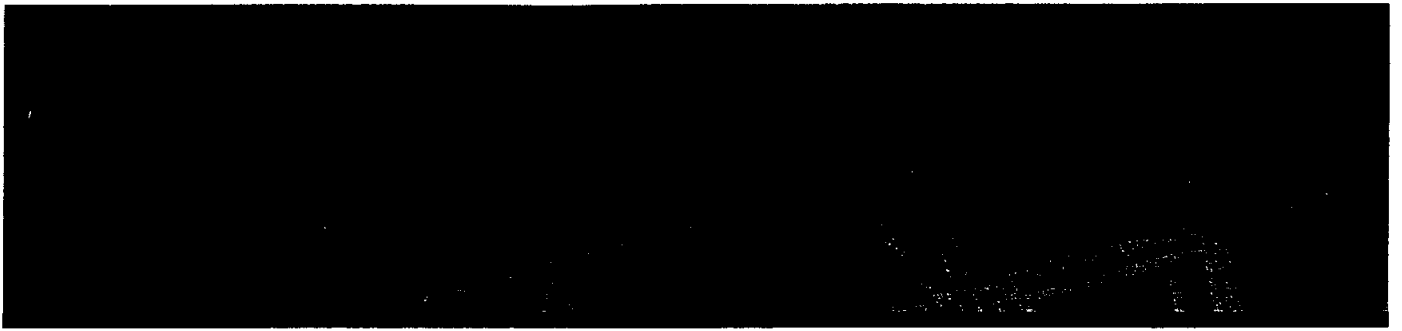
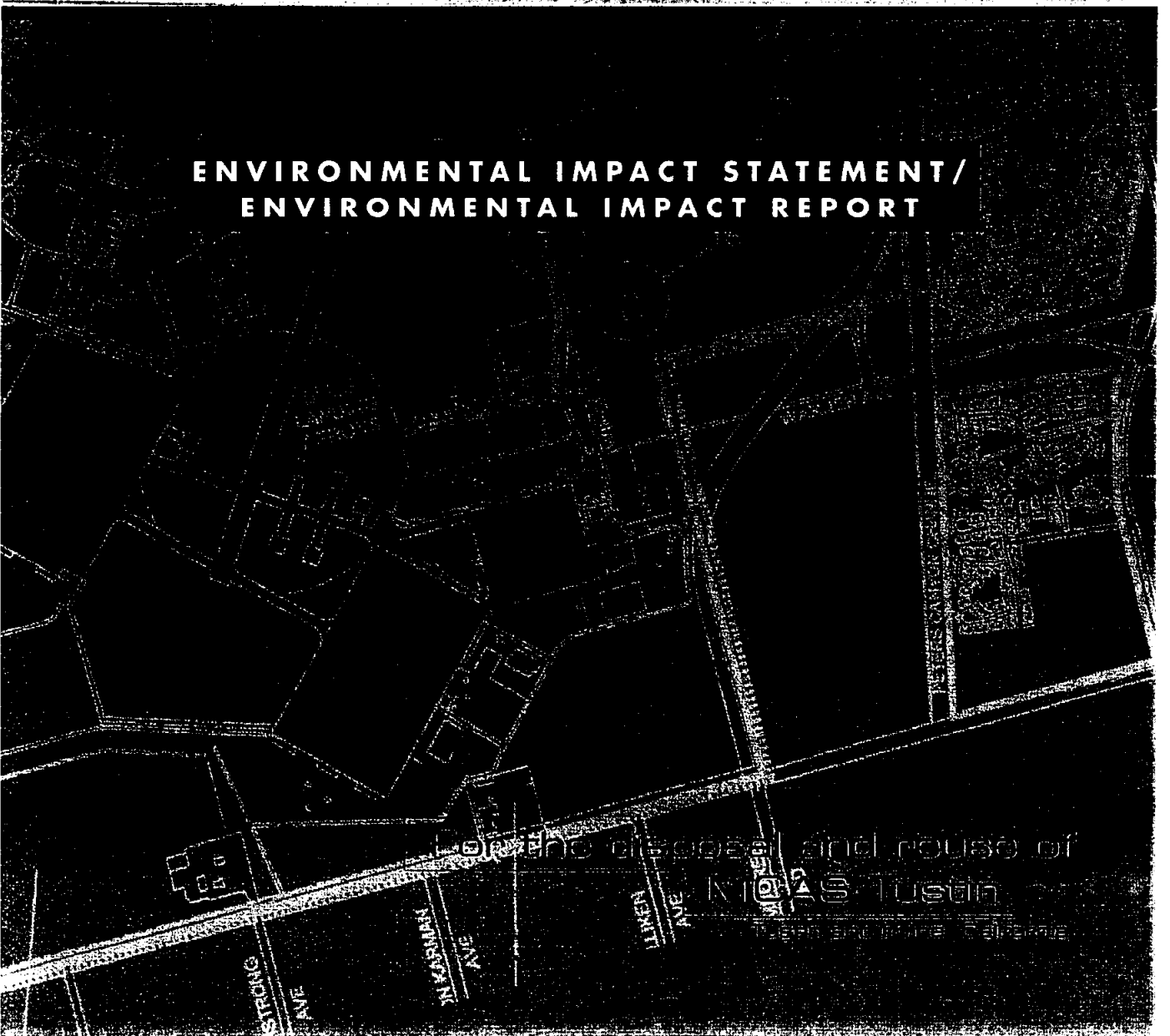




ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT



Being disposed and house of
NICHAS Justin

VOLUME 2

TABLE OF CONTENTS

Section

COMMENTS AND RESPONSES

APPENDIX F – Final Traffic Technical Report

ERRATA SHEETS - Supplementary Technical Appendices to Support Traffic Report

Note: This is Volume 2 of two volumes. Volume 1 contains the Final EIS/EIR and the following appendices:

- A Glossary/Index
- B Overview of Federal and State Disposal Laws and Regulations
- C Notice of Intent, Notice of Preparation, Supplementary Notice of Intent
- D Summary of Revisions Made to the Previously Circulated Draft EIS/EIR
- E Supporting Correspondence/Information
- G Supplementary Biological Information
- H Memorandum of Agreement Regarding Historic Resources

This page intentionally left blank.

COMMENTS AND RESPONSES

Written Comments

F Federal Agencies

S State Agencies

L Local Agencies

N Native American Tribes

O Organizations

I Individuals

Public Hearing Testimony

T Testimony

**RESPONSES TO COMMENTS ON THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT/
ENVIRONMENTAL IMPACT REPORT
FOR THE DISPOSAL AND REUSE OF MCAS TUSTIN**

The Draft Environmental Impact Statement/Environmental Impact Report for the Disposal and Reuse of MCAS Tustin was circulated for public and agency review from July 9, 1999 to August 23, 1999. The lead agencies, the U.S. Department of the Navy, and the City of Tustin, held a public hearing on August 11, 1999 to provide the public with an opportunity to comment on the content and accuracy of the Draft EIS/EIR. In addition, written comments were accepted through the review period. Some agencies requested additional time for review and the comment period was extended to September 1, 1999.

In accordance with the NEPA (42 U.S.C. § 4332 (1994)) regulations and guidelines for CEQA (Cal. Pub. Res. Code §§ 2100 et seq., as amended), the Final EIS/EIR includes a list of agencies, organizations, and individuals commenting on the Draft EIS/EIR; comment letters; and responses to the substantive environmental issues raised in the comments. Responses to comments raised at the public hearing are also included. If a comment did not relate to an environmental issue or was worded more as a statement to be entered into the record, it is noted.

This page intentionally left blank.

COMMENT INDEX

AGENCY/ ORGANIZATION	COMMENTER	LETTER REFERENCE
Written Comments		
Federal Agency	U.S. Department of Transportation	F1
	Federal Highway Administration, California Division	
	U.S. Environmental Protection Agency, Region IX	F2
	U.S. Department of the Interior	F3
	Office of Environmental Policy and Compliance	
	U.S. Army Corps of Engineers, Los Angeles District	F4
State Agency	California Department of Transportation, District 12	S1
	California Public Utilities Commission	S2
	Governor's Office of Planning and Research	S3
	State Clearinghouse	
Local Agency	County of Orange Executive Office	L1
	Orange County Sanitation District	L2
	Irvine Ranch Water District	L3
	Southern California Association of Governments (8/25/99)	L4
	Southern California Association of Governments (8/10/99)	L5
	City of Irvine	L6
	Orange County Fire Authority	L7
	Transportation Corridor Agencies	L8
	Bowie, Arneson, Wiles & Giannone (representing Santa Ana Unified School District)	L9
	Santa Ana Unified School District	L10
	South Coast Air Quality Management District	L11
	City of Santa Ana (8/31/99)	L12
	City of Santa Ana (8/27/99)	L13
Native American Tribe	Gabrieleno/Tongva Tribal Council	N1
	Professional Native American Cultural Resource Monitors	N2
Organization	The Irvine Company	O1
	North Irvine Villages Association	O2
	IBC Consortium	O3

AGENCY/ ORGANIZATION	COMMENTER	LETTER REFERENCE
Individual	Law Offices of Ivan K. Stevenson (representing Osumi Farms)	I1
	Roger McCullough	I2
	Martha Lindsay	I3
	Kay Shafer	I4
	John C. McDonald	I5
Public Hearing Testimony		
Local Agency	Wendy Wiles (representing Santa Ana Unified School District)	T1
Individual	John Higgins	T2

CALIFORNIA DIVISION MEMORANDUM



U.S. Department
of Transportation
Federal Highway
Administration

To: File
From: Ken Kochevar
Date: 7/28/99
Subject: Comments on transportation/circulation section on the Disposal and Reuse of the

File:#P23684

Dena, The following are my comments from our conversation today. I have only reviewed and commented on the transportation/circulation section. If you have any further questions give me a call. Ken Kochevar (916) 498-5853

F1-1 Pg. 4-146: The words between the second to last and last sentence need to be removed.

F1-2 Pg. 4-148 to 4-183: Refer to mitigated tables 4.12-8, 4.12-9, 4.12-17, 4.12-18, 4.12-19, 4.12-26, 4.12-27, and 4.12-28. Why do we need the column on "Impacts" when these should already be mitigated?

F1-3 Pg. 4-185: On the last sentence under "Mitigation Measures" add the words, ...to avoid traffic congestion impacts.

F1-1 Section 4.12 of the FEIS/EIR has been modified as suggested.

F1-2 Tables 4.12-8, 4.12-9, 4.12-17, etc. specify the required mitigation for the impacts identified in the corresponding tables 4.12-5, 4.12-6, 4.12-14, etc. The column headed "Impacts" is the same in each pair of corresponding tables and identifies whether there would (c) or would not (p) be a deficiency prior to the implementation of the proposed Alternative. "Mitigated" intersections which would still operate at less than acceptable LOS are identified in the "Mitigation Measures" text section for each alternative. ICU data for the mitigated intersections is included in Appendix F, the traffic study.

F1-3 Section 4.12 of the FEIS/EIR has been modified as suggested.

OPTIONAL FORM NO. 10-60		FAX TRANSMITTAL		Page 1 of 1	
To:	Ken Kochevar	From:	Ken Kochevar		
Date:	7/28/99	Phone:	(916) 498-5853		
Fax:	(916) 498-5853	Fax:	(916) 498-5853		
NOTED BY: 7/28/99					

RECEIVED
JUL 29 1999
REDEVELOPMENT AGENCY



RECEIVED

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AUG 25 1999

REGION IX
REDEVELOPMENT AGENCY

75 Hawthorne Street
San Francisco, CA 94105

Captain George R. Opra
Marine Corps Air Station El Toro
P.O. Box 95001
Santa Ana, CA 92709

AUG 23 1999

Dear Captain Opra,

The U.S. Environmental Protection Agency (EPA) has reviewed the Department of the Navy and the City of Tustin's *Revised Draft EIS/EIR for the Disposal and Reuse of Marine Corps Air Station (MCAS) Tustin*. Comments are provided under the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act and the Council on Environmental Quality's (CEQ) NEPA Implementing Regulations (40 CFR 1500-1508).

The MCAS Tustin has been closed under the Base Closure and Realignment Act. The City of Tustin has prepared and recirculated a Revised DEIS/EIR to address the significant volume of comments received on the initial DEIS regarding a broad range of environmental impacts. The Revised DEIS/EIR examines three re-use alternatives for the facility, as well as a no-action alternative whereby the Navy would maintain a custodial role over the base. The three re-use alternatives are variations on a theme of mixed residential, recreational, and commercial development.

EPA's comments focus on impacts to jurisdictional waters of the U.S., including wetlands on the site, and future operations of the proposed golf course that would have associated chemical fertilizer/pesticide use.

Based upon our review of the Revised DEIS/EIR, we have rated the document as Category EC-2, Environmental Concerns - Insufficient Information. Please refer to the enclosed Summary of Rating Definitions and Follow-Up Action for further information on EPA's rating system. The comments below will provide specific information about our concerns and what information and analysis will address them.

Pesticide Use and Human Health

All three re-use alternatives feature a golf course as a significant fixture of the reuse plans. Alternative one would have golf course "footprint" of 159 acres, the Alternative 2 golf course would cover 177 acres, and Alternative 3 would cover 187 acres. An elementary school and neighborhood park is proposed within the boundaries of the golf course and village in Alternative 1. Low and medium-density housing would be essentially encircled by the golf courses proposed for the other alternatives. In any of these cases, the fertilizer and pesticide use likely to be associated with the golf course is a concern due to both residential proximity and especially children's health (particularly in the case of Alternative 1).

The DEIS focuses its attention on hazardous substances on the current cleanup of the Tustin Air Station (the IRP) and the past agricultural use of pesticides (Section 3 and page 3-113), but does not fully

F2-1

An expanded discussion of fertilizer and pesticide use at the golf course and park areas adjacent to residential areas as been provided in subsection 4.11.3 of the FEIS/EIR. The relationship between these land uses and fertilizers/pesticides would be considered during future, more detailed, planning of site-specific development projects. Regulatory requirements of best management practices (BMPs) and integrated pest management (IPM) would reduce potential conflicts with land uses that may generate hazardous materials.

F2-1

address re-use hazardous chemicals associated with golf course operation. The Final EIS should fully assess the potential impacts of the planned use and reasonably anticipated environmental and health impacts associated with golf course operation. Proposed mitigation plans should also be fully explained. In a comment letter dated February 27, 1998, EPA commented on similar concerns. Integrated Pest Management (IPM) techniques were suggested, and the need for more comprehensive analysis of fertilizer and pesticide use and its effects on human health were called for. The current Revised DEIS has not fulfilled this need.

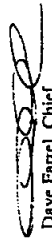
Wetlands and Waters of the United States

The DEIS describes the likely impacts to jurisdictional waters and wetlands, and assumes complete destruction of them in the area of the re-use plan. This includes approximately 33 acres of jurisdictional waters of the United States, of which 3.6 acres are wetlands. The document describes the U.S. Army Corps of Engineers (COE) process for obtaining permits for discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act.

