--	--	--	Airport Parking El Toro	367.45	31.64	5.07	9.76	3.85
	JWA	96.38	7.40	9.98	3.05	0.28	JWA	61.04	4.69	6.32	1.93	0.18
	Other Airports	2,296.37	197.72	31.70	60.99	24.07	Other Airports	1,952.50	168.12	26.95	51.86	20.47
	Total Regional	2,392.75	205.12	41.68	64.04	24.35	Total Regional	2,380.99	204.45	38.34	63.55	24.50
Roads	El Toro	--	--	--	--	--	Roads El Toro[1]	14,631.00 ~~13,166.00~~	5,781.00 ~~5,116.00~~	1,193.00 ~~1,091.00~~	396.00 ~~390.00~~	2,947.00 ~~2,590.00~~
	JWA	4,569.00	1,848.00	359.00	112.00	946.00	JWA	2,889.00	1,168.00	227.00	71.00	598.00
	Other Airports[2]	2,772,382.00 ~~2,764,036.00~~	495,123.00 ~~493,529.00~~	71,538.00 ~~70,589.00~~	48,963.00 ~~49,075.00~~	8,883.00 ~~8,892.00~~	Other Airports[2]	2,754,719.00 ~~2,722,511.00~~	489,484.00 ~~483,968.00~~	70,413.00 ~~66,692.00~~	48,535.00 ~~48,996.00~~	6,269.00 ~~6,445.00~~
	Total Regional[2]	2,776,951.00 ~~2,768,605.00~~	496,971.00 ~~495,377.00~~	71,897.00 ~~70,948.00~~	49,075.00 ~~49,187.00~~	9,829.00 ~~9,838.00~~	Total Regional[2]	2,772,239.00 ~~2,738,566.00~~	496,433.00 ~~490,252.00~~	71,833.00 ~~68,010.00~~	48,996.00 ~~49,457.00~~	9,814.00 ~~9,633.00~~
TOTAL (pounds/day)		**2,979,362.60** ~~2,971,016.60~~	**599,593.36** ~~597,999.36~~	**87,578.28** ~~86,629.28~~	**56,890.26** ~~57,002.26~~	**11,419.40** ~~11,428.40~~	**TOTAL (pounds/day)**	**2,969,901.07** ~~2,936,228.07~~	**598,870.65** ~~592,689.65~~	**86,761.89** ~~82,938.89~~	**56,590.02** ~~57,051.02~~	**11,384.05** ~~11,203.05~~
							Change from No Project (pounds/day)	(9,461.53) ~~(34,788.53)~~	(722.71) ~~(5,309.71)~~	(816.39) ~~(3,690.39)~~	(300.24) ~~48.76~~	(35.35) ~~(225.35)~~
							Change from No Project (tons/year)	(1,726.53) ~~(6,348.91)~~	(131.89) ~~(969.02)~~	(148.99) ~~(673.50)~~	(54.79) ~~8.90~~	(6.45) ~~(41.13)~~
							SCAQMD Threshold for Operation (pounds/day)	550	55	55	150	150

1 Revised calculation of average trip length. This revision does not impact any of the significance determinations made in connection with the project.

2 Typographical correction.

Source: CH2M HILL, P&D Consultants, and LSA Associates, Inc. 2001

Table 8.2-4
Phase 2 No Project/No Activity Pollutant Concentrations – JWA (Worst Case Operations and Meteorology)

Receptors	Pollutant Concentrations (ppm)								
	CO (ppm)		NO_2 (ppm)		SO_2 (ppm)			PM_{10} (µg/m³)	
	1-Hour[1]	8-Hour[2]	1-Hour[3]	AAM[4]	1-Hour[5]	24 Hour[6]	AAM[7]	24 Hour[8]	AAM[9]
1[10] - Monte Vista High School	5.0	3.0	0.128	0.01505	0.022	0.007	0.002	**84.5**[11]	33.8
2 - Newport Beach Golf Course	5.4	3.0	0.148	0.01511	0.023	0.007	0.002	**84.6**	33.8
3 - Santa Ana Country Club	5.0	3.1	0.128	0.01515	0.023	0.007	0.002	**84.7**	33.8
4 - Residential Area East of Campus Drive	5.5	3.0	0.190	0.01510	0.024	0.007	0.002	**84.7**	33.8
5 - Sheraton Newport Beach	5.7	3.1	0.143	0.01537	0.023	0.007	0.002	**84.9**	33.8
6 - County Superintendent of Schools	5.2	3.1	0.166	0.01554	0.023	0.007	0.002	**85.1**	33.9
7 - Fire Station	6.3	3.4	0.201	0.01748	0.027	0.008	0.002	**85.6**	34.1
8 - Executive Park	6.5	3.5	0.229	0.01614	0.024	0.007	0.002	**85.1**	33.9
9 - Sky Park	5.5	3.1	0.160	0.01530	0.022	0.007	0.002	**84.7**	33.8
Federal Standard	**35 ppm**	**9.0 pm**	**N/A**	**0.0534 ppm**	**N/A**	**0.14 ppm**	**0.030 ppm**	**150 µg/m³**	**50 µg/m³**
State Standard	**20 ppm**	**9.0 ppm**	**0.25 ppm**	**N/A**	**0.25 ppm**	**0.04 ppm**	**N/A**	**50 µg/m³**	**N/A**

Source: CH2M Hill and LSA Associates, Inc., 2001.

NOTE: [1] Includes ambient 1-hour CO concentration of 4.6 ppm and 1-hour CO concentration reported by EDMS.
[2] Includes ambient 8-hour CO concentration of 2.9 ppm and 8-hour CO concentration reported by EDMS.
[3] Includes ambient 1-hour NO2 concentration of 0.089 ppm and 48.9 percent of the 1-hour NOX concentration reported by EDMS.
[4] Includes ambient AAM NO2 concentration of 0.0150 ppm and 48.9 percent of the annual NOX concentration reported by EDMS.
[5] Includes ambient 1-hour SO2 concentration of 0.020 ppm and 1-hour SOX concentration reported by EDMS.
[6] Includes ambient 24-hour SO2 concentration of 0.006 ppm and 24-hour SOX concentration reported by EDMS.
[7] Includes ambient AAM SO2 concentrations of 0.002 ppm and AAM SOX concentration reported by EDMS.
[8] Includes ambient 24-hour PM10 concentration of 84.3 µg/m3 and 24-hour PM10 concentration reported by EDMS.
[9] Includes ambient AAM PM10 concentration of 33.8 µg/m3 and AAM PM10 concentration reported by EDMS.
[10] Receptor number corresponds to Figure 2-12.
[11] Numbers in bold represent concentrations that exceed federal or State standards.

Table 8.2-5
Phase 4 No Project/No Activity Pollutant Concentrations – JWA (Worst Case Operations and Meteorology)

Receptors	Pollutant Concentrations (ppm)								
	CO (ppm)		NO_2 (ppm)		SO_2 (ppm)			PM_{10} ($\mu g/m^3$)	
	1-Hour[1]	8-Hour[2]	1-Hour[3]	AAM[4]	1-Hour[5]	24 Hour[6]	AAM[7]	24 Hour[8]	AAM[9]
1[10] - Monte Vista High School	5.2	3.0	0.176	0.01559	0.031	0.008	0.002	**87.8**	31.5
2 – Newport Beach Golf Course	5.9	3.1	0.220	0.01572	0.038	0.008	0.002	**88.0**	31.5
3 – Santa Ana Country Club	5.4	3.2	0.172	0.01579	0.030	0.008	0.002	**88.2**	31.5
4 – Residential Area East of Campus Drive	5.9	3.1	**0.328**[11]	0.01569	0.049	0.009	0.002	**88.1**	31.5
5 – Sheraton Newport Beach	6.5	3.2	0.214	0.01620	0.035	0.008	0.003	**88.5**	31.6
6 - County Superintendent of Schools	5.5	3.2	0.222	0.01649	0.033	0.008	0.003	**88.6**	31.6
7 - Fire Station	7.7	3.6	**0.367**	0.02070	0.045	0.010	0.003	**89.5**	31.9
8 - Executive Park	8.1	4.0	**0.410**	0.01813	0.048	0.009	0.003	**88.9**	31.7
9 - Sky Park	6.2	3.3	**0.254**	0.01615	0.037	0.008	0.003	**88.2**	31.6
Federal Standard	**35 ppm**	**9.0 pm**	**N/A**	**0.0534 ppm**	**N/A**	**0.14 ppm**	**0.030 ppm**	**150 $\mu g/m^3$**	**50 $\mu g/m^3$**
State Standard	**20 ppm**	**9.0 ppm**	**0.25 ppm**	**N/A**	**0.25 ppm**	**0.04 ppm**	**N/A**	**50 $\mu g/m^3$**	**N/A**

Source: CH2M Hill and LSA Associates, Inc., 2001.

NOTE:
[1] Includes ambient 1-hour CO concentration of 4.6 ppm and 1-hour CO concentration reported by EDMS.
[2] Includes ambient 8-hour CO concentration of 2.9 ppm and 8-hour CO concentration reported by EDMS.
[3] Includes ambient 1-hour NO_2 concentration of 0.092 ppm and 48.9 percent of the 1-hour NO_X concentration reported by EDMS.
[4] Includes ambient AAM NO_2 concentration of 0.0155 ppm and 48.9 percent of the annual NO_X concentration reported by EDMS.
[5] Includes ambient 1-hour SO_2 concentration of 0.023 ppm and 1-hour SO_X concentration reported by EDMS.
[6] Includes ambient 24-hour SO_2 concentration of 0.007 ppm and 24-hour SO_X concentration reported by EDMS.
[7] Includes ambient AAM SO_2 concentrations of 0.002 ppm and AAM SO_X concentration reported by EDMS.
[8] Includes ambient 24-hour PM_{10} concentration of 87.5 $\mu g/m^3$ and 24-hour PM_{10} concentration reported by EDMS.
[9] Includes ambient AAM PM_{10} concentration of 35.1 $\mu g/m^3$ and AAM PM_{10} concentration reported by EDMS.
[10] Receptor number corresponds to Figure 2-12.
[11] Numbers in bold represent concentrations that exceed federal or State standards.

Table 8.2-6
Phase 2 No Project – Predicted One Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF ORANGE[13]												
345	Jamboree & Chapman	7.0	7.0	7.1	6.9	6.9	6.7	6.9	7.0	6.6	6.7	6.7	6.8
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	7.2	7.2	7.2	7.3	7.1	6.9	6.9	7.2	6.9	7.2	6.8	7.0
152	Main & Sunflower	7.1	7.2	6.8	7.2	6.7	7.0	6.6	6.5	6.7	6.9	7.2	7.0
90	Grand & Edinger	7.1	7.1	7.2	7.2	6.8	7.0	6.8	7.2	6.7	7.0	6.8	7.0
114	Red Hill & Dyer/Barranca	7.0	7.1	7.0	7.2	6.7	6.8	6.6	6.8	6.5	6.9	6.7	6.9
	CITY OF TUSTIN[13]												
93	Newport & Edinger	7.3	7.2	6.9	7.1	6.8	7.0	6.6	6.7	6.7	6.8	6.7	7.0
54	Jamboree & El Camino Real	7.1	7.2	7.2	7.0	6.7	7.0	6.6	6.9	6.8	6.7	7.0	7.0
105	Red Hill & Warner	7.0	6.9	7.0	6.9	6.7	6.9	6.6	6.7	6.6	6.9	6.8	6.7
115	Von Karman & Barranca	6.9	6.9	7.0	6.7	6.6	6.6	6.6	6.7	6.5	6.4	6.6	6.6
94	Red Hill & Edinger	6.8	7.0	7.2	6.9	6.8	7.0	6.7	7.0	6.7	6.8	6.8	6.7
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	5.9	6.0	5.7	5.7	5.4	5.6	5.4	5.5	5.6	5.6	5.5	5.8
156	Jamboree & Main	5.9	5.8	5.7	5.5	5.5	5.7	5.5	5.7	5.4	5.5	5.5	5.8
175	Jamboree & Michelson	5.7	5.6	5.7	5.6	5.2	5.6	5.3	5.3	5.5	5.4	5.5	5.5
134	Jamboree & Alton	5.7	5.6	5.8	5.5	5.3	5.5	5.2	5.2	5.3	5.3	5.3	5.6
151	Red Hill & MacArthur	5.8	5.6	5.5	5.6	5.2	5.4	5.3	5.4	5.5	5.5	5.4	5.5
98	Culver & Irvine Center	5.5	5.5	5.7	5.7	5.2	5.4	5.4	5.6	5.2	5.3	5.4	5.5
155	Von Karman & Main	5.5	5.6	5.6	5.6	5.3	5.5	5.2	5.4	5.1	5.4	5.4	5.3
177	Culver & Michelson	5.4	5.5	5.3	5.2	5.0	5.3	5.1	5.2	5.3	5.2	5.4	5.4
195	MacArthur & Jamboree	5.6	5.5	5.4	5.4	5.1	5.4	5.0	5.2	5.3	5.3	5.3	5.3
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	5.4	5.3	5.4	5.4	5.1	5.2	5.0	5.2	5.2	5.2	5.1	5.3

Note: * - Concentrations are in parts per million (ppm); federal 1 hour CO standard is 35 ppm; State 1 hour CO standard is 20 ppm

1 - REC1 SW CORNER
2 - REC2 SE CORNER
3 - REC3 NE CORNER
4 - REC4 NW CORNER
5 - REC5 S. DEPARTURE - MID BLOCK
6 - REC6 N. APPROACH - MID BLOCK
7 - REC7 E. DEPARTURE - MID BLOCK
8 - REC8 W. APPROACH - MID BLOCK
9 - REC9 N. DEPARTURE - MID BLOCK
10 - REC10 S. APPROACH - MID BLOCK
11 - REC11 W. DEPARTURE - MID BLOCK
12 - REC12 E. APPROACH - MID BLOCK
13 - The ambient one-hour CO concentration, 6.1 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years 1996 to 2000, is added to the calculated one hour levels.
14 - The ambient one-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years 1996 to 2000, is added to the calculated one hour levels.

Table 8.2-7
Phase 2 No Project – Predicted Eight Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF ORANGE[13]												
345	Jamboree & Chapman	5.2	5.2	5.3	5.2	5.2	5.0	5.2	5.2	5.0	5.0	5.0	5.1
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	5.4	5.4	5.4	5.4	5.3	5.2	5.2	5.4	5.2	5.4	5.1	5.2
152	Main & Sunflower	5.3	5.4	5.1	5.4	5.0	5.2	5.0	4.9	5.0	5.2	5.4	5.2
90	Grand & Edinger	5.3	5.3	5.4	5.4	5.1	5.2	5.1	5.4	5.0	5.2	5.1	5.2
114	Red Hill & Dyer/Barranca	5.2	5.3	5.2	5.4	5.0	5.1	5.0	5.1	4.9	5.2	5.0	5.2
	CITY OF TUSTIN[13]												
93	Newport & Edinger	5.4	5.4	5.2	5.3	5.1	5.2	5.0	5.0	5.0	5.1	5.0	5.2
54	Jamboree & El Camino Real	5.3	5.4	5.4	5.2	5.0	5.2	5.0	5.2	5.1	5.0	5.2	5.2
105	Red Hill & Warner	5.2	5.2	5.2	5.2	5.0	5.2	5.0	5.0	5.0	5.2	5.1	5.0
115	Von Karman & Barranca	5.2	5.2	5.2	5.0	5.0	5.0	5.0	5.0	4.9	4.8	5.0	5.0
94	Red Hill & Edinger	5.1	5.2	5.4	5.2	5.1	5.2	5.0	5.2	5.0	5.1	5.1	5.0
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	3.8	3.9	3.7	3.7	3.5	3.6	3.5	3.5	3.6	3.6	3.5	3.7
156	Jamboree & Main	3.8	3.7	3.7	3.5	3.5	3.7	3.5	3.7	3.5	3.5	3.5	3.7
175	Jamboree & Michelson	3.7	3.6	3.7	3.6	3.3	3.6	3.4	3.4	3.5	3.5	3.5	3.5
134	Jamboree & Alton	3.7	3.6	3.7	3.5	3.4	3.5	3.3	3.3	3.4	3.4	3.4	3.6
151	Red Hill & MacArthur	3.7	3.6	3.5	3.6	3.3	3.5	3.4	3.5	3.5	3.5	3.5	3.5
98	Culver & Irvine Center	3.5	3.5	3.7	3.7	3.3	3.5	3.5	3.6	3.3	3.4	3.5	3.5
155	Von Karman & Main	3.5	3.6	3.6	3.6	3.4	3.5	3.3	3.5	3.3	3.5	3.5	3.4
177	Culver & Michelson	3.5	3.5	3.4	3.3	3.2	3.4	3.3	3.3	3.4	3.3	3.5	3.5
195	MacArthur & Jamboree	3.6	3.5	3.5	3.5	3.3	3.5	3.2	3.3	3.4	3.4	3.4	3.4
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	3.5	3.4	3.5	3.5	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.4

Note: * - Concentrations are in parts per million (ppm); federal and State 8 hour CO standard is 9 ppm

1 - REC1 SW CORNER
2 - REC2 SE CORNER
3 - REC3 NE CORNER
4 - REC4 NW CORNER
5 - REC5 S. DEPARTURE - MID BLOCK
6 - REC6 N. APPROACH - MID BLOCK
7 - REC7 E. DEPARTURE - MID BLOCK
8 - REC8 W. APPROACH - MID BLOCK
9 - REC9 N. DEPARTURE - MID BLOCK
10 - REC10 S. APPROACH - MID BLOCK
11 - REC11 W. DEPARTURE - MID BLOCK
12 - REC12 E. APPROACH - MID BLOCK
13 - The ambient eight-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.
14 - The ambient eight-hour CO concentration, 2.9 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.

Toxic Air Contaminants

Under this alternative, no runway improvements at JWA would be necessary and there would be no aviation reuse of MCAS El Toro. In addition, no nonaviation uses are planned. Therefore, toxic air contaminant impacts would likely be less than under the Proposed Project.

8.2.4.6 Topography

The No Project/No Activity Alternative would not involve construction at the MCAS El Toro site and, therefore, would not result in impacts related to topography. Therefore, this alternative would avoid topographic impacts of the Proposed Project at the El Toro site. However, since the project impacts are insignificant, no significant impacts would be avoided.

Under the No Project/No Activity Alternative, no changes would be made to existing operations at JWA. Therefore, no changes to existing topographic conditions at JWA would occur. This is also the case under the Proposed Project.

8.2.4.7 Soils, Geology and Seismicity

The No Project/No Activity Alternative would not involve construction or development at MCAS El Toro, and would therefore not result in impacts related to soils or geologic features. Since MCAS El Toro would be closed and remain vacant and unoccupied under this scenario, it would not expose residents, employees or visitors to potential seismic effects.

Under the No Project/No Activity Alternative, no changes would be made to existing operations at JWA. Therefore, no changes to existing conditions regarding soils, geologic features or seismicity would occur at JWA.

This alternative would avoid impacts of the Proposed Project at the El Toro site. However, since the project impacts are insignificant, no significant impacts would be avoided.

8.2.4.8 Hydrology and Water Quality

Under the No Project/No Activity Alternative, existing on-base flooding would continue, and necessary improvements would not be made. In addition, improvements such as Marshburn Channel would not be made and regional flood control plans would not be implemented. In contrast, under the Proposed Project, improvements to the existing storm drain system at MCAS El Toro will be made resulting in beneficial impacts.

No groundwater will be pumped from the MCAS El Toro site under this alternative so there will be no impacts to local groundwater levels or basin storage under this alternative.

Groundwater quality impacts under this alternative will be similar to those discussed for the Proposed Project.

With respect to water quality, under the No Project/No Activity Alternative, sedimentation impacts due to erosion at the MCAS El Toro site would be significant. In comparison, under the Proposed Project, improvements to the drainage system will reduce water quality impacts to a level below significant.

Under this alternative, JWA will require no new construction. Therefore, this alternative will not result in impacts related to hydrology and water quality.

In summary, this alternative would result in worse impacts than the project, and would not avoid or lessen project impacts.

8.2.4.9 Biological Resources

Under the No Project/No Activity Alternative, the MCAS El Toro site would remain vacant and undeveloped, which would not result in direct adverse impacts to biological resources. There would be no improvements to channels or streambeds, and they would be retained at the MCAS El Toro site. However, agricultural activities would cease, and foraging would not occur. Depending upon the amount of time that this alternative continued, some areas may become more naturalized, and some wildlife may increase in numbers as a result. There would be no aircraft flyovers in the federal Habitat Reserve as part of this alternative. Under the Proposed Project, however, a Wildlife Habitat Area will be created. Consequently, no beneficial impacts associated with the creation of coastal sage scrub on the eastern portions of the MCAS El Toro site will result under the No Project/No Activity Alternative. This alternative would not result in any project impacts at the El Toro site, but since the project would have no significant impacts, this alternative would not avoid any identified significant impacts. This alternative would preclude implementation of the Wildlife Habitat Area; therefore, this alternative would have a significant adverse regional wildlife impact.

Under the No Project/No Activity Alternative for JWA, there would be no adverse biological resource impacts at JWA or in Upper Newport Bay, since there is no physical improvements and no substantial change in aircraft operations. The current indirect impacts on biological resources in Upper Newport Bay result from existing commercial operations at JWA. These impacts include noise, motion, and startle effects from direct aircraft flyovers. These impacts would continue under the No Project/No Activity Alternative. This alternative would not avoid or lessen these impacts compared to the project.

8.2.4.10 Public Services and Utilities

Under the No Project/No Activity Alternative, the MCAS El Toro site would remain vacant and undeveloped, which would require no utilities. However, a large-scale, vacant site with standing buildings, such as the El Toro site, would require some form of police security, and a plan to utilize nearby fire stations for fire and emergency medical services. However, the site would generate no revenues to offset costs requiring a subsidy from federal and/or local agencies. The lack of police and fire services under the No Project/No Activity Alternative results in significant adverse impacts. In addition, the proposed OCFA station on Irvine Boulevard that is part of the Proposed Project would not be developed, and OCFA would be required to obtain another site for relocation of the Spectrum/Lake Forest temporary OCFA station. In addition, the candidate OCFA station site in Planning Area 4 would not be developed, and OCFA would be required to obtain another site to serve the Irvine area west of the El Toro site. This alternative would preclude all the public facilities proposed in the ASMP, which would be a significant adverse impact to State, County, and special district operators.

JWA would remain status quo operations, and therefore, no change to the existing public service and utilities conditions would occur.

With respect to utilities, as described in Section 4.10 (Public Services and Utilities), the Proposed Project is not anticipated to result in significant adverse impacts related to utilities. Therefore, the No Project/No Activity Alternative would not avoid a significant impact. Utilities demand at JWA under the No Project/No Activity Alternative would be similar to existing demand and could be served without significant adverse impacts after mitigation, similar to the Proposed Project.

In summary, this alternative would not avoid impacts, but would lessen impacts compared to the project. However, this alternative would generate new, significant, adverse impacts by precluding all the public facilities included in the ASMP.

8.2.4.11 Natural Resources and Energy

As noted in Section 4.11 (Natural Resources and Energy), the Proposed Project would not result in significant adverse impacts to natural resources and energy, with the exception of impacts to consumption of jet fuel in the region (when compared to existing conditions) and to agricultural resources at MCAS El Toro, which could not be mitigated to below a level of significance. This alternative anticipates no activity at the El Toro site, so all agricultural operations would cease. However, the Prime Agricultural Soils would not be lost to development. There are no natural or agricultural resources at JWA.

Under this alternative, energy consumption associated with construction activities at El Toro would be eliminated, and this component of the alternative's energy consumption would be less than that of the Proposed Project. From a regional standpoint, however, this alternative

would not meet the forecasted increase in air service demand, a substantial portion of which would have been met by the Proposed Project. Under this circumstance, it would be necessary for the shortfall in air service demand to be met at other regional airports which, in turn, would entail energy (jet fuel) consumption on a par with that of the Proposed Project. As noted in Section 4.11, if for any reason the regional demand for air passenger and cargo service was not fully met, the Proposed Project would have a greater impact on consumption of jet fuels than the No Project/No Activity Alternative. In addition, providing air services equivalent to those of the Proposed Project at other regional airports also could increase overall highway travel-related fuel consumption, as air travelers drive to other, more distant airports within the ASA. Consequently, the long-term regional energy consumption implications of this alternative will be equivalent to, and possibly greater than, those of the Proposed Project, so long as regional air passenger and air cargo demand is met elsewhere.

In summary, this alternative would avoid the loss of Prime Agricultural Soils and lessen impacts on energy resources compared to the Proposed Project.

8.2.4.12 Aesthetics, Light and Glare

The No Project/No Activity Alternative would eliminate all activities and potential revenue for maintenance activities and lead to decay and vandalism. This would result in a significant adverse impact on aesthetics. No new or additional light or glare impacts would occur at either the El Toro site or the JWA site. Although this alternative would decrease the level of light and intensity of glare at El Toro, this was not identified as a potentially significant impact under the Proposed Project.

In summary, this alternative would have significant adverse aesthetic impacts not identified under the Proposed Project.

8.2.4.13 Cultural Resources

With the No Project/No Activity Alternative, no future uses would be developed on the former Marine base site. Any cultural resources on the site would not be disturbed under the No Project/No Activity Alternative. The Proposed Project would also have no significant impacts on cultural resources; therefore, this alternative would not avoid project impacts.

The No Project/No Activity Alternative anticipates status quo operations at JWA. As such, there would be no additional or new impacts on cultural resources in the JWA area. Similarly, the Proposed Project would not impact cultural resources in the JWA area.

8.2.4.14 Recreation

Assuming no future development of the MCAS El Toro site under the No Project/No Activity Alternative, there would not be any physical impacts to area recreational facilities (trails and parks). However, under the No Project/No Activity Alternative, the recreational

facilities proposed as part of the project at the El Toro site would not be provided. The demand for these recreational uses in South County would be increased. This alternative would not avoid impacts, but would significantly reduce recreational facilities, which would be a significant adverse impact of this alternative.

At JWA, status quo operations would continue under this alternative, and no additional impacts or changes to existing impacts on use of recreational facilities in the area would occur.

8.2.4.15 Public Health and Safety

Aviation Safety

Under the No Project/No Activity Alternative, the potential air carrier and air cargo accident risks at JWA would increase over the Proposed Project by approximately 40.9% to reflect the number of increasing aviation activity at JWA and the potential accident risks for general aviation at JWA would slightly increase by 2.1% correspondingly. Since there would be no aviation activity at OCX, there would be no aviation risks. Compared to the Proposed Project, this alternative would avoid impacts at the El Toro site, but would increase impacts at JWA.

This alternative would avoid the health risks of aviation toxic air contaminants at the El Toro site, but increase them at JWA compared to the project.

8.2.4.16 Hazardous Materials and Hazardous Wastes

Under the No Project/No Activity Alternative, no new construction would occur at the MCAS El Toro site and JWA would continue to operate at 8.4 MAP. Remedial investigations and response actions would continue at all IRP sites at El Toro, consistent with the current program requirements of industrial cleanup standards. This is also the case under the Proposed Project.

Under the No Project/No Activity Alternative, no new hazardous materials would be used or stored and no new hazardous waste would be generated from the El Toro site. Hazardous waste handling practices would remain unchanged at JWA. Likewise, there would be no impacts associated with the new use of hazardous materials or new generation of hazardous waste materials at the El Toro site under the Proposed Project.

In comparison to the Proposed Project, over the long term, existing structures with Asbestos-Containing Building Materials (ACBMs) and lead-based paint would no longer be maintained under the No Project/No Activity Alternative. Structures containing asbestos and lead paint would deteriorate over the long term, a condition which could represent a human health hazard. This would be a significant adverse impact associated with this alternative.

This alternative would avoid new hazardous materials impacts, but would result in worse asbestos and lead paint hazards compared to the project.

8.2.4.17 Socioeconomics

This alternative would result in a reduction of 24,300 jobs compared to the Proposed Project. Under this alternative, an estimated 5,200 jobs would be generated at JWA, a net increase of 3,100 jobs over existing 1998 conditions at JWA. However, this would be a significant reduction from the project case.

As with the Proposed Project, economic activity at JWA under the No Project/No Activity Alternative, as well as expenditures by visitors arriving by air through JWA, would stimulate additional off-site job growth. However, the total number of on-site and off-site jobs stimulated by the airport system would be significantly lower under the No Project/No Activity Alternative than under the Proposed Project.

Given the fewer number of jobs generated under this alternative, at 5,200 jobs versus 29,500 jobs under the Proposed Project, the magnitude of impacts related to induced growth or concentration of population and employment in the area, and increasing demand for housing, including low and moderate income housing, beneficial socioeconomic impacts would be significantly lower under the No Project/No Activity Alternative than under the Proposed Project.

In summary, this alternative would not avoid or lessen adverse impacts compared to the Proposed Project. This would be true under all development scenarios.

8.2.4.18 Economic Implications

To provide a point of comparison regarding the potential unrealized economic benefits to Orange County associated with the No Project/No Activity Alternative, the level of economic benefits generated under this scenario was also estimated.

Without the development of commercial aviation facilities at MCAS El Toro, the Orange County air service deficiencies are projected to increase significantly by 2020, even if JWA were to expand to its maximum passenger capability. In 2020, the air passenger capacity deficiency at Orange County airports would range from 9.2 to 14.8 million origin and destination passengers (excluding connecting passengers) depending on the extent to which JWA could be expanded. The 2020 air cargo deficiency would be approximately 2.0 million tons without development of OCX.

The potential economic implications associated with the No Project/No Activity Alternative are twofold. First, passengers served in the year 2020 in Orange County would be reduced from 34.2 MAP to 8.4 MAP, leading to substantial reductions in the output, income, and

employment associated with the direct (provision of service) activity. Second, while the air passengers and cargo projected to use OCX and JWA under the Proposed Project could be accommodated at other airports in the region, there would be some reduction in the level of visitor expenditures in Orange County from these air passengers, as well as a potential loss of economic competitiveness for the County.

Direct (provision of service) benefits to Orange County's economy generated by the No Project/No Activity Alternative in 2020 are projected to amount to $1.3 billion in output; $496 million in personal income; and 13,600 jobs. In terms of potential unrealized direct economic benefits, in 2020 the No Project/No Activity Alternative generates $2.9 billion *less* in total output, $1.2 billion *less* in personal income, and 32,000 *fewer* jobs than the airport related direct (provision of service) benefits associated with the Proposed Project.

Indirect benefits under the No Project/No Activity Alternative would be generated by use of aviation services provided at JWA. These use of service benefits include expenditures by visitors arriving on commercial and general aviation flights at JWA, aircrew layovers from commercial flights using JWA, and revenue to local travel agencies from Orange County residents booking flights from JWA. The total economic benefits (including indirect and induced activity) generated by use of service provided at JWA in 2020 under the No Project/No Activity Alternative amounts to 34,100 jobs, $784 million in personal income, and $1.9 billion in output.

The total economic benefits (including indirect and induced activity) generated by both provision and use of service provided at JWA in 2020 under the No Project/No Activity Alternative amounts to 47,700 jobs, $1.3 million in personal income, and $3.2 billion in output. In 2020 the No Project/No Activity Alternative generates $6.5 billion *less* in total output, $2.7 billion *less* in personal income, and 98,000 *fewer* jobs than the benefits associated with the Proposed Project.

However, these differences overstate the level of potential unrealized indirect (use of service) economic benefits associated with the No Project/No Activity Alternative. It is anticipated that air passengers projected to use OCX and JWA under the Proposed Project could be accommodated at other airports in the region under the No Project/No Activity Alternative. Thus, the visitors to Orange County expected to use OCX and JWA under the Proposed Project will still spend time and money in Orange County under the No Project/No Activity Alternative.

As regional ground access travel times increase, which regional transportation planning agencies expect will occur, reaching Orange County from airports outside of the County will become less convenient and more time-consuming. Because visitors (both business and pleasure) to the region arriving by air desire convenient, fast transportation between their origin and destination, this will place leisure and business destinations in Orange County at a competitive disadvantage in the region, potentially leading to reductions in the amount of time spent (and associated expenditures) in Orange County under the No Project/No Activity Alternative.

There is no reliable method to quantify this reduction in visitor expenditures caused by less convenient access to the County by air passengers. However, the magnitude of the impact could be significant, and would result in economic benefits generated by visitors to Orange County arriving by air that are less than the level estimated under the Proposed Project.

8.2.4.19 Risk of Upset

Implementation of the No Project/No Activity Alternative will not result in significant adverse impacts to public health and safety related to risk of upset conditions. This alternative would avoid impacts compared to the Proposed Project. However, since the Proposed Project impacts are insignificant after mitigation, no significant impacts would be avoided by this alternative.

8.2.5 Conclusions

The No Project/No Activity Alternative would:

(i) Not meet any of the general project objectives, and would not meet the aviation objectives relating to passenger and cargo demand, service opportunities, industry competition, economic growth, business activities, existing land use restrictions, or General Plan implementation;

(ii) Not avoid impacts on land uses, General Plan consistency, and regional air quality emissions;

(iii) Result in new or additional significant adverse impacts to regional VMT, regional air quality emissions, hydrology, public services, aesthetics, recreation, aviation safety at JWA, asbestos and lead paint hazards, and economics; and

(iv) Avoid or lessen impacts on topography; soils, geology, and seismicity; aviation noise at the El Toro site, including sleep disturbances and recreation uses; construction related air quality impacts; toxic air contaminants at El Toro; local air quality impacts at OCX due to aircraft operations; utilities; Prime Agricultural Soils; energy resources; aviation safety at El Toro; new hazardous materials and wastes; and risk of upset. However, the Proposed Project would have no significant impact after mitigation in these categories except for sleep disturbance, jet fuel consumption, local air quality, construction related air quality, toxic air contaminants, and agricultural resources.

In summary, the No Project/No Activity Alternative would avoid unmitigatable project impacts on agricultural resources, local air quality impacts at OCX, toxic air contaminants near the El Toro site, and noise impacts on sleep disturbance and recreation uses. However, this alternative would increase significant aviation noise and air quality impacts at regional airports, including toxic air contaminants and sleep disturbance due to increased service

levels at other regional airports. This alternative would result in new or additional impacts in several categories, including significant increases in regional VMT and regional air quality emissions as a result of the failure to meet the locally generated demand in Orange County. Specifically, under the No Project/No Activity Alternative, there will be greater average highway trip lengths and, therefore, increased VMT by air passengers and shippers. In addition, accommodating Orange County demand at other airports in the region would increase average delay time at those airports resulting in increased aircraft and GSE emissions.

8.3 ETRPA NONAVIATION PLAN ALTERNATIVE

This section presents the potential impacts of the ETRPA Nonaviation Plan Alternative as measured against the existing setting, as well as a comparison of the alternative's impacts to those of the Proposed Project at build out. In those instances in which the comparison of the alternative to the Proposed Project is materially affected by the phasing of the project, i.e., in those instances in which the impacts of the Proposed Project during the phasing years are materially different from those impacts at year 2020, a comparison of the alternative's impacts to those of the Proposed Project for the applicable phasing year is also provided.

8.3.1 Aviation Uses

No aviation reuse activities are proposed for MCAS El Toro under the ETRPA Nonaviation Plan Alternative.

8.3.2 Nonaviation Revenue Support Uses

The El Toro Reuse Planning Authority (ETRPA), composed of the cities of Irvine, Lake Forest, Dana Point, Laguna Beach, Laguna Hills, Laguna Niguel, and Mission Viejo, prepared a nonaviation plan (Millennium Plan, April 1998) for the El Toro site. In October of 1997, the Board of Supervisors directed that, if ETRPA timely delivered to the County a nonaviation development proposal for El Toro in form and detail adequate for analysis in the Master Development Plan EIR, the proposal would be analyzed as an alternative in the EIR. The Board also directed that environmental comparison to the Proposed Project in the EIR be provided on all environmental categories where the nonaviation alternative would result in significantly different impacts than the Proposed Project. At a minimum, the alternative will be analyzed for noise, air quality, and traffic impacts.

EIR No. 563 included analysis of a nonaviation development plan for the El Toro site (Alternative C), which was analyzed at a level of detail equal to the aviation alternatives (Alternatives A and B). The EIR No. 563 nonaviation alternative included a land use mix similar in key areas to the ETRPA Nonaviation Alternative. While there are differences in the individual land uses and land use locations, the overall objective of both alternatives is similar; that is, to establish a nonaviation planned community with a mix of residential, employment, institutional, and open space/recreation uses, including a major visitor serving commercial use component. In its certification of Final EIR No. 563, the LRA determined that the nonaviation alternative would not meet the objectives of the project and would have certain impacts greater than the CRP.

Since the nonaviation alternative was rejected during certification of Final EIR No. 563, the nonaviation plan is not required to be carried forward for analysis in Draft EIR No. 573. However, the LRA directed that the nonaviation alternative will be analyzed in case an aviation plan is determined to be infeasible at a future date.

The land uses assumed on the former MCAS El Toro site under this alternative are organized around four districts, three of which would be developed with mixes of various land uses and are referred to as an Arts and Culture district, an Education, Research and Technology (ERT) district, and a Sports and Entertainment district. The fourth district is designated as an undeveloped Habitat Reserve district, which would not generate an appreciable amount of vehicle traffic. Each of the three developed districts contains a mixed-use village as its core activity center. The mixed-use villages are envisioned as intensive activity areas composed of both residential and nonresidential uses that establish the theme for each district. Figure 8-1 depicts the ETRPA Nonaviation Plan Alternative.

Under this alternative and as in the No Project/No Activity Alternative, JWA is assumed to continue providing general aviation and short and medium-haul domestic air passenger services at a service level of 8.4 MAP (an average of 23.0 thousand passengers per day), all of which are non-connecting passengers. JWA is also assumed to continue to annually handle approximately 6.4 thousand tons of domestic belly cargo and 13.6 thousand tons of air express cargo.

8.3.3 Phasing: Build Out Over 20 Years

Development and build out of this alternative is proposed to occur over a 20-year period, in four 5-year phases. However, the feasibility of this absorption rate for the proposed uses is questionable. Phase One development would encompass a 1,826-acre area north and south of Irvine Boulevard at the western boundary of MCAS El Toro nearest the Eastern Transportation Corridor. Uses designated for the Phase One area include industrial, high-technology, and commercial uses, as well as a small portion of the ERT Village. Other Phase One uses include a sports stadium, auto center, office and industrial uses, and a 995-acre habitat area.

Phase Two includes an Arts and Culture Village, park space (Central Park), and a resort hotel/conference center with related golf course. This phase also includes development of residential areas related to the Village and areas adjacent to the Village.

Phase Three includes ERT uses in the southwest corner of MCAS El Toro and Entertainment/Mixed-Use areas. Phase Three developments also include an Outdoor Sports Complex and single-family residential development north of Irvine Boulevard.

Phase Four development includes additional residential areas near Central Park and south of Trabuco Drive. Also included are residential areas adjacent to the existing golf course and research and development areas. Phase Four also plans for the final development of Central Park.

8.3.4 Attainment of Project Objectives

This alternative would meet the general project objectives of development and surrounding land use compatibility. The ETRPA Nonaviation Plan Alternative would not meet the general project objectives of economic opportunities, timely implementation, and special planning of the aviation related objectives, with the exception of preserving general aviation opportunities (but not the objective of enhancing these opportunities).

8.3.5 Environmental Impacts of the ETRPA Nonaviation Plan Alternative

8.3.5.1 Land Use

Under the ETRPA Nonaviation Alternative, the MCAS El Toro site is proposed to be developed with a variety of nonaviation uses including parks and open space, residential areas, employment uses, and an arena/stadium. As with the Proposed Project, the proposed perimeter land uses along the northeast and southeast portions of the site are primarily open space such as golf, habitat, and park areas. These uses are similar in intensity or less intense than the existing and General Plan approved uses off-site. The northwest portion of the MCAS El Toro site under this alternative would be developed with business, technology, education research and development and village uses. Villages include a range of residential densities, retail, office, and hotel uses. These uses are consistent with the employment uses provided for in the Orange County General Plan in the adjacent areas. The ETRPA Nonaviation Alternative perimeter uses for the southwest portion of the site, abutting the business park uses in the City of Irvine, include business park, transportation center (adjacent to the Irvine Transportation Center), entertainment uses, and a stadium near the confluence of I-5 and I-405. These proposed uses are compatible with the existing business park/light industry in this area. There are no significant land use conflicts associated with the proposed land uses of the ETRPA Nonaviation Alternative.

This alternative does not include any agricultural uses, therefore there is no impact of agriculture on more urbanized development. The loss of agricultural acreage is addressed in Section 8.12.4.11, Natural Resources and Energy. Concerns that an airport would attract undesirable land uses such as sexually oriented businesses is not an issue since there is no airport use proposed in the ETRPA Nonaviation Alternative.

The ETRPA Nonaviation Alternative does not address any changes to JWA, therefore, the impacts are the same as the No Project/No Activity Alternative E. There are no significant land use impacts at JWA associated with the ETRPA Nonaviation Alternative.

In summary, the impacts of this alternative related to land use are generally less than or comparable to the impacts under the Proposed Project.

8.3.5.2 General Plan Consistency

The ETRPA Nonaviation Alternative would require several General Plan amendments. This alternative is not consistent with the current Public Facilities and Open Space designations of the Orange County General Plan, and would require an amendment to the Land Use Element. An amendment to the Noise Element of the County General Plan and the AELUP would be needed to eliminate aviation noise contours relating to the MCAS El Toro site. The ETRPA Nonaviation Alternative is not consistent with the City of Irvine General Plan. The ETRPA Nonaviation Alternative would require amendments to the same elements as the Proposed Project with the exception of the Safety Element of the Orange County General Plan and, therefore, would result in comparable impacts to General Plan consistency as the Proposed Project.

8.3.5.3 Transportation and Circulation

The transportation and circulation impacts with full build out of the ETRPA Nonaviation Plan Alternative were analyzed for two scenarios. The first scenario analyzed the effects of the alternative on the existing roadway system without any mitigating improvements and without the impacts of committed growth and development, for the purpose of determining the significance of this alternative's impacts. In order to identify specific project related roadway improvements required with full build out of the ETRPA Nonaviation Plan Alternative, the second scenario analyzed the effects of the alternative based on existing roadway conditions plus committed improvements and foreseeable development as represented by OCP-96 development growth for 2020. Traffic generation characteristics of JWA and the former MCAS El Toro site under this alternative were determined according to two components: 1) the ERTPA Nonaviation Plan Alternative land uses at the former MCAS El Toro site, and 2) aviation uses at JWA.

The AM and PM peak hour and ADT trips generated by the nonaviation land uses at the former MCAS El Toro site and by the aviation operations at JWA with build out of this alternative are summarized in Table 8.3-1. Refer to Section 13.0 in the 1999 Traffic Analysis Technical Report for detailed information on the methodology applied to produce trip generation estimates for the ETRPA Nonaviation Plan Alternative.

Table 8.3-1
Trip Generation Summary - ETRPA Nonaviation Plan Alternative

Project Component	AM Peak Hour			PM Peak Hour			Average Daily Traffic
	In	Out	Total	In	Out	Total	
Former MCAS El Toro Site							
ETRPA Nonaviation Plan Alternative Land Uses	23,778	7,421	31,199	11,756	25,155	36,911	339,616
JWA	1,552	1,037	2,589	2,047	2,050	4,097	51,706
TOTAL	25,330	8,458	33,788	13,803	27,205	41,008	391,322

The circulation plan that is proposed to provide access to the former MCAS El Toro site as well as to facilitate the project's on-site circulation needs under this alternative is described in detail in Section 13.0 of the 1999 Traffic Analysis Technical Report. The plan is comprised of a number of arterial roads proposed to be constructed both on- and off-site, and an ETC East Leg access system that provides full access at Trabuco Road and improved access at Irvine Boulevard. No changes to the connections which currently provide access between JWA and the surrounding circulation system are envisioned with development of this alternative.

Existing Conditions Plus Alternative Build Out Impact Analysis

The impacts of the ETRPA Nonaviation Plan Alternative on existing conditions were identified by superimposing full build out of the project onto the existing circulation setting. This scenario analyzes the impacts of the project without any mitigating improvements and without the impacts of committed growth and development, and is intended to identify the uniquely applicable potential significant effects of the alternative for the purpose of determining the significance of the alternative's impacts.

The on-site and site access plans for this alternative were applied in the existing plus project analysis with the exception of the ETC access system improvements (since the ETC had not yet been constructed under 1997 conditions) and road extensions associated with the El Toro circulation plan which assume unplanned off-site alignments. The resulting existing plus project peak hour LOS were compared with corresponding results for existing conditions (refer to Section 13.0 in the 1999 Traffic Analysis Technical Report for detailed summaries of the existing plus project traffic volumes and LOS as well as comparisons between existing and existing plus project conditions for intersections and arterial roadways within the traffic analysis study area, and refer to Section 13.0 in the 2001 Traffic Analysis Technical Report Addendum for comparable information for freeway/tollway mainline segments and freeway/tollway ramps within the traffic analysis study area). Table 8.3-2 summarizes the intersection locations, arterial roads, freeway ramps, and freeway mainline segments that are significantly impacted under existing plus ETRPA Nonaviation Plan Alternative conditions.

This scenario (i.e., build out of the 20 year project without the consideration of committed improvements to the roadway network or the impacts of other growth and development) will never actually occur and is analyzed to determine the significance of this alternative's potential traffic impacts. Potential impacts identified in the existing plus ETRPA Nonaviation Plan Alternative analysis would be mitigated through the implementation by others of committed (non-project related) roadway improvements during the actual phased development of this alternative and through the implementation of specific project mitigation measures identified based on the existing plus committed impact analysis that is summarized below for this alternative.

Table 8.3-2
Existing Plus ETRPA Nonaviation Plan Alternative Impact Summary

Location	Jurisdiction	Location	Jurisdiction
IMPACTED INTERSECTIONS			
Bake & Portola	County	Jeffrey & I-405 SB Ramps	Irvine
E. Central Park & Irvine	County	Jeffrey & Walnut/I-5 SB	Irvine
Millennium & Barranca	County	Sand Canyon & I-5 NB Ramps	Irvine
Millennium & Central Park	County	Sand Canyon & I-5 SB Ramps	Irvine
Millennium & Irvine	County	Technology & Barranca	Irvine
Millennium & Jeronimo	County	Irvine Center & Lake Forest	Irvine/ Laguna Hills
Millennium & Marine	County	Bake & Irvine/Trabuco	Irvine/ Lake Forest
Millennium & Rockfield	County	Bake & Jeronimo	Irvine/ Lake Forest
Research & Irvine	County	Bake & Toledo	Irvine/ Lake Forest
Sand Canyon & Trabuco	County	Jamboree & Irvine	Irvine/Tustin
Trabuco & Irvine	County	La Paz & Cabot/I-5 SB	Laguna Hills
W. Central Park & Irvine	County	Bake & Commercentre	Lake Forest
W. Central Park & Portola	County	El Toro & Rockfield	Lake Forest
Alton & Irvine	County/Irvine	Lake Forest & Jeronimo	Lake Forest
Alton & Toledo	Irvine	Lake Forest & Rockfield	Lake Forest
Bake & I-5/I-405 NB Ramps	Irvine	Lake Forest & Trabuco	Lake Forest
Bake & I-5/I-405 SB Ramps	Irvine	Los Alisos & Muirlands	Lake Forest/ Mission Viejo
Bake & Rockfield	Irvine	Alicia & Jeronimo	Mission Viejo
I-5 HOV Ramps & Barranca	Irvine	Alicia & Muirlands	Mission Viejo
I-5 NB Ramps & Alton	Irvine	La Paz & Muirlands/I-5 NB	Mission Viejo
Jeffrey & Alton	Irvine	Newport & Old Irvine	Tustin
Jeffrey & I-405 NB Ramps	Irvine		
IMPACTED ARTERIAL ROADS			
Irvine (Jeffrey to Research)	County	Laguna Canyon (south of El Toro)	County/ Laguna Beach
Irvine (Millennium to Trabuco)	County	Irvine (Alton to Bake)	Irvine
Portola (W. Central Park to FTC)	County	Sand Canyon (Trabuco to I-5)	Irvine
Laguna Canyon (I-405 to SR-73)	County/Irvine	Bake (north of Irvine/Trabuco)	Irvine/ Lake Forest
IMPACTED FREEWAY SEGMENTS			
I-5 (Sand Canyon to north of I-5)	Caltrans	SR-55 (I-5 to MacArthur)	Caltrans
I-405 (MacArthur to north of SR-55)	Caltrans	SR-55 (I-405 to SR-73)	Caltrans
IMPACTED FREEWAY RAMPS			
I-5 at Bake (SB Loop On-Ramp)	Caltrans/Irvine	I-5 at Sand Canyon (SB Off-Ramp)	Caltrans/ Irvine
I-5 at Bake (NB Direct On-Ramp)	Caltrans/Irvine	I-405 at Sand Canyon (NB Direct On-Ramp)	Caltrans/ Irvine
I-5 at Jeffrey (SB Off-Ramp)	Caltrans/Irvine	SR-133 at Barranca (SB On-Ramp)	Caltrans/Irvine
I-5 at Sand Canyon (NB On-Ramp)	Caltrans/Irvine	I-5 at La Paz (SB Off-Ramp)	Caltrans/ Laguna Hills

Alternative Build Out Impact Analysis

In order to identify project impacts that require specific project related roadway improvements, traffic conditions were analyzed based on build out of the ETRPA Nonaviation Plan Alternative. The traffic forecasts were prepared based on the circulation system that is committed to be in place within the study area by 2020 and OCP-96 development growth for 2020. Peak hour levels of service with and without the ETRPA Nonaviation Plan Alternative were compared in order to identify the locations on the existing plus committed circulation system that require specific project related improvements to address the traffic impacts of the ETRPA Nonaviation Plan Alternative.

Table 8.3-3 summarizes the intersection locations, arterial road and freeway/tollway ramps which are significantly impacted by this alternative at build out (refer to Section 13.0 in the 1999 Traffic Analysis Technical Report for detailed summaries of the traffic volumes and LOS as well as comparisons between existing plus committed conditions with and without this alternative for intersections and arterial roadways within the traffic analysis study area, and refer to Section 13.0 in the 2001 Traffic Analysis Technical Report Addendum for comparable information for freeway/tollway mainline segments and freeway/tollway ramps within the traffic analysis study area). The summary table also identifies circulation improvements which serve as mitigation measures for this alternative's impacts as well as the project's obligation (full share or fair share) to implement the proposed mitigation improvements.

Implementation of the circulation improvements identified in Table 8.3-3 would effectively mitigate to a level of insignificance all of the project impacts identified with project conditions with the exception of the intersection of Bake Parkway and the I-5/I-405 northbound ramps. As noted in the summary table, no feasible improvements that would address the impacts of this alternative were able to be identified at this location.

Table 8.3-3
ETRPA Nonaviation Plan Alternative Mitigation Improvements

Location	Jurisdiction	Improvement	Funding Obligation	Project Share
IMPACTED INTERSECTIONS				
ETC East Leg NB & Irvine	County	Convert second EB free right-turn lane to third through lane and convert NB left-turn lane to shared left-turn/second right-turn lane	Fully fund	100%
ETC NB Off & Santiago Canyon	County	Convert NB shared second left-turn lane/right-turn lane to right-turn lane and add a NB shared second left-turn lane/second right-turn lane	Fully fund	100%
Lake Forest & Portola	County	Add NB right-turn lane and convert second NB through lane to shared second through/second right-turn lane	Fully fund	100%
Millennium & Alton	County	Add fourth SB through lane	Fully fund	100%
Millennium & Irvine	County	Add third EB and WB through lanes	Fully fund	100%
Moulton & Laguna Hills	County	Convert SB right-turn lane to free right-turn lane	Fully fund	100%
Research & Irvine	County	Add third and fourth WB through lanes, third EB through lane, second NB and EB left-turn lanes and dual SB right-turn lanes	Fully fund	100%
Sand Canyon & Trabuco	County	Add third NB and SB through lanes, second EB through lane and second WB left-turn lane	Fully fund	100%
Trabuco & Irvine	County	Add third EB and WB through lanes and second NB right-turn lane	Fully fund	100%
W. Central Park & Irvine	County	Add third EB and WB through lanes	Fully fund	100%
Jeffrey & Irvine	County/Irvine	Add third EB and WB through lanes	Fair share	22%
Alton & Jeronimo	Irvine	Add second EB and WB through lanes	Fully fund	100%
Bake & I-5/I-405 NB Ramps	Irvine	No feasible improvements could be identified	Not applicable	
Bake & I-5/I-405 SB Ramps	Irvine	Convert second EB right-turn lane to third left-turn lane	Fully fund	100%
Culver & Irvine	Irvine	Add fourth WB through lane	Fully fund	100%
Jeffrey & Walnut/I-5 SB	Irvine	Convert WB through lane to shared through/second right-turn lane	Fully fund	100%
Sand Canyon & I-5 NB Ramps	Irvine	Add third SB through lane, NB right-turn lane, NB shared third through lane/second right-turn lane, second EB through lane, second WB through lane and second WB left-turn lane	Fully fund	100%

Location	Jurisdiction	Improvement	Funding Obligation	Project Share
IMPACTED INTERSECTIONS (CONTINUED)				
Sand Canyon & I-5 SB Ramps	Irvine	Add third NB through lane	Fully fund	100%
Sand Canyon & Irvine Center	Irvine	Add second SB right-turn lane	Fully fund	100%
Technology & Barranca	Irvine	Add dual SB right-turn lanes	Fully fund	100%
Lake Forest & Avd. Carlota	Irvine/ Laguna Hills	Convert second WB right-turn lane to shared second left-turn/second right-turn lane	Fair share	17%
Bake & Jeronimo	Irvine/ Lake Forest	Add second NB and SB left-turn lanes	Fully fund	100%
Bake & Toledo	Irvine/ Lake Forest	Add WB right-turn lane	Fully fund	100%
Jamboree & Portola	Irvine/Tustin	Convert second WB through lane to second right-turn lane	Fully fund	100%
Jamboree & Tustin Ranch	Irvine/Tustin	Add fourth NB through lane	Fair share	3%
Alicia & Paseo Valencia	Laguna Hills	Add second EB right-turn lane	Fair share	15%
El Toro & Paseo Valencia	Laguna Hills	Add EB right-turn lane	Fully fund	100%
La Paz & Cabot/I-5 SB	Laguna Hills	Add EB right-turn lane	Fair share	19%
Laguna Hills & P. Valencia	Laguna Hills/ Laguna Woods	Add EB right-turn lane and convert third EB through lane to shared third through/second right-turn lane	Fair share	13%
El Toro & Jeronimo	Lake Forest	Add second SB left-turn lane	Fair share	27%
El Toro & Rockfield	Lake Forest	Add fourth NB and SB through lanes and EB right-turn lane	Fair share	21%
Los Alisos & Rockfield	Lake Forest	Add second NB left-turn lane	Fully fund	100%
Alicia & Jeronimo	Mission Viejo	Add second NB left-turn lane	Fair share	20%
Red Hill & I-5 NB Ramps	Tustin	Add WB shared second left-turn/ second right-turn lane	Fully fund	100%
Red Hill & Irvine	Tustin	Convert NB right-turn lane to shared second through/right-turn lane	Fair share	8%
IMPACTED ARTERIAL ROADS				
Irvine (ETC East Leg to Research)	County	Improve to six lanes	Fully fund	100%
Irvine (Jeffrey to Sand Canyon)	County	Improve to six lanes	Fully fund	100%
Santiago Canyon (east of ETC)	County	Improve to six lanes	Fully fund	100%
Trabuco (ETC East Leg to Research)	County	Improve to eight lanes	Fully fund	100%
Trabuco (Jeffrey to Sand Canyon)	County	Improve to four lanes	Fully fund	100%
Laguna Canyon (south of El Toro)	Laguna Beach/County	Improve to four lanes	Fair share	14%
Irvine (Yale to Jeffrey)	Irvine	Improve to six lanes	Fully fund	100%
Jamboree (north of Tustin Ranch)	Tustin/Irvine	Improve to six lanes	Fair share	3%

Location	Jurisdiction	Improvement	Funding Obligation	Project Share
IMPACTED FREEWAY/TOLLWAY RAMPS				
I-5 at Alton (NB Direct On-Ramp)	Caltrans/ Irvine	Add a third mixed-flow lane at the ramp meter	Fully fund	100%
I-5 at Bake (SB Loop On-Ramp)	Caltrans/ Irvine	~~Convert HOV preferential lane to a~~ Add second metered mixed-flow lane	Fully fund	100%
I-5 at Jamboree (NB Off-Ramp)	Caltrans/ Irvine	Add second drop lane from freeway mainline to off-ramp	Fair share	13%
I-5 at Sand Canyon (NB On-Ramp)	Caltrans/ Irvine	~~Convert HOV preferential lane to a~~ Add second metered mixed-flow lane	Fully fund	100%
I-405 at Sand Canyon (NB Direct On-Ramp)	Caltrans/ Irvine	~~Convert HOV preferential lane to a~~ Add second metered mixed-flow lane	Fully fund	100%
I-5 at La Paz (SB Off-Ramp)	Caltrans/ Laguna Hills	Add second drop lane from freeway mainline to off-ramp	Fair share	22%
I-5 at El Toro (NB Loop On-Ramp)	Caltrans/ Lake Forest	~~Convert HOV preferential lane to a~~ Add second metered mixed-flow lane	Fair share	12%
ETC East Leg (SR-241) at Santiago Canyon (NB Off-Ramp)	Caltrans/ TCA/ County	Add second drop lane from tollway mainline to off-ramp	Fully fund	100%
ETC East Leg (SR-133) at Trabuco (NB Off-Ramp)	Caltrans/ TCA/ County	Provide two lanes from the SB I-5 connector ramp in addition to one lane from the NB I-5 connector ramp	Fully fund	100%
FTC (SR-241) at Portola East (NB Off-Ramp)	Caltrans/ TCA/ Lake Forest	Add second drop lane from tollway mainline to off-ramp	Fair share	17%

Location	Jurisdiction	Improvement	Project Share of Future Traffic
IMPACTED FREEWAY/TOLLWAY SEGMENTS			
ETC (north of FTC/SR-133)	Caltrans/ TCA	Implementation of Caltrans Traffic Operations Strategies (TOPS)	16%
FTC (Alton to south of Portola East)	Caltrans/ TCA	Implementation of Caltrans TOPS	11%-13%
I-5 (Alton to north of SR-55)	Caltrans	Implementation of Caltrans TOPS	7%-17%
I-5 (El Toro to La Paz)	Caltrans	Implementation of Caltrans TOPS	10%-11%
I-405 (Jamboree to north of SR-55)	Caltrans	Implementation of Caltrans TOPS	8%-12%
I-405 (Culver to Sand Canyon)	Caltrans	Implementation of Caltrans TOPS	15%-16%
SR-55 (Edinger to north of Irvine/Fourth)	Caltrans	Implementation of Caltrans TOPS	4%-6%
SR-55 (I-405 to SR-73)	Caltrans	Implementation of Caltrans TOPS	8%

Abbreviations: NB – northbound EB – eastbound
SB – southbound WB – westbound

In comparison, as discussed in detail in Section 4.3.6.6 of this Draft EIR No. 573, as supplemented, under the Proposed Project phasing years, four intersection locations, two arterial roadway segments, one continuous freeway mainline segment, and one freeway ramp would be significantly impacted under Phase 1 conditions (2005); five intersection locations, two arterial roadway segments, one continuous freeway mainline segment, and one freeway ramp would be significantly impacted under Phase 2 conditions (2010); and nine intersection locations, two arterial roadway segments, one continuous freeway mainline segment, and two freeway ramps would be significantly impacted under Phase 3 conditions (2015). At Phase 4 build out, the Proposed Project would result in significant impacts not previously identified to four freeway/tollway mainline segments and four freeway/tollway ramps. See Supplemental Analysis, Section 4.3.6.5. In each case, however, the identified impacts will be mitigated to a level below significant during the applicable phasing year (see Section 4.3.7.2, Table 4.3-20). Please refer to the Comparison of Alternative Impacts to Proposed Project Impacts, which follows below, for a facility-by-facility comparison of the ETRPA Nonaviation Alternative and the Proposed Project at build out.

Comparison of Alternative Impacts to Proposed Project Impacts

This alternative generates 339,616 daily trips from the MCAS El Toro site compared to the Proposed Project's 176,123 daily trips at MCAS El Toro. This alternative would not decrease traffic at JWA, whereas the Proposed Project would decrease JWA trips by 14,760.

Comparison to Existing Conditions

A comparison of the impacts of the Existing plus ETRPA Nonaviation Plan Alternative and Existing plus Proposed Project is as follows:

Impacted Intersections

The following intersections are impacted by both the Proposed Project and the ETRPA Nonaviation Plan Alternative:

- Bake & Portola
- Sand Canyon & Trabuco
- Bake & I-5/I-405 SB Ramps
- Bake & Rockfield
- Jeffrey & Alton
- Jeffrey & I-405 NB Ramps
- Jeffrey & I-405 SB Ramps
- Jeffrey & Walnut/I-5 SB
- Sand Canyon & I-5 NB Ramps
- Sand Canyon & I-5 SB Ramps

- Irvine Center & Lake Forest
- Bake & Irvine/Trabuco
- Bake & Toledo
- Los Alisos & Muirlands
- Alicia & Jeronimo
- Newport & Old Irvine

The following intersections are impacted by the ETRPA Nonaviation Plan Alternative only:

- E. Central Park & Irvine
- Millennium & Barranca
- Millennium & Central Park
- Millennium & Irvine
- Millennium & Jeronimo
- Millennium & Marine
- Millennium & Rockfield
- Research & Irvine
- Trabuco & Irvine
- W. Central Park & Irvine
- W. Central Park & Portola
- Alton & Irvine
- Alton & Toledo
- Bake & I-5/I-405 NB Ramps
- I-5 HOV Ramps & Barranca
- I-5 NB Ramps & Alton
- Technology & Barranca
- Bake & Jeronimo
- Jamboree & Irvine
- La Paz & Cabot/I-5 SB
- Bake & Commercentre
- El Toro & Rockfield
- Lake Forest & Jeronimo
- Lake Forest & Rockfield
- Lake Forest & Trabuco
- Alicia & Muirlands
- La Paz & Muirlands/I-5 NB

Impacted Arterial Roads

The following arterials roads are impacted by both the Proposed Project and the ETRPA Nonaviation Plan Alternative:

- Laguna Canyon (I-405 to SR-73)

The following arterials are impacted by the ETRPA Nonaviation Plan Alternative only:

- Irvine (Jeffrey to Research)
- Irvine (Millennium to Trabuco)
- Portola (W. Central Park to FTC)
- Laguna Canyon (south of El Toro)
- Irvine (Alton to Bake)
- Sand Canyon (Trabuco to I-5)
- Bake (north of Irvine/Trabuco)

The Proposed Project impacts the following additional arterials:

- Laguna Canyon (south of El Toro)
- Culver (Bryan to Trabuco)

Impacted Freeway Ramps

The following freeway ramps are impacted by both the Proposed Project and the ETRPA Nonaviation Plan Alternative:

- I-5 at Sand Canyon – NB On
- I-5 at Sand Canyon – SB Off
- I-405 at Sand Canyon (NB Direct On-Ramp)

The following freeway ramps are impacted by the ETRPA Nonaviation Plan Alternative only:

- I-5 at Bake – SB Loop On-ramp
- I-5 at Bake – NB Direct On-ramp
- I-5 at Jeffrey (SB Off-Ramp)
- I-5 at La Paz (SB Off-Ramp)
- SR-133 at Barranca (SB On-Ramp)

The following freeway ramp is impacted by the Proposed Project only:

- I-5 at Culver – SB Off

Impacted Freeway Mainline Segments

The following freeway mainline segments are impacted by both the Proposed Project and the ETRPA Nonaviation Plan Alternative:

- I-5 (Jeffrey to north of SR-55)

The following freeway mainline segments are impacted by the ETRPA Nonaviation Plan Alternative only:

- I-5 (Jeffrey to Sand Canyon)
- I-405 (MacArthur to north of SR-55)
- SR-55 (I-5 to MacArthur)
- SR-55 (I-405 to SR-73)

Comparison to Existing Plus Committed Conditions

Impacted Intersections

The following intersections are impacted by both the Proposed Project and the ETRPA Nonaviation Plan Alternative:

- ETC East Leg NB & Irvine
- Sand Canyon & Trabuco
- Jeffrey & Irvine
- Sand Canyon & I-5 NB Ramps
- Sand Canyon & I-5 SB Ramps
- Alicia & Paseo Valencia
- La Paz & Cabot/I-5 SB
- El Toro & Rockfield
- Alicia & Jeronimo
- Red Hill & I-5 NB Ramps
- Red Hill & Irvine

The following intersections are impacted by the ETRPA Nonaviation Plan Alternative only:

- ETC NB Off & Santiago Canyon
- Lake Forest & Portola
- Millennium & Alton
- Millennium & Irvine
- Moulton & Laguna Hills
- Research & Irvine

- Trabuco & Irvine
- W. Central Park & Irvine
- Alton & Jeronimo
- Bake & I-5/I-405 NB Ramps
- Bake & I-5/I-405 SB Ramps
- Culver & Irvine
- Jeffrey & Walnut/I-5 SB
- Sand Canyon & Irvine Center
- Technology & Barranca
- Lake Forest & Avd. Carlota
- Bake & Jeronimo
- Bake & Toledo
- Jamboree & Portola
- Jamboree & Tustin Ranch
- El Toro & Paseo Valencia
- Laguna Hills & P. Valencia
- El Toro & Jeronimo
- Los Alisos & Rockfield

The following intersections are impacted by the Proposed Project only:

- Sand Canyon & Irvine
- Jeffrey & Trabuco
- Tustin Ranch & Irvine

Impacted Arterial Roads

The following arterial roads are impacted by both the Proposed Project and the ETRPA Nonaviation Plan Alternative:

- Irvine (Jeffrey to Sand Canyon)
- Laguna Canyon (south of El Toro)

The ETRPA Nonaviation Plan Alternative alone impacts the following arterials:

- Irvine (ETC East Leg to Research)
- Santiago Canyon (east of ETC)
- Trabuco (ETC East Leg to Research)
- Trabuco (Jeffrey to Sand Canyon)
- Irvine (Yale to Jeffrey)

The Proposed Project alone impacts the following arterials:

- Irvine (ETC East Leg to PA 2 East Access Road)
- Portola (ETC West Leg to Culver)

Impacted Freeway/Tollway Ramps

The following freeway/tollway ramps are impacted by both the Proposed Project and the ETRPA Nonaviation Plan Alternative:

- I-5 at Jamboree (NB Off-Ramp)
- I-5 at La Paz (SB Off-Ramp)
- I-405 at Sand Canyon (NB Direct On-Ramp)
- FTC (SR-241) at Portola East (NB Off-Ramp)

The ETRPA Nonaviation Plan Alternative alone impacts the following freeway/tollway ramps:

- ETC East Leg (SR-241) at Santiago Canyon (NB Off-Ramp)
- ETC East Leg (SR-133) at Trabuco (NB Off-Ramp)
- I-5 at Alton (NB Direct On-Ramp)
- I-5 at Bake (SB Loop On-Ramp)
- I-5 at El Toro (NB Loop On-Ramp)
- I-5 at Sand Canyon (NB On-Ramp)

The following freeway ramp is impacted by the Proposed Project only:

- I-5 at Red Hill (SB On-Ramp)

Impacted Freeway/Tollway Mainline Segments

The following freeway/tollway mainline segments are impacted by both the Proposed Project and the ETRPA Nonaviation Plan Alternative:

- FTC (Alton to south of Portola East)
- I-5 (Alton to north of SR-55)
- I-405 (Jamboree to north of SR-55)
- I-405 (Jeffrey to Sand Canyon)

The following freeway/tollway mainline segments are impacted by the ETRPA Nonaviation Plan Alternative only:

- ETC (north of FTC/SR-133)
- I-5 (El Toro to La Paz)
- I-405 (Culver to Jeffrey)
- SR-55 (Edinger to north of Irvine/Fourth)
- SR-55 (I-405 to SR-73)

The following freeway mainline segment is impacted by the Proposed Project only:

- I-5 (I-405 to Alton)

Level of Significance After Mitigation

Under this alternative, impacts to one location cannot be mitigated to below a level of significance. With the Proposed Project, all impacts will be reduced to below a level of significance.