As the DEIS points out, and as EPA stated in its comment letter dated February 27, 1998, the Section 404 permit process favors avoidance of wetlands. Where adequate justification is demonstrated that wetlands can not be avoided in a project, appropriate mitigation is acceptable by providing for restoration, revegetation, or replacement of wetlands. While the DEIS (page 4-102) accurately explains this process, it should be more specific in describing possible mitigation measures under the planned 404 permitting process. The DEIS seems to indicate that the on-site wetlands will be destroyed, and through the COE 404 process, appropriate mitigation will be achieved. The Final EIS should contain several reasonable proposals for both avoidance and off-site mitigation that might be considered under the 404 permit process. Without these comparisons of options and impacts, the document does not provide enough information to fully analyze the range of alternatives available and associated impacts.

Please send two copies of the Final Environmental Impact Statement to my attention (mail code: CMD-2) at the letterhead address at the same time that it is sent to EPA's Washington, D.C. office for filing. Please contact me at (415) 744-1584 c. Paul Carroll of my staff at (415) 744-1148 if you have questions regarding our comments.

Sincerely,


Dave Farrell, Chief
Federal Activities Office

Attachment:
EPA Ratings Summary

cc: Mr. Dana Ogden, Senior Project Manager, City of Tustin
Col. Robert Davis, District Engineer, LA District, Corps of Engineers
Richard Schubel, Chief, Regulatory Branch, LA District, Corps of Engineers

F2-2

There may be options to avoid individual wetlands at the site-specific design phase, including incorporation of seasonal wetlands into the golf course feature; however, it would be inappropriate to base the significance determination regarding wetland impacts on such an uncertain outcome. Instead the EIS/EIR identifies the most conservative scenario where all wetlands on the site would be destroyed. Since it is unknown at this time what the exact impact to wetlands would be under the three reuse alternatives examined, it is inappropriate to speculate as to what reasonable proposals for both avoidance and off-site mitigation might be considered under the 404 permit process. The Section 404 permit process includes extensive evaluation of alternatives as subsequent individual development projects occur, such that avoidance and off-site mitigation can be evaluated once potential individual, project-specific impacts are known. The EIS/EIR also examined and rejected an alternative as infeasible that protected existing wetlands at the program level (see subsection 2.3.3 of the EIS/EIR).

SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION

Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of environmental quality, public health or welfare. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected in the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1-Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From: EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
600 Harrison Street, Suite 515
San Francisco, California 94107-1376



ER99/617

August 20, 1999

Dana Ogdon, Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, California 92780

Dear Ms. Ogdon:

RE: Revised Draft Environmental Impact Statement/Report for the Disposal and Reuse of
Marine Corps Air Station (MCAS) Tustin, Tustin, California, Irvine California (Orange
County, California) (ER 99/617).

Dear Ms. Ogden:

The Department of the Interior has reviewed the above-referenced EIS/EIR for MCAS Tustin, and prepared the following general comments. These are in addition to comments provided to the U.S. Marine Corps on April 1, 1998.

- 1) According to the EIS/EIR, wetland vegetation in Peters Canyon Channel has the potential to exist, and historically existed. Lack of vegetation within the channel is attributed to clearing of vegetation by the Orange County Flood Control District. However, the EIS/EIR appears to characterize habitat within Peters Canyon Channel as jurisdictional waters rather than jurisdictional wetlands. It is unclear whether this determination is based on the present absence of hydrophytic vegetation from the channel. The Corps in its Wetland Delineation Manual (January 1987) considers wetlands within which vegetation has been cleared as "atypical situations" for purposes of making a wetland delineation. The summary of jurisdictional wetland and jurisdictional waters impacts should accurately portray the acreage of wetlands subject to impacts pursuant to Corps' methodology for atypical situations.

F3-1

- 2) The proposed land uses are non-water dependent. We recommend avoidance of all impacts to jurisdictional waters and wetlands.

F3-2

- 3) The EIS/EIR proposes to relocate southwestern pond turtles as mitigation for impacts to this species. The proposal for relocation of pond turtles assumes that suitable habitat can

F3-3

F3-1

Based in a field visit with staff from the USACOE and utilizing the methodology contained in the Corps Wetlands Delineation Manual (1987), as well as a correction to the boundary of the reuse plan area within the wetlands study, the FEIS/EIR has been revised to reflect modifications in the acreage of jurisdictional waters and wetlands. Wetlands are now considered to encompass approximately 2.4 acres and jurisdictional waters are now considered to encompass approximately 29.0 acres. The delineation includes approximately 12.8 acres of jurisdictional waters in Peters Canyon Channel, which are cleared regularly for flood control purposes and may be indirectly impacted by reuse. The corrections do not change the conclusion of significance. See also response to comment letters F2 and F4.

F3-2

As noted in Section 4.7 of the EIS/EIR, impacts to wetlands and jurisdictional waters would occur both in the Peters Canyon Channel complex and other discontinuous channels. The EIS/EIR acknowledges that it may be possible to avoid or reduce impacts, but it would not be appropriate to base the significance determination on such an uncertain outcome. Therefore, in the interest of full disclosure of reasonably foreseeable impacts, the EIS/EIR assumes loss of all jurisdictional waters and wetlands. Refer also to response to comment letter F2.

F3-3

As indicated in Section 3.7 of the EIS/EIR, the population of southwestern pond turtles at MCAS Tustin is not expected to persist into the foreseeable future. The southwestern pond turtle is not listed federally as threatened or endangered. No consultation with the USFWS would be required for any action related to the pond turtles, and DON has no authority to participate in relocation of the pond turtle. Since the CDFG has listed the southwestern pond turtle as a species of special concern, consultation and coordination with CDFG, as well as permits from CDFG for live-capture, would be required for relocation due to reuse alternatives. No appropriate habitat within the City of Tustin is available for relocation. Many property owners and public agencies may be adverse to the relocation of species of special concern onto their property or jurisdiction, and it would be speculative to discuss specific sites prior to completion of consultation with CDFG and with potential property owners and/or appropriate public agencies.

Mitigation measures Bio-2, Bio-3, and Bio-4 contained in the DEIS/EIR would ensure that a relocation plan acceptable to CDFG is negotiated. That plan could include population monitoring, an alien species control program, and permission of the present landowner to manage habitat for the pond turtle. Identification of the source of funding necessary for such an effort is also required.

be locally identified. Appropriate pond turtle habitat not only includes open water, but other habitat features such as appropriate adjoining upland habitat and exposure to the sun for reproduction and basking, and remoteness from humans to protect against collectors and displacement by introduction of non-native species. Recent trapping of southwestern pond turtles in the San Joaquin Marsh suggests that this population of pond turtles is in decline likely due to competition and/or predation from alien species (Goodman, 1999). The Shady Canyon location will necessitate creation of habitat and appropriate hydrology, and may involve displacement of other habitat types as a result. The EIS/EIR should identify the specific site proposed for relocation, and assess associated impacts and suitability of that location for the pond turtle. A proposal to relocate pond turtles to the San Joaquin Marsh should include population monitoring, an alien species control program, permission of the present landowner to manage habitat for this species, and identification of the source of funding necessary for such an effort.

The appropriateness of relocation as mitigation for impacts to southwestern pond turtle can only be determined if an assessment of the size and age structure of the population demonstrates that it is of low value for long-term conservation, and if an appropriate relocation site can be identified. If relocation of the pond turtle is pursued, a relocation plan acceptable to the U.S. Fish and Wildlife Service and/or California Department of Fish and Game should be prepared prior to issuance of a grading permit for the project.

- 4) Based on the information provided, we cannot determine the significance of loss of grasslands associated with the proposed project. The EIS/EIR should include a table summarizing acreage of impacts to each habitat type subject to impacts from the proposed project. The contribution of this project to cumulative loss of grasslands within Orange County is likely an adverse, if not significant impact, due to loss of foraging habitat for northern harrier and other raptors, and sensitive species, like burrowing owl and loggerhead shrike. Consideration should be given to retaining onsite natural habitats, or compensating for habitat losses by contributing to conservation of like habitats elsewhere.

F3-4

- 5) The EIS/EIR should be revised to include the referenced biological surveys as appendices to the document. Should you have questions regarding any of the above comments, please contact William Miller of FWS, Carlsbad at (760) 431-9440.

F3-5

Thank you for the opportunity to comment on this document.

Sincerely,

Patricia Sanderson Port
Regional Environmental Officer

cc:
Director, OEPC, w/original incoming
Regional Director, FWS, Portland

F3-4

As stated in the DEIS/EIR (Section 3.7), no native grasslands remain at MCAS Tustin. Agricultural, ruderal, and ornamental vegetation are the primary forms of plant life. Agricultural and ruderal plants on the station are the primary wildlife habitat provided and the only native plant communities are located in disturbed wetlands. Agricultural and ruderal plant communities can be found on about 765 acres of the approximately 1,600-acre reuse plan area (City of Tustin 1993b). Of this land, approximately 530 acres are utilized for agricultural operations (Section 3.8 of the EIS/EIR), with the remaining approximately 245 acres comprised of ruderal vegetation.

No burrowing owls, northern harriers, or other raptors were observed on the site (Section 3.7). Considering the lack of native habitat for these species on MCAS Tustin, their absence is not surprising. Although loggerhead shrikes have been observed at the site, the loss of foraging area for this species is considered less than significant (Section 4.7). The cumulative impacts discussion (subsection 5.2.7) states that, under CEQA, cumulative impacts would be less than significant because project impacts would be less than significant. However, it does acknowledge that the "development of identified general plans (Tustin, Irvine, and Orange County) and the reuse of MCAS El Toro would contribute to continued, irreversible loss of native habitat and sensitive species."

F3-5

A biological appendix (Appendix G) has been provided that includes the following reports: *MCAS Tustin Biological Impacts and Mitigation* (Tierra Madre Consultants, March 1995), *MCAS Tustin Southwestern Pond Turtle Survey* (Tierra Madre Consultants, June 1999), *Wetlands Delineation MCAS Tustin* (Tierra Data Systems, August 1999), and supplementary letter from Tierra Data Systems dated October 29, 1999.

REFERENCES:

Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

Goodman, Robert. 1999. Southwestern pond turtle (*Clemmys marmorata pallida*) project within the San Joaquin Reserve, Orange County, California. (Unpublished Report)



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF

August 26, 1999

Office of the Chief
Regulatory Branch

Dana Ogdon
Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, California 92780

Dear Mr. Ogdon:

In regard to your Notice of Availability (File No. 199916346-VAW) concerning the completion of a Joint Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for Disposal and Reuse of Marine Corps Air Station (MCAS) in Tustin, Orange County, California, the Corps has the following comments.

1. Corps of Engineers permit, pursuant to Section 404 of the Clean Water Act, is required for the discharge of dredged or fill material into "waters of the United States" including adjacent wetlands. Examples of activities involving the discharge of dredged or fill material include the placing of bank protection, temporary or permanent stockpiling of excavated material, grading roads, any grading (including vegetative clearing operations) involving filling, low areas or leveling the land, and structures involving the placement of fill material.

For the purpose of the Corps' permit evaluation process, the Draft EIS/EIR should include:

- 1) An alternatives analysis satisfying the 404(b)(1) Guidelines. Such an analysis will enable the Corps to identify the least environmentally damaging practicable alternative in light of the overall project purpose.
- 2) A review of all public interest factors relevant to the proposal including the cumulative effects thereof.

In order to comply with the 404(b)(1) Guidelines, the alternatives analysis in the Draft EIS/EIR should first examine alternatives which avoid impacts to waters of the U.S. If avoidance is shown to be impracticable in terms of cost, logistics or existing technology in light of the overall project purpose, then alternatives which minimize impacts should be considered. Compensatory mitigation may not be used to reduce environmental impacts in the evaluation of the least damaging practicable alternative, but may be required for unavoidable adverse impacts which remain after all appropriate and practicable minimization has been incorporated.

F4-1

The EIS/EIR is a program document that evaluates large-scale (over 1,600 acres) reuse which may or may not result in significant impacts on wetlands. Refer to response to comment F2-2 for reasons why it is not appropriate to perform the detailed alternatives analysis required under 404 (b)(1) guidelines at this stage. Such an evaluation will be performed when more detailed land use planning occurs.

Public interest factors that may be applicable to the proposed reuse plan include, but are not limited to, conservation, general environmental concerns, wetlands, fish and wildlife values, flood hazards, land use, water supply and conservation, and water quality.

According to the Draft EIS/EIR, a total of 16.2 acres of jurisdictional waters of the U.S., including 3.65 acres of wetlands, would be directly impacted by the proposed reuse plan. The Draft EIS/EIR also states that an additional 16.5 acres of jurisdictional waters within Peters Canyon Channel would be indirectly impacted as a result of flood control improvements planned by the Corps of Engineers Regulatory Branch conducted a site visit of the MCAS Tustin to verify the draft Wetland Delineation report (dated May 1999). The Corps of Engineers Regulatory Branch made a preliminary determination that the impact acreage was underestimated and that several areas identified in the report as non-jurisdictional were jurisdictional. The Corps of Engineers Regulatory Branch requested historic information about the drainage patterns on the project site. Until this information is provided, the Corps of Engineers Regulatory Branch cannot complete their verification of the Wetland Delineation report.

F4-2

Enclosed you will find a permit application form and a pamphlet that describes our regulatory program. If you have any questions, please contact Vicki A. White of my staff at (213) 450-3114. Please refer to this letter in your reply.

Sincerely,



Mark Durham
Chief, South Coast Section
Regulatory Branch

Enclosure

F4-2

The draft wetlands delineation report (May 1999) was preliminarily updated after the June 1999 field visit with staff from the USACOE, and those preliminary wetlands acreage calculations were incorporated into the draft EIS/EIR document which was distributed for public review in July 1999. The May 1999 draft wetlands delineation report evaluated 11 sites and found that none contained jurisdictional waters or wetlands. Peters Canyon Channel was not addressed in the May 1999 evaluation. Based on a review of historic information site, as requested by the USACOE, and field verification with agency staff, the wetlands delineation was preliminarily revised. Those calculations resulted in an estimated 29.0 acres of jurisdictional waters and 3.65 acres as wetlands (Section 3.7 of the draft EIS/EIR). However, the final wetlands delineation was completed during the public review period, and an error was found in the reuse plan area boundary, so the final calculations are now estimated at 29.0 acres of jurisdictional waters and 2.4 acres of wetlands. These minor revisions are reflected in this FEIS/EIR but do not modify the previous conclusion of significant impacts to wetlands. The final wetlands delineation has been bound with other biological technical reports into a single biological appendix (Appendix G).

DEPARTMENT OF TRANSPORTATION

DISTRICT 12
3347 MICHELSON DRIVE, SUITE 100
IRVINE, CA 92612-0651



FAX and SEND

August 27, 1999

Dana Ogdon, Senior Project Manager
City of Tustin
Planning Department
300 Centennial Way
Tustin, CA 92780

IGR/CEQA
SCH# 94071005
DEIS/DEIR
Log # 572

Dear Mr. Ogdon:

Subject: MCAS Tustin Reuse Plan

Thank you for the opportunity to review and comment on the (re-issued) Draft Environmental Impact Statement/Report (DEIS/DEIR) for the MCAS Tustin Reuse Plan. The proposed project is for a 1,600-acre mixed-use development project (residential/commercial). There are three alternatives - whereby from 4,340 - 6,205 dwelling units would be constructed. The proposed project is located in the City of Tustin and is bounded by the SR-55, I-5, SR-133, and I-405 freeways.

Caltrans District 12 is a reviewing agency and is forwarding the following comments to you in addition to those comments in our letter of August 9, 1999 (attached):

- S1-1 • The impact of the project on the off-site drainage systems, particularly on the existing concrete channels has not been addressed.
- S1-2 • A Caltrans Encroachment Permit will be required.

S1-1

It is unclear from the comment which drainage systems the commenter is referencing. Section 3.3 identified and described the three large, existing concrete drainage channels in or adjacent to the project; Santa Ana-Santa Fe Channel, Peters Canyon Channel, and Barranca Channel. These channels are operated by the Orange County Flood Control District (OCFCD). Section 4.3 acknowledged that the existing storm drain system on MCAS Tustin would not be adequate because the pipes and channels are undersized. A conceptual storm drain system has been designed in coordination with OCFCD with construction of a backbone system along major roads and improvements to Barranca Channel. OCFCD anticipates the improvement of the Peters Canyon Channel in the next five years and is studying methods to improve the capacity of the Santa Ana-Santa Fe Channel. As concluded in the draft EIS/EIR, the system can be provided to serve the needs of civilian reuse under any alternative.

S1-2

Table 2-16 in the draft EIS/EIR identified that an encroachment permit would be necessary.

- The proposed project is expected to result in a substantial increase in traffic, have a significant impact on State Transportation Facilities, and exceed LOS standards established by the Congestion Management Agency. Mitigation measures will be needed to promote demand management and alternative modes of transportation. Suggested measures include: a) planning for and facilitating the use of commuter rail and transit use by implementing shuttle services to major transportation and business/commercial centers and constructing bus turnouts and amenities; b) construction of bicycle paths and amenities; c) facilitate the types of services and businesses that have trip reduction potential in the retail/commercial component of the proposed project; and d) coordinate the transportation planning process of the proposed development with (esp. large-scale) nearby developments (ex. El Toro MCAS Reuse Plan).

S1-3

All three reuse alternatives contain a bicycle path/lane network to connect with other existing and planned bike facilities. A Metrolink station is proposed for construction immediately adjacent to MCAS Tustin, with shuttle services being examined by OCTA. Such mitigation measures as shuttle service and bus turn-outs are appropriately defined in the more detailed Specific Plan stage. Chapter 7.0 of the EIS/EIR evaluates the Specific Plan, and many of the suggested mitigation measures are, in fact, part of its design, e.g., bus turn-outs. Additionally, Measure 1A-10 in Chapter 7.0 requires preparation of a pedestrian circulation component for each project within the Specific Plan to ensure such access to trails, parks, schools, shopping areas, bus stops, etc.

S1-4

Section 4.12 of the EIS/EIR analyzes freeway ramp intersections and fully mitigates project impacts at those locations.

- S1-4 • Transportation System Management (TSM) measures to manage traffic impacts on the SR-55, I-405, I-5, and ETC 241 also need to be considered.

S1-5

Those two letters are reproduced in this FEIS/EIR as a continuation of comment letter S-1. Responses are provided on the following pages to comments S1-6, S1-7, S1-8, and S1-9.

- S1-5 • Comments from our previous letters of February 23, 1998 and August 9, 1999 are attached and are to be considered as part of this comment letter.

Please continue to keep us informed of projects that may potentially impact our State Transportation Facilities. If you have any questions or need assistance, please contact Lynne Gear at (949) 724-2241.

Sincerely,


Robert F. Joseph, Chief
Advance Planning Branch

Attachments (2)

cc: Tom Loftus, OPR
Ron Helgeson, HDQTRS Planning
Roger Kao, Hydrology

DEPARTMENT OF TRANSPORTATION

DISTRICT 12
3347 MICHELSON DRIVE, SUITE 100
IRVINE, CA 92612-0681

GRAY DAVIS, Governor



RECEIVED

AUG 13 1999

REDEVELOPMENT AGENCY

August 9, 1999

Dana Ogdon, Senior Project Manager
City of Tustin IGR/CEQA
SCH# 94071005
Planning Department DEIS/DEIR
300 Centennial Way Log # 572
Tustin, CA 92780

Dear Mr. Ogdon:

Subject: MCAS Tustin Reuse Plan

Thank you for the opportunity to review and comment on the (re-issued) Draft Environmental Impact Statement/Report (DEIS/DEIR) for the MCAS Tustin Reuse Plan. The proposed project is for a 1,600-acre mixed-use development project (residential/commercial). There are three alternatives - whereby from 4,340 - 6,205 dwelling units would be constructed. The proposed project is located in the City of Tustin and is bounded by the SR-55, I-5, SR-133, and I-405 freeways.

Caltrans District 12 is currently reviewing this document. We have requested an extension of 7 -10 days beyond the deadline date of 8/23/99 to complete our review. This is necessary due to the extent of the proposed project; the size, complexity and volume of the document; and the fact that this type of project must be reviewed by a number of divisions within our agency.

The following comments are being forwarded to you in this letter by divisions that have already reviewed the document. Additional comments from the remaining divisions will be forwarded to you no later than September 1, 1999.

- SI-6 • The intersections of Dyer Avenue/SR-55 and MacArthur/I-405 should be included as a part of the 'existing conditions' analysis which includes Level of Service (LOS).

-1 of 2-

SI-6

Existing conditions for the intersections of Dyer Road/SR-55 and MacArthur Boulevard/I-405 were provided in the traffic study (Appendix F). See intersection locations #59 and #67 under Santa Ana and #83 and #84 under Irvine in Table 3-1 of the traffic technical report (Appendix F). As shown, all these intersections currently operate at acceptable levels of service. Table 3.12-3 of the EIS/EIR lists only the existing intersections in the study area that have deficiencies. Please note that the complete traffic technical report is provided in Appendix F, while the FEIS/EIR contains a summary of that technical information, focusing on the areas of deficiencies or impacts.

- Indicate any measurements taken to have all of the Congestion Management Program (CMP) intersections and non-CMP locations meet the applicable performance standards in all four alternatives.
- S1-7
- The comments made in our previous letter of February 23, 1998 are attached for reference.
- S1-8

Thank you for your continued cooperation by keeping us informed of projects that may potentially impact our State Transportation Facilities. If you have any questions or need assistance, please contact Lynne Gear at (949) 724-2241.

Sincerely,



Robert F. Joseph, Chief
Advance Planning Branch

Attachment

cc: Tom Loftus, OPR
Ron Helgeson, HDQTRS Planning
Raouf Moussa, Traffic Operations

S1-7

CMP and non-CMP locations were analyzed based on the performance standards outlined in Table 3.12-2 of the draft EIS/EIR. As shown, these standards pertain to both CMP and non-CMP intersections. The traffic study methodology (Section 1.4 of Appendix F) and Relationship To Other Programs (Section 1.5 of Appendix F) of the traffic technical report describe the CMP program within the study area and how it is satisfied for this reuse plan analysis.

S1-8

That letter is reproduced in this FEIS/EIR as a continuation of comment S-1.

DEPARTMENT OF TRANSPORTATION

DISTRICT 12
2551 PULMAN STREET
SANTA ANA, CA 92705



S1-9

This letter was submitted in response to the initial draft EIS/EIR (December 1997). As described in Appendix D of this EIS/EIR, the traffic/circulation section in this revised EIS/EIR is entirely different because a new traffic study was completed based on comments received from Caltrans and others. The revised traffic technical report does address freeways, various toll road conditions, and freeway interchanges as requested. However, consistent with OCTA guidelines, only the ICU method is used. A meeting was held, as requested, in Spring 1998 and input from that meeting was utilized in preparation of the revised technical analysis.

February 23, 1998

FAX AND MAIL

File: IGR/CEQA
SCH# 98011006

Dana Ogdon
City of Tustin
300 Centennial Way
Tustin, CA 92680

Subject: Disposal and Reuse of the Marine Corps Air Station (MCAS).

Dear Mr. Ogdon:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Report (DEIR) for the Disposal and Reuse of the Marine Corps Air Station (MCAS). The proposed project is the federal disposal action and the community actions needed to reuse the closing Marine Corps Air Station (MCAS) Tustin site. Caltrans District 12 is a reviewing agency and has the following comments for your consideration.

The proposed project will generate about 225,000 Average Daily Trips (ADT) per day, page a 10-25. We are concerned with the "Long Range" traffic forecast (no project: figure IV-1 and with project: figure IV-2); AS stated the traffic volumes on State Route 55 (SR-55) and I-5 and I-405 show a decline in volume or remain the same if the Tustin Reuse Plan is implemented as proposed. In our review of the proposed plan, using the Caltrans traffic model, the traffic forecasts do not agree with the traffic volumes as shown in the City's DEIR. We can find no explanation for the decrease in ADT. According to the 1991 household travel survey conducted by SCAG, approximately 50% of the miles traveled will occur on the freeway system. Therefore, many of these trips being generated by the proposed project will be using the freeway system.

Caltrans is also concerned that the EIR traffic analysis is too limited and should be expanded in scope to include I-5, State Route 55 and I-405. Also, the additional capacity proposed in the immediate vicinity is done without analyzing the impact on the rest of the Transportation System. This report assumes that the available toll road systems operate as freeways, this is misleading as the projection is the toll road will remain as a toll facility for twenty years. A sensitivity analysis needs to be performed in order to gauge the impact of toll roads versus freeway use.

Also, no impacts are shown on any of the interchanges leading to the area (i.e. SR-55 at Edinger, Dyer, and MacArthur and on the I-5, Red Hill, and Tustin Ranch Road). Since, there may be significant adverse impacts to freeways and freeway/interchanges mitigation measures may be required to adequately address these impacts. The EIR did not take into account the planned future freeways and interchange projects e.g. 405/55 Interchange reconstruction project.

In addition, analysis of intersections needs to be adequately addressed using the Highway Capacity Manual method instead of the I.C.U. method as stated in section 4.10.1. Caltrans prefers the Highway Capacity Manual method because it analyzes the operational capacity whereas, the I.C.U. method only reflects the potential capacity of the intersection.

In order to sort out the differences in the traffic analysis Caltrans requests an opportunity to meet with the City and the Orange County Transportation Authority (OCTA), to provide more definitive comments related to traffic volumes and impacts prior to final certification of the EIR.

We appreciate the opportunity to comment on this document. If you have any questions or would like to contact someone, please contact Aileen Kennedy on (714) 724-2239.

Sincerely,


Robert F. Joseph, Chief
Advance Planning Branch

C: Tom Lofus, OPR
Ron Helgeson, HDQTRS Planning
Adnan Maiah, Project Management
Judy Hoyer, Transportation Planning
Agnies Villanueva, Toll Roads
Massoud Tajik, Traffic Operations North
Joe El Harake, Traffic Studies
Saied Hasheim, Project Management



August 26, 1999

Dana Ogdon
Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, CA 92780

File Number: 183/30/EJR
City of Tustin for MCAS Tustin

Dear Mr. Ogdon:

This refers to Draft Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) for the Disposal and Reuse of Marine Corp Air Station (MCAS) Tustin.

The staff has reviewed pertinent sections of the EIS/EIR and has the following comments to offer:

- S2-1
- 1) On page 3-125, in Table 3.12-4 it is indicated that Red Hill Avenue between Walnut Avenue and Valencia Avenue will be improved to six lanes. Our records indicate that there exists a railroad-highway grade crossing within these limits, which is identified by PUC crossing number 101OR-177.9. The Commission will have permit authority for any work done at this crossing per its General Order 88-A, which governs rules for widening railroad-highway grade crossings.
 - 2) Our records indicate that there is another railroad-highway grade crossing immediately outside of the Reuse Plan Area as shown on page ES-5, on Harvard Avenue between Irvine Center Drive and Walnut Avenue identified by PUC crossing number 101OR-179.9. The staff would be interested, but found no mention of in the EIS/EIR, in how traffic patterns would change in this area.

Please feel free to contact me at (213) 576-7081 (or e-mail at vsj@cpuc.ca.gov) should you have further questions.

Very truly yours,

Varoujan Jimbachian
Utilities Engineer
Rail Crossing Engineering Section

S2-1

Table 2-16 in this FEIS/EIR has been revised to include this permit requirement.

S2-2

Sections 3.12 and 4.12 of the EIS/EIR provides a concise summary of the existing locations with deficiencies and locations where the reuse alternative would result in impacts, as well as appropriate mitigation. Harvard Avenue in this location does not have any of these issues. The complete traffic analysis is contained in Appendix F. As shown in Figure 3-1 of Appendix F, Harvard Avenue along this length has two traffic lanes with 10,000 ADT. Under various reuse alternatives, the future traffic volumes would range from 11,000 to 16,000 ADT. Link volume summaries for this location contained in the appendices to Appendix F identify two lanes in the year 2005 and 2020, indicating there would be no change to the existing configuration in that time period. However, Table S-2 of Appendix F identifies this segment of Harvard Avenue as four lanes in the post-2020 condition based on General Plan designations. Therefore, traffic generated by various reuse alternatives and future growth would increase volumes between 1,000 and 6,000 ADT, but road widening would not occur until after 2020. Widening from two lanes to four is based on a General Plan designation. In terms of the railroad-highway crossing, reuse activity would not result in any change to the existing crossing.



Gray Davis
GOVERNOR

STATE OF CALIFORNIA

Governor's Office of Planning and Research
State Clearinghouse

STREET ADDRESS: 1400 TENTH STREET, ROOM 322 SACRAMENTO, CALIFORNIA 95834
MAILING ADDRESS: E.D. BOX 3044 SACRAMENTO, CA 95812-3044
916-445-0001 FAX 916-333-1018 WWW.opr.ca.gov/clearinghouse.html



Loretta Lynch
DIRECTOR

August 27, 1999

Dana Ogdon
CITY OF TUSTIN
300 Centennial Way
Tustin, CA 92680

Subject: EIR for the Disposal and Reuse of the Marine Corps Air Station (MCAS)
SC#1#: 94071005

Dear Dana Ogdon:

The enclosed comment (s) on your draft environmental document was (were) received by the State Clearinghouse after the end of the state review period, which closed on August 25, 1999. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the eight-digit State Clearinghouse number (94071005) when contacting this office.

Sincerely,

Terry Roberts
Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

RECEIVED
AUG 31 1999
REDWELL (P-4-1)

State of California

MEMORANDUM

The Resources Agency

To: Project Coordinator
Resources Agency

Date: August 26, 1999

Dana Ogdon, Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, CA 92780

RECEIVED
AUG 31 1999
REDEVELOPMENT AGENCY

From: Department of Conservation
Office of Governmental and Environmental Relations

Subject: Draft Revised Environmental Impact Report (DREIR) for Disposal and Reuse
of Marine Corp Air Station (MCAS), Tustin - SCH #94071005

The Department of Conservation's Divisions of Land Resource Protection (DLRP) and Mines and Geology (DMG) have reviewed the DREIR for the above referenced project. DLRP administers several agricultural land conservation programs, including the Agricultural Land Stewardship Program (ALSP) which provides grant funds to local agencies and private nonprofit organizations for acquisition of agricultural land conservation easements. DMG gathers, analyzes and shares information with lead agencies and the public on geologic hazards in California. It is from these areas of expertise that we offer the following comments for your consideration.