8.3.5.4 Noise

Aircraft Noise

The noise impacts of this alternative would be comparable to "No Project" ~~Compared to existing~~ conditions at JWA.~~, this alternative would create significant adverse noise impacts since JWA would have to be expanded to handle additional passengers that could not be accommodated on the MCAS El Toro site. Therefore, it is anticipated that there would be a sizable increase in the 60 and 65 CNEL noise contour around JWA in comparison to both the 1998 and 1985 airport noise contours. The total number of jet carrier SENEL events would also increase.~~ However, a possible consequence of this alternative is pressure on the County to expand JWA to respond to growth in aviation demand, and to relax existing restrictions on the use of JWA, including nighttime restrictions. ~~Even with the mitigation measures proposed for the Proposed Project and the ETRPA Nonaviation Alternative, the aviation impacts of this alternative would not be reduced to below a level of insignificance because of the sleep disturbance that would be created by the increased number of airplanes that would use JWA and the possible increase in nighttime operations if existing restrictions were relaxed.~~

Traffic Noise

Noise associated with vehicular traffic for this project alternative was conducted using the FHWA highway noise model. The FHWA model uses traffic volumes, vehicle mix, average vehicle speeds, road geometry, and sound propagation path characteristics to predict hourly A-weighted LEQ values adjacent to a road. Vehicle mix is reported in terms of the number of automobiles, medium trucks, and heavy trucks. The truck categories are defined in the FHWA model by number of axles and weight. To compute a CNEL value for roads, the hourly data for a 24 hour period are used according to the CNEL formula. Vehicle distribution over the 24 hour day must be known, that is, the percentage of vehicles in the daytime period between 7 a.m. and 7 p.m., in the evening period between 7 p.m. and 10 p.m., and in the night period between 10 p.m. and 7 a.m. To determine the location of noise contours, noise levels are calculated at a large number of distances and the location of constant value CNEL is determined.

Table 8.3-4 shows the existing road links included in the Airport System Master Plan (ASMP) with traffic volumes provided in the traffic report by Austin-Foust Associates. Table 8.3-5 shows road links that would have a potential noise increase greater than 1.5 dB over the existing conditions for the ETRPA Nonaviation Plan Alternative (Existing Plus ETRPA Nonaviation Plan Conditions). A total of 12 road links would have a traffic noise increase between 1.5 and 3.0 dB. A total of 15 road links would have an increase of more than 3 dB over their corresponding existing conditions levels. The noise level increase along these road links, due to the implementation of the ETRPA Nonaviation Plan Alternative, would be considered significant. Except along Portola Parkway west of Jamboree Road, where the 60 dB CNEL noise contour would remain within the roadway right-of-way, existing residences along these other road links may be exposed to traffic noise exceeding 65 dB CNEL.

Table 8.3-6 shows the noise levels along the new road links that would be constructed with the implementation of the ETRPA Nonaviation Plan Alternative under the existing condition. Because no road traffic exists for comparison with these road links, their impacts are based on whether there is a potential for existing residences adjacent to these road links to experience noise level exceeding 65 dB CNEL. Except for areas along portions of East Central Park and East Culture, most of these road links would have the 65 dB CNEL noise contour extend outside the right-of-way and potentially impact residences along the road.

Table 8.3-7 shows the noise levels along existing road links that would have 1.5 dB or more noise increases in year 2020 under the no project scenario (Alternative E) over the existing conditions. There would be 58 road links that would have 1.5 to 3.0 dB increase in traffic noise over their corresponding existing level. A total of 115 road links would have 3 dB or

Airport System Master Plan - ASMP 1997 (Reference CNELs for existing segments)		CNEL RESULTS						
ID #	New Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)
3	17th e/o Prospect	22100	30	4	66	< RdHW	52	111
1	17th e/o SR-55	32600	30	6	67.7	< RdHW	67	144
2	17th e/o Yorba	27600	30	6	67	< RdHW	60	130
4	17th w/o Newport	15900	30	4	64.6	< RdHW	42	90
30	1st w/o El Camino Real	18100	30	4	65.1	< RdHW	46	98
31	1st w/o Newport	15300	30	4	64.4	< RdHW	40	87
28	1st w/o Tustin	18500	35	4	66.9	29	62	134
29	1st w/o Yorba	17800	30	4	65.1	< RdHW	45	97
13	4th w/o SR-55	29000	40	6	70.3	50	108	232
12	4th w/o Tustin	20200	40	6	68.7	40	86	184
459	Alicia e/o Marguerite	25800	50	6	72.1	71	153	330
463	Alicia n/o I-5	60500	45	6	74.7	103	222	477
461	Alicia n/o Jeronimo	40500	45	6	73	78	168	362
462	Alicia n/o Muirlands	56300	45	6	74.4	98	212	456
460	Alicia n/o Trabuco	34400	45	6	72.3	70	151	325
464	Alicia s/o I-5	49100	45	6	73.8	90	193	416
466	Alicia s/o Moulton	36600	45	6	72.5	73	158	341
465	Alicia s/o Paseo Valencia	43300	45	6	73.3	82	176	379
381	Aliso Creek e/o El Toro	18400	55	4	71.7	68	146	315
382	Aliso Creek s/o Glenwood	18300	55	4	71.7	68	146	315
383	Aliso Crk s/o Laguna Hills	26500	55	4	73.3	87	187	403
104	Alton e/o Culver	24200	45	4	70.7	56	120	258
114	Alton e/o I-5	42300	55	8	75.3	118	254	548
113	Alton e/o Irvine Center	24900	55	6	73	83	179	385
102	Alton e/o Jamboree	18300	50	4	70.7	57	122	262
111	Alton e/o Laguna Canyon	14700	55	4	70.7	59	128	275
106	Alton e/o Lake	20600	45	4	70	50	108	232
100	Alton e/o Red Hill	14700	50	4	69.7	49	106	229
110	Alton e/o Sand Canyon	16900	55	4	71.3	65	140	301
105	Alton e/o West Yale Loop	22900	45	4	70.5	54	116	251
395	Alton n/o Jeronimo	22700	55	6	72.6	78	168	362
396	Alton n/o Muirlands	32500	55	6	74.2	100	215	463
394	Alton s/o Irvine	12100	55	6	69.9	52	111	239
397	Alton s/o Muirlands	28800	55	6	73.6	92	199	429
390	Alton s/o Portola	3800	55	6	64.8	< RdHW	52	111
103	Alton w/o Culver	15900	50	6	70	52	111	239
107	Alton w/o East Yale Loop	20100	50	4	71.1	60	130	279
112	Alton w/o Irvine Center	14400	55	4	70.6	58	126	271
101	Alton w/o Jamboree	16900	50	4	70.3	54	116	251
108	Alton w/o Jeffrey	25900	50	4	72.2	71	153	330
99	Alton w/o Red Hill	4300	50	4	64.4	< RdHW	46	100
109	Alton w/o Sand Canyon	15000	50	4	69.8	50	108	232
363	Avd Carlota e/o El Toro	15400	40	4	67.5	33	71	153
360	Avd Carlota e/o Lake Forest	10400	45	4	67.1	32	68	146
361	Avd Carlota e/o Ridge Route	14700	45	4	68.6	40	86	184
362	Avd Carlota w/o El Toro	29800	45	4	71.6	64	138	297
399	Bake n/o Commercentre	30800	55	4	73.9	97	208	449
405	Bake n/o I-5	64900	50	8	76.1	132	283	610
400	Bake n/o Irvine/Trabuco	36200	55	6	74.6	108	232	500
402	Bake n/o Jeronimo	43700	50	6	74.4	101	218	470
403	Bake n/o Muirlands	58600	50	6	75.7	124	266	574
404	Bake n/o Rockfield	52000	50	6	75.2	115	247	532
406	Bake s/o I-5	4500	50	6	64.6	< RdHW	48	103
401	Bake s/o Irvine/Trabuco	41200	50	6	74.2	97	208	449
398	Bake s/o Portola	30800	55	4	73.9	97	208	449
136	Baker e/o SR-55	15100	40	4	67.4	33	70	151

Airport System Master Plan - ASMP 1997 (Reference CNELs for existing segments)		CNEL RESULTS						
ID #	New Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)
135	Baker w/o SR-55	27100	40	4	70	48	103	222
87	Barranca e/o Culver	25100	45	4	70.9	57	124	266
96	Barranca e/o Irvine Center	16100	55	4	71.1	63	136	292
85	Barranca e/o Jamboree	24700	50	6	72	69	149	320
94	Barranca e/o Laguna Canyon	3200	55	4	64.1	< RdHW	46	98
89	Barranca e/o Lake	19000	50	4	70.8	58	126	271
83	Barranca e/o Red Hill	33000	50	4	73.2	84	182	391
93	Barranca e/o Sand Canyon	4400	55	4	65.5	26	57	122
98	Barranca e/o Technology	14800	50	4	69.7	49	106	229
88	Barranca e/o West Yale Loop	22300	45	4	70.4	53	115	247
347	Barranca w/o Alton	13300	50	4	69.3	46	98	212
86	Barranca w/o Culver	22300	50	6	71.5	65	140	301
90	Barranca w/o East Yale Loop	18300	50	4	70.7	57	122	262
95	Barranca w/o Irvine Center	10900	55	4	69.4	48	104	225
84	Barranca w/o Jamboree	28900	50	6	72.6	77	166	357
91	Barranca w/o Jeffrey	16700	50	4	70.3	53	115	247
97	Barranca w/o Technology	18400	55	4	71.7	68	146	315
142	Birch e/o MacArthur	9500	40	4	65.4	< RdHW	52	111
199	Birch n/o North Bristol	14800	40	4	67.3	32	69	149
200	Birch s/o North Bristol	5900	40	4	4.5	< RdHW	37	80
201	Birch s/o South Bristol	5900	40	2	63.3	17	37	80
143	Birch w/o Jamboree	7400	40	4	64.3	< RdHW	44	94
145	Bristol e/o Red Hill	30000	45	4	71.7	64	138	297
144	Bristol w/o Red Hill	25200	45	4	70.9	57	124	266
202	Browning n/o Bryan	2900	40	4	60.3	< RdHW	< RdHW	50
203	Browning n/o El Camino Real	2400	40	4	59.4	< RdHW	< RdHW	44
204	Browning n/o Walnut	2600	35	2	58.4	< RdHW	17	36
39	Bryan e/o Culver	7800	45	4	65.8	26	57	122
38	Bryan e/o Jamboree	11400	45	4	67.5	34	72	156
35	Bryan w/o Browning	12400	40	4	66.6	28	61	132
37	Bryan w/o Jamboree	12600	45	4	67.9	36	78	168
40	Bryan w/o Jeffrey	5200	50	4	65.2	25	53	115
34	Bryan w/o Red Hill	14300	40	4	67.2	32	68	146
36	Bryan w/o Tustin Ranch	12200	45	4	67.8	35	76	163
139	Campus e/o Jamboree	19100	45	4	69.7	48	103	222
137	Campus e/o MacArthur	20600	40	4	68.8	40	86	184
141	Campus e/o University	20700	45	4	70.1	50	108	232
195	Campus n/o North Bristol	31400	45	6	71.9	66	142	306
196	Campus s/o North Bristol	27500	45	4	71.3	61	132	283
138	Campus w/o Jamboree	15000	40	4	67.4	33	70	151
140	Campus w/o University	18300	45	2	69.5	46	100	215
238	Carlson s/o Michelson	2300	35	6	57.8	< RdHW	< RdHW	< RdHW
323	Commercentre w/o Bake	500	45	4	53.9	< RdHW	< RdHW	< RdHW
255	Culver n/o Alton	44400	55	6	75.5	124	266	574
254	Culver n/o Barranca	43100	55	6	75.4	120	258	557
249	Culver n/o Bryan	16800	45	3	69.2	44	94	202
257	Culver n/o I-405	50900	45	4	74	91	196	422
252	Culver n/o Irvine Center	43200	55	6	75.4	120	258	557
256	Culver n/o Main	45300	55	6	75.6	124	266	574
250	Culver n/o Trabuco/I-5	27300	45	3	71.3	60	130	279
253	Culver n/o Warner	44200	55	6	75.5	122	262	565
258	Culver s/o I-405	49500	45	6	74	90	193	416
259	Culver s/o Michelson	36000	45	6	72.5	72	156	335
260	Culver s/o University	37100	45	6	72.6	75	161	346
152	Del Mar e/o Newport (NB)	9600	30	2	62.4	14	30	64
153	Del Mar w/o Irvine	6400	30	2	60.6	< RdHW	23	49
82	Dyer e/o SR-55	43300	40	6	72	66	142	306
81	Dyer w/o Hotel Terrace	32500	40	6	70.8	54	116	251
273	East Yale Loop n/o Alton	11500	45	4	67.5	34	73	158
272	East Yale Loop n/o Barranca	10100	45	4	66.9	31	67	144

EIR No. 573 *County of Orange* **Table 8.3-4**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Existing Conditions

12/17/99

Airport System Master Plan - ASMP 1997 (Reference CNELs for existing segments)		CNEL RESULTS						
ID #	New Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)
274	East Yale Loop s/o Alton	13300	45	4	68.1	37	80	173
64	Edinger e/o Jamboree	20600	50	6	71.2	61	132	283
62	Edinger e/o Red Hill	17900	55	6	71.6	67	144	311
61	Edinger w/o Red Hill	28900	40	4	70.2	50	108	232
60	Edinger w/o SR-55	32600	45	4	72	68	146	315
44	El Camino Real e/o Red Hill	8800	35	4	63.7	< RdHW	38	82
41	El Camino Real n/o Main	6400	35	4	62.3	< RdHW	31	66
46	El Camino Real w/o Jamboree	13500	35	4	65.5	< RdHW	50	108
42	El Camino Real w/o Newport	8900	35	4	63.7	< RdHW	38	82
43	El Camino Real w/o Red Hill	11100	35	4	64.7	< RdHW	44	95
45	El Camino w/o Tustin Ranch	5500	35	4	61.6	< RdHW	27	59
444	El Toro e/o Laguna Canyon	17100	35	2	66.5	27	59	128
431	El Toro e/o Marguerite	11700	55	2	69.7	51	109	236
432	El Toro e/o Santa Margarita	8500	55	6	68.3	41	88	190
439	El Toro n/o Bridger/I-5	52800	35	6	71.4	58	126	271
430	El Toro n/o Glenn Ranch	11100	55	2	69.5	48	104	225
436	El Toro n/o Jeronimo	33800	50	6	73.3	86	184	397
437	El Toro n/o Muirlands	36300	50	6	73.6	90	193	416
438	El Toro n/o Rockfield	42200	40	6	71.9	65	140	301
434	El Toro n/o Trabuco	27500	50	5	72.4	75	161	346
443	El Toro s/o Aliso Creek	29000	45	6	71.5	63	136	292
440	El Toro s/o Avd Carlota	34200	35	6	69.5	44	94	202
435	El Toro s/o Trabuco	31500	50	6	73	82	176	379
442	El Toro w/o Moulton	19700	50	6	71	59	128	275
441	El Toro w/o Paseo Valencia	35300	40	6	71.1	57	124	266
433	El Toro w/o Santa Margarita	19000	55	6	71.8	70	151	325
559	FTC s/o Alton	21000	65	6	74.1	103	222	477
560	FTC s/o Lake Forest	18000	65	6	73.5	92	199	429
558	FTC s/o Portola	23000	65	6	74.5	109	236	508
561	FTC s/o Santa Margarita	20000	65	6	73.9	100	215	463
308	Glenn Ranch n/o Portola	10600	55	4	69.3	47	101	218
309	Glenn Ranch w/o El Toro	4100	55	4	65.2	25	54	116
455	Glenwood w/o Aliso Creek	11000	50	4	68.4	40	87	187
454	Glenwood w/o Moulton	8800	50	4	67.5	35	75	161
171	Grand n/o Dyer	22800	40	6	69.2	43	92	199
170	Grand s/o Edinger	26900	45	6	71.2	60	130	279
242	Harvard n/o Alton	11300	50	4	68.6	41	88	190
241	Harvard n/o Barranca	11100	50	4	68.5	40	87	187
239	Harvard n/o Irvine Center	9600	50	2	67.8	37	79	171
243	Harvard n/o Main	17000	50	4	70.3	54	116	251
245	Harvard n/o University	13900	45	2	68.3	39	83	179
240	Harvard s/o Irvine Center	10300	50	4	68.2	39	83	179
244	Harvard s/o Main	17600	50	4	70.5	55	118	254
246	Harvard s/o University	12100	45	4	67.7	35	76	163
159	Holt n/o Irvine	6900	40	4	64	< RdHW	42	90
160	Holt s/o Irvine	6000	30	4	60.3	< RdHW	< RdHW	47
586	I-405 n/o I-5	149000	65	11	82.6	379	817	1761
580	I-405 n/o Jamboree	251000	65	14	84.9	540	1163	2506
578	I-405 n/o SR-55	265000	65	13	85.1	557	1199	2584
582	I-405 s/o Culver	217000	65	10	84.3	485	1045	2251
581	I-405 s/o Jamboree	237000	65	12	84.7	516	1111	2393
583	I-405 s/o Jeffrey	211000	65	10	84.2	477	1029	2216
584	I-405 s/o Sand Canyon	200000	65	10	83.9	463	998	2149
585	I-405 s/o SR-133	179000	65	12	83.4	429	924	1991
579	I-405 s/o SR-55	265000	65	14	85.1	557	1199	2584
562	I-5 n/o SR-55	293000	65	14	85.6	592	1275	2748
576	I-5 s/o Alicia	280000	65	12	85.4	574	1237	2665
571	I-5 s/o Alton	208000	65	10	84.1	477	1029	2216
573	I-5 s/o Bake	333000	65	20	86.1	649	1398	3013
568	I-5 s/o Culver	244000	65	12	84.8	524	1128	2430

Airport System Master Plan - ASMP 1997 (Reference CNELs for existing segments)		CNEL RESULTS						
ID #	New Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)
575	I-5 s/o El Toro	299000	65	13	85.7	601	1295	2790
572	I-5 s/o I-405	357000	65	22	86.4	680	1464	3155
567	I-5 s/o Jamboree	246000	65	14	84.8	532	1145	2468
569	I-5 s/o Jeffrey	238000	65	12	84.7	516	1111	2393
577	I-5 s/o La Paz	268000	65	10	85.2	565	1218	2624
574	I-5 s/o Lake Forest	319000	65	16	86	629	1356	2922
564	I-5 s/o Newport	250000	65	13	84.9	540	1163	2506
565	I-5 s/o Red Hill	244000	65	14	84.8	524	1128	2430
570	I-5 s/o SR-133	224000	65	10	84.4	500	1077	2321
563	I-5 s/o SR-55	273000	65	14	85.3	565	1218	2624
566	I-5 s/o Tustin Ranch	244000	65	14	84.8	524	1128	2430
66	Irvine Center e/o Culver	22000	55	6	72.5	77	166	357
69	Irvine Center e/o Sand Cyn	12800	55	4	70.1	54	116	251
71	Irvine Center n/o Alton	12700	55	6	70.1	53	115	247
72	Irvine Center s/o Alton	25600	55	6	73.1	86	184	397
371	Irvine Center s/o Bake	30400	60	4	74.8	113	243	524
370	Irvine Center s/o I-405	27900	60	4	74.5	106	229	492
70	Irvine Center w/o Barranca	13300	55	6	70.3	55	118	254
65	Irvine Center w/o Culver	21600	55	6	72.4	76	163	351
67	Irvine Center w/o Jeffrey	18300	55	6	71.7	68	146	315
68	Irvine Center w/o Sand Cyn	16900	55	4	71.3	65	140	301
23	Irvine e/o Culver	23000	50	6	71.6	66	142	306
27	Irvine e/o ETC East Leg	19700	40	4	4.5	39	83	179
21	Irvine e/o Jamboree	22900	50	6	71.6	66	142	306
16	Irvine e/o Prospect	28000	40	4	70.1	49	106	229
26	Irvine e/o Sand Canyon	19700	65	4	73.9	98	212	456
14	Irvine e/o SR-55	36600	40	6	71.3	58	126	271
15	Irvine e/o Yorba	29300	35	6	68.9	39	84	182
198	Irvine n/o Del Mar	25700	35	4	68.3	36	77	166
197	Irvine s/o South Bristol	31600	45	4	71.9	67	144	311
325	Irvine w/o Alton	18900	65	4	73.7	95	205	442
326	Irvine w/o Bake	24200	55	6	72.9	82	176	379
18	Irvine w/o Browning	24200	45	4	70.7	56	120	258
20	Irvine w/o Jamboree	25500	50	6	72.1	71	153	330
24	Irvine w/o Jeffrey	22500	50	5	71.5	65	140	301
17	Irvine w/o Red Hill	29700	40	4	70.4	51	109	236
25	Irvine w/o Sand Canyon	17400	65	4	73.3	91	196	422
19	Irvine w/o Tustin Ranch	23800	45	6	70.7	55	118	254
230	Jamboree n/o Alton	30700	50	8	72.9	80	173	374
229	Jamboree n/o Barranca	34000	50	8	73.3	86	184	397
223	Jamboree n/o Bryan	26200	45	5	71.1	59	128	275
227	Jamboree n/o Edinger	41400	50	8	74.2	98	212	456
224	Jamboree n/o El Camino Real	33400	45	8	72.1	69	149	320
232	Jamboree n/o I-405	60100	50	8	75.8	126	271	583
225	Jamboree n/o I-5	44700	45	8	73.4	84	182	391
222	Jamboree n/o Irvine	22900	45	5	70.5	54	116	251
237	Jamboree n/o MacArthur	31200	50	6	73	80	173	374
231	Jamboree n/o Main	34800	50	8	73.4	87	187	403
221	Jamboree n/o Portola	22000	50	4	71.5	64	138	297
220	Jamboree n/o Tustin Ranch	19000	55	4	71.8	70	151	325
235	Jamboree s/o Campus	34900	50	6	73.5	87	187	403
228	Jamboree s/o Edinger	39800	50	8	74	95	205	442
233	Jamboree s/o I-405	67000	50	6	76.3	136	292	629
226	Jamboree s/o I-5	41600	45	6	73.1	80	173	374
234	Jamboree s/o Michelson	45000	50	6	74.6	103	222	477
284	Jeffrey n/o Alton	30900	55	5	73.9	97	208	449
283	Jeffrey n/o Barranca	32300	55	5	74.1	100	215	463
279	Jeffrey n/o Bryan	21200	60	6	73.3	88	190	410
285	Jeffrey n/o I-405	38000	55	5	74.8	111	239	516
281	Jeffrey n/o I-5	29800	60	6	74.7	111	239	516

EIR No. 573 *County of Orange* **Table 8.3-4 (Cont.)**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Existing Conditions

12/17/99

Airport System Master Plan - ASMP 1997 (Reference CNELs for existing segments)		CNEL RESULTS						
ID #	New Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)
278	Jeffrey n/o Irvine	17800	60	4	72.5	79	171	368
280	Jeffrey n/o Trabuco	24900	60	6	74	98	212	456
282	Jeffrey s/o Walnut/I-5	32200	55	5	74.1	100	215	463
344	Jeronimo e/o Alicia	16200	45	4	69	43	92	199
338	Jeronimo e/o Alton	8000	45	4	65.9	27	57	124
342	Jeronimo e/o El Toro	20400	45	4	70	50	108	232
340	Jeronimo e/o Lake Forest	13600	45	4	68.2	38	82	176
343	Jeronimo e/o Los Alisos	17700	45	4	69.4	46	98	212
346	Jeronimo e/o Marguerite	9100	45	4	66.5	29	63	136
341	Jeronimo w/o El Toro	14200	45	4	68.4	39	84	182
339	Jeronimo w/o Lake Forest	11500	45	4	67.5	34	73	158
345	Jeronimo w/o Marguerite	13000	45	4	68	37	79	171
467	La Paz e/o Marguerite	18900	45	4	69.7	47	101	218
471	La Paz n/o Moulton	15500	45	4	68.8	42	90	193
468	La Paz n/o Muirlands/I-5	39800	45	4	72.9	78	168	362
469	La Paz s/o Cabot/I-5	19300	35	4	67.1	30	64	138
472	La Paz s/o Moulton	16200	45	6	69	43	92	199
470	La Paz s/o Paseo Valencia	17600	45	4	69.4	45	97	208
305	Laguna Canyon n/o Alton	1500	45	4	58.7	< RdHW	< RdHW	40
388	Laguna Canyon n/o El Toro	18800	35	2	66.9	29	63	136
387	Laguna Canyon n/o SJHTC	27500	55	3	73.4	90	193	416
306	Laguna Canyon s/o Alton	3100	45	2	61.8	14	31	66
389	Laguna Canyon s/o El Toro	32800	45	2	72.1	68	146	315
603	Laguna Cyn s/o I-405	28000	35	4	68.7	38	82	176
456	Laguna Hills e/o Moulton	15000	50	4	69.8	50	108	232
458	Laguna Hills w/o Aliso Crk	3100	50	6	62.9	< RdHW	37	80
457	Laguna Hills w/o Moulton	16500	50	6	70.2	53	115	247
418	Lake Forest n/o I-5	53200	35	6	71.5	58	126	271
415	Lake Forest n/o Jeronimo	27100	50	6	72.4	73	158	341
416	Lake Forest n/o Muirlands	27800	40	6	70.1	48	104	225
411	Lake Forest n/o Rancho	11600	50	4	68.7	42	90	193
417	Lake Forest n/o Rockfield	35800	40	6	71.2	57	124	266
413	Lake Forest n/o Trabuco	26700	50	4	72.3	73	158	341
410	Lake Forest s/o Portola	11700	50	4	68.7	42	91	196
412	Lake Forest s/o Rancho	13500	50	4	69.3	46	100	215
414	Lake Forest s/o Trabuco	27600	50	6	72.4	75	161	346
419	Lake Forest w/o Avd Carlota	26900	35	6	68.5	37	79	171
420	Lake Forest w/o Moulton	10400	45	6	67.1	< RdHW	68	146
445	Los Alisos e/o Marguerite	6900	50	4	66.4	30	64	138
449	Los Alisos n/o Jeronimo	29600	50	6	72.7	78	168	362
450	Los Alisos n/o Muirlands	28500	50	6	72.6	76	163	351
451	Los Alisos n/o Rockfield	28900	50	4	72.6	77	166	357
446	Los Alisos n/o S. Margarita	7500	50	4	66.8	31	67	144
448	Los Alisos n/o Trabuco	24100	50	4	71.8	68	146	315
453	Los Alisos s/o Avd Carlota	22200	45	6	70.4	52	113	243
452	Los Alisos s/o Rockfield	24800	45	4	70.8	57	122	262
447	Los Alisos s/o S. Margarita	14000	50	4	69.5	48	103	222
116	MacArthur e/o SR-55	38900	50	6	73.9	94	202	435
189	MacArthur n/o I-405	46100	45	8	73.5	86	184	397
194	MacArthur n/o Jamboree	26700	55	6	73.3	87	187	403
188	MacArthur n/o Main	27100	50	6	72.4	73	158	341
190	MacArthur n/o Michelson	53100	45	8	74.2	94	202	435
193	MacArthur s/o Birch	19300	50	6	70.9	58	126	271
192	MacArthur s/o Campus	27400	50	6	72.4	75	161	346
191	MacArthur s/o Michelson	40600	50	8	74.1	97	208	449
115	MacArthur w/o SR-55	53500	50	6	75.3	116	251	540
124	Main e/o Culver	14900	50	4	69.8	49	106	229
122	Main e/o Jamboree	29400	50	6	72.7	78	168	362
120	Main e/o MacArthur	33200	50	6	73.2	84	182	391
117	Main n/o Sunflower	22800	40	6	69.2	43	92	199

Airport System Master Plan - ASMP 1997 (Reference CNELs for existing segments)		CNEL RESULTS						
ID #	New Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)
123	Main w/o Culver	11600	50	4	68.7	42	90	193
32	Main w/o El Camino Real	9400	30	2	62.3	14	29	63
121	Main w/o Jamboree	24000	50	6	71.8	68	146	315
119	Main w/o MacArthur	26500	50	4	72.3	72	156	335
33	Main w/o Newport	10700	30	4	62.9	< RdHW	32	69
118	Main w/o Red Hill	24600	50	4	71.9	69	149	320
476	Marguerite n/o Alicia	19200	45	4	69.7	48	103	222
478	Marguerite n/o Jeronimo	24900	45	4	70.9	57	122	262
479	Marguerite n/o La Paz	32500	45	4	72	68	146	315
475	Marguerite n/o Olympiad	23300	45	4	70.6	54	116	251
474	Marguerite n/o S. Margarita	9200	45	4	66.5	29	63	136
477	Marguerite n/o Trabuco	17900	45	4	69.4	46	98	212
473	Marguerite s/o El Toro	10200	45	4	67	32	68	146
480	Marguerite s/o La Paz	31600	45	4	71.9	67	144	311
50	McFadden w/o Walnut	12200	35	4	65.1	< RdHW	47	101
130	Michelson e/o Culver	12000	35	2	65	21	46	100
127	Michelson e/o Jamboree	28700	45	4	71.5	63	136	292
125	Michelson e/o MacArthur	19500	45	4	69.8	48	104	225
129	Michelson w/o Culver	18600	45	4	69.6	47	101	218
128	Michelson w/o Harvard	18900	45	2	69.7	47	101	218
126	Michelson w/o Jamboree	25100	45	4	70.9	57	124	266
131	Michelson w/o University	4700	35	2	60.9	< RdHW	25	54
377	Moulton n/o Alicia	24400	55	6	72.9	83	179	385
374	Moulton n/o El Toro	37600	45	6	72.7	75	161	346
378	Moulton n/o La Paz	20700	45	6	70.1	50	108	232
375	Moulton s/o El Toro	35600	45	6	72.4	72	156	335
376	Moulton s/o Glenwood	26800	55	6	73.3	88	190	410
379	Moulton s/o La Paz	16900	45	6	69.2	44	95	205
372	Moulton s/o Lake Forest	33900	45	6	72.2	70	151	325
373	Moulton s/o Ridge Route	33700	45	6	72.2	70	151	325
354	Muirlands e/o Alicia	17800	40	4	68.1	36	78	168
348	Muirlands e/o Alton	13200	50	4	69.2	46	98	212
352	Muirlands e/o El Toro	19600	45	4	69.8	48	104	225
350	Muirlands e/o Lake Forest	19700	45	4	69.8	48	104	225
353	Muirlands e/o Los Alisos	19800	40	4	68.6	39	84	182
351	Muirlands w/o El Toro	19200	45	4	69.7	48	103	222
349	Muirlands w/o Lake Forest	16600	45	4	69.1	44	94	202
164	Newport n/o I-5	34700	35	4	69.6	44	94	202
161	Newport n/o Old Irvine	27900	35	4	68.7	38	82	176
165	Newport s/o I-5/Nissen	29100	35	4	68.8	39	84	182
162	Newport s/o Irvine	26900	35	4	68.5	37	79	171
163	Newport s/o Main	29400	35	4	68.9	39	84	182
166	Newport s/o Walnut	12100	35	4	65	< RdHW	47	101
147	North Bristol w/o Birch	26800	45	4	71.2	60	130	279
146	North Bristol w/o Campus	34600	45	4	72.3	71	153	330
148	North Bristol w/o Jamboree	16000	45	3	68.9	42	91	196
324	Olympiad e/o Marguerite	8400	45	4	66.1	27	59	128
369	P. Valencia e/o La Paz	7900	45	4	65.9	27	57	124
364	P. Valencia s/o Avd Carlota	10600	40	4	65.9	26	56	120
365	P. Valencia s/o El Toro	22800	40	6	69.2	43	92	199
366	P. Valencia s/o Los Alisos	32800	45	6	72.1	68	146	315
367	P. Valencia w/o Alicia	27600	45	6	71.3	61	132	283
368	P. Valencia w/o La Paz	11700	45	6	67.6	< RdHW	75	161
134	Paularino e/o SR-55	12800	40	4	66.7	29	63	136
133	Paularino w/o SR-55	18600	40	4	68.3	37	80	173
11	Portola e/o Sand Canyon	22800	65	4	74.5	109	236	508
316	Portola n/o El Toro	20200	55	6	72.1	72	156	335
314	Portola s/o Glenn Ranch	24700	55	4	73	83	179	385
310	Portola w/o Alton	4900	55	4	65.9	28	61	132
311	Portola w/o Bake	11300	55	6	69.6	49	106	229

EIR No. 573 *County of Orange* **Table 8.3-4 (Cont.)**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Existing Conditions

12/17/99

Airport System Master Plan - ASMP 1997 (Reference CNELs for existing segments)		CNEL RESULTS						
ID #	New Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)
313	Portola w/o Glenn Ranch	31500	55	4	74	98	212	456
5	Portola w/o Jamboree	600	45	4	54.7	< RdHW	< RdHW	< RdHW
312	Portola w/o Lake Forest	27300	55	4	73.4	88	190	410
10	Portola w/o Sand Canyon	15100	65	4	72.7	83	179	385
157	Prospect n/o Irvine	10000	40	4	65.6	25	53	115
158	Prospect s/o Irvine	10900	35	4	64.6	< RdHW	44	94
322	Rancho e/o Lake Forest	3300	50	4	63.2	< RdHW	39	84
172	Red Hill s/o Bryan	15300	40	4	67.5	33	70	151
180	Red Hill n/o Dyer/Barranca	30700	50	6	72.9	80	173	374
177	Red Hill n/o Edinger	36900	40	5	71.3	59	128	275
173	Red Hill n/o El Camino Real	22200	35	4	67.7	33	70	151
174	Red Hill n/o I-5	38800	35	6	70.1	47	101	218
182	Red Hill n/o MacArthur	31500	50	6	73	82	176	379
183	Red Hill n/o Main	15200	50	6	69.8	50	108	232
179	Red Hill n/o Warner	32300	45	6	72	68	146	315
186	Red Hill s/o Baker	16100	50	4	70.1	52	113	243
181	Red Hill s/o Dyer/Barranca	31600	50	6	73	82	176	379
178	Red Hill s/o Edinger	31500	45	6	69.2	67	144	311
175	Red Hill s/o I-5	38200	35	6	70	47	101	218
184	Red Hill s/o Main	20500	50	6	71.1	61	132	283
185	Red Hill s/o Paularino	18400	50	4	70.7	57	122	262
176	Red Hill s/o Walnut	34600	40	4	71	57	122	262
427	Ridge Route e/o Moulton	7600	45	2	65.7	26	56	120
423	Ridge Route n/o Jeronimo	9800	45	4	66.8	31	66	142
424	Ridge Route n/o Muirlands	8800	40	4	65.1	< RdHW	48	104
425	Ridge Route n/o Rockfield	8000	40	4	64.7	< RdHW	46	98
422	Ridge Route s/o Trabuco	8500	45	4	66.2	28	60	130
428	Ridge Route w/o Moulton	8800	35	4	63.7	< RdHW	38	82
292	Ridgeline s/o University	14300	45	4	68.5	39	84	182
359	Rockfield e/o El Toro	16800	40	4	67.9	35	76	163
357	Rockfield e/o Lake Forest	21600	45	4	70.2	52	111	239
358	Rockfield w/o El Toro	19600	45	4	69.8	48	104	225
356	Rockfield w/o Lake Forest	18800	40	4	68.4	37	80	173
318	S. Margarita e/o Los Alisos	22600	50	6	71.6	65	140	301
319	S. Margarita e/o Marguerite	25200	50	6	72	70	151	325
299	Sand Canyon n/o Alton	16600	55	6	71.2	64	138	297
300	Sand Canyon n/o I-405	18600	55	4	71.7	69	149	320
295	Sand Canyon n/o I-5	25200	60	6	74	100	215	463
293	Sand Canyon n/o Irvine	12600	60	4	71	63	136	292
294	Sand Canyon n/o Trabuco	17600	60	4	72.5	78	168	362
296	Sand Canyon s/o I-5	21800	50	4	74	64	138	297
297	Sand Cyn n/o Irvine Center	21600	50	6	71.4	63	136	292
298	Sand Cyn s/o Irvine Center	16700	55	4	71.3	64	138	297
187	Santa Ana s/o Bristol	10400	45	4	67.1	32	68	146
317	Santa Margarita e/o El Toro	28800	50	6	72.6	77	166	357
429	Santa Maria w/o Moulton	9600	45	4	66.7	30	65	140
587	SJHTC n/o Laguna Canyon	53000	65	6	78.2	190	410	882
589	SJHTC s/o Aliso Creek	47000	65	6	77.6	176	379	817
588	SJHTC s/o El Toro	47000	65	6	77.6	176	379	817
150	South Bristol w/o Birch	20200	45	3	70	49	106	229
149	South Bristol w/o Campus	28900	45	4	71.5	63	136	292
151	South Bristol w/o Jamboree	17100	45	3	69.2	44	95	205
602	SR-133 n/o I-405	20000	65	6	73.9	100	215	463
601	SR-133 s/o I-5	20000	65	6	73.9	100	215	463
593	SR-55 n/o Dyer	240000	65	10	84.7	524	1128	2430
592	SR-55 n/o Edinger	247000	65	12	84.8	532	1145	2468
590	SR-55 n/o Irvine/Fourth	221000	65	12	84.4	492	1061	2285
594	SR-55 n/o MacArthur	238000	65	10	84.7	516	1111	2393
591	SR-55 n/o McFadden	245000	65	14	84.8	532	1145	2468
596	SR-55 s/o I-405	138000	65	8	82.3	362	780	1681

Airport System Master Plan - ASMP 1997 (Reference CNELs for existing segments)		CNEL RESULTS						
ID #	New Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)
595	SR-55 s/o MacArthur	236000	65	12	84.6	516	1111	2393
597	SR-55 s/o SR-73	128000	65	8	82	341	734	1581
598	SR-73 n/o SR-55	87000	65	6	80.3	266	574	1237
600	SR-73 s/o Campus/Irvine	44000	65	6	77.3	168	362	780
599	SR-73 s/o SR-55	79000	65	6	79.9	247	532	1145
59	Sycamore w/o Red Hill	7400	30	2	61.3	< RdHW	25	54
74	Technology n/o Barranca	9800	35	4	64.1	< RdHW	40	87
334	Toledo e/o Alton	7200	45	4	65.5	25	53	115
336	Toledo e/o Lake Forest	7100	45	4	65.4	25	53	115
337	Toledo w/o El Toro	5600	45	4	64.4	< RdHW	46	98
335	Toledo w/o Lake Forest	9900	45	4	66.9	31	66	142
333	Trabuco e/o Alicia	14200	45	4	68.4	39	84	182
327	Trabuco e/o Bake	22700	55	6	72.6	78	168	362
331	Trabuco e/o El Toro	23300	50	4	71.7	67	144	311
329	Trabuco e/o Lake Forest	28600	50	6	72.6	77	166	357
332	Trabuco e/o Los Alisos	20600	45	4	70	50	108	232
330	Trabuco w/o El Toro	26300	50	6	72.2	72	156	335
48	Trabuco w/o Jeffrey	4100	55	4	65.2	25	54	116
328	Trabuco w/o Lake Forest	28000	50	6	72.5	76	163	351
49	Trabuco w/o Sand Canyon	3900	35	2	60.1	< RdHW	22	47
47	Trabuco w/o Yale	13200	55	6	70.3	55	118	254
207	Tustin Ranch e/o Bryan	16600	45	6	69.1	44	94	202
209	Tustin Ranch e/o I-5	29600	45	6	71.6	64	138	297
206	Tustin Ranch n/o Irvine	15200	45	6	68.7	41	88	190
205	Tustin Ranch n/o Portola	2700	50	6	62.3	< RdHW	< RdHW	73
208	Tustin Ranch s/o Bryan	20300	45	6	70	49	106	229
210	Tustin Ranch s/o I-5	18400	45	6	69.6	46	100	215
154	Tustin s/o 4th	14700	45	4	68.6	40	86	184
289	University e/o Culver	19600	45	4	69.8	48	104	225
290	University e/o Harvard	15800	50	6	70	52	111	239
288	University e/o Yale	19300	45	4	69.8	48	103	222
291	University n/o Campus	18200	50	6	70.6	57	122	262
286	University s/o I-405	35200	55	5	74.5	104	225	485
287	University w/o Michelson	30600	45	4	71.8	65	140	301
169	Valencia w/o Red Hill	3700	35	2	59.9	< RdHW	21	46
218	Von Karman n/o Birch	13500	40	4	66.9	30	65	140
217	Von Karman n/o Campus	17100	50	4	70.4	54	116	251
219	Von Karman n/o MacArthur	10900	40	4	66	26	57	122
215	Von Karman n/o Main	16300	50	6	70.1	52	113	243
216	Von Karman n/o Michelson	21500	50	6	71.4	63	136	292
214	Von Karman s/o Barranca	16400	50	6	70.2	52	113	243
57	Walnut e/o Culver	17700	45	4	69.4	46	98	212
55	Walnut e/o Jamboree	9800	35	4	64.1	< RdHW	40	87
52	Walnut e/o Red Hill	14600	35	4	65.8	25	53	115
56	Walnut w/o Culver	13600	35	4	65.5	< RdHW	51	109
54	Walnut w/o Jamboree	10000	40	4	65.6	25	53	115
58	Walnut w/o Jeffrey	10400	35	4	64.4	< RdHW	42	91
51	Walnut w/o Red Hill	16800	35	4	66.5	27	58	126
53	Walnut w/o Tustin Ranch	15400	35	4	66.1	25	55	118
80	Warner e/o Culver	6900	40	4	64	< RdHW	42	90
79	Warner w/o Culver	3100	40	4	60.6	< RdHW	24	52
78	Warner w/o Harvard	1400	40	4	57.1	< RdHW	< RdHW	31
75	Warner w/o Red Hill	14800	40	6	67.3	< RdHW	69	149
269	West Yale Loop s/o Alton	7200	45	4	65.5	25	53	115
268	West Yale Loop s/o Barranca	9900	45	4	66.9	31	66	142
270	West Yale Loop s/o Main	9000	45	4	66.4	29	62	134
267	West Yale Loop s/o Warner	7200	45	4	65.5	25	53	115
271	West Yale Loop s/o Main	15300	45	4	68.7	41	88	190
262	Yale n/o Bryan	10300	45	4	67	32	68	146
261	Yale n/o Irvine	9800	45	4	66.8	31	66	142
265	Yale n/o Irvine Center	14100	45	4	68.4	39	84	182
263	Yale n/o Trabuco	13300	45	4	68.1	37	80	173
276	Yale n/o University	2000	35	4	57.2	< RdHW	< RdHW	30
264	Yale n/o Walnut	13800	45	4	68.3	39	83	179
266	Yale s/o Irvine Center	11400	45	4	67.5	34	72	156
155	Yorba n/o Irvine	6700	35	4	62.5	< RdHW	32	68
156	Yorba s/o Irvine	8100	35	4	63.3	< RdHW	36	77

EIR No. 573 *County of Orange* **Table 8.3-4 (Cont.)**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Existing Conditions

CCTM2.8 MCAS El Toro		Airport System Master Plan - ASMP Existing						Nonaviation Plan - Existing							
ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	CNEL Increase dBA
394	Alton s/o Irvine	12100	55	6	69.9	49	106	229	24000	55	6	73.8	90	193	416	3.9
406	Bake s/o I-5	4500	50	6	64.6	< RdHW	47	101	9000	50	6	68.3	39	83	179	3.7
347	Barranca w/o Alton	13300	50	4	69.3	45	97	208	20000	50	4	71.8	66	142	306	2.5
97	Barranca w/o Technology	18400	55	4	71.7	65	140	301	27000	55	4	74.3	97	208	449	2.6
23	Irvine e/o Culver	23000	50	6	71.6	64	138	297	33000	50	6	74	92	199	429	2.4
26	Irvine e/o Sand Canyon	19700	65	4	70.1	51	109	236	45000	65	4	78.6	187	403	869	8.5
325	Irvine w/o Alton	18900	65	4	73.7	88	190	410	70000	65	4	80.5	251	540	1163	6.8
326	Irvine w/o Bake	24200	55	6	72.9	78	168	362	68000	55	6	78.3	179	385	830	5.4
24	Irvine w/o Jeffrey	22500	50	5	71.5	63	136	292	36000	50	5	74.4	98	212	456	2.9
25	Irvine w/o Sand Canyon	17400	65	4	73.9	91	196	422	38000	65	4	77.9	168	362	780	4
279	Jeffrey n/o Bryan	21200	60	6	73.3	83	179	385	30000	60	6	75.8	122	262	565	2.5
338	Jeronimo e/o Alton	8000	45	4	65.9	27	57	124	13000	45	4	68.6	40	87	187	2.7
5	Portola w/o Jamboree	600	45	4	54.7	< RdHW	< RdHW	< RdHW	1000	45	4	57.5	< RdHW	< RdHW	34	2.8
356	Rockfield w/o Lake Forest	18800	40	4	68.4	39	84	182	28000	40	4	70.5	54	116	251	2.1
299	Sand Canyon n/o Alton	16600	55	6	71.2	60	130	279	29000	55	6	74.6	101	218	470	3.4
300	Sand Canyon n/o I-405	18600	55	4	71.7	65	140	301	27000	55	4	74.3	97	208	449	2.6
295	Sand Canyon n/o I-5	25200	60	6	74	92	199	429	62000	60	6	79	199	429	924	5
294	Sand Canyon n/o Trabuco	17600	60	4	72.5	73	158	341	32000	60	4	76.1	128	275	592	3.6
297	Sand Cyn n/o Irvine Center	21600	50	6	71.4	62	134	288	40000	50	6	74.8	104	225	485	3.4
298	Sand Cyn s/o Irvine Center	16700	55	4	71.3	61	132	283	29000	55	4	74.6	101	218	470	3.3
74	Technology n/o Barranca	9800	35	4	64.1	< RdHW	44	94	17000	35	4	66.6	30	64	138	2.5
334	Toledo e/o Alton	7200	45	4	65.5	25	54	116	11000	45	4	67.9	36	78	168	2.4
335	Toledo w/o Lake Forest	9900	45	4	66.9	31	67	144	14000	45	4	68.9	42	91	196	2
327	Trabuco e/o Bake	22700	55	6	72.6	75	161	346	43000	55	6	76.3	132	283	610	3.7
48	Trabuco w/o Jeffrey	4100	55	4	65.2	< RdHW	52	111	7000	55	4	68.4	39	84	182	3.2
328	Trabuco w/o Lake Forest	28000	50	6	72.5	73	158	341	47000	50	6	75.5	116	251	540	3
49	Trabuco w/o Sand Canyon	3900	35	2	60.1	< RdHW	24	51	15000	35	2	66.1	27	59	128	6

EIR No. 573 *County of Orange* **Table 8.3-5**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Existing plus ETRPA Nonaviation Plan -
Existing Segments with 1.5 dB or Higher
Traffic Noise Increase

12/17/99

CCTM2.8 EXISTING MCAS El Toro ETRPA Nonaviation Plan - New Segments		CNEL RESULTS						
ID #	New Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)
500	Arts Village e/o E. Culture	11000	35	4	64.1	< RdHW	44	94
499	Arts Village e/o Millennium	13000	35	4	64.9	< RdHW	49	106
510	Astor e/o E. Central Park	5000	35	4	60.7	< RdHW	26	56
200	Birch s/o North Bristol	0	40	2	0	0	0	0
495	Bryan e/o Millennium	4000	50	4	64.2	< RdHW	44	95
494	Bryan e/o Research	4000	50	4	64.2	< RdHW	44	95
493	Bryan e/o Sand Canyon	6000	50	4	66	27	58	126
543	E. Central Park n/o Irvine	4000	35	4	59.8	< RdHW	< RdHW	48
545	E. Central Park n/o Trabuco	2000	35	4	56.7	< RdHW	< RdHW	30
547	E. Central Park s/o Astor	3000	35	4	58.5	< RdHW	< RdHW	40
544	E. Central Park s/o Irvine	11000	35	4	64.1	< RdHW	44	94
546	E. Central Park s/o Trabuco	3000	35	4	58.5	< RdHW	< RdHW	40
497	E. Culture e/o Millennium	4000	35	4	59.8	< RdHW	< RdHW	48
498	E. Culture n/o Trabuco	7000	35	4	62.2	< RdHW	33	70
491	Irvine e/o E. Central Park	42000	35	4	70	50	108	232
490	Irvine e/o Millennium	37000	35	4	69.4	46	98	212
488	Irvine e/o Research	39000	35	4	69.6	47	101	218
516	Jeronimo w/o Alton	13000	35	4	64.9	< RdHW	49	106
515	Jeronimo w/o Millennium	8000	35	4	62.8	< RdHW	36	77
513	Marine e/o Research	24000	35	4	67.5	34	73	158
512	Marine e/o Sand Canyon	26000	35	4	67.9	36	78	168
514	Marine w/o Millennium	27000	35	4	68	37	79	171
540	Millennium n/o Alton	34000	35	4	69	43	92	199
534	Millennium n/o Arts Village	7000	35	4	62.2	< RdHW	33	70
542	Millennium n/o Bake	34000	35	4	69	43	92	199
539	Millennium n/o Barranca	46000	35	4	70.4	53	115	247
532	Millennium n/o Bryan	10000	35	4	63.7	< RdHW	41	88
538	Millennium n/o Jeronimo	47000	35	4	70.5	54	116	251
537	Millennium n/o Marine	34000	35	4	69	43	92	199
541	Millennium n/o Rockfield	42000	35	4	70	50	108	232
535	Millennium n/o Trabuco	21000	35	4	67	32	68	146
533	Millennium s/o Bryan	9000	35	4	63.3	< RdHW	39	83
536	Millennium s/o Trabuco	29000	35	4	68.4	39	84	182
485	Portola e/o W. Central Park	29000	35	4	68.4	39	84	182
511	Quantum e/o Research	7000	35	4	62.2	< RdHW	33	70
520	Research n/o Bryan	10000	35	4	63.7	< RdHW	41	88
519	Research n/o Irvine	14000	35	4	65.2	< RdHW	52	111
523	Research n/o Marine	17000	35	4	66	27	58	126
521	Research n/o Trabuco	22000	35	4	67.2	33	70	151
524	Research s/o Marine	11000	35	4	64.1	< RdHW	44	94
522	Research s/o Trabuco	11000	35	4	64.1	< RdHW	44	94
355	Rockfield w/o Bake	18000	40	4	68	37	79	171
518	Sand Canyon s/o Irvine	31000	60	4	75.4	115	247	532
508	Trabuco e/o E. Central Park	27000	35	4	68	37	79	171
506	Trabuco e/o Millennium	27000	35	2	68	37	79	171
503	Trabuco e/o Research	33000	35	4	68.9	42	91	196
501	Trabuco e/o Sand Canyon	47000	35	4	70.5	54	116	251
504	Trabuco e/o W. Central Park	30000	35	2	68.5	40	86	184
507	Trabuco w/o E. Central Park	29000	35	4	68.4	39	84	182
505	Trabuco w/o Millennium	27000	35	2	68	37	79	171
527	W. Central Park n/o Bryan	11000	35	4	64.1	< RdHW	44	94
526	W. Central Park n/o Irvine	10000	35	4	63.7	< RdHW	41	88
528	W. Central Park n/o Trabuco	11000	35	4	64.1	< RdHW	44	94
525	W. Central Park s/o Portola	12000	35	4	64.5	< RdHW	46	100
530	W. Central Park s/o Quantum	11000	35	4	64.1	< RdHW	44	94
529	W. Central Park s/o Trabuco	8000	35	4	62.8	< RdHW	36	77
496	W. Culture n/o Trabuco	9000	35	4	63.3	< RdHW	39	83
489	Irvine e/o W. Central Park	40000	35	4	69.8	48	104	225

EIR No. 573 *County of Orange* **Table 8.3-6**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Existing plus ETRPA Nonaviation
Plan - New Segments

12/17/99

CCTM2.8 MCAS El Toro		Airport System Master Plan - ASMP 1997							No Project Alternative 2020 - Existing Segments							
ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	CNEL Increase dBA
28	1st w/o Tustin	18500	35	4	66.9	31	67	144	27000	35	6	68.6	40	87	187	1.7
12	4th w/o Tustin	20200	40	6	68.7	41	88	190	29000	40	6	70.6	55	118	254	1.9
111	Alton e/o Laguna Canyon	14700	55	4	70.7	56	120	258	22000	55	4	73.4	84	182	391	2.7
100	Alton e/o Red Hill	14700	50	4	69.7	48	103	222	25000	50	6	72.8	77	166	357	3.1
110	Alton e/o Sand Canyon	16900	55	4	71.3	61	132	283	27000	55	4	74.3	97	208	449	3
395	Alton n/o Jeronimo	22700	55	6	72.6	75	161	346	35000	55	6	75.4	115	247	532	2.8
396	Alton n/o Muirlands	32500	55	6	74.2	95	205	442	52000	55	6	77.1	149	320	690	2.9
394	Alton s/o Irvine	12100	55	6	69.9	49	106	229	30000	55	6	74.8	104	225	485	4.9
390	Alton s/o Portola	3800	55	6	64.8	< RdHW	48	104	29000	55	6	74.6	101	218	470	9.8
101	Alton w/o Jamboree	16900	50	4	70.3	52	113	243	29000	50	6	73.4	84	182	391	3.1
406	Bake s/o I-5	4500	50	6	64.6	< RdHW	47	101	18000	50	6	71.3	61	132	283	6.7
136	Baker e/o SR-55	15100	40	4	67.4	34	72	156	30000	40	4	70.8	57	122	262	3.4
96	Barranca e/o Irvine Center	16100	55	4	71.1	59	128	275	29000	55	4	74.6	101	218	470	3.5
94	Barranca e/o Laguna Canyon	3200	55	4	64.1	< RdHW	44	94	15000	55	4	71.7	65	140	301	7.6
93	Barranca e/o Sand Canyon	4400	55	4	65.5	25	54	116	16000	55	4	72	68	146	315	6.5
98	Barranca e/o Technology	14800	50	4	69.7	48	103	222	27000	50	4	73.1	80	173	374	3.4
347	Barranca w/o Alton	13300	50	4	69.3	45	97	208	26000	50	4	72.9	78	168	362	3.6
95	Barranca w/o Irvine Center	10900	55	4	69.4	46	98	212	19000	55	4	72.8	77	166	357	3.4
84	Barranca w/o Jamboree	28900	50	6	72.6	75	161	346	49000	50	6	75.7	120	258	557	3.1
97	Barranca w/o Technology	18400	55	4	71.7	65	140	301	33000	55	4	75.2	111	239	516	3.5
201	Birch s/o South Bristol	5900	40	2	63.3	18	39	83	9000	40	2	65.5	25	54	116	2.2
39	Bryan e/o Culver	7800	45	4	65.8	26	57	122	12000	45	4	68.3	39	83	179	2.5
38	Bryan e/o Jamboree	11400	45	4	67.5	34	73	158	26000	45	4	71.6	64	138	297	4.1
40	Bryan w/o Jeffrey	5200	50	4	65.2	< RdHW	52	111	10000	50	4	68.8	42	90	193	3.6
139	Campus e/o Jamboree	19100	45	4	69.7	48	103	222	30000	45	4	72.2	70	151	325	2.5
238	Carlson s/o Michelson	2300	35	6	57.8	< RdHW	< RdHW	< RdHW	8000	35	6	63.4	< RdHW	39	84	5.6
323	Commercentre w/o Bake	500	45	4	53.9	< RdHW	< RdHW	< RdHW	3000	45	4	62.2	< RdHW	33	70	8.3
249	Culver n/o Bryan	16800	45	3	69.2	44	95	205	42000	45	6	73.7	88	190	410	4.5
250	Culver n/o Trabuco/I-5	27300	45	3	71.3	61	132	283	62000	45	6	75.4	115	247	532	4.1
152	Del Mar e/o Newport (NB)	9600	30	2	62.4	16	34	72	16000	30	2	64.4	21	46	98	2
82	Dyer e/o SR-55	43300	40	6	72	68	146	315	79000	40	6	75	108	232	500	3
81	Dyer w/o Hotel Terrace	32500	40	6	70.8	57	122	262	79000	40	6	75	108	232	500	4.2
64	Edinger e/o Jamboree	20600	50	6	71.2	60	130	279	37000	50	6	74.5	100	215	463	3.3
62	Edinger e/o Red Hill	17900	55	6	71.6	64	138	297	57000	55	6	77.5	158	341	734	5.9
61	Edinger w/o Red Hill	28900	40	4	70.2	52	111	239	62000	40	6	73.9	91	196	422	3.7
60	Edinger w/o SR-55	32600	45	4	72	68	146	315	59000	45	6	75.2	111	239	516	3.2
41	El Camino Real n/o Main	6400	35	4	62.3	< RdHW	33	71	10000	35	4	64.3	< RdHW	45	97	2
42	El Camino Real w/o Newport	8900	35	4	63.7	< RdHW	41	88	18000	35	4	66.9	31	67	144	3.2
431	El Toro e/o Marguerite	11700	55	2	69.7	48	103	222	21000	55	2	73.2	82	176	379	3.5
432	El Toro e/o Santa Margarita	8500	55	6	68.3	39	83	179	24000	55	6	73.8	90	193	416	5.5
430	El Toro n/o Glenn Ranch	11100	55	2	69.5	46	100	215	16000	55	2	72	68	146	315	2.5
436	El Toro n/o Jeronimo	33800	50	6	73.3	83	179	385	52000	50	6	76	126	271	583	2.7
437	El Toro n/o Muirlands	36300	50	6	73.6	87	187	403	58000	50	6	76.4	134	288	620	2.8
438	El Toro n/o Rockfield	42200	40	6	71.9	67	144	311	64000	40	6	74.1	94	202	435	2.2
440	El Toro s/o Avd Carlota	34200	35	6	69.5	46	100	215	50000	35	6	71.3	61	132	283	1.8
435	El Toro s/o Trabuco	31500	50	6	73	79	171	368	50000	50	6	75.8	122	262	565	2.8
559	FTC s/o Alton	21000	65	6	74.1	94	202	435	91000	65	6	81.7	301	649	1398	7.6
560	FTC s/o Lake Forest	18000	65	6	73.5	86	184	397	78000	65	6	81	271	583	1256	7.5
558	FTC s/o Portola	23000	65	6	74.5	100	215	463	94000	65	6	81.8	306	659	1420	7.3
561	FTC s/o Santa Margarita	20000	65	6	73.9	91	196	422	88000	65	6	81.5	292	629	1356	7.6
308	Glenn Ranch n/o Portola	10600	55	4	69.3	45	97	208	27000	55	4	74.3	97	208	449	5

EIR No. 573 *County of Orange* **Table 8.3-7**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Year 2020 No Project vs. Existing No Project Conditions -
Existing Segments with 1.5 dB or Higher Traffic Noise Increase

12/17/99

CCTM2.8 MCAS El Toro		Airport System Master Plan - ASMP 1997							No Project Alternative 2020 - Existing Segments							
ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	CNEL Increase dBA
309	Glenn Ranch w/o El Toro	4100	55	4	65.2	< RdHW	52	111	9000	55	4	69.5	46	100	215	4.3
454	Glenwood w/o Moulton	8800	50	4	67.5	34	73	158	13000	50	4	69.9	49	106	229	2.4
170	Grand s/o Edinger	26900	45	6	71.2	60	130	279	46000	45	6	74.1	94	202	435	2.9
244	Harvard s/o Main	17600	50	4	70.5	54	116	251	25000	50	4	72.8	77	166	357	2.3
246	Harvard s/o University	12100	45	4	67.7	35	76	163	18000	45	4	70	50	108	232	2.3
159	Holt n/o Irvine	6900	40	4	64	< RdHW	43	92	13000	40	4	67.1	32	69	149	3.1
160	Holt s/o Irvine	6000	30	4	60.3	< RdHW	24	52	9000	30	4	61.9	< RdHW	31	67	1.6
66	Irvine Center e/o Culver	22000	55	6	72.5	73	158	341	49000	55	6	76.9	144	311	669	4.4
69	Irvine Center e/o Sand Cyn	12800	55	4	70.1	51	109	236	40000	55	6	76	126	271	583	5.9
71	Irvine Center n/o Alton	12700	55	6	70.1	51	109	236	34000	55	6	75.3	113	243	524	5.2
72	Irvine Center s/o Alton	25600	55	6	73.1	80	173	374	47000	55	6	76.7	140	301	649	3.6
371	Irvine Center s/o Bake	30400	60	4	74.8	104	225	485	66000	60	6	79.3	208	449	967	4.5
370	Irvine Center s/o I-405	27900	60	4	74.5	100	215	463	62000	60	6	79	199	429	924	4.5
70	Irvine Center w/o Barranca	13300	55	6	70.3	52	113	243	42000	55	6	76.2	130	279	601	5.9
65	Irvine Center w/o Culver	21600	55	6	72.4	72	156	335	43000	55	6	76.3	132	283	610	3.9
67	Irvine Center w/o Jeffrey	18300	55	6	71.7	65	140	301	46000	55	6	76.6	138	297	639	4.9
68	Irvine Center w/o Sand Cyn	16900	55	4	71.3	61	132	283	40000	55	6	76	126	271	583	4.7
23	Irvine e/o Culver	23000	50	6	71.6	64	138	297	42000	50	6	75	108	232	500	3.4
27	Irvine e/o ETC East Leg	19700	40	4	68.9	42	91	196	41000	40	4	72.1	69	149	320	3.2
21	Irvine e/o Jamboree	22900	50	6	71.6	64	138	297	40000	50	6	74.8	104	225	485	3.2
16	Irvine e/o Prospect	28000	40	4	70.1	51	109	236	41000	40	4	72.1	69	149	320	2
26	Irvine e/o Sand Canyon	19700	65	4	73.9	91	196	422	48000	65	4	78.9	196	422	910	5
15	Irvine e/o Yorba	29300	35	6	68.9	42	91	196	47000	35	6	71.1	59	128	275	2.2
325	Irvine w/o Alton	18900	65	4	73.7	88	190	410	32000	65	4	77.1	149	320	690	3.4
18	Irvine w/o Browning	24200	45	4	70.7	56	120	258	44000	45	6	73.9	91	196	422	3.2
20	Irvine w/o Jamboree	25500	50	6	72.1	69	149	320	44000	50	6	75.2	111	239	516	3.1
24	Irvine w/o Jeffrey	22500	50	5	71.5	63	136	292	41000	50	5	74.9	106	229	492	3.4
17	Irvine w/o Red Hill	29700	40	4	70.4	53	115	247	47000	40	6	72.7	76	163	351	2.3
25	Irvine w/o Sand Canyon	17400	65	4	73.3	83	179	385	42000	65	4	78.3	179	385	830	5
19	Irvine w/o Tustin Ranch	23800	45	6	70.7	56	120	258	39000	45	6	73.4	84	182	391	2.7
230	Jamboree n/o Alton	30700	50	8	72.9	78	168	362	73000	50	8	77.4	156	335	723	4.5
229	Jamboree n/o Barranca	34000	50	8	73.3	83	179	385	88000	50	8	78.2	176	379	817	4.9
223	Jamboree n/o Bryan	26200	45	5	71.1	59	128	275	47000	45	6	74.2	95	205	442	3.1
227	Jamboree n/o Edinger	41400	50	8	74.2	95	205	442	104000	50	8	79	199	429	924	4.8
224	Jamboree n/o El Camino Real	33400	45	8	72.1	69	149	320	51000	45	8	74.5	100	215	463	2.4
222	Jamboree n/o Irvine	22900	45	5	70.5	54	116	251	34000	45	6	72.8	77	166	357	2.3
231	Jamboree n/o Main	34800	50	8	73.4	84	182	391	69000	50	8	77.2	151	325	701	3.8
221	Jamboree n/o Portola	22000	50	4	71.5	63	136	292	42000	50	6	75	108	232	500	3.5
220	Jamboree n/o Tustin Ranch	19000	55	4	71.8	66	142	306	47000	55	4	76.7	140	301	649	4.9
228	Jamboree s/o Edinger	39800	50	8	74	92	199	429	107000	50	8	79.1	202	435	938	5.1
279	Jeffrey n/o Bryan	21200	60	6	73.3	83	179	385	34000	60	6	76.4	134	288	620	3.1
281	Jeffrey n/o I-5	29800	60	6	74.7	103	222	477	59000	60	6	78.8	193	416	896	4.1
280	Jeffrey n/o Trabuco	24900	60	6	74	92	199	429	36000	60	6	76.6	138	297	639	2.6
282	Jeffrey s/o Walnut/I-5	32200	55	5	74.1	94	202	435	48000	55	6	76.8	142	306	659	2.7
305	Laguna Canyon n/o Alton	1500	45	4	58.7	< RdHW	< RdHW	41	7000	45	4	65.9	27	57	124	7.2
306	Laguna Canyon s/o Alton	3100	45	2	61.8	14	31	66	12000	45	2	68.3	39	83	179	6.5
456	Laguna Hills e/o Moulton	15000	50	4	69.8	48	104	225	23000	50	4	72.4	72	156	335	2.6
458	Laguna Hills w/o Aliso Crk	3100	50	6	62.9	< RdHW	36	78	29000	50	6	73.4	84	182	391	10.5
457	Laguna Hills w/o Moulton	16500	50	6	70.2	52	111	239	50000	50	6	75.8	122	262	565	5.6
413	Lake Forest n/o Trabuco	26700	50	4	72.3	71	153	330	44000	50	4	75.2	111	239	516	2.9
412	Lake Forest s/o Rancho	13500	50	4	69.3	45	97	208	37000	50	4	74.5	100	215	463	5.2
445	Los Alisos e/o Marguerite	6900	50	4	66.4	29	62	134	16000	50	4	70.8	57	122	262	4.4
446	Los Alisos n/o S. Margarita	7500	50	4	66.8	31	66	142	11000	50	4	69.2	44	95	205	2.4
120	Main e/o MacArthur	33200	50	6	73.2	82	176	379	51000	50	6	75.9	124	266	574	2.7
121	Main w/o Jamboree	24000	50	6	71.8	66	142	306	37000	50	6	74.5	100	215	463	2.7

EIR No. 573 *County of Orange* **Table 8.3-7 (Cont.)**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Year 2020 No Project vs. Existing No Project Conditions -
Existing Segments with 1.5 dB or Higher Traffic Noise Increase

CCTM2.8 MCAS El Toro		Airport System Master Plan - ASMP 1997							No Project Alternative 2020 - Existing Segments							
ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	CNEL Increase dBA
119	Main w/o MacArthur	26500	50	4	72.3	71	153	330	46000	50	6	75.4	115	247	532	3.1
118	Main w/o Red Hill	24600	50	4	71.9	67	144	311	41000	50	6	74.9	106	229	492	3
474	Marguerite n/o S. Margarita	9200	45	4	66.5	29	63	136	14000	45	4	68.9	42	91	196	2.4
473	Marguerite s/o El Toro	10200	45	4	67	32	68	146	19000	45	4	70.3	52	113	243	3.3
131	Michelson w/o University	4700	35	2	60.9	12	27	57	9000	35	2	63.9	20	42	91	3
377	Moulton n/o Alicia	24400	55	6	72.9	78	168	362	46000	55	6	76.6	138	297	639	3.7
374	Moulton n/o El Toro	37600	45	6	72.7	76	163	351	69000	45	6	75.9	124	266	574	3.2
378	Moulton n/o La Paz	20700	45	6	70.1	51	109	236	40000	45	6	73.5	86	184	397	3.4
375	Moulton s/o El Toro	35600	45	6	72.4	72	156	335	76000	45	6	76.3	132	283	610	3.9
376	Moulton s/o Glenwood	26800	55	6	73.3	83	179	385	63000	55	6	78	171	368	792	4.7
379	Moulton s/o La Paz	16900	45	6	69.2	44	95	205	32000	45	6	72.5	73	158	341	3.3
372	Moulton s/o Lake Forest	33900	45	6	72.2	70	151	325	61000	45	6	75.3	113	243	524	3.1
373	Moulton s/o Ridge Route	33700	45	6	72.2	70	151	325	63000	45	6	75.5	116	251	540	3.3
348	Muirlands e/o Alton	13200	50	4	69.2	44	95	205	19000	50	4	71.6	64	138	297	2.4
166	Newport s/o Walnut	12100	35	4	65	< RdHW	50	108	25000	35	4	68.3	39	83	179	3.3
316	Portola n/o El Toro	20200	55	6	72.1	69	149	320	50000	55	6	77	146	315	680	4.9
311	Portola w/o Bake	11300	55	6	69.6	47	101	218	20000	55	6	73	79	171	368	3.4
5	Portola w/o Jamboree	600	45	4	54.7	< RdHW	< RdHW	< RdHW	8000	45	4	66.5	29	63	136	11.8
322	Rancho e/o Lake Forest	3300	50	4	63.2	< RdHW	38	82	41000	50	4	74.9	106	229	492	11.7
182	Red Hill s/o MacArthur	31500	50	6	73	79	171	368	47000	50	6	75.5	116	251	540	2.5
427	Ridge Route e/o Moulton	7600	45	2	65.7	26	56	120	11000	45	2	67.9	36	78	168	2.2
299	Sand Canyon n/o Alton	16600	55	6	71.2	60	130	279	34000	55	6	75.3	113	243	524	4.1
300	Sand Canyon n/o I-405	18600	55	4	71.7	65	140	301	36000	55	4	75.5	116	251	540	3.8
295	Sand Canyon n/o I-5	25200	60	6	74	92	199	429	44000	60	6	77.5	158	341	734	3.5
293	Sand Canyon n/o Irvine	12600	60	4	71	58	126	271	18000	60	4	73.6	87	187	403	2.6
294	Sand Canyon n/o Trabuco	17600	60	4	72.5	73	158	341	33000	60	4	76.3	132	283	610	3.8
297	Sand Cyn n/o Irvine Center	21600	50	6	71.4	62	134	288	39000	50	6	74.7	103	222	477	3.3
298	Sand Cyn s/o Irvine Center	16700	55	4	71.3	61	132	283	34000	55	6	75.3	113	243	524	4
187	Santa Ana s/o Bristol	10400	45	4	67.1	32	69	149	15000	45	4	69.2	44	95	205	2.1
317	Santa Margarita e/o El Toro	28800	50	6	72.6	75	161	346	50000	50	6	75.8	122	262	565	3.2
587	SJHTC n/o Laguna Canyon	53000	65	6	78.2	176	379	817	108000	65	6	82.4	335	723	1557	4.2
589	SJHTC s/o Aliso Creek	47000	65	6	77.6	161	346	745	89000	65	6	81.6	297	639	1377	4
588	SJHTC s/o El Toro	47000	65	6	77.6	161	346	745	99000	65	6	82	315	680	1464	4.4
151	South Bristol w/o Jamboree	17100	45	3	69.2	44	95	205	26000	45	3	71.6	64	138	297	2.4
602	SR-133 n/o I-405	20000	65	6	73.9	91	196	422	42000	65	6	78.3	179	385	830	4.4
601	SR-133 s/o I-5	20000	65	6	73.9	91	196	422	47000	65	6	78.8	193	416	896	4.9
597	SR-55 s/o SR-73	128000	65	8	82	315	680	1464	181000	65	8	84.7	477	1029	2216	2.7
598	SR-73 n/o SR-55	87000	65	6	80.3	243	524	1128	136000	65	6	83.4	391	843	1815	3.1
600	SR-73 s/o Campus/Irvine	44000	65	6	77.3	153	330	712	66000	65	6	80.3	243	524	1128	3
599	SR-73 s/o SR-55	79000	65	6	79.9	229	492	1061	116000	65	6	82.7	351	757	1630	2.8
48	Trabuco w/o Jeffrey	4100	55	4	65.2	< RdHW	52	111	14000	55	4	71.4	62	134	288	6.2
49	Trabuco w/o Sand Canyon	3900	35	2	60.1	< RdHW	24	51	21000	35	2	67.6	35	75	161	7.5
207	Tustin Ranch n/o Bryan	16600	45	6	69.1	44	94	202	28000	45	6	71.9	67	144	311	2.8
209	Tustin Ranch n/o I-5	29600	45	6	71.6	64	138	297	43000	45	6	73.8	90	193	416	2.2
206	Tustin Ranch n/o Irvine	15200	45	6	68.7	41	88	190	34000	45	6	72.8	77	166	357	4.1
205	Tustin Ranch n/o Portola	2700	50	6	62.3	< RdHW	< RdHW	71	17000	50	6	71.1	59	128	275	8.8
208	Tustin Ranch s/o Bryan	20300	45	6	70	50	108	232	29000	45	6	72.1	69	149	320	2.1
210	Tustin Ranch s/o I-5	18400	45	6	69.6	47	101	218	43000	45	6	73.8	90	193	416	4.2
169	Valencia w/o Red Hill	3700	35	2	59.9	< RdHW	23	49	15000	35	4	66.1	27	59	128	6.2
218	Von Karman n/o Birch	13500	40	4	66.9	31	67	144	20000	40	4	69	43	92	199	2.1
217	Von Karman n/o Campus	17100	50	4	70.4	53	115	247	25000	50	4	72.8	77	166	357	2.4
215	Von Karman n/o Main	16300	50	6	70.1	51	109	236	32000	50	6	73.8	90	193	416	3.7
216	Von Karman n/o Michelson	21500	50	6	71.4	62	134	288	33000	50	6	74	92	199	429	2.6
214	Von Karman s/o Barranca	16400	50	6	70.2	52	111	239	36000	50	6	74.4	98	212	456	4.2
54	Walnut w/o Jamboree	10000	40	4	65.6	25	55	118	15000	40	4	67.8	36	77	166	2.2
79	Warner w/o Culver	3100	40	4	60.6	< RdHW	25	55	18000	40	4	68.6	40	87	187	8
78	Warner w/o Harvard	1400	40	4	57.1	< RdHW	< RdHW	32	16000	40	6	68	37	79	171	10.9
75	Warner w/o Red Hill	14800	40	6	67.3	< RdHW	71	153	40000	40	6	72	68	146	315	4.7
267	West Yale Loop n/o Warner	7200	45	4	65.5	25	54	116	11000	45	4	67.9	36	78	168	2.4
155	Yorba n/o Irvine	6700	35	4	62.5	< RdHW	34	73	14000	35	4	65.8	26	57	122	3.3

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Year 2020 No Project vs. Existing No Project Conditions -
Existing Segments with 1.5 dB or Higher Traffic Noise Increase

higher noise increase over their corresponding existing no project level. Although these noise increases would be considered significant, they are due to area growth and planned development in the region. Table 8.3-8 shows the noise levels along new road links that would be constructed under the year 2020 no project scenario. Many of these new road links would have the 65 dB CNEL affecting sensitive uses adjacent to the roads.

Table 8.3-9 shows the road links that would have a potential noise increase greater than 1.5 dB under the 2020 ETRPA Nonaviation Plan Alternative over the existing plus committed (2020) scenario. Although a total of 58 road links with 2020 ETRPA Nonaviation Plan Alternative would have a 1.5 to 3.0 dB in noise level increase over their corresponding existing plus committed scenarios and a total of 111 road links would have a 3 dB or more noise level increase over their corresponding existing plus committed scenario, in order to determine the impacts associated with the 2020 ETRPA Nonaviation Plan Alternative, a comparison with the year 2020 existing plus committed scenario was also conducted. A total of 60 road links under the 2020 ETRPA Nonaviation Plan Alternative would have an increase of up to 3.0 dB in noise levels over their corresponding existing plus committed (2020) scenario. Only two road links would have noise level increases of more than 3 dB. Along Commercentre Drive west of Bake Parkway, there would be a 3.7 dB increase. Along Trabuco Road east of Sand Canyon Road, there would be a 10.6 dB increase with the implementation of the 2020 ETRPA Nonaviation Plan Alternative. These noise level increases would be considered significant with the 2020 ETRPA Nonaviation Plan Alternative.

However, no existing sensitive use along these segments of the two road links would have more than 3 dB noise increases. Any future sensitive uses proposed along these two road links would require mitigation or rejection. In addition, a total of 41 road links would have lower traffic noise with ETRPA Nonaviation Plan Alternative. A total of 91 road links would have no measurable change in traffic noise in year 2020 with implementation of the ETRPA Nonaviation Plan Alternative.

Table 8.3-10 summarizes the number of road links that would have noise level increase over their corresponding existing levels for the existing plus ETRPA Nonaviation Plan Alternative, 2020 No Project, and 2020 ETRPA Nonaviation Plan Alternative. Table 8.3-11 summarizes the number of road links that would have noise level increase with 2020 ETRPA Nonaviation Plan Alternative over their corresponding 2020 No Project levels.

Comparison of Alternative Impacts to Proposed Project Impacts

This alternative would not have any of the aviation noise impacts of the project at the MCAS El Toro site.

CCTM2.8 2020 MCAS El Toro NO PROJECT - New Segments		CNEL RESULTS						
ID #	New Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)
392	Alton n/o Commercentre	35000	55	6	74.8	104	225	485
393	Alton n/o Irvine	35000	55	6	74.8	104	225	485
391	Alton n/o Rancho	28000	55	6	73.9	91	196	422
92	Barranca w/o Sand Canyon	18000	35	4	66.3	28	61	132
200	Birch s/o North Bristol	10000	40	2	65.4	25	53	115
248	Culver n/o Irvine	29000	45	6	71.5	63	136	292
511	East Access n/o Irvine	0	35	4	0	0	0	0
509	East Access s/o Irvine	0	35	4	0	0	0	0
63	Edinger w/o Jamboree	38000	55	6	75.2	111	239	516
512	ETC Connector (N & S)	0	35	4	0	0	0	0
513	ETC Connector (N)	0	35	4	0	0	0	0
552	ETC East Leg n/o Irvine	58000	65	6	79.1	202	435	938
550	ETC East Leg n/o Jeffrey	96000	65	6	81.3	283	610	1315
553	ETC East Leg s/o Irvine	48000	65	6	78.3	179	385	830
551	ETC East Leg s/o Jeffrey	96000	65	6	81.3	283	610	1315
555	ETC West Leg n/o Irvine	69000	65	6	79.9	229	492	1061
554	ETC West Leg n/o Portola	65000	65	6	79.6	218	470	1013
556	ETC West Leg s/o Irvine	60000	65	6	79.3	208	449	967
557	FTC s/o ETC East Leg	79000	65	6	80.4	247	532	1145
500	Irvine e/o Perimeter Rd	47000	35	4	70.5	54	116	251
22	Irvine w/o Culver	46000	50	6	74.8	104	225	485
236	Jamboree n/o California	38000	50	6	74	92	199	429
304	Laguna Canyon n/o Barranca	1000	45	4	56.9	< RdHW	< RdHW	31
385	Laguna Canyon s/o Bake	46000	55	4	76	126	271	583
386	Laguna Cyn n/o Aliso Creek	30000	55	4	74.2	95	205	442
384	Laguna Cyn s/o Lake Forest	46000	35	4	70.4	53	115	247
303	Laguna Cyn s/o Technology	3000	35	4	58.5	< RdHW	< RdHW	40
502	Marine Way e/o Sand Canyon	3000	35	4	58.5	< RdHW	< RdHW	40
167	Newport n/o Edinger	33000	35	6	68.9	42	91	196
168	Newport s/o Edinger	15000	35	6	65.5	< RdHW	54	116
302	Oak Canyon e/o Sand Canyon	6000	35	4	61.5	< RdHW	29	63
506	Perimeter Rd e/o Air Cargo	0	35	2	0	0	0	0
504	Perimeter Rd n/o Marine Way	0	35	2	0	0	0	0
507	Perimeter Rd s/o Astor	0	35	2	0	0	0	0
503	Perimeter Rd s/o Irvine	0	35	2	0	0	0	0
505	Perimeter Rd s/o Marine Way	0	35	2	0	0	0	0
8	Portola e/o Culver	21000	50	2	71.4	62	134	288
6	Portola e/o Jamboree	25000	50	6	72.2	70	151	325
315	Portola n/o Rancho	27000	65	4	75.8	122	262	565
7	Portola w/o Culver	29000	50	2	72.8	77	166	357
9	Portola w/o Jeffrey	14000	35	2	65.2	24	52	111
320	Rancho e/o Alton	10000	55	4	69.4	46	98	212
321	Rancho e/o Bake	36000	55	4	74.9	106	229	492
355	Rockfield e/o Alton	0	40	4	0	0	0	0
301	Sand Canyon s/o I-405	3000	50	4	63	< RdHW	37	79
73	Technology e/o Oak Cyn	2000	35	4	56.7	< RdHW	< RdHW	30
501	Trabuco e/o Sand Canyon	2000	35	4	56.7	< RdHW	< RdHW	30
211	Tustin Ranch n/o Edinger	41000	45	6	73	79	171	368
212	Tustin Ranch s/o Edinger	26000	35	6	67.9	36	78	168
213	Tustin Ranch s/o Warner	42000	35	6	70	50	108	232
76	Warner e/o Red Hill	52000	50	6	75.4	115	247	532
77	Warner w/o Jamboree	24000	50	6	72	68	146	315
510	West Access n/o Irvine	0	35	4	0	0	0	0
508	West Access s/o Irvine	0	35	4	0	0	0	0

EIR No. 573 *County of Orange* **Table 8.3-8**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Year 2020 No Project Condition
- New Segments

12/17/99

CCTM2.8 MCAS El Toro		No Project Alternative 2020 - All Segments							CCTM2.8 MCAS El Toro		NonAviation Alternative 2020 - All Segments						
ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	CNEL Increase dBA
393	Alton n/o Irvine	35000	55	6	74.8	104	225	485	N 393	Alton n/o Irvine	19000	55	6	72.2	70	151	325	-2.6
200	Birch s/o North Bristol	10000	40	2	65.4	25	53	115	N 200	Birch s/o Bristol	5900	40	6	63.1	< RdHW	37	80	-2.3
81	Dyer w/o Hotel Terrace	79000	40	6	75	108	232	500	E 81	Dyer w/o Hotel Terrace	48000	40	6	72.8	77	166	357	-2.2
70	Irvine Center w/o Barranca	42000	55	6	76.2	130	279	601	E 70	Irvine Center w/o Barranca	31000	55	6	74.9	106	229	492	-1.3
69	Irvine Center e/o Sand Cyn	40000	55	6	76	126	271	583	E 69	Irvine Center e/o Sand Cyn	31000	55	6	74.9	106	229	492	-1.1
294	Sand Canyon n/o Trabuco	33000	60	4	76.3	132	283	610	E 294	Sand Canyon n/o Trabuco	26000	60	4	75.2	111	239	516	-1.1
347	Barranca w/o Alton	26000	50	4	72.9	78	168	362	E 347	Barranca w/o Alton	21000	50	4	72	68	146	315	-0.9
97	Barranca w/o Technology	33000	55	4	75.2	111	239	516	E 97	Barranca w/o Technology	28000	55	4	74.5	100	215	463	-0.7
98	Barranca e/o Technology	27000	50	4	73.1	80	173	374	E 98	Barranca e/o Technology	23000	50	6	73.4	72	156	335	-0.7
94	Barranca e/o Laguna Canyon	15000	55	4	71.7	65	140	301	E 94	Barranca e/o Laguna Canyon	13000	55	4	71.1	59	128	275	-0.6
93	Barranca e/o Sand Canyon	16000	55	4	72	68	146	315	E 93	Barranca e/o Sand Canyon	14000	55	4	71.4	62	134	288	-0.6
96	Barranca e/o Irvine Center	29000	55	4	74.6	101	218	470	E 96	Barranca e/o Irvine Center	26000	55	4	74.1	94	202	435	-0.5
370	Irvine Center s/o I-405	62000	60	6	79	199	429	924	E 370	Irvine Center s/o I-405	56000	60	6	78.6	187	403	869	-0.4
71	Irvine Center s/o Alton	34000	55	6	75.3	113	243	524	E 71	Irvine Center s/o Alton	32000	55	6	75	108	232	500	-0.3
110	Alton e/o Sand Canyon	27000	55	4	74.3	97	208	449	E 110	Alton e/o Sand Canyon	25000	55	4	74	92	199	429	-0.3
394	Alton s/o Irvine	30000	55	6	74.8	104	225	485	E 394	Alton s/o Irvine	28000	55	6	74.5	100	215	463	-0.3
412	Lake Forest s/o Rancho	37000	50	4	74.5	100	215	463	E 412	Lake Forest s/o Rancho	35000	50	4	74.2	95	205	442	-0.3
72	Irvine Center s/o Alton	47000	55	6	76.7	140	301	649	E 72	Irvine Center s/o Alton	45000	55	6	76.5	136	292	629	-0.2
281	Jeffrey n/o I-5	59000	60	6	78.8	193	416	896	E 281	Jeffrey n/o I-5	57000	60	6	78.6	187	403	869	-0.2
435	El Toro s/o Trabuco	50000	50	6	75.8	122	262	565	E 435	El Toro s/o Trabuco	48000	50	6	75.6	118	254	548	-0.2
66	Irvine Center e/o Culver	49000	55	6	76.9	144	311	669	E 66	Irvine Center e/o Culver	48000	55	6	76.8	142	306	659	-0.1
84	Barranca w/o Jamboree	49000	50	6	75.7	120	258	557	E 84	Barranca w/o Jamboree	48800	50	4	75.6	118	254	548	-0.1
101	Alton w/o Jamboree	29000	50	6	73.4	84	182	391	E 101	Alton w/o Jamboree	28000	50	4	73.3	83	179	385	-0.1
119	Main w/o MacArthur	46000	50	6	75.4	115	247	532	E 119	Main w/o MacArthur	45000	50	6	75.3	113	243	524	-0.1
120	Main e/o MacArthur	51000	50	6	75.9	124	266	574	E 120	Main e/o MacArthur	50000	50	6	75.8	122	262	565	-0.1
231	Jamboree n/o Main	69000	50	8	77.2	151	325	701	E 231	Jamboree n/o Main	68800	50	8	77.1	149	320	690	-0.1
279	Jeffrey n/o Bryan	34000	60	6	76.4	134	288	620	E 279	Jeffrey n/o Bryan	33800	60	6	76.3	132	283	610	-0.1
555	ETC West Leg n/o Irvine	69000	65	6	79.9	229	492	1061	N 555	ETC West Leg n/o Irvine	68800	65	6	79.8	225	485	1045	-0.1
587	SJHTC n/o Laguna Canyon	108000	65	6	82.4	335	723	1557	E 587	SJHTC n/o Laguna Canyon	106000	65	6	82.3	330	712	1533	-0.1
65	Irvine Center w/o Culver	43000	55	6	76.3	132	283	610	E 65	Irvine Center w/o Culver	42000	55	6	76.2	130	279	601	-0.1
68	Irvine Center w/o Sand Cyn	40000	55	6	76	126	271	583	E 68	Irvine Center w/o Sand Cyn	39000	55	6	75.9	124	266	574	-0.1
82	Dyer e/o SR-55	79000	40	6	75	108	232	500	E 82	Dyer e/o SR-55	78000	40	6	74.9	106	229	492	-0.1
121	Main w/o Jamboree	37000	50	6	74.5	100	215	463	E 121	Main w/o Jamboree	36000	50	6	74.4	98	212	456	-0.1
210	Tustin Ranch s/o I-5	43000	45	6	73.8	90	193	416	E 210	Tustin Ranch s/o I-5	42000	45	6	73.7	88	190	410	-0.1
215	Von Karman n/o Main	32000	50	6	73.8	90	193	416	E 215	Von Karman n/o Main	31000	50	6	73.7	88	190	410	-0.1
436	El Toro n/o Jeronimo	52000	50	6	76	126	271	583	E 436	El Toro n/o Jeronimo	51000	50	6	75.9	124	266	574	-0.1
438	El Toro n/o Rockfield	64000	40	6	74.1	94	202	435	E 438	El Toro n/o Rockfield	63000	40	6	74	92	199	429	-0.1
554	ETC West Leg n/o Portola	65000	65	6	79.6	218	470	1013	N 554	ETC West Leg n/o Portola	64000	65	6	79.5	215	463	998	-0.1
556	ETC West Leg s/o Irvine	60000	65	6	79.3	208	449	967	N 556	ETC West Leg s/o Irvine	59000	65	6	79.2	205	442	953	-0.1
589	SJHTC s/o Aliso Creek	89000	65	6	81.6	297	639	1377	E 589	SJHTC s/o Aliso Creek	88000	65	6	81.5	292	629	1356	-0.1
600	SR-73 n/o Campus/Irvine	66000	65	6	80.3	243	524	1128	E 600	SR-73 n/o Campus/Irvine	65000	65	6	80.2	239	516	1111	-0.1
5	Portola w/o Jamboree	8000	45	4	66.5	29	63	136	E 5	Portola w/o Jamboree	8000	45	4	66.5	29	63	136	0
12	4th w/o Tustin	29000	40	6	70.6	55	118	254	E 12	4th w/o Tustin	29000	40	6	70.6	55	118	254	0
15	Irvine c/o Yorba	47000	35	6	71.1	59	128	275	E 15	Irvine c/o Yorba	47000	35	6	71.1	59	128	275	0
16	Irvine e/o Prospect	41000	40	4	72.1	69	149	320	E 16	Irvine e/o Prospect	41000	40	4	72.1	69	149	320	0
17	Irvine w/o Red Hill	47000	40	6	72.7	76	163	351	E 17	Irvine w/o Red Hill	47000	40	6	72.7	76	163	351	0
18	Irvine w/o Browning	44000	45	6	73.9	91	196	422	E 18	Irvine w/o Browning	44000	45	6	73.9	91	196	422	0
19	Irvine w/o Tustin Ranch	39000	45	6	73.4	84	182	391	E 19	Irvine w/o Tustin Ranch	39000	45	6	73.4	84	182	391	0
20	Irvine w/o Jamboree	44000	50	6	75.2	111	239	516	E 20	Irvine w/o Jamboree	44000	50	6	75.2	111	239	516	0
28	1st w/o Tustin	27000	35	6	68.6	40	87	187	E 28	1st w/o Tustin	27000	35	4	68.6	40	87	187	0
38	Bryan e/o Jamboree	26000	45	4	71.6	64	138	297	E 38	Bryan e/o Jamboree	26000	45	4	71.6	64	138	297	0
41	El Camino Real n/o Main	10000	35	4	64.3	< RdHW	45	97	E 41	El Camino Real n/o Main	10000	35	4	64.3	< RdHW	45	97	0
42	El Camino Real w/o Newport	18000	35	4	66.9	31	67	144	E 42	El Camino Real w/o Newport	18000	35	4	66.9	31	67	144	0
60	Edinger w/o SR-55	59000	45	6	75.2	111	239	516	E 60	Edinger w/o SR-55	59000	45	6	75.2	111	239	516	0
61	Edinger w/o Red Hill	62000	40	6	73.9	91	196	422	E 61	Edinger w/o Red Hill	61000	40	6	73.9	91	196	422	0
62	Edinger e/o Red Hill	57000	55	6	77.5	158	341	734	E 62	Edinger e/o Red Hill	56000	55	6	77.5	158	341	734	0
64	Edinger e/o Jamboree	37000	50	6	74.5	100	215	463	E 64	Edinger e/o Jamboree	37000	50	6	74.5	100	215	463	0
75	Warner w/o Red Hill	40000	40	6	72	68	146	315	E 75	Warner w/o Red Hill	40000	40	6	72	68	146	315	0
77	Warner w/o Jamboree	24000	50	6	72	68	146	315	N 77	Warner w/o Jamboree	24000	50	6	72	68	146	315	0
78	Warner w/o Harvard	16000	40	6	68	37	79	171	E 78	Warner w/o Harvard	16000	40	6	68	37	79	171	0
79	Warner w/o Culver	18000	40	4	68.6	40	87	187	E 79	Warner w/o Culver	18000	40	4	68.6	40	87	187	0
100	Alton e/o Red Hill	25000	50	6	72.8	77	166	357	E 100	Alton e/o Red Hill	25000	50	6	72.8	77	166	357	0
118	Main w/o Red Hill	41000	50	6	74.9	106	229	492	E 118	Main w/o Red Hill	41000	50	6	74.9	106	229	492	0
131	Michelson w/o University	9000	35	2	63.9	20	42	91	E 131	Michelson w/o University	9000	35	2	63.9	20	42	91	0
136	Baker e/o SR-55	30000	40	4	70.8	57	122	262	E 136	Baker e/o SR-55	30000	40	4	70.8	57	122	262	0

EIR No. 573 *County of Orange* **Table 8.3-9**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Year 2020 with ETRPA Nonaviation Plan
vs. Year 2020 No Project - All Segments

CCTM2.5 MCAS El Toro		No Project Alternative 2020 - All Segments							CCTM2.5 MCAS El Toro		NonAviation Alternative 2020 - All Segments							
ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	CNEL Increase dBA
139	Campus s/o Jamboree	30000	45	4	72.2	70	151	325	E 139	Campus s/o Jamboree	30000	45	4	72.2	70	151	325	0
151	South Bristol w/o Jamboree	26000	45	3	71.6	64	138	297	E 151	South Bristol w/o Jamboree	26000	45	3	71.6	64	138	297	0
152	Del Mar e/o Newport (NB)	16000	30	2	64.4	21	46	98	E 152	Del Mar e/o Newport (NB)	16000	30	2	64.4	21	46	98	0
155	Yorba n/o Irvine	14000	35	4	65.8	26	57	122	E 155	Yorba n/o Irvine	14000	35	4	65.8	26	57	122	0
159	Holt n/o Irvine	13000	40	4	67.1	32	69	149	E 159	Holt n/o Irvine	13000	40	4	67.1	32	69	149	0
160	Holt s/o Irvine	9000	30	4	61.9	< RdHW	31	67	E 160	Holt s/o Irvine	9000	30	4	61.9	< RdHW	31	67	0
166	Newport s/o Walnut	25000	35	4	68.3	39	83	179	E 166	Newport s/o Walnut	25000	35	4	68.3	39	83	179	0
168	Newport s/o Edinger	15000	35	6	65.5	< RdHW	54	116	N 168	Newport s/o Edinger	15000	35	6	65.5	< RdHW	54	116	0
169	Valencia w/o Red Hill	15000	35	4	66.1	27	59	128	E 169	Valencia w/o Red Hill	15000	35	4	66.1	27	59	128	0
170	Grand s/o Edinger	46000	45	6	74.1	94	202	435	E 170	Grand s/o Edinger	46000	45	6	74.1	94	202	435	0
182	Red Hill s/o MacArthur	47000	50	6	75.5	116	251	540	E 182	Red Hill s/o MacArthur	47000	50	6	75.5	116	251	540	0
187	Santa Ana s/o Bristol	15000	45	4	69.2	44	95	205	E 187	Santa Ana s/o Bristol	15000	45	4	69.2	44	95	205	0
205	Tustin Ranch n/o Portola	17000	50	6	71.1	59	128	275	E 205	Tustin Ranch n/o Portola	17000	50	6	71.1	59	128	275	0
206	Tustin Ranch n/o Irvine	34000	45	6	72.8	77	166	357	E 206	Tustin Ranch n/o Irvine	34000	45	6	72.8	77	166	357	0
207	Tustin Ranch s/o Bryan	28000	45	6	71.9	67	144	311	E 207	Tustin Ranch s/o Bryan	28000	45	6	71.9	67	144	311	0
208	Tustin Ranch s/o Bryan	29000	45	6	72.1	69	149	320	E 208	Tustin Ranch s/o Bryan	29000	45	6	72.1	69	149	320	0
209	Tustin Ranch n/o I-5	43000	45	6	73.8	90	193	416	E 209	Tustin Ranch n/o I-5	43000	45	6	73.8	90	193	416	0
211	Tustin Ranch n/o Edinger	41000	45	6	73	79	171	368	N 211	Tustin Ranch n/o Edinger	41000	45	6	73	79	171	368	0
212	Tustin Ranch s/o Edinger	26000	35	6	67.9	36	78	168	N 212	Tustin Ranch s/o Edinger	26000	35	6	67.9	36	78	168	0
214	Von Karman s/o Barranca	36000	50	6	74.4	98	212	456	E 214	Von Karman s/o Barranca	36000	50	6	74.4	98	212	456	0
216	Von Karman n/o Michelson	33000	50	6	74	92	199	429	E 216	Von Karman n/o Michelson	33000	50	6	74	92	199	429	0
218	Von Karman n/o Birch	20000	40	4	69	43	92	199	E 218	Von Karman n/o Birch	20000	40	4	69	43	92	199	0
223	Jamboree n/o Bryan	47000	45	6	74.2	95	205	442	E 223	Jamboree n/o Bryan	47000	45	6	74.2	95	205	442	0
224	Jamboree n/o El Camino Real	51000	45	8	74.5	100	215	463	E 224	Jamboree n/o El Camino Real	51000	45	8	74.5	100	215	463	0
227	Jamboree n/o Edinger	104000	50	8	79	199	429	924	E 227	Jamboree n/o Edinger	104000	50	8	79	199	429	924	0
228	Jamboree s/o Edinger	107000	50	8	79.1	202	435	938	E 228	Jamboree s/o Edinger	107000	50	8	79.1	202	435	938	0
229	Jamboree n/o Barranca	88000	50	8	78.2	176	379	817	E 229	Jamboree n/o Barranca	88000	50	8	78.2	176	379	817	0
230	Jamboree n/o Alton	73000	50	8	77.4	156	335	723	E 230	Jamboree n/o Alton	72000	50	8	77.4	156	335	723	0
236	Jamboree n/o California	38000	50	6	74	92	199	429	N 236	Jamboree n/o California	38000	50	6	74	92	199	429	0
238	Carlson s/o Michelson	8000	35	6	63.4	< RdHW	39	84	E 238	Carlson s/o Michelson	8000	35	6	63.4	< RdHW	39	84	0
244	Harvard s/o Main	25000	50	4	72.8	77	166	357	E 244	Harvard s/o Main	25000	50	4	72.8	77	166	357	0
246	Harvard s/o University	18000	45	4	70	50	108	232	E 246	Harvard s/o University	18000	45	4	70	50	108	232	0
248	Culver n/o Irvine	29000	45	6	71.5	63	136	292	N 248	Culver n/o Irvine	29000	45	6	71.5	63	136	292	0
249	Culver s/o Bryan	42000	45	6	73.7	88	190	410	E 249	Culver s/o Bryan	42000	45	6	73.7	88	190	410	0
250	Culver s/o Trabuco/I-5	62000	45	6	75.4	115	247	532	E 250	Culver s/o Trabuco/I-5	62000	45	6	75.4	115	247	532	0
267	West Yale Loop n/o Warner	11000	45	4	67.9	36	78	168	E 267	West Yale Loop n/o Warner	11000	45	4	67.9	36	78	168	0
301	Sand Canyon s/o I-405	3000	50	4	63	< RdHW	37	79	N 301	Sand Canyon s/o I-405	3000	50	4	63	< RdHW	37	79	0
303	Laguna Cyn s/o Technology	3000	35	4	58.5	< RdHW	< RdHW	40	N 303	Laguna Cyn s/o Technology	3000	35	4	58.5	< RdHW	< RdHW	40	0
304	Laguna Canyon n/o Barranca	1000	45	4	56.9	< RdHW	< RdHW	31	N 304	Laguna Canyon n/o Barranca	1000	45	4	56.9	< RdHW	< RdHW	31	0
305	Laguna Canyon n/o Alton	7000	45	4	65.9	27	57	124	E 305	Laguna Canyon n/o Alton	7000	45	4	65.9	27	57	124	0
306	Laguna Canyon s/o Alton	12000	45	2	68.3	39	83	179	E 306	Laguna Canyon s/o Alton	12000	45	2	68.3	39	83	179	0
309	Glenn Ranch w/o El Toro	9000	55	4	69.5	46	100	215	E 309	Glenn Ranch w/o El Toro	9000	55	4	69.5	46	100	215	0
315	Portola n/o Rancho	27000	65	4	75.8	122	262	565	N 315	Portola n/o Rancho	27000	65	4	75.8	122	262	565	0
348	Muirlands s/o Alton	19000	50	4	71.6	64	138	297	E 348	Muirlands s/o Alton	19000	50	4	71.6	64	138	297	0
375	Moulton s/o El Toro	76000	45	6	76.3	132	283	610	E 375	Moulton s/o El Toro	77000	45	6	76.3	132	283	610	0
376	Moulton s/o Glenwood	63000	55	6	78	171	368	792	E 376	Moulton s/o Glenwood	64000	55	6	78	171	368	792	0
378	Moulton s/o La Paz	40000	45	6	73.5	86	184	397	E 378	Moulton s/o La Paz	40000	45	6	73.5	86	184	397	0
379	Moulton s/o La Paz	32000	45	6	72.5	73	158	341	E 379	Moulton s/o La Paz	32000	45	6	72.5	73	158	341	0
395	Alton s/o Jeronimo	35000	55	6	75.4	115	247	532	E 395	Alton s/o Jeronimo	35000	55	6	75.4	115	247	532	0
413	Lake Forest s/o Trabuco	44000	50	4	75.2	111	239	516	E 413	Lake Forest s/o Trabuco	44000	50	4	75.2	111	239	516	0
427	Ridge Route s/o Moulton	11000	45	2	67.9	36	78	168	E 427	Ridge Route s/o Moulton	11000	45	2	67.9	36	78	168	0
430	El Toro s/o Glenn Ranch	16000	55	2	72	68	146	315	E 430	El Toro s/o Glenn Ranch	16000	55	2	72	68	146	315	0
431	El Toro e/o Marguerite	21000	55	2	73.2	82	176	379	E 431	El Toro e/o Marguerite	21000	55	2	73.2	82	176	379	0
432	El Toro e/o Santa Margarita	24000	55	6	73.8	90	193	416	E 432	El Toro s/o Santa Margarita	24000	55	6	73.8	90	193	416	0
437	El Toro s/o Muirlands	58000	50	6	76.4	134	288	620	E 437	El Toro s/o Muirlands	58000	50	6	76.4	134	288	620	0
440	El Toro s/o Avd Carlota	50000	35	6	71.3	61	132	283	E 440	El Toro s/o Avd Carlota	50000	35	6	71.3	61	132	283	0
445	Los Alisos e/o Marguerite	16000	50	4	70.8	57	122	262	E 445	Los Alisos e/o Marguerite	16000	50	4	70.8	57	122	262	0
454	Glenwood w/o Moulton	13000	50	4	69.9	49	106	229	E 454	Glenwood w/o Moulton	13000	50	4	69.9	49	106	229	0
457	Laguna Hills w/o Moulton	50000	50	6	75.8	122	262	565	E 457	Laguna Hills w/o Moulton	50000	50	6	75.8	122	262	565	0
458	Laguna Hills w/o Aliso Crk	29000	50	6	73.4	84	182	391	E 458	Laguna Hills w/o Aliso Crk	29000	50	6	73.4	84	182	391	0
473	Marguerite s/o El Toro	19000	45	4	70.3	52	113	243	E 473	Marguerite s/o El Toro	19000	45	4	70.3	52	113	243	0
474	Marguerite n/o S. Margarita	14000	45	4	68.9	42	91	196	E 474	Marguerite n/o S. Margarita	14000	45	4	68.9	42	91	196	0
557	FTC s/o ETC East Leg	79000	65	6	80.4	247	532	1145	N 557	FTC s/o ETC East Leg	78000	65	6	80.4	247	532	1145	0
588	SJHTC s/o El Toro	99000	65	6	82	315	680	1464	E 588	SJHTC s/o El Toro	98000	65	6	82	315	680	1464	0
597	SR-55 s/o SR-73	181000	65	8	84.7	477	1029	2216	E 597	SR-55 s/o SR-73	181000	65	8	84.7	477	1029	2216	0
598	SR-73 n/o SR-55	136000	65	6	83.4	391	843	1815	E 598	SR-73 n/o SR-55	135000	65	6	83.4	391	843	1815	0
599	SR-73 s/o SR-55	116000	65	6	82.7	351	757	1630	E 599	SR-73 s/o SR-55	115000	65	6	82.7	351	757	1630	0
6	Portola e/o Jamboree	25000	50	6	72.2	70	151	325	N 6	Portola e/o Jamboree	26000	50	6	72.3	71	153	330	0.1
23	Irvine e/o Culver	42000	50	6	75	108	232	500	E 23	Irvine e/o Culver	43000	50	6	75.1	109	236	508	0.1

EIR No. 573 *County of Orange* **Table 8.3-9 (Cont.)**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Year 2020 with ETRPA Nonaviation Plan
vs. Year 2020 No Project - All Segments

12/17/99

CCTM2.8 MCAS El Toro		No Project Alternative 2020 - All Segments							CCTM2.8 MCAS El Toro		NonAviation Alternative 2020 - All Segments							
ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	CNEL Increase dBA
220	Jamboree n/o Tustin Ranch	47000	55	4	76.7	140	301	649	E 220	Jamboree n/o Tustin Ranch	48000	55	4	76.8	142	306	659	0.1
221	Jamboree n/o Portola	42000	50	6	75	108	232	500	E 221	Jamboree n/o Portola	43000	50	6	75.1	109	236	508	0.1
373	Moulton s/o Ridge Route	63000	45	6	75.5	116	251	540	E 373	Moulton s/o Ridge Route	65000	45	6	75.6	118	254	548	0.1
374	Moulton n/o El Toro	69000	45	6	75.9	124	266	574	E 374	Moulton n/o El Toro	71000	45	6	76	126	271	583	0.1
384	Laguna Cyn s/o Lake Forest	46000	35	4	70.4	53	115	247	N 384	Laguna Cyn s/o Lake Forest	47000	35	4	70.5	54	116	251	0.1
385	Laguna Canyon s/o Bake	46000	55	4	76	126	271	583	N 385	Laguna Canyon s/o Bake	47000	55	4	76.1	128	275	592	0.1
386	Laguna Cyn n/o Aliso Creek	38000	55	4	74.2	95	205	442	N 386	Laguna Cyn n/o Aliso Creek	31000	55	4	74.3	97	208	449	0.1
21	Irvine s/o Jamboree	48000	50	6	74.8	104	225	485	E 21	Irvine s/o Jamboree	41000	50	6	74.9	106	229	492	0.1
22	Irvine w/o Culver	46000	50	6	74.8	104	225	485	N 22	Irvine w/o Culver	47000	50	6	74.9	106	229	492	0.1
67	Irvine Center w/o Jeffrey	46000	55	6	76.6	138	297	639	E 67	Irvine Center w/o Jeffrey	47000	55	6	76.7	140	301	649	0.1
222	Jamboree n/o Irvine	34000	45	6	72.8	77	166	357	E 222	Jamboree n/o Irvine	35000	45	6	72.9	78	168	362	0.1
377	Moulton n/o Alicia	46000	55	6	76.6	138	297	639	E 377	Moulton n/o Alicia	47000	55	6	76.7	140	301	649	0.1
8	Portola s/o Culver	21000	50	2	71.4	62	134	288	N 8	Portola s/o Culver	22000	50	2	71.6	64	138	297	0.2
24	Irvine w/o Jeffrey	41000	50	5	74.9	106	229	492	E 24	Irvine w/o Jeffrey	43000	50	5	75.1	109	236	508	0.2
26	Irvine s/o Sand Canyon	48000	65	4	78.9	196	422	910	E 26	Irvine s/o Sand Canyon	50000	65	4	79.1	202	435	938	0.2
456	Laguna Hills s/o Moulton	23000	50	4	72.4	72	156	335	E 456	Laguna Hills s/o Moulton	24000	50	4	72.6	75	161	346	0.2
7	Portola w/o Culver	29000	50	2	72.8	77	166	357	N 7	Portola w/o Culver	30000	50	2	73	79	171	368	0.2
95	Barranca w/o Irvine Center	19000	55	4	72.8	77	166	357	E 95	Barranca w/o Irvine Center	20000	55	4	73	79	171	368	0.2
295	Sand Canyon n/o I-5	44000	60	6	77.5	158	341	734	E 295	Sand Canyon n/o I-5	46000	60	6	77.7	163	351	757	0.2
308	Glenn Ranch n/o Portola	27000	55	4	74.3	97	208	449	E 308	Glenn Ranch n/o Portola	28000	55	4	74.5	100	215	463	0.2
316	Portola n/o El Toro	50000	55	6	77	146	315	680	E 316	Portola n/o El Toro	53000	55	6	77.2	151	325	701	0.2
317	Santa Margarita s/o El Toro	50000	50	6	75.8	122	262	565	E 317	Santa Margarita s/o El Toro	52000	50	6	76	126	271	583	0.2
371	Irvine Center s/o Bake	66000	60	6	79.2	208	449	967	E 371	Irvine Center s/o Bake	69000	60	6	79.5	215	463	998	0.2
558	FTC s/o Portola	94000	65	6	81.8	306	659	1420	E 558	FTC s/o Portola	98000	65	6	82	315	680	1464	0.2
559	FTC s/o Alton	91000	65	6	81.7	301	649	1398	E 559	FTC s/o Alton	96000	65	6	81.9	311	669	1442	0.2
561	FTC s/o Santa Margarita	88000	65	6	81.5	292	629	1356	E 561	FTC s/o Santa Margarita	92000	65	6	81.7	301	649	1398	0.2
9	Portola w/o Jeffrey	14000	35	2	65.2	24	52	111	N 9	Portola w/o Jeffrey	15000	35	2	65.5	25	54	116	0.3
25	Irvine w/o Sand Canyon	42000	65	4	78.3	179	385	830	E 25	Irvine w/o Sand Canyon	45000	65	4	78.6	187	403	869	0.3
39	Bryan s/o Culver	12000	45	4	68.3	39	83	179	E 39	Bryan s/o Culver	13000	45	4	68.6	40	87	187	0.3
48	Trabuco w/o Jeffrey	14000	55	4	71.4	62	134	288	E 48	Trabuco w/o Jeffrey	15000	55	4	71.7	65	140	301	0.3
282	Jeffrey s/o Walnut/I-5	48000	55	6	76.8	142	306	659	E 282	Jeffrey s/o Walnut/I-5	51000	55	6	77.1	149	320	690	0.3
372	Moulton s/o Lake Forest	61000	45	6	75.3	113	243	524	E 372	Moulton s/o Lake Forest	65000	45	6	75.6	118	254	548	0.3
560	FTC s/o Lake Forest	78000	65	6	81	271	583	1256	E 560	FTC s/o Lake Forest	83000	65	6	81.3	283	610	1315	0.3
322	Rancho s/o Lake Forest	41000	50	4	74.9	106	229	492	E 322	Rancho s/o Lake Forest	45000	50	4	75.3	113	243	524	0.4
446	Los Alisos n/o S. Margarita	11000	50	4	69.2	44	95	205	E 446	Los Alisos n/o S. Margarita	12000	50	4	69.6	47	101	218	0.4
300	Sand Canyon n/o I-405	36000	55	4	75.5	116	251	540	E 300	Sand Canyon n/o I-405	39000	55	4	75.9	124	266	574	0.4
550	ETC East Leg n/o Jeffrey	96000	65	6	81.3	283	610	1315	N 550	ETC East Leg n/o Jeffrey	105000	65	6	81.7	301	649	1398	0.4
551	ETC East Leg s/o Jeffrey	96000	65	6	81.3	283	610	1315	N 551	ETC East Leg s/o Jeffrey	105000	65	6	81.7	301	649	1398	0.4
601	SR-133 s/o I-5	47000	65	6	78.8	193	416	896	E 601	SR-133 s/o I-5	52000	65	6	79.2	205	442	953	0.4
602	SR-133 n/o I-405	42000	65	6	78.3	179	385	830	E 602	SR-133 n/o I-405	46000	65	6	78.7	190	410	882	0.4
49	Trabuco w/o Sand Canyon	21000	35	2	67.6	35	75	161	E 49	Trabuco w/o Sand Canyon	24000	35	2	68.1	37	80	173	0.5
311	Portola w/o Bake	20000	55	6	73	79	171	368	E 311	Portola w/o Bake	23000	55	6	73.6	87	187	403	0.6
321	Rancho s/o Bake	36000	55	4	74.9	106	229	492	N 321	Rancho s/o Bake	41000	55	4	75.5	116	251	540	0.6
299	Sand Canyon n/o Alton	34000	55	6	75.3	113	243	524	E 299	Sand Canyon n/o Alton	39000	55	6	75.9	124	266	574	0.6
293	Sand Canyon n/o Irvine	18000	60	4	73.6	87	187	403	E 293	Sand Canyon n/o Irvine	21000	60	4	74.3	97	208	449	0.7
298	Sand Cyn s/o Irvine Center	34000	55	6	75.3	113	243	524	E 298	Sand Cyn s/o Irvine Center	40000	55	6	76	126	271	583	0.7
302	Oak Canyon e/o Sand Canyon	6000	35	4	61.5	< RdHW	29	63	N 302	Oak Canyon e/o Sand Canyon	7000	35	4	62.2	< RdHW	33	70	0.7
390	Alton e/o Portola	29000	55	6	74.6	101	218	470	E 390	Alton e/o Portola	35000	55	6	75.4	115	247	532	0.8
552	ETC East Leg n/o Irvine	58000	65	6	79.1	202	435	938	N 552	ETC East Leg n/o Irvine	71000	65	6	80	232	500	1077	0.9
553	ETC East Leg s/o Irvine	48000	65	6	78.3	179	385	830	N 553	ETC East Leg s/o Irvine	61000	65	6	79.3	208	449	967	1
40	Bryan w/o Jeffrey	10000	50	4	68.8	42	90	193	E 40	Bryan w/o Jeffrey	13000	50	4	69.9	49	106	229	1.1
297	Sand Cyn n/o Irvine Center	39000	50	6	74.7	103	222	477	E 297	Sand Cyn n/o Irvine Center	51000	50	6	75.9	124	266	574	1.2
391	Alton n/o Rancho	28000	55	6	73.9	91	196	422	N 391	Alton n/o Rancho	38000	55	6	75.2	111	239	516	1.3
27	Irvine e/o ETC East Leg	41000	40	4	72.1	69	149	320	E 27	Irvine e/o ETC East Leg	57000	40	4	73.6	87	187	403	1.5
392	Alton n/o Commercentre	35000	55	6	74.8	104	225	485	N 392	Alton n/o Commercentre	52000	55	6	76.5	136	292	629	1.7
325	Irvine w/o Alton	32000	65	4	77.1	149	320	690	E 325	Irvine w/o Alton	48000	65	4	78.9	196	422	910	1.8
320	Rancho e/o Alton	10000	55	4	69.4	46	98	212	N 320	Rancho e/o Alton	17000	55	4	71.7	65	140	301	2.3
406	Bake s/o I-5	18000	50	6	71.3	61	132	283	E 406	Bake s/o I-5	31000	50	6	73.7	88	190	410	2.4
323	Commercentre w/o Bake	3000	45	4	62.2	< RdHW	33	70	E 323	Commercentre w/o Bake	7000	45	4	65.9	27	57	124	3.7
501	Trabuco e/o Sand Canyon	2000	35	4	56.7	< RdHW	< RdHW	30	N 501	Trabuco e/o Sand Canyon	23000	35	4	67.3	33	71	153	10.6
28									N 28	1st w/o Tustin	27000	50	6	72.5	73	158	341	
54	Walnut w/o Jamboree	15000	40	4	67.8	36	77	166	E 54									
63	Edinger w/o Jamboree	38000	55	6	75.2	111	239	516	N 63									
64									N 64	Edinger e/o Jamboree	37000	55	6	75.1	109	236	508	
73	Technology e/o Oak Cyn	2000	35	4	56.7	< RdHW	< RdHW	30	N 73									
74									N 74	Technology n/o Barranca	13000	35	4	64.9	< RdHW	49	106	
76	Warner e/o Red Hill	52000	50	6	75.4	115	247	532	N 76									
78									N 78	Warner w/o Harvard	16000	50	4	70.2	52	111	239	
92	Barranca w/o Sand Canyon	18000	35	4	66.3	28	61	132	N 92									

CCTM2.8 MCAS El Toro		No Project Alternative 2020 - All Segments							CCTM2.8 MCAS El Toro		NonAviation Alternative 2020 - All Segments							CNEL Increase dBA
ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 50ft.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	
93									N 93	Barranca e/o Sand Canyon	14000	55	4	70.8	57	122	262	
111	Alton e/o Laguna Canyon	22000	55	4	73.4	84	182	391	E 111									
167	Newport n/o Edinger	33000	35	6	68.9	42	91	196	N 167									
169									N 169	Valencia w/o Red Hill	15000	35	4	65.5	25	54	116	
201	Birch s/o South Bristol	9000	40	2	65.5	25	54	116	E 201									
213	Tustin Ranch s/o Warner	42000	35	6	70	50	108	232	N 213									
217	Von Karman n/o Campus	25000	50	4	72.8	77	166	357	E 217									
221									N 221	Jamboree n/o Portola	43000	55	6	75.7	120	258	557	
280	Jeffrey n/o Trabuco	36000	60	6	76.6	138	297	639	E 280									
296									E 296	Sand Canyon s/o I-5	55000	50	4	76.2	130	279	601	
318									E 318	S. Margarita e/o Los Alisos	47000	50	6	75.5	116	251	540	
319									E 319	S. Margarita e/o Marguerite	40000	50	6	74.8	104	225	485	
326									E 326	Irvine w/o Bake	51000	55	6	77.1	149	320	690	
327									E 327	Trabuco e/o Bake	34000	55	6	75.3	113	243	524	
337									E 337	Toledo w/o El Toro	8000	45	4	66.5	29	63	136	
338									E 338	Jeronimo e/o Alton	13000	45	4	68.6	40	87	187	
355	Rockfield e/o Alton	0	40	4	0	0	0	0	N									
355									N 355	Rockfield w/o Bake	18000	40	4	68	37	79	171	
396	Alton w/o Muirlands	52000	55	6	77.1	149	320	690	E 396									
419									E 419	Lake Forest w/o Avd Carlota	38000	35	6	70.1	51	109	236	
485									N 485	Portola e/o W. Central Park	30000	35	4	68.5	40	86	184	
486									N 486	Portola e/o Millennium	33000	35	4	68.9	42	91	196	
487									N 487	Portola e/o E. Central Park	34000	35	4	69	43	92	199	
488									N 488	Irvine e/o Research	49000	35	4	70.6	55	118	254	
489									N 489	Irvine e/o W. Central Park	42000	35	4	70	50	108	232	
490									N 490	Irvine e/o Millennium	38000	35	4	69.5	46	100	215	
491									N 491	Irvine e/o E. Central Park	41000	35	4	69.9	49	106	229	
492									N 492	Bryan w/o Sand Canyon	5000	50	4	65.2	< RdHW	52	111	
493									N 493	Bryan e/o Sand Canyon	12000	50	4	69	43	92	199	
494									N 494	Bryan e/o Research	9000	50	4	67.7	35	76	163	
495									N 495	Bryan e/o Millennium	8000	50	4	67.2	33	70	151	
496									N 496	W. Culture n/o Trabuco	9000	35	4	63.3	< RdHW	39	83	
497									N 497	E. Culture e/o Millennium	4000	35	4	59.8	< RdHW	< RdHW	48	
498									N 498	E. Culture n/o Trabuco	8000	35	4	62.8	< RdHW	36	77	
499									N 499	Arts Village e/o Millennium	13000	35	4	64.9	< RdHW	49	106	
500	Irvine e/o Perimeter Rd	47000	35	4	70.5	54	116	251	N 500									
500									N 500	Arts Village e/o E. Culture	11000	35	4	64.1	< RdHW	44	94	
502	Marine Way e/o Sand Canyon	3000	35	4	58.5	< RdHW	< RdHW	40	N 502									
502									N 502	Trabuco e/o ETC East Leg	73000	35	4	72.4	72	156	335	
503	Perimeter Rd s/o Irvine	0	35	2	0	0	0	0	N 503									
503									N 503	Trabuco e/o Research	56000	35	4	71.2	60	130	279	
504	Perimeter Rd n/o Marine Way	0	35	2	0	0	0	0	N 504									
504									N 504	Trabuco e/o W. Central Park	49000	35	2	70.6	55	118	254	
505	Perimeter Rd s/o Marine Way	0	35	2	0	0	0	0	N 505									
505									N 505	Trabuco w/o Millennium	44000	35	2	70.2	52	111	239	
506	Perimeter Rd e/o Air Cargo	0	35	2	0	0	0	0	N 506									
506									N 506	Trabuco e/o Millennium	47000	35	2	70.5	54	116	251	
507	Perimeter Rd s/o Astor	0	35	2	0	0	0	0	N 507									
507									N 507	Trabuco w/o E. Central Park	49000	35	4	70.6	55	118	254	
508	West Access s/o Irvine	0	35	4	0	0	0	0	N 508									
508									N 508	Trabuco e/o E. Central Park	50000	35	4	70.7	56	120	258	
509	East Access s/o Irvine	0	35	4	0	0	0	0	N 509									
509									N 509	Trabuco w/o Alton	43000	35	4	70.1	51	109	236	
510	West Access n/o Irvine	0	35	4	0	0	0	0	N 510									
510									N 510	Astor e/o E. Central Park	5000	35	4	60.7	< RdHW	26	56	
511	East Access n/o Irvine	0	35	4	0	0	0	0	N 511									
511									N 511	Quantum e/o Research	7000	35	4	62.2	< RdHW	33	70	
512	ETC Connector (N & S)	0	35	4	0	0	0	0	N 512									
512									N 512	Marine e/o Sand Canyon	27000	35	4	68	37	79	171	
513	ETC Connector (N)	0	35	4	0	0	0	0	N 513									
513									N 513	Marine e/o Research	27000	35	4	68	37	79	171	
514									N 514	Marine w/o Millennium	25000	35	4	67.7	33	76	163	
515									N 515	Jeronimo w/o Millennium	7000	35	4	62.2	< RdHW	33	70	
516									N 516	Jeronimo w/o Alton	14000	35	4	65.2	< RdHW	52	111	
517									N 517	Sand Canyon s/o Portola	17000	60	4	72.8	77	166	357	
518									N 518	Sand Canyon s/o Irvine	23000	60	4	74.1	94	202	435	
519									N 519	Research s/o Irvine	15000	35	4	65.5	25	54	116	
520									N 520	Research s/o Bryan	12000	35	4	64.5	< RdHW	46	100	
521									N 521	Research n/o Trabuco	27000	35	4	68	37	79	171	

EIR No. 573 *County of Orange* **Table 8.3-9 (Cont.)**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Year 2020 with ETRPA Nonaviation Plan
vs. Year 2020 No Project - All Segments

CCTM2.8 MCAS El Toro		No Project Alternative 2020 - All Segments							CCTM2.8 MCAS El Toro		NonAviation Alternative 2020 - All Segments							CNEL
ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 500.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	ID #	Existing Segment Names	ADT	Spd. (mph)	# of Lanes	CNEL at 500.C.R. (dBA)	70 dB CNEL (Ft.)	65 dB CNEL (Ft.)	60 dB CNEL (Ft.)	Increase dBA
522									N 522	Research s/o Trabuco	14000	35	4	65.2	< RdHW	52	111	
523									N 523	Research s/o Marine	15000	35	4	65.5	25	54	116	
524									N 524	Research s/o Marine	13000	35	4	64.9	< RdHW	49	106	
525									N 525	W. Central Park s/o Portola	10000	35	4	63.7	< RdHW	41	88	
526									N 526	W. Central Park s/o Irvine	13000	35	4	64.9	< RdHW	49	106	
527									N 527	W. Central Park s/o Bryan	9000	35	4	63.3	< RdHW	39	83	
528									N 528	W. Central Park s/o Trabuco	13000	35	4	64.9	< RdHW	49	106	
529									N 529	W. Central Park s/o Trabuco	10000	35	4	63.7	< RdHW	41	88	
530									N 530	W. Central Park s/o Quantum	11000	35	4	64.1	< RdHW	44	94	
531									N 531	Millennium s/o Irvine	23000	35	4	67.3	33	71	153	
532									N 532	Millennium s/o Bryan	20000	35	4	66.7	30	65	140	
533									N 533	Millennium s/o Bryan	17000	35	4	66	27	58	126	
534									N 534	Millennium s/o Arts Village	13000	35	4	64.9	< RdHW	49	106	
535									N 535	Millennium s/o Trabuco	24000	35	4	67.5	34	73	158	
536									N 536	Millennium s/o Trabuco	30000	35	4	68.5	40	86	184	
537									N 537	Millennium s/o Marine	34000	35	4	69	43	92	199	
538									N 538	Millennium s/o Jeronimo	44000	35	4	70.2	52	111	239	
539									N 539	Millennium s/o Barranca	44000	35	4	70.2	52	111	239	
540									N 540	Millennium s/o Alton	33000	35	4	68.9	42	91	196	
541									N 541	Millennium s/o Rockfield	44000	35	4	70.2	52	111	239	
542									N 542	Millennium s/o Bake	36000	35	4	69.3	45	97	208	
543									N 543	E. Central Park s/o Irvine	4000	35	4	59.8	< RdHW	< RdHW	48	
544									N 544	E. Central Park s/o Irvine	10000	35	4	63.7	< RdHW	41	88	
545									N 545	E. Central Park s/o Trabuco	3000	35	4	58.5	< RdHW	< RdHW	40	
546									N 546	E. Central Park s/o Trabuco	3000	35	4	58.5	< RdHW	< RdHW	40	
547									N 547	E. Central Park s/o Astor	3000	35	4	58.5	< RdHW	< RdHW	40	
548									N 548	Alton s/o Trabuco	55000	35	4	71.1	59	128	275	
603									E 603	Laguna Cyn s/o I-405	43000	35	4	70.7	56	120	258	

EIR No. 573 *County of Orange* **Table 8.3-9 (Cont.)**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results
Year 2020 with ETRPA Nonaviation Plan
vs. Year 2020 No Project - All Segments

Number of Existing Segments related to the Noise Level Increase

Scenarios	Existing No Project	Existing NonAviation Pla	2020 No Project	2020 NonAviation Plan
1.5<#<3dB	-	12	51	58
3 <#< 6dB	-	12	95	92
6 <#< 9dB	-	3	15	12
9 <#< 12dB	-	0	5	6
# > 12 dB	-	0	0	1

EIR No. 573 *County of Orange* **Table 8.3-10**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results Comparison
Number of Segments with Traffic Noise Increase
Over Existing No Project Condition

12/17/99

Number of Segments related to the Noise Level Increase

Scenario	2020 NoPj vs 2020 NonAv
(-3)< # <0dB	41
# = 0 dB	91
0 <#< 3dB	60
3 < # < 6dB	1
6 < # < 9dB	0
9 <#< 12dB	1
# > 12 dB	0

EIR No. 573 *County of Orange* **Table 8.3-11**

SOURCE: LSA Associates, Inc., 9/99

Traffic Noise Model Results Comparison
Year 2020 ETRPA Nonaviation Plan vs. Year 2020 No Project -
Number of Segments with Traffic Noise Increase

Comparison to Existing Conditions

A comparison of the impacts of the Existing plus ETRPA Nonaviation Plan Alternative and Existing plus Proposed Project is as follows.

Impacted Roadway Links

The following roadway links are impacted by both the Proposed Project and the ETRPA Nonaviation Plan Alternative with 1.5 dB or higher traffic level increases over the existing conditions:

- Irvine w/o Sand Canyon
- Irvine e/o Sand Canyon
- Irvine w/o Alton
- Irvine w/o Bake
- Jeffrey n/o Bryan
- Portola w/o Jamboree
- Sand Canyon n/o I-5
- Sand Canyon n/o Irvine Center
- Sand Canyon s/o Irvine Center
- Sand Canyon n/o Alton
- Sand Canyon n/o I-405
- Trabuco w/o Jeffrey
- Trabuco w/o Sand Canyon

The following roadway links are impacted by the ETRPA Nonaviation Plan Alternative only with 1.5 dB or higher traffic noise level increases over the existing conditions:

- Alton s/o Irvine
- Bake s/o I-5
- Barranca e/o Technology
- Barranca w/o Alton
- Irvine e/o Culver
- Irvine w/o Jeffrey
- Jeronimo e/o Alton
- Rockfield w/o Lake Forest
- Sand Canyon n/o Trabuco
- Technology n/o Barranca
- Toledo e/o Alton
- Toledo w/o Lake Forest

- Trabuco e/o Bake
- Trabuco w/o Lake Forest

The following roadway links are impacted by the Proposed Project only with 1.5 dB or higher traffic noise level increases over the existing conditions:

- Irvine e/o ETC East Leg
- Jeffrey n/o Trabuco
- Jeffrey n/o I-5
- Sand Canyon s/o I-5

The same four areas of residential development that may be significantly impacted by traffic noise impacts associated with the Proposed Project would be significantly impacted by the ETRPA Nonaviation Plan Alternative as well, as discussed in Section 4.4, Noise.

Comparison to Existing Plus Committed Conditions

A comparison of the impacts of the year 2020 ETRPA Nonaviation Plan Alternative and year 2020 Proposed Project is as follows:

Impacted Roadway Links

The following roadway links are impacted by the Proposed Project and the ETRPA Nonaviation Plan Alternative with 1.5 dB or higher traffic noise level increases over the 2020 No Project conditions:

- Irvine e/o ETC East Leg
- Irvine w/o Alton

The following roadway links are impacted by the ETRPA Nonaviation Plan Alternative only with 1.5 dB or higher traffic noise level increases over the 2020 No Project conditions:

- Alton n/o Commercentre
- Bake s/o I-5
- Commercentre w/o Bake
- Rancho e/o Alton
- Trabuco w/o Sand Canyon

The following roadway links are impacted by the Proposed Project only with 1.5 dB or higher traffic noise level increases over the 2020 No Project conditions:

- ETC East Leg s/o Irvine
- SR-133 s/o I-5
- SR-133 n/o I-405
- Trabuco e/o Sand Canyon

8.3.5.5 Air Quality

The air quality impacts of the ETRPA Nonaviation Plan Alternative were identified by analyzing the short-term impacts (construction), regional air quality impacts (total air pollutants emissions), local air quality impacts due to traffic carbon monoxide, and local impacts due to aircraft and associated operations in comparison to the Proposed Project's impacts. As summarized below, the ETRPA Alternative would result in additional significant regional air quality impacts that would be greater than the Proposed Project under all development scenarios due to Orange County generated demand being serviced at other regional airports outside of the County similar to the No Project/No Activity Alternative (Alternative E). This alternative would also result in significant local CO hot spot air quality impacts associated with vehicle emissions not identified under the Proposed Project. In addition, it is likely that construction emissions would be significant and would be greater than under the Proposed Project due to the proposed greater intensity of use at the MCAS El Toro site. This alternative, however, would avoid the significant local air quality impacts of the Proposed Project resulting from aircraft emissions at OCX and JWA.

Short-Term Air Quality Impacts (Construction)

Under this alternative, no significant runway improvements would be made at JWA. MCAS El Toro, however, would be developed with nonaviation uses in greater intensity and density than under the Proposed Project. Therefore, total construction emissions are anticipated to be greater than those of the Proposed Project in all phasing years due to higher density or intensity land uses being proposed at the MCAS El Toro site.

Operational Air Quality Impacts

Emissions Inventories

Under this project alternative, JWA will serve 8.4 MAP in Phase 4. No aviation reuse at MCAS El Toro would occur as the site would be developed based on the nonaviation land uses proposed in the ETRPA Plan. Although there would be no emissions associated with aviation uses at MCAS El Toro, there would be emissions associated with energy consumption and vehicular trips by the nonaviation uses. Project build out air pollutant emissions associated with airport operations at JWA and nonaviation land uses at OCX are shown below in Table 8.3-12 for this alternative.

Table 8.3-12
Phase 4 ETRPA Nonaviation Plan Alternative –
Project Direct Air Pollutant Emissions (Pounds/Day)

	CO	NO_X	ROC[1]	SO_X	PM_{10}
Aircraft	7,061.00	3,025.85	402.78	239.64	44.48
MCAS El Toro	0.00	0.00	0.00	0.00	0.00
JWA	7,061.00	3,025.85	402.78	239.64	44.48
GSE/APU	5,610.84	597.89	171.83	14.93	26.54
MCAS El Toro	0.00	0.00	0.00	0.00	0.00
JWA	5,610.84	597.89	171.83	14.93	26.54
Fuel Storage/Dispensing	0.00	0.00	9.14	0.00	0.00
MCAS El Toro	0.00	0.00	0.00	0.00	0.00
JWA	--	--	9.14	--	--
Airport Roadways	117.92	13.70	3.99	0.56	1.17
MCAS El Toro	0.00	0.00	0.00	0.00	0.00
JWA	117.92	13.70	3.99	0.56	1.17
Airport Parking	96.38	7.40	9.98	3.05	0.28
MCAS El Toro	0.00	0.00	0.00	0.00	0.00
JWA	96.38	7.40	9.98	3.05	0.28
Energy Consumption	161.20	500.70	313.70	18.70	6.80
MCAS El Toro	129.60	318.50	312.00	NA	0.60
JWA	31.60	182.20	1.70	18.70	6.20
Vehicular Traffic	20,714	7,186	1,964	605	3,511
MCAS El Toro	16,145	5,338	1,605	493	2,565
JWA	4,569	1,848	359	112	946
Total (lbs/day)	33,761	11,332	2,875	882	3,590

Source: CH2M Hill and LSA Associates, Inc., 2001

[1] ROC emissions obtained by multiplying HC emissions reported by EDMS by a factor of 1.14.

Total project direct emissions under this alternative would be significantly higher than the emissions under the Existing Conditions (1998). The increase in emissions for each criteria pollutant exceeds the applicable SCAQMD threshold. Accordingly, the ETRPA Alternative would result in significant operational air quality impacts.

Regional air pollutant emissions, including airport operations at other airports in the region and VMT required for air travel passengers to get to these airports, would be similar to those shown in Tables 8.2-3A and 8.2-3B for the No Project/No Activity Alternative. When compared to the regional air quality emissions associated with the Proposed Project, this project alternative would have higher regional CO, NO_X, SO_X, ROC, and PM_{10} emissions than the Proposed Project. Because of the conclusions reached in connection with the No Project/No Activity Alternative, this would likely be true in all phasing years under the ETRPA Alternative, as well. As discussed in connection with the No Project/No Activity scenario, the failure to provide sufficient airport capacity in Orange County to meet the

locally generated demand will result in increased VMT and increased aircraft emissions as a result of longer taxi times and LTO cycle time as average delay time at these regional airports increases.

Dispersion Analysis

No airport emissions dispersion analysis was conducted for this project alternative. However, because local criteria pollutant hot spots were found under the No Project/No Activity Alternative, which has the same annual aircraft LTO operations at JWA, it is expected that criteria pollutant hot spots from aircraft exhaust emissions would also occur under this alternative. This alternative, however, would avoid the significant and unavoidable local air quality impacts at OCX and JWA due to aircraft and associated operations.

With regard to vehicle emissions at intersections in the vicinity of the project sites, the CAL3QHC model was used to assess CO concentrations. Tables 8.3-13 through 8.3-16 show the one-hour and eight-hour CO concentrations under the Existing Conditions (1998) plus ETRPA Nonaviation Plan scenario. Because of the CAL3QHC modeling selection criteria, not all intersections modeled for the Existing Conditions (1998) scenario were modeled for the Existing Conditions plus ETRPA Nonaviation Plan. However, for those intersections that were modeled under both scenarios, the increase in CO concentration would be 0.6 ppm or smaller for the one-hour CO concentrations, which is less than the 1 ppm threshold established by the SCAQMD. However, some of the increases in CO concentrations would exceed the thresholds of significant changes (0.45 ppm) for the eight-hour CO concentration. Based on this analysis, the ETRPA Nonaviation Plan Alternative would result in significant local air quality impacts related to vehicle CO hot spot concentrations. In comparison to the Proposed Project, the ETRPA Alternative would result in exceedances of the eight-hour CO standard not present under the Proposed Project. Therefore, the ETRPA Alternative would result in significant local air quality impacts not identified under the Proposed Project.

Toxic Air Contaminants

Under this alternative, although there would be no runway improvements at JWA and there would be no aviation reuse of MCAS El Toro, MCAS El Toro would be developed with nonaviation uses that are higher in density and intensity than are proposed under the project (Alternative B). Therefore, although it is difficult to predict, it is likely that this alternative would result in toxic air contaminant impacts that would be significant.