Agricultural Land Conservation

The DREIR addresses disposal and proposed reuses of a 1,606-acre area primarily consisting of MCAS Tustin property. Proposed reuses are addressed in three alternatives and include a variety of residential, commercial, recreational, and institutional land uses. The DREIR notes that while the disposal action itself would not result in farmland conversion, the implementation of any of the three alternatives would result in conversion of 702 acres of prime farmland to urban uses.

Consistent with the court directive given the lead agency in the related El Toro MCAS project (SCH #96041043) (El Toro Land Use Planning Authority, et al v. County of Orange, et al, San Diego Superior Court #710123, October 28, 1997), the DREIR appropriately discusses the potential mitigation measure of replacing agricultural land lost due to the project with land protected by conservation easements. However, the discussion concludes that this mitigation measure is not feasible because it would not fully mitigate the loss of the farmland, and because of the high cost of purchasing and administering development rights in Orange County.

S3-1

It is not realistic to further consider agricultural conservation easements as mitigation for impacts to agricultural land at MCAS Tustin. Not only does the County of Orange not have a county-wide strategic plan of farmland protection, but the Orange County General Plan treats agricultural land uses as a temporary classification until lands are ready for development. There is no agriculture designation category within the Tustin General Plan. The agricultural operation at MCAS Tustin is an interim use that existed as long as it was appropriate for the Marine Corps mission. As noted in response to comment 11-1 and the revisions to Sections 3.8 and 4.8 of this EIS/EIR, the agricultural operations at MCAS Tustin are not afforded federal protection under the Farmland Protection Policy Act (FPPA).

Also as described in Section 4.8 of the EIS/EIR, other reasons for determining agricultural easements as infeasible included the high cost, the need for long-term monitoring which would increase costs further, and the difficulty of locating willing sellers who would have to forgo the tremendous financial incentive to develop their land with uses other than agricultural.

S3-1

Our comments for the MCAS Tustin echo those we made on the Draft Supplemental Analysis for the MCAS El Toro disposal project in April 1999. The feasibility of easements should not be rejected solely because they will not fully negate the loss of agricultural land, or because of a lack of precedence for their use. We recommend that the City of Tustin give further consideration to securing agricultural conservation easements to partially mitigate for the project's agricultural land conversion impacts.

One alternative to the direct acquisition of easements would be the donation of funds to a regional or statewide program promoting and implementing the use of agricultural conservation easements such as those run by local agricultural land trusts or conservancies, or the State's ALSP. (Information on the ALSP is available on the Web at www.consrv.ca.gov/dlrp/ALSP/index.htm or by contacting the Division at the address and phone number below.)

Similarly, the DREIR dismisses the use of a transfer of development rights program simply because there is no current process to develop such a program. We recommend that further consideration be given to how the eventual development of this property could involve the purchase of development rights or easements on agricultural land elsewhere for each acre converted, perhaps as part of a development agreement. A similar approach that could be considered is mitigation banking; i.e., the payment of mitigation fees for each development of prime farmland. In the latter case, the fees could be used to purchase easements on targeted lands elsewhere in the region.

Finally, the DREIR acknowledges the cumulative impacts of the project on agricultural lands. However, the DREIR should also discuss the project's growth-inducing impacts on other agricultural lands in the vicinity. This discussion should include potential mitigation measures such as the use of buffers to reduce adverse impacts of incompatible urban uses on ongoing agricultural uses.

Geologic Hazards

The State Geologist has mapped the entire MCAS site as being within a liquefaction hazard zone. Thus, liquefaction hazards should be treated in final EIR as a significant environmental impact of the project, unless mitigated. The City should rely on the DMG Seismic Hazards Zone map that was sent to the City on August 4, 1999 (a full-scale ozalid map of the Tustin Quadrangle). For your convenience, we have attached an extract of that map and the title pages of two reports on liquefaction that should be utilized in future geotechnical work for this project. DMG Special Publication 117 would be of particular value in providing guidance for the evaluation and mitigation measures with respect to seismic hazards.

S3-2

Refer to S3-1 regarding the interim nature of agriculture operations at MCAS Tustin and the status of farmlands under the FPPA (not protected).

S3-3

The City of Tustin does not have the economic means to purchase conservation easements on agricultural lands "elsewhere." Refer to subsection 4.8.3 of the FEIS/EIR. Nor does the city have the legal authority to purchase conservation easements for use by private parties. Such a purchase is likely to be viewed by a state court as an unlawful gift of public funds (Article XVI, Section 6, California Constitution).

S3-4

The growth-inducing effect of reuse was discussed in Section 6.4 of the EIS/EIR. That section states that cumulative impacts would be significant and identifies that there are no county-wide policies for plans to replace or buffer farmlands. Only such a county-wide program would be effective at mitigating this region-wide issue.

The area surrounding MCAS Tustin is almost completely urbanized (see subsection 3.1.2 of the EIS/EIR). As shown in Figure 3.1-1, only one area of undeveloped land is available adjacent to MCAS Tustin, and no agricultural operations occur on this land. There is only one small temporary agricultural operation in the City of Tustin and it is not adjacent to MCAS Tustin. Therefore, no on-site mitigation measures would be necessary to buffer future urban uses and existing agricultural uses. Other lands used for agricultural purposes in the City of Irvine are primarily interim uses and are already impacted by adjacent urban uses.

S3-5

As stated in Section 4.9 of the draft EIS/EIR, the liquefaction potential of MCAS Tustin is considered to be moderate to high; however, the FEIS/EIR has been modified to reflect the mapping provided and incorporate the proper citation. Section 4.9 of the draft EIS/EIR included a partial list of established engineering techniques that could be required to be implemented depending on site-specific liquefaction hazards. The text of this section has been modified in the FEIS/EIR to include the entire list shown in CDMG Special Publication 117. One of these techniques, other techniques, or a combination of techniques would be required based on the site-specific geotechnical evaluation required by the cities of Tustin and Irvine.

Project Coordinator and Dana Ogdon
August 26, 1999
Page 3

Thank you for the opportunity to review and comment on the DREIR. If you have questions on the above comments, or require technical assistance or information, please contact either Emily Kishi, DLRP, at (916) 324-0859, or Mr. Robert H. Sydnor, DMG, at 916-323-4399. Information about the Department's programs and publications may also be accessed via the Department's website at <consrv.ca.gov>.

Sincerely,

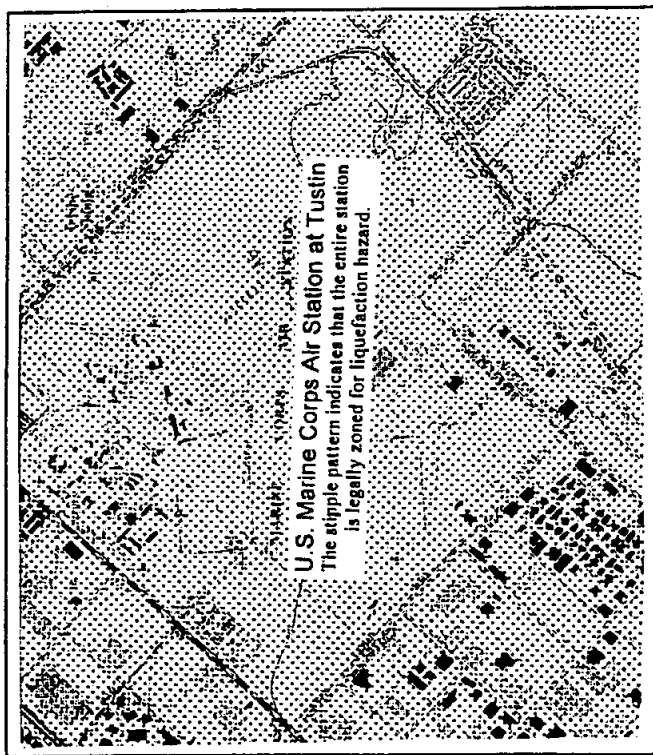


Jason Marshall
Assistant Director

Attachments

Cc: Luree Stetson, Assistant Director
DLRP

Robert H. Sydnor, Senior Geologist
DMG



Extract from official Seismic Hazard Zones Map

Tustin Quadrangle

Scale: 1:24,000 or 1 inch = 2,000 feet

Issued by the State Geologist on March 15, 1998

Delineated in compliance with Chapter 7.8, Division 2, California Public Resources Code

Seismic Hazard Mapping Act of 1990

For explanation, refer to California Division of Mines & Geology Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, 1997, 74 pages. SP-117 and the complete zone map may be downloaded free from the CDMG homepage at www.consrv.ca.gov/dmg

(Condensed extract of title page and table of contents.)

California Division of Mines & Geology
Special Publication 117
1997 74 pages

Guidelines for Evaluating and Mitigating Seismic Hazards in California

Adopted March 13, 1997 by the State Mining and Geology Board
in accordance with the Seismic Hazards Mapping Act of 1990

Chapter 1, Introduction
Chapter 2, Definitions, Caveats and General Considerations
Chapter 3, Overview of Investigations for Assessing Seismic Hazards
Chapter 4, Estimation of Earthquake Ground-Motion Parameters
Chapter 5, Analysis and Mitigation of Earthquake-Induced Landslide Hazards
Chapter 6, Analysis and Mitigation of Liquefaction Hazards
Chapter 7, Guidelines for Reviewing Site-Investigation Reports
References Cited
Related References
Appendix A, Seismic Hazards Mapping Act of 1990

MCA-S
TV/STN

This 74-page report may be downloaded at no cost from our website:
<http://www.consrv.ca.gov/dmg>

As of March 1999, there are 39 quadrangles legally zoned for seismic hazards. The names of the 7½-minute quadrangles are available at our CDMG website. Note that SP-117 pertains to ground motion, landslides, and liquefaction, but *not* surface faulting. Please refer to CDMG Special Publication 42, 1997 edition, for an index of the 544 official quadrangles that have been legally zoned for active faults by the State Geologist under the *Alquist-Priolo Earthquake Fault Zoning Act*. A complete list of all CDMG publications and index of Alquist-Priolo maps is available at our website.

Public Information Offices of the California Division of Mines & Geology

Southern California Regional Office 107 South Broadway, Room 1065 Los Angeles, CA 90012-4402 (213) 620-3560	Publications and Information Office 801 K Street, Mail Stop 14-33 Sacramento, CA 95814-3532 (916) 445-5716	Bay Area Regional Office 185 Berry Street, Suite 120 San Francisco, CA 94107-1728 (415) 904-7707

May 1999
Announcement of New Publication in Liquefaction Analysis

Recommended Procedures for Implementation of CDMG Special Publication 117 Guidelines for Analyzing and Mitigating Liquefaction in California

edited by Dr. Geoffrey R. Martin, professor of geotechnical engineering at USC,
and Dr. Marshall Lew, consulting geotechnical engineer, Law/Crandall
with committee members: K. Arulimoli, J.I. Baez, T.F. Blake, J. Earnest, F. Gharib, J. Goldhammer,
D. Hsu, S. Kupferman, J. O'Tousa, Charles R. Reel of CDMG, W. Reeder, E. Simantob,
and T. Leslie Yout.

63 pages, 8½ x 11 format, softbound, price: \$10.00

Chapter 1: Introduction; Chapter 2: Establishment of Liquefaction Hazard Zones; Chapter 3:
Roles of Engineering Geologists and Geotechnical Engineers; Chapter 4: Preliminary Screening for
Liquefaction; Chapter 5: Field Investigations; Chapter 6: Ground Motions for Liquefaction
Analyses; Chapter 7: Evaluation of Liquefaction Hazards; Chapter 8: Mitigation of Liquefaction
Hazards; Chapter 9: Reporting of Results; Chapter 10: Concluding Remarks; Chapter 11
References/Bibliography.

Order from:

Southern California Earthquake Center

Mark Benithien, Outreach Coordinator

University of Southern California

Los Angeles, CA 90089-0742

telephone: (213) 740-5843 fax: (213) 740-0011

e-mail: SCECinfo@usc.edu homepage: www.scec.org

These "Recommended Procedures" will assist consulting engineering geologists and geotechnical engineers with implementation of CDMG Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, 74 pages. SP-117 was legally adopted March 13, 1997 by both the State Mining & Geology Board and the California State Board of Registration for Geologists and Geophysicists. SP-117 can be purchased from the California Division of Mines & Geology for \$15 (comb-bound with stiff covers) or down-loaded free from the DMG website at: www.consrv.ca.gov/dmg

There will be an all-day training session on liquefaction analysis using this new procedure manual to be hosted by SCEC at the Davidson Conference Center on the campus of the University of Southern California. The special one-time only training session will be held **Thursday, June 17, 1999, 8 AM to 5 PM**, cost: \$95. There is a special reduced price of \$50 for official representatives of local government agencies, e.g., building code officials, city and county geologists and geotechnical engineers. Reservations are required; contact Mark Benithien at the SCEC address shown above.

Robert H. Sydney, Senior Engineering Geologist
California Division of Mines & Geology
RSydnor@consrv.ca.gov (816) 323-4359



County of Orange
California

Janice M. Mittermeier
Chief Executive Officer

RECEIVED
AUG 24 1999
REDEVELOPMENT AGENCY

August 18, 1999

Dana Ogdon
Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, CA 92780

SUBJECT: Draft EIS/EIR for the Disposal and Reuse of MCAS Tustin

Dear Mr. Ogdon:

Thank you for the opportunity to provide comments on the Draft EIS/EIR. County staff has reviewed the document and has identified the attached technical comments for your consideration. If it would be helpful, staff is available to meet with you to discuss these comments and how they may be addressed.

The County appreciates the City of Tustin's ongoing coordination efforts relative to issues of mutual concern. We fully intend to continue the cooperative relationship we have enjoyed with your city.

If you have any questions, please contact Melinda Bowman at 834-4414.

Sincerely,


Michael M. Ruane, Assistant CEO
Strategic and Intergovernmental Affairs

Attachment

Cc: George Britton (NCL 99-55)

E:\us040

County Executive Office
1st Civic Center Plaza
Third Floor
Santa Ana, California
92701-4002

Tel: (714) 834-2345
Fax: (714) 834-4416
Web: www.co.or.ca.gov

TECHNICAL COMMENTS - MCAS TUSTIN DRAFT EIS/EIR

Submitted by the County of Orange

August 18, 1999

Alternatives

The EIS/EIR alternatives do not include specific conveyance recommendations. Clarification is requested as to whether all of the County uses included in the approved Specific Plan/Reuse Plan (Children's Emergency Shelter, Regional Park, Youth and Family Resource Center, Animal Shelter, and Regional Law Enforcement Training Center) are included in each EIS/EIR alternative. The County is fully committed to each of these projects. Each plays a significant and necessary role for the long-range development of facilities in Orange County.

L1-1

Flood Control

1. Pages 3-103 to 3-107, Section 3.11 Hazardous Wastes, Substances, and Materials, and Page 4-39, Section 4.3.3 Operation Impacts, Drainage: As noted in previous correspondence, OCFCD cannot accept fee title at this time for portions of the existing Peters Canyon Channel flood control easement within the contaminated area of Operable Unit 3 (RP 1).