Table 8.3-13

Year 1998 Existing Conditions Plus ETRPA Nonaviation Plan - Predicted One Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF TUSTIN[13]												
26	Jamboree & Irvine	13.1	13.0	13.0	13.5	12.8	12.7	12.6	12.9	12.6	12.7	12.6	12.7
	CITY OF IRVINE[14]												
238	Bake & Irvine/Trabuco	8.6	9.0	8.4	8.4	8.0	8.6	8.0	7.9	8.1	8.2	8.2	8.6
268	Bake & Rockfield	8.2	8.2	8.4	8.3	8.0	8.1	8.1	8.1	8.0	8.3	7.8	8.1
175	Jamboree & Michelson	8.6	8.4	8.5	8.2	7.9	8.2	7.9	8.0	8.0	8.2	8.0	8.3
156	Jamboree & Main	8.4	8.4	8.4	8.2	8.0	8.1	7.9	7.9	7.9	8.1	7.9	8.3
237	Alton & Irvine	8.3	8.7	8.2	8.1	7.9	8.1	8.1	8.3	7.7	7.7	8.0	8.2
68	Sand Canyon & Trabuco	8.3	8.0	8.6	8.5	8.1	7.9	7.8	8.3	7.7	8.1	7.7	7.8
320	Trabuco & Irvine	8.1	8.1	8.2	7.9	7.8	7.7	7.8	8.1	7.7	7.5	7.7	7.9
338	Millennium & Alton	8.3	8.3	8.2	8.3	8.0	8.1	7.9	8.2	7.9	8.2	7.9	8.0
151	Red Hill & MacArthur	8.3	8.1	8.0	8.3	7.8	7.9	7.8	8.0	7.9	7.9	7.9	8.0
319	E. Central Park & Irvine	7.8	8.3	7.9	7.8	7.6	7.9	7.7	7.7	7.4	7.3	7.6	7.7
130	Technology & Barranca	8.0	7.9	7.9	8.2	7.5	7.3	7.6	7.7	7.6	7.7	7.6	7.7
317	W. Central Park & Irvine	8.0	8.1	7.9	8.3	7.9	8.0	7.6	7.9	7.7	8.0	7.6	7.7
316	Research & Irvine	8.1	8.2	8.0	8.2	7.7	7.7	7.6	7.8	7.8	7.9	7.6	7.7
318	Millennium & Irvine	7.9	8.2	7.9	8.0	7.7	7.7	7.7	7.8	7.4	7.4	7.8	7.9
337	Millennium & Barranca	8.5	8.0	8.1	8.3	7.9	7.8	7.9	8.0	8.1	8.2	7.9	8.2
32	Sand Canyon & Irvine	8.3	8.2	8.2	8.1	8.1	8.3	7.9	8.1	7.6	7.6	7.9	7.8
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	8.4	7.9	8.2	8.1	7.6	7.9	7.5	7.7	7.8	7.9	7.8	7.9
	CITY OF LAKE FOREST[14]												
269	Lake Forest & Rockfield	8.5	8.6	8.5	8.5	8.0	8.6	7.9	8.0	7.9	8.2	8.0	8.5
	CITY OF MISSION VIEJO[14]												
265	Alicia & Muirlands	8.4	8.3	8.3	8.2	7.8	8.0	7.8	8.0	7.8	8.0	7.9	8.1

Note:

* - Concentrations are in parts per million (ppm); federal one-hour CO standard is 35 ppm; State one-hour CO standard is 20 ppm.

1 - REC1 SW CORNER

2 - REC2 SE CORNER

3 - REC3 NE CORNER

4 - REC4 NW CORNER

5 - REC5 S. DEPARTURE - MID BLOCK

6 - REC6 N. APPROACH - MID BLOCK

7 - REC7 E. DEPARTURE - MID BLOCK

8 - REC8 W. APPROACH - MID BLOCK

9 - REC9 N. DEPARTURE - MID BLOCK

10 - REC10 S. APPROACH - MID BLOCK

11 - REC11 W. DEPARTURE - MID BLOCK

12 - REC12 E. APPROACH - MID BLOCK

13 - The ambient one-hour CO concentration, 12.0 ppm, the second highest one-hour CO concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years of 1993 and 1997, is added to the calculated one-hour levels.

14 - The ambient one-hour CO concentration, 7.0 ppm, the second highest one-hour CO concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years of 1993 and 1997, is added to the calculated one-hour levels.

Table 8.3-14

Year 1998 Existing Conditions Plus ETRPA Nonaviation Plan - Predicted Eight Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]		REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC112[12]
	CITY OF TUSTIN[13]													
26	Jamboree & Irvine	8.8	8.7	8.7	9.1	14	8.6	8.5	8.4	8.6	8.4	8.5	8.4	8.5
	CITY OF IRVINE[15]													
238	Bake & Irvine/Trabuco	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	5.2
268	Bake & Rockfield	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.9
175	Jamboree & Michelson	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	5.0
156	Jamboree & Main	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	5.0
237	Alton & Irvine	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.9
68	Sand Canyon & Trabuco	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.7
320	Trabuco & Irvine	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.7
338	Millennium & Alton	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.8
151	Red Hill & MacArthur	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.8
319	E. Central Park & Irvine	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.6
130	Technology & Barranca	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.6
317	W. Central Park & Irvine	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.6
316	Research & Irvine	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.6
318	Millennium & Irvine	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.7
337	Millennium & Barranca	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.9
32	Sand Canyon & Irvine	5.2	5.5	5.1	4.8		5.2	4.8	4.7	4.9	4.9	4.9	4.9	4.7
	CITY OF LAGUNA HILLS[15]													
280	El Toro & Avd. Carlota	5.2	5.5	5.1	5.1		4.8	5.2	4.8	4.7	4.9	4.9	4.9	4.7
	CITY OF LAKE FOREST[15]													
269	Lake Forest & Rockfield	5.2	5.5	5.1	5.1		4.8	5.2	4.8	4.7	4.9	4.9	4.9	5.2
	CITY OF MISSION VIEJO[15]													
265	Alicia & Muirlands	5.2	5.5	5.1	5.1		4.8	5.2	4.8	4.7	4.9	4.9	4.9	4.9

Note: * - Concentrations are in parts per million (ppm); federal eight-hour CO standard is 9 ppm.

1 - REC1 SW CORNER

2 - REC2 SE CORNER

3 - REC3 NE CORNER

4 - REC4 NW CORNER

5 - REC5 S. DEPARTURE - MID BLOCK

6 - REC6 N. APPROACH - MID BLOCK

7 - REC7 E. DEPARTURE - MID BLOCK

8 - REC8 W. APPROACH - MID BLOCK

9 - REC9 N. DEPARTURE - MID BLOCK

10 - REC10 S. APPROACH - MID BLOCK

11 - REC11 W. DEPARTURE - MID BLOCK

12 - REC12 E. APPROACH - MID BLOCK

13 - The ambient eight-hour CO concentration, 8.0 ppm, the second highest eight-hour CO concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years of 1993 and 1997, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.

14 - Number in bold represents exceedance of the standards.

15 - The ambient eight-hour CO concentration, 4.1 ppm, the second highest eight-hour CO concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years of 1993 and 1997, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.

Table 8.3-15

Phase 4 ETRPA Non-Aviation Plan – Predicted One Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	7.0	7.2	7.1	7.1	6.8	6.8	6.6	7.1	6.8	7.0	6.7	6.8
152	Main & Sunflower	6.9	7.1	6.7	7.0	6.6	6.9	6.5	6.5	6.7	6.8	7.0	6.8
	CITY OF TUSTIN[13]												
93	Newport & Edinger	7.2	7.0	6.8	7.2	6.7	6.6	6.6	6.7	6.7	6.9	6.6	6.9
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	5.8	5.9	5.6	5.6	5.3	5.5	5.3	5.5	5.5	5.4	5.5	5.7
156	Jamboree & Main	5.7	5.6	5.6	5.4	5.2	5.4	5.3	5.4	5.4	5.3	5.4	5.6
98	Culver & Irvine Center	5.6	5.5	5.7	5.6	5.3	5.4	5.3	5.5	5.2	5.5	5.4	5.5
134	Jamboree & Alton	5.6	5.6	5.8	5.6	5.1	5.5	5.2	5.4	5.3	5.4	5.4	5.6
175	Jamboree & Michelson	5.8	5.4	5.4	5.5	5.2	5.3	5.3	5.3	5.4	5.4	5.5	5.4
100	Jeffrey & Irvine Center	5.5	5.6	5.6	5.7	5.3	5.5	5.2	5.3	5.3	5.6	5.2	5.3
151	Red Hill & MacArthur	5.7	5.4	5.5	5.6	5.0	5.4	5.4	5.3	5.3	5.4	5.3	5.7
155	Von Karman & Main	5.5	5.6	5.8	5.5	5.2	5.6	5.3	5.4	5.1	5.4	5.4	5.4
316	Research & Irvine	5.2	5.2	5.2	5.3	5.0	5.0	5.0	5.1	5.0	5.3	5.0	5.1
68	Sand Canyon & Trabuco	5.2	5.3	5.3	5.2	5.1	5.0	5.1	5.3	5.0	5.1	5.1	4.9
31	Jeffrey & Irvine	5.3	5.5	5.4	5.5	5.2	5.3	5.1	5.2	4.9	5.2	5.0	5.1
153	Red Hill & Main	5.4	5.5	5.5	5.5	5.1	5.3	5.1	5.2	5.2	5.2	5.1	5.3
320	Trabuco & Irvine	5.4	5.5	5.6	5.5	5.2	5.3	5.2	5.3	5.1	5.3	5.2	5.3
	CITY OF LAGUNA BEACH[14]												
299	Moulton & El Toro	5.6	5.4	5.5	5.5	5.1	5.3	5.4	5.5	5.0	5.3	5.1	5.1
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	5.5	5.3	5.5	5.4	5.0	5.3	5.1	5.1	5.3	5.2	5.1	5.3
	CITY OF LAKE FOREST[14]												
271	El Toro & Rockfield	5.5	5.4	5.6	5.5	5.2	5.3	5.3	5.5	5.2	5.4	5.0	5.3
	CITY OF SAN JUAN CAPISTRANO[14]												
287	Laguna Hills & Paseo Valencia	5.1	5.5	5.2	5.1	5.0	5.2	4.9	5.0	4.8	4.9	5.1	5.0

Note: * - Concentrations are in parts per million (ppm)

1 - REC1 SW CORNER
2 - REC2 SE CORNER
3 - REC3 NE CORNER
4 - REC4 NW CORNER
5 - REC5 S. DEPARTURE - MID BLOCK
6 - REC6 N. APPROACH - MID BLOCK
7 - REC7 E. DEPARTURE - MID BLOCK
8 - REC8 W. APPROACH - MID BLOCK
9 - REC9 N. DEPARTURE - MID BLOCK
10 - REC10 S. APPROACH - MID BLOCK
11 - REC11 W. DEPARTURE - MID BLOCK
12 - REC12 E. APPROACH - MID BLOCK

13 - The ambient one-hour CO concentration, 6.1 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years 1996 to 2000, is added to the calculated one hour levels.

14 - The ambient one-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years 1996 to 2000, is added to the calculated one hour levels.

Table 8.3-16

Phase 4 ETRPA Non-Aviation Plan – Predicted Eight Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	5.2	5.4	5.3	5.3	5.1	5.1	5.0	5.3	5.1	5.2	5.0	5.1
152	Main & Sunflower	5.2	5.3	5.0	5.2	5.0	5.2	4.9	4.9	5.0	5.1	5.2	5.1
	CITY OF TUSTIN[13]												
93	Newport & Edinger	5.4	5.2	5.1	5.4	5.0	5.0	5.0	5.0	5.0	5.2	5.0	5.2
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	3.7	3.8	3.6	3.6	3.4	3.5	3.4	3.5	3.5	3.5	3.5	3.7
156	Jamboree & Main	3.7	3.6	3.6	3.5	3.3	3.5	3.4	3.5	3.5	3.4	3.5	3.6
98	Culver & Irvine Center	3.6	3.5	3.7	3.6	3.4	3.5	3.4	3.5	3.3	3.5	3.5	3.5
134	Jamboree & Alton	3.6	3.6	3.7	3.6	3.3	3.5	3.3	3.5	3.4	3.5	3.5	3.6
175	Jamboree & Michelson	3.7	3.5	3.5	3.5	3.3	3.4	3.4	3.4	3.5	3.5	3.5	3.5
100	Jeffrey & Irvine Center	3.5	3.6	3.6	3.7	3.4	3.5	3.3	3.4	3.4	3.6	3.3	3.4
151	Red Hill & MacArthur	3.7	3.5	3.5	3.6	3.2	3.5	3.5	3.4	3.4	3.5	3.4	3.7
155	Von Karman & Main	3.5	3.6	3.7	3.5	3.3	3.6	3.4	3.5	3.3	3.5	3.5	3.5
316	Research & Irvine	3.3	3.3	3.3	3.4	3.2	3.2	3.2	3.3	3.2	3.4	3.2	3.3
68	Sand Canyon & Trabuco	3.3	3.4	3.4	3.3	3.3	3.2	3.3	3.4	3.2	3.3	3.3	3.1
31	Jeffrey & Irvine	3.4	3.5	3.5	3.5	3.3	3.4	3.3	3.3	3.1	3.3	3.2	3.3
153	Red Hill & Main	3.5	3.5	3.5	3.5	3.3	3.4	3.3	3.3	3.3	3.3	3.3	3.4
320	Trabuco & Irvine	3.5	3.5	3.6	3.5	3.3	3.4	3.3	3.4	3.3	3.4	3.3	3.4
	CITY OF LAGUNA BEACH[14]												
299	Moulton & El Toro	3.6	3.5	3.5	3.5	3.3	3.4	3.5	3.5	3.2	3.4	3.3	3.3
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	3.5	3.4	3.5	3.5	3.2	3.4	3.3	3.3	3.4	3.3	3.3	3.4
	CITY OF LAKE FOREST[14]												
271	El Toro & Rockfield	3.5	3.5	3.6	3.5	3.3	3.4	3.4	3.5	3.3	3.5	3.2	3.4
	CITY OF SAN JUAN CAPISTRANO[14]												
287	Laguna Hills & Paseo Valencia	3.3	3.5	3.3	3.3	3.2	3.3	3.1	3.2	3.0	3.1	3.3	3.2

Note:
* - Concentrations are in parts per million (ppm)
1 - REC1 SW CORNER
2 - REC2 SE CORNER
3 - REC3 NE CORNER
4 - REC4 NW CORNER
5 - REC5 S. DEPARTURE - MID BLOCK
6 - REC6 N. APPROACH - MID BLOCK
7 - REC7 E. DEPARTURE - MID BLOCK
8 - REC8 W. APPROACH - MID BLOCK
9 - REC9 N. DEPARTURE - MID BLOCK
10 - REC10 S. APPROACH - MID BLOCK
11 - REC11 W. DEPARTURE - MID BLOCK
12 - REC12 E. APPROACH - MID BLOCK
13 - The ambient eight-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.
14 - The ambient eight-hour CO concentration, 2.9 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.

8.3.5.6 Topography

The Nonaviation Plan Alternative was prepared by ETRPA at a General Plan level of detail, which is insufficient to determine at this time the topographic effects of this alternative.

Usage of JWA under the ETRPA Nonaviation Plan Alternative would be the same as the current usage, and therefore would not entail potential topographic impacts.

Under the Proposed Project, due to the relatively flat to gently sloping topography, both before and after grading, and the lack of any unusual or unique topographic features on the site, no significant adverse impacts to topography at MCAS El Toro are anticipated. No modifications to the existing topography at JWA are proposed.

8.3.5.7 Soils, Geology and Seismicity

Usage of MCAS El Toro under the ETRPA Nonaviation Plan Alternative would entail development of the site for nonaviation uses. Potential geophysical impacts of the ETRPA Nonaviation Plan Alternative project would likely be similar to those of the Proposed Project, but would differ in detail, depending upon the specific types or locations of structures or other features to be constructed.

Usage of JWA under the ETRPA Nonaviation Plan Alternative would be the same as the current usage, and therefore would not raise potential impacts related to soils, geologic features or seismicity. Likewise, under the Proposed Project no significant modifications would be made and, therefore, no impacts are anticipated.

8.3.5.8 Hydrology and Water Quality

Under the ETRPA Nonaviation Plan Alternative, the potential impacts at the MCAS El Toro site related to hydrology and water quality would be similar to those identified under the Proposed Project because both alternatives have approximately the same impervious acreage and open space areas. However, under the Proposed Project, design improvements are incorporated into the project that will reduce impacts to a level below significance. It is unclear whether the ETRPA Nonaviation Alternative includes similar design improvements.

Water quality constituents will be different under the ETRPA Nonaviation Plan Alternative as compared to the Proposed Project due to the differences associated with construction, operation, and runoff. Impacts to water quality resulting from construction, operations, and runoff under the Nonaviation Alternative can be mitigated using BMPs and other permit requirements.

Groundwater quality impacts under the ETRPA Nonaviation Plan Alternative would be the same as those discussed under the Proposed Project. No groundwater will be pumped from the MCAS El Toro site, so there will be no impacts to local groundwater levels or basin storage under either alternative.

Under this alternative, JWA would maintain the same volume of passenger traffic and would require no new construction. Therefore, the Nonaviation Alternative would not result in impacts related to hydrology and water quality at the JWA site.

8.3.5.9 Biological Resources

The direct impacts of the ETRPA Nonaviation Plan Alternative on biological resources will be limited primarily to the loss of some coastal sage scrub habitat, non-native plant communities, including agricultural habitats, non-native grasslands, disturbed/developed land, and their associated wildlife species. Approximately 758 acres of agricultural land will be impacted under the ETRPA Nonaviation Plan Alternative, compared to approximately 620 acres under the Proposed Project. There will not be any direct impacts to the federal Habitat Reserve.

There is some native Venturan-Diegan sage scrub habitat on the MCAS El Toro site outside the Habitat Reserve. This area occurs on a knoll and appears to be at least partially impacted by the Nonaviation Alternative, as indicated by the residential designation in this portion of the site. There is also a 20 acre parcel, south of Alton Parkway that does contain some coastal sage scrub. The nonaviation alternative does include a park/open space designation at this location. Depending upon the configuration of the uses, there may be some potential coastal sage scrub impacted at this location. These areas include California gnatcatcher habitat. In addition, streambed habitat is also impacted by the Nonaviation Alternative. These streambeds vary in terms of plant species they support. The streambeds include mulefat scrub, willow scrub, cattails, as well as highly disturbed and scoured sandy washes. Specific streambeds impacted include San Diego Creek, Serrano Creek, Borrego Wash, and portions of Agua Chinon Wash. It appears that Agua Chinon is retained north of Irvine Boulevard.

In contrast to the Proposed Project, there will be no potential beneficial impacts from the ETRPA Nonaviation Plan Alternative since the proposed wildlife habitat area along the eastern perimeter of the MCAS El Toro site is not included. In contrast, under the Proposed Project, the addition of native plant communities would potentially provide a wildlife habitat area between large habitat areas in the Coastal and Central Subregional NCCP/HCP Reserve System.

The ETRPA Nonaviation Plan Alternative assumes that JWA continues its existing role at an approved service level of 8.4 MAP, with no facility improvements. Therefore, this alternative would not result in any direct impacts on biological resources at JWA or the Upper Newport Bay.

Biological resources on MCAS El Toro that may experience indirect impacts as a result of the ETRPA Nonaviation Plan Alternative are primarily limited to resources in the federal Habitat Reserve. These potential impacts may occur with construction of the facilities associated with the Residential, Business/Technology, Village and Outdoor Sports districts. These indirect impacts may consist of construction dust, noise, introduction of non-native plants and animals, and increased human presence, similar to the Proposed Project. However, due to the distance of these impacts from the Habitat Reserve, potential indirect impacts on biological resources would be minimized and not considered significant.

8.3.5.10 Public Services and Utilities

The City of Irvine GPA, Zone Change, and Annexation EIR (March, 1999) concluded that, compared to the existing conditions, development of the ETRPA Alternative on the MCAS El Toro site could: 1) create potential short-falls in fire protection services and facilities; 2) may exacerbate overcrowding at area schools; 3) create significant traffic noise levels such that three existing schools would be within 65 dB CNEL noise contours; 4) potentially disrupt domestic water services to adjacent areas; 5) create the need for new sources of water to serve proposed development on site; and 6) require additional sewage treatment capacity and damage existing sewer treatment facilities on site. The City's EIR concluded that, with prescribed mitigation, these impacts would be reduced to below a level of significance.

Similarly, as described in Section 4.10 (Public Services and Utilities), after mitigation, the Proposed Project is not anticipated to result in significant adverse impacts related to utilities.

8.3.5.11 Natural Resources and Energy

The ETRPA Alternative would increase the consumption of energy compared to the existing condition. The ultimate build out and development of the ETRPA Nonaviation Alternative will require construction with a greater level of total energy consumption over a 20 year build out period compared with the existing (1998) setting and the Proposed Project. As a mixed-use development, operational energy consumption by the ETRPA project would likely be substantially less than under the existing setting (1998) but substantially more than the Proposed Project. However, both the ETRPA Plan Alternative and the Proposed Project would not result in significant adverse impacts related to energy resources.

Implementation of the ETRPA Nonaviation Alternative would eliminate all of the existing agricultural uses on the MCAS El Toro site. Some areas could remain in agricultural production until such time as development is phased in, or indefinitely, if certain areas are not developed. In comparison, the Proposed Project plans to reserve 139 acres of existing agricultural land. The loss of agricultural land is considered significant for either the ETRPA Alternative or Proposed Project cases; however, the ETRPA Alternative would have an incrementally larger impact on agricultural resources than the Proposed Project. Both the

ETRPA Alternative and Proposed Project would have greater impacts to agricultural resources compared with the existing setting.

8.3.5.12 Aesthetics, Light and Glare

At the MCAS El Toro site, the ETRPA Nonaviation Plan Alternative (ETRPA) would change the existing aesthetics of the site from a military aviation base to a mixed use urban planned community. The visual character of the site would change from an airfield with perpendicular runways and aviation support buildings, military community buildings, military housing, and recreational facilities to a more modern "village" development with business/technology, education, research, entertainment, retail, residential (low to high density), community parks and open space uses, and an outdoor sports complex. Buildings would include single to multi-story structures. The ETRPA Alternative also includes preservation of the natural habitat in the northeastern panhandle area of the site, as does the Proposed Project. A multi-modal transportation system is proposed to include bus, rail, and potential people-mover facilities.

Compared to the existing 1998 setting, development of the MCAS El Toro site with the ETRPA Alternative would visually appear to further intensify the surrounding urban setting, with office/commercial uses in the site vicinity and residential subdivisions in the surrounding hillsides. Specific potential aesthetic impacts of the ETRPA plan discussed in the City of Irvine's GPA/ZC EIR include that new buildings proposed as part of the ETRPA plan may be several stories in height, which would be visible to motorists on adjacent roadways and from residences located west and at higher elevations southeast and northeast of the MCAS El Toro site. New public roadways proposed with the ETRPA plan would provide public views of future development within the site. Potential adverse aesthetic impacts could occur if adjacent structures have highly different architectural styles, massing, or building density (i.e., if residential and industrial structures are proposed near each other).

The ETRPA Alternative would not necessarily represent a significant aesthetic impact compared with the existing setting, in that it would not adversely affect (e.g., obstruct) any scenic vistas or highways. The Proposed Project would, in contrast, maintain the overall visual character of the former military base, with modernization of airport support facilities, and provision of more open space and recreation areas than is currently provided. The ETRPA Alternative would not necessarily substantially degrade the existing visual character or quality of the site or its surroundings; however, it would intensify the urbanization of the site by removing the runways and filling that area with a combination of buildings interlaced with community open areas and landscaping.

The City of Irvine GPA/ZC EIR also determined that new development within the site may create light and glare impacts on adjacent residents. The Proposed Project will also generate light and glare, but at levels that are more similar to the existing setting than the levels of the ETRPA plan. With either the ETRPA plan or the Proposed Project, light and glare will be kept to below the level of significance with implementation of mitigation measures that

would minimize light intrusion and spillover onto adjacent properties, and that would minimize glare from buildings and light sources.

At JWA, the ETRPA Nonaviation Plan Alternative would maintain status quo operations and would not change the existing aesthetic, light, or glare conditions. Therefore, the ETRPA Alternative would have approximately the same effects as the Proposed Project.

8.3.5.13 Cultural Resources

Redevelopment of the site with all nonaviation uses would have the same less than significant effects as the Proposed Project on cultural resources on the property since none of the cultural resources on the site are considered potentially significant. As with the Proposed Project, potential impacts of unknown archaeological resources during ground disturbance would be mitigated through implementation of standard construction monitoring measures.

The ETRPA Nonaviation Alternative assumes status quo operations at JWA. As such, there would be no additional or new effects on cultural resources in the JWA area, as there are no known archaeological, paleontological or historic resources on the already developed airport property.

8.3.5.14 Recreation

With the ETRPA Nonaviation Plan Alternative, the specific recreational features and facilities proposed with the Proposed Project would not be provided. However, the ETRPA Nonaviation Plan Alternative would provide recreational facilities, including a 360 acre community park, community and neighborhood parks totaling 168 acres, open space linkages to surrounding off-site open space areas, walking paths, hiking trails, off-road bikeways, a sports stadium, and a hotel conference center with golf course. No significant long-term impacts of the ETRPA plan on parks and recreational facilities are anticipated (City of Irvine GPA, Zone Change and Annexation DEIR for MCAS El Toro and James A. Musick Branch Jail, March 31, 1999) as the City of Irvine would provide for the parks and recreational needs of the site under the ETRPA plan.

Physical effects on adjacent off-site recreational trails are likely to be the same level of magnitude as that of the Proposed Project, assuming that there would be some temporary disruptions to on-road bikeways for street improvements to serve the nonaviation plan improvements. The primary difference between the ETRPA Nonaviation Plan Alternative and the Proposed Project in terms of recreational impacts would be the lack of aviation related noise under the ETRPA Nonaviation Plan Alternative. Because there would be no exposure of planned bicycle trails and riding and hiking trails to aircraft noise from the proposed OCX, the noise related impacts to recreation would be less than under the Proposed Project.

The status quo operations of JWA under the ETRPA Nonaviation Plan Alternative would have no change in effect on recreational facilities in the JWA area.

8.3.5.15 Public Health and Safety

Aviation Safety

Under the ETRPA Nonaviation Alternative, there would be no aviation activity at MCAS El Toro. Since there is no aviation activity at OCX, there would be zero aviation risks. Under the Proposed Project, there would be no significant adverse impacts related to aviation safety at the MCAS El Toro site or at JWA relative to on-airport and off-airport fatal accidents per million operations.

Compared to the existing conditions, there would be virtually no changes in the number of air carrier and air cargo operations and general aviation operations at JWA. Under this scenario, the potential air carrier and air cargo and general aviation accident risks at JWA would remain the same as the existing conditions. There would be no significant adverse impacts related to aviation safety at JWA.

8.3.5.16 Hazardous Materials and Hazardous Wastes

Hazardous Materials/Waste Usage

Most of the proposed uses under the ETRPA Nonaviation Plan Alternative would not yield large quantities of hazardous waste. However, hazardous waste generation could result from the proposed Orange County Transit Authority (OCTA) rail and bus maintenance facility, light industrial uses, and research and development uses. Compared to the Proposed Project, which would accommodate jet fuel storage and aircraft maintenance, the ETRPA Nonaviation Plan Alternative would involve substantially smaller quantities of hazardous material. All hazardous materials used, or generated, would be regulated by existing federal, state and local regulations. By meeting the regulatory guidelines, potential impacts associated with hazardous material use, or generation, would be maintained to below a level of significance. The potential impacts of the ETRPA Nonaviation Plan Alternative related to hazardous materials are generally described in the following sections for the different land uses proposed on the site under this alternative.

Habitat Reserve

The federal Habitat Reserve, outlined under the ETRPA Nonaviation Plan Alternative, would fall under the jurisdiction of a federal agency, which is the same as assumed under the Proposed Project. The ETRPA Nonaviation Plan also includes 686 acres of recreation uses in the southern portion of this area. However, the potential impacts associated with remediation activities addressed under the Installation Restoration Program (IRP) for Sites 1, 2, and 17 are the same for both the ETRPA Nonaviation Plan Alternative and the Proposed

Project. Since the areas under the ETRPA Nonaviation Plan Alternative are designated for use as a Habitat Reserve, the potential impacts associated with the presence of hazardous waste and the likelihood of future hazardous waste generated materials are anticipated to be less than significant.

Education, Research & Technology (ERT) District

Under the ETRPA Nonaviation Plan Alternative, the ERT District consists of an integrated, higher intensity grouping of high-density residential, retail and office uses, such as Village, Business/Technology, Education, Research & Technology Campus, Entertainment/Mixed Use, Parks/Open Space, Retail, and a Sports Complex. Development of the ERT District would encompass all or part of IRP Sites 3, 7, 11, 12, and 14.

ERT Village

A potential impact associated with the ERT Village residential land use outlined in the ETRPA Nonaviation Plan Alternative is its relation to the Base Realignment and Closure (BRAC) remediation activity at MCAS El Toro. One of the areas included within the ERT Village land use is IRP Site 3 near the eastern end of the loop formed by the proposed East Culture Road. Development of the ERT Village residential land use, which would overlie or directly abut IRP Site 3, would conflict with California Health and Safety Code (H&SC) Section 25202.5. Under this statute, a minimum buffer of 2,000 feet is required for residential development in the vicinity of a hazardous waste disposal facility. This is a significant adverse impact.

Under H&SC Section 25202.5, disposal of hazardous wastes, at a site with a buffer zone of less than 2,000 feet from residential land uses, is only allowable if it can be proven to the satisfaction of the California Department of Toxic Substance Control (DTSC) that the buffer zone is sufficient to protect present and future public health and safety. Therefore, development of residential uses overlying or within 2,000 feet of IRP Site 3 under the ETRPA Nonaviation Plan Alternative would result in significant adverse impacts related to hazardous wastes.

Another area of concern related to land use development within IRP Site 3 is that construction activities could result in greater potential impacts under the ETRPA Nonaviation Plan Alternative than those potential impacts under the Proposed Project. Construction activities in the area may require earth moving and excavation to accommodate foundations, subterranean parking, or footings for multi-story structures. Excavation in this area could result in the unearthing of hazardous wastes associated with IRP Site 3 and resultant exposures to construction workers and future residents on the site to levels that may exceed those deemed acceptable from a health protective perspective. Subsurface chemical concentrations in the soil are unknown, therefore a subsurface assessment of soil contamination would be required prior to any construction activities in the area where subsurface excavation is planned in order to more accurately characterize the risks

associated with disturbance of soils at the site. Impacts associated with construction worker exposures to contaminants likely could be mitigated to below a level of significance through implementation of personal protective equipment appropriate to the potential health threat posed by the site.

Business/Technology

The Business/Technology use areas of the ETRPA Nonaviation Plan Alternative would entail Research and Development, and Light Industrial uses. The Research and Development uses would consist of a variety of business and high technology uses, including production and service establishments, scientific laboratories, new technology training centers, professional/ administrative offices, and other supporting services. Police and fire stations are also a possibility within the Business/Technology land use designation.

The Light Industrial uses would encompass communications equipment manufacturing, electronics, pharmaceuticals, plastics, furniture and fixtures, printing and publishing, wholesaling, warehousing and distribution centers, professional/administrative offices, and other supporting uses.

Under the ETRPA Nonaviation Plan Alternative, proposed developments within the Business/Technology area encompass IRP Sites 11 and 12, and a portion of IRP Site 7. As discussed in Section 4.16 (Hazardous Wastes and Hazardous Materials), the Remedial Investigation/Feasibility Study (RI/FS) process for IRP Sites 7, 11, and 12 has not been completed; therefore, human health risk assessment data are not available for these sites and potential impacts associated with development of these sites cannot be fully evaluated. However, the type of land uses proposed for the site under the ETRPA Nonaviation Plan Alternative is not generally considered by EPA to be as sensitive as residential uses. Therefore, potential impacts associated with development under the proposed ETRPA Nonaviation Plan Alternative may not be significant.

As discussed in Section 4.16 (Hazardous Wastes and Hazardous Materials), the Department of the Navy (DON), with the approval of EPA and Cal-EPA, has been using industrial cleanup standards for IRP sites at MCAS El Toro. Based on this standard, development of the proposed uses within the Business/Technology land use areas of the ETRPA Nonaviation Plan Alternative is not anticipated to result in significant adverse impacts related to the presence of hazardous waste sites. Should conditions at Sites 7, 11, and 12 pose human health hazards which exceed acceptable levels under the industrial exposure scenario, remedial action will be prescribed by the DON, and agreed to by the U.S. EPA and Cal-EPA, which would reduce potential impacts to below a level of significance. These remedial actions could have an adverse effect on the land uses proposed.

Under the ETRPA Nonaviation Plan Alternative, IRP Site 14 (Battery Acid Disposal Area) lies within the ERT District, near the proposed intersection of Quantum Road and Research Parkway. The site is currently undergoing remedial investigation, and no human health risk assessment data are available. The ETRPA Nonaviation Plan Alternative proposes more

intense development overlying IRP Site 14, compared with that of the Proposed Project; thus, the potential for adverse impacts related to residual hazardous wastes is greater under the ETRPA Nonaviation Plan Alternative. However, under the ETRPA Nonaviation Plan Alternative, the ERT District would not likely consist of highly sensitive uses such as residential development; therefore, potential impacts associated with development of the IRP Site 14 area are anticipated to be less than significant following implementation of any prescribed remedial action.

Park and Open Space

Park and open space uses would comprise approximately 50 percent of the proposed ETRPA Nonaviation Plan Alternative. A network of open space corridors would interconnect the activity centers of the site, linking parks and recreational facilities to surrounding open space areas and other proposed uses. IRP Site 5 (Perimeter Road Landfill), a portion of IRP Site 7 (Drop Tank Drainage Area No. 2), and IRP Site 16 (Crash Crew Pit No. 2) are located within the area proposed for park and open space uses under the ETRPA Nonaviation Plan Alternative. Under the Proposed Project, IRP Site 5 is located in an open space area proposed for use as a Secondary Habitat Corridor. The potential impacts associated with the presence of IRP Site 5 under the ETRPA Nonaviation Plan Alternative are, therefore, similar to those of the Proposed Project, in terms of the proposed site development. Consequently, no significant adverse impacts related to the existence of IRP Site 5 are anticipated, provided that the selected presumptive remedy for the site remains intact.

Under the ETRPA Nonaviation Plan Alternative, proposed residential development also directly abuts IRP Site 5, which would be inconsistent with the California Health and Safety Code buffer zone requirements, as described regarding IRP Site 3 development.

Under the ETRPA Nonaviation Plan Alternative, a portion of IRP Site 7 and all of IRP Site 16 underlie an area proposed for park and open space land uses. Development of the proposed uses in this area will likely require some surface grading activities; however, no deep excavation is anticipated. Similar to the impacts of the Proposed Project, potential impacts would most likely be associated with exposing contaminated soils during construction. Because the ETRPA Nonaviation Plan Alternative proposes no structural development for human occupation in the Open Space area overlying IRP Sites 7 and 16, this usage will entail a relatively low level of risk to the public. Development of these sites under the Proposed Project would result in coverage by asphalt or concrete surfaces, which could aid in the reduction of potential contaminant migration. Park and Open Space uses under the ETRPA Nonaviation Plan Alternative likely would not provide this same benefit. Without more specific human health risk data for a portion of IRP Site 7 and all of IRP Site 16, the potential impacts associated with disturbance of these sites cannot be fully addressed; however, it is possible that some remedial action may be required before the sites can be developed for the proposed Millennium Park/Open Space uses.

Entertainment/Mixed Use

In response to a request by OCTA, the ETRPA Nonaviation Plan Alternative was modified to include approximately 50 acres of land for a rail and bus maintenance facility. The proposed facility would be located in an area northwest of the regional transportation center that was previously identified for entertainment/mixed use and research and development.

Site 8, the Defense Reutilization and Marketing Office (DRMO) Storage Yard, is located within the boundaries of the proposed OCTA Maintenance Facility. The RI/FS process for Site 8 has not been completed; therefore, human health risk assessment data are not available for this site and impacts associated with development of this site cannot be fully evaluated. The DON, with the approval of EPA and Cal-EPA, has been using industrial cleanup standards for IRP sites at MCAS El Toro. Based on these standards, development of the proposed uses within the OCTA Maintenance Facility area, under the ETRPA Nonaviation Plan Alternative, would not result in significant adverse impacts related to hazardous wastes. Should conditions at IRP Site 8 pose human health hazards that exceed acceptable levels under the industrial exposure scenario, remedial action will be prescribed by the DON, and agreed to by the U.S. EPA and Cal-EPA, to reduce potential impacts to below a level of significance.

8.3.5.17 Socioeconomics

Under the ERTPA Nonaviation Plan Alternative, the military would leave MCAS El Toro and the site would be converted into a mixed-use urban center, emphasizing high technology industries, education and recreation. This alternative would also provide a range of housing types on the site. JWA would continue to operate at a maximum of 8.4 MAP. As under the Proposed Project, no housing units will be constructed at JWA.

Under this alternative, almost 56,000 jobs would be generated, including 50,700 jobs at El Toro and 5,200 jobs at JWA in 2020 as shown earlier in Table 8.2-3. This represents a net increase of 48,100 jobs at El Toro and 3,100 jobs at JWA, over existing 1998 conditions. There would be approximately 13,600 people residing at El Toro under this Alternative in 5,900 housing units. In total, this alternative support generated 55,900 jobs, 13,600 persons, and 5,900 housing units on the project site. This figure is significantly higher than the number of jobs, persons, and housing units expected under the Proposed Project. As with the Proposed Project, economic activity occurring at El Toro and JWA, as well as expenditures by visitors arriving by air through JWA, would stimulate additional off-site job growth. The total number of on-site and off-site jobs stimulated by the airport system would be similar to the level under the Proposed Project.

Given the level of employment and population growth generated by this alternative, this would be considered a significant adverse impact under the threshold of significance related to inducing substantial growth or concentration of population or housing.

The ratio of 9.5 jobs for each housing unit under this alternative is lower than the jobs/housing ratio anticipated on the JWA and MCAS El Toro site under the adopted regional forecasts. It is also significantly lower than the jobs/housing ratio forecast under the Proposed Project. However, since this alternative would produce a jobs/housing ratio in the surrounding area that is higher than the ratio expected under the adopted regional growth forecasts, and since these areas are considered by SCAG to be housing poor, this would be a significant adverse impact of this alternative.

The impacts of this alternative related to housing demand, including low and moderate income housing needs, would be higher than under the Proposed Project as a substantially higher number of jobs would be generated under this alternative compared to the Proposed Project. However, this alternative would also provide a range of housing types on site, partially accommodating the increased demand for all types of housing in the area. Even with this housing, the impact of this alternative would be significantly adverse.

The ERTPA Nonaviation Plan Alternative would generate almost 56,000 jobs at El Toro and JWA, which is substantially higher than what was adopted in the regional forecasts, and would also result in an increase in on-site housing units over what was adopted in the regional forecasts. Therefore, this alternative would result in significant adverse impacts related to inconsistency with adopted regional forecasts.

8.3.5.18 Risk of Upset

Ultimate build out and development of the ETRPA Nonaviation Alternative may include land uses (e.g. the OCTA rail and bus maintenance facility, light industrial uses, and research/ development uses) that could result in a presently unidentified potential for risk of upset conditions. Compared with the Proposed Project, which would accommodate jet fuel transport and storage facilities and operations, the ETRPA Nonaviation Alternative likely would involve a lower potential for risk of upset conditions at the MCAS El Toro site. Risk of upset at JWA would be essentially the same as under the Proposed Project. On this basis, it would appear that implementation of the ETRPA Nonaviation Alternative would result in an unknown, but likely lower potential for adverse impacts to public health and safety than the Proposed Project.

8.3.6 Feasibility

Benefits generated by the proposed aviation uses on the MCAS El Toro site under the Proposed Project and benefits of the alternative nonaviation reuse plan are not mutually exclusive. Virtually all of the uses proposed under the nonaviation plan can be successfully developed at other locations in the County. In fact, the ability of many of these uses to attract tenants may be enhanced by airport system development and the improved economic competitiveness of the County resulting from Proposed Project implementation. Therefore, the potential benefits of the proposed aviation plan and the components of the nonaviation

plan if developed at other locations in the County are complementary, and in fact, taken together may be greater than the sum of the individual parts.

The converse, however, is not true. There is no feasible alternative site for an international airport in Orange County. Thus, reuse of MCAS El Toro for nonaviation purposes would preclude development of significant international and expanded domestic air service capabilities in Orange County, with the attendant loss of the potential quantifiable and non-quantifiable benefits to the County's economy (Technical Report 16, Economic Benefits Study).

In October, 1998, a consultant team of INTERRA, BBC Research & Consulting, and Urban Design Camp prepared an independent analysis of the ETRPA Nonaviation Plan for the Orange County Regional Airport Authority titled: Development Feasibility Analysis: El Toro Non-Aviation Reuse Alternative Millennium Plan, October 1998. In summary, the analysis concluded:

(i) The office market absorption projections are reasonable.

(ii) The current supply of industrial land in southern Orange County would meet demand for 30 years without this alternative. Therefore, the alternative would face considerable competition on cost/revenue pressure.

(iii) The southern Orange County retail market is already well served and, therefore, the alternative's commercial center and Power Center are highly speculative.

(iv) Actual residential competition in southern Orange County is 90 percent higher than the competition assumed in the alternative.

(v) ETRPA underestimated the backbone public services costs for the alternative by $38 million for water and sewer capacity, $9 million for grading, and $31.25 million for highway and street lighting improvements.

(vi) ETRPA underestimated the development costs for schools, fire stations, police facilities, libraries, open space, and landscape amenities and other costs by $226.15 million.

(vii) ETRPA estimated that demolition costs would be about $32.85 million, which is too low. (Note: the ASMP estimates that the ETRPA Alternative demolition costs would be $193 million.)

(viii) Based on these costs, the ETRPA Alternative would result in a net loss (cost versus revenue) of $210 million.

In addition, the sports facilities included in the ETRPA Alternative would result in a net loss in cost versus revenue, requiring public subsidies according to the INTERRA analysis and

Sports, Jobs and Taxes, the Economic Impact of Sports Teams and Stadiums, Roger Noll and Andrew Zimbalist, Editors (1997).

8.3.7 Conclusions

In conclusion, the ETRPA Alternative would:

(i) Would not meet any of the general project objectives, and would not meet the aviation objectives relating to passenger and cargo demand, service opportunities, industry competition, economic growth, business activities, existing land use restrictions, or General Plan implementation;

(ii) Would not avoid impacts on land uses, General Plan consistency, regional air quality emissions, toxic air contaminants, and construction emissions;

(iii) Would result in new or additional significant adverse impacts on traffic, regional VMT, regional air quality emissions, local air quality impacts due to traffic CO hot spots, agricultural soils, hazardous wastes, socioeconomics, economics, and adverse effects of aviation noise on a regional basis; and

(iv) Would avoid aviation noise at the El Toro site, including sleep disturbances and on recreation uses; toxic air contaminants at El Toro associated with airport operations; local air quality impacts at OCX due to aircraft and associated operations; aviation safety effects at El Toro; and aviation risk of upset at El Toro.

In summary, the ETRPA Nonaviation Plan Alternative would avoid unmitigatable project impacts on toxic air contaminants near the El Toro site associated with airport operations and aviation noise impacts on sleep disturbance and recreation uses. However, this alternative would result in new or additional impacts in several categories, including traffic, significant increases in regional VMT, regional air quality emissions, construction emissions, local CO hot spot air quality impacts at OCX, and further loss of agricultural soils.

8.4 ALTERNATIVE A: JWA – STATUS QUO AVIATION ROLES; OCX – FULL DOMESTIC

This section presents the potential impacts of Alternative A as measured against the existing setting, as well as a comparison of the alternative's impacts to those of the Proposed Project at build out. In those instances in which the comparison of the alternative to the Proposed Project is materially affected by the phasing of the project, i.e., in those instances in which the impacts of the Proposed Project during the phasing years are materially different from those impacts at year 2020, a comparison of the alternative's impacts to those of the Proposed Project for the applicable phasing year is also provided.

This alternative was selected for analysis because it has the potential to lessen aircraft noise, traffic, and local air quality impacts of the Proposed Project while still feasibly attaining most of the objectives of the project.

8.4.1 Aviation Uses

Under Alternative A, OCX provides short-, medium- and long-haul domestic and limited (Mexican and Canadian) international air passenger service for an estimated 19.0 MAP, 12 percent (2.2 MAP) of which are passengers with connecting flights. OCX is also forecast to annually handle approximately 0.04 million tons of international cargo, and 1.21 million tons of domestic cargo. This alternative includes an on-airport 500-room hotel. Fuel for aircraft operations at OCX is assumed to be delivered by trucks.

Under Alternative A, JWA would continue to serve general aviation, as well as provide primarily short- and medium-haul domestic passenger service. JWA will serve 6.0 MAP in 2020 under this alternative, which is less than the current service level of 7.5 MAP.

No major runway improvements, such as the lengthening of a runway, would be made at JWA. On the MCAS El Toro site, Alternative A would reuse existing Runways 16R/34L and 7R/25L and reconstruct Runways 16L/34R and 7L/25R, offset 800 feet and 700 feet, respectively, from their parallel twins to meet FAA runway separation requirements for operations under visual conditions. Figure 8-2 depicts Alternative A.

8.4.2 Nonaviation Revenue Support Uses

The nonaviation land uses proposed under Alternative A are the same as the Proposed Project. However, the aviation development area in this alternative would be reduced by approximately 200 acres in Planning Area 1 and by about 175 acres in Planning Area 2 compared to the Proposed Project. These lands are assumed to be agricultural, horticultural, or passive open space uses.

8.4.3 Attainment of Project Objectives

This alternative would meet the general project objectives for base reuse except to enhance higher quality economic development. Alternative A would meet most of the aviation related objectives with the exception of meeting full international air traffic demand in Orange County, and achieving economic growth and business activities that would rely on full international aviation service. Since this alternative does not meet these project objectives, this Draft EIR proposes to reject this proposal.

8.4.4 Environmental Impacts of Alternative A

8.4.4.1 Land Use

Compared to existing conditions, this alternative would have no significant land use impacts at JWA, but would have impacts at the El Toro site similar to the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the Proposed Project.

There would be a slight increase in aviation activity at JWA and a decrease in overall aviation activity at MCAS El Toro under Alternative A compared with the Proposed Project. The aviation and nonaviation revenue support land uses for Alternative A are essentially the same as the Proposed Project. The perimeter uses associated with the development of an airport on the El Toro site are generally comparable in intensity or less intense than the existing and planned adjacent off-site uses. Therefore, as with the Proposed Project, there are no significant land use conflicts associated with the proposed land uses under this alternative.

The on-site agricultural uses under this alternative will be preserved within an increasingly urbanized area. Agricultural management practices can be implemented to reduce potential impacts. As with the Proposed Project, the on-site agriculture uses will not have significant impacts on off-site or other on-site land uses, and the impacts that might occur can be controlled through agricultural management practices and through the terms of the County's lease agreements.

The Proposed Project includes approximately 65 acres of airport parking in Planning Area 5 north of Irvine Boulevard, 200 acres of aviation uses in Planning Area 1, and 175 acres of aviation uses in Planning Area 2, which would not be required for this alternative. These airport areas includes Prime Agricultural Soils; therefore, this alternative would reduce the loss of Prime Agricultural Soils by up to 440 acres compared to the ASMP. However, as with the Proposed Project, there would continue to be a loss of Prime Agricultural Soils compared to existing conditions.

The proposed airport use at MCAS El Toro under Alternative A would attract new development in nearby areas. There is a potential for undesirable land use development (such as sexually oriented businesses) in the vicinity of the site, unless the County and adjacent cities have adequate land use controls in place. Also, the design of future off-site development may adversely affect existing and planned development in the adjacent jurisdictions if appropriate design standards are not implemented by the local jurisdictions. This potential impact is the same under both Alternative A and the Proposed Project.

Although the JWA aviation activity under Alternative A is slightly higher than the Proposed Project, it is lower than existing conditions, and future improvements would be very limited within the boundaries of the airport. Therefore, Alternative A, with less commercial aviation activity than existing JWA, would not have significant land use impacts.

The impacts of Alternative A related to land use are comparable to the impacts under the Proposed Project. This alternative would not avoid or measurably lessen the impacts of the Proposed Project.

8.4.4.2 General Plan Consistency

Compared to existing conditions, this alternative would have no significant impacts at JWA, but would have significant impacts at the El Toro site similar to the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance.

Alternative A introduces a civilian aviation use to MCAS El Toro; therefore, as with the Proposed Project, an amendment to the Airport Environs Land Use Plan (AELUP) is required. In addition, the General Plan Amendments required for the Proposed Project would also be required for this alternative. Alternative A includes land uses which conflict with the adopted City of Irvine General Plan for Planning Area 7 (City of Irvine Planning Area 30). An amendment to the City of Irvine General Plan would not be required since the site would be under the County's jurisdiction. The need for amendments to General Plans and the AELUP for Alternative A are comparable to those required for the Proposed Project, therefore; the General Plan consistency impacts for Alternative A are the same as for the Proposed Project.

8.4.4.3 Transportation and Circulation

Compared to existing conditions, this alternative would have no significant impacts at JWA, but would have significant impacts at the El Toro site similar to the Proposed Project. With the project mitigation measures identified for this alternative, the impacts of this alternative would be reduced to a level of insignificance.

The AM and PM peak hour and average daily traffic (ADT) generated by the aviation operations at JWA and OCX and by nonaviation revenue support land uses with build out of Alternative A are summarized in Table 8.4-1. Refer to Section 9.0 in the 1999 Traffic Analysis Technical Report for detailed information on the methodology applied to produce trip generation estimates for Alternative A. This alternative would generate an increase of 112,757 ADT at the El Toro site compared to an increase of 150,723 ADT for the Proposed Project over existing conditions. The alternative would generate 167,083 ADT less than the CRP. At JWA, this alternative would generate 11,176 ADT less than existing conditions. For a comparison of peak hour trip generation, see Table 4.3-8. In summary, the alternative would generate significantly fewer daily and peak hour trips than the Proposed Project.

Table 8.4-1
Trip Generation Summary - Alternative A

Project Component	AM Peak Hour			PM Peak Hour			ADT	Existing ADT
	In	Out	Total	In	Out	Total		
Former MCAS El Toro site								
OCX Commercial Air Terminal	2,552	1,699	4,251	2,571	2,530	5,101	84,328	
OCX Air Cargo Handling Facility	360	433	793	473	281	754	10,810	
Nonaviation Revenue Support Land Uses	3,692	728	4,420	989	3,573	4,562	43,019	
Sub-Total (El Toro Site)	6,604	2,860	9,464	4,033	6,384	10,417	138,157	25,400
JWA	1,088	729	1,817	1,433	1,438	2,871	36,274	47,450
TOTAL	7,692	3,589	11,281	5,466	7,822	13,288	174,431	72,850

The on-site and site access circulation plans anticipated for JWA and OCX in Alternative A are the same as those described earlier in Section 4.3 (Transportation and Circulation) for the Proposed Project with the exception that 2020 Alternative A conditions do not assume the Trabuco Road/ETC interchange option because of the reduced trip generation of the alternative. Peak hour levels of service with and without Alternative A were compared in order to identify locations on the existing plus committed circulation system that require improvements to mitigate traffic impacts of Alternative A and other foreseeable growth or development. Table 8.4-2 compares, in summary, the Alternative A highway impacts to the existing conditions and existing conditions plus Proposed Project. As discussed in Section 4.3.6.5, there is minimal comparison between the existing conditions plus Proposed Project versus the Alternative A impacts due to highway improvements recently completed and the effects of committed highway improvements. Section 9.0 in the 1999 Traffic Analysis Technical Report includes detailed summaries of the Alternative A build out traffic volumes and levels of service (LOS) and comparisons between existing plus committed conditions with and without Alternative A for intersections and arterial roadways within the traffic analysis study area, and Section 9.0 in the 2001 Traffic Analysis Technical Report Addendum includes comparable information for freeway/tollway mainline segments and freeway/tollway ramps within the traffic analysis study area).

Table 8.4-2
Summary Comparison of Traffic Impacts for Alternative A to Existing Conditions and Existing Conditions Plus Project

Existing Conditions Deficient Highway Facilities	Existing Conditions Plus Proposed Project Impacts	Alternative A With Existing Plus Committed Facilities
Location	**Location**	**Location**
INTERSECTIONS	**IMPACTED INTERSECTIONS**	**IMPACTED INTERSECTIONS**
Newport (NB) & Del Mar	Bake & Portola	ETC East Leg NB & Irvine
El Toro & SR-73 NB Ramps	Sand Canyon & Trabuco	Sand Canyon & Irvine
Campus & N. Bristol	Bake & I-5/I-405 SB Ramps	Sand Canyon & Trabuco
Jamboree (SB) & Walnut	Bake & Rockfield	Jeffrey & Irvine
Jamboree & I-405 NB Ramps	Jeffrey & Alton	Jeffrey & Trabuco
Jeffrey & I-405 NB Ramps	Jeffrey & I-405 NB Ramps	Sand Canyon & I-5 NB Ramps
Red Hill & MacArthur	Jeffrey & I-405 SB Ramps	Sand Canyon & I-5 SB Ramps
Irvine Center & Lake Forest	Jeffrey & Walnut/I-5 SB	Alicia & Paseo Valencia
Bake & Jeronimo	Sand Canyon & I-5 NB Ramps	El Toro & Rockfield
El Toro & Avd Carlota	Sand Canyon & I-5 SB Ramps	Alicia & Jeronimo
La Paz & Cabot/I-5 SB	Irvine Center & Lake Forest	Red Hill & I-5 NB Ramps
Los Alisos & Muirlands	Bake & Irvine/Trabuco	
Alicia & Jeronimo	Bake & Toledo	**IMPACTED ARTERIAL ROADS**
Alicia & Muirlands	Los Alisos & Muirlands	Irvine (ETC East Leg to PA-2 East Access Road)
La Paz & Muirlands/I-5 NB	Alicia & Jeronimo	Irvine (Jeffrey to Sand Canyon)
Red Hill & Edinger	Newport & Old Irvine	Laguna Canyon (south of El Toro)
Red Hill & Sycamore		
Red Hill & Walnut	**IMPACTED ARTERIAL ROADS**	**IMPACTED FREEWAY/ TOLLWAY RAMPS**
	Laguna Canyon (I-405 to SJHTC)	FTC (SR-241) at Portola East (NB Off-Ramp)
ARTERIAL ROADWAYS	Laguna Canyon (south of El Toro)	I-5 at Red Hill (SB On-Ramp)
Portola (Sand Canyon to Foothill Toll Road)	Culver (Bryan to Trabuco)	I-5 at La Paz (SB Off-Ramp)
Laguna Canyon (I-405 to SR-73)		I-405 at Sand Canyon (NB Direct On-Ramp)
Laguna Canyon (south of El Toro)	**IMPACTED FREEWAY RAMPS**	
Culver (Bryan to Trabuco)	I-5 at Culver (SB Off-Ramp)	**IMPACTED FREEWAY/ TOLLWAY SEGMENTS**
Michelson (Carlson to Harvard)	I-5 at Sand Canyon (NB On-Ramp)	FTC (Lake Forest to south of Portola East)
	I-5 at Sand Canyon (SB Off-Ramp)	I-5 (I-405 to north of SR-55)

Existing Conditions Deficient Highway Facilities	Existing Conditions Plus Proposed Project Impacts	Alternative A With Existing Plus Committed Facilities
FREEWAY RAMPS	I-405 at Sand Canyon (NB Direct On-Ramp)	I-405 (Jamboree to north of SR-55)
I-5 at Culver (SB Off-Ramp)		
I-405 at Jamboree (SB Off-Ramp)	**IMPACTED FREEWAY SEGMENTS**	
I-405 at MacArthur (SB On-Ramp)	I-5 (Jeffrey to north of SR-55)	
I-405 at MacArthur (NB On-Ramp)		
I-405 at MacArthur (NB Off-Ramp)		
SR-55 at Dyer (SB On-Ramp)		
SR-55 at Dyer (NB Off-Ramp)		
SR-55 at MacArthur (SB Direct On-Ramp)		
SR-55 at MacArthur (NB Direct On-Ramp)		
SR-55 at MacArthur (SB Off-Ramp)		
FREEWAY SEGMENTS		
I-5 (Culver to north of SR-55)		
I-5 (Alton to I-405)		
I-5 (El Toro to La Paz)		
I-405 (MacArthur to SR-133)		
SR-55 (I-5 to SR-73)		

Abbreviations: NB-northbound EB-eastbound
SB-southbound WB-westbound

In addition, a comparison of the impacts of Alternative A may also be made to the Proposed Project's impacts during the phasing years. As discussed in detail in Section 4.3.6.6 of this Draft EIR No. 573, as supplemented, under the Proposed Project phasing years, four intersection locations, two arterial roadway segments, one continuous freeway mainline segment and one freeway ramp would be significantly impacted under Phase 1 conditions (2005), five intersection locations, two arterial roadway segments, one continuous freeway mainline segment and one freeway ramp would be significantly impacted under Phase 2 conditions (2010), and nine intersection locations, two arterial roadway segments, one continuous freeway mainline segment and two freeway ramps would be significantly impacted under Phase 3 conditions (2015). At Phase 4 build out the Proposed Project would result in significant impacts not previously identified to four freeway/tollway mainline segments and four freeway/tollway ramps. See Supplemental Analysis, Section 4.3.6.5. In each case, however, the identified impacts will be mitigated to a level below significant during the applicable phasing year (see Section 4.3.7.2, Table 4.3-20).

8.4.4.4 Noise

Compared to existing conditions, this alternative would create no significant noise impacts at JWA (see Table 8.4-4). Table 8.4-3 shows a land use comparison with noise contours for 1998 military and year 2020 alternatives for El Toro. Also, see Figure 8-3, which depicts noise contours for Alternative A.

The Alternative A 65 CNEL contour line would include 6.6 square miles of land for OCX. For JWA, the numbers are the same as the Proposed Project. The 65 CNEL for the existing military aircraft operations at MCAS El Toro include 6.3 square miles of land. Therefore, Alternative A would increase the area affected by the 65 CNEL surrounding the El Toro site by 0.3 square miles, compared to an increase of 1.5 square miles for the Proposed Project.

The Proposed Project would increase noise sensitive land uses by three churches and one private school compared to existing conditions at the El Toro site (see Table 8.4-3). However, the alternative would avoid these impacts. Therefore, Alternative A would result in no increase in sensitive land uses affected by the 65 CNEL because: 1) County and City policies have restricted incompatible land uses within the much larger (28.81 square mile) MCAS El Toro AICUZ 65 CNEL, 2) the Alternative A 65 CNEL line does not exceed the AICUZ 65 CNEL boundary north of the El Toro site (and, therefore, avoids the impacts of the Proposed Project outside the AICUZ 65 CNEL line), and 3) land use restrictions and noise mitigation programs minimize land use conflicts at JWA.

EIR 563 concluded that a civilian airport at MCAS El Toro would result in significantly greater number of total operations compared to historical military levels of use, both throughout the day and during the nighttime hours. Although the Proposed Project and Alternative A would have significantly fewer operations than the Community Reuse Plan analyzed in EIR 563, the number of forecast civilian operations is still substantially greater at El Toro than the existing conditions level of military operations.

Table 8.4-3
Land Use Comparison with Noise Contours for 1998 Military and Year 2020 Alternatives for El Toro

	1998 Military	Proposed Project	Year 2020 Alternatives A	C	H	I	J	No Project
Square Miles Within Contour:								
- 60 to 65 CNEL Contour	16.6	22	15.5	20.4	12.3	13.8	23.2	0
- 65 to 70 CNEL Contour	6.3	9.8	6.6	9.2	5	5.8	12.1	0
- 70+ CNEL Contour	3.0	3.9	2.7	3.6	1.9	2.3	3.8	0
Square Miles Within Contour on Base:								
- 60 to 65 CNEL Contour	6.3	6.4	6	6.2	5.6	5.8	4.4	0
- 65 to 70 CNEL Contour	4.8	4.9	4.5	4.6	3.9	4.2	3.7	0
- inside 70 CNEL Contour	2.9	3.2	2.6	3	1.8	2.3	2.7	0
Square Miles of Residential:								
- 60 to 65 CNEL Contour	0.3	0.7	0.5	0.3	0.15	0.3	1.3	0
- 65 to 70 CNEL Contour	0	0	0	0	0	0	0.2	0
- inside 70 CNEL Contour	0	0	0	0	0	0	0	0
Number of Residences Inside Contour:								
- 60+ CNEL Contour	672	1837	1312	787	394	787	3,411	0
- 65+ CNEL Contour	0	0	0	0	0	0	525	0
- 70+ CNEL Contour	0	0	0	0	0	0	0	0
Number of Public Schools Inside Contour:								
- 60 to 65 CNEL Contour	0	1	0	0	0	0	2	0
- 65 to 70 CNEL Contour	1 on base	0	0	0	0	0	0	0
- inside 70 CNEL Contour	0	0	0	0	0	0	0	0
Number of Private Schools Inside Contour:								
- 60 to 65 CNEL Contour	4	3	3	3	2	2	2	0
- 65 to 70 CNEL Contour	0	1	1	1	0	0	0	0
- inside 70 CNEL Contour	0	0	0	0	0	0	0	0
Number of Colleges Inside Contour:								
- 60 to 65 CNEL Contour	0	0	0	0	0	0	0	0
- 65 to 70 CNEL Contour	0	0	0	0	0	0	0	0
- inside 70 CNEL Contour	0	0	0	0	0	0	0	0
Number of Hospitals Inside Contour:								
- 60 to 65 CNEL Contour	0	0	0	0	0	0	0	0
- 65 to 70 CNEL Contour	0	0	0	0	0	0	0	0
- inside 70 CNEL Contour	0	0	0	0	0	0	0	0
Number of Churches Inside Contour:								
- 60 to 65 CNEL Contour	12	13	13	10	8	12	10	0
- 65 to 70 CNEL Contour	0	3	0	0	0	0	0	0
- inside 70 CNEL Contour	0	0	0	0	0	0	0	0

Table 8.4-4
Land Use Comparison with Noise Contours for 1998 and Year 2020 Alternatives for John Wayne Airport

			Year 2020 Alternatives				
	1998	1985 Master Plan	Proposed Project	C	F	G	No Project
Square Miles Within Contour:							
- 60 to 65 CNEL Contour	2.2	4.13	1.8	2.77	2.76	7.4	2.49
- 65 to 70 CNEL Contour	0.75	1.22	0.8	1.07	1.08	3.28	0.98
- 70+ CNEL Contour	0.74	0.99	0.54	0.73	0.69	2.19	0.84
Square Miles of Residential:							
- 60 to 65 CNEL Contour	0.26	0.59	0.22	0.39	0.38	2.65	0.38
- 65 to 70 CNEL Contour	0.04	0.12	0.03	0.09	0.07	0.71	0.09
- inside 70 CNEL Contour	0	0	0	0	0	0.17	0.00
Number of Residences Inside Contour:							
- 60 to 65 CNEL Contour	682	1548	577	1023	997	6954	997
- 65 to 70 CNEL Contour	134	314	79	236	184	1863	236
- inside 70 CNEL Contour	0	0	0	0	0	446	0
Number of Public Schools Inside Contour:							
- 60 to 65 CNEL Contour	0	0	0	0	0	0	0
- 65 to 70 CNEL Contour	0	0	0	0	0	4	0
- inside 70 CNEL Contour	0	0	0	0	0	0	0
Number of Private Schools Inside Contour:							
- 60 to 65 CNEL Contour	0	0	0	0	2	1	0
- 65 to 70 CNEL Contour	0	0	0	0	0	3	0
- inside 70 CNEL Contour	0	0	0	0	0	0	0
Number of Colleges Inside Contour:							
- 60 to 65 CNEL Contour	0	0	0	0	0	0	0
- 65 to 70 CNEL Contour	0	0	0	0	0	0	0
- inside 70 CNEL Contour	0	0	0	0	0	0	0
Number of Hospitals Inside Contour:							
- 60 to 65 CNEL Contour	0	0	0	0	0	0	0
- 65 to 70 CNEL Contour	0	0	0	0	0	0	0
- inside 70 CNEL Contour	0	0	0	0	0	0	0
Number of Churches Inside Contour:							
- 60 to 65 CNEL Contour	2	2	2	2	2	6	1
- 65 to 70 CNEL Contour	0	2	0	0	0	2	1
- inside 70 CNEL Contour	0	0	0	0	0	1	0

As discussed earlier, the CNEL calculation factors in the number of daily operations and assigns a "penalty weighting" to operations occurring during the nighttime hours (10 p.m. to 7 a.m.). However, the substantial increase in the number of operations, particularly during nighttime hours, may be considered a significant impact of Alternative A independent of the CNEL computation.

The noise levels identified for the Proposed Project as well as Alternative A will be considered an annoyance by some residents and nighttime events will cause some sleep disturbance regardless of the levels of significance prescribed by regulatory agencies. Therefore, a mitigation measure for sleep disturbance is proposed in Section 4.4. With this mitigation measure, Alternative A impacts are reduced but remain significant similar to the Proposed Project.

8.4.4.5 Air Quality

Alternative A would result in new significant regional air quality impacts that would be greater in all phasing years than under the Proposed Project's development scenarios due to the failure of this alternative to meet local demand for air service. This alternative, as with the Proposed Project, may result in similar exceedances of the 1-hour standard for NO_2 projected at both OCX and JWA and the 24-hour PM_{10} standard at OCX and JWA. Similar to the Proposed Project, Alternative A's construction emissions impacts would remain significant and unavoidable. Alternative A would also likely result in toxic air contaminant impacts similar to the Proposed Project.

Short-Term (Construction) Impacts

Under this alternative, no significant runway improvements would be made at JWA (ASMP Technical Report 6, *Alternatives Definition Report*, 1999). At the MCAS El Toro site, Runways 16L/34R and 7L/25R would be reconstructed to meet FAA parallel runway separation requirements for operations under visual conditions. Therefore, total construction emissions would be less than those of the Proposed Project; however, peak daily emissions, including both equipment exhaust and fugitive dust, would likely be similar to those of the Proposed Project. Therefore, this alternative would likely result in significant short-term construction impacts that cannot be mitigated below significance.

Operational Air Quality Impacts

Emissions Inventories

Project direct air pollutant emissions associated with airport operations, including aircraft, GSE, energy consumption, and vehicular trips, are shown below in Table 8.4-5 for this alternative. Regional air pollutant emissions, including airport operations at other airports in the region and VMT required for air travel passengers to get to these airports, are shown in Table 8.4-6 for this alternative. Compared to the Proposed Project, Alternative A would serve substantially less Orange County demand for aviation services; therefore, this alternative would result in a higher regional vehicle miles traveled on highways as passengers and cargo travel to other regional airports. This increase in VMT would result in higher regional air quality emissions for this alternative when compared to the Proposed Project. However, this alternative would generate less regional VMT and air quality emissions than the No Project/No Activity Alternative because this alternative would serve more locally generated demand in Orange County.

Table 8.4-5
Project Direct Air Pollutant Emissions (Pounds/Day) – Phase 4 Alternative A

	CO	NOx	ROC	SOx	PM_{10}
Aircraft	10,976.22	10,574.57	912.07	720.08	121.75
OCX	4,864.63	8,579.53	607.54	559.26	89.30
JWA	6,111.59	1,995.04	304.53	160.82	32.45
GSE/APU	17,804.26	1,714.86	531.24	72.44	111.92
OCX	13,360.31	1,200.10	391.14	59.08	89.30
JWA	4,443.95	514.76	140.10	13.36	22.62
Fuel Storage/Dispensing	--	--	65.79	--	--
OCX	--	--	59.28	--	--
JWA	--	--	6.51	--	--
Airport Roadways	429.59	85.98	19.59	5.67	5.61
OCX	345.90	76.03	16.73	4.71	4.78
JWA	83.69	9.95	2.86	0.96	0.83
Airport Parking	331.47	27.79	10.62	9.32	3.10
OCX	263.82	22.61	3.61	7.17	2.90
JWA	67.65	5.18	7.01	2.15	0.20
Energy Consumption	94.20	542.10	5.00	55.60	18.50
OCX	71.60	412.00	3.80	42.30	14.10
JWA	22.60	130.10	1.20	13.30	4.40
Vehicular Traffic	14,838 ~~13,266~~	5,872 ~~5,158~~	1,210 ~~1,900~~	374 ~~367~~	2,994 ~~2,611~~
OCX[3]	11,633 ~~10,061~~	4,575 ~~3,861~~	958 ~~848~~	295 ~~288~~	2,331 ~~1,948~~
JWA	3,205	1,297	252	79	663
Total	44,473.79 ~~42,902~~	18,817.30 ~~18,103~~	2,754.31 ~~2,644~~	1,233.11 ~~1,230~~	3,254.88 ~~2,872~~

Source: CH2M Hill and LSA Associates, Inc., 2001

1 ROC emissions obtained by multiplying HC emissions reported by EDMS by a factor of 1.14.
2 SO_X emissions are not reported by the URBEMIS7G model.
3 Revised calculation of average trip length. This revision does not impact any of the significance determinations made in connection with the project.