L1-2

2. Page 4-39, Section 4.3.3 Operation Impacts, Drainage: The EIS/EIR states that "The system [improved drainage system] can be provided by the cities of Tustin and Irvine, and OCFCD; therefore impacts under Alternative 1 would be less than significant." OCFCD programs funding for construction of flood control facilities on an annual basis based on countywide priorities. Given the limited funding available to OCFCD, there is no guarantee that OCFCD will have the funds necessary to improve these facilities prior to, or contemporaneous with, the proposed development. Developers of the base property should be conditioned to construct those portions to flood control improvements along Peters Canyon Channel needed to protect the development from flooding and erosion damages.

L1-3

3. Pages 4-44 and 4-45, Section 4.3.3 Alternative 1 Implementation Measures: Federal Emergency Management Agency (FEMA) has not delineated the floodplain through the MCAS, Tustin. We recommend, if possible, that the base property be studied and the areas that are prone to flooding be mapped rather than relying entirely on a FIRM that is incomplete.

L1-4

Water Quality and NPDES

1. Pages 3-99 to 3-102, Section 3.10.4 Surface Water Quality: There may be some confusion between the state and municipal NPDES programs. The EIS/EIR states that "As co-permittees, Tustin and Irvine require all development projects over five (5) acres in size within their jurisdiction to abide by the NPDES requirements for construction and operations as appropriate." In actuality, all development must prepare a Water Quality Management Plan (WQMP), regardless of size. It is the state program, which is triggered by five-acre projects. This section should show compliance to the municipal program by incorporating the following language:

L1-5

"A Water Quality Management Plan will be prepared by the developer, and approved by the city prior to the issuance of a grading permit or building permit, whichever comes first, for each development project, in conformance with the County Drainage Area Management Plan, Appendix G."

2. Page 4-121, Section 4.10.1 Significance Criteria: Consideration should be given to revising the significance criteria for water resource impacts to be consistent with other recent EIRs in the County. Significant impacts can occur whenever standards are exceeded for shorter periods of time and may contribute to cumulative exceedances such as those addressed by the Newport Total Mass Daily Loads (TMDLs). The following significance criteria is suggested as a substitute for criteria (1):

L1-6

L1-1

Conveyance recommendations and identification of specific property owners/operators are not appropriate for discussion in the joint NEPA/CEQA document because the impacts of disposal and reuse are evaluated independently of who would own the land or operate a facility. The Reuse Plan that was forwarded by the City of Tustin to DON and HUD applies strictly to Alternative 1 in the EIS/EIR, as does the Specific Plan. However, it is appropriate to assume that conveyance recommendations in the Reuse Plan could be implemented under either Alternative 2 or 3 and that a new Specific Plan could be generated as well.

L1-2

The issue of fee title is not a substantive comment on the adequacy of the EIS/EIR.

L1-3

Neither the County of Orange nor the cities of Tustin or Irvine can impose the cost of flood control improvements to Peters Canyon Channel on subsequent individual development projects without an essential nexus (*Dolan v. City of Tigard* (1994) 512 U.S. 374; *Nollan v. California Coastal Commission* (1987) 483 U.S. 825; *Ehrlich v. City of Culver* (1996) 12 Cal. 4th 854). Based on this doctrine, developers within the reuse plan area would be required to contribute their fair share towards local and regional flood control improvements if stormwater from the reuse plan area would exceed the planned capacity of Peters Canyon Channel.

While there is no feasible way to determine fair share funding at this time, implementation measure (I) has been added to Section 4.3 of the FEIS/EIR to clarify a mechanism for determining fair-share contribution for flood-control improvements as necessary.

L1-4

In January 1997, the City of Tustin requested that the Federal Emergency Management Agency (FEMA) revise the Flood Insurance Rate Map (FIRM) to show the flood hazards at MCAS Tustin. On May 3, 1999 FEMA issued a revised FIRM for a comment period which ended September 13, 1999. That FIRM was reproduced as Figure 3.3-1, although the source citation reflected an incorrect date. Therefore the draft EIS/EIR conveyed the most up-to-date flood plain information available and the FEIS/EIR corrects the citation.

L1-5

Section 3.10 of the FEIS/EIR has been revised to include the requested language.

L1-6

The significance criteria in Section 4.10 is defined by the lead agency based on CEQA Guidelines and the Initial Study Checklist (Appendix G of CEQA). In preparing this FEIS/EIR, the intent of this, and comments L1-7, L1-8, and L1-9 were discussed with county staff. Revisions have been made to Sections 3.10 and 4.10 of the FEIS/EIR to meet the intent of those comments.

"has the potential to violate water quality standards or to adversely impact the efforts of government agencies to correct previously identified significant impairments of water quality."

3. Page 4-122, Section 4.10.3 Construction Impacts: The EIS/EIR states that "Construction operations would be required to implement BMPs to comply with the TMDLs for the Newport Bay watershed." The sediment TMDL does not impose specific BMP requirements on construction sites (although these are elements of the 208 Program and the State NPDES General Construction Permit), but rather establishes an objective of reducing sediment loads entering San Diego Creek and Newport Bay by 50% in 10 years. The text uses the significance criteria critiqued above.

LJ1-7

4. Pages 4-123 and 4-124, Section 4.10.3 Water Quality: The discussion of water quality impacts should be expanded to provide a clearer discussion of the relationship of the project runoff to the impaired section of San Diego Creek and Newport Bay waterbodies. This discussion should address:

LJ1-8

- Routine water quality Best Management Practices contained in the Drainage Area Management Plan (DAMP) in response to the impairments in San Diego Creek and Newport Bay.
- The discharge of construction dewatering water, which is high in nutrients, relative to the nutrient TMDL reduction targets and the General Dewatering Permit issued by the Santa Ana Regional Water Control Board.
- Construction level impacts in relation to the sediment TMDL reduction targets and State NPDES General Construction Permit.

5. It would be beneficial for the EIS/EIR to identify any potential regional water quality enhancement opportunities that may exist in the project area that could assist the City of Tustin and other watershed stakeholders in meeting TMDL requirements through the watershed planning process initiated with the Army Corps of Engineers.

LJ1-9

Environmental Health

1. Chapter 4, Environmental Consequences: The EIS/EIR should contain a discussion on the effects that IRP Site 1, Moffett Trenches and Crash Crew Burn Pits will have on the planned developments. Specifically, the effects that landfill decomposition gas will have, if found in significant quantities, when landfill gas monitoring probes are installed in the future as part of the remedy for the closure of the landfill site.

LJ1-10

The text should also discuss the effect landscape irrigation, along the proposed riding and hiking trail over/adjacent to IRP Site 1, will have on the landfill closure remedy.

2. The City of Tustin is encouraged to work closely with the Orange County Solid Waste Local Enforcement Agency regarding the disposal or recycling of demolition debris.

LJ1-11

3. The conversion and reuse of on-site facilities such as eating establishments, swimming pools, operation of solid waste facilities, and hazardous waste generating facilities may be subject to permitting and regulatory requirements of the Orange County Environmental Health Department. Please contact Environmental Health regarding the operation of such facilities at the base.

LJ1-12

Regional Park

1. Pages 2-21, 2-29, and 2-36 (Trip Generation Estimates): Since each alternative for the regional park area proposes to include very similar uses (i.e. special events center, sports center, museum, restaurants, picnic areas, video arcade, or historic collections facility), it is suggested that the "Average Daily Vehicle Trips" or trip generation estimates used for the 85-acre Regional Park parcel in Alternative 1 be similar to those used in Alternatives 2 and 3.

LJ1-13

Following are the trip generation estimates used for the same approximately 85-acre parcel in each Alternative:

LJ1-7

The intent of the referenced text was to indicate that BMPs, in conjunction with the requirements to meet water quality targets established by TMDLs for the Newport Bay watershed, would ensure that impacts would be less than significant under all three reuse alternatives. The referenced text has been revised to more clearly relate its intent.

LJ1-8

An expanded discussion of BMPs from the DAMP, construction dewatering, and sediment TMDL goals has been provided in Section 4.10 of the FEIS/EIR.

LJ1-9

Under all of the reuse alternatives, the removal of agricultural operations would have potential water quality enhancement opportunities by reducing the amount of nutrients entering the system from agricultural run-off. This possible benefit has been noted in Section 4.10 of the FEIS/EIR.

LJ1-10

Sections 3.11 and 4.11 of the FEIS/EIR have been expanded to address IRP-1 in more detail; specifically landfill decomposition gas and irrigation.

LJ1-11

The comment does not address the adequacy of the EIS/EIR, but as evidenced by current practice, the city and county work closely regarding recycling and disposal.

LJ1-12

Table 2-16 of the FEIS/EIR has been revised to more explicitly identify these permits that may be required.

LJ1-13

Although the acreages and locations make it appear that the land uses (urban regional park in Alternative 1 and cultural center in Alternatives 2 and 3) would generate the same amount of traffic, they are intended to be different in intensity. Alternative 1 has been corrected in Section 2.4 of the FEIS/EIR to delete some uses that were not intended for this reuse alternative. The definitions of Alternatives 2 and 3 have been amended in Section 2.4 of the FEIS/EIR to clearly reflect the definition of cultural center, i.e., more interactive and regionally attractive year-round uses that would generate more employment and more traffic. The traffic generation calculations in Appendix F and the EIS/EIR remain valid. However, it should be noted that as future discretionary permits are considered for any uses in this area, there would be subsequent CEQA evaluation. If proposed uses would generate more traffic than estimated and mitigated with this document, supplementary traffic analysis would be performed to determine impacts of that specific project and mitigation would be required as appropriate.

	Land Use (Northern Blimp Hangar) Regional Park (84.5 acres)	Average Daily Vehicle Trips 4,343	Page 2-21 (Table 2-7)
Alternative 1			
Alternative 2	PI - Park (47 acres)	234	2-29 (Table 2-10)
	PI - Cultural Center (56 acres)	14,266	2-29 (Table 2-10)
Alternative 3	PI - Park (51 acres)	257	2-36 (Table 2-13)
	PI - Cultural Center (51 acres)	13,939	2-36 (Table 2-13)

Recreational Bikeways/Trails

1. We encourage the City of Tustin to explore additional opportunities for providing Class I bikeways and riding and hiking trails on the base. The subject project site presents a unique opportunity to link proposed land uses and regional facilities. In particular, we suggest that EIS/EIR consider a connection between the proposed Peters Canyon Bikeway and Trail and the proposed regional park. We suggest the following be given consideration:

- Peters Canyon Trail undercrossings at Moffett Drive and Edinger Avenue
- Loop Bikeway - Class I bikeway that would circle the base site, linking schools, parks, residential areas, employment centers, etc.
- Regional Connector Bikeway - Class I bikeway linking the Loop Bikeway to the future Tustin rail station and the future Peters Canyon Bikeway.
- Railroad ROW Bikeway - Class I bikeway along the former railroad right-of-way between Tustin Meadows and Peppertree neighborhoods, with a connection to the Loop Bikeway (connecting Nelson Elementary School and surrounding neighborhoods with proposed activity centers on the base).
- Local connector Class I bikeways linking the Loop Bikeway to activity centers.

Traffic Circulation Technical Report (Appendix F)

County staff appreciates the efforts of the City and consultants to improve and strengthen the traffic study. The following comments are offered to ensure that the traffic study can withstand any challenge through a complete and thorough discussion of issues.

1. It appears that the majority of the trip lengths are extraordinarily short even though certain proposed uses for the site will attract some regional trips. This is particularly evident from Figures 2-7 to 2-9. Please include an explanation of this characteristic in the traffic study.
2. It appears from the trip rates that no adjustment is made for similar uses between the various alternatives. For instance, the +5 TE/AC is used for park uses in each alternative. While this rate is applicable for open space park uses, it does not account for active recreation or entertainment uses such as those envisioned for Hangar 28. Please consider including a mechanism, such as a traffic study mitigation, to allow adjustments as a result of land use refinements.
3. Each of the alternatives includes 11 - 12% internal trip capture. Please include documentation to support this assumption.

L1-14

Bikeways provided under Alternatives 1, 2, and 3 would be consistent with the *Master Plan of Countywide Bikeways* and the *Commuter Bikeways Strategic Plan*, neither of which include the commenter's suggested Class I facilities. The City of Tustin reuse process was based on extensive public input, and the bikeway facilities included in the LRA reuse plan are a result of this process and consultation with county staff regarding future facilities. The commenter's suggested undercrossings of Peters Canyon Channel may not be feasible within the ultimate configuration of Peters Canyon Channel. The suggested bikeway along the railroad right-of-way would be outside of the reuse plan area. Class II bikeways would be provided under Alternative 1 in the remaining locations where the commenter has suggested Class I bikeways.

The EIS/EIR analyzes the environmental impacts of bikeway facilities under reuse. As stated in Section 4.4, impacts on bikeways and trails under alternatives 1, 2, and 3 would be beneficial.

L1-15

Final Appendix F has been modified to explain the assumptions used to determine trip lengths.

L1-16

As described in Section 1.5 of the EIS/EIR, this document is intended to serve as a Program EIR, and additional future CEQA analysis shall be conducted where future project-specific impacts would be different than those disclosed in the document or when new information becomes available. Future traffic studies reflecting adjustments as a result of land use refinements are inherent in the process. Refer to response L1-13. Additionally, Section 4.12 of the FEIS/EIR has mitigation measures which establish ADT thresholds and fair share percentages for future traffic mitigation and processes by which future proposals are evaluated in the context of those thresholds.

L1-17

Documentation to support this assumption has been added to Final Appendix F.



ORANGE COUNTY SANITATION DISTRICT

August 23, 1999

Dana Ogdon
Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, CA 92780

RECEIVED
AUG 25 1999
REDEVELOPMENT AGENCY

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report for
Marine Corp Air Station (MCAS) Tustin

L2-1

This is in response to the Notice of Preparation of a Draft Environmental Impact Report (EIR) for Marine Corp Air Station (MCAS) located in the City of Tustin. The Orange County Sanitation District (District) takes no exception to any of the wastewater service issues in the EIR. However, we offer the following comments:

1. The development will need to be coordinated with construction of the Districts Armstrong Sewer.
2. For the project to proceed, a three party agreement will need to be finalized for sewerage issues between Irvine Ranch Water District, the District, and the City of Tustin.

Thank you for the opportunity to comment on the proposed development. If you have any questions regarding this project, please contact Chuck Winsor at (714) 593-7331.

David A. Ludwin
David A. Ludwin, P.E.
Director of Engineering

DAL:AA:jak
H:\wp\dialeng\EIRSMCAS Tustin.doc

c: Richard Bell, Irvine Ranch Water District

phone: (714) 962-2411

mailing address:
P.O. Box 8127
Fountain Valley, CA
92728-8127

street address:
10844 Ellis Avenue
Fountain Valley, CA
92708-7018

Member Agencies

Cities

Anaheim
Brea
Buena Park
Orange
Fountain Valley
Fullerton
Garden Grove
Huntington Beach
Irvine
La Habra
La Palma
Los Alamitos
Newport Beach
Orange
Placentia
Santa Ana
Seal Beach
Torrance
Tustin
Vista Park
Yorba Linda

County of Orange

Sanitary Districts

Costa Mesa
Midway City

Water Districts

Irvine Ranch

L2-1

The comments regarding coordination with other future sewer construction and three party agreements are noted, but do not address the adequacy of the EIS/EIR.