Table 8.4-6
Regionwide Emissions Inventory Alternative A Phase 4
(Pounds/Day Unless Noted)

		CO	NO_X	ROC	SO_X	PM_{10}
Aircraft	El Toro	4,864.63	8,579.53	607.54	559.26	89.30
	JWA	6,111.59	1,995.04	304.53	160.82	32.45
	Other Airports	66,830.49	73,354.73	9,753.01	5,589.15	798.25
	Total Regional	77,806.71	83,929.30	10,665.08	6,309.23	920.00
GSE	El Toro	13,360.31	1,200.10	391.14	59.08	89.30
	JWA	4,443.95	514.76	140.10	13.36	22.62
	Other Airports	93,744.51	9,413.56	2,773.67	609.72	345.17
	Total Regional	111,548.77	11,128.42	3,304.91	682.16	457.09
Energy	El Toro	71.60	412.00	3.80	42.30	14.10
	JWA	22.60	130.10	1.20	13.30	4.40
	Others	579.00	3,331.00	31.00	340.90	114.00
	Total Regional	673.20	3,873.10	36.00	396.50	132.50
Fuel	El Toro	--	--	59.28	--	--
	JWA	--	--	6.51	--	--
	Other Airports	--	--	491.24	--	--
	Total Regional	--	--	557.03	--	--
Airport Roadways	El Toro	345.90	76.03	16.73	4.71	4.78
	JWA	83.69	9.95	2.86	0.96	0.83
	Other Airports	3,232.71	656.01	148.75	39.48	53.64
	Total Regional	3,662.30	741.99	168.34	45.15	59.25
Airport Parking	El Toro	263.82	22.61	3.61	7.17	2.90
	JWA	67.65	5.18	7.01	2.15	0.20
	Other Airports	2,020.74	580.44	27.89	53.66	21.18
	Total Regional	2,352.21	608.23	38.51	62.98	24.28
Roads	El Toro[1]	11,633.00 ~~10,061.00~~	4,575.00 ~~3,861.00~~	958.00 ~~848.00~~	295.00 ~~288.00~~	2,331.00 ~~1,948.00~~
	JWA	3,205.00	1,297.00	252.00	79.00	663.00
	Others Airports[2]	2,757,679.00 ~~2,730,639.00~~	490,576.00 ~~485,975.00~~	70,624.00 ~~67,491.00~~	48,634.00 ~~49,000.00~~	6,821.00 ~~6,984.00~~
	Total Regional[2]	2,772,517.00 ~~2,743,905.00~~	496,448.00 ~~491,133.00~~	71,834.00 ~~68,591.00~~	49,000.00 ~~49,367.00~~	9,815.00 ~~9,995.00~~
TOTAL (pounds/day)		**2,968,560.19** ~~**2,939,948.19**~~	**596,729.04** ~~**591,414.04**~~	**86,603.87** ~~**83,360.87**~~	**56,496.02** ~~**56,863.02**~~	**11,408.12** ~~**11,188.12**~~
Change from 2020 No Project (pounds/day)		(10,802.41) ~~(31,068.41)~~	(2,864.32) ~~(6,585.460)~~	(974.41) ~~(3,268.78)~~	(394.24) ~~(139.24)~~	(11.28) ~~(239.84)~~
SCAQMD Threshold for Operation (pounds/day)		**550**	**55**	**55**	**150**	**150**

Source: LSA Associates, Inc., 2001.

1 Revised calculation of average trip length. This revision does not impact any of the significance determinations made in connection with the project.

2 Typographical correction.

Dispersion Analysis

No airport emissions dispersion analysis was conducted for this project alternative. Several local criteria pollutant hot spots for NO_2 and SO_2 were found under the Proposed Project. Although the Proposed Project has higher annual aircraft LTO operations, these local hot spots from aircraft exhaust emissions would also likely occur for Alternative A.

At intersections in the vicinity of the project sites, the CAL3QHC model was used to assess the CO concentrations. Tables 8.4-7 and 8.4-8 show that the 1-hour and 8-hour CO concentrations would be below the State and federal CO standards for Alternative A.

Toxic Air Contaminants

Under this alternative, toxic air contaminant impacts would likely be similar to those identified under the Proposed Project.

8.4.4.6 Topography

Compared to existing conditions, this alternative would have no significant impacts due to JWA operations, but would have impacts at the El Toro site similar to the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or lessen substantially the impacts of the Proposed Project.

Since development of MCAS El Toro under Alternative A is similar to that described for the Proposed Project, no significant impacts related to topography would occur.

Operation and development of JWA under Alternative A would be similar to the current usage, and would not entail expansion of the airport acreage. Therefore, Alternative A would not raise potential impacts related to topography. The impacts of Alternative A related to topography are slightly fewer than the impacts under the Proposed Project due to fewer grading requirements.

Table 8.4-7
Phase 4 Alternative A – Predicted One Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF ORANGE[13]												
345	Jamboree & Chapman	7.0	7.0	7.2	7.0	7.0	7.2	6.8	7.2	6.8	6.8	6.7	6.7
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	7.1	7.2	7.1	7.1	6.8	6.8	6.7	7.1	6.9	7.0	6.7	6.8
152	Main & Sunflower	7.0	7.1	6.7	7.1	6.6	7.0	6.5	6.5	6.7	6.8	7.1	6.8
90	Grand & Edinger	6.9	7.0	7.2	7.3	7.0	7.1	6.7	7.0	6.6	7.0	6.9	6.7
	CITY OF TUSTIN[13]												
93	Newport & Edinger	7.2	7.1	6.8	7.2	6.7	6.7	6.6	6.7	6.7	7.0	6.6	6.9
115	Von Karman & Barranca	7.0	7.1	7.1	7.0	6.6	7.1	6.7	6.9	6.6	6.6	6.7	6.9
95	Tustin Ranch & Edinger	7.2	7.0	6.9	7.1	6.7	6.9	6.6	6.7	6.9	6.9	6.6	7.0
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	5.8	6.0	5.6	5.6	5.2	5.5	5.3	5.5	5.5	5.4	5.5	5.8
156	Jamboree & Main	5.6	5.6	5.7	5.4	5.2	5.4	5.3	5.5	5.3	5.3	5.4	5.6
98	Culver & Irvine Center	5.6	5.6	5.7	5.7	5.3	5.4	5.4	5.5	5.3	5.5	5.4	5.5
134	Jamboree & Alton	5.6	5.6	5.7	5.6	5.2	5.5	5.2	5.3	5.3	5.4	5.4	5.7
175	Jamboree & Michelson	5.7	5.4	5.4	5.6	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.4
151	Red Hill & MacArthur	5.7	5.5	5.5	5.6	5.0	5.4	5.4	5.3	5.3	5.4	5.2	5.7
100	Jeffrey & Irvine Center	5.6	5.5	5.5	5.6	5.3	5.5	5.2	5.2	5.5	5.8	5.1	5.3
321	Access Rd. West & Irvine	5.2	5.2	5.2	5.4	5.1	5.1	5.1	5.2	4.9	4.9	5.1	5.2
320	Perimeter Rd. & Irvine	5.3	5.2	5.2	5.1	4.9	4.9	5.0	5.2	4.8	4.8	5.1	5.1
153	Red Hill & Main	5.5	5.5	5.5	5.6	5.1	5.3	5.2	5.2	5.2	5.2	5.2	5.2
	CITY OF LAGUNA BEACH[14]												
299	Moulton & El Toro	5.5	5.4	5.5	5.6	5.1	5.3	5.4	5.4	5.0	5.3	5.1	5.1
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	5.4	5.4	5.4	5.3	5.0	5.2	5.0	5.0	5.2	5.2	5.1	5.3
	CITY OF LAKE FOREST[14]												
271	El Toro & Rockfield	5.6	5.5	5.6	5.5	5.2	5.2	5.2	5.4	5.2	5.3	5.3	5.4

Note:
* - Concentrations are in parts per million (ppm)
1 - REC1 SW CORNER
2 - REC2 SE CORNER
3 - REC3 NE CORNER
4 - REC4 NW CORNER
5 - REC5 S. DEPARTURE - MID BLOCK
6 - REC6 N. APPROACH - MID BLOCK
7 - REC7 E. DEPARTURE - MID BLOCK
8 - REC8 W. APPROACH - MID BLOCK
9 - REC9 N. DEPARTURE - MID BLOCK
10 - REC10 S. APPROACH - MID BLOCK
11 - REC11 W. DEPARTURE - MID BLOCK
12 - REC12 E. APPROACH - MID BLOCK
13 - The ambient one-hour CO concentration, 6.1 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years 1996 to 2000, is added to the calculated one hour levels.
14 - The ambient one-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years 1996 to 2001, is added to the calculated one hour levels.

Table 8.4-8
Phase 4 Alternative A – Predicted Eight Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF ORANGE[13]												
345	Jamboree & Chapman	5.2	5.2	5.4	5.2	5.2	5.4	5.1	5.4	5.1	5.1	5.0	5.0
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	5.3	5.4	5.3	5.3	5.1	5.1	5.0	5.3	5.2	5.2	5.0	5.1
152	Main & Sunflower	5.2	5.3	5.0	5.3	5.0	5.2	4.9	4.9	5.0	5.1	5.3	5.1
90	Grand & Edinger	5.2	5.2	5.4	5.4	5.2	5.3	5.0	5.2	5.0	5.2	5.2	5.0
	CITY OF TUSTIN[13]												
93	Newport & Edinger	5.4	5.3	5.1	5.4	5.0	5.0	5.0	5.0	5.0	5.2	5.0	5.2
115	Von Karman & Barranca	5.2	5.3	5.3	5.2	5.0	5.3	5.0	5.2	5.0	5.0	5.0	5.2
95	Tustin Ranch & Edinger	5.4	5.2	5.2	5.3	5.0	5.2	5.0	5.0	5.2	5.2	5.0	5.2
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	3.7	3.9	3.6	3.6	3.3	3.5	3.4	3.5	3.5	3.5	3.5	3.7
156	Jamboree & Main	3.6	3.6	3.7	3.5	3.3	3.5	3.4	3.5	3.4	3.4	3.5	3.6
98	Culver & Irvine Center	3.6	3.6	3.7	3.7	3.4	3.5	3.5	3.5	3.4	3.5	3.5	3.5
134	Jamboree & Alton	3.6	3.6	3.7	3.6	3.3	3.5	3.3	3.4	3.4	3.5	3.5	3.7
175	Jamboree & Michelson	3.7	3.5	3.5	3.6	3.3	3.4	3.4	3.4	3.4	3.5	3.5	3.5
151	Red Hill & MacArthur	3.7	3.5	3.5	3.6	3.2	3.5	3.5	3.4	3.4	3.5	3.3	3.7
100	Jeffrey & Irvine Center	3.6	3.5	3.5	3.6	3.4	3.5	3.3	3.3	3.5	3.7	3.3	3.4
321	Access Rd. West & Irvine	3.3	3.3	3.3	3.5	3.3	3.3	3.3	3.3	3.1	3.1	3.3	3.3
320	Perimeter Rd. & Irvine	3.4	3.3	3.3	3.3	3.1	3.1	3.2	3.3	3.0	3.0	3.3	3.3
153	Red Hill & Main	3.5	3.5	3.5	3.6	3.3	3.4	3.3	3.3	3.3	3.3	3.3	3.3
	CITY OF LAGUNA BEACH[14]												
299	Moulton & El Toro	3.5	3.5	3.5	3.6	3.3	3.4	3.5	3.5	3.2	3.4	3.3	3.3
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	3.5	3.5	3.5	3.4	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.4
	CITY OF LAKE FOREST[14]												
271	El Toro & Rockfield	3.6	3.5	3.6	3.5	3.3	3.3	3.3	3.5	3.3	3.4	3.4	3.5

Note: * - Concentrations are in parts per million (ppm)

1 – REC1 SW CORNER
2 – REC2 SE CORNER
3 – REC3 NE CORNER
4 – REC4 NW CORNER
5 – REC5 S. DEPARTURE - MID BLOCK
6 – REC6 N. APPROACH - MID BLOCK
7 – REC7 E. DEPARTURE - MID BLOCK
8 – REC8 W. APPROACH - MID BLOCK
9 – REC9 N. DEPARTURE - MID BLOCK
10 - REC10 S. APPROACH - MID BLOCK
11 - REC11 W. DEPARTURE - MID BLOCK
12 - REC12 E. APPROACH - MID BLOCK

13 - The ambient eight-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.

14 - The ambient eight-hour CO concentration, 2.9 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.

8.4.4.7 Soils, Geology and Seismicity

Compared to existing conditions, this alternative would have no significant impacts due to operations at JWA, but would have impacts due to development at the El Toro site similar to the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance.

Development of MCAS El Toro under Alternative A is similar to that described for the Proposed Project, and does not significantly differ in its impacts related to soils or local geologic features. Alternative A also does not entail additional risk based on projected earthquake events beyond those discussed for the Proposed Project. The impacts of Alternative A related to seismicity are the same as the impacts under the Proposed Project.

Operation and development of JWA under Alternative A would be similar to the current usage, and would not entail expansion of the airport acreage. Therefore, Alternative A would not raise impacts related to soils, geologic features or seismicity.

The impacts of Alternative A related to soils, geology and seismicity would be the same as under the Proposed Project, and this alternative would not avoid or lessen substantially the impacts of the project.

8.4.4.8 Hydrology and Water Quality

Compared to existing conditions, this alternative would have no significant impacts due to operations at JWA, but would have impacts due to development at the El Toro site similar to the Proposed Project. With the mitigation measures proposed for the project, the impacts would be reduced to a level of insignificance. As discussed in Section 4.8 (Hydrology and Water Quality), the Proposed Project will not result in significant adverse impacts related to drainage and surface water quality. Because most issues related to drainage at the MCAS El Toro site can be addressed adequately through proper design and engineering, it is anticipated that Alternative A could also be developed for use as a civilian airport without significant adverse impacts related to drainage. Similarly, as discussed in Section 4.8, operations can be conducted and controls implemented to minimize potential adverse impacts related to surface water quality under Alternative A. Consequently, development of Alternative A would not result in significant impacts related to surface water quality.

No groundwater will be pumped from the MCAS El Toro site under this alternative so there will be no impacts to local groundwater levels or basin storage under this alternative. Groundwater quality impacts under this alternative will be the same as those discussed for the Proposed Project in Section 4.8. As with the Proposed Project, no hazardous waste remediation activities at the MCAS El Toro site are a component of this alternative. Therefore, this alternative will result in no significant adverse impacts related to groundwater.

Under this alternative, JWA will have a lower MAP level compared with current operations and therefore will require no major construction. Therefore, this alternative will not result in impacts related to hydrology and water quality beyond existing conditions at JWA.

In summary, the hydrology and water quality impacts of Alternative A will be similar to the level of impacts under the Proposed Project, and this alternative would not avoid or lessen substantially the impacts of the project.

8.4.4.9 Biological Resources

When compared to existing conditions, this alternative would have no significant impacts due to operations at JWA, but would have impacts due to development of the El Toro site similar to the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. However, this alternative would not avoid or lessen the impacts of the Proposed Project.

The aviation land use and airfield component for the MCAS El Toro site and the corresponding nonaviation component under this alternative are very similar to those under the Proposed Project. The only substantive difference between Alternative A and the Proposed Project is that there are no plans for a runway extension under Alternative A. However, since the extension results in impacts to non-native or ruderal grassland, the difference in biological resource impacts are not significantly different for direct impacts (i.e. native plant communities, wildlife, wildlife dispersion corridors and special interest species). For indirect impacts, the biological resource impacts under Alternative A are not substantially different than for the Proposed Project. However, there is one identifiable indirect impact that is expected to be different and that is noise exposure to biological resources. For Alternative A, the CNEL noise contour is substantially shorter to the north. The CNEL noise contour differences to the east and the Habitat Reserve, and to the south and the San Joaquin Hills are not substantially different. SEL values are not expected to be substantially different from the Proposed Project. The shorter CNEL noise contours to the north reflect a lower average noise level from aircraft overflights at Siphon Ridge as compared to the Proposed Project. Although, this is an improvement from the Proposed Project, it is not anticipated to result in a substantially different level of biological productivity in the Siphon Ridge area. This alternative would have impacts similar to the Proposed Project on wetlands and Waters of the U.S. With the mitigation measures recommended for the project, the impacts of this alternative would be reduced to a level of insignificance.

This alternative will not result in significant adverse impacts to native plant communities, wildlife dispersion corridors, or special interest species at JWA or Upper Newport Bay. There are no substantive biological resources on the JWA site, and impacts to the Upper Newport Bay are limited to indirect impacts as a result of aircraft operations, which are less than the Proposed Project.

8.4.4.10 Public Services and Utilities

Compared to existing conditions, this alternative would have no significant impacts due to operations at JWA, but would have impacts due to development at the El Toro site similar to the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or lessen substantially the impacts of the Proposed Project.

Redevelopment of MCAS El Toro under Alternative A is similar to that of the Proposed Project, no significant unmitigated impacts related to public services would occur. The same conclusions are made for JWA, which will remain status quo for this alternative.

As described in Section 4.10 (Public Services and Utilities), the Proposed Project would not result in significant unmitigated adverse impacts related to utilities. Alternative A could be served with utilities without significant adverse impacts after mitigation, similar to conditions under the Proposed Project.

8.4.4.11 Natural Resources and Energy

Compared to existing conditions, this alternative would have no significant impacts due to operations at JWA, but would have significant impacts at the El Toro site similar to the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance except for impacts to Agricultural Resources, which would remain significant after mitigation. This alternative would lessen the impacts on Prime Agricultural Soils by up to 440 acres compared to the Proposed Project. However, impacts would remain significant and unavoidable.

The land use/airfield component and nonaviation land use component for this alternative are similar to those of the Proposed Project. The primary exception is that no runway extensions are planned at the MCAS El Toro site under this alternative. As discussed in Section 4.11 (Natural Resources and Energy), the Proposed Project will not result in significant adverse impacts related to natural resources and energy, with the exception of unmitigatable significant impacts to agricultural resources on the MCAS El Toro site.

There are no agricultural resources existing at JWA; therefore, no impacts at JWA would result from this alternative.

8.4.4.12 Aesthetics, Light and Glare

Compared to existing conditions, this alternative would have no significant impacts due to operations at JWA, but would have impacts due to construction and operations at the MCAS El Toro site similar to the Proposed Project. With the mitigation measures proposed for the Proposed Project, the aesthetic, light, and glare impacts of this alternative would be reduced

to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the Proposed Project.

The design of the facilities for Alternative A is similar to that of the Proposed Project, with an insignificant reduction of the size of the terminal, number of gates, and ancillary aviation support facilities. The Nonaviation Revenue Support uses would consist of the same facilities as proposed with the project, although the acreages for agricultural and passive open space would be larger by approximately 440 acres due to the reduced size of the airport facilities needed to serve 19 MAP. The overall appearance of the MCAS El Toro site, including the airport facilities (runways, terminal, cargo buildings, parking structures, etc.) and Nonaviation Revenue Support uses (regional park, golf courses, office/commercial and cultural and institutional buildings) would be similar to the appearance of the Proposed Project. Views of the MCAS El Toro site from the vantage points described in Section 4.12 would not differ substantially from the views created by the development of the Proposed Project. In that there is less development and more open space/green space on the site due to the less intense commercial passenger service plan under Alternative A, this alternative would have slightly less visual change than those of the Proposed Project; however, the reduction would be insignificant.

The impacts of light and glare at the MCAS El Toro site under this alternative would approximate those of the Proposed Project.

At JWA, Alternative A would slightly reduce the commercial service level from the existing level and, therefore, any visual changes caused by either the Proposed Project or Alternative A would be slightly less than existing conditions. Potential light and glare at JWA would be similar to that of the Proposed Project; no substantive change in this effect would occur.

8.4.4.13 Cultural Resources

Compared to existing conditions, this alternative would have no effect on cultural resources at JWA, but would have impacts due to development at the MCAS El Toro site similar to the Proposed Project. This alternative would not avoid or substantially lessen the impacts of the Proposed Project.

The physical effects of this alternative on cultural resources at MCAS El Toro would be approximately the same as with the Proposed Project. As the cultural resources within the disturbance area (construction and operations) are not considered significant (SHPO concurrence pending), no significant impacts would be caused by this alternative, as with the Proposed Project.

Under Alternative A, there would be no additional or new effects on cultural resources at JWA since there is no known archaeological, paleontological or historic resources on the already developed airport property.

8.4.4.14 Recreation

Compared to existing conditions, this alternative would have fewer impacts from operations at JWA, because the primary project development would take place at the MCAS El Toro site. Alternative A would have impacts due to development at the MCAS El Toro site similar to the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen impacts of the Proposed Project.

Alternative A would have approximately the same effects related to recreational resources in the MCAS El Toro area as the Proposed Project. The physical boundaries of construction with Alternative A would be, for all practical purposes, the same as that of the Proposed Project. Therefore, no adjacent off-road trails would be physically impacted with Alternative A. Development at the MCAS El Toro site under Alternative A would have the same effect regarding consistency with County and City General Plan Recreational policies, goals and objectives, in that nonaviation land uses would be included on-site similar to the Proposed Project. In addition, Alternative A would not differ from the project in that it would not exceed Thresholds of Significance 2 and 3 in Section 4.14.

Noise impacts at MCAS El Toro under Alternative A would be reduced from those of the Proposed Project because the noise contours would be reduced. Existing recreational facilities and planned future facilities in the 65 dB CNEL contour for Alternative A would include approximately the same facilities as the project contour, with the potential for the use of fewer facilities or smaller portions of the same facilities to be affected. The overall noise impact on the use of area recreational facilities would be similar to the impacts of the Proposed Project, given that the alternative calls for the same type of uses on the site, at a reduced intensity (28.8 MAP for the project, 19 MAP for Alternative A).

The physical effects on area recreational facilities in the JWA area under Alternative A would be approximately the same as under the Proposed Project. Similarly, no significant differences in noise effects on public use of area recreational facilities would occur in that the 65 dB CNEL noise contour for JWA in Alternative A would be approximately the same.

8.4.4.15 Public Health and Safety

Compared to existing conditions, the overall potential for accidents is greater with this alternative. The increase in accident potential is not deemed to be significant as an extraordinary risk is not created. This alternative would not avoid or substantially lessen impacts of the Proposed Project.

Aviation Safety

Compared to the Proposed Project, there would be an increase of approximately 7,600 air carrier and air cargo operations and a decrease of approximately 2,000 general aviation

operations at JWA. Under this scenario, the potential air carrier and air cargo accident risks at JWA would increase by approximately 11.3% to reflect the number of increasing aviation activity diverted from OCX to JWA and the potential accident risks for general aviation at JWA would slightly decrease by 0.6% correspondingly. At OCX, there would be an estimated decrease of 59,100 air carrier and air cargo operations and an estimated increase of 11,000 general aviation operations. Under this condition, the potential air carrier and air cargo accident risks at OCX would decrease by approximately 21.3% to reflect the fewer number of operations at OCX. The potential general aviation risks at OCX would increase by 50.0% correspondingly. Compared to the Proposed Project relative to on-airport and off-airport fatal accidents per million operations, there would be no significant adverse impacts related to aviation safety at the MCAS El Toro site or at JWA.

Compared to the existing conditions, there would be a decrease of approximately 14,908 air carrier and air cargo operations and an increase of approximately 29,376 general aviation operations at JWA. Under this scenario, the potential air carrier and air cargo accident risks at JWA would decrease by approximately 16.6% to reflect the number of decreasing operations and the potential general aviation accident risks would increase by 9.0% correspondingly. Compared to the existing conditions, there would be no significant adverse impacts related to aviation safety at JWA.

8.4.4.16 Hazardous Materials and Hazardous Wastes

Compared to existing conditions, this alternative would have no significant impacts due to operations at JWA, but would have impacts due to development at the El Toro site similar to the Proposed Project. With mitigation measures, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the Proposed Project.

Implementation of Alternative A would result in impacts related to hazardous wastes approximately the same as under the Proposed Project. This alternative would not alter remedial investigations, response actions or environmental risks associated with any hazardous waste sites on the MCAS El Toro and JWA sites.

Any use of hazardous materials and/or generation of hazardous waste under Alternative A would be regulated by applicable State law, federal law, and regulations pertaining to worker protection, hazardous materials storage and use, and hazardous waste generation and disposal. Implementation of these regulations will reduce potential impacts associated with the presence of these hazardous substances to below a level of significance.

The impacts of Alternative A related to hazardous materials and hazardous wastes are approximately the same as the impacts under the Proposed Project.

8.4.4.17 Socioeconomics

Under this alternative, a total of 22,900 jobs would be generated, including 19,200 at MCAS El Toro and 3,700 at JWA, representing a net increase of 16,500 jobs at MCAS El Toro and 1,600 jobs at JWA over existing 1998 conditions. The distribution of jobs between MCAS El Toro and JWA differs under this alternative compared to the Proposed Project. There would be fewer jobs generated at the MCAS El Toro site under Alternative A than under the Proposed Project. Employment at JWA would be marginally higher under Alternative A than under the Proposed Project.

As with the Proposed Project, economic activity at the El Toro site and JWA site, as well as expenditures by visitors arriving by air through the two airports, would stimulate additional off-site job growth. Given the lower number of on-site jobs and air passengers served by this alternative, the number of off-site jobs stimulated by the airport system would be significantly lower than the level under the Proposed Project.

Given the lower number of jobs generated under Alternative A compared to the Proposed Project, the magnitude of impacts related to inducing substantial growth or concentration of employment, and demand for housing, including low and moderate income housing, would be lower than under the Proposed Project. The employment projections under Alternative A would also be inconsistent with the adopted regional forecasts, as under the Proposed Project.

In summary, this alternative would not avoid or substantially lessen the impacts of the Proposed Project.

8.4.4.18 Risk of Upset

Compared to existing conditions, this alternative would have no significant impacts due to operations at JWA, but would have impacts due to development at the El Toro site similar to the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the project.

As discussed in Section 4.18 (Risk of Upset), the Proposed Project would not result in significant adverse impacts to public health and safety resulting from project-related risk of upset conditions. The ultimate build out and phased development of this alternative will entail a lower level of operations than the Proposed Project, with a commensurate lower level of risk of upset potential associated with jet fuel storage and delivery. Consequently, implementation of this alternative would not result in significant adverse impacts to public health and safety.

8.4.5 Feasibility

In summary, this alternative, which is very similar to the Proposed Project, would have the same development and environmental feasibility. However, this alternative would have slightly lower development cost due to the reduced extent of terminal and related aviation facilities, and lower revenues due to reduced aviation use.

8.4.6 Conclusions

Alternative A would reduce the area affected by the 65 dB CNEL for OCX, and would reduce traffic, and loss of agricultural soils impacts compared to the Proposed Project. This alternative would have greater regional air quality impacts due to increased regional traffic to airports meeting the County's unmet air service demand.
In conclusion, Alternative A:

- Does not meet the County's future demand for aviation services, especially international service. This would have an adverse impact on trade, business, tourism, jobs, and other economic activity in the County.

- Would result in higher regional VMT and regional air quality emissions as passengers and cargo travel from Orange County to LAX or other airports.

- Since the 65 dB CNEL for LAX and other airports (which would serve the County's unmet aviation demand) already include large numbers of noise sensitive populations/ developments, this alternative would increase the adverse effects of aviation noise on a regional basis.

- Would generate fewer on-site and off-site jobs than the Proposed Project.

- Would not result in a significant reduction in project impacts (after mitigation), and would not avoid project impacts that cannot be reduced to a level of insignificance, including short-term construction air quality impacts, local air quality impacts due to aircraft and associated operations, and toxic air contaminant impacts.

8.5 ALTERNATIVE C: JWA – SHORT-HAUL; OCX – MEDIUM-HAUL TO FULL INTERNATIONAL (LINKED) AIR SERVICE

This section presents the potential impacts of Alternative C as measured against the existing setting, as well as a comparison of the alternative's impacts to those of the Proposed Project at build out. In those instances in which the comparison of the alternative to the Proposed Project is materially affected by the phasing of the project, i.e., in those instances in which the impacts of the Proposed Project during the phasing years are materially different from those impacts at year 2020, a comparison of the alternative's impacts to those of the Proposed Project for the applicable phasing year is also provided.

This alternative was selected for analysis because it has the potential to lessen aircraft noise, traffic, and local air quality emissions at OCX while still feasibly attaining most of the objectives of the Proposed Project. The Notice of Preparation (NOP) identified this alternative and the Proposed Project as preferred projects to be analyzed in the Draft EIR. However, the analysis of this option determined that this alternative is infeasible due to costs as described below. Therefore, this plan is analyzed as an alternative that was considered.

8.5.1 Aviation Uses

Under this alternative, JWA and OCX would ultimately (year 2020) be linked by an airport-to-airport connector such as a light rail system that would allow the two airports to function as one for connecting passengers. Without this connector, market segmentation between the two airports is not feasible. The market roles of the two airports would include regulatory perimeter rules defining their respective permitted roles. Under Alternative C, OCX provides long-haul domestic and international air passenger service for an estimated 23.4 MAP, 22 percent (5.1 MAP) of which are passengers with connecting flights (45 percent of these connecting passengers transfer between JWA and OCX via the transit facility that is proposed to link the two airports). OCX is also forecast to annually handle approximately 0.84 million tons of international cargo and 1.18 million tons of domestic cargo. The 2020 service level at JWA under this alternative would be 10.1 MAP. This alternative includes a proposed on-airport 500-room hotel in the OCX terminal area. JWA would serve general aviation activity and short-haul passengers. The runway improvements at OCX would be the same as under the Proposed Project. Figure 8-4 depicts Alternative C.

8.5.2 Nonaviation Revenue Support Uses

Nonaviation land uses proposed under Alternative C are the same as assumed for the Proposed Project.

8.5.3 Attainment of Project Objectives

This alternative meets the general project objectives for base reuses except to optimize cost/revenues, as well as the aviation related objectives. However, the very high costs/passenger for the JWA/OCX transit connector would result in an infeasible project.

8.5.4 Environmental Impacts of Alternative C

8.5.4.1 Land Use

Compared to existing conditions, this alternative would have greater land use impacts at JWA and slightly less impact at the El Toro site than the Proposed Project. With the mitigation measures proposed for the Proposed Project and additional mitigation related to noise impacted land uses around JWA, the impacts of this alternative could be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the project.

Compared to the Proposed Project, the primary difference is that Alternative C includes an airport-to-airport transit connector. The selected option was a fully elevated fixed-guideway system from OCX along SR-133 to I-405, along the I-405 right-of-way to MacArthur Boulevard, and then to JWA. The land use impacts of this alternative were found to be low, with the assumption that a large portion of the system can be provided within existing right-of-way.

Uses along the perimeter of OCX are generally comparable in intensity or less intense than the existing and planned adjacent off-site uses. Therefore, as with the Proposed Project, there are no significant land use conflicts associated with the proposed land uses under this alternative. The elevated nature of the airport connector means that it will be visually prominent, and the connector would be expected to generate noise and vibration effects on adjacent land uses.

The on-site agricultural uses preserved under this alternative will be the same as is preserved with the Proposed Project. As with the Proposed Project, the agriculture impacts that might occur can be controlled through agricultural management practices and through the terms of the County's lease agreements.

The proposed airport use at MCAS El Toro under Alternative C will attract new development in nearby areas. There is a potential for undesirable land use development (such as sexually oriented businesses) in the vicinity of the site, unless the County and adjacent cities have adequate land use controls in place. Also, the design of future off-site development may adversely affect existing and planned development in the adjacent jurisdictions if appropriate design standards are not implemented by the local jurisdictions. This potential impact is the same under both Alternative C and the Proposed Project.

Although the JWA aviation activity under Alternative C is higher than the Proposed Project, major future aviation and terminal improvements would be limited since the existing facility was designed to accommodate 10.1 MAP. Also, future improvements under Alternative C would take place within the existing boundaries of the airport. This alternative would create a JWA 65 CNEL noise contour, which would be larger than the Proposed Project (see noise analysis below). With the current JWA noise mitigation program, these impacts would be reduced to a level of insignificance.

The impacts of Alternative C related to land use are generally comparable to the impacts under the Proposed Project at El Toro. The airport-to-airport connector proposed under Alternative C would have aesthetic, noise, and vibration impacts on adjacent uses. However, these impacts would be principally limited to the adjacent freeway or highway right-of-way. The land use impacts around JWA due to a larger 65 CNEL noise contour would be greater than the Proposed Project, which has a 65 CNEL contour smaller than that existing today.

8.5.4.2 General Plan Consistency

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the El Toro site than the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the Proposed Project impacts.

Alternative C introduces a civilian aviation use to MCAS El Toro and modifies existing aviation activity conditions at JWA; therefore, as with the Proposed Project, an amendment to the AELUP is required. An amendment to the Orange County General Plan Land Use Element map is needed for this alternative, to address the conflicts with proposed land uses in Planning Area 5, and to redesignate the Open Space portion at the south end of JWA to Public Facilities. The adopted 65 dB CNEL noise contour policy implementation line would change at El Toro as a result of this alternative, therefore, an amendment to the Orange County General Plan Noise Element would be required. Alternative C includes land uses which conflict with the adopted City of Irvine General Plan for Planning Area 7 (City of Irvine Planning Area 30). An amendment to the City of Irvine General Plan would not be required since the site would be owned by the County. The need for amendments to General Plans and the AELUP for Alternative C are comparable to those required for the Proposed Project, therefore; the General Plan consistency impacts for Alternative C are similar to the Proposed Project.

8.5.4.3 Transportation and Circulation

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the El Toro site than the Proposed Project. With the project alternative mitigation measures, the impacts of this alternative would be reduced to a level of

insignificance. This alternative would not avoid or substantially lessen the impacts of the project.

The AM and PM peak hour and ADT trips generated by the aviation operations at JWA and OCX and by nonaviation revenue support land uses with build out of Alternative C are summarized in Table 8.5-1. Refer to Section 10.0 in the 1999 Traffic Analysis Technical Report for detailed information on the methodology used to produce trip generation estimates for Alternative C. This alternative would generate an increase of 126,873 ADT at the El Toro site compared to an increase of 150,723 ADT for the Proposed Project over existing conditions. The alternative would generate 152,967 ADT less than the CRP. At JWA, this alternative would generate 1,426 ADT more than existing conditions. For a comparison of peak hour trip generation, see Table 4.3-8. In summary, this alternative would substantially reduce the number of vehicle trips generated at the El Toro site compared to the Proposed Project. However, after mitigation measures are applied, the Proposed Project and this alternative would have no significant adverse impacts.

Table 8.5-1
Trip Generation Summary – Alternative C

Project Component	AM Peak Hour			PM Peak Hour			ADT	Existing ADT
	In	Out	Total	In	Out	Total		
Former MCAS El Toro Site								
OCX Commercial Air Terminal	2,771	1,847	4,618	2,786	2,747	5,533	91,751	
OCX Air Cargo Handling Facility	565	707	1,272	790	513	1,303	17,503	
Nonaviation Revenue Support Land Uses	3,692	728	4,420	989	3,573	4,562	43,019	
Sub-Total (El Toro Site)	7,028	3,282	10,310	4,565	6,833	11,398	152,273	25,400
JWA	1,468	982	2,450	1,930	1,931	3,861	48,876	47,450
TOTAL	8,496	4,264	12,760	6,495	8,764	15,259	201,149	72,850

The on-site and site access circulation plans assumed for JWA and OCX in Alternative C are the same as those described in Section 4.3 (Transportation and Circulation) for the Proposed Project. Peak hour levels of service with and without Alternative C were compared in order to identify the locations on the existing plus committed circulation system that require project related improvements to mitigate the traffic impacts of Alternative C and other foreseeable growth or development. Table 8.5-2 compares, in summary, the Alternative C highway impacts to the existing conditions and existing conditions plus Proposed Project. As discussed in Section 4.3.6.5, there is minimal comparison between the existing conditions plus Proposed Project versus the Alternative C impacts due to highway improvements recently completed and the effects of committed highway improvements.

Table 8.5-2
Summary Comparison of Traffic Impacts for Alternative C to Existing Conditions and Existing Conditions Plus Project

Existing Conditions Deficient Highway Facilities	Existing Conditions Plus Proposed Project Impacts	Alternative C With Existing Plus Committed Facilities
Location	**Location**	**Location**
INTERSECTIONS	**IMPACTED INTERSECTION**	**IMPACTED INTERSECTIONS**
Newport (NB) & Del Mar	Bake & Portola	Main & Sunflower
El Toro & SR-73 NB Ramps	Sand Canyon & Trabuco	ETC East Leg NB & Irvine
Campus & N. Bristol	Bake & I-5/I-405 SB Ramps	Sand Canyon & Irvine
Jamboree (SB) & Walnut	Bake & Rockfield	Sand Canyon & Trabuco
Jamboree & I-405 NB Ramps	Jeffrey & Alton	Jeffrey & Irvine
Jeffrey & I-405 NB Ramps	Jeffrey & I-405 NB Ramps	Jeffrey & Trabuco
Red Hill & MacArthur	Jeffrey & I-405 SB Ramps	MacArthur & Main
Irvine Center & Lake Forest	Jeffrey & Walnut/I-5 SB	Red Hill & Main
Bake & Jeronimo	Sand Canyon & I-5 NB Ramps	Sand Canyon & I-5 NB Ramps
El Toro & Avd Carlota	Sand Canyon & I-5 SB Ramps	Sand Canyon & I-5 SB Ramps
La Paz & Cabot/I-5 SB	Irvine Center & Lake Forest	MacArthur & Campus
Los Alisos & Muirlands	Bake & Irvine/Trabuco	Alicia & Paseo Valencia
Alicia & Jeronimo	Bake & Toledo	El Toro & Rockfield
Alicia & Muirlands	Los Alisos & Muirlands	Alicia & Jeronimo
La Paz & Muirlands/I-5 NB	Alicia & Jeronimo	Red Hill & I-5 NB Ramps
Red Hill & Edinger	Newport & Old Irvine	
Red Hill & Sycamore		**IMPACTED ARTERIAL ROADS**
Red Hill & Walnut	**IMPACTED ARTERIAL ROADS**	Irvine (ETC East Leg to PA-2 West Access Road)
	Laguna Canyon (I-405 to SJHTC)	Irvine (Jeffrey to Sand Canyon)
ARTERIAL ROADWAYS	Laguna Canyon (south of El Toro)	Laguna Canyon (south of El Toro)
Portola (Sand Canyon to Foothill Toll Road)	Culver (Bryan to Trabuco)	
Laguna Canyon (I-405 to SR-73)		**IMPACTED FREEWAY/ TOLLWAY RAMPS**
Laguna Canyon (south of El Toro)	**IMPACTED FREEWAY RAMPS**	FTC (SR-241) at Portola East (NB Off-Ramp)
Culver (Bryan to Trabuco)	I-5 at Culver (SB Off-Ramp)	I-5 at Alton (NB Direct On-Ramp)
Michelson (Carlson to Harvard)	I-5 at Sand Canyon (NB On-Ramp)	I-5 at Jamboree (NB Off-Ramp)
	I-5 at Sand Canyon (SB Off-Ramp)	I-5 at La Paz (SB Off-Ramp)

Existing Conditions Deficient Highway Facilities	Existing Conditions Plus Proposed Project Impacts	Alternative C With Existing Plus Committed Facilities
FREEWAY RAMPS	I-405 at Sand Canyon (NB Direct On-Ramp)	I-5 at Red Hill (SB On-Ramp)
I-5 at Culver (SB Off-Ramp)		I-5 at Sand Canyon (SB Off-Ramp)
I-405 at Jamboree (SB Off-Ramp)	**IMPACTED FREEWAY SEGMENTS**	I-405 at Sand Canyon (NB Direct On-Ramp)
I-405 at MacArthur (SB On-Ramp)	I-5 (Jeffrey to north of SR-55)	
I-405 at MacArthur (NB On-Ramp)		**IMPACTED FREEWAY/ TOLLWAY SEGMENTS**
I-405 at MacArthur (NB Off-Ramp)		FTC (Alton to south of Portola East)
SR-55 at Dyer (SB On-Ramp)		I-5 (I-405 to north of SR-55)
SR-55 at Dyer (NB Off-Ramp)		I-405 (Jamboree to SR-55)
SR-55 at MacArthur (SB Direct On-Ramp)		
SR-55 at MacArthur (NB Direct On-Ramp)		
SR-55 at MacArthur (SB Off-Ramp)		
FREEWAY SEGMENTS		
I-5 (Culver to north of SR-55)		
I-5 (Alton to I-405)		
I-5 (El Toro to La Paz)		
I-405 (MacArthur to SR-133)		
SR-55 (I-5 to SR-73)		

Abbreviations: NB-northbound EB-eastbound
SB-southbound WB-westbound

Table 8.5-3 summarizes the intersection locations, arterial roads and freeway ramps which are significantly impacted by Alternative C at build out (refer to Section 10.0 in the Traffic Analysis Technical Report for detailed summaries of the Alternative C traffic volumes and level of service (LOS) and comparisons between existing plus committed conditions with and without Alternative C) for intersections and arterial roadways within the traffic analysis study area, and refer to Section 10.0 in the 2001 Traffic Analysis Technical Report Addendum for comparable information for freeway/tollway mainline segments and freeway/tollway ramps within the traffic analysis study area).

Table 8.5-3
Alternative C Impact Summary

Location	Jurisdiction	Location	Jurisdiction
IMPACTED INTERSECTIONS			
Main & Sunflower	Costa Mesa/ Santa Ana	Sand Canyon & I-5 NB Ramps	Irvine
ETC East Leg NB & Irvine	County	Sand Canyon & I-5 SB Ramps	Irvine
Sand Canyon & Irvine	County	MacArthur & Campus	Irvine/ Newport Beach
Sand Canyon & Trabuco	County	Alicia & Paseo Valencia	Laguna Hills
Jeffrey & Irvine	County/Irvine	El Toro & Rockfield	Lake Forest
Jeffrey & Trabuco	County/Irvine	Alicia & Jeronimo	Mission Viejo
MacArthur & Main	Irvine	Red Hill & I-5 NB Ramps	Tustin
Red Hill & Main	Irvine		
IMPACTED ARTERIAL ROADS			
Irvine (ETC East Leg to PA-2 West Access Rd)	County	Laguna Canyon (south of El Toro)	County/ Laguna Beach
Irvine (Jeffrey to Sand Canyon)	County		
IMPACTED FREEWAY/TOLLWAY SEGMENTS			
FTC (Alton to south of Portola East)	Caltrans/TCA	I-405 (Jamboree to SR-55)	Caltrans
I-5 (I-405 to north of SR-55)	Caltrans		
IMPACTED FREEWAY/TOLLWAY RAMPS			
I-5 at Alton (NB Direct On-Ramp)	Caltrans/Irvine	I-5 at La Paz (SB Off-Ramp)	Caltrans/ Laguna Hills
I-5 at Jamboree (NB Off-Ramp)	Caltrans/Irvine	FTC (SR-241) at Portola East (NB Off-Ramp)	Caltrans/TCA/ Lake Forest
I-5 at Sand Canyon (SB Off-Ramp)	Caltrans/Irvine	I-5 at Red Hill (SB On-Ramp)	Caltrans/Tustin
I-405 at Sand Canyon (NB Direct On-Ramp)	Caltrans/Irvine		

A comparison of Alternative C to the Proposed Project during the phasing years may also be made. As discussed in detail in Section 4.3.6.6 of this Draft EIR No. 573, as supplemented, under the Proposed Project phasing years, four intersection locations, two arterial roadway segments, one continuous freeway mainline segment and one freeway ramp would be significantly impacted under Phase 1 conditions (2005), five intersection locations, two arterial roadway segments, one continuous freeway mainline segment and one freeway ramp would be significantly impacted under Phase 2 conditions (2010), and nine intersection

locations, two arterial roadway segments, one continuous freeway mainline segment and two freeway ramps would be significantly impacted under Phase 3 conditions (2015). At Phase 4 build out, the Proposed Project would result in significant impacts not previously identified to four freeway/tollway mainline segments and four freeway/tollway ramps. See Draft Supplemental Analysis, Section 4.3.6.5. In each case, however, the identified impacts will be mitigated to a level below significant during the applicable phasing year (see Section 4.3.7.2, Table 4.3-20).

8.5.4.4 Noise

Compared to existing conditions, Alternative C would create a greater noise impact at JWA than currently exists because of the forecast increase in use of the airport under this alternative. Alternative C would increase the 60 and 65 CNEL John Wayne Airport contours somewhat but not to the extent where they exceed those of the 1985 Master Plan contours (EIR No. 508). Table 8.4-3 shows a land use comparisons between noise contours for 1998 military and year 2020 alternatives for El Toro, and Table 8.4-4 shows land use comparisons between noise contours for 1998 and year 2020 alternatives for John Wayne Airport. The number of residences inside the 60 to 65 dB CNEL contour at JWA is 1,023 compared to the Proposed Project level of 577 and the 1998 existing condition of 682. The number of residences inside the 65 dB CNEL contours for those three scenarios is 236, 79, and 134, respectively. Figure 8-5 illustrates noise contours for Alternative C at El Toro. This alternative would not avoid or substantially lessen the impacts of the project.

The Alternative C 65 CNEL contour line would include 9.2 square miles of land for OCX and 1.07 square miles of land for JWA. The 65 CNEL for the existing military aircraft operations at MCAS El Toro include 6.3 square miles of land and for JWA, the existing conditions include 0.75 square miles of land. Therefore, Alternative C would increase the area affected by the 65 CNEL surrounding the El Toro site by 2.9 square miles, compared to an increase of 3.5 square miles for the Proposed Project. At JWA, Alternative C would increase the area affected by the 65 CNEL by 0.32 square mile, compared to 0.05 square mile for the Proposed Project.

The Proposed Project would increase noise sensitive land uses within the OCX 65 CNEL by three churches and one private school compared to existing conditions. However, this alternative would avoid the impacts of the Proposed Project on the three churches, but the private school would still be affected by the 65 dB CNEL. In general, the 65 CNEL line for this alternative is located within the much larger (28.8 square mile) MCAS El Toro AICUZ 65 CNEL. However, the Alternative C 65 CNEL line does exceed the AICUZ 65 CNEL boundary north of the El Toro site and, therefore, Alternative C has the same impacts of the Proposed Project outside the AICUZ 65 CNEL line.

EIR No. 563 concluded that a civilian airport at MCAS El Toro would result in significantly greater number of total operations compared to historical military levels of use, both throughout the day and during the nighttime hours. Although the Proposed Project and

Alternative C would have significantly fewer operations than the Community Reuse Plan analyzed in EIR No. 563, the number of forecast civilian operations is still substantially greater at El Toro than the existing conditions level of military operations.

As discussed earlier, the CNEL calculation factors in the number of daily operations and assigns a "penalty weighting" to operations occurring during the nighttime hours (10 p.m. to 7 a.m.). However, the substantial increase in the number of operation, particularly during nighttime hours, may be considered a significant impact of Alternative C independent of the CNEL computation.

The noise levels identified for the Proposed Project as well as Alternative C will be considered an annoyance by some residents and nighttime events will cause some sleep disturbance regardless of the levels of significance prescribed by regulatory agencies. Therefore, a mitigation measure for sleep disturbance is proposed in Section 4.4. With this mitigation measure, Alternative C impacts are reduced but remain significant similar to the Proposed Project.

8.5.4.5 Air Quality

Alternative C would have greater impacts due to JWA operations, but would have fewer impacts at the El Toro site than under the Proposed Project. The local and regional impacts of this alternative would likely be similar to the Proposed Project. Construction impacts would also likely remain significant and unavoidable, similar to the air quality impacts identified for the Proposed Project. Air toxics impacts would also be similar to those under the Proposed Project. This alternative would not avoid or substantially lessen the air quality project impacts.

Short-Term (Construction) Impacts

Total on-site construction emissions under Alternative C would be similar to those of the Proposed Project. Construction of an airport to airport connector system under this alternative would add to the total project construction emissions, but may not increase the total peak daily emissions depending on the construction scheduling. Nevertheless, Alternative C would result in significant unavoidable short-term construction emissions impacts similar to the Proposed Project.

Operational Air Quality Impacts

Emissions Inventories

Direct air pollutant emissions associated with airport operations, including aircraft, GSE, energy consumption, and vehicular trips, are shown in Table 8.5-4 for this alternative. Air pollutant emissions under this project alternative are very similar to those under the

Proposed Project, due to similar total number of air travel passengers projected.[1] Although project site emissions at OCX are larger than the No Project/No Activity Alternative and the Nonaviation Plan Alternative, like the Proposed Project, this alternative would reduce regional VMT compared to No Project conditions because more of the demand would be serviced in Orange County. With lower regional VMT, this alternative would result in lower total regional emissions than the No Project or ETRPA Alternative. See Table 8.5-5.

Table 8.5-4
Phase 4 Alternative C – Project Direct Air Pollutant Emissions (Pounds/Day)

	CO	NOx	ROC[1]	SOx	PM_{10}
Aircraft	12.457.43	14,964.43	1,249.39	966.37	157.78
OCX	5,294.64	12,038.99	773.56	690.50	102.62
JWA	7,162.79	2,925.44	475.83	275.87	55.16
GSE/APU	19,532.10	1,732.62	568.00	67.81	73.02
OCX	10,975.79	1,096.30	342.46	50.98	47.01
JWA	8,556.31	636.32	225.54	17.73	26.01
Fuel Storage/Dispensing	--	--	83.46	--	--
OCX	--	--	72.50	--	--
JWA	--	--	10.96	--	--
Airport Roadways	661.56	141.48	213.35	8.67	8.99
OCX	540.79	126.57	209.14	8.02	7.76
JWA	120.77	14.91	4.21	0.65	1.23
Airport Parking	411.07	34.65	14.36	11.24	3.45
OCX	314.59	27.22	4.37	8.19	3.17
JWA	96.48	7.43	9.99	3.05	0.28
Energy Consumption	126.10	726.50	6.80	74.50	24.80
OCX	88.10	507.50	4.70	52.00	17.30
JWA	38.00	219.00	2.10	22.50	7.50
Vehicular Traffic[3]	17,145 ~~15,573~~	6,802 ~~6,088~~	1,392 ~~1,282~~	446 ~~440~~	3,470 ~~3,087~~
OCX[3]	12,826 ~~11,254~~	5,055 ~~4,341~~	1,052 ~~942~~	339 ~~333~~	2,576 ~~2,193~~
JWA	4,319	1,747	340	107	894
Total	50,333.26 ~~48,761~~	24,401.68 ~~21,955~~	3,527.36 ~~3,417~~	1,574.59 ~~1,569~~	3,738.04 ~~3,355~~

Source: CH2M Hill and LSA Associates, Inc., 2001

1 ROC emissions obtained by multiplying HC emissions reported by EDMS by a factor of 1.14

2 SO_X emissions are not reported by the URBEMIS7G model.

3 Revised calculation of average trip length. This revision does not impact any of the significance determinations made in connection with the project.

[1] For a more detailed emissions inventory discussion, please see the Proposed Project discussion in Chapter 2.0 of this supplemental analysis.

Table 8.5-5
Regionwide Emissions Inventory Alternative C Phase 4
(Pounds/Day Unless Noted)

		CO	NO_X	ROC	SO_X	PM_{10}
Aircraft	El Toro	5,294.64	12,038.99	773.56	690.50	102.62
	JWA	7,162.79	2,925.44	475.83	275.87	55.16
	Other Airports	66,392.26	72,068.29	9,570.54	5,484.71	788.94
	Total Regional	78,849.69	87,032.72	10,819.93	6,451.08	946.72
GSE	El Toro	10,975.79	1,096.30	342.46	50.08	47.01
	JWA	8,556.31	636.32	225.54	17.73	26.01
	Other Airports	91,932.50	9,231.57	2,720.06	597.93	338.51
	Total Regional	111,464.60	10,964.19	3,288.06	665.74	411.53
Energy	El Toro	88.10	507.50	4.70	52.00	17.30
	JWA	38.00	219.00	2.10	22.50	7.50
	Others	544.00	3,132.00	29.00	319.00	107.00
	Total Regional	670.10	3,858.50	35.80	393.50	131.80
Fuel	El Toro	--	--	72.50	--	--
	JWA	--	--	10.96	--	--
	Other Airports	--	--	481.74	--	--
	Total Regional	--	--	565.20	--	--
Airport Roadways	El Toro	540.79	126.57	209.14	8.02	7.76
	JWA	120.77	14.91	4.21	0.65	1.23
	Other Airports	3,170.27	643.34	145.87	68.30	52.60
	Total Regional	3,831.83	784.82	359.22	76.97	61.59
Airport Parking	El Toro	314.59	27.22	4.37	8.19	3.17
	JWA	96.48	7.43	9.99	3.05	0.28
	Other Airports	1,981.71	170.63	27.35	52.63	20.77
	Total Regional	2,392.78	205.28	41.71	63.87	24.22
Roads	El Toro[1]	12,826.00	5,055.00	1,052.00	339.00	2,576.00
		~~11,254.00~~	~~4,341.00~~	~~942.00~~	~~333.00~~	~~2,193.00~~
	JWA	4,319.00	1,747.00	340.00	107.00	894.00
	Others Airports[2]	2,755,094.00	489,631.00	70,441.00	48,560.00	6,344.00
		~~2,722,511.00~~	~~483,968.00~~	~~66,692.00~~	~~48,996.00~~	~~6,445.00~~
	Total Regional[2]	2,772,239.00	496,433.00	71,833.00	48,996.00	9,814.00
		~~2,738,084.00~~	~~490,056.00~~	~~67,974.00~~	~~49,436.00~~	~~9,532.00~~
TOTAL (pounds/day)		**2,969,448.00**	**599,278.51**	**86,942.92**	**56,647.16**	**11,389.86**
		~~**2,935,293.00**~~	~~**592,901.51**~~	~~**83,083.92**~~	~~**57,087.16**~~	~~**11,107.86**~~
Change from 2020 No Project (pounds/day)		(9,914.60)	(314.85)	(635.36)	(243.10)	(29.54)
		~~(35,723.60)~~	~~(5,097.99)~~	~~(3,545.73)~~	~~84.90~~	~~(320.11)~~
SCAQMD Threshold for Operation (pounds/day)		**550**	**55**	**55**	**150**	**150**

Source: LSA Associates, Inc., 2001.

1 Revised calculation of average trip length. This revision does not impact any of the significance determinations made in connection with the project.

2 Typographical correction.

Dispersion Analysis

The Proposed Project would result in several exceedances of the 1-hour standard for NO_2 at JWA and OCX and continue the exceedances of the State 24-hour standard for PM_{10} at OCX and JWA. Although no airport dispersion analysis was conducted for this project alternative, these local criteria pollutant hot spots found under the Proposed Project may also occur under this alternative.

At intersections in the vicinity of the project sites, CAL3QHC model was used to assess the CO concentrations. Tables 8.5-6 and 8.5-7 show that the 1-hour and 8-hour CO concentrations would be below the State and federal CO standards of 9 ppm/20 ppm and 9 ppm/35 ppm, respectively. Therefore, similar to the Proposed Project, no CO hot spots would occur from project related vehicular traffic trips under this alternative.

Toxic Air Contaminant Impacts

This alternative would avoid some of the impacts identified under the Proposed Project at MCAS El Toro but have greater impacts than under the Proposed Project at JWA. Therefore, air toxic impacts would likely be similar to those under the Proposed Project. Impacts would be reduced with the mitigation measures recommended for the project but are anticipated to remain significant after mitigation.

8.5.4.6 Topography

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the El Toro site than the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the project.

With the exception of the JWA/OCX connector, the facilities to be developed and constructed for this alternative are very similar to those of the Proposed Project. Since development of the MCAS El Toro site under Alternative C is similar to that described for the Proposed Project, no significant impacts related to topography would occur.

Operations and construction at JWA under Alternative C would be similar to the current usage, and would not entail expansion of the airport acreage although it would require some facilities improvements in previously developed or disturbed areas. Therefore, Alternative C would not raise potential impacts related to topography.

Table 8.5-6

Phase 4 Alternative C – Predicted One Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF ORANGE[13]												
345	Jamboree & Chapman	7.0	7.0	7.2	7.0	7.0	7.2	6.8	7.2	6.9	6.8	6.8	6.7
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	7.1	7.2	7.1	7.2	6.9	6.9	6.8	7.1	6.9	7.0	6.7	6.8
152	Main & Sunflower	7.0	7.1	6.7	7.1	6.6	7.0	6.6	6.5	6.7	6.8	7.1	6.9
90	Grand & Edinger	6.9	7.0	7.0	7.3	7.0	7.1	6.7	7.0	6.6	7.0	6.9	6.7
	CITY OF TUSTIN[13]												
93	Newport & Edinger	7.2	7.1	6.9	7.2	6.7	6.7	6.6	6.7	6.7	7.0	6.6	6.9
115	Von Karman & Barranca	7.0	7.1	7.1	6.9	6.6	7.1	6.7	6.9	6.6	6.6	6.7	6.9
95	Tustin Ranch & Edinger	7.1	7.0	6.9	7.1	6.7	6.9	6.6	6.7	6.9	7.0	6.6	7.0
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	5.9	6.0	5.6	5.6	5.3	5.5	5.3	5.5	5.5	5.4	5.5	5.8
156	Jamboree & Main	5.6	5.6	5.7	5.4	5.2	5.4	5.3	5.4	5.3	5.3	5.4	5.5
98	Culver & Irvine Center	5.6	5.6	5.7	5.7	5.3	5.4	5.4	5.5	5.3	5.5	5.4	5.5
134	Jamboree & Alton	5.6	5.6	5.7	5.6	5.1	5.5	5.2	5.4	5.4	5.4	5.4	5.7
175	Jamboree & Michelson	5.7	5.4	5.4	5.6	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.4
151	Red Hill & MacArthur	5.7	5.4	5.5	5.6	5.1	5.4	5.4	5.3	5.3	5.4	5.4	5.7
100	Jeffrey & Irvine Center	5.6	5.5	5.5	5.7	5.4	5.6	5.2	5.3	5.4	5.7	5.1	5.3
321	Access Rd. West & Irvine	5.2	5.2	5.2	5.4	5.1	5.1	5.1	5.2	4.9	4.9	5.1	5.2
153	Red Hill & Main	5.4	5.5	5.5	5.6	5.1	5.3	5.2	5.2	5.2	5.2	5.1	5.2
320	Perimeter & Irvine	5.3	5.3	5.3	5.1	5.0	4.9	5.0	5.2	4.8	4.8	5.1	5.1
	CITY OF LAGUNA BEACH[14]												
299	Moulton & El Toro	5.4	5.4	5.5	5.5	5.1	5.3	5.4	5.4	5.0	5.3	5.1	5.1
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	5.4	5.4	5.4	5.3	5.0	5.2	5.0	5.0	5.2	5.2	5.1	5.3
	CITY OF LAKE FOREST[14]												
271	El Toro & Rockfield	5.6	5.5	5.6	5.5	5.2	5.3	5.2	5.3	5.2	5.3	5.3	5.4

Note:
* - Concentrations are in parts per million (ppm)
1 - REC1 SW CORNER
2 - REC2 SE CORNER
3 - REC3 NE CORNER
4 - REC4 NW CORNER
5 - REC5 S. DEPARTURE - MID BLOCK
6 - REC6 N. APPROACH - MID BLOCK
7 - REC7 E. DEPARTURE - MID BLOCK
8 - REC8 W. APPROACH - MID BLOCK
9 - REC9 N. DEPARTURE - MID BLOCK
10 - REC10 S. APPROACH - MID BLOCK
11 - REC11 W. DEPARTURE - MID BLOCK
12 - REC12 E. APPROACH - MID BLOCK
13 - The ambient one-hour CO concentration, 6.10 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years 1996 to 2000, is added to the calculated one hour levels.
14 - The ambient one-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years 1996 to 2000, is added to the calculated one hour levels.

Table 8.5-7

Phase 4 Alternative C – Predicted Eight Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF ORANGE[13]												
345	Jamboree & Chapman	5.2	5.2	5.4	5.2	5.2	5.4	5.1	5.4	5.2	5.1	5.1	5.0
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	5.3	5.4	5.3	5.4	5.2	5.2	5.1	5.3	5.2	5.2	5.0	5.1
152	Main & Sunflower	5.2	5.3	5.0	5.3	5.0	5.2	5.0	4.9	5.0	5.1	5.3	5.2
90	Grand & Edinger	5.2	5.2	5.2	5.4	5.2	5.3	5.0	5.2	5.0	5.2	5.2	5.0
	CITY OF TUSTIN[13]												
93	Newport & Edinger	5.4	5.3	5.2	5.4	5.0	5.0	5.0	5.0	5.0	5.2	5.0	5.2
115	Von Karman & Barranca	5.2	5.3	5.3	5.2	5.0	5.3	5.0	5.2	5.0	5.0	5.0	5.2
95	Tustin Ranch & Edinger	5.3	5.2	5.2	5.3	5.0	5.2	5.0	5.0	5.2	5.2	5.0	5.2
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	3.8	3.9	3.6	3.6	3.4	3.5	3.4	3.5	3.5	3.5	3.5	3.7
156	Jamboree & Main	3.6	3.6	3.7	3.5	3.3	3.5	3.4	3.5	3.4	3.4	3.5	3.5
98	Culver & Irvine Center	3.6	3.6	3.7	3.7	3.4	3.5	3.5	3.5	3.4	3.5	3.5	3.5
134	Jamboree & Alton	3.6	3.6	3.7	3.6	3.3	3.5	3.3	3.5	3.5	3.5	3.5	3.7
175	Jamboree & Michelson	3.7	3.5	3.5	3.6	3.3	3.4	3.4	3.4	3.4	3.5	3.5	3.5
151	Red Hill & MacArthur	3.7	3.5	3.5	3.6	3.3	3.5	3.5	3.4	3.4	3.5	3.5	3.7
100	Jeffrey & Irvine Center	3.6	3.5	3.5	3.7	3.5	3.6	3.3	3.4	3.5	3.7	3.3	3.4
321	Access Rd. West & Irvine	3.3	3.3	3.3	3.5	3.3	3.3	3.3	3.3	3.1	3.1	3.3	3.3
153	Red Hill & Main	3.5	3.5	3.5	3.6	3.3	3.4	3.3	3.3	3.3	3.3	3.3	3.3
320	Perimeter & Irvine	3.4	3.4	3.4	3.3	3.2	3.1	3.2	3.3	3.0	3.0	3.3	3.3
	CITY OF LAGUNA BEACH[14]												
299	Moulton & El Toro	3.5	3.5	3.5	3.5	3.3	3.4	3.5	3.5	3.2	3.4	3.3	3.3
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	3.5	3.5	3.5	3.4	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.4
	CITY OF LAKE FOREST[14]												
271	El Toro & Rockfield	3.6	3.5	3.6	3.5	3.3	3.4	3.3	3.4	3.3	3.4	3.4	3.5

Note:
* - Concentrations are in parts per million (ppm)
1 - REC1 SW CORNER
2 - REC2 SE CORNER
3 - REC3 NE CORNER
4 - REC4 NW CORNER
5 - REC5 S. DEPARTURE - MID BLOCK
6 - REC6 N. APPROACH - MID BLOCK
7 - REC7 E. DEPARTURE - MID BLOCK
8 - REC8 W. APPROACH - MID BLOCK
9 - REC9 N. DEPARTURE - MID BLOCK
10 - REC10 S. APPROACH - MID BLOCK
11 - REC11 W. DEPARTURE - MID BLOCK
12 - REC12 E. APPROACH - MID BLOCK
13 - The ambient eight-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.
14 - The ambient eight-hour CO concentration, 2.9 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.

8.5.4.7 Soils, Geology and Seismicity

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the El Toro site than the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the project.

With the exception of the JWA/OCX connector, the physical area to be developed/redeveloped and constructed for Alternative C is very similar to that under the Proposed Project. Development on the MCAS El Toro site under Alternative C would be very much like that assumed for the Proposed Project, and would not significantly differ in its potential impacts related to soils or local geologic features. Alternative C also does not entail additional risk based on projected earthquake events beyond those discussed for the Proposed Project.

Operations and construction at JWA under Alternative C would be similar to current usage, and would not entail expansion of the airport acreage. Therefore, Alternative C would not raise potential impacts related to soils, geologic features or seismicity.

8.5.4.8 Hydrology and Water Quality

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the El Toro site than the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the project.

With the exception of the JWA/OCX connector, the facilities to be developed and constructed for Alternative C are very similar to those of the Proposed Project. As discussed in Section 4.8 (Hydrology and Water Quality), the Proposed Project will not result in significant adverse impacts related to drainage and surface water quality. Because most issues related to drainage at the MCAS El Toro site can be addressed adequately through proper design and engineering, it is anticipated that Alternative C could be developed for use as a civilian airport without significant adverse impacts related to hydrology. Similarly, as discussed in Section 4.8, operations can be conducted and controls implemented to minimize potential project-related adverse impacts to surface water quality. Consequently, development of this alternative is unlikely to result in significant adverse impacts to surface water quality.

The JWA/OCX connector will have additional impacts related to both runoff and water quality associated with the connector corridor and facility between the two airports. The drainage impacts can be mitigated using proper engineering design and construction practices; similar to those assumed for the roads and runways under the Proposed Project. Impacts to surface water quality from construction and operation of this connector can be

mitigated, using Best Management Practices (BMPs) and other permit requirements to minimize adverse impacts related to water quality, similar to the Proposed Project. Therefore this alternative will not result in significant adverse drainage and surface water impacts after mitigation.

No groundwater will be pumped from the MCAS El Toro site under this alternative so there will be no impacts to local groundwater levels or basin storage under this alternative. Groundwater quality impacts under this alternative will be the same as those discussed for the Proposed Project in Section 4.8, associated with the base closure plan remediation. Therefore, this alternative will result in no significant adverse impacts after mitigation related to groundwater. As with the Proposed Project, no hazardous waste remediation activities at the MCAS El Toro site are included as a component of this alternative.

In summary, the hydrology and water quality impacts of Alternative C will be slightly greater than the level of impacts under the Proposed Project because of the connector and the increased aviation activities at JWA.

8.5.4.9 Biological Resources

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the El Toro site than the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the project.

The aviation land use and airfield component for the MCAS El Toro site and the corresponding nonaviation component are very similar to the Proposed Project. Alternative C project components that require construction occupy nearly the same areas and closely parallel functions identical to those under the Proposed Project. The primary difference between Alternative C and the Proposed Project is the airport-to-airport connector. However, the physical improvements that comprise Alternative C have nearly identical biological resource impacts as to the Proposed Project.

The direct impacts of Alternative C also include the loss of approximately 139 acres of agricultural land, which is the same acreage loss estimated for the Proposed Project. This impact results in reduced foraging opportunities for raptor species similar to the Proposed Project. Other direct impacts (i.e. native plant communities, wildlife, wildlife dispersion corridors and special interest species) are also very similar. There are some slight differences in potential impacts as a result of noise exposure and aircraft overflights, since the aircraft operations differ at both the MCAS El Toro and JWA sites. However, noise and overflight characteristics are not substantively different between Alternative C and the Proposed Project and are not expected to result in significant adverse biological resource impacts at Siphon Ridge, the Habitat Reserve, the San Joaquin Hills or Upper Newport Bay.

The CNEL and SEL values at these locations are discussed in detail in the Biological Resources Technical Report.

8.5.4.10 Public Services and Utilities

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the El Toro site than the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the project.

The airport-to-airport light rail system that is unique to Alternative C would require some level of police security, emergency and medical service, and transit planning. Mitigation to implement the needed services would reduce any potential impacts of Alternative C on public services to below a level of significance. Alternative C is nearly identical to the Proposed Project in all other aspects so the provision of public services would not be impacted.

As described in Section 4.10 (Public Services and Utilities), the Proposed Project is not anticipated to result in significant adverse impacts related to utilities at El Toro site or JWA. It is anticipated that the utilities needs at El Toro and JWA under Alternative C could be served by existing or currently planned utilities, or extensions/expansions of existing utility infrastructure, without significant adverse impacts after mitigation, similar to the Proposed Project. Mitigation similar to that for the Proposed Project would reduce the potential adverse impacts of this alternative related to utilities infrastructure and services at El Toro and JWA to below a level of significance.

8.5.4.11 Natural Resources and Energy

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the El Toro site than the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance with the exception of the unavoidable adverse impact to loss of Prime Agricultural Lands. This alternative would not avoid or substantially lessen the impacts of the project.

The land use/airfield, nonaviation land use and associated infrastructure components for this alternative are virtually identical to those of the Proposed Project. The primary exception is the light-rail, airport-to-airport link planned under Alternative C.

As discussed in Section 4.11 (Natural Resources and Energy), the Proposed Project will not result in significant adverse impacts related to natural resources and energy at either JWA or the MCAS El Toro site, with the exception of unmitigatable significant impacts to agricultural resources on the MCAS El Toro site. There are no agricultural resources at

JWA. The incremental increase in regional energy consumption associated with operation of the JWA/OCX connector would be minor. Consequently, although energy consumption would be greater for this alternative than for the Proposed Project, no significant adverse impacts to energy resources will occur with the implementation of this alternative.

This alternative and the Proposed Project would have the same level of significant adverse unmitigatable impacts associated with loss of agricultural resources at the MCAS El Toro site. There are no agricultural resources existing at JWA; therefore, no impacts at JWA would result from this alternative.

8.5.4.12 Aesthetics, Light and Glare

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the MCAS El Toro site than the Proposed Project. With mitigation measures, the impacts of this alternative would be reduced to a level of insignificance at both JWA and MCAS El Toro sites. This alternative would not avoid or substantially lessen the project impacts.

The visual effect of Alternative C at the MCAS El Toro site would be very similar to that of the Proposed Project. The primary differences between Alternative C and the Proposed Project are the addition of a people mover (APM) passenger and baggage transport system between JWA and OCX.

The JWA/OCX connector would be an elevated fixed guideway system along SR-133 to the I-405 corridor, then along the I-405 Freeway right-of-way to MacArthur Boulevard and then to JWA. Examples of "people mover" systems are shown in Technical Report No. 6, Alternatives Definition Report (OCAA, November, 1999), Figures 1-4 through 1-6. Provision of an elevated guideway system for passenger and baggage connection between the two airport sites would impact the existing visual setting along the freeway corridor by creating an upper level structure that currently does not exist. The new structure would block views from the freeway corridor. The terminal points of this system at OCX and JWA would be visible from existing roads and the I-405 Freeway.

The views from the majority of the vantage points described in Section 4.12 would not change substantially from those of the Proposed Project. Vantage Point 8 would show the connection of the elevated APM system as it enters the terminal. Light and glare effects of this alternative would be similar to those of the Proposed Project, with some potential additional lighting from the APM facility along the freeway route and at the OCX terminal.

No significant runway improvements would be made at JWA, and the terminal would be expanded by lengthening both concourses and increasing the size of the RON area; no expansion of the existing boundaries of JWA would be required. The APM connecting JWA with OCX would enter the terminal area at JWA by way of MacArthur Boulevard and terminate in a station adjacent to the existing terminal. The addition of this passenger

system would be visible from existing roads and the I-405 Freeway adjacent to JWA. No scenic vistas or views would be blocked or altered by the addition of this structure, as the area is urbanized; the system would further intensify the urbanized effect of the visual setting. Compared to the Proposed Project, additional lighting and potential glare would be generated by the APM system as it connects with the JWA terminal.

In conclusion, the aesthetic impact of Alternative C would not be less than those of the Proposed Project.

8.5.4.13 Cultural Resources

Compared to existing conditions, this alternative would have the potential for greater impacts at JWA and slightly less impact at the MCAS El Toro site than the Proposed Project. With mitigation measures, the impacts of this alternative at either site would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the project impacts.

The effects of Alternative C on cultural resources at the MCAS El Toro site would be approximately the same as with the Proposed Project. As the cultural resources within the disturbance area (construction and operations) are not considered significant (SHPO concurrence to be included in the DOD's EIS), no significant impacts would be caused by this alternative, as with the Proposed Project.

Under Alternative C, improvements at JWA would be made within the boundaries of the existing airport site. For Alternative C, there would be no additional or new effects on cultural resources since there is no known archaeological, paleontological or historic resources on the already developed airport property.

8.5.4.14 Recreation

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the MCAS El Toro site than the Proposed Project. With the mitigation measures proposed for the Proposed Project and additional mitigation related to noise impacted recreation uses around JWA, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the project.

Alternative C would have approximately the same effects related to recreational resources in the MCAS El Toro area as the Proposed Project. The area of construction with Alternative C would be, for all practical purposes, the same as that of the Proposed Project. Therefore, no adjacent off-road trails would be physically impacted with Alternative C similar to the Proposed Project. Development at the MCAS El Toro site with Alternative C would have the same effect regarding consistency with County and City General Plan Recreational policies, goals and objectives, in that nonaviation land uses would be included on-site

similar to the Proposed Project. In addition, Alternative C would not differ from the project in that it would not exceed Thresholds of Significance ii and iii in Section 4.14.

Given the alignment of the JWA/OCX connector, impacts to existing recreational facilities would be limited to temporary disruption of use of on-street Class II bikeways adjacent to OCX and JWA during construction of the connector facility. The temporary impact to on-street bikeways would be less than significant with implementation of standard construction detour measures. No off-road trails or site specific recreational areas would be physically impacted by the airport to airport connector.

Compared to the Proposed Project, Alternative C would have substantially the same impact on recreational facilities and planned future facilities within the 65 CNEL contour. The overall noise impact on the use of area recreational facilities would be similar to the impacts of the Proposed Project.

The airport to airport connector would be located within existing freeway right of way and along existing highways, such that recreational facilities such as off-street trails and parks would not be affected. Alternative C would result in slightly enlarged noise contours around JWA; however, this increase would be minimal, and not anticipated to include any additional recreational facilities within the 65 CNEL noise contour compared to existing conditions.

8.5.4.15 Public Health and Safety

Compared to existing conditions the overall potential for accidents is greater with this alternative. The increase in accident potential is not deemed to be significant as an extraordinary risk is not created. This alternative would not avoid or substantially lessen project impacts.

Aviation Safety

Compared to the Proposed Project, there would be an increase of approximately 79,500 air carrier and air cargo operations and a decrease of approximately 42,000 general aviation operations at JWA. Under this scenario, the potential air carrier and air cargo accident risks at JWA would increase by approximately 117.8% to reflect the number of increasing aviation activity diverted from OCX to JWA and the potential accident risks for general aviation at JWA would decrease by 11.7% correspondingly. At OCX, there would be an estimated decrease of 101,500 air carrier and air cargo operations and an estimated decrease of 7,000 general aviation operations. Under this condition, the potential air carrier and air cargo accident risks at OCX would decrease by approximately 36.6% to reflect the fewer number of operations at OCX and the potential general aviation accident risks would decrease by 31.8% correspondingly. Compared to the Proposed Project relative to on-airport and off-airport fatal accidents per million operations, there would be no significant adverse impacts related to aviation safety at the MCAS El Toro site or at JWA.

Compared to the existing conditions, there would be an increase of approximately 56,992 air carrier and air cargo operations and a decrease of approximately 10,624 general aviation operations at JWA. Under this scenario, the potential air carrier and air cargo accident risks at JWA would increase by approximately 63.3% to reflect the number of increasing operations and the potential general aviation accident risks would slightly decrease by 3.2% correspondingly. Compared to the existing conditions, there would be no significant adverse impacts related to aviation safety at JWA.

8.5.4.16 Hazardous Materials and Hazardous Wastes

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the MCAS El Toro site than the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the Proposed Project.

Construction of facilities required under both the Proposed Project and Alternative C would require ground-disturbing activities. Under Alternative C, the impacts of greatest concern, when dealing with soil and groundwater contamination, are human exposure and the spread of contaminants in the environment. Since the preferred approach to the transit connector is an elevated system, no significant excavation is expected.

If PCE levels in the groundwater exceed regulatory levels at the time of construction, treatment would be required before the extracted water could be discharged.

The impacts of Alternative C related to hazardous materials and hazardous wastes are the same as under the Proposed Project.

8.5.4.17 Socioeconomics

Under this alternative, a total of 29,100 jobs would be created for the Airport System Master Plan, including almost 22,900 jobs at the MCAS El Toro site and 6,200 jobs at JWA in 2020, representing a net increase of 20,200 jobs at MCAS El Toro site, and 4,100 jobs at JWA, over existing 1998 conditions. The total number of jobs generated under this alternative is marginally lower than under the Proposed Project. However, there are differences in the distribution of jobs between the two alternatives. The number of jobs generated at the El Toro site under Alternative C will be lower than the number of jobs generated under the Proposed Project. However, a greater number of jobs would be generated at JWA under Alternative C than under the Proposed Project.

As with the Proposed Project, economic activity on the MCAS El Toro and JWA sites, as well as expenditures by visitors arriving by air through the two airports, would stimulate

additional off-site job growth. The number of off-site jobs stimulated by the airport system under Alternative C would be similar to the level under the Proposed Project.

Given the marginal difference in the total number of jobs generated under the Proposed Project and Alternative C, at 29,500 and 29,000 jobs respectively, the magnitude of impacts under Alternative C related to inducing substantial growth or concentration of employment, consistency with adopted regional forecasts, and increased demand for housing, including low and moderate income housing, would be similar to that of the Proposed Project. Therefore, the impacts of Alternative C will not be substantially different from the impacts of the Proposed Project. This alternative would not avoid or measurably lessen the impacts of the Proposed Project.

8.5.4.18 Risk of Upset

Compared to existing conditions, this alternative would have greater impacts at JWA and slightly less impact at the El Toro site than the Proposed Project. With the mitigation measures proposed for the Proposed Project, the impacts of this alternative would be reduced to a level of insignificance. This alternative would not avoid or substantially lessen the impacts of the Proposed Project.

As discussed in Section 4.18 (Risk of Upset), the Proposed Project would not result in significant adverse impacts to public health and safety resulting from project-related risk of upset conditions. The ultimate build out and phased development of this alternative will entail a level of operations similar to the Proposed Project, with similar levels of risk of upset potential associated with jet fuel storage and delivery requirements. Consequently, this alternative would not result in significant adverse impacts to public health and safety.

8.5.5 Feasibility

Technical Report 13, published March 18, 1999, provided a detailed analysis of the OCX-JWA connector system to evaluate the feasibility of Alternative C. In order to allow passengers to connect effectively between the short-haul flights at JWA and the longer haul flights at OCX, it would be necessary to build and operate a connector system between the two airports which would, in effect, allow the two facilities to function as a single airport. Without this connector, the market segmentation between the two airports is not feasible. Also, it is assumed that regulatory perimeter rules would define the roles of the two airports.

The costs of the connector were found to be unreasonable to the extent they would impose unnecessary burdens on the Orange County air traveling public and the airlines that serve them. The total costs per rider for a two-way connector trip were estimated to be between $103 and $110 (in 2020 dollars), assuming the connector would be implemented in Phase 4 when connector costs could be spread over a greater number of passengers. If the connector were to begin service in 2005, the cost per rider would be $248 (in 2005 dollars) for a two-way connector trip. Most of these connector costs would be absorbed ultimately by the

passenger in the form of higher ticket prices, and such an increase would be unacceptable to the airlines and passengers.

8.5.6 Conclusions

For the reasons noted above, Alternative C is infeasible. In addition to infeasibility, the impact analysis demonstrates that this alternative would:

- Meet the general project objectives except to optimize project cost/revenues.
- Increase aviation noise impacts at JWA and regional air quality impacts.
- Decrease aviation noise impacts near OCX compared to the Proposed Project, but impacts on sleep disturbance and recreation uses would remain significant and unavoidable.

Have land use, General Plan consistency, traffic, sleep disturbance, noise impacts on recreation uses, local and regional air quality impacts, construction air quality impacts, toxic air contaminant impacts, soils, geology, seismicity, hydrology, water quality, biological, public services, natural resource, energy, aesthetics, light and glare, cultural, recreational, public health, safety, hazardous materials/wastes, socioeconomics, and risk of upset impacts the same or similar to the project.

8.6 ALTERNATIVE F: JWA – SHORT- TO LIMITED LONG-HAUL WITH LIMITED GENERAL AVIATION; NO AVIATION REUSE AT FORMER MCAS EL TORO

This section presents the potential impacts of Alternative F as measured against the existing setting, as well as a comparison of the alternative's impacts to those of the Proposed Project at build out. In those instances in which the comparison of the alternative to the Proposed Project is materially affected by the phasing of the project, i.e., in those instances in which the impacts of the Proposed Project during the phasing years are materially different from those impacts at year 2020, a comparison of the alternative's impacts to those of the Proposed Project for the applicable phasing year is also provided.

This alternative was selected for analysis because it has the potential to avoid significant unavoidable aircraft noise and aircraft air quality emission impacts at the El Toro site while still feasibly attaining some of the objectives of the Proposed Project.

8.6.1 Aviation Uses

Under Alternative F, JWA would continue to provide short- and medium-haul domestic passenger service (with limited long-haul service), and there would be no aviation reuse at MCAS El Toro. JWA would also provide all-cargo service to short-, medium-, and limited long-haul destinations. JWA would not be constrained by existing limits on passengers or aircraft operations under this alternative. The airport would accommodate as much passenger demand as possible, estimated to be approximately 14 MAP in 2020, by expanding airport facilities to the extent possible within the existing airport property limits, approximately four percent (0.6 MAP) of which would be passengers with connecting flights. JWA is also forecast to annually handle approximately 180 thousand tons of domestic cargo. Alternative F would include 29 jet aircraft gates and 8 commuter aircraft gates, 19 Remain Overnight (RON) aircraft parking spaces, 13,820 vehicle parking spaces, and approximately 1.14 million square feet of terminal area. There would be minimal general aviation service at JWA, which would allow the airport to accommodate expanded commercial service. The general aviation runway would be closed. The main runway would be extended from 5,700 feet to 6,800 feet. General aviation activity would be displaced to private or municipal airports in Orange County or other counties. Figure 8-6 depicts Alternative F.

The environmental analysis of this alternative focuses on the impacts of the alternative at JWA. This alternative does not propose or include any physical changes at the El Toro site. However, if Alternative F were selected and implemented, it necessarily would result in the adoption of a nonaviation plan for the El Toro site, possibly one similar to the ETRPA Nonaviation Alternative. To understand the full impacts of Alternative F along with the

ETRPA Nonaviation Alternative, for example, the reader should review the impacts of both alternatives as addressed in this section.

8.6.2 Nonaviation Revenue Support Uses

Alternative F does not propose nonaviation uses at JWA and does not include any physical changes at the El Toro site. However, approval of Alternative F would lead to the adoption of a nonaviation plan for the El Toro site.

8.6.3 Attainment of Project Objectives

This alternative will not meet the general project objectives for reuse of MCAS El Toro. Alternative F will also not meet the general aviation, existing land use restrictions, and General Plan implementation objectives. It will have a major adverse impact on general aviation as the more than 500 general aviation aircraft now at JWA would have to be relocated. Alternative F also does not encourage growth of service opportunities, and it does not implement the two airport system. This alternative will partially further the other aviation related objectives.

8.6.4 Environmental Impacts of Alternative F

8.6.4.1 Land Use

This alternative would have no land use impacts at the El Toro site since all development would occur at JWA. However, this alternative would have greater adverse land use impacts at JWA than the Proposed Project. Based on this analysis, the alternative would not avoid or substantially lessen impacts compared to the project.

JWA under Alternative F will serve almost twice as many commercial air passengers as are currently served at JWA. This will require a runway extension and facilities expansion. The JWA site is surrounded by business parks, light industrial uses, and airport serving businesses, which are compatible with intensified airport use at JWA, therefore; the intensification of on-site land uses associated with Alternative F will not have significant impact on adjacent off-site land uses. However, as a result of a larger 65 CNEL noise contour, this alternative will have a significant effect on existing residential uses compared to no significant effect under the Proposed Project (see Section 8.4.4.4).

8.6.4.2 General Plan Consistency

This alternative would impact General Plan consistency issues at the El Toro site, although it would not raise General Plan issues with respect to JWA. Amendments to the County Noise Element and AELUP are not required for JWA because the new noise contours related to the increase in the aviation activity at JWA would be within the 1985 JWA Master Plan

contours. Although this alternative avoids aviation uses at the El Toro site, a nonaviation use at El Toro would require a County General Plan Amendment to replace Measure A policies designating the El Toro site for commercial airport development and amendments to reflect the absence of aviation noise and associated land use restrictions.

Under the Proposed Project, the Land Use, Noise, Public Services and Facilities, and Safety elements of the General Plan are proposed to be amended.

8.6.4.3 Transportation and Circulation

This alternative would have greater adverse traffic impacts at JWA than the Proposed Project. Additionally, since this alternative would meet less existing and future County aviation demand, the alternative would result in higher regional vehicle miles traveled (VMT) compared to the Proposed Project. This alternative would not avoid or lessen measurably the project impacts because JWA impacts would be increased and because the foreseeable development of the El Toro site with nonaviation uses would generate adverse impacts greater than the project due to higher regional VMTs.

The AM and PM peak hour and ADT traffic generated by JWA with build out of Alternative F is summarized in Table 8.6-1. Refer to Section 11.0 in the 1999 Traffic Analysis Technical Report for detailed information on the methodology applied to produce trip generation estimates for Alternative F.

Table 8.6-1
Trip Generation Summary – Alternative F

	AM Peak Hour			PM Peak Hour			ADT	Existing
Project Component	In	Out	Total	In	Out	Total		ADT
JWA	2,524	1,711	4,235	3,330	3,312	6,642	83,943	47,450

For the JWA site, no changes to the connections that currently provide access between JWA and the surrounding circulation system are envisioned under Alternative F. Primary access to the passenger terminal would be provided by the existing entryways from MacArthur Boulevard at the Michelson Drive and I-405 southbound ramp intersections and from SR-55 via the existing JWA direct connector ramps. The parking areas that replace the existing general aviation facilities in the southeast part of the airport would be accessed from Campus Drive via the existing Airport Way intersection. The parking areas that replace the existing general aviation facilities in the southwest part of the airport would be accessed via the existing general aviation entryway from Baker Street east of Red Hill Avenue.

Table 8.6-2 compares, in summary, the Alternative F highway impacts to the existing conditions and existing conditions plus Proposed Project. There is minimal comparison between the existing plus Proposed Project versus the Alternative F impacts due to the large differences between the scope of the project (two airports) and the alternative (one airport).

Table 8.6-2
Summary Comparison of Traffic Impacts for Alternative F to Existing Conditions and Existing Conditions Plus Project

Existing Conditions Deficient Highway Facilities	Existing Conditions Plus Proposed Project Impacts	Alternative F With Existing Plus Committed Facilities
Location	**Location**	**Location**
INTERSECTIONS	**IMPACTED INTERSECTION**	**IMPACTED INTERSECTIONS**
Newport (NB) & Del Mar	Bake & Portola	Red Hill & Baker
El Toro & SR-73 NB Ramps	Sand Canyon & Trabuco	SR-55 NB Frontage & Baker
Campus & N. Bristol	Bake & I-5/I-405 SB Ramps	SR-55 NB Frontage & Paularino
Jamboree (SB) & Walnut	Bake & Rockfield	Main & Sunflower
Jamboree & I-405 NB Ramps	Jeffrey & Alton	Campus/Irvine & South Bristol
Jeffrey & I-405 NB Ramps	Jeffrey & I-405 NB Ramps	Campus & North Bristol
Red Hill & MacArthur	Jeffrey & I-405 SB Ramps	Jamboree & Michelson
Irvine Center & Lake Forest	Jeffrey & Walnut/I-5 SB	MacArthur & Main
Bake & Jeronimo	Sand Canyon & I-5 NB Ramps	MacArthur & Michelson
El Toro & Avd Carlota	Sand Canyon & I-5 SB Ramps	Red Hill & MacArthur
La Paz & Cabot/I-5 SB	Irvine Center & Lake Forest	Red Hill & Main
Los Alisos & Muirlands	Bake & Irvine/Trabuco	Von Karman & Michelson
Alicia & Jeronimo	Bake & Toledo	MacArthur & Campus
Alicia & Muirlands	Los Alisos & Muirlands	
La Paz & Muirlands/I-5 NB	Alicia & Jeronimo	**IMPACTED FREEWAY RAMPS**
Red Hill & Edinger	Newport & Old Irvine	I-405 at MacArthur (NB Off-Ramp)
Red Hill & Sycamore		I-405 at MacArthur (SB On-Ramp)
Red Hill & Walnut	**IMPACTED ARTERIAL ROADS**	I-405 at Sand Canyon (NB Direct On-Ramp)
	Laguna Canyon (I-405 to SJHTC)	
ARTERIAL ROADWAYS	Laguna Canyon (south of El Toro)	**IMPACTED FREEWAY SEGMENTS**
Portola (Sand Canyon to Foothill Toll Road)	Culver (Bryan to Trabuco)	SR-55 (MacArthur to I-405)
Laguna Canyon (I-405 to SR-73)		SR-55 (south of SR-73)
Laguna Canyon (south of El Toro)	**IMPACTED FREEWAY RAMPS**	
Culver (Bryan to Trabuco)	I-5 at Culver (SB Off-Ramp)	
Michelson (Carlson to Harvard)	I-5 at Sand Canyon (NB On-Ramp)	
	I-5 at Sand Canyon (SB Off-Ramp)	
FREEWAY RAMPS	I-405 at Sand Canyon (NB Direct On-Ramp)	
I-5 at Culver (SB Off-Ramp)		
I-405 at Jamboree (SB Off-Ramp)	**IMPACTED FREEWAY SEGMENTS**	
I-405 at MacArthur (SB On-Ramp)	I-5 (Jeffrey to north of SR-55)	

Existing Conditions Deficient Highway Facilities	Existing Conditions Plus Proposed Project Impacts	Alternative F With Existing Plus Committed Facilities
I-405 at MacArthur (NB On-Ramp)		
I-405 at MacArthur (NB Off-Ramp)		
SR-55 at Dyer (SB On-Ramp)		
SR-55 at Dyer (NB Off-Ramp)		
SR-55 at MacArthur (SB Direct On-Ramp)		
SR-55 at MacArthur (NB Direct On-Ramp)		
SR-55 at MacArthur (SB Off-Ramp)		
FREEWAY SEGMENTS		
I-5 (Culver to north of SR-55)		
I-5 (Alton to I-405)		
I-5 (El Toro to La Paz)		
I-405 (MacArthur to SR-133)		
SR-55 (I-5 to SR-73)		

Abbreviations: NB-northbound EB-eastbound
SB-southbound WB-westbound

However, Table 8.6-2 indicates that under Alternative F traffic impacts will occur in the vicinity of JWA, while under the Proposed Project impacts will result primarily in the El Toro vicinity (refer to Section 11.0 in the 1999 Traffic Analysis Technical Report for detailed summaries of the Alternative F traffic volumes and LOS, as well as comparisons between existing plus committed conditions with and without Alternative F for intersections and arterial roadways within the traffic analysis study area, and refer to Section 11.0 in the 2001 Traffic Analysis Technical Report Addendum for comparable information for freeway/tollway mainline segments and freeway/tollway ramps within the traffic analysis study area).

A comparison of the impacts of Alternative F to the Proposed Project during the phasing years may also be made. As discussed in detail in Section 4.3.6.6 of this Draft EIR No. 573, as supplemented, under the Proposed Project phasing years, four intersection locations, two arterial roadway segments, one continuous freeway mainline segment and one freeway ramp would be significantly impacted under Phase 1 conditions (2005), five intersection locations, two arterial roadway segments, one continuous freeway mainline segment and one freeway ramp would be significantly impacted under Phase 2 conditions (2010), and nine intersection locations, two arterial roadway segments, one continuous freeway mainline segment and two freeway ramps would be significantly impacted under Phase 3 conditions (2015). At Phase 4 build out, the Proposed Project would result in significant impacts not previously identified to four freeway/tollway mainline segments and four freeway/tollway ramps. See Draft Supplemental Analysis Section 4.3.6.5. In each case, however, the identified impacts

will be mitigated to a level below significant during the applicable phasing year (see Section 4.3.7.2, Table 4.3-20).

In evaluating traffic impacts under Alternative F, the reader should keep in mind that approval of this alternative would lead to adoption of a nonaviation plan for the El Toro site such as the ETRPA Nonaviation Plan Alternative analyzed in Section 8.10.

8.6.4.4 Noise

Compared to existing conditions, this alternative would have no aviation noise impacts at the El Toro site, but would have greater adverse noise impacts at JWA than existing operations and the Proposed Project. Alternative F would increase the 60 and 65 CNEL contours at JWA from the 1998 contours somewhat, but not to the extent where they exceed those of the 1985 Master Plan contours. The number of individual commercial aircraft events will also increase substantially under this alternative. This alternative assumes that these operations would all be accommodated during existing operations hours, and no increase in the number of nighttime operations is expected under this alternative at JWA. However, the substantial increase in the number of operations may be considered a significant impact of Alternative F independent of the CNEL computation, as it was for El Toro under the Proposed Project and various other alternatives. The number of affected residences inside the 60 and 65 dB CNEL contours is greater under Alternative F than either existing conditions or the Proposed Project (Table 8.4-4).

In conclusion, this Alternative would avoid aircraft noise impacts at the El Toro site. Also see Figure 8-7, which depicts noise contours for Alternative F.

Adoption of this alternative would probably lead to approval of a nonaviation land use plan for the El Toro site, such as the ETRPA Nonaviation Alternative. For analysis of the noise impacts of a nonaviation land use plan, refer to Section 8.3.

8.6.4.5 Air Quality

As described below, Alternative F would result in: 1) significant unavoidable short-term construction impacts greater than under the Proposed Project; 2) significant regional impacts greater than the Proposed Project under all development scenarios due to Orange County generated demand being serviced at other regional airports outside of the County similar to the No Project/No Alternative; and 3) significant local air quality impacts at JWA greater than the Proposed Project resulting from aircraft operations at JWA. This alternative, however, would avoid the significant local air quality impacts of the Proposed Project resulting from aircraft emissions at OCX. This alternative may, however, result in the adoption of a nonaviation plan for the El Toro site that could have local CO hot spot impacts greater than the Proposed Project.

Short-Term (Construction) Impacts

Under this alternative, there would be a facility expansion and runway extension at JWA. Construction emissions would be greater than those of the Proposed Project at JWA. With respect to MCAS El Toro, this alternative may lead to the adoption of a nonaviation alternative similar to the ETRPA Nonaviation Alternative. Construction emission impacts at MCAS El Toro under this scenario could be greater than those of the Proposed Project due to higher density or intensity land uses being proposed. Therefore, this alternative would result in significant and unavoidable construction emissions that could be greater than the Proposed Project under all development scenarios and would not avoid or substantially lessen impacts compared to the Proposed Project.

Operational Air Quality Impacts

Emissions Inventories

Under this alternative, total annual passenger and total annual aircraft LTO operations at JWA would be greater than those of the Proposed Project. Alternative F's direct air pollutant emissions associated with airport operations, including aircraft, GSE, energy consumption, and vehicular trips, are shown below in Table 8.6-3.

When compared to the direct air quality emissions associated with the Proposed Project at build out, Alternative F would have greater CO, NO_X, and PM_{10} emissions at JWA but lower ROC emissions.

Air pollutant emissions, including airport operations at other airports in the region and VMT required for air travel passengers to get to these airports, are shown in Table 8.6-4 for this alternative. The regional air quality impacts under this alternative would be significant and would be greater than under the Proposed Project. These regional air quality impacts, however, would be less than under the No Project Alternative.

Table 8.6-3
Phase 4 Alternative F – Project Direct Air Pollutant Emissions (Pounds/Day)

	CO	NOx	ROC[1]	SOx	PM_{10}
Aircraft	2,073.72	5,146.14	205.17	349.98	65.49
OCX	--	--	--	--	--
JWA	2,073.72	5,146.14	205.17	349.98	65.49
GSE/APU	9,605.97	622.45	246.59	15.13	26.49
OCX	--	--	--	--	--
JWA	9,605.97	622.45	246.59	15.13	26.49
Fuel Storage/Dispensing	--	--	4.76	--	--
OCX	--	--	--	--	--
JWA	--	--	4.76	--	--
Airport Roadways	198.12	26.61	7.23	1.21	2.10
OCX	--	--	--	--	--
JWA	198.12	26.61	7.23	1.21	2.10
Airport Parking	154.99	12.02	16.02	4.90	0.47
OCX	--	--	--	--	--
JWA	154.99	12.02	16.02	4.90	0.47
Energy Consumption	52.80	303.60	2.80	31.10	10.40
OCX	--	--	--	--	--
JWA	52.80	303.60	2.80	31.10	10.40
Vehicular Traffic	7,417	3,000	583	185	1,535
OCX	--	--	--	--	--
JWA	7,417	3,000	583	185	1,535
Total	19,502	9,111	1,066	587	1,640

Source: CH2M Hill and LSA Associates, Inc., 2001

[1] ROC emissions obtained by multiplying HC emissions reported by EDMS by a factor of 1.14.

Table 8.6-4
Regionwide Emissions Inventory Alternative F Phase 4
(Pounds/Day Unless Noted)

		CO	NO_X	ROC	SO_X	PM_{10}
Aircraft	El Toro	--	--	--	--	--
	JWA	2,073.72	5,146.14	205.17	349.98	65.49
	Other Airports	78,722.06	80,454.54	10,959.04	6,126.26	887.12
	Total Regional	80,795.78	85,600.68	11,164.21	6,476.24	952.61
GSE	El Toro	--	--	--	--	--
	JWA	9,605.97	622.45	246.59	15.13	26.49
	Other Airports	102,215.15	10,264.12	3,024.28	664.81	376.36
	Total Regional	111,821.12	10,886.57	3,270.87	679.94	402.85
Energy	El Toro	--	--	--	--	--
	JWA	52.80	303.60	2.80	31.10	10.40
	Others	620.00	3,568.00	33.00	365.00	122.00
	Total Regional	672.80	3,871.60	35.80	396.10	132.40
Fuel	El Toro	--	--	--	--	--
	JWA	--	--	4.76	--	--
	Other Airports	--	--	535.63	--	--
	Total Regional	--	--	540.39	--	--
Airport Roadways	El Toro	--	--	--	--	--
	JWA	198.12	26.61	7.23	1.21	2.10
	Other Airports	3,524.86	715.29	162.18	43.04	58.49
	Total Regional	3,722.98	741.90	169.41	44.25	60.59
Airport Parking	El Toro	--	--	--	--	--
	JWA	154.99	12.02	16.02	4.90	0.47
	Other Airports	2,203.37	189.72	30.42	58.51	23.10
	Total Regional	2,358.36	201.74	46.44	63.41	23.57
Roads	El Toro	--	--	--	--	--
	JWA	7,417.00	3,000.00	583.00	185.00	1,535.00
	Others Airports[1]	2,768,580.00 ~~2,755,707.00~~	493,807.00 ~~491,238.00~~	71,290.00 ~~69,753.00~~	48,891.00 ~~49,058.00~~	8,292.00 ~~8,311.00~~
	Total Regional[1]	2,775,997.00 ~~2,763,124.00~~	496,807.00 ~~494,238.00~~	71,873.00 ~~70,336.00~~	49,058.00 ~~49,243.00~~	9,827.00 ~~9,846.00~~
TOTAL (pounds/day)		**2,975,368.04** **~~2,962,495.04~~**	**598,109.49** **~~595,540.49~~**	**87,100.12** **~~85,563.12~~**	**56,717.94** **~~56,902.94~~**	**11,399.02** **~~11,418.02~~**
Change from 2020 No Project (pounds/day)		(3,994.56) ~~(8,521.56)~~	(1,483.87) ~~(2,459.01)~~	(478.16) ~~(1,006.53)~~	(172.32) ~~(99.32)~~	(20.38) ~~(9.95)~~
SCAQMD Threshold for Operation (pounds/day)		**550**	**55**	**55**	**150**	**150**

Source: LSA Associates, Inc., 2001.

[1] Typographical correction.

Dispersion Modeling

At intersections in the vicinity of the project sites, the CAL3QHC model was used to assess the CO concentrations for Alternative F. Tables 8.6-5 and 8.6-6 show that the 1-hour and 8-hour CO concentrations would be below the State and federal CO standards. No CO hot spots would occur from vehicular traffic trips caused by this alternative.

Toxic Air Contaminant Impacts

This alternative would avoid impacts at the El Toro site but would increase impacts at the JWA site. Impacts would be reduced with the mitigation measures recommended for the project but are anticipated to remain significant after mitigation.

8.6.4.6 Topography

Under Alternative F the main runway at JWA (Runway 19R-1L) would be extended 1,100 feet to the north; however, no expansion of overall airport acreage is planned. Under Alternative F, terminal expansion would potentially require minor grading, but because the site is essentially flat, there would be no significant impact related to topography. Therefore, Alternative F would not be expected to result in adverse impacts related to topography at JWA, similar to the result found for the Proposed Project. As noted above, approval of this alternative would lead to the adoption of a nonaviation alternative for the El Toro site. Therefore, this alternative would not avoid or substantially lessen the impacts of the project.

8.6.4.7 Soils, Geology and Seismicity

This alternative would implement improvements at JWA within the existing developed area of the site. Therefore, no significant impacts related to soils, geology, or seismicity would occur, similar to the Proposed Project. Under Alternative F the main runway at JWA (Runway 19R-1L) would be extended 1,100 feet to the north; however, no expansion of overall airport acreage is planned. Therefore, Alternative F would not result in adverse impacts related to soils, geologic features or seismicity, similar to the Proposed Project. No aviation uses would be developed at the El Toro site. However, this alternative would lead to the adoption of a nonaviation plan for the El Toro site and would not, therefore, avoid or substantially lessen impacts of the project.

Table 8.6-5

Phase 4 Alternative F – Predicted One Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF ORANGE[13]												
345	Jamboree & Chapman	7.0	7.0	7.2	7.0	7.0	7.2	6.8	7.2	6.8	6.8	6.7	6.6
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	7.1	7.2	7.2	7.3	7.0	6.9	6.9	7.1	6.9	7.0	6.7	6.9
152	Main & Sunflower	7.0	7.1	6.8	7.1	6.7	7.0	6.6	6.5	6.7	6.8	7.1	6.9
90	Grand & Edinger	6.9	7.0	7.0	7.3	7.0	7.1	6.7	6.9	6.6	7.0	6.9	6.7
	CITY OF TUSTIN[13]												
93	Newport & Edinger	7.2	7.1	6.8	7.2	6.7	6.6	6.6	6.7	6.7	7.0	6.6	6.9
115	Von Karman & Barranca	7.0	7.1	7.1	6.9	6.6	7.1	6.7	6.9	6.6	6.5	6.7	7.0
95	Tustin Ranch & Edinger	7.2	7.0	6.9	7.1	6.7	6.9	6.6	6.7	6.9	6.9	6.6	7.0
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	5.9	6.0	5.6	5.7	5.3	5.5	5.3	5.5	5.5	5.4	5.5	5.9
156	Jamboree & Main	5.7	5.7	5.7	5.4	5.2	5.4	5.3	5.4	5.3	5.4	5.4	5.7
134	Jamboree & Alton	5.6	5.6	5.7	5.5	5.2	5.5	5.2	5.4	5.4	5.4	5.4	5.7
98	Culver & Irvine Center	5.6	5.6	5.7	5.7	5.2	5.4	5.4	5.5	5.3	5.5	5.4	5.5
175	Jamboree & Michelson	5.7	5.4	5.4	5.6	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.4
151	Red Hill & MacArthur	5.7	5.5	5.5	5.6	5.0	5.4	5.4	5.4	5.3	5.4	5.3	5.7
155	Von Karman & Main	5.5	5.7	5.8	5.5	5.3	5.7	5.2	5.3	5.3	5.4	5.3	5.5
153	Red Hill & Main	5.5	5.6	5.5	5.6	5.2	5.4	5.2	5.3	5.2	5.2	5.2	5.2
174	Von Karman & Michelson	5.4	5.4	5.3	5.2	5.0	5.1	5.1	5.0	5.0	5.2	5.0	5.3
186	MacArthur & Campus	5.7	5.4	5.4	5.5	5.0	5.1	5.1	5.2	5.2	5.2	5.1	5.3
177	Culver & Michelson	5.4	5.5	5.2	5.2	5.0	5.2	5.1	5.0	5.1	5.1	5.3	5.4
	CITY OF LAGUNA BEACH[14]												
299	Moulton & El Toro	5.4	5.4	5.4	5.5	5.1	5.3	5.2	5.4	5.0	5.3	5.1	5.1
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	5.4	5.4	5.4	5.3	5.0	5.3	5.0	5.1	5.2	5.2	5.1	5.3

Note: * - Concentrations are in parts per million (ppm)

1 - REC1 SW CORNER
2 - REC2 SE CORNER
3 - REC3 NE CORNER
4 - REC4 NW CORNER
5 - REC5 S. DEPARTURE - MID BLOCK
6 - REC6 N. APPROACH - MID BLOCK
7 - REC7 E. DEPARTURE - MID BLOCK
8 - REC8 W. APPROACH - MID BLOCK
9 - REC9 N. DEPARTURE - MID BLOCK
10 - REC10 S. APPROACH - MID BLOCK
11 - REC11 W. DEPARTURE - MID BLOCK
12 - REC12 E. APPROACH - MID BLOCK

13 - The ambient one-hour CO concentration, 6.1 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years 1996 to 2000, is added to the calculated one hour levels.

14 - The ambient one-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years 1996 to 2000, is added to the calculated one hour levels.

Table 8.6-6
Phase 4 Alternative F – Predicted Eight Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF ORANGE[13]												
345	Jamboree & Chapman	5.2	5.2	5.4	5.2	5.2	5.4	5.1	5.4	5.1	5.1	5.0	5.0
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	5.3	5.4	5.4	5.4	5.2	5.2	5.2	5.3	5.2	5.2	5.0	5.2
152	Main & Sunflower	5.2	5.3	5.1	5.3	5.0	5.2	5.0	4.9	5.0	5.1	5.3	5.2
90	Grand & Edinger	5.2	5.2	5.2	5.4	5.2	5.3	5.0	5.2	5.0	5.2	5.2	5.0
	CITY OF TUSTIN[13]												
93	Newport & Edinger	5.4	5.3	5.1	5.4	5.0	5.0	5.0	5.0	5.0	5.2	5.0	5.2
115	Von Karman & Barranca	5.2	5.3	5.3	5.2	5.0	5.3	5.0	5.2	5.0	4.9	5.0	5.2
95	Tustin Ranch & Edinger	5.4	5.2	5.2	5.3	5.0	5.2	5.0	5.0	5.2	5.2	5.0	5.2
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	3.8	3.9	3.6	3.7	3.4	3.5	3.4	3.5	3.5	3.5	3.5	3.8
156	Jamboree & Main	3.7	3.7	3.7	3.5	3.3	3.5	3.4	3.5	3.4	3.5	3.5	3.7
134	Jamboree & Alton	3.6	3.6	3.7	3.5	3.3	3.5	3.3	3.5	3.5	3.5	3.5	3.7
98	Culver & Irvine Center	3.6	3.6	3.7	3.7	3.3	3.5	3.5	3.5	3.4	3.5	3.5	3.5
175	Jamboree & Michelson	3.7	3.5	3.5	3.6	3.3	3.4	3.4	3.4	3.4	3.5	3.5	3.5
151	Red Hill & MacArthur	3.7	3.5	3.5	3.6	3.2	3.5	3.5	3.5	3.4	3.5	3.4	3.7
155	Von Karman & Main	3.5	3.7	3.7	3.5	3.4	3.7	3.3	3.4	3.4	3.5	3.4	3.5
153	Red Hill & Main	3.5	3.6	3.5	3.6	3.3	3.5	3.3	3.4	3.3	3.3	3.3	3.3
174	Von Karman & Michelson	3.5	3.5	3.4	3.3	3.2	3.3	3.3	3.2	3.2	3.3	3.2	3.4
186	MacArthur & Campus	3.7	3.5	3.5	3.5	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.4
177	Culver & Michelson	3.5	3.5	3.3	3.3	3.2	3.3	3.3	3.2	3.3	3.3	3.4	3.5
	CITY OF LAGUNA BEACH[14]												
299	Moulton & El Toro	3.5	3.5	3.5	3.5	3.3	3.4	3.3	3.5	3.2	3.4	3.3	3.3
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	3.5	3.5	3.5	3.4	3.2	3.4	3.2	3.3	3.3	3.3	3.3	3.4

Note:
* - Concentrations are in parts per million (ppm)
1 - REC1 SW CORNER
2 - REC2 SE CORNER
3 - REC3 NE CORNER
4 - REC4 NW CORNER
5 - REC5 S. DEPARTURE - MID BLOCK
6 - REC6 N. APPROACH - MID BLOCK
7 - REC7 E. DEPARTURE – MID BLOCK
8 - REC8 W. APPROACH – MID BLOCK
9 - REC9 N. DEPARTURE – MID BLOCK
10 – REC10 S. APPROACH – MID BLOCK
11 – REC11 W. DEPARTURE - MID BLOCK
12 – REC12 E. APPROACH – MID BLOCK
13 - The ambient eight-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.
14 - The ambient eight-hour CO concentration, 2.9 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.

8.6.4.8 Hydrology and Water Quality

Since all improvements would occur within the existing developed area of JWA, this alternative will incur hydrology and water quality impacts at JWA similar to the Proposed Project. No aviation uses would be developed at the El Toro site. However, this alternative would lead to adoption of a nonaviation plan for the El Toro site and would not, therefore, avoid or substantially lessen impacts of the project.

8.6.4.9 Biological Resources

Since the biological resource component at JWA is very limited, no direct or indirect impacts would be expected at JWA under Alternative F. For indirect impacts, the biological resource issues would not be substantially different from the Proposed Project. There would be some slight differences in impacts as a result of noise exposure and aircraft overflights since the aircraft operations differ at JWA. Noise and overflight characteristics are different between Alternative F and the Proposed Project, because the 60 CNEL contour is longer for Alternative F. However, this difference would not result in adverse impacts to biological resources in the Newport Back Bay. This alternative would not, therefore, avoid or substantially lessen the impacts of the project.

8.6.4.10 Public Services and Utilities

This alternative would have greater adverse impacts at JWA than the Proposed Project. Due to the plan to expand JWA in Alternative F, a need for increased fire and emergency medical, police services, and transit to the area would likely arise. Like the Proposed Project, mitigation measures prescribed in section 4.10 (Public Services and Utilities) would reduce staffing impacts to below a level of significance.

As described in Section 4.10 (Public Services and Utilities), the Proposed Project is not anticipated to result in significant adverse impacts related to utilities. Alternative F could also be served with utilities without significant adverse impacts after mitigation, similar to conditions under the Proposed Project. Depending on the specific land uses and utility services and infrastructure needs associated with Alternative F, a utility infrastructure different from that anticipated under the Proposed Project may be necessary to most effectively provide utility services under this alternative. Mitigation similar to that for the Proposed Project would reduce adverse impacts of this alternative related to utilities infrastructure and services to below a level of significance. This alternative would not avoid or substantially lessen the impacts of the project.

8.6.4.11 Natural Resources and Energy

This alternative would have greater adverse impacts at JWA than the Proposed Project. As discussed in Section 4.11 (Natural Resources and Energy), the Proposed Project would not result in significant adverse impacts related to natural resources, with the exception of significant adverse impacts to agricultural resources on the El Toro site, which could not be mitigated to below a level of significance. This alternative could reduce or avoid the project impacts on agricultural soils depending on the reuse alternative selected for the El Toro site. Section 8.3 analyzes the impacts of a nonaviation alternative for the El Toro site. There are no natural or agricultural resources at JWA.

Implementation of the Proposed Project also would result in a less than significant increase in regional energy consumption, associated primarily with construction and operation of a new international airport at the MCAS El Toro site, as compared to existing conditions. Under this alternative, the temporary increase in energy consumption associated with construction activities at MCAS El Toro would be replaced by a lower level of effort to expand JWA. From a regional standpoint, this alternative also would realize lower energy consumption levels associated with airport operations compared with the two-airport system of the Proposed Project. This energy savings would be offset somewhat, however, by increased highway travel, as the shortfall in forecasted demand for air travel service forces air travelers to drive to other airports within the region than would be required with the Proposed Project.

The ultimate build out and phased development of Alternative F would require more intense construction efforts, and entail a higher level of operations at JWA than the Proposed Project. Therefore, the impacts related to natural resources and energy would be greater to JWA under Alternative F because of the higher level of operations and higher energy consumption. In conclusion, this alternative would not avoid or substantially lessen impacts compared to the project.

8.6.4.12 Aesthetics, Light and Glare

This alternative would have greater impacts at JWA compared to the Proposed Project. With mitigation measures, the impacts of this alternative would be reduced but would remain significant. This alternative would lead to adoption of a nonaviation reuse plan for the El Toro site similar to the ETRPA Nonaviation Alternative. Refer to Section 8.3 for an analysis of this alternative.

Physical changes to the JWA site under Alternative F include extension of the main commercial runway (Runway 1L-19R) from 5,700 feet to 6,800 feet, which is the maximum extension allowable within the existing property boundary of the airport. The existing terminal concourse would be lengthened by several hundred feet on the north and south ends to provide additional aircraft gates. An additional terminal would be created to the south and connected to the existing terminal. Additional parking would be provided in all

remaining areas around the new terminal, and additional long-term parking would be provided in the general aviation areas on the southeast and southwest of the airport. Additional off-site parking would likely be necessary for this alternative. Expansion of access roadways to JWA would be necessary to accommodate the expanded passenger service under Alternative F. Expansions would potentially include the existing direct access from SR-55, Campus Drive, and MacArthur Boulevard at Michelson Drive.

Alternative F would increase the intensity of development on and around the JWA site, whereas the Proposed Project would make no substantial aesthetic changes to the site (a slight reduction of commercial service is proposed). The potential effects of light and glare under this alternative would be greater than those of the Proposed Project due to the increased services at the airport, especially evening (the nighttime curfew is assumed to continue for commercial flights) aircraft light and glare impacts on nearby residential areas (e.g. Santa Ana Heights). Ground level light and glare impacts would be reduced to a level of insignificance with County Standard Condition of Approval LG 1. In conclusion, this alternative would not avoid or substantially lessen impacts compared to the project at the JWA site.

8.6.4.13 Cultural Resources

Improvements at JWA under Alternative F would occur within the physical confines of the existing airport site. Like the Proposed Project, there would be no additional or new effects on cultural resources since there are no known archaeological, paleontological or historic resources on the already developed JWA airport property. Approval of this alternative would lead to adoption of a nonaviation plan for the El Toro site, which could potentially impact cultural resources more than the Proposed Project. Therefore, this alternative would not avoid or substantially lessen impacts compared to the project.

8.6.4.14 Recreation

Under Alternative F, noise impacts on the use of area recreational facilities in the JWA area would increase due to the enlarged 65 dB CNEL contours resulting from the increased commercial aviation and cargo services under this alternative. This alternative would avoid aviation noise impacts on recreation uses at the El Toro site but would increase aviation impacts from aircraft noise on the use of trails, parks, and other recreational facilities at the JWA site. Approval of this alternative would lead to adoption of a nonaviation plan for the El Toro site similar to the ETRPA Nonaviation Alternative. Refer to Section 8.3 for an analysis of the nonaviation plan impacts.

8.6.4.15 Public Health and Safety

Aviation Safety

Compared to the Proposed Project, under Alternative F there would be an increase of approximately 97,900 air carrier and air cargo operations and a decrease of approximately 352,400 general aviation operations at JWA. Under this scenario, the potential air carrier and air cargo accident risks at JWA would increase by approximately 145.0% to reflect the number of increasing aviation activity diverted from OCX to JWA. The potential accident risks for general aviation at JWA would decrease by 98.2%. Since there is no aviation activity at OCX under this alternative, there would be zero aviation risks. Compared to the Proposed Project relative to on-airport and off-airport fatal accidents per million operations, there would be no significant adverse impacts under this alternative related to aviation safety at the MCAS El Toro site or at JWA.

Compared to the existing conditions, there would be an increase of approximately 75,392 air carrier and air cargo operations and a decrease of approximately 321,024 general aviation operations at JWA. Under this scenario, the potential air carrier and air cargo accident risks at JWA would increase by approximately 83.8% to reflect the number of increasing operations and the potential general aviation accident risks would decrease by 98.0% correspondingly.

8.6.4.16 Hazardous Materials and Hazardous Wastes

Under this alternative, aviation facilities would be expanded to the maximum available capacity within the existing airport property limits at JWA. Hazardous waste handling practices would remain unchanged at JWA; however, an increase in hazardous materials consumption, particularly jet fuel, commensurate with the expansion of aviation facilities would result.

Like the Proposed Project, any use of hazardous materials and/or generation of hazardous waste at JWA under Alternative F would be regulated by applicable State law, federal law, and regulations pertaining to worker protection, hazardous materials storage and use, and hazardous waste generation and disposal. Implementation of these regulations will reduce potential impacts associated with the presence of these hazardous substances to below a level of significance. This alternative would lead to adoption of a nonaviation alternative at the El Toro site similar to the ETRPA Nonaviation Alternative. Refer to Section 8.3 for an analysis of nonaviation impacts.

8.6.4.17 Socioeconomics

Under this alternative, 8,500 jobs would be generated at JWA in 2020, which represents a net increase of 6,400 jobs at JWA over existing 1998 conditions. The number of jobs generated at JWA under this alternative would therefore be substantially greater, at approximately 5,200 jobs, than the number of jobs generated at JWA under the Proposed Project. Under this alternative, it is assumed that the MCAS El Toro site would develop with a range of nonaviation uses similar to those shown in the ETRPA Nonaviation Plan. This development would result in an estimated 50,700 jobs, 13,600 persons, and 5,900 housing units being located on the site in 2020. This level of activity is significantly higher than the level anticipated under the Proposed Project. In total, this alternative is projected to generate 59,000 jobs, 13,600 persons, and 5,900 housing units on the project site. This figure is significantly higher than the number of jobs, persons, and housing units expected under the Proposed Project.

As with the Proposed Project, economic activity on the JWA and MCAS El Toro sites, as well as expenditures by visitors arriving by air at JWA, would stimulate additional off-site job growth. Given the higher total number of on-site jobs for MCAS El Toro and JWA and the lower number of air passengers served by this alternative, the number of off-site jobs stimulated by the airport system could be similar to the Proposed Project.

Given the greater number of jobs generated under Alternative F, at 59,000 jobs versus 29,500 jobs under the Proposed Project, the magnitude of impacts related to induced growth or concentration of population and employment in the area, and increasing demand for housing, including low and moderate income housing, would be significantly higher than under the Proposed Project. However, the additional demand for housing created by project related employment would be partially offset by the housing to be developed on the MCAS El Toro site under this alternative. The employment, population, and housing projections under Alternative F would also be inconsistent with the adopted regional forecasts, as under the Proposed Project. In conclusion, this alternative would not avoid or substantially lessen Proposed Project impacts.

8.6.4.18 Risk of Upset

The ultimate build out and phased development of this alternative would entail no aviation reuse at the El Toro site and a market-driven increase in operations at JWA. General aviation operations would be eliminated and the main JWA runway would be extended to accommodate expanded commercial service.

This alternative would generate an increase in demand for jet fuel at JWA, as well as associated tank truck jet fuel transport operations since JWA (unlike OCX) is not served by pipelines. Additional requirements for fuel storage capacity on the JWA site also would be required. Under this circumstance, the risk of upset potential at JWA would be higher than under the Proposed Project. As discussed in Section 4.18 (Risk of Upset), the Proposed

Project would not result in significant adverse impacts to public health and safety resulting from project-related risk of upset conditions after mitigation. Therefore, this alternative would not avoid or substantially lessen impacts compared to the project at JWA, but would avoid aviation impacts at the El Toro site.

8.6.5 Feasibility

This alternative is feasible from a physical standpoint in that the existing main runway can be extended to serve the intended market role (short- and medium-haul and limited long-haul). The existing short general aviation runway can also be converted to a taxiway. The existing terminal building can be expanded to accommodate the projected demand. The present facilities can be expanded to meet projected demand in this alternative with some exceptions. Some vehicle parking would be located off-airport. In addition, facilities for in-flight catering would be located off-airport. No space would be available at the airport for aircraft maintenance.

From an operational standpoint, the single runway for JWA is capable of supporting a limited long-haul market role. However, it is not feasible for the runway in this alternative to accommodate operations by unlimited long-haul or full international service. General aviation operations can be accommodated on a very limited basis, however, the more than 500 JWA based general aviation aircraft must be relocated to other general aviation airports in the region. Furthermore, since the airport would be reduced to a single runway, it could be subject to periods of closure if the runway was under repair or otherwise unusable.

From a market perspective, the alternative allows some growth in passenger service beyond today's passenger levels and some growth in all-cargo service. It does not accommodate a substantial portion of Orange County's long-term air travel needs, including general aviation demand.

The costs for Alternative F, described in ASMP Technical Report 6, Volume 2, Appendix D are described as "order of magnitude" because they were prepared without the benefit of a master plan. They can be used, however, in a general comparison with the capital costs of the Proposed Project. The order of magnitude cost for Alternative F was estimated at $350 million. The net revenue for this alternative would be expected to be less than other aviation "build" alternatives due to the lower level of airport activity.

In conclusion, this alternative would be physically feasible, but would result in operational and development limitations, and would not meet the market objectives of the project.

8.6.6 Conclusions

Alternative F does not:

- Encourage growth of air service opportunities;
- Implement two airport system;
- Enhance GA opportunities for O.C. residents; and
- Take advantage of existing land use restrictions.

In comparison to the Proposed Project, Alternative F would result in significant regional air quality impacts and short-term construction impacts greater than the Proposed Project, greater local air quality impacts at JWA compared to the Proposed Project, and additional land use impacts, traffic impacts, noise impacts, public services and utilities impacts, natural resources and energy impacts, and aesthetics, light and glare impacts at JWA than under the Proposed Project.

This alternative would lead to adoption of a nonaviation alternative for the El Toro site similar to the ETRPA Nonaviation Alternative. Refer to Section 8.3 for conclusions regarding nonaviation uses.

8.7 ALTERNATIVE G: JWA – LIMITED INTERNATIONAL; NO AVIATION REUSE AT FORMER MCAS EL TORO

This section presents the potential impacts of Alternative G as measured against the existing setting, as well as a comparison of the alternative's impacts to those of the Proposed Project at build out. In those instances in which the comparison of the alternative to the Proposed Project is materially affected by the phasing of the project, i.e., in those instances in which the impacts of the Proposed Project during the phasing years are materially different from those impacts at year 2020, a comparison of the alternative's impacts to those of the Proposed Project for the applicable phasing year is also provided.

This alternative was selected for analysis because it has the potential to avoid aircraft noise and aircraft air quality emission impacts at the El Toro site while still feasibly attaining some of the objectives of the Proposed Project.

8.7.1 Aviation Uses

In Alternative G, the former MCAS El Toro is assumed to be a nonaviation use and JWA provides short, medium, and long-haul domestic and international air passenger service for an estimated 25.0 MAP, nine percent (2.2 MAP) of which are passengers with connecting flights. JWA is also forecast to annually handle approximately 40.0 thousand tons of international cargo and 1.23 million tons of domestic cargo. JWA would not be constrained by existing limits on passengers or aircraft operations under this alternative, and it is assumed that the airport would accommodate all of the demand in these categories projected for the airport beyond 2005 (estimated to be approximately 25 MAP in 2020 as described in the ASMP). To enable the airport to handle this demand, a major program for the acquisition of property would be required. Property to be acquired would include existing developed property north of JWA, extending the airport boundary west to SR-55, and a triangular shaped area to the east bound by Campus Drive, MacArthur Boulevard, Bristol Street, and Jamboree Road. New runway facilities, terminal facilities, parking, cargo facilities, and support facilities would be necessary. The closure of the general aviation runway, a 2,300-foot extension to the main runway, and a new 6,700-foot runway are envisioned in this alternative to accommodate the projected demand. Alternative G would include 52 jet aircraft gates, 11 commuter aircraft gates, 29 RON aircraft parking spaces, 21,500 vehicle parking spaces, and 1.84 million square feet of terminal area (Figure 8-8 depicts Alternative G). There would be no aviation reuse of MCAS El Toro.

Under this alternative, there would be no aviation reuse of MCAS El Toro. Accordingly, the environmental analysis of this alternative focuses on the impacts of the alternative at JWA. However, if Alternative G were selected and implemented, it would lead to adoption of a nonaviation plan for the El Toro site, possibly one similar to the ETRPA Nonaviation Alternative analyzed in Section 8.3. To understand the full impacts of Alternative G along

with the ETRPA Nonaviation Alternative, for example, the reader should review the impacts of both alternatives as addressed in this section.

8.7.2 Nonaviation Revenue Support Uses

Alternative G does not propose nonaviation uses at JWA and does not include physical changes at El Toro. However, as noted above, approval of Alternative G lead to the adoption of nonaviation uses at El Toro, possibly similar to the ETRPA Nonaviation Plan Alternative addressed in Section 8.3.

8.7.3 Attainment of Project Objectives

This alternative would not meet the general project objectives for reuse of MCAS El Toro. Alternative G will further most of the aviation related objectives, but not to the same extent as the Proposed Project. This alternative does not meet the general aviation objectives. It will have a major impact on general aviation as the more than 500 general aviation aircraft now at JWA would have to be relocated. This alternative will not meet the existing land use or General Plan implementation aviation objectives. This alternative does not encourage service opportunities such as international service, and this alternative does not implement the two airport system to avoid impacts of a single system.

8.7.4 Environmental Impacts of Alternative G

8.7.4.1 Land Use

This alternative would have no land use impacts at the MCAS El Toro site since all development would occur at JWA. This alternative would have significant adverse land use impacts at JWA.

Under Alternative G, JWA would be expanded to accommodate 25 MAP, requiring the acquisition of a considerable amount of developed land outside the current property boundary. The land acquisition would occur primarily to the west, extending the JWA boundary to SR 55, and to the southeast, adding a large triangular shaped area south of Campus Drive and MacArthur Boulevard.

There are residential land uses west of SR 55, the western boundary of JWA under Alternative G. Alternative G proposes 60 acres of parking at JWA along SR 55. Parking lot lighting has the potential to be a significant impact to the nearby residential uses, if not appropriately mitigated. The residences would not be directly impacted by the airport expansion, as the existing freeway separates the two uses.

JWA acquisition to the southeast under this alternative would include the addition of a triangular shaped area of land bound by Campus Drive, MacArthur Boulevard, and Bristol

Street. A small portion of this area would front on Jamboree Road. The existing land uses in this triangular area are primarily commercial, offices and light industrial. A large number of businesses, primarily commercial offices, would be displaced. Campus Drive and Birch Street would no longer extend through this area under Alternative G.

The existing JWA boundary along Campus Drive south of the MacArthur intersection places the existing airport facilities across the street right-of-way from business park uses, generally office and light industrial. The acquisition of the additional area east of Campus Drive would result in a similar situation, with business park uses across from the MacArthur Boulevard boundary of the acquisition area. Under this alternative, the SR 73/Bristol Street boundary of JWA is extended further south. The Bristol Street right-of-way forms a large barrier between the airport uses in the acquisition area and the Bristol Street commercial frontage and residential uses behind the frontage.

The extended runways needed under Alternative G will result in an extension of the ROFA area to the south and the tunneling of SR 73 under the ROFA. The significant transportation improvements needed in this area may result in the acquisition of additional properties along Bristol Street, and potentially impact the business frontage, the existing golf course, and possibly the residential areas behind the gold course. The extent of these impacts is not known at this time, but they are potentially significant.

The existing long-term parking to the north of JWA and the 405 freeway would remain. Some additional property acquisition for parking could be required. The primary potential off-site effects of the long-term parking use are nighttime lighting and vehicular noise, which do not conflict with the typical daytime use of nearby office buildings; therefore, the long-term parking use is compatible in the business park setting where it is located.

The land acquisition needed for the extension of the ROFA to the south and related transportation improvements under this alternative would involve the acquisition of property south of Bristol Street. In addition, two major JWA acquisition areas, west to SR 55 and southeast to SR 73, involve the displacement and relocation of a large number of existing businesses. The extent of the acquisition south of Bristol and the related impacts are not known at this time. The two major acquisitions to the west and southeast will disrupt businesses, but will not disrupt or divide residential communities, because there are no residences in these areas and, therefore, no established residential neighborhoods.

The new boundaries of JWA under this alternative are major streets or highways, including SR 55 on the west and SR 73/Bristol Street and MacArthur Boulevard on the east. These major streets create a physical separation between the JWA acquisition areas and adjacent uses. The adjacent uses across MacArthur Boulevard are primarily office and light industrial that would not be significantly affected by operational characteristics of the airport, such as stationary noise sources, periodic emissions of fumes or odors related to engine startups or testing, and lighting for nighttime activities. The land uses across SR73/Bristol are primarily community commercial uses with residential neighborhoods behind the Bristol Street frontage. The land use impacts associated with this alternative, such as stationary

noise, fumes, and lighting, may exceed the threshold of significance by creating substantial incompatibilities between this alternative's land uses and adjacent existing and planned land uses. These impacts may be mitigatable through such measures as screen walls, light fixture hoods and/or automatic timers, the careful placement of buildings and building openings, and other measures.

Overall, the land use impacts of Alternative G on the JWA area are greater than those of the Proposed Project. With respect to El Toro, as noted above, this alternative would lead to adoption of a nonaviation plan for the El Toro site. If for example, the ETRPA Nonaviation Alternative were adopted, this would result in land use impacts at the El Toro site greater than the Proposed Project. Therefore, this alternative would not avoid or substantially lessen Proposed Project land use impacts.

8.7.4.2 General Plan Consistency

Compared to existing conditions, this alternative would have significant general plan consistency impacts at the El Toro site and at JWA.

Alternative G involves significant changes to JWA that will result in new runways and expanded noise contours, among other changes. These modifications necessitate amendments to the AELUP and the Noise, Land Use, Safety, and Public Services and Facilities Elements of the County General Plan. The change in airport boundaries will require changes to the Land Use, Noise, and related general plan elements of adjacent jurisdictions, including the Cities of Costa Mesa, Newport Beach, Irvine, Santa Ana, and Tustin.

With respect to the El Toro site, Alternative G is inconsistent with the Measure A provisions of the County General Plan and would require more extensive amendments to adopted plans than the Proposed Project. Therefore, the impacts of Alternative G related to general plan consistency are greater than the impacts projected to occur under the Proposed Project. Adoption of the ETRPA Nonaviation Alternative for the El Toro site also would be inconsistent with the County General Plan. Therefore, this alternative would not avoid or substantially lessen Proposed Project general plan consistency impacts.

8.7.4.3 Transportation and Circulation

Compared to existing conditions, this alternative would have significant adverse transportation and circulation impacts at JWA. This alternative would result in adoption of a nonaviation plan for the El Toro site likely similar to the ETRPA Nonaviation Alternative (Section 4.3), which would have significant unavoidable adverse impacts. Therefore, this Alternative would not avoid or substantially lessen project impacts.

The AM and PM peak hour and ADT traffic generated by JWA with build out of Alternative G is summarized in Table 8.7-1. Refer to Section 12.0 in the 1999 Traffic Analysis Technical Report for detailed information on the methodology applied to produce trip generation estimates for Alternative G.

Table 8.7-1
Trip Generation Summary - Alternative G

	AM Peak Hour			PM Peak Hour			ADT	Existing
Project Component	In	Out	Total	In	Out	Total		ADT
JWA	3,533	2,575	6,108	3,579	3,422	7,001	116,424	47,450

Table 8.7-2 compares, in summary, the Alternative G highway impacts to the existing conditions and existing conditions plus Proposed Project. There is minimal comparison between the existing plus project versus the Alternative G impacts due to the large differences between the scope of the project (two airports) and the alternative (one airport). In addition, Alternative G would require the removal of a large portion of the existing development surrounding JWA, along with the removal of existing trip generators.

In addition, a comparison of the impacts of Alternative G to the impacts of the Proposed Project during the phasing years may also be made. As discussed in detail in Section 4.3.6.6 of this ~~Draft~~ EIR No. 573~~, as supplemented,~~ under the Proposed Project phasing years, four intersection locations, two arterial roadway segments, one continuous freeway mainline segment and one freeway ramp would be significantly impacted under Phase 1 conditions (2005), five intersection locations, two arterial roadway segments, one continuous freeway mainline segment and one freeway ramp would be significantly impacted under Phase 2 conditions (2010), and nine intersection locations, two arterial roadway segments, one continuous freeway mainline segment and two freeway ramps would be significantly impacted under Phase 3 conditions (2015). At Phase 4 build out, the Proposed Project would result in significant impacts not previously identified to four freeway/tollway mainline segments and four freeway/tollway ramps. See Draft Supplemental Analysis, Section 4.3.6.5. In each case, however, the identified impacts will be mitigated to a level below significant during the applicable phasing year (see Section 4.3.7.2, Table 4.3-20).

Table 8.7-2
Summary Comparison of Traffic Impacts for Alternative G to Existing Conditions and Existing Conditions Plus Project

Existing Conditions Deficient Highway Facilities	Existing Conditions Plus Proposed Project Impacts	Alternative G With Existing Plus Committed Facilities
Location	**Location**	**Location**
INTERSECTIONS	**IMPACTED INTERSECTION**	**IMPACTED INTERSECTIONS**
Newport (NB) & Del Mar	Bake & Portola	Red Hill & Main
El Toro & SR-73 NB Ramps	Sand Canyon & Trabuco	MacArthur & Jamboree
Campus & N. Bristol	Bake & I-5/I-405 SB Ramps	MacArthur & Von Karman
Jamboree (SB) & Walnut	Bake & Rockfield	
Jamboree & I-405 NB Ramps	Jeffrey & Alton	**IMPACTED FREEWAY RAMPS**
Jeffrey & I-405 NB Ramps	Jeffrey & I-405 NB Ramps	I-405 at Jamboree (SB Off-Ramp)
Red Hill & MacArthur	Jeffrey & I-405 SB Ramps	I-405 at MacArthur (NB On-Ramp)
Irvine Center & Lake Forest	Jeffrey & Walnut/I-5 SB	I-405 at MacArthur (NB Off-Ramp)
Bake & Jeronimo	Sand Canyon & I-5 NB Ramps	I-405 at Sand Canyon (NB Direct On-Ramp)
El Toro & Avd Carlota	Sand Canyon & I-5 SB Ramps	
La Paz & Cabot/I-5 SB	Irvine Center & Lake Forest	**IMPACTED FREEWAY SEGMENTS**
Los Alisos & Muirlands	Bake & Irvine/Trabuco	SR-55 (I-5 to south of SR-73)
Alicia & Jeronimo	Bake & Toledo	
Alicia & Muirlands	Los Alisos & Muirlands	
La Paz & Muirlands/I-5 NB	Alicia & Jeronimo	
Red Hill & Edinger	Newport & Old Irvine	
Red Hill & Sycamore		
Red Hill & Walnut	**IMPACTED ARTERIAL ROADS**	
	Laguna Canyon (I-405 to SJHTC)	
ARTERIAL ROADWAYS	Laguna Canyon (south of El Toro)	
Portola (Sand Canyon to Foothill Toll Road)	Culver (Bryan to Trabuco)	
Laguna Canyon (I-405 to SR-73)		
Laguna Canyon (south of El Toro)	**IMPACTED FREEWAY RAMPS**	
Culver (Bryan to Trabuco)	I-5 at Culver (SB Off-Ramp)	
Michelson (Carlson to Harvard)	I-5 at Sand Canyon (NB On-Ramp)	
	I-5 at Sand Canyon (SB Off-Ramp)	
FREEWAY RAMPS	I-405 at Sand Canyon (NB Direct On-Ramp)	
I-5 at Culver (SB Off-Ramp)		
I-405 at Jamboree (SB Off-Ramp)	**IMPACTED FREEWAY SEGMENTS**	
I-405 at MacArthur (SB On-Ramp)	I-5 (Jeffrey to north of SR-55)	
I-405 at MacArthur (NB On-Ramp)		
I-405 at MacArthur (NB Off-Ramp)		
SR-55 at Dyer (SB On-Ramp)		
SR-55 at Dyer (NB Off-Ramp)		
SR-55 at MacArthur (SB Direct On-Ramp)		
SR-55 at MacArthur (NB Direct On-Ramp)		
SR-55 at MacArthur (SB Off-Ramp)		

Existing Conditions Deficient Highway Facilities	Existing Conditions Plus Proposed Project Impacts	Alternative G With Existing Plus Committed Facilities
Location	**Location**	**Location**
FREEWAY SEGMENTS		
I-5 (Culver to north of SR-55)		
I-5 (Alton to I-405)		
I-5 (El Toro to La Paz)		
I-405 (MacArthur to SR-133)		
SR-55 (I-5 to SR-73)		

Abbreviations: NB-northbound EB-eastbound
SB-southbound WB-westbound

The acquisition of a substantial amount of developed property and roadway infrastructure around JWA (i.e., outside the existing JWA property boundary) in the Cities of Costa Mesa and Newport Beach would be required to accommodate the runway extension and airport facility requirements for expanding JWA under Alternative G. The elimination of existing and planned development in the Costa Mesa and Newport Beach areas that would need to be acquired would result in a reduction of approximately 75,000 average daily trips, 6,200 AM peak hour trips and 6,900 PM peak hour trips in the immediate vicinity of JWA under year 2020 conditions. The JWA access concept anticipated in the analysis of Alternative G takes into consideration the effects of the existing roadway infrastructure that would be acquired, as well as the impact that the runway extension required under Alternative G would have on the Bristol Street/SR73 corridor immediately south of JWA. The JWA site access/roadway reconfiguration plan for Alternative G is described as follows for three general areas surrounding JWA.