IRVINE RANCH WATER DISTRICT

15600 Sand Canyon Ave., P.O. Box 57000, Irvine, CA 92615-7000 (949) 453-5300

RECEIVED

AUG 23 1999

COMMUNITY DEVELOPMENT

L3-1

The requested deletion has not been made to the FEIS/EIR because the referenced text is integral to the discussion of cumulative impacts on groundwater; however, the requested additional language has been included in the FEIS/EIR. The referenced letter from 1998 has been reproduced in this FEIS/EIR as a continuation of comment letter L3.

L0820GKH

August 20, 1999

Mr. Dana Ogdon
Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, CA 92780

Subject: Joint Draft Environmental Impact Statement/Environmental Impact Report for Disposal and Reuse of Marine Corps Air Station, Tustin, California

Dear Mr. Ogdon:

Irvine Ranch Water District (IRWD) has received and reviewed the subject document (hereafter DEIR). The DEIR does not warrant a significantly different response from IRWD than our letter of March 2, 1998 (copy enclosed). The Implementation Measures in the Utilities section and the Utilities Phasing Requirements in Table 4.3-1 are thorough and recognize IRWD must determine appropriate facility requirements associated with the proposed project. In addition, IRWD requires the preparation of Sub-Area Master Plans (SAMP) for larger projects, and the SAMP for the base is nearing completion. The purpose of the SAMP is to identify and analyze the facility infrastructure necessary to meet demands of the project. IRWD has been coordinating this effort closely with the city of Tustin and will provide a revised near-final document to you for review very soon.

L3-1 The DEIR includes a significant discussion of issues surrounding groundwater and upon review, we have some clarifications that will enhance the discussion. In the Groundwater section on page 5-9, the statement beginning with "Producers within the Orange County Water District (OCWD)" and concluding at "would be less than significant under NEPA and CEQA" should be deleted. We request the DEIR read as follows:

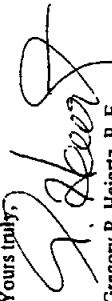
The reuse plan area is inside the boundary of the Orange County Water District (OCWD), the manager of the local groundwater basin. OCWD will be responsible to manage any groundwater withdrawals from the reuse area consistent with OCWD's District Act and to the benefit of the producers inside OCWD.

We believe this statement will accurately reflect what the DEIR should communicate in terms of management of the groundwater basin.

Mr. Dana Ogdon
Joint Draft/Impact Statement
City of Tuslin
August 20, 1999
Page 2

IRWD appreciates the opportunity to comment on the DEIR and looks forward to the issuance of the final environmental document. Please forward a copy of the Final EIS/EIR to Dick Diamond, Senior Planner at the address above. You may also contact him at (949) 453-5594 with any questions or if you require additional information.

Yours truly,



Gregory P. Heiertz, P. E.
Director of Engineering and Planning

GPH/GKH/RP

Enclosure



IRVINE RANCH WATER DISTRICT

16600 Sand Canyon Ave., P.O. Box 67000, Irvine, CA 92616-7000 (714) 453-5300

AFM.11 .03

L3-2

The utilities and water resources analyses in the revised draft EIS/EIR are different from the initial draft EIS/EIR. Modifications incorporated into the revised EIS/EIR are based on corrections and comments provided in this letter as well as letters from other service providers. A summary of the differences between the initial draft EIS/EIR and the revised draft EIS/EIR is provided in Appendix D. For further clarification, a discussion of water-saving features required under existing regulations has been added to Section 3.3 of the FEIS/EIR.

March 2, 1998

L0302RAD
ECT.
mcaself.doc

Mr. Dana Ogdon
Senior Redevelopment Project Manager
City of Tustin
300 Centennial Way
Tustin, Ca. 92780

Subject: Joint Draft Environmental Impact Statement/Environmental Impact Report, (EIS/EIR),
for Disposal and Reuse of the Marine Corps Air Station (MCAS), Tustin, California

Dear Mr. Ogdon:

The Irvine Ranch Water District (IRWD) has received and reviewed the Joint Draft EIS/EIR for the subject project. IRWD appreciates the opportunity to respond to this important project and provides the comments which follow. These comments are segregated into general comments and comments addressing specific sections of the report.

L3-2

General

The draft EIS/EIR outlines future water and wastewater facilities as identified in the report prepared for the City (MCAS Tustin Reuse Plan/Specific Plan). Although IRWD provided input on this report, a more recent and thorough review of existing and/or planned facilities is available in IRWD's 90% draft Sub Area Master Plan (SAMP) for the base dated February 1997 (prepared by Daniel Boyle Engineering, Inc. and provided to the City at that time). This document must be used as the basis for identifying future facilities and potential impacts. The EIR/EIS should be revised to reflect SAMP facilities, including updating exhibits and text. It should also be noted that base reuse will require the purchase of source and regional facilities capacity not identified in the SAMP. These elements will be identified in the preparation of a Plan of Works for the base following completion of the SAMP. In any case, IRWD requires the EIS/EIR to thoroughly address and provide mitigation for the potential of overall impacts to water and sewer service to the base at the "program" level. This should include facilities, capacity, and financing.

Relative to financing, it will be necessary for the redevelopment agency and IRWD to enter into an agreement addressing the parameters for financing the acquisition of capacity and construction of facilities. Such an agreement will ensure financial equity between the base reuse property and other areas of IRWD; the reuse of the base must not place a financial burden on other areas of IRWD.

Financing for necessary improvements is not a topic for analysis under either NEPA or CEQA, so that topic is not addressed. However, in the interest of full disclosure, it should be noted that if a redevelopment plan is implemented, portions of the budget for the redevelopment plan would be allocated for utility improvements including water and sewer systems. In 1994, changes were made to the California Community Redevelopment Law (CRL) that required a mandatory pass-through of portions of the tax increment received by redevelopment agencies to other affected taxing agencies. The pass-through amount is established in the CRL. As a result, the IRWD would receive some portion of the tax increment generated by any redevelopment plan if it is adopted. In addition, assessment district and utility district financing is also anticipated. In any event, implementation measures identified in Section 4.3 would ensure provision of adequate facilities. Therefore, it is not expected that reuse would place a financial burden on other areas of the IRWD.

The EIS/EIR should incorporate "standard" conservation measures and mitigations to reduce water demands and sewage flows and minimize impacts on water and wastewater systems and capacity. These measures which include the use of low water use fixtures, drought tolerant landscaping, and reclaimed water whenever possible are delineated in IRWD's Rules and Regulations.

Section 3 - Affected Environment

- Section 3.13.1: Water

We concur with the assessment of the condition of the existing base water systems (potable and nonpotable) and the need to construct new facilities to provide service for base reuse. Please note that the EIS/EIR incorrectly identifies the 16-inch reclaimed water line traversing through the base as an IRWD facility; this pipeline is served from the IRWD system through a meter located near Barranca Parkway, but is owned by the Navy.

- Section 3.13.2: Sewer

As noted in the document, we concur that the sewer system will need to be upgraded (see comments in consequences section below). Note that most existing and proposed sewage from the base properly flows to the County Sanitation Districts (CSDOC) which treats most wastewater to less than tertiary standards followed by ocean disposal. All wastewater treated at IRWD's Michelson Water Reclamation Plant (a small percentage of existing and future base flows) is treated to tertiary standards as a prerequisite for reuse. Revise the sentence that includes mention of "virtual drinking water standards" to read, "...treated, reclaimed and reused throughout the surrounding area for agricultural and landscape irrigation, and is reused in flushing systems for high-rise buildings." In addition, we strongly disagree with the statement referring to the high costs associated with this level of treatment. To the contrary, in addition to providing protection against drought and reducing the need for imported water, wastewater reclamation helps IRWD maintain some of the lowest water and sewer rates in the County.

Section 4 - Environmental Consequences

- Section 4.13.2: Utilities

We agree with the general comments, but emphasize that significant upgrades to water, reclaimed water and sewer systems will be required. Based on communication from the Department of the Navy, it is likely IRWD will receive (through public conveyance) all existing water and sewer facilities on the base and will, at its absolute discretion, determine the need for replacing these facilities. Given the generally poor condition of the existing systems, for the purposes of estimating costs it should be assumed that all existing facilities will be replaced. Under this scenario, the potential for private systems on the base would appear to be minimal. Relative to the use of reclaimed water for lakes and ponds, these should be limited to impoundments for onsite golf courses and large parks and is subject to state and local regulations. With respect to sanitary sewer, based on our understanding with CSDOC, IRWD will be the provider of "onsite" sewer services to the base.

Mr. Dana Ogdon
City of Tustin
Page 3

Thank you for the opportunity to comment on the draft EIS/EIR for the subject project and we look forward to receiving and reviewing the final documents (Response to Comments). If you have any questions or require additional information, please call Richard Diamond, Senior Planner, at (714) 453-5594.

Yours truly,

IRVINE RANCH WATER DISTRICT



Richard B. Bell, P.E.
Manager, Planning and Resources

RAD/RBB/tp

bcc: Greg Hertz
Dick Diamond

5. Finally, with regard to the options described for the two wooden structures, the Blimp Hangars, SCAG policy is to encourage the preservation of Cultural and Historical Resources, and our comment was consistent with this policy.

I.4.5

Policy 3.21, found in the Intergovernmental Review Procedures Handbook, specifically states: "Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites."

We note that Alternatives 2 and 3 would retain only the northern blimp hangar, and that only if financially feasible. We believe that consistency with the SCAG policy would favor retention of one or both hangars if possible, and have so noted in our comment.

I would also bring to your attention that the IGR comments and recommendations are advisory in nature only, and are intended to assist local agencies and project proponents to take actions that contribute to the attainment of regional goals and policies. The lead agency is still responsible for making the final determination whether a plan or project should be approved.

I trust that these further comments clarify the issues you have raised. The responses to these comments should provide satisfactory discussion and resolution to these matters. I shall be glad to respond further should you have any additional concerns or questions.

Sincerely,



J. David Stein, Manager
Implementation Assessment

L.4-5

The commenter's clarification that Alternative 1 may provide the most consistency with SCAG policy regarding cultural and historic resources is noted. This is due to the fact that Alternative 1 may retain both hangars, if financially feasible.



**ASSOCIATION of
GOVERNMENTS**

Main Office
818 West Seventh Street

12th floor
Los Angeles, California
90017-3435

1 (213) 236-1800
1 (213) 236-1875

Verf. Dr. J. A. J. J. J.

muscle: 100 ± 10 mmHg

1980-1981
 1981-1982
 1982-1983
 1983-1984
 1984-1985
 1985-1986
 1986-1987
 1987-1988
 1988-1989
 1989-1990
 1990-1991
 1991-1992
 1992-1993
 1993-1994
 1994-1995
 1995-1996
 1996-1997
 1997-1998
 1998-1999
 1999-2000
 2000-2001
 2001-2002
 2002-2003
 2003-2004
 2004-2005
 2005-2006
 2006-2007
 2007-2008
 2008-2009
 2009-2010
 2010-2011
 2011-2012
 2012-2013
 2013-2014
 2014-2015
 2015-2016
 2016-2017
 2017-2018
 2018-2019
 2019-2020
 2020-2021
 2021-2022
 2022-2023
 2023-2024
 2024-2025
 2025-2026
 2026-2027
 2027-2028
 2028-2029
 2029-2030
 2030-2031
 2031-2032
 2032-2033
 2033-2034
 2034-2035
 2035-2036
 2036-2037
 2037-2038
 2038-2039
 2039-2040
 2040-2041
 2041-2042
 2042-2043
 2043-2044
 2044-2045
 2045-2046
 2046-2047
 2047-2048
 2048-2049
 2049-2050
 2050-2051
 2051-2052
 2052-2053
 2053-2054
 2054-2055
 2055-2056
 2056-2057
 2057-2058
 2058-2059
 2059-2060
 2060-2061
 2061-2062
 2062-2063
 2063-2064
 2064-2065
 2065-2066
 2066-2067
 2067-2068
 2068-2069
 2069-2070
 2070-2071
 2071-2072
 2072-2073
 2073-2074
 2074-2075
 2075-2076
 2076-2077
 2077-2078
 2078-2079
 2079-2080
 2080-2081
 2081-2082
 2082-2083
 2083-2084
 2084-2085
 2085-2086
 2086-2087
 2087-2088
 2088-2089
 2089-2090
 2090-2091
 2091-2092
 2092-2093
 2093-2094
 2094-2095
 2095-2096
 2096-2097
 2097-2098
 2098-2099
 2099-2100
 2100-2101
 2101-2102
 2102-2103
 2103-2104
 2104-2105
 2105-2106
 2106-2107
 2107-2108
 2108-2109
 2109-2110
 2110-2111
 2111-2112
 2112-2113
 2113-2114
 2114-2115
 2115-2116
 2116-2117
 2117-2118
 2118-2119
 2119-2120
 2120-2121
 2121-2122
 2122-2123
 2123-2124
 2124-2125
 2125-2126
 2126-2127
 2127-2128
 2128-2129
 2129-2130
 2130-2131
 2131-2132
 2132-2133
 2133-2134
 2134-2135
 2135-2136
 2136-2137
 2137-2138
 2138-2139
 2139-2140
 2140-2141
 2141-2142
 2142-2143
 2143-2144
 2144-2145
 2145-2146
 2146-2147
 2147-2148
 2148-2149
 2149-2150
 2150-2151
 2151-2152
 2152-2153
 2153-2154
 2154-2155
 2155-2156
 2156-2157
 2157-2158
 2158-2159
 2159-2160
 2160-2161
 2161-2162
 2162-2163
 2163-2164
 2164-2165
 2165-2166
 2166-2167
 2167-2168
 2168-2169
 2169-2170
 2170-2171
 2171-2172
 2172-2173
 2173-2174
 2174-2175
 2175-2176
 2176-2177
 2177-2178
 2178-2179
 2179-2180
 2180-2181
 2181-2182
 2182-2183
 2183-2184
 2184-2185
 2185-2186
 2186-2187
 2187-2188
 2188-2189
 2189-2190
 2190-2191
 2191-2192
 2192-2193
 2193-2194
 2194-2195
 2195-2196
 2196-2197
 2197-2198
 2198-2199
 2199-2200
 2200-2201
 2201-2202
 2202-2203
 2203-2204
 2204-2205
 2205-2206
 2206-2207
 2207-2208
 2208-2209
 2209-2210
 2210-2211
 2211-2212
 2212-2213
 2213-2214
 2214-2215
 2215-2216
 2216-2217
 2217-2218
 2218-2219
 2219-2220
 2220-2221
 2221-2222
 2222-2223
 2223-2224
 2224-2225
 2225-2226
 2226-2227
 2227-2228
 2228-2229
 2229-2230
 2230-2231
 2231-2232
 2232-2233
 2233-2234
 2234-2235
 2235-2236
 2236-2237
 2237-2238
 2238-2239
 2239-2240
 2240-2241
 2241-2242
 2242-2243
 2243-2244
 2244-2245
 2245-2246
 2246-2247
 2247-2248
 2248-2249
 2249-2250
 2250-2251
 2251-2252
 2252-2253
 2253-2254
 2254-2255
 2255-2256
 2256-2257
 2257-2258
 2258-2259
 2259-2260
 2260-2261
 2261-2262
 2262-2263
 2263-2264
 2264-2265
 2265-2266
 2266-2267
 2267-2268
 2268-2269
 2269-2270
 2270-2271
 2271-2272
 227

L-5-1

This letter dated August 10, 1999 is superseded by the letter submitted on August 25, 1999, which is comment L4 in this index. As part of this letter, a copy of the February 9, 1998 letter originally submitted by SCAG to the City of Tustin regarding the initial draft EIS/EIR (December 1997) is provided for reference. No responses are provided to the February 1998 letter because SCAG clearly identified in letter L4 which issues they felt warranted response in the FEIS/EIR.