Northeast (I-405 Freeway/MacArthur Boulevard)

Under Alternative G, the JWA airport terminal area would be expanded along the west side of MacArthur Boulevard to a point south of the existing MacArthur Boulevard/Von Karman Avenue intersection. Such an expansion of the air terminal and other associated airport facilities would eliminate the existing City of Newport Beach land uses and roadway system in the area bounded by MacArthur Boulevard, Campus Drive, North Bristol Street, and Jamboree Road. Master Plan of Arterial Highway (MPAH) facilities that would be eliminated in this area include Campus Drive and Birch Street between MacArthur Boulevard and North Bristol Street. The existing direct connector ramps between SR-55 and the terminal would be retained as would the terminal access provided from MacArthur Boulevard at the Michelson Drive and I-405 southbound ramp intersections. In addition, terminal entryways would be provided from MacArthur Boulevard at the Campus Drive and Von Karman Avenue intersections.

South (Bristol Street/SR-73)

In addition to being affected by the JWA terminal expansion mentioned previously, the Bristol Street/SR-73 corridor south of JWA would be impacted by Runway Object Free Area (ROFA) requirements associated with the extended JWA runways needed under Alternative G. The ROFA area would extend across SR-73 to a point south of existing South Bristol Street. It is assumed that SR-73 would tunnel under the ROFA area in its existing alignment and that North Bristol Street and South Bristol Street would be reconstructed south of the ROFA as a standard two-way primary arterial road from Red Hill Avenue to Birch Street and that Irvine Avenue would intersect the realigned Bristol Street from the south but would not extend north of Bristol Street. North Bristol Street and South Bristol Street east of Birch Street are assumed to remain in place as they are currently constructed. The elimination of Campus Drive and the realignment of Bristol Street would also result in the elimination of the existing SR-73 on- and off-ramps northwest of Campus Drive. It is anticipated that a new northbound SR-73 on-ramp would be constructed from North Bristol Street south of

Birch Street but that a new southbound SR-73 off-ramp would not be constructed since an off-ramp to South Bristol Street currently exists south of Birch Street.

West (Red Hill Avenue/SR-55)

In Alternative G, the City of Costa Mesa area bounded by the current JWA property boundary and I-405, SR-55 and SR-73 would be acquired and utilized for air cargo operations, various airport support facilities and public parking areas. It is anticipated that Red Hill Avenue would be retained, although realigned, as a four-lane arterial through this area, as would the connections of Paularino Avenue and Baker Street between Red Hill Avenue and the existing SR-55 collector/distributor roadway system. Entryways to the public parking and air cargo areas would be provided from Red Hill Avenue at the Paularino Avenue and Baker Street intersections.

Approval of this alternative would lead to adoption of a nonaviation plan for the El Toro site such as the ETRPA Nonaviation Plan Alternative analyzed in Section 8.3. The traffic impact analysis for the ERTPA Nonaviation Plan Alternative concludes that traffic impacts cannot be mitigated to below a level of significance. Therefore, a combination of Alternative G and a nonaviation plan for the El Toro site would result in a total traffic impact that could not be mitigated to acceptable levels.

8.7.4.4 Noise

Compared to existing conditions, this alternative would have significant adverse noise impacts at JWA because of the increased use of this airport. Under Alternative G, a large increase in the land area affected by the 60 and 65 CNEL noise contours would occur in comparison both to the 1998 and the 1985 Master Plan airport noise contours. The total number of daily jet carrier operations (arrivals and departures) would be more than 900 per day under this alternative (see Table 8.1-1). Under this alternative, the forecast number of commercial aircraft operations could not be accommodated unless the existing nighttime noise restrictions at JWA were removed. As discussed earlier, the CNEL calculation factors in the number of daily operations and assigns a "penalty weighting" to operations occurring during the nighttime hours (10 p.m. to 7 a.m.). However, the substantial increase in the number of operations, particularly during nighttime hours, is considered a significant impact of Alternative G independent of the CNEL computation. See Table 8.4-4, which shows the land use comparison with noise contours for 1998 and year 2020 alternatives for JWA. Also see Figure 8-9, which depicts noise contours for Alternative G.

Adoption of this alternative would probably lead to approval of a nonaviation land use plan such as the ETRPA Nonaviation Alternative analyzed herein for the El Toro site. For analysis of the noise impacts of a nonaviation land use plan, refer to Section 8.3. In conclusion, compared to the Proposed Project, this alternative would avoid aircraft noise impacts at the El Toro site and surrounding areas. However, this alternative would generate

substantially greater impacts than the Proposed Project in the vicinity of JWA, including sleep disturbance.

8.7.4.5 Air Quality

Compared to existing physical conditions (1998), Alternatives would have significant construction, regional and local air quality impacts. This alternative would not avoid or substantially lessen the Proposed Project's impacts because: a) local impacts at JWA would be increased, and b) this alternative would lead to adoption of a nonaviation pan for the El Toro site, which could have local CO hot spot impacts not found under the Proposed Project and regional impacts that are greater than the Proposed Project in light of the increase in VMT caused by demand being met at other regional airports outside Orange County. See Section 4.2 for an analysis of air quality impacts of a potential nonaviation plan for the El Toro site.

Short-Term (Construction) Impacts

Under this alternative, new runway facilities, terminal facilities, parking, cargo facilities, and support facilities at JWA would be necessary. Construction emissions would be greater than those of the Proposed Project at JWA. Under this alternative, there would be no aviation reuse at MCAS El Toro. Therefore, construction emissions would likely be similar at this site to those associated with the Nonaviation Alternative. When the construction impacts for the Nonaviation Alternative are added to construction emissions at JWA, the total construction emissions could exceed the Proposed Project and would be significant and unavoidable.

Operational Air Quality Impacts

Emissions Inventors

Under this project alternative, JWA will serve up to 25 MAP at build out. Total annual passengers and total annual aircraft LTO operations are less than those of the Proposed Project. Direct air pollutant emissions associated with airport operations, including aircraft, GSE, energy consumption, and vehicular trips, are shown below in Table 8.7.3 for this alternative.

Table 8.7-3
2020 Alternative G – Project Direct Air Pollutant Emissions (pounds/day)

	CO	NOx	ROC[1]	SOx	PM_{10}
Aircraft	4,021.51	10,622.78	368.32	672.44	125.82
OCX	--	--	--	--	--
JWA	4,021.51	10,622.78	368.32	672.44	125.82
GSE/APU	17,588.19	1,203.18	462.52	27.61	52.78
OCX	--	--	--	--	--
JWA	17,588.19	1,203.18	462.52	27.61	52.78
Fuel Storage/Dispensing	--	--	27.15	--	--
OCX	--	--	--	--	--
JWA	--	--	27.15	--	--
Airport Roadways	344.51	68.41	15.64	4.07	4.48
OCX	--	--	--	--	--
JWA	344.51	68.41	15.64	4.07	4.48
Airport Parking	249.31	20.21	25.27	8.10	0.91
OCX	--	--	--	--	--
JWA	249.31	20.21	25.27	8.10	0.91
Energy Consumption	94.20	542.20	5.00	55.60	18.50
OCX	--	--	--	--	--
JWA	94.20	542.20	5.00	55.60	18.50
Vehicular Traffic	10,288	4,161	809	268	2,129
OCX	--	--	--	--	--
JWA	10,288	4,161	809	268	2,129
Total	32,586	16,608	1,703	1,036	2,331

Source: CH2M Hill and LSA Associates, Inc., 2001

[1] ROC emissions were obtained by multiplying HC emissions reported by EDMS by a factor of 1.14.

[2] SO_X emissions are not reported by the URBEMIS7G model.

Regional air pollutant emissions, including airport operations at other airports in the region and VMT required for air travel passengers to get to these airports, are shown in Table 4.7-2 for this alternative. Regional vehicle miles traveled for this alternative would be higher than existing conditions (1998) and the Proposed Project (Phase 4) because of the regional diversion issue. Therefore, this alternative would result in significant regional emissions that are greater than under the Proposed Project. These regional emissions, however, would be less than under the No Project Alternative. See Table 8.7-4.

Table 8.7-4
Regionwide Emissions Inventory Alternative G Phase 4
(Pounds/Day Unless Noted)

		CO	NO_X	ROC	SO_X	PM_{10}
Aircraft	El Toro	--	--	--	--	--
	JWA	4,021.51	10,622.78	368.32	672.44	125.82
	Other Airports	71,705.90	73,399.17	9,966.37	5,590.88	809.05
	Total Regional	75,727.41	84,021.95	10,334.69	6,263.32	934.87
GSE	El Toro	--	--	--	--	--
	JWA	17,588.19	1,203.18	462.52	27.61	52.78
	Other Airports	93,222.50	9,361.15	2,759.22	606.34	343.25
	Total Regional	110,810.69	10,564.33	3,221.74	633.95	396.03
Energy	El Toro	--	--	--	--	--
	JWA	94.20	542.20	5.00	55.60	18.50
	Others	579.00	3,331.00	31.00	341.00	114.00
	Total Regional	673.20	3,873.20	36.00	396.60	132.50
Fuel	El Toro	--	--	--	--	--
	JWA	--	--	27.15	--	--
	Other Airports	--	--	488.50	--	--
	Total Regional	--	--	515.65	--	--
Airport Roadways	El Toro	--	--	--	--	--
	JWA	344.51	68.41	15.64	4.07	4.48
	Other Airports	3,214.75	652.36	147.92	39.26	53.34
	Total Regional	3,559.26	720.77	163.56	43.33	57.82
Airport Parking	El Toro	--	--	--	--	--
	JWA	249.31	20.21	25.27	8.10	0.91
	Other Airports	3,408.00	293.44	47.04	90.52	35.72
	Total Regional	3,657.31	313.65	72.31	98.62	36.63
Roads	El Toro	--	--	--	--	--
	JWA	10,288.00	4,161.00	809.00	268.00	2,129.00
	Others Airports[1]	2,763,687.00	492,434.00	71,041.00	48,776.00	7,691.00
		~~2,745,343.00~~	~~489,026.00~~	~~68,947.00~~	~~49,025.00~~	~~7,761.00~~
	Total Regional[1]	2,773,975.00	496,595.00	71,850.00	49,024.00	9,820.00
		~~2,755,631.00~~	~~493,187.00~~	~~69,756.00~~	~~49,293.00~~	~~9,890.00~~
TOTAL (pounds/day)		**2,968,402.87**	**596,088.90**	**86,193.95**	**56,459.82**	**11,377.85**
		~~**290,058.87**~~	~~**592,680.00**~~	~~**84,099.95**~~	~~**56,728.82**~~	~~**11,447.85**~~
Change from 2020 No Project (pounds/day)		(10,959.73)	(3,504.46)	(1,384.33)	(430.44)	(41.55)
		~~(20,957.73)~~	~~(5,318.60)~~	~~(2,529.70)~~	~~(273.44)~~	~~19.88~~
SCAQMD Threshold for Operation (pounds/day)		**550**	**55**	**55**	**150**	**150**

Source: LSA Associates, Inc., 2001.

[1] Typographical correction.

The CAL3QHC model was used to assess the CO concentrations at intersections in the vicinity of the project sites. Tables 8.7-5 and 8.7-6 show that the 1-hour and 8-hour CO concentrations would be below the State and federal CO standards. Similar to the Proposed Project, no CO hot spots at JWA would occur from project related vehicular traffic trips under this alternative. Local CO hot spots, however would likely occur at the MCAS El Toro site similar to those under the Nonaviation Alternative.

Toxic Air Contaminant Impacts

This alternative would avoid toxic air contaminant aviation impacts at the El Toro site but would increase impacts at the JWA site. Toxic air contaminant impacts would also result from development of the MCAS El Toro site as nonaviation.

8.7.4.6 Topography

Under Alternative G, the acreage of JWA would be expanded to meet a substantially increased volume of passenger traffic. In order to accomplish this, additional land surrounding the airport would be purchased. Expansion of the existing JWA runway would result in significant impacts to topography due to grading in order to extend the runway south by approximately 1,000 feet and north by approximately 1,300 feet. In addition, this alternative requires the addition of a runway to the JWA site, which would also result in significant impacts related to topography due to the grading necessary to create the addition. Based on these identified impacts, this alternative would result in a greater level of impacts related to topography than that identified under the Proposed Project. Therefore, this alternative would not avoid or substantially lessen impacts compared to the project.

8.7.4.7 Soils, Geology and Seismicity

This alternative would have no significant impacts at the El Toro site but would have significant adverse impacts at JWA.

Under Alternative G, the acreage of JWA would be expanded to meet the increased volume of passenger traffic. Expansion of the existing JWA runway would result in significant impacts related to soils, geology, and seismicity because of the necessity for runway extensions south by approximately 1,000 feet and north by approximately 1,300 feet. Another aspect of this alternative is the development of an additional parallel runway. The soils in the northern part of the JWA site are classified as part of the Omni soil association and are potentially highly expansive. The northern expansion area would be into a flood prone and high liquefaction area. Although it is anticipated that construction design would include mitigation measures, the impacts related to soils, geology, and seismicity would be greater under this alternative than those identified under the Proposed Project.

Table 8.7-5

Phase 4 Alternative G – Predicted One Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT#	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF ORANGE[13]												
345	Jamboree & Chapman	7.0	7.0	7.2	7.0	7.0	7.2	6.8	7.2	6.8	6.8	6.7	6.6
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	7.0	7.1	7.1	7.2	6.8	6.8	6.6	7.0	6.9	7.0	6.7	6.8
152	Main & Sunflower	7.0	7.1	6.7	7.1	6.6	7.0	6.5	6.5	6.7	6.8	7.2	7.0
90	Grand & Edinger	7.0	7.0	7.0	7.2	6.9	7.0	6.7	7.1	6.6	6.9	6.8	6.8
	CITY OF TUSTIN[13]												
93	Newport & Edinger	7.2	7.1	6.9	7.2	6.7	6.7	6.6	6.7	6.7	7.0	6.6	6.9
95	Tustin Ranch & Edinger	7.2	7.0	6.9	7.1	6.7	6.9	6.6	6.7	6.9	6.9	6.6	7.0
115	Von Karman & Barranca	7.0	7.1	7.1	6.9	6.6	7.1	6.7	6.9	6.6	6.5	6.8	7.0
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	5.9	6.0	5.6	5.6	5.3	5.5	5.3	5.5	5.5	5.4	5.5	5.9
156	Jamboree & Main	5.6	5.5	5.7	5.4	5.2	5.4	5.3	5.4	5.3	5.3	5.4	5.5
134	Jamboree & Alton	5.6	5.6	5.7	5.7	5.2	5.5	5.2	5.3	5.4	5.4	5.4	5.7
98	Culver & Irvine Center	5.6	5.6	5.7	5.7	5.3	5.4	5.4	5.5	5.3	5.5	5.4	5.5
175	Jamboree & Michelson	5.6	5.4	5.4	5.6	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.4
151	Red Hill & MacArthur	5.7	5.6	5.5	5.6	5.1	5.4	5.3	5.3	5.3	5.3	5.3	5.7
100	Jeffrey & Irvine Center	5.6	5.5	5.5	5.6	5.3	5.5	5.2	5.2	5.4	5.7	5.1	5.3
153	Red Hill & Main	5.4	5.5	5.5	5.5	5.2	5.4	5.1	5.2	5.2	5.2	5.1	5.3
195	MacArthur & Jamboree	5.5	5.5	5.5	5.3	5.1	5.2	5.1	5.3	5.4	5.3	5.2	5.4
174	Von Karman & Michelson	5.4	5.4	5.3	5.2	5.0	5.1	5.2	5.1	5.1	5.2	4.9	5.3
177	Culver & Michelson	5.4	5.5	5.3	5.2	5.0	5.2	5.1	5.0	5.1	5.1	5.3	5.4
	CITY OF LAGUNA BEACH[14]												
299	Moulton & El Toro	5.4	5.4	5.5	5.5	5.1	5.3	5.4	5.4	5.0	5.3	5.1	5.1
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	5.4	5.4	5.4	5.3	5.0	5.3	5.0	5.1	5.2	5.2	5.1	5.3

Note: * - Concentrations are in parts per million (ppm)

1 - REC1 SW CORNER
2 - REC2 SE CORNER
3 - REC3 NE CORNER
4 - REC4 NW CORNER
5 - REC5 S. DEPARTURE - MID BLOCK
6 - REC6 N. APPROACH - MID BLOCK
7 - REC7 E. DEPARTURE - MID BLOCK
8 - REC8 W. APPROACH - MID BLOCK
9 - REC9 N. DEPARTURE - MID BLOCK
10 - REC10 S. APPROACH - MID BLOCK
11 - REC11 W. DEPARTURE - MID BLOCK
12 - REC12 E. APPROACH - MID BLOCK
13 - The ambient one-hour CO concentration, 6.1 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years 1996 to 2000, is added to the calculated one hour levels.
14 - The ambient one-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest one-hour CO concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years 1996 to 2000, is added to the calculated one hour levels.

Table 8.7-6

Phase 4 Alternative G – Predicted Eight Hour Ambient Carbon Monoxide Concentration for Intersections with the Highest Volume and Worst Level of Service (LOS)

INT*	INTERSECTING STREETS	REC1[1]	REC2[2]	REC3[3]	REC4[4]	REC5[5]	REC6[6]	REC7[7]	REC8[8]	REC9[9]	REC10[10]	REC11[11]	REC12[12]
	CITY OF ORANGE[13]												
345	Jamboree & Chapman	5.2	5.2	5.4	5.2	5.2	5.4	5.1	5.4	5.1	5.1	5.0	5.0
	CITY OF SANTA ANA[13]												
154	MacArthur & Main	5.2	5.3	5.3	5.4	5.1	5.1	5.0	5.2	5.2	5.2	5.0	5.1
152	Main & Sunflower	5.2	5.3	5.0	5.3	5.0	5.2	4.9	4.9	5.0	5.1	5.4	5.2
90	Grand & Edinger	5.2	5.2	5.2	5.4	5.2	5.2	5.0	5.3	5.0	5.2	5.1	5.1
	CITY OF TUSTIN[13]												
93	Newport & Edinger	5.4	5.3	5.2	5.4	5.0	5.0	5.0	5.0	5.0	5.2	5.0	5.2
95	Tustin Ranch & Edinger	5.4	5.2	5.2	5.3	5.0	5.2	5.0	5.0	5.2	5.2	5.0	5.2
115	Von Karman & Barranca	5.2	5.3	5.3	5.2	5.0	5.3	5.0	5.2	5.0	4.9	5.1	5.2
	CITY OF IRVINE[14]												
116	Jamboree & Barranca	3.8	3.9	3.6	3.6	3.4	3.5	3.4	3.5	3.5	3.5	3.5	3.8
156	Jamboree & Main	3.6	3.5	3.7	3.5	3.3	3.5	3.4	3.5	3.4	3.4	3.5	3.5
134	Jamboree & Alton	3.6	3.6	3.7	3.7	3.3	3.5	3.3	3.4	3.5	3.5	3.5	3.7
98	Culver & Irvine Center	3.6	3.6	3.7	3.7	3.4	3.5	3.5	3.5	3.4	3.5	3.5	3.5
175	Jamboree & Michelson	3.6	3.5	3.5	3.6	3.3	3.4	3.4	3.4	3.4	3.5	3.5	3.5
151	Red Hill & MacArthur	3.7	3.6	3.5	3.6	3.3	3.5	3.4	3.4	3.4	3.4	3.4	3.7
100	Jeffrey & Irvine Center	3.6	3.5	3.5	3.6	3.4	3.5	3.3	3.3	3.5	3.7	3.3	3.4
153	Red Hill & Main	3.5	3.5	3.5	3.5	3.3	3.5	3.3	3.3	3.3	3.3	3.3	3.4
195	MacArthur & Jamboree	3.5	3.5	3.5	3.4	3.3	3.3	3.3	3.4	3.5	3.4	3.3	3.5
174	Von Karman & Michelson	3.5	3.5	3.4	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.1	3.4
177	Culver & Michelson	3.5	3.5	3.4	3.3	3.2	3.3	3.3	3.2	3.3	3.3	3.4	3.5
	CITY OF LAGUNA BEACH[14]												
299	Moulton & El Toro	3.5	3.5	3.5	3.5	3.3	3.4	3.5	3.5	3.2	3.4	3.3	3.3
	CITY OF LAGUNA HILLS[14]												
280	El Toro & Avd. Carlota	3.5	3.5	3.5	3.4	3.2	3.4	3.2	3.3	3.3	3.3	3.3	3.4

Note:
* - Concentrations are in parts per million (ppm)
1 - REC1 SW CORNER
2 - REC2 SE CORNER
3 - REC3 NE CORNER
4 - REC4 NW CORNER
5 - REC5 S. DEPARTURE - MID BLOCK
6 - REC6 N. APPROACH - MID BLOCK
7 - REC7 E. DEPARTURE - MID BLOCK
8 - REC8 W. APPROACH - MID BLOCK
9 - REC9 N. DEPARTURE - MID BLOCK
10 - REC10 S. APPROACH - MID BLOCK
11 - REC11 W. DEPARTURE - MID BLOCK
12 - REC12 E. APPROACH - MID BLOCK
13 - The ambient eight-hour CO concentration, 4.6 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Central Orange County Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.
14 - The ambient eight-hour CO concentration, 2.9 ppm, obtained by multiplying a rollback factor to the second highest eight-hour concentration at the nearest air monitoring station, Saddleback Valley Air Monitoring Station between the years of 1996 to 2000, is added to the product of the calculated one-hour levels multiplied by a persistent factor of 0.7.

With regard to the MCAS El Toro site, the impacts related to soils, geology, and seismicity would be similar to those identified in Section 8.3 for the ETRPA Nonaviation Alternative. This alternative would not, therefore, avoid or substantially lessen impacts compared to the project.

8.7.4.8 Hydrology and Water Quality

This alternative would have significant adverse impacts at JWA. The hydrology and water quality impacts of Alternative G at JWA would be greater than the level of impacts under the Proposed Project due to the increased aviation activities. These impacts could be mitigated using proper engineering design and construction practices, similar to those described under the Proposed Project. With regard to the El Toro site, the impacts related to hydrology and water quality would be similar to those identified in Section 8.3 for the ETRPA Nonaviation Alternative. This alternative, therefore, would not avoid or substantially lessen impacts compared to the project.

8.7.4.9 Biological Resources

This alternative would have significant adverse impacts at JWA. At JWA there are substantial new facility improvements required to accommodate the increase in aviation operations. Compared to the Proposed Project, the physical improvements for Alternative G would impact additional non-native, ornamental vegetation but would not likely impact native plant communities. The most substantive change in the environment would be associated with the increase in aircraft activity and commensurate increases in noise exposure and overflights in Newport Back Bay. These increases do represent a substantial adverse change from the Proposed Project as well as from existing conditions. CNEL values in the Upper Newport Bay would range from in excess of 65 dB CNEL to over 70 dB CNEL. Depending upon the receptor location, this represents a CNEL increase of 5 to 10 dB. Alternative G ranges between 3 and 9 dB CNEL greater than for existing conditions, and between 4 and 10 dB CNEL greater than the Proposed Project conditions.

Due to the increase in noise exposure, adverse impacts to nesting behavior as a result of the CNEL increase are anticipated. Local listed species that reside in the Upper Newport Bay include California gnatcatcher, California least tern, Belding's savannah sparrow, California brown pelican, and clapper rail. However, the SEL impacts are not anticipated to change because of the similarity of the aircraft fleet mix under Alternative G and the Proposed Project. Therefore, no increase in the startle response is anticipated. Regardless, the increase in overflights, coupled with the higher average noise exposure could result in additional adverse impacts to biological productivity in the Upper Newport Bay. Regarding the El Toro site, this alternative would result in impacts similar to the ETRPA Nonaviation Alternative. In summary, this alternative would not avoid or substantially lessen impacts compared to the project.

8.7.4.10 Public Services and Utilities

This alternative would have significant adverse impacts at JWA. Alternative G would expand JWA beyond its current property limits and would substantially increase the MAP served, which would generate the need for increased fire and emergency medical, police services, and transit service in the area. Mitigation measures prescribed in Section 4.10 (Public Services and Utilities) would be applied, which would reduce the impacts of increased service needs. With demand for additional public services at both MCAS El Toro and JWA areas, Alternative G would have greater impacts to public service providers and facilities than the Proposed Project.

As described in Section 4.10 (Public Services and Utilities), the Proposed Project is not anticipated to result in significant adverse impacts related to utilities at the El Toro site or at JWA. It is anticipated that the utilities needs at El Toro under Alternative G would be similar to the anticipated needs under the ETRPA Nonaviation Alternative. Therefore, this alternative would not avoid or substantially lessen impacts compared to the project.

8.7.4.11 Natural Resources and Energy

As noted in Section 4.11 (Natural Resources and Energy), the Proposed Project would not result in significant adverse impacts to natural resources and energy, with the exception of impacts to agricultural resources at MCAS El Toro, which could not be mitigated to below a level of significance. This alternative could reduce or avoid the project impacts on agricultural soils depending on the reuse plan selected for the El Toro site. However, a nonaviation plan such as the ETRPA Nonaviation Alternative (Section 8.3) would have greater impacts than the project on agricultural soils. There are no natural or agricultural resources at JWA.

Implementation of the Proposed Project also would result in a less than significant increase in regional energy consumption, associated primarily with construction and operation of a new international airport at the MCAS El Toro site, as compared to existing conditions. Alternative G also would realize lower energy consumption levels associated with airport operations. This energy savings would be offset, however, by increased highway miles traveled, as the shortfall in forecasted demand for air travel service forces air travelers to drive to other airports within the region than would be required with the Proposed Project. In summary, this alternative would not avoid or substantially lessen impacts compared to the project.

8.7.4.12 Aesthetics, Light and Glare

This alternative would have greater impacts at JWA compared to the Proposed Project. Because significant expansion of the JWA site would be required for Alternative G, substantial alteration of the existing visual setting would take place under this alternative, whereas the Proposed Project would not substantially modify the existing visual appearance

of JWA. Visual impacts of this alternative could be reduced to a level of insignificance with adequate mitigation; however, the impact of aircraft light and glare on nearby residential uses, mainly Santa Ana Heights, would be unavoidably significant.

Alternative G would require property acquisition of the developed area east of the airport between Campus Drive, MacArthur Boulevard, Bristol Street (SR-73), and Jamboree Road. In addition, property to the west of the airport beyond Red Hill Avenue would be needed for a new runway and aviation support uses. At the JWA site, Alternative G would have a significantly greater visual impact than that of the Proposed Project, which would not alter the existing visual effect on the surrounding land uses. Since the existing setting is one of intensive urban development, the expansion of facilities under Alternative G would not have a substantial adverse effect on a scenic vista, or damage scenic resources such as rock outcroppings, trees, historic buildings, or a scenic highway; such scenic resources are not present in the immediate JWA area. The effects of light and/or glare at the JWA site under this alternative would be more adverse than the existing setting and the Proposed Project. With the County Standard Condition of Approval LG 1 (Appendix L), the effects of the increased ground-level light and glare would be reduced to below the level of significance. However, the added nighttime aircraft light and glare impacts would be significant after mitigation. In summary, this alternative would not avoid or substantially lessen impacts compared to the project.

8.7.4.13 Cultural Resources

This alternative would have impacts at JWA similar to the Proposed Project. The records search referenced in Section 4.13, Cultural Resources, included the expansion area between MacArthur Boulevard, Campus Drive, and Bristol Street that would be required for development of Alternative G at JWA. The majority of the expansion area southeast of JWA has not been surveyed for historic or prehistoric archaeological resources because the area is intensely developed with office and commercial buildings. The surveys that have been conducted were at locations at the periphery of the expansion area. Similar to Proposed Project conditions, no prehistoric or historic archaeological sites or properties of historic significance were found in the few surveys at the periphery of the area.

In summary, this alternative would not avoid or substantially lessen impacts compared to the project.

8.7.4.14 Recreation

This alternative would have greater impacts at JWA than those under the Proposed Project. Alternative G would expand the physical area of JWA and interrupt trail use and/or encroach into the golf courses south of JWA. On-street bikeways would be impacted by enlargement of JWA and required realignment of area streets such as Redhill Avenue. The extent of encroachment or interruption of use would be determined with a more precise level of planning for Alternative G. In addition, noise impacts on recreational use of trails and parks

in the area would increase from existing conditions and the Proposed Project. Significant noise related recreational impacts would occur under Alternative G since the 65 dB CNEL contour would be expanded to areas beyond the existing 1998 65 dB CNEL contour.

In summary, this alternative would not avoid or substantially lessen impacts compared to the project.

8.7.4.15 Public Health and Safety

Compared to existing conditions, the overall potential for accidents under this alternative is less than the Proposed Project. This alternative would avoid aviation accident impacts at the El Toro site and lessen the aviation accident potential at JWA due to a reduction in GA operations.

Aviation Safety

Compared to the Proposed Project, there would be an increase of approximately 234,700 air carrier and air cargo operations and a decrease of approximately 313,700 general aviation operations at JWA under this alternative. Under this scenario, the potential air carrier and air cargo accident risks at JWA would increase by approximately 347.7% to reflect the number of increasing aviation activity and the potential accident risks for general aviation at JWA would decrease by 87.4% correspondingly. Since there is no aviation activity at OCX, under this alternative, there would be zero aviation risks. Compared to the Proposed Project, relative to on-airport and off-airport fatal accidents per million operations, there would be no significant adverse impacts related to aviation safety at the MCAS El Toro site or at JWA.

Compared to the existing conditions, there would be an increase of approximately 212,192 air carrier and air cargo operations and a decrease of approximately 282,324 general aviation operations at JWA. Under this scenario, the potential air carrier and air cargo accident risks at JWA would increase by approximately 235.7% to reflect the number of increasing operations and the potential general aviation accident risks would decrease by 86.2% correspondingly. Compared to the existing conditions, there would be no significant adverse impacts related to aviation safety at JWA.

8.7.4.16 Hazardous Materials and Hazardous Wastes

Under this alternative, expansion of runway facilities at JWA would have a moderate potential to result in excavation of contaminated soils. Although it is not presently known if subsurface contamination exists within runway expansion areas, there is a possibility that petroleum hydrocarbon contamination may be encountered from leaking underground storage tank sites in the vicinity. However, construction activities would be required by state and federal law to ensure that any hazardous waste contamination encountered during construction is reported and handled to the satisfaction of the appropriate local agencies. Therefore, with the application of existing laws governing hazardous waste remediation, the

impacts of Alternative G related to soil and groundwater contamination would be anticipated to be less than significant. The impacts of Alternative G related to hazardous materials and hazardous wastes at JWA, however, would be greater than under the Proposed Project.

Any use of hazardous materials and/or generation of hazardous waste under Alternative G would be regulated by applicable State law, federal law, and regulations pertaining to worker protection, hazardous materials storage and use, and hazardous waste generation and disposal. Implementation of these regulations would reduce potential impacts associated with the presence of these hazardous substances to below a level of significance. In summary, this alternative would not avoid or substantially lessen impacts compared to the project.

8.7.4.17 Socioeconomics

Under this alternative, approximately 700 acres of surrounding land would have to be acquired to accommodate the projected aviation activities. Much of this land is currently developed with commercial/industrial uses, which would have to be displaced and relocated. Therefore, under the threshold of significance related to displacement of a large number of persons, this alternative would have a significant adverse impact that is not anticipated under the Proposed Project. No existing housing units would be displaced under this alternative.

Under this alternative, an estimated 17,500 jobs would be provided at JWA in 2020, representing a net increase of 15,400 jobs over existing 1998 conditions. The total number of jobs generated under this alternative would be substantially lower than under the Proposed Project. However, the number of jobs at JWA under Alternative G substantially exceeds the jobs projected at JWA under the Proposed Project. Under this alternative, it is assumed that the MCAS El Toro site would develop with a range of nonaviation uses similar to those shown in the ETRPA Nonaviation Plan. This development would result in an estimated 50,700 jobs, 13,600 persons, and 5,900 housing units being located on the site in 2020. This level of activity is significantly higher than the level anticipated under the Proposed Project. In total, this alternative supports 68,200 jobs, 13,600 persons, and 5,900 housing units on the project site. This figure is significantly higher than the number of jobs, persons, and housing units expected under the Proposed Project.

As with the Proposed Project, economic activity occurring at the JWA and El Toro sites, as well as expenditures by visitors arriving by air through JWA, would stimulate additional off-site job growth. Given the higher number of on-site jobs and fewer air passengers served by this alternative, the number of off-site jobs under Alternative G would be similar to the Proposed Project.

Given the greater number of jobs generated under Alternative G, at 68,200 jobs versus 29,500 jobs under the Proposed Project, the magnitude of impacts related to induced growth or concentration of population and employment, and increasing demand for housing, including low and moderate income housing, would be greater than under the Proposed

Project. The additional demand for housing created by project related employment would be partially, but not completely, offset by the housing to be developed on the El Toro site under this alternative.

In summary, this alternative would not avoid or substantially lessen impacts compared to the project.

8.7.4.18 Risk of Upset

The ultimate build out and phased development of this alternative would entail no aviation reuse at the El Toro site and a market-driven increase in operations at JWA. An increase in operations under this alternative would entail an approximate three-fold increase in ultimate commercial passenger service levels at JWA over the existing cap. This growth in passenger service would also generate a substantial increase in demand for jet fuel at JWA, as well as associated diesel-fueled tank truck jet fuel transport operations since JWA (unlike OCX) is not served by pipelines. Additional requirements for fuel storage capacity on the JWA also could be required. Under this circumstance, the risk of upset potential at JWA would be higher than that under the Proposed Project.

As discussed in Section 4.18 (Risk of Upset), the Proposed Project would not result in significant adverse impacts to public health and safety resulting from project related risk of upset conditions. Therefore, this alternative would not avoid or substantially lessen impacts at JWA, but would avoid aviation impacts at the El Toro site.

8.7.5 Feasibility

This alternative is feasible from a physical standpoint in that the existing main runway can be extended to serve an expanded market role (limited international). However, significant acquisition of developed property adjacent to the airport is required in order to provide space for additional airfield development and required terminal facilities.

From an operational standpoint, the primary runway for JWA is capable of supporting a limited international market role. However, it is not feasible for the runway in this alternative to serve operations by all commercial aircraft types. The runway length would not be capable of supporting full international service. This alternative provides a limited amount of space for general aviation. As such, general aviation operations can be served on a very limited basis, and the more than 500 JWA based aircraft must be relocated to other general aviation airports in the region.

From a market perspective, this alternative provides for substantial growth in passenger and cargo service beyond today's levels. It does not however meet all of the project market objectives.

From a fiscal perspective, the order of magnitude cost for Alternative G is estimated at $4.3 billion as described in ASMP Technical Report 6. These are identified as "order of magnitude" costs since they have been prepared without the benefit of a master plan ($4.3 billion is 54 percent higher than the Proposed Project's cost).

8.7.6 Conclusions

- This alternative would increase the adverse effects of noise compared to the Proposed Project, No Project, and all other alternatives. It is the only one of the alternatives evaluated with existing residences (446 homes) inside the highest impact 70 CNEL noise contour. It has 6,954 residences inside the 60 CNEL contour, 4,540 more than the Proposed Project.

- The feasibility of this alternative is questionable from a financial standpoint. The "order of magnitude" capital cost estimate is $4.3 billion, 54 percent higher than the Proposed Project. Compared to the Proposed Project, the reserve potential is much less due to 27 percent fewer passengers and fewer revenue generating airport compatible uses.

- This alternative fails to meet a major objective of satisfying, a substantial portion of Orange County's general aviation demand.

- The alternative does not fulfill the LRA's objective of implementing a two commercial airport system.

- The alternative does not take advantage of existing land use restrictions within the Policy Implementation Line (PIL).

- The alternative does not meet as much of the Orange County commercial aviation demand as the Proposed Project alternative. The runway length would not be capable of supporting full international service. Therefore, the alternative does not meet all of the project market objectives.

- This alternative would result in significant local and regional air quality impacts and air quality impacts related to construction greater than the Proposed Project. Toxic air contaminant health risk impacts would also be significant under this alternative.

8.8 ALTERNATIVE J: JWA – STATUS QUO AVIATION ROLES; OCX FULL INTERNATIONAL WITH WIDELY-SPACED RUNWAYS

This section presents the potential impacts of Alternative J as measured against the existing setting, as well as a comparison of the alternative's impacts to those of the Proposed Project at build out. In those instances in which the comparison of the alternative to the Proposed Project is materially affected by the phasing of the project, i.e., in those instances in which the impacts of the Proposed Project during the phasing years are materially different from those impacts at year 2020 build out, a comparison of the alternative's impacts to those of the Proposed Project for the applicable phasing year is also provided.

This alternative was selected for analysis because it has the potential to avoid the impacts of easterly departures (and the potential for westerly departures) while still obtaining most of the objectives of the project.

8.8.1 Aviation Uses

The airport roles and expected aviation activity levels for Alternative J would be the same as for the Proposed Project. Under this alternative, however, MCAS El Toro would be developed with two parallel north-south runways, with a centerline separation of 3,000 feet. This would provide greater separation of the arrival and departure streams of aircraft to increase the aircraft arrival rate under instrument weather conditions. It would also create a large "infield" area between the runways for the development of terminal or other aviation related facilities. Figure 8-10 depicts Alternative J.

8.8.2 Nonaviation Revenue Support Uses

The nonaviation land uses proposed under Alternative J are the same as assumed for the Proposed Project.

8.8.3 Attainment of Project Objectives

This alternative meets the general project objectives for reuse of the base except special planning opportunities and minimize environmental impacts. Alternative J also meets the aviation related objectives, with the exception of existing land use restrictions. However, the greater separation of the runways will subject large areas of existing and planned noise sensitive uses to aviation noise impacts exceeding 65 CNEL. For this reason, this Draft EIR proposes to reject this alternative.

8.8.4 Environmental Impacts of Alternative J

The airport role and MAP levels would be the same as with the Proposed Project, therefore most of the impacts would be identical or similar to those addressed for the Proposed Project, except that aviation noise impacts would be much more adverse than with the Proposed Project. Because this alternative would have the identical or similar impacts compared to the Proposed Project, the following analysis focuses on the topical areas where there are measurable differences between the alternative and the Proposed Project.

8.8.4.1 Noise

Compared to existing conditions, this alternative would have the same impacts at JWA as the project; however, the impacts surrounding the El Toro site would be significantly worse than the Proposed Project. This alternative would not, therefore, avoid or substantially lessen the project impacts.

The Alternative J 65 CNEL contour line would include 13.97 square miles of land for OCX and 1.49 square miles of land for JWA. The 65 CNEL for the existing military aircraft operations at MCAS El Toro include 8.0 square miles of land and, for JWA, the existing conditions include 1.49 square miles of land. Therefore, Alternative J would increase the area affected by the 65 CNEL surrounding the El Toro site by 5.97 miles compared to an increase of 5.7 square miles for the Proposed Project. At JWA, Alternative J would impact the same area affected by the 65 CNEL.

The Proposed Project would increase noise sensitive land uses by three churches and one private school compared to existing conditions at the El Toro site (see Table 8.2-3). This alternative would result in 525 residences in the vicinity of El Toro located in areas subject to aviation noise levels of 65 to 70 CNEL compared to zero residences in the vicinity of El Toro impacted by the 65 to 70 CNEL for the Proposed Project and existing conditions (see Table 8.2-4). This represents a significant adverse impact that could not be reduced through mitigation measures. This is due to the proposed addition of the westerly runway complex, which would result in aircraft approaches over existing homes south of the El Toro site. Departures from this new westerly runway complex would fly close to existing homes in the Northwood Pointe area of Irvine and over planned residences in north and northeast Irvine. Figure 8-11 illustrates the year 2020 dB CNEL contours for Alternative J.

As discussed earlier, the CNEL calculation factors in the number of daily operations and assigns a "penalty weighting" to operations occurring during the nighttime hours (10 p.m. to 7 a.m.). However, the substantial increase in the number of operations, particularly during nighttime hours, may be considered a significant impact of Alternative J independent of the CNEL computation for the same reasons identified for the Proposed Project and other relevant alternatives.

8.8.4.2 Biological Resources

Compared to existing conditions, this alternative would have no significant impact at JWA, but would have significant adverse impacts at the El Toro site similar to the Proposed Project except as noted below. The mitigation measures proposed for the Proposed Project would reduce any impacts of this alternative to a level of insignificance.

The elimination of the east-west runway would reduce aircraft noise exposure in the federal Habitat Reserve. For Alternative J, the 60, 65 and 70 CNEL contours do not overlay any of the Habitat Reserve. This would be a beneficial impact of Alternative J as the noise exposure from aircraft overflights is substantially reduced. However, the habitat in the preserve has included relatively high densities of gnatcatcher occupation. Even during the military aircraft utilization of the east-west runway, and the corresponding noise exposure in the preserve, there were relatively high densities of California gnatcatcher. Therefore, the reduction in noise exposure within the preserve boundary would not result in a corresponding increase in gnatcatcher density. The quality and extent of the habitat in the preserve contributes to the density of occupation, rather than indirect influences resulting from noise exposure.

The north-south runway, being separated by 3,000 feet, results in an increase in the width of the CNEL contours at Siphon Ridge to the north. The noise is essentially spread out over a wider geographic area, although the closure point of the CNEL contours (e.g. 65, 70) is not substantially changed from the Proposed Project. This condition is consistent for both the 70 CNEL contour as well as for the 65 CNEL contour. The closure point for the 65 CNEL contour extends further to the north well beyond the south facing slopes of Loma Ridge, into the Santiago Hills. The most significant biological resource at Siphon Ridge is coastal sage scrub habitat and the California gnatcatcher. However, since the proposed federal habitat area has one of the densest occupations by California gnatcatchers in Orange County in an area subject to decades of very high military aircraft noise, there appears to be no correlation between aircraft noise and adverse habitat impacts. Therefore, Alternative J would not have a significant adverse impact on the Siphon Ridge coastal sage scrub habitat area.

8.8.4.3 Public Health and Safety

Compared to the Proposed Project, the overall aviation activity levels and aircraft accident risks at JWA and the MCAS El Toro site would remain the same because the level of aircraft operations would be the same. The change in runway configuration would not significantly affect aviation accident risk.

8.8.5 Feasibility

This alternative requires significant land acquisition for runway construction at OCX and requires major modifications to SR133, the Eastern Transportation Corridor (including the construction of a bridge to allow a new parallel runway and associated taxiway to pass over SR133), and potentially modifications to Irvine Boulevard.

From an operational standpoint, the runway configuration at OCX does not allow departures to the east. This increases airspace interactions with JWA and other traffic to the north, and does not take full advantage of the existing Policy Implementation Line (PIL). This alternative would create new noise impact areas north and south of OCX outside the PIL.

From a market perspective, this alternative provides for substantial growth in passenger and cargo service beyond today's levels, and also accommodates Orange County's general aviation demand.

8.8.6 Conclusions

Conclusions regarding Alternative J are as follows:

- This alternative increases airspace intersections by directing more air traffic towards the JWA primary approach corridor, towards a VFR flyway between Corona and Los Alamitos (V-8-21), and towards airspace used by Ontario Airport departing aircraft. It fails to take advantage of less active airspace to the east of El Toro.

- This alternative requires significant land acquisition and requires significant major Modifications to SR 133, the Eastern Transportation Corridor, and potential modifications to Irvine Boulevard.

- This alternative does not take full advantage of existing land use restrictions inside the Policy Implementation Line (PIL) and creates new noise impacts areas north and south of OCX. It causes 5425 residences to be within the OCX 65 CNEL contour, and 3,411 residences to be within the OCX 60 CNEL contour.

8.9 ALTERNATIVE OCX AIRPORT RUNWAY LAYOUT (WILDLANDS RANCH ALTERNATIVE)

This section presents the potential impacts of the Wildlands Ranch Alternative as measured against the existing setting, as well as a comparison of the alternative's impacts to those of the Proposed Project at build out. In those instances in which the comparison of the alternative to the Proposed Project is materially affected by the phasing of the project, i.e., in those instances in which the impacts of the Proposed Project during the phasing years are materially different from those impacts at year 2020 build out, a comparison of the alternative's impacts to those of the Proposed Project for the applicable phasing year is also provided.

In April 1998, a proposed El Toro runway layout consisting of a "V" configuration was submitted by Mr. Charles E. Griffin to the Orange County Register. Throughout 1998, regular updates of the concept were distributed by Mr. Griffin, including submittals to the Orange County Board of Supervisors. On November 24, 1998, and December 1, 1998, Mr. Griffin submitted responses to the Notice of Preparation of Draft Environmental Impact Report No. 573. These included conceptual sketches of an alternative airport runway layout. On April 7, 1999, Mr. Griffin submitted his then latest iteration of the proposed alternative to the County of Orange. A review of this submittal was conducted as part of this EIR. Subsequently, a later concept was submitted to the County on October 5, 1999. This submittal contained significant modifications to the April 7 concept. This concept was also reviewed. The description of the alternative presented herein is based on the information contained in both the April 7 and October 5, 1999, submittals. Each submittal is addressed separately in this EIR subsection.

8.9.1 Aviation Uses

The following is a chronology of materials submitted by Mr. Griffin that have been received by the County of Orange El Toro Master Development Program and their aviation planning consultants.

(i) April 26, 1998 – Submitted to the Orange County Register. The submittal offers a concept of reorienting runways so flight paths are over non-residential areas. The concept is based on a 3 degree glide slope to Runway 16.

(ii) May 20, 1998 – Submitted to the Orange County Register. The concept is similar to the April 26 submittal, except the concept is based on a glide slope greater than 3 degrees.

(iii) July 21, 1998 – Submitted to the Orange County Board of Supervisors. The submittal provides further documentation of the proposed concept, including additional documentation of TERPS issues. The concept represented in this submittal is based on a 3 degree glide slope to Runway16 and Runway 2.

(iv) July 28, 1998 – Submitted to the Orange County Board of Supervisors. The submittal expresses an opinion on an issue that the separation of parallel runways should be at least 2,500 feet and preferably 5,000 feet for simultaneous IFR operations, per FAA Advisory Circular 150/5300-13.

(v) August 11, 1998 - Submitted to the Orange County Board of Supervisors. The submittal expresses the opinion that FAA should not approve an Airport Layout Plan that includes parallel runways with centerline spacings of less than 2,500 feet and therefore will also not approve funding of runway improvements proposed by alternatives considered by Orange County.

(vi) September 1, 1998 - Submitted to the Orange County Board of Supervisors. The submittal was in response to proposed modifications of Airport Community Concepts B and C. The submittal contains a conceptual runway layout entitled "Alternative Airport and Open Space Plan Year 2020 Concept C As Recommended by the FAA in Advisory Circular AC 150/5300-13". The runway layout depicts extension of the north-south runway on the south end to Bake Parkway.

(vii) November 24, 1998 – Comments submitted on the Notice of Preparation of Draft EIR No. 573.

(viii) December 1, 1998 – Comments submitted on the Notice of Preparation of Draft EIR No. 573. The submittal proposes a standard approach angle of 3 degrees to Runway 16.

(ix) April 7, 1999 – Submitted to the El Toro Master Development Program in response to the Notice of Availability of Final EIR No. 563 Draft Supplemental Analysis. The submittal contains a concept plan entitled, "The Airport and Wildlands Ranch Plan Year 2020 Concept V". The concept plan is dated 1/23/99. The concept is based on an approach angle of 3.1 degrees to Runways 16 and Runway 01.

(x) May 7, 1999 – Submitted to the El Toro Master Development Program Office to offer comments on the "Green Airport Plan" dated April 29, 1999 and addresses water quality issues related to San Diego Creek and Serrano Creek. The submittal indicates an approach angle of 3.1 degrees is possible to Runway 16.

(xi) October 5, 1999 – A document entitled "The Alternative Airport Runway Layout Long V and Short V FAA TERPS Analysis Feasibility Study". The submittal includes an alternative layout in which the north-south runway is maintained north of the ~~AT&SF~~ Metrolink railroad tracks. A 3.3 degree glide slope is indicated for approaches to Runway 16. The submittal also includes the original runway concept in which the north-south runway is extended to Bake Parkway with approaches to Runway 16 using a 3.1 degree glide slope.

8.9.1.1 General Features of the Wildlands Ranch Alternative

The description of the concept provided by the proponent provides general information related to the proposed runway configuration. The alternative proposed did not address all aspects of the project, so assumptions were made with respect to the following information:

(i) Information describing the role and the design demand level of OCX.

(ii) Information regarding the role and design demand level of JWA.

(iii) Information regarding the extent and specific location of airfield, terminal, landside and access facilities.

The "V" runway configuration utilizes the existing Runway 16L-34R and a new Runway 1-19. In the April 7 submittal, the south end of the existing Runway 16L-34R is proposed to be extended 7,000 feet. Since a total runway length of 18,000 feet is proposed and the existing runway length is 10,000 feet, it is inferred that the north end of the runway is extended 1,000 feet. A new 12,000 foot Runway 1-19 is proposed, and is generally aligned with the SR-133 Freeway. In the October 5, 1999 submittal, Runway 16L-34R is not extended as far to the south. The Runway 34R threshold is located within the "Measure A" boundary and does not extend into the "south panhandle" of the base property.

The rationale for the alternative runway configuration is to redirect air traffic patterns over vacant land southwest of MCAS El Toro, to permit the use of Runway 16 for arrival operations, and to eliminate the use of the existing east-west runways.

The first phase of this alternative would operate with no changes to the current Runways 16L and 16R. Runway 16L would initially be used for landing from the north, and 16R would be used for takeoffs to the south. Runway 34L would be used during Santa Ana wind conditions for VFR circle approach from the southwest, and 34R would be used for takeoffs to the north. Runways 7R/25L and 7L/25R are used only as a concourse for gateways to temporary terminals for initial operations, until the new terminal is constructed. The new Runway 1/19 would be constructed to allow simultaneous operations as FAA budget and grant funds are allocated. The new runway would be aligned with SR 133, and a three mile wide corridor of undeveloped land (wildlands) would become public land south of the Irvine Spectrum complex and extending to Crystal Cove State Park. This alternative also calls for Runway 16L/34R to be extended across the railroad tracks to Bake Parkway as FAA funds become available.

The proposed initial phasing of this alternative would require an approach glide slope of 3.3 degrees, which would preclude precision instrument approaches by all aircraft with an approach speed of 141 knots or more.

8.9.1.2 Attainment of Project Objectives

This alternative limits operations by certain aircraft types that could use MCAS El Toro. Aircraft with approach speeds of 141 knots or more (termed as Approach Category D) would not be provided a precision instrument approach to the primary arrival runway and, therefore, would not be accommodated by this alternative. The limitation on Approach Category D aircraft does not encourage the growth of air service opportunities such as international, domestic long haul, and cargo. As such, while this alternative allows a greater portion of locally generated air traffic demand to be served, it is not to the same degree as the Proposed Project. Certain business jet models are also affected by the Category D limitation and, therefore, general aviation opportunities are not fully enhanced. This is described in more detail later in this section in the evaluation of the short "V" alternative.

This alternative does not meet the objective of taking maximum advantage of the historical compatible land use regulation around MCAS El Toro, because the runway configuration, and hence noise contours, are substantially different from the military operation. While the alternative is intended to direct flights over vacant areas, these areas are planned for 3,000 to 5,000 homes and other noise sensitive uses in the City of Irvine and County General Plan.

8.9.1.3 OCX Facility Improvements for the Wildlands Ranch Alternative (April 7, 1999, Submittal)

Figure 8.12 summarizes the basic features of this alternative for OCX described below.

Airfield

Runway 16 is proposed as the primary arrival runway and the landing threshold of Runway 16 is assumed to be displaced approximately 7,100 feet, based on interpretation of a drawing dated January 23, 1999, and included in the proponent's submittal of April 7, 1999. The landing threshold of Runway 34 is also shown to be displaced an equivalent distance. Based on the configuration of the Inner Safety Zone depicted by the proponent's submittal, approximately 8,300 feet of runway length is available for takeoff on Runway 16. This is considerably less than the existing runway length of 10,000 feet and runway lengths included in other alternatives (i.e., more than 12,000 feet). It appears that the right-turn after takeoff proposed in this alternative would start too soon, and protection zones should actually be slightly farther south.

A new runway oriented in a northeast-southwest direction, and designated as Runway 1-19 is proposed along the northwest side of the base boundary, generally aligned parallel with SR 133. It is planned to be 12,000 feet long. The landing threshold of Runway 1 is shown to be displaced by approximately 1,100 feet.

It is proposed to use Runways 16 and 1 for landings, and Runways 19, 16 and 34 for takeoffs under this alternative. The submittal specifies a 3.1 degree glide slope for the

proposed precision instrument approaches for Runways 16 and 1. This is considered non-standard as it exceeds a standard glide slope of 3 degrees. Almost all commercial airports in the United States are equipped for precision instrument approaches with standard 3 degree glide slopes.

The runway centerline to parallel taxiway centerline separation scales to a dimension of 400 feet.

Evaluation of Proposed Airfield

Several aspects of the proposed airfield are discussed here. These include approach slope, capacity, runway length available for landing, runway markings, airfield geometrics, taxiway system and construction issues.

Approach Slope

The Alternative provides a non-standard approach angle of 3.1 degrees. Very few major commercial airports have non-standard glide slopes, and the other airfield alternatives considered in this EIR are based on a standard approach angle of 3 degrees.

Capacity

The capacity of this alternative is limited due to the fact that only one runway is available for arrivals. Substantial delays will result during peak arrival periods at 2020 demand levels. The Proposed Project includes two runways that can be used for arrivals during prevailing weather conditions. While one runway can accommodate off-peak arrival periods, the second runway provides the ability to reduce delays during peak arrival periods.

Data contained in FAA guidelines (FAA Advisory Circular 150/5060-5, Airport Capacity and Delay) indicate that the Proposed Project provides 25 to 30 percent more runway capacity than the "V" configuration. Therefore, the "V" runway configuration will not accommodate traffic as efficiently as the Proposed Project and will be subject to escalating delays during peak periods.

Runways

Analysis of precision instrument approaches from the north in accordance with TERPS was conducted by the aviation planning team. The TERPS analysis concluded that the required location of the landing threshold for a 3.1 degree glide slope is approximately 8,200 feet south of the end of the existing Runway 16L. Therefore, the landing threshold for Runway 16 needs to be located approximately 2,000 feet further south than depicted under this alternative. The maximum amount of runway extension to the south (towards Bake Parkway) that is usable for landings on Runway 16 is approximately 6,200 feet. Such an extension would provide a landing distance of approximately 8,050 feet. This landing distance is significantly less than landing distances provided by other alternatives

(approximately 9,900 to 10,400 feet). This is a marginal runway requirement to be used for the planning of the primary arrival runway at a new commercial airport with operations and role as forecast for the Proposed Project.

While the landing distances provided by other alternatives are greater than this alternative, it is also noted that other alternatives are based on a standard, 3-degree glide slope. The runway configuration in this alternative is operationally inferior to the other alternatives due to the combination of steeper approach angle and reduced landing length. Compared to other alternatives, the available landing length is unacceptable.

Runway Markings

The placement of Runway Protection Zones under this alternative (Figure 8.12) suggests that Runway 34 will be retained for precision instrument approaches. Therefore, it will be necessary to provide precision runway markings for both Runways 16 and 34. This will require relocating the landing threshold of Runway 34 approximately 4,200 feet to the south to accommodate runway markings. This may impact precision instrument approaches from the south. It would also displace arrival SENEL contours by an equivalent amount to the south, increasing single event noise levels in some existing residential areas.

Airfield Geometrics

The runway centerline to taxiway centerline separation of 400 feet is not adequate to accommodate future New Large Airplane (NLA) models that may operate at the airport. A separation distance of 600 feet is required. The airfield geometrics of the Proposed Project are such that NLA operations can be accommodated.

Taxiway Operations

The separation of the runway centerline to the face of the terminal concourse that is parallel to Runway 16-34 is approximately 1,000 feet as shown in Figure 8.12. This precludes development of dual parallel taxiways along the terminal, which suggests a high potential for bottlenecks and aircraft delays on the ground due to pushbacks and maneuvering to and from parking positions. Parallel taxiways for Aircraft Design Group V are possible under this alternative but would limit the size of aircraft at concourse parking positions to aircraft with fuselage lengths of approximately 125 feet, rendering the gates unusable by the majority of the commercial aircraft fleet.

The extension of Runway 16-34 to the south as proposed in this alternative results in long taxi distances for aircraft arriving on the primary arrival runway, on the order of two miles.

Construction Issues

This airfield concept requires considerable fill on the south end. The construction of runways under this alternative requires that several roads and ground access infrastructure be tunneled under runways. These include:

i) Main airport entrance road
ii) Airport perimeter road
iii) Alton Parkway
iv) ~~AT&SF~~Metrolink railroad tracks and Borrego Canyon Wash
v) Irvine Boulevard

The south end of the airfield will require significant fill. It is through this area of fill that Alton Parkway, the airport perimeter road and the railroad would be tunneled. The south end of the extension of Runway 16-34 is located in the City of Irvine, and pursuant to the State Aeronautics Act, City approval may be required. However, City approval of any airport facility would be inconsistent with the City's position on the Reuse Plan (see City Council Resolution 99-01 and Measure D, November, 1998).

Terminal and RON Parking

A linear terminal complex is proposed between the "V" shaped runways. Details on the terminal have not been documented by the proponent, however, based on the concept drawing the terminal provides approximately 9,000 linear feet of ramp frontage to accommodate aircraft contact gates at the terminal. This is considerably less ramp frontage and fewer gates than that provided by the terminal concept under the Proposed Project which provides over 11,500 feet of ramp frontage.

The face of the concourse that is parallel to Runway 16-34 is approximately 1,000 feet from the runway centerline. As previously indicated, this prevents the development of dual parallel taxiway capability which is important for efficient airfield operations. The terminal setback from the runway also affects the size of aircraft in terms of tail heights that can park at the terminal (in accordance with obstruction criteria specified in Federal Aviation Regulations Part 77, Objects Affecting Navigable Airspace). Aircraft parking areas need to be sufficiently separated from the runway so that parked aircraft are not obstructions as defined in FAR Part 77. If an aircraft parking limit line is assumed at a distance of 300 feet from the face of the terminal concourse in this alternative, the maximum tail height permitted at this line is 28.6 feet above the elevation of the nearest point of the runway centerline. Tail heights of the MD-11 and B747 exceed 57 and 64 feet, respectively, and would be precluded from parking at the concourse, as well as other aircraft that would be obstructions under FAR Part 77.

Remain Overnight Parking (RON) is not indicated on the concept drawing included in the proponent's submittal of April 7, 1999 (Figure 8-12).

Access and Parking

Terminal Access

Primary access to the terminal complex would be provided at Trabuco Road and Barranca/Alton Parkways near the Irvine Transportation Center (ITC). Trabuco Road would cross under the proposed Runway 1-19 and connect directly to the terminal loop road. A new access road from Barranca/Alton Parkways would cross over the railroad tracks and connect to the terminal loop road north of the proposed Airport Transportation Center (ATC). Secondary terminal access would be provided by Marine Way which would be realigned at the south end of Runway 1-19.

It is assumed that the terminal loop road is at-grade (as there is no indication or provision for ramps in the proponent's submittal). Vehicles would circulate counterclockwise along the terminal loop road.

Assessment

The connection of Trabuco Road to the terminal loop road poses some technical and safety concerns.

The technical aspect pertains to the need to provide adequate distance from edge of the runway area for vertical gradient. A gradient of six percent, the standard used in other alternatives, could be accommodated over a distance of approximately 330 feet. The Alternative does not provide such distance. Thus, a steeper, substandard gradient would have to be used.

The safety aspect pertains to connecting the depressed segment of Trabuco Road directly to the terminal loop road immediately at the end of the tunnel. This intersection would have to be signalized. Due to the depression, drivers could not readily see the oncoming intersection, making it prone to accidents. Warning signals would need to be installed in the tunnel to alert drivers of the signal ahead. Furthermore, vehicles would be queued in the tunnel on Trabuco Road due to signalization. This could result in unsafe conditions since drivers of vehicles entering the tunnel could not immediately see the end of the queue. Vehicle queuing within the tunnel is also expected to result in an unhealthful concentration of vehicle fumes.

Angular bends on the terminal loop road, particularly the ones in front of the north and south terminal buildings, could result in traffic bottlenecks due to vehicles slowing down at bends. A single level terminal road suggests the potential for congestion due to the mixing of arrival and departure traffic which is separated by multi-level terminal roads in the Proposed Project.

Parking

This alternative provides three parking areas on a total of approximately 125 acres. All parking areas are inside the terminal loop road. It is assumed that these areas would accommodate short term, long term and employee parking as well as rental car facilities.

Assessment

The total parking area provided in this alternative is roughly equal to the on-site short term, long term, employee and rental car areas provided in the Proposed Project. If this alternative is to accommodate the same air passenger level as forecast for the Proposed Project, additional remote areas would have to be provided. In the Proposed Project, remote parking areas are conveniently located in the Northern Panhandle. This alternative does not have such area that could be easily accessed from the terminal. The parking area shown on the east-side of Runway 16-34 is not ideally suited for remote public parking.

Furthermore, since all parking areas in this alternative are inside the terminal loop road, employee and rental car traffic would have to mix with terminal (short term, long term and curbside) traffic. This would substantially add to the volume of traffic using the terminal loop road and, together with the effect of roadway bends discussed above, could lead to severe traffic congestion on the terminal loop road.

Non-Terminal Roadway Access

Primary access to the air cargo area would be provided by Alton Parkway. Although there are existing I-5 interchanges at Alton Parkway and Bake Parkway, their location would force air cargo truck traffic to use local streets.

The tunnel section of Irvine Boulevard under Runway 1-19 raises similar safety and air quality concerns as discussed for Trabuco Road. Westbound traffic on the Irvine Boulevard tunnel would immediately encounter the signalized intersection at the SR 133 northbound on/off ramps on exiting the tunnel. Also, traffic would be queued under the tunnel on the westbound approach to the intersection, which could result in unsafe driving and air quality conditions.

8.9.2 OCX Facility Improvements for the Wildlands Ranch Alternative (October 5, 1999, Submittal)

Figure 8-12A summarizes the basic features of this alternative (Wildlands Ranch Plan Alternative 1) for OCX described below. Figure 8-12B (Wildlands Ranch Plan Alternative 2) presents a variation of the alternative.

8.9.2.1 Airfield

The major difference between this concept and that reflected in the April 7 submittal is that the north-south runway (16-34) is not extended as far south in order to locate runways entirely within the "Measure A" boundary. This results in a potential runway length of 12,000 feet which is achieved by constructing 1,000 foot extensions on each end of the existing Runway 16L-34R. Runway 16 would be the primary arrival runway. The runway would be equipped for precision instrument approaches with a specified glide path angle of 3.3 degrees. The proponent states that 8,000 feet of runway would be available for landing which suggests the landing threshold is displaced 4,000 feet.

The primary departure runway, Runway 19, is proposed in the concept at a length of 10,000 feet, and expandable to a length of 12,000 feet. The ultimate length is achieved by constructing a 2,000-foot extension on the end of Runway 19. Runway 1 is also equipped for precision instrument approaches. The submittal specifies a 3.1 degree glide slope for Runway 1. The runway is proposed for arrivals during Santa Ana wind conditions and also to accommodate arrivals of Approach Category D aircraft. The elevation of the end of Runway 1 is indicated at 300 feet MSL. This is approximately 60 feet more than the existing ground elevation and will require significant fill.

The proposed airfield of the October 5, 1999, submittal (Alternative 1) is assessed below with respect to those factors considered for the April 7, 1999 submittal.

Approach Slope

A non-standard approach angle of 3.3 degrees is specified for the primary arrival runway, Runway 16. This precludes use of the runway for arrival operations by aircraft with approach speeds of at least 141 knots. This includes the following aircraft commercial transport aircraft: L-1011, DC-10-30, DC-10-40, DC-8-61, DC-8-63, MD-11, B747 (all models), B777, B767-300, B757-300 and the B737-800. It also precludes approaches by Gulfstream II, IV and V, and Lear 35 business jets. The submittal suggests a strategy for accommodating Approach Category D aircraft whereby Runway 1 is used for arrivals by these aircraft. As explained herein, this would be a "counter-flow" or head-to-head operation and raises safety and capacity concerns.

A 3.3 degree glide slope would have landing minimums of 250 foot decision height and visibility of ¾ miles. These are slightly higher than standard Category I minimums of 200/½.

Runway 16 Approach

The development of the instrument approach procedure for Runway 16 contained in the submittal does not include adverse obstacle assumptions and allowance for precipitous terrain. These factors are typically applied by FAA in the development of instrument

procedures and most likely would be applied for instrument procedures at El Toro. These were applied in the previous assessment of instrument approach procedures conducted as part of the Airport System Master Plan and are prudent for the planning of a new airport.[1] Considering these allowances and the proposed approach procedure for Runway 16, it is found that a 3.3 degree glide slope is not possible for the proposed landing threshold. In order to provide a 3.3 degree glide slope the landing threshold would have to be displaced an additional 1,900 feet to the south. If the proposed landing threshold is retained, a glide slope angle of 3.6 degrees would be required to provide adequate obstacle clearance.

The options of additional displacement of the landing threshold or a steeper (3.6 degree) glide slope required to implement an acceptable approach procedure, render the proposed concept of Runway 16 arrivals not feasible for a new commercial airport. Even if a 3.3 degree approach procedure could be developed in accordance with standard FAA practices, it is not a desirable basis for planning the main arrival runway at a commercial airport.

Runway 1 Approach

An analysis of the proposed approach for Runway 1 concluded that a glide slope of 3.1 degrees is possible for the proposed landing threshold location and elevation.

Runway 19 Departures

Departures on Runway 19 will require a minimum climb rate of 300 feet per nautical mile to an altitude of 1,600 feet MSL before resuming a standard rate of climb.

Approach Category D Aircraft Limitations

The steep glide slope proposed for Runway 16 prevents the use of the runway for arrival purposes by aircraft with approach speeds of 141 knots and greater. It is estimated that this restriction would affect 29,700 aircraft arrivals projected for the Proposed Project in 2020 (see Table 8.9-1), or 21 percent of all commercial aircraft arrivals forecast for OCX in 2020.

As may be noted in Table 8.9-2, several market segments are particularly impacted, including passenger arrivals on Asia-Pacific routes (100 percent of arrivals), Atlantic routes (72 percent), and domestic long-haul routes (33 percent of arrivals), as well as all-cargo arrivals on international routes (94 percent of arrivals) and domestic routes (32 percent of arrivals). If these operations cannot be accommodated at the airport, the ability of the airport to provide the range of services envisioned under the Proposed Project would be severely limited, particularly for international passenger and cargo markets.

[1] Instrument Flight Procedures Analysis Final Report. K&M Consultants. May 1998.

Table 8.9-1
Summary of Arrivals by Type of Aircraft Impacted by Short "V" Alternative Airport Runway Layout at OCX in 2020

Aircraft Type	Annual Arrivals[1]	Percent Total
A340	2,823	10%
A3XX/B7XX	1,583	5%
DC10	631	2%
MD11	4,853	16%
737-800	1,599	5%
747	4,894	16%
757-300	1,064	4%
767-300/400 (some)	5,695	19%
777	6,558	22%
Total	**29,698**	**100%**

Source: P&D Aviation
NOTE: [1] Number of Category D aircraft operations based on the projected fleet mix reflected in the Proposed Project.

Table 8.9-2
Summary of Impact Short "V" Alternative Airport Runway Layout on Projected Aircraft Arrivals at OCX in 2020

	Annual Operations		% Arrivals
	Alt. B	Impacted [1]	Impacted
Passenger Arrivals			
Domestic			
Regional/Commuter	19,950	0	0%
Short Haul	36,400	543	1%
Medium Haul	27,650	3,544	13%
Long Haul	23,150	7,635	33%
Subtotal-Domestic	107,150	11,721	11%
International			
Latin America	5,650	867	15%
Atlantic	2,900	2,091	72%
Asia-Pacific	8,850	8,850	100%
Canada/Other	1,000	111	11%
Subtotal-International	18,400	11,918	65%
Total Passenger Operations	125,550	23,639	19%
All-Cargo			
Domestic	10,350	3,286	32%
International	2,950	2,774	94%
Total-All Cargo Operations	13,300	6,060	46%
Total Commercial Operations			
Total Commercial Operations	138,850	29,699	21%

Source: P&D Aviation

NOTE: [1] Number of Category D aircraft operations based on the projected fleet mix reflected in the Proposed Project.

Alternative Category C equipment providing similar lift capacity is available to substitute for some of the aircraft impacted by the restriction. Examples of alternative aircraft include the A320/321 and B737-400 for the B737-800, and the A300 and A330 for the B757-300 and B767-300/400. However, there are effectively no alternative non-Category D aircraft available to replace the larger aircraft affected by the restriction.