August 10, 1999

RECEIVED

AUG 17 1999

REDEVELOPMENT AGENCY

Mr. Dana Ogdon
Senior Redevelopment Project Manager
City of Tustin
300 Centennial Way
Tustin, CA 92780

RE: Comments on the Draft Environmental Impact Statement/Environmental Impact Report for the Disposal and Reuse of the Marine Corps Air Station (MCAS) Tustin, Tustin, California – SCAG No. 19900335

L.5.1 Thank you for the opportunity to respond to the Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the above referenced project. A letter from SCAG was issued on February 8, 1998 regarding this project. Those comments remain valid today. A copy of that letter is attached. In addition, for your review and consideration, we have the following comments:

The EIS/EIR indicates on pages 3-58 and 3-59 that two (2) blimp hangers (i.e., Buildings 28 and 29) are located within the Air Station. These structures were apparently placed on the National Register of Historic Places (NRHP) in 1975. Moreover, on page 3-72 of the EIS/EIR reference is made to these and several other ancillary buildings as potentially forming two (2) discontinuous historical districts.

The EIS/EIR indicates on page 7-25 that it may not be financially feasible to retain either of the two blimp hangars. As such, implementation of the Reuse Alternative Implementing Actions would result in a significant impact. Moreover, the document indicates that while a draft MOA currently under preparation would explicitly address mitigation measures for each blimp hangar, as well as the eligible historic districts, even with the MOA, impacts could still be considered significant.

The importance of these structures and their contribution to the Nation's heritage has been clearly demonstrated by their inclusion on the NRHP. To the extent practicable and feasible, we strongly encourage the preservation of these important historical resources. As such, we recommend that both

Mr. Dana Ogdon
Page 2

the draft MOA and EIS/EIR include mitigation measures which incorporate the existing buildings into the overall design plans for the facility. However, we would ask that appropriate measures be taken to protect both the structural and architectural integrity of the buildings.

Should you have any questions, please feel free to contact me at your earliest convenience.

Respectfully,



J. DAVID STEIN
Manager, Performance Assessment and Implementation



Main Office
818 West Seventh Street
12th Floor
Los Angeles, California
90017-3435

236-1800
236-1825

www.scribd.com

[illegible]

Printed on Recycled Paper

February 9, 1998

Mr. Dana Ogden, Senior Redevelopment Project Manager
City of Tustin
300 Centennial Way
Tustin, CA 92680

RE: Comments on the Draft Environmental Impact Statement/
Environmental Impact Report for the Disposal and Reuse of the
Marine Corps Air Station (MCAS) Tustin, Tustin, California -
SCAG No. I 9800009

Dear Mr. Ogden:

Thank you for submitting the Draft Environmental Impact Statement/Environmental Impact Report for the Disposal and Reuse of the Marine Corps Air Station (MCAS) Tustin, Tustin, California to SCAG for review and comment. As an arwide clearinghouse for regionally significant projects, SCAG assists cities, counties and other agencies in reviewing projects and plans for consistency with regional plans.

The attached detailed comments are meant as administrative comments to provide guidance for considering the proposed project within the context of our regional goals and policies. SCAG's policy level review will be initiated with the presentation of the proposed Disposal and Reuse of MCAS Tustin to SCAG's Standing Committee on Implementation (SCI) on March 5, 1998 at 1:15 pm at the SCAG office in Los Angeles. You are cordially invited to attend this meeting and answer any questions of the elected official members of the SCI. If you have any questions regarding the attached comments, please contact Bill Boyd at (213) 236-1960. He will be contacting you with further information concerning this SCI meeting.

Sincerely,

DAVID STEIN

Manager, Performance Assessment and Implementation

COMMENTS ON THE
DISPOSAL AND REUSE OF
MARINE CORPS AIR STATION (MCAS) TUSTIN
DRAFT ENVIRONMENTAL IMPACT STATEMENT/
DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT DESCRIPTION

The Marine Corps Air Station (MCAS) Tustin consists of approximately 1,600 acres in central Orange County, bounded on the south by Barranca Parkway, on the east by Harvard Avenue, on the north by the SCRRA/OCTA Railway, and on the west by Redhill Avenue. The site is situated in the City of Tustin, except for an 80-acre portion located within the City of Irvine. The site is surrounded by urban development in the Cities of Tustin, Irvine and Santa Ana. MCAS Tustin was originally commissioned in 1942 as a Navy lighter-than-air base to support Navy reconnaissance blimps that protected the Southern California coast during World War II. Designated as MCAS Tustin in 1985, the station has been the main Marine Corps West coast facility for training and operations involving medium and heavy lift-capable helicopters. Approximately 4,440 active duty military and 384 civilian personnel work at MCAS Tustin. In addition, approximately 3,150 dependents of active duty Marines live in family housing at the base. A decision was made in 1991-95 to close MCAS Tustin, which is scheduled for completion by July 1999. The Draft EIR for the Community Reuse Plan has been prepared by the City of Tustin, which was designated by the Department of Defense as the Local Redevelopment Authority (LRA).

The LRA has recommended that a 10 acre site be used for an Armed Forces Reserve Center. The LRA is proposing that 192 barracks units of emergency/transitional housing for single men and women and 50 family leased units be made available in existing facilities. The LRA is also recommending that requests of state and local agencies be approved for community college (vocational and business development), Sheriff's Department training center, three elementary schools and one high school, day care center, animal control facility, 60-bed facility for abused, abandoned and neglected children, two community and two neighborhood parks, an urban regional park, and right-of-way for the Peters Canyon flood control channel.

The proposed Reuse Plan/Specific Plan consists of the following elements: land use plan; circulation plan; recreational bikeway/trail plan; parks/recreation/open space plan; domestic water plan; reclaimed water plan; sanitary sewer plan; storm drainage plan; electricity, natural gas, telephone and cable television plan; urban design plan; and, land use and development/reuse regulations.

Key features to the Plan include the following:

- Uses with the greatest public revenue generation potential are located in areas positioned for early development to help finance the infrastructure needed to develop other areas of the site.
- Residential uses are proposed in the northern and eastern portion of the site, adjacent to existing residential neighborhoods.

Jana Ogden

February 9, 1998

Page 3

- Commercial, office and industrial uses are predominately located in central and southern portions of the site, which is compatible with existing surrounding uses.
- Many buildings in the existing base community services area along the western edge of the site will be reused for educational purposes. The Saddleback Community College District and a coalition of educational institutions intends to provide community college level programs, job training, and incubator (start-up) business development opportunities for students.
- Approximately 20 percent of the Plan will be dedicated to recreation and open space uses, including an 84.5-acre County Regional Park, a 25-acre Community Park, neighborhood parks dispersed within the residential enclaves, an 18-hole publicly accessible golf course, and a Commercial Recreation center. In addition, neighborhood recreation facilities within the existing housing areas and school play yards will provide nearby recreation opportunities for residents.
- The County Regional Park will be developed in the vicinity of the northern blimp hangar which is a historically significant structure listed on the National Register of Historic Places. The hangar may be preserved if financially feasible, and will in any event set the theme for the park as well as being a major landmark for the Plan area.
- The core area of the Plan will permit a variety of future development opportunities when market conditions will be suitable for high value use of the property. The core area is the last and most difficult area to develop due to timing of the environmental cleanup, market absorption factors, probable high demolition costs associated with airfield facilities, and high infrastructure improvement costs. The southern historic blimp hangar is located within the core area and may be preserved if financially feasible.
- A golf Village is planned to offer prime quality golf course-oriented housing around an 18-hole course. A hotel and conference facility will serve business travelers, recreational travelers, and other visitors to the area.
- The extension of Tustin Ranch Road and Warner Avenue through the Plan area will complete significant segments of the regional arterial system. The implementation of the Circulation Plan will create new capacity for the region while accommodating traffic generated by the future development on the site.
- A loop roadway system for local circulation will provide early access to the interior of the site where parcels are first available for reuse.

The proposed Project will result in a total of 4,601 housing units and about 12.2 million square feet of non-residential development within the site. Of that total, about 3,064 housing units and about 10.1 million square feet of non-residential development will be new development. About 1,537 housing units and 2.1 million square feet of non-residential development is anticipated to be the reused existing military structures and facilities. The housing provided under the proposed Plan will generate residential population of up to 10,797 persons on the site. The Plan is expected to generate approximately 26,000 direct and 11,000 indirect jobs in Orange County at full buildout. Generation of this employment will occur in stages over a period of more than 25 years, dependent on market conditions, land availability and other factors.

The proposed land use configuration of the MCAS Tustin Project follows:

Land Use Categories	Area (gross acres)	Total Development (dus/sf)
Low Density Residential (1-7 dus/ac)	202.2	1,163 dus
Medium Density Residential (8-15 dus/ac)	109.7	803 dus
Medium-High Density Residential (16-25 dus/ac)	28.6	573 dus
Transitional/Emergency Housing	6.1	85,215 sf
Golf Village (1-15 dus/ac)	103.7	934 dus
Community Core (16-25 dus/ac)	(see commercial)	1,126 dus
Commercial/Business (.35-.54 FAR)	247.0	4,209,426 sf
Commercial (.35-.40 FAR)	68.8	1,069,921 sf
Commercial/Recreation (.35 FAR)	28.7	437,560 sf
Village Services (.35 FAR)	28.4	389,688 sf
Commercial/Golf Village (.5-.6 FAR)	188.5	280,526 sf
Community Core (.5 FAR)	240.4	3,797,526 sf
Learning Village (.3 FAR)	130.6	1,355,936 sf
Community Park (.1 FAR)	25.0	14,100 sf
Urban Regional Park (.16 FAR)	84.5	574,992 sf
Rights-of-Way & Channels	107.9	
TOTAL	1,600.1	4,601 dus 12,214,890 sf

Anticipated development scheduling for the proposed MCAS Tustin Project follows:

Land Use Uses	1997-2000	2001-2005	2006-2010	2011-2015	2016-2020	2020+
Residential (in du or sf)	851 du 85,215 sf	2,065 du	559 du	1,126 du		
Commercial/Business (in sf)	675,000	1,567,800	1,640,937	1,747,751	1,128,173	3,424,986
Institutional/Recreation (in sf)	1,332,724	612,304				
TOTAL	851 du 2,092,939	2,065 du 2,180,104	559 du 1,640,937	1,126 du 1,747,751	1,128,173	3,424,986

Phasing triggering mechanisms that apply to all development anticipated to occur under the proposed plan include facilities and improvements that must be constructed for the subsequent increment of development to proceed. These include specific on-site circulation improvements; drainage, water, sewer, electricity, gas, and other utility improvements; and community facilities including parks. The

Jana Ogden

February 9, 1998

Page 5

Timing for on-site circulation improvements is based on specific thresholds for a number of cumulative additional daily trips.

The Plan proposes eight distinct but interrelated neighborhoods which form the Plan's community structure. The neighborhoods as described in the Specific Plan are as follows:

- Neighborhood A - Learning Village (Learning Village, 10 acre elementary school, community park, transitional/emergency housing).
- Neighborhood B - Village Housing (low and medium density residential and village services)
- Neighborhood C - Regional Park (urban regional park).
- Neighborhood D - Community Core (community core, medium-high density residential, 40 acre high school).
- Neighborhood E - Employment Center (commercial, commercial recreation, commercial business military).
- Neighborhood F - Regionally-Oriented Commercial District (commercial military, commercial business).
- Neighborhood G - Residential Core (Golf Village, 48.5 acres low density residential, 55.2 acres medium density residential, 10 acres hotel, 2.4 acres commercial, 176.1 acres golf course, 10 acres elementary school).
- Neighborhood H - Irvine Residential Neighborhood (medium density residential, 20 acres elementary school K-8).

During the initial review period for the Notice of Preparation and in the Draft EIR/EIS itself, the following potential areas of controversy were identified:

- The proposed transportation system's ability to accommodate potential traffic, and coordination with the existing and planned transportation network.
- Drainage issues related to Peters Canyon Wash.
- Proposed land use compatibility with existing and long-range plans.
- Potential impacts on the Tustin Unified School District, Irvine Unified School District, and Santa Ana Unified School District.
- Potential impacts on the Peters Canyon Regional Riding and Hiking Trail.
- The possible demolition of one or both of the lighter-than-air hangars, listed on the National Register of Historic Places and/or destruction of portions of the eligible historic district.
- Funding for necessary infrastructure and other public improvements and facilities.

The Proposed Action and alternatives examined in the EIS/EIR are the result of a comprehensive community reuse planning process, which involved broad based participation by affected public and private interests. They are as follows:

- Proposed Action -- Disposal and subsequent reuse of MCAS Tustin in accordance with the MCAS Tustin Reuse Plan/Specific Plan, and associated discretionary actions.
- Alternative 1 -- Disposal and subsequent reuse of MCAS Tustin in accordance with the Arterial

Jana Ogeden
February 9, 1998
Page 6

Grid Pattern/No Core/High Density Residential land use pattern, and associated discretionary actions.

- Alternative 2 -- Disposal and subsequent reuse of MCAS Tustin in accordance with the Arterial Loop Pattern/Low Density Residential land use pattern, and associated discretionary actions
- Alternative 3 -- No Action, required by NEPA and CEQA, which assumes closure of MCAS Tustin with property remaining in federal ownership under a caretaker maintenance plan.

INTRODUCTION TO SCAG REVIEW PROCESS

The document that provides the primary reference for SCAG's project review activity is the Regional Comprehensive Plan and Guide (RCPG). The RCPG chapters fall into three categories: core, ancillary, and bridge. The Growth Management (adopted June 1994), Regional Mobility (adopted June 1994), Air Quality (adopted October 1995), Hazardous Waste Management (adopted November 1994), and Water Quality (adopted January 1995) chapters constitute the core chapters. These core chapters respond directly to federal and state planning requirements. The core chapters constitute the base on which local governments ensure consistency of their plans with applicable regional plans under CEQA. The Air Quality and Growth Management chapters contain both core and ancillary policies, which are differentiated in the comment portion of this letter. The Regional Mobility Element (RME) constitutes the region's Transportation Plan. The RME policies are incorporated into the RCPG.

Ancillary chapters are those on the Economy, Housing, Human Resources and Services, Finance, Open Space and Conservation, Water Resources, Energy, and Integrated Solid Waste Management. These chapters address important issues facing the region and may reflect other regional plans. Ancillary chapters, however, do not contain actions or policies required of local government. Hence, they are entirely advisory and establish no new mandates or policies for the region.