The fleet mix of individual airlines that choose to provide service at the airport will dictate the availability of these particular aircraft types. Since most domestic airlines and many international airlines have at least some of the impacted aircraft types in their fleet, it is reasonable to expect that a constraint at OCX that would restrict the flexibility of the airlines to assign equipment to the airport would place OCX at a competitive disadvantage relative to other airports in the region without such restrictions. This would further limit the ability of OCX to provide the range of services anticipated under the Proposed Project.

The submittal suggests a strategy for accommodating Category D arrival operations. This is achieved by using Runway 1 for arrivals. The proposed strategy involves a counterflow operating configuration in which departures from Runway 16 would track outbound in the opposite direction of arriving aircraft. Such an operating mode raises safety and capacity concerns.

Capacity

The assessment of capacity issues for the April 7 submittal also applies to the October 5, 1999, submittal. However, the concept is less efficient than the April 7 submittal from the standpoint that it suggests an operating mode that promotes counterflow operations. This operating mode is proposed as a means of overcoming limitations on arrivals by Approach Category D aircraft that are inherent in the alternative.

The assessment of Category D limitations concluded that approximately 21 percent of the forecast fleet mix cannot use Runway 16 (the primary arrival runway) and must use Runway 1 for arrivals. Use of Runway 1 for arrivals will close down the primary departure runway (Runway 19) during these periods. Considering that Category D arrivals can be expected on a regular basis throughout the day suggests that inefficiencies at best can be expected due to the frequent need to change operating configuration of the runways.

Flight Tracks

Proposed flight tracks are basically "straight-in" and "straight-out" for arrivals and departures with the exception of departures on Runway 16. The proposed departure specifies a right turn be commenced shortly after takeoff, followed by a left turn so that the departure track parallels that of Runway 19. The turning departure is intended to avoid residential communities of Laguna Village, Leisure World and Laguna Hills. The ability to avoid these noise sensitive areas and follow the depicted flight tracks will be controlled by the point at which turns actually occur and the radius of turn that is executed.

The following comments are based on data depicted on an exhibit entitled "Proposed Flight Paths The Alternative Airport" contained in the October 5, 1999, submittal. The submittal indicates that the right turn out on departure will be initiated approximately 5,000 feet from brake release with a turn radius of approximately 1 nautical mile. After turning approximately 50 degrees from the runway heading, a left turn is executed to parallel the departure track of Runway 19.

This is not representative of the flight tracks that could be expected by the proposed operation. First, many aircraft would commence the proposed initial right turn out farther south than depicted. A distance of 8,000 feet from brake release is reasonable, and it is understood that some aircraft would require longer distances. Taking this into account, the proposed departure track would then over fly the northern edge of the noise sensitive area. Secondly, larger turn radii than that which has been assumed would direct the departure track farther south such that a greater portion of residential area is over flown. The flight track as shown does not reflect the normal range of ground tracks that can be expected due to dispersion. Lastly, the flight track is based on the assumption that a departure procedure involving the proposed double turns will be implemented. If a procedure based on only a right turn is employed, this would result in over flight of the greatest portion of the Laguna Village area.

Runway Length Available for Takeoff

Geodetic computations of the runway end coordinates given for Runway 1-19 indicate a length of 9,333 feet (versus a length of 10,000 feet depicted in the submittal). Taking into account the need to provide required runway object free area, a takeoff length of approximately 9,000 feet is available on Runway 19 with the "Short V" Alternative Runway Layout presented in the submittal. This takeoff distance is significantly less than the takeoff distances provided by other alternatives (takeoff lengths greater than 11,000 feet are available under the Proposed Project).

Runway Length Available for Landing

The review of the Runway 16 approach procedure concluded that the proposed landing threshold location cannot be assumed to provide a 3.3 degree approach slope. A 3.6 degree glide slope is possible for the proposed landing threshold location. In order to provide a 3.3 degree glide slope the landing threshold would need to be displaced an additional 1,900 feet to the south. Considering the need to provide 1,000 feet of Object Free Area beyond the stop end of the runway results in an available landing distance of approximately 5,800 feet. This landing distance is significantly less than the landing distances provided by other alternatives (as previously indicated to be approximately 9,900 to 10,400 feet).

It was previously stated that geodetic computations of the runway end coordinates given for Runway 1-19 indicate a length of 9,333 feet. When requirements for runway object free area are taken into account this results in an available landing distance of approximately 8,400 feet for the Short V configuration. This landing distance is significantly less than the landing distances provided by other alternatives.

Airfield Geometrics

The conclusions stated for the April 7 submittal apply to this alternative airport configuration.

Taxiway Operations

Previously stated inefficiencies of the April 7 submittal due to the inability to provide dual parallel taxiways in the terminal area are also inherent in this concept.

8.9.2.2 Terminal and RON Parking

A linear terminal complex is proposed and is located in between the "V" shaped runways. A difference between this concept and the April 7 submittal is that retail uses previously proposed in the terminal building appear to have been eliminated with the building area used for aircraft gates. This would provide an additional 1,100 feet of ramp frontage (approximately 10,100 feet overall). This is less than that provided by the preferred terminal concept (which provides over 11,500 feet of ramp frontage).

As previously described for the April 7 submittal, the setback of the terminal from the runway will limit the heights of aircraft that can park along the face of the building. RON parking is not included in the concept.

8.9.3 Nonaviation Revenue Support Uses

Although not specifically included in the proponent's information about this alternative, it is assumed that nonaviation uses similar to those included in the Proposed Project would be included. Because of the runway configuration, this alternative would not have the same space available for the wildlife habitat area and preservation of existing agricultural uses as the Proposed Project.

8.9.4 Environmental Impacts of Wildlands Ranch Alternative

8.9.4.1 General Impacts

As previously discussed, this alternative presents serious technical and feasibility concerns. Due to these unresolved issues, the alternative could not feasibly attain most of the project basic objectives. With respect to environmental impacts, while some impacts under this alternative would be similar to those of the Proposed Project, this alternative would not avoid or substantially lessen impacts projected to result from the Proposed Project. In fact, this alternative would result in a number of impacts that would be greater than the Proposed Project, including noise and biological resources, as discussed below.

8.9.4.2 Noise

Review of this alternative indicates it may produce the greatest noise impacts of any alternative considered in the El Toro Master Planning Process.

This alternative, as presented by the Proponent, includes several noise footprints which are referenced as produced by the County's consultants. In fact, none of the noise contours included in the proponent's submittal were generated or reviewed by the County except for those that are direct reproductions of contours provided by the County consultants for the Proposed Project. Noise contours which are purported to reflect SENEL and CNEL contours for this alternative were not produced by the County consultants and are not credible representations of the noise footprints that would be created by this alternative.

This alternative assumes departures to the south on Runways 19 and 16. The Runway 19 departures would not expose existing residential uses to noise levels in excess of 65 CNEL. However, the track from Runway 19 would overfly a portion of the Irvine Meadows Amphitheater and near the Irvine Medical Center. The associated noise levels would probably exceed FAA Part 150 recommended noise levels for such uses as well as exceed County of Orange and City of Irvine noise standards for such uses.

The Runway 16 departures assume a right turn "as soon as possible." It is these right turns that cause the greatest noise impact on existing noise sensitive uses. If the turns do not occur very early, the 65 dB CNEL contour would likely impact most of the residential areas of Laguna Village, part of Laguna Hills and potentially Laguna Woods. Should residential uses be allowed in the Irvine Spectrum area by the City of Irvine, then these residential areas would also be impacted by planes taking off of Runways 19 and 16. The extent of the noise impact will depend on where aircraft departing Runway 16 make their turns and how small a radius is used for those turns. For the CNEL contour to impact no residential uses, the turns would have to be completed prior to reaching the present end of Runway 16, not the proposed relocated end of Runway 16. This would require a very sharp turn very early in

the departure procedure. This turn would be highly unlikely for heavy aircraft and subsequent late turns by heavy aircraft would impact Laguna Village, Laguna Hills and Leisure World. Given the typical dispersion associated with this right turn, the expected 65 dB CNEL contour would impact more residential uses than any other Alternative considered. Other than this alternative, only Alternative J impacts residential uses with noise in excess of 65 dB CNEL.

These conclusions were based on the size and shape of the CNEL contours shown for Alternative A but applied to the runway configuration under this alternative. The Alternative A contours were assumed because the runway capacity of this alternative is less than the Proposed Project. If noise contours for the Proposed Project are applied, the impacts would be greater than those indicated above.

The 65 CNEL for this alternative would affect seven residential planning areas in the City of Irvine and the City's Sphere of Influence. While there are few, if any, residential units currently constructed in these planning areas, all of them include major future residential planned communities or villages that would be affected by the 65 CNEL. The departure corridor would result in a 65 CNEL affecting approximately 1,200 dwelling units proposed in Planning Area (PA) 33, 2,030 units allocated by the City General Plan to PA 17, and 750 units allocated to PA 18 for a total of 3,980 dwelling units. In addition to these units, the 65 CNEL could affect dwelling units in PA 22 and the Laguna Laurel Planned Community depending on the extent of the 65 CNEL and the final development plan for the Laguna Laurel Planned Community (this planned community would permit up to 2,042 dwelling units).

The arrival corridor 65 CNEL for this alternative would affect PAs 2, 5, and 9 in the City's Sphere of Influence, which also include planned residential units. However, most of the area affected by the 65 CNEL has been enrolled in the NCCP Program. The approach corridor 65 CNEL would also affect residential development planned in the East Orange General Plan. However, no zoning or development plans have been proposed for these future residential areas, so the impact cannot be estimated reliably. Based on plans available, the alternative is expected to impact 3,000 to 6,000 future homes.

Mitigation of the 65 CNEL impacts on existing and future residential development is not feasible. There is no mitigation for exterior noise levels of 65 CNEL or higher that would reduce the effects of aircraft noise on existing housing. In addition, amendments to the City of Irvine and County General Plans to eliminate or relocate thousands of future residential units is infeasible because there are no alternative locations for the 3,000 to 6,000 future units affected by the 65 CNEL. Most of the remaining unentitled lands (30,000+ acres) in central Orange County have been enrolled in the NCCP Program. In addition, amendment to the City's Conservation/Open Space Plan to accommodate transfer of dwelling units is not considered feasible and may require a City ballot measure. Purchase of the development rights for these units would be prohibitively high.

For these reasons, this alternative would have a significant adverse noise impact, which would not be reduced by feasible mitigation measures. Therefore, this alternative would have the greatest adverse noise impact of any of the alternatives analyzed herein.

8.9.4.3 Biological Resources

This alternative is substantially different from any of the other alternatives considered in several ways. One of the differences is how the concept accommodates the federal Habitat Reserve. The nonaviation land use component does accommodate a wildlife habitat area, although the southerly portion of this area is substantially narrower than under Proposed Project.

Under this alternative, the extension of existing Runway 16L-34R restricts available open space to the extreme east side of the MCAS El Toro site. This more narrow, constricted area requires the realignment and reconfiguration of the federal Habitat Reserve. South of the proposed Jeronimo Road extension there is a narrow area reserved for wildlife use. The area is constrained by the runway extension on the west and the airport property to the east. This narrow segment of the wildlife area extends an estimated 7,000 feet before a new wildlife corridor underpass is provided at Bake Parkway. The width of the wildlife area is estimated at 500 feet, with the runway and manicured aviation land to the west and an industrial park immediately adjacent to the east. This alternative relocates the wildlife underpass at I-5 to the San Diego Creek outlet, rather than at Serrano Creek. This relocation lengthens the wildlife habitat area on the MCAS El Toro site. To accommodate this area, the Alternative requires the realignment of Serrano Creek to join with San Diego Creek, south of Bake Parkway. This realignment represents a new impact to soft bottom habitat not reflected in the Proposed Project.

The most substantive difference between this alternative and the Proposed Project is the wildlife habitat area configuration. In addition to the changes discussed on the southern portion of the area, there are some modifications to the north. The access into the Habitat Reserve occurs further to the east and accommodates a new equestrian use.

This alternative does not share some of the project components discussed for the Proposed Project, or they vary in their locations. For example, there is no provision for Astor Road. The Alton/Barranca intersection is relocated and reconfigured. There is no provision for the future Rockfield alignment, which is inconsistent with the Master Plan of Arterial Highways. Serrano Creek is realigned to the east with a new culvert requirement at Bake Parkway to transition into San Diego Creek. These modifications constrain and lengthen the Wildlife Habitat area, subjecting this area to additional nighttime illumination and to more contiguous aircraft activity, and reduce golf and agricultural open space buffers relative to the Proposed Project. The alternative is not expected to be as functional for wildlife movement as that proposed as part of the Proposed Project due to the narrower width and proximity to more indirect aviation activities along the runway extension.

With the exception of differences in the wildlife habitat area, this alternative is not expected to generate substantially different direct impacts on biological resources than under the Proposed Project. Direct impacts to native plant communities, wildlife, wildlife dispersion corridors and special interest species are very similar to the Proposed Project. Indirect impacts resulting from aircraft overflights are discussed below.

The flight tracks under this alternative are also substantially different from the Proposed Project. Similar to Alternative J, there are no direct overflights associated with the federal Habitat Reserve due to the elimination of the east-west runway. The aircraft overflights are generally reversed and aircraft generally land from the north and depart to the south. One of the purposes of this runway configuration is to direct overflights into a different area of the San Joaquin Hills, rather than having overflights over the populated Aliso Viejo area. These overflights would occur in the Shady, Bommer, Moro Canyon areas, that are a part of the NCCP reserve. Similar to the Proposed Project, these overflights are not expected to result in substantially new biological resource impacts.

8.9.5 Conclusions

The alternative limits operations by certain aircraft types. The limitation does not encourage the growth of air service and general aviation opportunities. Service opportunities such as international, domestic long haul, and cargo are not accommodated by the alternative. Thus, aviation demand is not served, and economic growth is not enhanced to the same degree as the Proposed Project. The alternative is technically inferior to the Proposed Project and other alternatives with respect to several airport planning issues. The alternative also impacts residential land uses to noise in excess of 65 dB CNEL.

8.10 LAND USE ALTERNATIVES AT FORMER MCAS EL TORO

This section evaluates possible alternatives to the nonaviation uses on the MCAS El Toro site under the Proposed Project for the purpose of reducing any significant adverse impacts pertaining to the nonaviation uses to below the level of significance. In both alternatives, the aviation-related land uses of the Proposed Project would remain the same as described in Chapter 3.0. These alternatives to the nonaviation uses do not affect the ability of the Proposed Project to meet the general project and aviation related objectives.

8.10.1 Nonaviation Revenue Support Area Alternative 1

In summary, this alternative was selected for analysis because it has the potential to lessen the project impacts on Prime Agricultural Soils, traffic, and traffic related impacts while still obtaining most of the objectives of the project.

Figure 8-13 shows the proposed Nonaviation Revenue Support Area Alternative 1 land use plan and Table 8.10-1 shows the proposed land uses and acreages by parcel. In summary, in comparison to the Proposed Project, this alternative would:

1. Delete the Business Park uses in Planning Area 7 and retain the existing agricultural uses to reduce the loss of Prime Agricultural Soils.
2. Relocate the Regulation Golf Course from the southerly portion of Planning Area 3 (thus retaining approximately 120 acres of Prime Agricultural Soils to the northerly portion of Planning Area 2 replacing (a) Regional Park uses and (b) Cultural/ Institutional uses planned in the Proposed Project (formerly military housing areas). Cultural/Institutional uses would be reduced from approximately 80 acres to approximately 40 acres in Planning Area 2. Approximately 160 acres of Regional Park uses would be reclassified to Golf Course uses. The equestrian stable area in the Proposed Project (Parcel 2-2) would remain unchanged (approximately 36 acres).
3. Relocate the Vehicle Maintenance Yard and the State Department of Education Warehouse from Planning Area 5 to Planning Area 3, deleting an equal area of Regional Park uses in the high aircraft noise portion of Planning Area 3. This change from the Proposed Project would reduce the loss of farm lands by about 64 acres in Planning Area 5.
4. Relocate the proposed Executive Golf Course from Planning Area 7 to the location of the existing (former military) golf course in Planning Area 3. This change would reduce the loss of Prime Agricultural Soils in Planning Area 7 by approximately 98 acres.

Table 8.10-1
Nonaviation Revenue Support Area Alternative 1

LAND USE	LU_CODE	ACRES
Agriculture	5-1a	102.76
Agriculture	3-1b	45.07
Agriculture	3-1c	13.03
Agriculture	3-1d	166.58
Agriculture	3-1e	78.98
Agriculture	3-1f	18.57
Agriculture	7-1g	22.22
Agriculture	7-1h	70.35
Agriculture	7-1i	6.24
Agriculture	7-1j	181.40
Agriculture	7-1k	33.05
Agriculture Total		**738.25**
Park Uses	2-2	35.94
Park Uses Total		**35.94**
Golf Course (North)	2-3a	197.26
Golf Course (North)	2-3b	41.24
Golf Total		**238.50**
Habitat Reserve	6-5a	970.45
Habitat Reserve	3-5b	20.64
Habitat Reserve Total		**991.09**
Restricted Open Space	8-6a	12.98
Restricted Open Space	8-6b	4.64
Restricted Open Space	8-6c	68.83
Restricted Open Space	8-6d	32.45
Restricted Open Space	8-6e	11.42
Restricted Open Space	8-6f	16.29
Restricted Open Space	7-6g	30.16
Restricted Open Space	7-6h	9.14
Restricted Open Space Total		**185.92**
Marshburn Retarding Basin	5-7	38.87
Retarding Basin Total		**38.87**
Airfield Total	8-8	1,120.03
Airfield Total		**1,120.03**
Parking	5-9a	63.65
Terminal and Parking	1-9b	481.10
Terminal and Parking Total		**544.75**
Airport Shuttle Rail Yard	4-10a	12.53
Airport Transportation Center	4-10b	9.34
Transportation Facility Total		**21.86**

LAND USE	LU_CODE	ACRES
Cargo (west)	4-11a	137.59
Cargo (east)	3-11b	56.08
Cargo Total		**193.67**
In-flight Catering	2-12a	17.07
Aviation/Industrial Related	2-12b	99.49
Control Tower	2-12c	4.00
FBO/Corporate Aviation	2-12d	54.28
ARFF	2-12e	4.00
Airport Maintenance	3-12f	25.71
Airline Maintenance	3-12g	46.41
Ground Service Equipment	4-12h	14.00
Fuel Storage	4-12i	14.30
Aviation Support	4-12j	5.45
Aviation Support Total		**284.72**
Vehicle Maintenance Yard	3-13a	57.40
Food Distribution Warehouse	3-13b	6.18
IRWD Reservoir and Pumping	3-13c	5.73
Fire Station	3-13d	1.20
California Air National Guard	3-13e	25.36
IRWD Facility	3-13f	9.00
Homeless Service Providers	4-13g	28.29
Fire Station	4-13h	1.00
Public Facilities Total		**134.16**
Cultural Institutional	2-16	8.00
Cultural Institutional Total		**8.00**
Roads and Easements		156.62
Roads and Easements Total		**156.62**
GRAND TOTAL		**4,692.38**
1- Planning Area		

8.10.2 Environmental Impacts of Nonaviation Revenue Support Area Alternative 1

Compared to the Proposed Project, this alternative is intended to reduce the project impacts on traffic (and traffic related impacts such as air quality and highway noise) and on Prime Farm Lands. This alternative would result in a net reduction in Regional Park acreage, a net increase in farm lands, and elimination of the Business Park as further described below. In addition, this alternative reduces the aircraft noise impacts on recreational uses by reducing the planned recreation areas in the high noise impact areas (i.e., 70+ CNEL).

The alternative would also reduce the development costs for Regional Park uses and Cultural/Institutional uses, and eliminate development costs for the Business Park. The alternative would slightly increase revenues from farm land leases, reduce revenues from Cultural/Institutional and Regional Park uses, and eliminate revenue from the Business Park.

Land Use

Compared to the Proposed Project, this alternative would result in a reduction in the lands planned for the Business Park and Cultural/Institutional uses, an increase of approximately 379 acres of farm lands, and relocations of the recreational uses, the Vehicle Maintenance Yard, and the State Department of Education Warehouse uses. No changes are proposed to aviation uses, aviation support uses, habitat uses, or other public facilities (e.g., homeless providers, IRWD, OCTA rail yard and ANG). As with the Proposed Project, there would be no significant impact related to land use compatibility.

General Plan Consistency

The adjustments to nonaviation revenue support use do not affect the need for General Plan Amendments compared with the Proposed Project.

Transportation and Circulation

This alternative would reduce the trips generated by the Project as follows:

	CHANGE IN TRIP GENERATION:			
LAND USE	**AM PEAK**	**PM PEAK**	**TOTAL**	**% CHANGE**
Business Park	-1,735	-1,566	-15,775	(-100%)
Cultural/Institutional	-390	-350	-3,920	(-50%)
Regional Park	-149	-179	-3732	(-81%)
Agricultural Uses	+4	+4	+798	(+480%)
Total	-2,270	-2,091	-22,629	(N/A)

In summary, this alternative would reduce the Proposed Project trip generation as follows:

PROJECT CASES:	TRIP GENERATION FOR OCX AREA:		
	AM PEAK	PM PEAK	TOTAL
Proposed Project:	11,498	12,796	176,123
Alternative:	9,228 (-20%)	10,705 (-16%)	153,494 (-13%)
Existing Conditions:	2,200	2,300	25,400

This alternative would reduce the peak hour trip generation by 20 percent in the morning peak hour and 16 percent in the afternoon peak hour, which is a significant reduction. This alternative could result in a measurable reduction in peak hour conditions east and southeast of the OCX project area.

Elimination of the Business Park and relocation of the Executive Golf Course would have a measurable reduction in trips on Rockfield Drive, Alton Parkway, Bake Parkway, Barranca Parkway, and the I-5 Freeway ramps in the vicinity of the Business Park site. The relocation of the Vehicle Maintenance Yard and State Warehouse would reduce trips on Portola Parkway between Sand Canyon and the Foothill Tollroad and increase by an equal amount the trips on Irvine Boulevard between Sand Canyon and Bake Parkway. This increase would be partially offset by reductions in trip generation for Cultural/Institutional uses and regional park uses. The increase in agricultural trips and relocation of Regulation Golf Course trips would have insignificant effects.

The traffic impacts of the Proposed Project are reduced by mitigation measures to a level of insignificance. Therefore, this alternative would not result in a different conclusion regarding project impacts. However, this alternative would reduce the extent and costs of required mitigation for traffic impacts, and would reduce traffic impacts in congested areas to the east and south of the project site, especially in the Spectrum and Lake Forest areas.

Aviation Compatibility

The alternative would virtually eliminate recreational uses (i.e., golf course areas) within the Safety Zones for the Proposed Project and retain most of the existing agricultural uses located in these Zones. In addition, this alternative would virtually eliminate Regional Park-type uses within high aviation noise areas (i.e., 70+ CNEL).

Since Golf Courses and Regional Park-type uses proposed in the Safety Zones and high aviation noise areas are considered compatible land uses, the Proposed Project would not result in recreational uses being incompatible with aviation activities. Therefore, this alternative would not change the conclusions of the Proposed Project impact analysis.

Air Quality and Highway Noise

This alternative would reduce the highway traffic (mobile source) air quality emissions by about 13 percent, and total on-site generated project emissions by approximately 5 percent.

Highway noise impacts in the project area would be reduced significantly compared to the project case on Rockfield Drive in and near the site, and to a lesser degree on Bake Parkway, Alton Parkway, and Barranca Parkway. Highway noise would be reduced on Portola Parkway near the project site to a less than significant level. However, highway noise would be increased on Irvine Boulevard in and near the project site to a less than significant level.

This alternative would not result in a different conclusion regarding project impacts. However, this alternative would measurably reduce the total project air quality emissions due to mobile sources, and would measurably reduce highway noise impacts in some areas near the project site.

Recreation

This alternative would reduce the amount of active and passive types of recreational uses included in the proposed regional park area, retain the project proposals for equestrian stables, and Executive Golf Course and a Regulation Golf Course, and increase farm land for an overall insignificant change in total open space. Therefore, this alternative would have approximately the same effects as the Proposed Project in providing open space in the rapidly urbanizing central and southern Orange County area. This alternative would preserve less open space, however, than would be preserved by the No Project/No Activity Alternative, but the alternative would provide a larger amount of active recreational uses (i.e., two golf courses) compared to the No Project case.

However, this alternative would result in a large reduction in Regional Park-type uses compared to the Proposed Project. The demand for active (e.g., ballfields) and passive (e.g., picnicking) Regional Park-type uses in the project area is significant, and recreational surveys for the project and studies by the County and nearby cities demonstrate a significant unmet need. This alternative would reduce or eliminate the opportunity to meet this demand. Therefore, this alternative would be inferior to the Proposed Project in meeting the demand for Regional Park-type recreational uses.

Natural Resources and Energy

This alternative would increase the amount of agricultural lands from approximately 139 acres under the Proposed Project to approximately 517 acres. Per Section 4.1.6 of the Draft EIR, the Department of Navy leased approximately 1,040 acres for agricultural uses at the OCX site, of which 726 acres have been classified as "Prime Farmland" and 92 acres have been classified "Farmland of Statewide Importance" by the U.S. Department of Agriculture, Natural Resources Conservation Service.

According to Section 4.11.1.1, P. 4-453 and Figure 4-91 of FEIR 563, all of Planning Area 5 (approx. 269 acres), portions of Planning Area 3 (approx. 175 acres), portions of Planning Area 7 (approximately 245 acres) and a portion of Planning Area 8 (approx. 40 acres) are classified Prime Farmlands. Note, however, that since the U.S. Department of Agriculture's

classification, Marshburn Detention Basin has been constructed, reducing the lands classified as Prime Farmland by approx. 39 acres to a total of 230 acres in Planning Area 5.

Of these Prime Farmlands, 166 acres (72 percent) would be retained in Planning Area 5, 131 acres (75 percent) would be retained in Planning Area 3, and 203 acres (83 percent) would be retained in Planning Area 7. All of the Prime Farmland in Planning Area 8 would be lost due to the ROFA and RPZ proposed for OCX. In total, of the 726 acres classified Prime Farmland (687 acres after construction of Marshburn Basin), approximately 500 acres would be retained by this alternative. Note that the construction of the Rockfield Drive extension in Planning Area 7, although not required for this alternative, would remove approximately seven acres of Prime Farm Land.

Figure 4-453 also shows that portions of Planning Area 7 (approximately 82 acres) and a portion of Planning Area 3 (approximately ten acres) are classified Farmland of Statewide Importance. Virtually all of this land is located in the Runway Obstacle Free Area (ROFA) or the Runway Protection Zone (RPZ) proposed for OCX. According to FAA Advisory Circular AC 150/5200-33, the FAA recommends that no agricultural activities be conducted in the ROFA and related zones to ensure safe, efficient aircraft operations. Therefore, the ROFA and RPZ for the Proposed Project and this alternative would result in the loss of approximately 67 acres of Farmland of Statewide Importance. In addition, the proposed location of the IRWD Aqueous Waste Treatment Plant in Planning Area 7 would remove another nine acres of these Farmlands for a total loss of approximately 76 acres.

In conclusion, the Nonaviation Revenue Support Area Alternative 1 would significantly reduce the loss of farmland compared to the Proposed Project. The alternative would, however, result in a significant loss of farmland compared to the No Project/No Activity Alternative.

In regard to Farmlands of Statewide Importance, the ASMP includes an alternative that would locate all of the ROFA and RPZ on the north side of the ~~AT&SF~~ Metrolink railroad in the unincorporated area. This alternative could reduce the loss of Farmlands of Statewide Importance from 76 acres to approximately 10 acres of loss, which would reduce the impacts to a level of insignificance.

Cultural/Institutional Uses

This alternative would reduce the Cultural/Institutional acreage by over 50 percent from the Proposed Project, which could potentially result in the site being unsuitable in size to accommodate the proposed branch university. However, this site would still be large enough to accommodate the remaining Cultural/Institutional uses proposed by the project (e.g., Sheriff's education center, etc.). Therefore, this alternative would be expected to have an adverse impact on accommodating a portion of the demand for a branch university in southern Orange County.

Feasibility

This alternative would reduce development costs for nonaviation uses, so economic feasibility is enhanced.

Conclusion

Under this alternative, the level of development at MCAS El Toro would be less intense than with the Proposed Project. This would result in slight differences in effects from the Proposed Project, for example, fewer trips and fewer jobs created. Most of the impacts would be similar to, or slightly less than, the impacts of the Proposed Project. The primary difference in effects is that more agricultural land would be preserved although the impacts would remain significant under this alternative. However, for many of the impact categories for which this alternative results in slightly less than the Proposed Project, the Proposed Project does not result in significant unmitigated impacts; thus implementation of this alternative would not reduce any significant impacts. For these reasons, this Draft EIR proposes to reject this alternative.

8.10.3 Nonaviation Revenue Support Area Alternative 2

In summary, this alternative was selected for analysis because it has the potential to avoid project impacts on Prime Agricultural Soils and lessen impacts on traffic and traffic related impact while still attaining the objectives of the project.

Under Nonaviation Area Alternative 2, nonaviation uses proposed are shown in Table 8.10-2 and Figure 8-13. Compared to the Proposed Project, this alternative is intended to reduce the project impacts on traffic (and traffic related impacts such as air quality and highway noise) and on Prime Farm Lands. Compared to the Proposed Project, this alternative would result in a net reduction in:

a. Regional Park acreage
b. Golf Course acreage
c. Proposed County Wildlife Habitat area
d. Business Park area
e. Cultural/Institutional uses

This alternative would result in a net increase in farm lands compared to the Proposed Project. In addition, this alternative reduces the aircraft noise impacts on recreational uses by reducing the planned recreation areas in high noise impact areas.

The alternative would also reduce the development costs for Regional Park uses and the Cultural/Institutional uses and eliminate development costs for the Business Park, the

Table 8.10-2
Nonaviation Revenue Support Area Alternative 2

LAND USE	LU_CODE	ACRES
Agriculture	5-1a	102.76
Agriculture	3-1b	27.01
Agriculture	3-1c	13.03
Agriculture	3-1d	0.37
Agriculture	3-1e	119.94
Agriculture	7-1f	61.35
Agriculture	7-1g	6.24
Agriculture	7-1h	53.62
Agriculture	7-1i	99.81
Agriculture	7-1j	33.05
Agriculture Total		**517.18**
Park Uses	2-2	35.94
Park Uses Total		**35.94**
Golf Course (North)	2-3a	165.16
Golf Course (North)	2-3b	41.24
Golf Course (South)	3-3c	15.32
Golf Course (South)	3-3d	47.04
Golf Total		**268.76**
Open Space	3-4a	0.78
Open Space	3-4b	0.53
Open Space Total		**1.31**
Habitat Reserve	6-5a	970.45
Habitat Reserve	3-5b	20.64
Habitat Reserve Total		**991.09**
Restricted Open Space	8-6a	12.98
Restricted Open Space	8-6b	4.64
Restricted Open Space	8-6c	68.83
Restricted Open Space	8-6d	32.45
Restricted Open Space	8-6e	11.42
Restricted Open Space	8-6f	16.29
Restricted Open Space	7-6g	38.02
Restricted Open Space	7-6h	9.14
Restricted Open Space Total		**193.78**
Marshburn Retarding Basin	5-7	38.87
Retarding Basin Total		**38.87**
Airfield Total	8-8	1,120.03
Airfield Total		**1,120.03**
Parking	5-9a	63.65
Terminal and Parking	1-9b	481.10
Terminal and Parking Total		**544.75**
Airport Shuttle Rail Yard	4-10a	12.53
Airport Transportation Center	4-10b	9.34
Transportation Facility Total		**21.86**

LAND USE	LU_CODE	ACRES
Cargo (west)	4-11a	137.59
Cargo (east)	3-11b	56.08
Cargo Total		**193.67**
In-flight Catering	2-12a	17.07
Aviation/Industrial Related	2-12b	99.49
Control Tower	2-12c	4.00
FBO/Corporate Aviation	2-12d	54.28
ARFF	2-12e	4.00
Airport Maintenance	3-12f	25.71
Airline Maintenance	3-12g	46.41
Ground Service Equipment	4-12h	14.00
Fuel Storage	4-12i	14.30
Aviation Support	4-12j	5.45
Aviation Support Total		**279.27**
Vehicle Maintenance Yard	3-13a	57.40
Food Distribution Warehouse	3-13b	6.18
IRWD Reservoir and Pumping	3-13c	5.73
Fire Station	3-13d	1.20
California Air National Guard	3-13e	24.05
Homeless Service Providers	4-13f	28.29
Fire Station	4-13h	1.00
IRWD Facility	7-13g	9.00
Public Facilities Total		**132.85**
Wildlife Habitat Area	3-15l	17.57
Wildlife Habitat Area	3-15b	20.09
Wildlife Habitat Area	3-15c	42.96
Wildlife Habitat Area	3-15d	18.57
Wildlife Habitat Area	7-15e	14.15
Wildlife Habitat Area	7-15f	27.98
Wildlife Habitat Area Total		**150.32**
Cultural Institutional	2-16	40.10
Cultural Institutional Total		**40.10**
Roads and Easements		157.16
Roads and Easements Total		**157.16**
GRAND TOTAL		**4,692.38**
1- Planning Area		

Executive Golf Course, and the proposed Wildlife Habitat Area. The alternative would slightly increase revenues from farm land leases, reduce revenues from Cultural/Institutional and regional park uses, and eliminate revenue from the Business Park. In summary, this alternative would:

1. Delete the Business Park (87 acres), Executive Golf Course (98 acres), and County Wildlife Habitat Area (40 acres) in Planning Area 7 and retain the existing agricultural uses, to reduce the loss of existing farm lands by approximately 283 acres in Planning Area 7.

2. Relocate the Regulation Golf Course from the southerly portion of Planning Area 3 (thus retaining approximately 120 acres of farm lands in Parcel 3-1e) to the northerly portion of Planning Area 3 replacing (a) regional park uses and (b) Cultural/ Institutional uses planned in the Proposed Project (formerly military housing areas). Relocation of the golf course would permit conversion of the existing (former military) golf course (a net area of 62.36 acres after reductions for proposed aviation and other uses) to the proposed Irvine Ranch Water District (IRWD) Aqueous Waste Treatment Plant site (9 acres) and to agricultural uses (approximately 53 acres). This agricultural area could accommodate the relocation of nursery uses from Planning Area 5 required by the proposed parking area in Parcel 5-9a. The proposed County Wildlife Habitat Area in Planning Area 3 (approximately 104 acres) would be eliminated and the existing agricultural uses would be retained.

3. Cultural/Institutional uses would be reduced from approximately 80 acres to approximately 8 acres in Planning Area 2, and 72 acres would be reclassified to golf course use for the Regulation Golf Course. Approximately 195 acres of regional park uses would be reclassified to golf course uses. The equestrian stable area in the Proposed Project would remain unchanged (approximately 36 acres).

4. Relocate the Vehicle Maintenance Yard (57.4 acres) and the State Department of Education Warehouse (6.18 acres) from Planning Area 5 to Planning Area 3. This change from the project plan would reduce the loss of farm lands by 64 acres in Planning Area 5.

8.10.4 Environmental Impacts of Nonaviation Revenue Support Area Alternative 2

Land Use

Compared to the Proposed Project, this alternative would result in a reduction in the lands planned for the Business Park, Golf, Regional Park-type uses, proposed County Wildlife Habitat Area, and Cultural/Institutional uses. This alternative would increase the amount of existing agricultural uses retained by the project from 139 acres to 738 acres, an increase of approximately 600 acres. Finally, this alternative would relocate the Regulation Golf

Course, the Vehicle Maintenance Yard, and the State Department of Education Warehouse uses compared to the Proposed Project. No changes are proposed to aviation uses, aviation support uses, or other public facilities (e.g., homeless providers, IRWD, OCTA rail yard, and ANG).

This alternative would reduce the Cultural/Institutional acreage by 90 percent, which would result in the site being unsuitable in size to accommodate the proposed branch university and virtually all the other Cultural/Institutional uses. However, this site would still be large enough to accommodate the small Cultural/Institutional uses.

General Plan Consistency

The adjustments to nonaviation revenue support use do not affect the need for General Plan Amendments compared with the Proposed Project.

Transportation and Circulation

This alternative would reduce the trips generated by the Proposed Project as follows:

	CHANGE IN TRIP GENERATION:			
LAND USE	**AM PEAK**	**PM PEAK**	**TOTAL**	**% CHANGE**
Business Park	-1,735	-1,566	-15,775	(-100%)
Cultural/Institutional	-796	-716	-7,956	(-90%)
Regional Park	-149	-179	-3732	(-81%)
Agricultural Uses	+6	+6	+1,200	(+736%)
Total	-2,674	-2,455	-26,263	(N/A)

In summary, this alternative would reduce the Proposed Project trip generation as follows:

PROJECT CASES:	**TRIP GENERATION FOR OCX AREA:**		
	AM PEAK	**PM PEAK**	**TOTAL**
Proposed Project:	11,498	12,796	176,123
Alternative:	8,824 (-23%)	10,341 (-19%)	150,222 (-15%)
Existing Conditions:	2,200	2,300	25,400

This alternative would reduce the peak hour trip generation by 23 percent in the morning peak hour and 19 percent in the afternoon peak hour, which is a significant reduction. This alternative could result in a measurable reduction in peak hour conditions east and south east of the OCX project area.

Elimination of the Business Park and the Executive Golf Course would have a measurable reduction in trips on Rockfield Drive, Alton Parkway, Bake Parkway, Barranca Parkway, and the I-5 Freeway ramps in the vicinity of the Business Park site. The relocation of the Vehicle Maintenance Yard and State Warehouse would reduce trips on Portola Parkway between Sand Canyon and the Foothill Tollroad and increase by an equal amount the trips on Irvine Boulevard between Sand Canyon and Bake Parkway. This increase would be

almost entirely offset by reductions in trip generation for Cultural/Institutional uses and regional park uses. The increase in agricultural trips and relocation of Regulation Golf Course trips would have insignificant effects.

The traffic impacts of the Proposed Project are reduced by mitigation measures to a level of insignificance. Therefore, this alternative would not result in a different conclusion regarding project impacts. However, this alternative would reduce the extent and costs of required mitigation for traffic impacts, and would reduce traffic impacts in congested areas to the east and south of the project site, especially in the Spectrum and Lake Forest areas.

Aviation Compatibility

Compared to the Proposed Project, the alternative would eliminate recreational uses (i.e., golf course areas) and proposed County Wildlife Habitat Areas within the Safety Zones for the Proposed Project and retain almost all of the existing agricultural uses located in these Zones. The ROFA and RPZ would remove small amounts of existing agricultural uses. In addition, this alternative would eliminate Regional Park-type uses within high aviation noise areas (i.e., 70+ CNEL).

Since Golf Courses, Regional Park-type uses, and proposed County Wildlife Habitat areas proposed in the Safety Zones and high aviation noise areas are considered compatible land uses, the Proposed Project would not result in open space uses being incompatible with aviation activities. Therefore, this alternative would not change the conclusions of the Proposed Project impact analysis.

Air Quality and Highway Noise

Compared to the Proposed Project, this alternative would reduce the highway traffic (mobile source) air quality emissions by about 15 percent, and total on-site generated project emissions by approximately 7 percent. Highway noise impacts in the project area would be reduced significantly compared to the project case on Rockfield Drive in and near the site, and to a lesser degree on Bake Parkway, Alton Parkway, and Barranca Parkway. Highway noise would be reduced on Portola Parkway near the project site to a less than significant level. However, highway noise would be increased on Irvine Boulevard in and near the project site to a less than significant level.

The local and regional air quality impacts of the Proposed Project are reduced by mitigation measures to a level of insignificance. Therefore, this alternative would not result in a different conclusion regarding project impacts. However, this alternative would measurably reduce the total project air quality emissions due to mobile sources, and would measurably reduce highway noise impacts in some areas near the project site.

Recreation

Compared to the Proposed Project, this alternative would eliminate the amount of active and passive types of recreational uses included in the proposed Regional Park area and in the Executive Golf Course. However, this alternative would retain the project proposals for Equestrian Stables (approximately 36 acres) and a Regulation Golf Course (238.5 acres), and increase farm land for an overall insignificant change in total open space. Therefore, this alternative would have approximately the same effects as the Proposed Project in providing open space in the rapidly urbanizing central and southern Orange County area. This alternative would preserve less open space, however, than would be preserved by the No Project/No Activity Alternative, but the alternative would provide a larger amount of active recreational uses (i.e., golf course) compared to the No Project case.

This alternative would result in a large reduction in regional park-type uses. The demand for active (e.g., ballfields) and passive (e.g., picnicking) regional park-type uses in the project area is significant, and recreational surveys for the project and studies by the County and nearby cities demonstrate a significant unmet need. This alternative would reduce or eliminate the opportunity to meet this demand. Therefore, this alternative would be inferior to the Proposed Project in meeting the demand for regional park-type recreational uses.

Natural Resources and Energy

This alternative would increase the amount of farm lands from approximately 139 acres under the Proposed Project to approximately 738 acres. Per Section 4.1.6 of the Draft EIR, the Department of Navy leased approximately 1,040 acres for agricultural uses at the OCX site, of which 726 acres have been classified as "Prime Farmland" and 92 acres have been classified "Farmland of Statewide Importance" by the U.S. Department of Agriculture, Natural Resources Conservation Service.

According to Section 4.11.1.1, P. 4-453 and Figure 4-91 of FEIR 563, all of Planning Area 5 (approximately 269 acres), portions of Planning Area 3 (approximately 175 acres), portions of Planning Area 7 (approximately 245 acres), and a portion of Planning Area 8 (approximately 40 acres) are classified Prime Farmlands. Note, however, that since the U.S. Department of Agriculture's classification, Marshburn Detention Basin has been constructed, reducing the lands classified as Prime Farmland by approximately 39 acres to a total of 230 acres in Planning Area 5.

Of these Prime Farmlands, this alternative would retain in agricultural use 166 acres (72 percent) in Planning Area 5, 175 acres (100 percent) in Planning Area 3, and 245 acres (100 percent) in Planning Area 7. However, all of the Prime Farmland in Planning Area 8 (approximately 40 acres) would be lost due to conflicts with the ROFA and RPZ for OCX.

In total, of the 726 acres classified Prime Farmland (689 acres after construction of Marshburn Basin), 586 acres of Prime Farm Land would be retained by this alternative.

Note that the extension of Rockfield Drive, although not required for this land use alternative, would remove approximately seven acres of agricultural lands in Planning Area 7 when constructed to implement the Master Plan of Arterial Highways.

Figure 4-453 also shows that portions of Planning Area 7 (approximately 82 acres) and a portion of Planning Area 3 (approximately ten acres) are classified Farmland of Statewide Importance. Virtually all of this land is located in the Runway Obstacle Free Area (ROFA) or the Runway Protection Zone (RPZ) proposed for OCX. According to FAA Advisory Circular AC 150/5200-33, the FAA recommends that no agricultural activities be conducted in the ROFA and related zones to ensure safe, efficient aircraft operations. Therefore, the ROFA and RPZ for the Proposed Project and this alternative would result in the loss of approximately 67 acres of Farmland of Statewide Importance.

In conclusion, the Nonaviation Revenue Support Area Alternative 2 significantly reduce the loss of farmland compared to the Proposed Project. The alternative would, however, result in a significant loss of farm land compared to the No Project/No Activity Alternative.

In regard to Farmlands of Statewide Importance, the ASMP includes an alternative which would locate all of the ROFA and RPZ on the north side of the ~~AT&SF~~ Metrolink railroad in the unincorporated area. This alternative could reduce the loss of Farmlands of Statewide Importance from 67 acres to approximately 10 acres of loss, which could reduce the impacts to a level of insignificance.

Final EIR 563/FSA EIR 563 concluded that the CRP would not have a significant adverse impact on prime farm lands. Therefore, this alternative would not result in a different conclusion regarding project impacts.

Feasibility

Under this alternative, the development costs for nonaviation development are reduced, which increases the feasibility of the alternative.

Conclusions

Under this alternative, the level of development at MCAS El Toro would be less intense than with the Proposed Project. This would result in slight differences in effects from the Proposed Project, for example, fewer trips and fewer jobs created. Most of the impacts would be similar to, or slightly less than, the impacts of the Proposed Project. The primary difference in effects is that more agricultural land would be preserved although the impacts would remain significant under this alternative. However, for many of the impact categories for which this alternative results in slightly less than the Proposed Project, the Proposed Project does not result in significant unmitigated impacts; thus implementation of this alternative would not reduce any significant impacts. The Draft EIR proposes to reject this alternative because it eliminates active recreational uses such as ballfields, which are needed to meet demand in South County.

8.11 ALTERNATIVE K: JWA – STATUS QUO AVIATION ROLES; ALTERNATIVE AIRPORT SITE– FULL DOMESTIC TO FULL INTERNATIONAL; NO AVIATION REUSE AT MCAS EL TORO

8.11.1 CEQA Requirements for Alternative Sites

Section 15126.6 (Consideration and Discussion of Alternatives to the Proposed Project) of the CEQA Guidelines specifically describes the types of alternatives to a Proposed Project that should be evaluated in an EIR. Section 15126.6(f)(2) provides the following guidance on identifying and considering alternative sites for Proposed Projects:

(A) Key question. The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.

(B) None feasible. If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, there may be no feasible alternative locations for a geothermal plant or mining project, which must be in close proximity to natural resources at a given location.

(C) Limited new analysis required. Where a previous document has sufficiently analyzed a range of reasonable alternative locations and environmental impacts for projects with the same basic purpose, the lead agency should review the previous document. The EIR may rely on the previous document to help it assess the feasibility of potential project alternatives to the extent the circumstances remain substantially the same as they relate to the alternative.

8.11.2 Previous Studies of Alternative Airport Sites

Over the last approximately 30 years, a number of studies have been conducted regarding the siting of an airport in addition to JWA to serve all or some of the anticipated increase in demand for air travel in Orange County. These prior studies considered a wide range of possible sites and evaluated these candidate locations based on a number of characteristics, including suitability for aviation uses, ground transportation, physical site constraints and/or environmental considerations. Given the large number of sites that have been considered for an additional airport in Orange County, a detailed description of the site evaluation and history of environmental documentation is contained in Appendix J. A table summarizing the potential environmental impacts and other constraints of each alternative site (Table J-A) is included in Appendix J. A brief summary of the prior studies follows.

EIR No. 102, Orange County Airport Alternative Futures (DMJM 1978), identified several alternative airport sites to assist JWA in serving aviation demand in Orange County. EIR No. 102 did not evaluate either the potential environmental impacts of these alternative airport sites or the ability of these sites to accommodate a civilian airport. The following eight alternative airport sites were identified in EIR No. 102, as discussed in detail in Appendix J:

(i) Mesa de Colorado (Rancho California)
(ii) Ontario International Airport
(iii) Naval Air Station (NAS) Los Alamitos
(iv) Camp Pendleton
(v) Chino Hills
(vi) Long Beach Airport
(vii) Bell Canyon

EIR No. 508 (County of Orange, 1985), prepared in support of the JWA Master Plan and Santa Ana Heights Land Use Compatibility Program, evaluated a number of alternative sites for airports which would have accommodated some or all of the expanded flight activity planned for JWA. These sites, which are discussed in detail in Appendix J, are:

i) Camp Pendleton
ii) Armed Forces Reserve Center (AFRC), Los Alamitos
iii) Ontario and Los Angeles International Airports and Long Beach Airport (Combined Alternative)
iv) Santiago Canyon
v) San Pedro Bay/Long Beach Harbor
vi) Chino Hills

A relatively recent study related to alternative airport sites was the Airport Site Consensus Team Final Report (The Planning Center 1990). That study identified a wide range of possible sites and considered potential advantages and disadvantages of each site. The report evaluated 20 sites and identified four that were considered potentially able to serve Orange County air service demand. These sites, which are discussed in detail in Appendix J, are:

(i) Potrero Los Piños
(ii) South Camp Pendleton
(iii) Cristianitos Canyon
(iv) March Air Force Base (AFB)

On June 12, 1990, the Orange County Board of Supervisors approved a motion to find that none of the four sites recommended by the Airport Site Coalition Consensus Team were appropriate for master planning at that time. On December 4, 1990, the Board of Supervisors voted to support planning efforts for a commercial airport at George Air Force Base, including a rail linkage.

Final EIR No. 563 (P&D 1996), prepared in support of the reuse of MCAS El Toro, considered the four possible alternative sites identified in the 1990 Consensus Report. Technical Report 6 to EIR No. 563, Alternatives Definition Report for the MCAS El Toro Master Development Program, identified three possible alternative sites for an airport to serve Orange County demand: the AFRC Los Alamitos, Cristianitos Canyon and Camp Pendleton. The sites considered in EIR No. 563 and Technical Report 6 are discussed in detail in Appendix J. FEIR No. 563 concluded that none of the sites was feasible for the CRP project, as explained in Appendix J.

8.11.3 Alternative Sites Evaluated for EIR No. 573

As part of EIR No. 573, no additional feasible sites were found in Orange County, and none that would satisfy the project objectives or that would avoid or substantially lessen the potential adverse impacts of the Proposed Project. Therefore, pursuant to CEQA Guidelines Section 15126.6(f), there are no additional sites to be considered for the Proposed Project. For further information, see Section 8.14.1.5, New Airport Site Only.

In addition, to the extent that increased use of other existing airports in the region to accommodate Orange County demand which would otherwise be served in Orange County under the Proposed Project could be considered an "off-site" alternative, the environmental effects of such a scenario are summarized, to the extent practicable, in the No Project/No Activity Alternative (see particularly the relevant discussion in Section 8.2.4 of this EIR).

8.12 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

8.12.1 Introduction

Section 15126.6 of the State CEQA Guidelines requires an analysis of a range of reasonable alternatives to the Proposed Project. In particular, subsections (1) and (e)(2) in relevant part state:

> (1) "The specific alternative of "no project" shall also be evaluated along with its impact: (2) If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

Section 8.2 summarizes the impacts of the No Project/No Activity Alternative in comparison to the Proposed Project in detail.

8.12.2 No Project/No Activity Impacts Summary

As analyzed in Section 8.2 and Table 8.13-1, the No Project/No Activity Alternative would not be the environmentally superior alternative because it would have greater adverse environmental impacts than the Proposed Project, in summary, as follows:

- The aviation alternatives, the ETRPA Nonaviation Alternative, and the project would generate less regional VMT.

- The aviation alternatives (except Alternative F) and the project would generate less regional air quality emissions than the No Project/No Activity Alternative.

- While the No Project/No Activity Alternative would avoid increased aviation operations and sleep disturbance impacts near the El Toro site, this alternative would increase operations and sleep disturbances at JWA and regional airports where the impacts would be worse due to the large number of noise sensitive uses within the 65 CNEL at regional airports.

For these reasons, the No Project/No Activity Alternative would not be the environmentally superior alternative.

8.12.3 Environmentally Superior Alternative

Based upon the comparisons in Table 8.13-1, Alternative A, because it creates less noise, transportation, local air quality emissions, toxic air contaminants due to aircraft, natural resources and energy impacts than the Proposed Project, although creating greater regional VMT and air quality impacts, is the environmentally superior alternative. For the nonaviation revenue support land uses. Alternative LU-2 is the environmentally superior alternative because it substantially reduces the loss of agricultural soils, trip generation, and local air quality emissions while retaining substantially the benefits of proposed recreation uses and public facilities.

8.13 COMPARISON OF THE ENVIRONMENTAL IMPACTS OF THE PROJECT ALTERNATIVES

A comparison of the key impacts of each of the alternatives analyzed in this EIR is provided in Table 8.13-1.

Table 8.13-1
Comparison of Key Impacts of Alternatives Relative to the Proposed Project

Impacts	Project*	A	C	F	G	J	Land Use 1	Land Use 2	No Project/ No Activity	Wildlands Ranch	ETRPA Non-Aviation
Land Use	I	=	=	S+	S+	S+	=	=	S+	S+	=
G.P. Consistency	I	=	=	S+	S+	S+	=	=	S+	S+	=
Transportation	I	-	=	S+	S+	=	-	-	-	=	S+
Noise	S	S-	=	S-	S+	S+	S-	=	+	S+	S+
Air Quality, Local	I**	-	=	S+	S+	=	-	-	-	-	S+
Air Quality, Regional	I	S+	=	S+	S+	=	=	=	S+	S+	S+
Air Quality, Toxics	S	S-	=	S	S	=	=	=	-	S-	-
Topography	I	=	=	=	S+	=	=	=	=	=	=
Soils, Geology	I	=	=	=	=	=	=	=	=	=	=
Hydrology	I	=	=	=	=	=	=	=	S+	=	=
Biology	I	=	=	+	+	=	+	=	+	=	+
Public Services	I	=	=	=	=	=	=	=	+	=	=
Nat. Resources/Energy	S	S-	=	S+	S+	=	-	-	-	S+	S+
Aesthetics	I	=	=	-	S+	=	-	-	S	=	=
Cultural Resources	I	=	=	=	=	=	=	=	=	=	=
Recreation	S	=	=	-	S	=	+	+	S	=	-
Health, Safety	I	=	=	=	=	=	=	=	=	=	=
Hazardous Waste	I	=	=	=	=	=	=	=	S	=	S
Socioeconomics	S	=	=	+	+	=	=	=	+	=	S
Risk of Upset	I	=	=	+	+	=	=	=	-	=	-
Cumulative	S	=	=	+	+	=	=	=	+	=	+

* In those instances in which the comparison of the alternative to the Proposed Project is materially affected by the phasing, a footnote has been added to identify those differences.

~~** Significant local air quality impacts will not occur until sometime after 2010. These impacts will be mitigated to a level below the level of significance.~~

Legend:
- I = Impacts are insignificant after mitigation.
- S = Impacts are significant after mitigation.
- \+ = Impacts are substantially greater than the Proposed Project.
- \- = Impacts are substantially less than the Proposed Project.
- = = Impacts are similar to the Proposed Project
- NA = Not Applicable.

8.14 ALTERNATIVES CONSIDERED BUT REJECTED

This section discusses alternatives to the Proposed Project that have been considered but rejected from further consideration. The alternatives that have not been carried forward for further consideration were eliminated, generally, if screening analyses indicated that the scenario:

(i) had a serious operational or environmental deficiency and/or was clearly inferior to one or more scenarios retained for further study;

(ii) was infeasible or would have failed to meet significant and substantial goals and criteria, as established in the Community Reuse Plan and further refined for the ASMP;

(iii) did not offer significant advantages over another scenario retained for further study, or;

(iv) was closely bracketed by two other scenarios that were carried forward for further consideration, or was a closely-related variant of a scenario that had been carried forward.

The following subsections describe these alternatives and the specific reasons for eliminating them from further consideration in this EIR.

8.14.1 One-Airport Scenarios Not Carried Forward

8.14.1.1 JWA Only – Status Quo with Runway Extension

Under this alternative, the role of JWA would remain unchanged, but the main runway would be extended 1,100 feet to the north for a total runway length of 6,800 feet. The northerly extension would allow some commercial aircraft operating at JWA to have greater takeoff weights, enabling them to travel farther and/or carry more passengers. It would also provide an added margin of safety. In order to accommodate a significant amount of commercial passenger demand beyond 8.4 MAP, general aviation would be eliminated at JWA and the short runway closed. This alternative was eliminated from further consideration, because it was concluded that this scenario offered no significant advantage over Alternative F, while having the same failures to achieve project objectives as set forth in Alternative F in Section 8.4.3.

8.14.1.2 JWA Only – Enhanced Service

Under this alternative, the role of JWA would include additional long haul service. The improvements needed, the elimination of general aviation, and the conclusions for this alternative are the same as for Alternative 8.14.1.1, above.

8.14.1.3 JWA Only – Enhanced Service with Reduced General Aviation

Under this alternative, the role of JWA would be expanded to include full long-haul service. The main runway would be extended 1,100 feet to the north for a total runway length of 6,800 feet. This alternative was eliminated from further consideration, because it was concluded that this scenario offered no significant advantage over Alternative G, while failing to attain the same project objectives as discussed in Section 8.5.3.

8.14.1.4 MCAS El Toro Only

Ten alternatives were evaluated which involved closing JWA to all aircraft operations and developing MCAS El Toro to varying degrees of passenger and other service. None of the single-airport scenarios that would close JWA has been considered further, because the general aviation facilities at JWA would become unavailable to Orange County general aviation users or would need to be replaced at MCAS El Toro. If all JWA general aviation activity were relocated to MCAS El Toro, it would significantly affect the ability of MCAS El Toro to accommodate growth in commercial air passenger and cargo needs. The project objectives to follow the County's General Plan and board direction to utilize a two airport system would also not be attained.

8.14.1.5 New Airport Site Only

Under this alternative, a new airport site would have been developed to serve Orange County. JWA would be closed to all aircraft operations, and MCAS El Toro would have been reused for nonaviation purposes. Three potential new airport sites were identified for this analysis based on prior airport site selection studies in Orange County (AFRC Los Alamitos and a Cristianitos Canyon site in Orange County, and Camp Pendleton in San Diego County). No determination has been made here of the suitability of any of the three sites for a commercial airport with full domestic to full international service (see Section 8.12).

This scenario has not been carried forward because a guideline established by the Board of Supervisors in adopting the CRP was that a system of two airports, including commercial service at JWA, is favored. Alternative K consists of a two-airport system, with commercial service at JWA and a new commercial airport site serving Orange County. Furthermore, there is considerable uncertainty and speculation regarding the feasibility of both of the Orange County sites suggested. With the Camp Pendleton site about ten miles from the

Orange County border, it would not be a suitable replacement for JWA. The County has no access to the ownership of the Pendleton and Los Alamitos sites, and they remain under military ownership and control. There are no plans pending to close either of those bases. As set forth in Section 11.3.3.3 on page 11-56 of EIR No. 563, the Cristianitos Canyon site was rejected because it would be only a medium haul facility (maximum runway length 6,800 feet), is within the ten mile Emergency Planning Zone for the San Onofre Nuclear Power Plant, and it would result in greater environmental impacts than the Community Reuse Plan. See also the discussion in Section 8.11, Appendix J to this EIR, and the studies referenced in Appendix J.

8.14.2 Unlinked Two-Airport Scenarios Not Carried Forward

8.14.2.1 Alternative D

Under this alternative, MCAS El Toro would be developed to provide full domestic and international passenger and cargo service, and general aviation service, as in the Proposed Project. However, JWA would serve only general aviation. No major facility improvements would be needed at JWA. Runway improvements at MCAS El Toro would be the same as the Proposed Project and Alternative C. Although this alternative was the closest refined alternative to CRP Alternative A, this alternative was rejected because it does not meet the project objective of a two airport system, and because it causes greater environmental impacts than the Proposed Project.

8.14.2.2 Alternative H: JWA - Status Quo; MCAS El Toro - Full Domestic with 10 MAP Limit

The airport roles and airfield improvements for this alternative would be the same as for Alternative A, except that MCAS El Toro would be constrained to 10 MAP. The limited service at OCX would result in twice as many passengers being served at JWA in 2020 compared with the Proposed Project (10.8 MAP compared with 5.4 MAP). This alternative has been rejected because it does not meet the project objectives. Less than two-thirds of the County's air passenger service demand would be served by Alternative H. The regional air quality benefits of serving nearly all the demand in Orange County would be lost. Noise impacts around JWA would increase. Figure 8-9 depicts Alternative H.

8.14.2.3 Alternative I: JWA – Status Quo; MCAS El Toro - Full Domestic with 15 MAP Limit

Aviation Uses

The airport roles and airfield improvements for this alternative would be the same as for Alternative A, except that MCAS El Toro would be constrained to 15 MAP. Because of this

limitation, JWA would serve slightly more passengers in 2020 than under the Proposed Project, 7 MAP compared with 5.4 MAP. JWA currently (1998) serves approximately 7.5 MAP. This alternative has been rejected because it does not meet the project objectives. Alternative I would serve less than two-thirds of the County's aviation passenger demand, will reduce the potential economic benefits of the project, would not take full advantage of the noise buffer around El Toro, and would not reduce regional air quality impacts to the extent feasible under the Proposed Project.

8.14.2.4 JWA -- Status Quo/MCAS El Toro -- General Aviation and Cargo

This scenario was the Community Reuse Plan (CRP) Alternative B. JWA would have retained its existing role, while MCAS El Toro would have been devoted to general aviation and cargo use only. The airfield at MCAS El Toro would consist of two closely-spaced parallel runways, the existing Runway 16R-34L and a new 4,200-foot runway with a runway centerline separation of 700 feet. The CRP and associated Environmental Impact Report No. 563 concluded that the CRP Alternative A was superior to the CRP Alternative B. For the reasons stated in EIR No. 563, this scenario was not carried forward for further study.

8.14.2.5 JWA -- Status Quo/MCAS El Toro -- Limited International

Under this alternative, JWA would have continued its existing role. MCAS El Toro would have provided limited international service, including limited service to overseas destinations in addition to service to North and Central America. The runway configuration at JWA would have been unchanged. MCAS El Toro would have had the same runway improvements as Alternative A. The role of MCAS El Toro in this scenario would have been between that of Alternatives A (MCAS El Toro full domestic, including international to North and Central America) and B (MCAS El Toro full international). The effects of this alternative are adequately tested by Alternatives A and B, so it was not be carried forward for further analysis.

8.14.2.6 JWA (North Flow) -- Status Quo/MCAS El Toro -- Full International with Wide Parallel Runways

This alternative is similar to Alternative J, except JWA would have operated in predominantly north-flow (aircraft landing and departing to the north), rather than the existing south-flow operations. North flow operations at JWA have been examined in the airspace analysis of Alternative J. Therefore, further study under a separate scenario was not needed.

8.14.2.7 JWA -- Status Quo/MCAS El Toro -- Full International with Realigned Runways 13/31

Under this alternative, JWA would have operated as status quo, and one or more of the runways at MCAS El Toro would have been realigned to a northwest-southeast (Runway 13/31) direction. The purpose of the realignment would have been to minimize the presence of high terrain in the approach and departure paths. This scenario would be similar to Alternative B, except for the MCAS El Toro runway configuration. The realignment of runways would not take full advantage of the non-residential areas within the County Policy Implementation Line (PIL) and, in fact, exposes new noise sensitive areas to aircraft noise impacts. For this reason, a separate alternative with realigned runways was not carried forward.

8.14.2.8 JWA -- Expanded Role/MCAS El Toro -- General Aviation and Cargo

Two alternatives would have expanded passenger service roles for JWA (ranging from full domestic to limited international), with only general aviation and cargo at MCAS El Toro. Runways at JWA would have been extended to 6,800 to 8,000 feet, while MCAS El Toro would have had the same runway two-runway configuration discussed previously. In a two-airport system with MCAS El Toro, long-haul and international service is more suited to MCAS El Toro due to its longer runways and ample space for the necessary terminal facilities. Runways of 6,800 to 8,000 feet would not efficiently provide full domestic and limited international service, respectively at JWA. The project objectives to serve Orange County's aviation demand and take advantage of economic and land use opportunities prescribed by the availability of El Toro would not be met. Thus, these scenarios were not considered further.

8.14.2.9 JWA -- Expanded Cargo or Passenger Roles/MCAS El Toro -- Short- and Medium-Haul

Three alternatives would have expanded the role of JWA (either all-cargo service or full domestic or limited international passenger service), while MCAS El Toro would have assumed JWA's current role. These alternatives all would have forced JWA to assume a role that requires longer runways and more space than presently exists at the airport. Although, the main runway at JWA would have been extended from 6,800 to 8,000 feet, it would not have adequately accommodated the roles envisioned in these alternatives. On the other hand, the long runways at MCAS El Toro would have been underutilized by the short- and medium-haul role there. Alternatives with JWA fulfilling the primarily short- and medium-haul role and MCAS El Toro serving longer flights (such as Alternatives A, B, H, I and J) provide a better balance considering existing facilities and available space at the two airports. The studied alternatives take better advantage of the economic and land use

opportunities with El Toro to meet the project objectives to serve Orange County's aviation demand. Therefore, these three scenarios were not carried forward for further study.

8.14.2.10 JWA -- General Aviation and Cargo/MCAS El Toro -- Long-Haul or Limited International

Two alternatives envisioned JWA with general aviation and all-cargo service, and MCAS El Toro with long-haul to limited international passenger service. The main runway at JWA would have been extended to 6,800 feet. MCAS El Toro would have had intersecting pairs of close parallel runways. The 6,800-foot runway length at JWA would not have adequately accommodated expanded all-cargo service. Furthermore, there are no facilities and little space to support an all-cargo role there. The longer runways at MCAS El Toro make that airport more suited to the all-cargo role. Thus, this alternative fails to meet the project objectives to take advantage of economic and land use opportunities at El Toro to meet Orange County's aviation demand.

8.14.2.11 JWA -- General Aviation and Short-Haul/MCAS El Toro -- Limited or Full International

Here, JWA would have had a general aviation and short-haul role, while MCAS El Toro would have provided limited to full international passenger service. The runway configuration at JWA would have remained unchanged. MCAS El Toro would have had intersecting pairs of close parallel runways. These alternatives are very similar to Alternative B, the primary difference being medium-haul service at JWA in Alternative B. Demand forecasts have shown that with short- and medium haul service at JWA it would attract fewer passengers with Alternatives A and B than served today. Therefore, it is more appropriate to consider medium-haul service at JWA, as in Alternatives A and B. Moreover, Alternative C tests the general aviation and short-haul role at JWA. For these reasons, these two scenarios were not carried forward.

8.14.2.12 JWA -- General Aviation/MCAS El Toro -- Full Domestic

In this scenario, JWA would have served only general aviation, while MCAS El Toro would have had a full domestic role. This scenario would be similar to Alternative D, except MCAS El Toro would not provide international service. It is concluded that Alternative D will adequately test the limits of effects under this scenario, and therefore this scenario was eliminated from further consideration.

8.14.2.13 JWA -- General Aviation/MCAS El Toro -- Full International

This alternative is CRP Alternative A: general aviation at JWA and all-cargo and full international passenger service at MCAS El Toro. Under this alternative, JWA would have retained its existing runway configuration. MCAS El Toro would have had the same airfield configuration as Alternative A. The more refined and detailed Alternative D would have had the same roles as this alternative, but would have had extended runways at MCAS El Toro (within the existing MCAS El Toro property). The longer runways at MCAS El Toro would have provided the greater takeoff length needed for intercontinental flights. This scenario does not appear to have a significant advantage over Alternative D, and thus was not carried forward for further study in its original form. For the reasons stated in Section 8.14.2.1, the CRP has evolved in its more refined form, and with Board direction for a two airport system, into the Proposed Project, Alternative B.

8.14.2.14 General Aviation/MCAS El Toro -- Full International with Parallel Runways Separated by 2,500 Feet

This alternative would have been similar to Alternative J, but with a narrower runway separation to reduce impacts to SR133. The 3,000-foot separation of Alternative J could potentially permit simultaneous landings or departures on the two runways during IFR conditions. While a separation of 2,500 feet allows a simultaneous departure and arrival, it does not allow simultaneous arrivals or departures. Furthermore, the area between the runways for terminal development would be smaller than desirable for terminal development. This scenario offers no significant advantage over Alternative J, and was not carried forward for further consideration.

8.14.3 Linked Two-Airport Scenarios Not Carried Forward

8.14.3.1 JWA – Short- to Medium-Haul/MCAS El Toro – Long-Haul to Full International

Alternative C examines a linked two-airport system with short-haul service at JWA and medium-haul to full international service at MCAS El Toro. This alternative is a variation of that concept, whereby JWA would assume a greater role in the split of activity. Demand forecast studies have shown that JWA would serve 10.1 MAP by 2020 with short-haul service only (Alternative C). Because of the lack of terminal capacity beyond the 10 MAP range at JWA, and because the longer runways at MCAS El Toro would be more suited to the longer-haul operations, this scenario would offer no significant advantage over Alternative C, in the context of project objectives to take advantage of economic and land use opportunities at El Toro to serve Orange County's aviation demand. Further, the expense of the people mover system connecting the two airports is infeasible.

8.14.3.2 JWA – Full Domestic/MCAS El Toro – International Only

The reasons for not carrying forward this alternative are similar to those for the preceding alternative. In this case, however, the full domestic role is significantly less suitable for JWA than the short-haul role of Alternative C, because of the limited capability to extend the main runway within airport property. Furthermore, the split of activity between the two airports in this alternative would place the majority of passengers at JWA, which does not have the space on-airport to accommodate it. The scenario would also require a very large number of passengers to connect between the two airports on the people mover system, the cost of which is infeasible.