Bridge chapters include the Strategy and Implementation chapters, functioning as links between the Core and Ancillary chapters of the RCPG.

Each of the applicable policies related to the proposed project are identified by number and reproduced below in italics followed by SCAG staff comments regarding the consistency of the Project with those policies.

Consistency With Regional Comprehensive Plan and Guide Policies

1. *The Growth Management Chapter (GMC)* of the Regional Comprehensive Plan contains a number of policies that are particularly applicable to the MCAS Tustin Project.

a. *Core Growth Management Policies*

3.01 *The population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.*

SCAG staff comments. As SCAG has designated subregions, the project is situated in the Ventura County Council of Governments subregion. Implementation of the project by would result in the creation of 4,600 dwelling units by year 2020 and approximately 26,000 new direct jobs at buildout (13,500 jobs by year 2020) and 11,000 new indirect jobs at buildout. The Project will eliminate approximately 380 jobs currently held by civilian personnel at the base. The new homes would be occupied by approximately 10,800 residents. The Draft EIR/EIS does not include a comparison of the proposed population, housing unit and employment projections for the Project with SCAG's adopted growth forecasts contained in the 1994 Regional Comprehensive Plan and Guide nor with the Regional Transportation Plan 97 Final Baseline (6-7-97) Population, Household and Employment Forecasts. The Project would be consistent with the adopted SCAG FORECASTED increases for the Orange County subregion from year 2000 to 2015 as follows: Population (Project - 13,500 versus SCAG - 314,000); Households (Project - 4,600 versus SCAG - 125,000); and, Employment (Project 10,984 versus SCAG - 448,000). The Project would be inconsistent with the RTP97 Final Baseline Forecasted increases from year 2000 to 2020 for the City of Tustin as follows: Population (Project - 10,800 versus SCAG - 5,254); Households (Project - 4,600 versus SCAG - 2,739); and, Employment (Project - 13,500 versus SCAG - 11,919). The Final EIR/EIS should discuss the relationship of proposed Project population, housing and employment growth with SCAG regional growth forecasts. The Project is consistent with adopted SCAG Orange County subregional growth forecasts but inconsistent with new SCAG RTP97 growth forecasts for the City of Tustin.

3.03 *The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.*

SCAG staff comments: The Draft EIR/EIS contains information on development phasing and timing (page 2-18), as referenced in the above Project Description. SCAG's Standing Committee on Implementation has consistently stressed that Final EIR's/EIS's for similar projects should address the manner in which the proposed project will be developed so that provision of service to new housing units or jobs producing commercial, industrial or other uses will be staged or phased to help achieve greater jobs/housing balance within the jurisdiction and the Subregion. The Standing Committee on Implementation has previously expressed the concern that, in housing rich subregions, the housing will likely be constructed first and the employment producing land uses may never materialize. Conversely, in jobs rich subregions, the employment producing office buildings, shopping centers, schools or industrial buildings could be built first, and the housing components could be brought in much later, or never. The objective of a phasing or development staging plan would be to encourage the implementation of types of development that would address the jobs/housing balance issue and work toward the reduction of Vehicle Miles Traveled in the early phases or stages of development rather than leaving such uses until later (or allowing indefinite postponement). In the case of the MCAS Tustin Project, as noted in the project description, all of the proposed housing units are scheduled to be built prior to year 2015, whereas, less than half of the 26,100 buildout employment is anticipated prior to year 2015. Public utilities, facilities and transportation systems are staged to support forecasted, housing and employment growth as detailed on Tables 2.3-3 and 2.3-4. The latter table identifies triggering mechanisms for public facilities. The Project is consistent with this core RCPG policy.

b. Ancillary Growth Management Policies

3.04 *Encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices.*

SCAG staff comments. The Draft EIR/EIS lacks specific information on the types of jobs that would be attracted to the Project area and on housing prices. The Final EIR/EIS should include information on anticipated housing price ranges for the various types of housing proposed within the Project area. Similarly, the Final EIR/EIS should also address the matter of the types of jobs that would be attracted to the proposed Project and the relationship between types of jobs and housing prices. Some information on types of jobs may be included in the "SKMG Market Demand Report", but this is not included in the Draft EIR/EIS as an Appendix. We are unable to determine whether the Project is supportive of this ancillary RCPG policy.

3.05 *Encourage patterns of urban development and land use which reduce costs on infrastructure construction and make better use of existing facilities.*

SCAG staff comments. The Draft EIR/EIS acknowledges that Project is surrounded by existing urban development. It concludes that water, sewer, storm drainage and transportation service and facilities are available to the site to support the proposed uses. The Project is supportive of this ancillary RCPG policy.

3.07 *Support subregional policies that recognize agriculture as an industry, support the economic viability of agricultural activities, preserve agricultural land, and provide compensation for property owners holding lands in greenbelt areas.*

SCAG staff comments. The Draft EIR/EIS acknowledges on page 3.2-6 that the Navy currently leases out 530 acres of the Project site for agricultural purposes, of which 360 acres are farmed with irrigated row crops. The document acknowledges on pages ES-15, 4.7-1 and 5-2 that the Project will result in the irreversible effect of converting approximately 360 acres of prime agricultural land to urban uses. Additional information should be included in the Final EIR/EIS which graphically depicts the extent and significance of the agricultural land. We are unable to determine whether the Project is supportive of this ancillary RCPG policy.

3.08 *Encourage subregions to define economic strategy to maintain economic viability of the subregion, including the development and use of marketing programs, and other economic incentives, which support the attainment of subregional goals and policies.*

SCAG staff comments. The Draft EIR/EIS acknowledges on page 2-22 that the Tustin General Plan goals and policies will be amended by the addition of policy 7.6 to promote marketing techniques for development of MCAS Tustin; policy 13.4 which addresses balanced growth and use of tax revenues to offset costs of public services; policy 13.7 which promotes uses and institutions which will attract 21st Century jobs and technologies; and, policy 13.10 which supports a fiscally sound reuse of MCAS Tustin which fosters economic development. The Draft

EIR/EIS identifies "fostering economic development" as one of the supporting goals. The Project is supportive of this ancillary RCPG policy.

- 3.09 *Support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.*

SCAG staff comments. The Draft EIR/EIS identifies various on- and off-site infrastructure and public service delivery facilities to serve the Project. These improvements reflect necessary extension of existing facilities or the construction of new facilities, where none currently exist. Infrastructure is designed to minimize cost to the maximum extent. The Draft also acknowledges that "where the proposed development is not supported by existing infrastructure, conditions of approval will be established that appropriate infrastructure is constructed in accordance with the Plan". It also states that for those areas of the site that can be reused without initiating major infrastructure, a mechanism will be established to enable these areas to bear their proportionate share of on-site and off-site roadway infrastructure costs. The Project is supportive of this ancillary RCPG policy.

- 3.10 *Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.*

SCAG staff comments. The Draft EIR/EIS acknowledges the use of flexible growth management policies, development regulations (page 2-5), standards, design guidelines and would therefore be supportive of this ancillary RCPG policy.

- 3.11 *Support provisions and incentives created by local jurisdictions to attract housing growth in job rich subregions and job growth in housing subregions.*

SCAG staff comments. The Draft EIR/EIS on page 4.3-2 acknowledges that "the proposed Plan will add both housing and jobs to the "job-rich" and "Housing poor" subregion. Furthermore, the Draft EIR/EIS states that significantly more jobs than housing units would result from the proposed Plan. This will widen the jobs/housing ratio in the County. The Project is not supportive of this ancillary RCPG policy.

- 3.12 *Encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.*

SCAG staff comments. The Draft EIR/EIS, includes a detailed discussion of the relationship of the Project's existing and planned transit services (pages 4.11-3 through 4.11-7). Twenty nine TDM/TSM mitigation measures are identified on pages 4.11-6 and -7 and implementation is required on a project-by-project basis. The Project is supportive of this ancillary RCPG policy.

- 3.13 *Encourage local jurisdictions plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.*

SCAG staff comments. The Draft EIR/EIS acknowledges on page 3.10-12 that the Southern California Regional Rail Authority and the Orange County Transportation Authority are finalizing acquisition of property for locating a Tustin Metrolink station in the vicinity of the base. The Project is a fine example of infill development and redevelopment of an existing military base, with good access to existing and proposed transit facilities. The Project is supportive of this ancillary RCPG policy.

3.14 *Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems and activity centers.*

SCAG staff comments. The Draft EIR/EIS acknowledges on pages 2-6 through 2-18 that the Project Reuse/Specific Plan proposes medium high density residential uses (16-42 dus/acre) adjacent to the future Tustin Metrolink station at the intersection of Jamboree Road and the SCRRA/OCTA Railway. This site is also located in close proximity to the Golf Village and Community Core activity centers. The Project is supportive of this ancillary RCPG policy.

3.15 *Support local jurisdictions' strategies to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors.*

SCAG staff comments. See SCAG staff comments on policy 3.14. The Project incorporate strategies to establish mixed-use clusters and other transit oriented development in and around Metrolink rail facilities. The Project is supportive of this ancillary RCPG policy.

3.16 *Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.*

SCAG Staff comments. See SCAG staff comments under policy 3.12 through 3-15 which also address this policy. The Project is supportive of this ancillary RCPG policy.

3.17 *Support and encourage settlement patterns which contain a range of urban densities.*

SCAG staff comments. The Draft EIR/EIS on pages 2-9 through 2-11 includes a detailed discussion of the six different residential density categories proposed for the Project. The Project is supportive of this ancillary RCPG policy.

3.18 *Encourage planned development in locations least likely to cause adverse environmental impact.*

SCAG staff comments. The Project is designed in a manner which will minimize adverse environmental impacts. The following resource conservation goals identified in the Draft EIR/EIS and the MCAS Tustin Specific Plan are designed in a manner which will minimize adverse environmental impacts:

- **Good Neighbor:** The new uses and design should peacefully coexist with surrounding residential and businesses in Tustin and adjacent cities, minimizing impacts on noise, air

quality, traffic and other environmental features.

- **Sustainable Environment:** The land and water should be clean and safe to use, now and in the future; and native plants and animals selectively re-introduced into the design.

The mitigation measures included in the Draft EIR/EIS have been developed to address any identified adverse environmental impacts. The adequacy of project specific mitigation and the feasibility of further mitigation of these impacts should be carefully considered by the Cities of Tustin and Irvine during the approval process for specific development proposals within the MCAS Tustin Specific Plan Project. The Project is supportive of this ancillary RCPG as it pertains to the above noted areas.

3.19 Support policies and actions that preserve open space areas identified in local, state, and federal plans.

SCAG staff comments. The Draft EIR/EIS acknowledges that implementation of the proposed Project will result in the preservation of at least 285.6 acres of recreation and open space land (golf course - 176.1 acres, community park - 25 acres, and urban regional park - 84.5 acres). Major portions of these areas have been or will be identified in the City of Tustin, County of Orange and SCAG Regional Open Space Plans. The Draft EIR/EIS notes on page 4.16-3 that developers will be required to show evidence of meeting park and open space standards of the Cities of Tustin and Irvine prior to recording of tract maps. The adequacy of project specific mitigation and the feasibility of further mitigation of these impacts should be carefully considered by the Cities of Tustin and Irvine during the approval process for specific development proposals within the MCAS Tustin Specific Plan Project. If the proposed mitigation measures are implemented, the Project would be supportive of this ancillary RCPG policy.

3.20 Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.

SCAG staff comments. The Draft EIR/EIS acknowledges on page 4.6-1 through 4.6-3 that the Project will have adverse impacts on areas along the Peters Canyon Channel and four other drainage channels within the base which constitute approximately 4.4 acres of jurisdictional wetlands. The Draft EIR/EIS also states on pages 3.6-4 and 5 that the Southwestern Pond Turtle (a candidate for federal listing as Threatened or Endangered) habits the Peters Canyon Channel. Potential mitigation measures BR-1 through BR-3 have been identified to address the adverse biological impacts. The adequacy of project specific mitigation and the feasibility of further mitigation of these impacts should be carefully considered by the Cities of Tustin and Irvine during the approval process for specific development proposals within the MCAS Tustin Specific Plan Project. The Project is supportive of this ancillary RCPG policy.

3.21 Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.

SCAG staff comments. The Draft EIR/EIS acknowledges on page 4.16-3 that the proposed Project will result have significant effects to eligible historic district associated with the two

historic blimp hangars and associated facilities and on the hangar structures (which are currently listed on the National Register of Historic Places). Potential mitigation measures CR-1 through CR-4 have been identified to address the adverse cultural resource impacts. We concur that the proposed mitigation measures will reduce the potentially significant but not below the level of significance and we strongly encourage actions to preserve the two historic blimp hangars, as currently planned in the Project design. The adequacy of project specific mitigation and the feasibility of further mitigation of these impacts should be carefully considered by the City of Tustin, the U.S. Marine Corps, and the County of Orange during the approval process for specific development proposals within the MCAS Tustin Specific Plan Project. If the proposed mitigation measures are implemented, the Project would be supportive of this ancillary RCPG policy.

3.22 *Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.*

SCAG staff comments. The Draft EIR/EIS acknowledges at pages 4.9-1 through 4.9-6 that the Project site is subject to potential soils and geologic hazards but that they are mitigatable. Portions of the base are situated within the 100-year flood zone and flooding is considered a significant impact, as noted on page 4.13-7 of the Draft EIR/EIS. The Project includes a number of design features and mitigation measures to guard against adverse soils and geologic, surface drainage, and flooding impacts. The adequacy of project specific mitigation and the feasibility of further mitigation of these impacts should be carefully considered by the Cities of Tustin and Irvine during the approval process for specific development proposals within the MCAS Tustin Specific Plan Project. If the proposed mitigation measures are implemented, the Project would be supportive of this ancillary RCPG policy.

3.23 *Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.*

SCAG staff comments. Discussion of mitigation measures for most of these environmental factors is addressed under SCAG policies 3.20 and 3.22. Additionally mitigation measures are proposed to reduce noise and hazardous wastes and materials, including contaminated soils (as part of the BRAC Cleanup Plan) below a level of significance. The adequacy of project specific mitigation and the feasibility of further mitigation of these impacts should be carefully considered by the Cities of Tustin and Irvine, and the U.S. Marine Corps during the approval process for specific development proposals within the MCAS Tustin Specific Plan Project. If the proposed mitigation measures are implemented, the Project would be supportive of this ancillary RCPG policy.

24 *Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.*

SCAG staff comments. The Draft EIR/EIS acknowledges on page 4.3-2 that the Project will provide 4,061 housing units (1,537 dwelling units in existing military housing structures which could be converted to civilian use, or reconstructed in the event that rehabilitation is not economically feasible and 3,064 dwelling units in new development), including a variety of housing types ranging from low density (up to 7 dwelling units per acre) to medium-high density with a maximum density of 25 dwelling units per acre. The Cities of Tustin and Irvine have provisions for affordable housing in their General Plan Housing Elements. The Project proposes the development of transitional/emergency housing as part of a Homeless Accommodation Plan. The Reuse Plan proposes 192 barracks units for emergency/transitional housing for single men and women and 50 units of family unit emergency shelter and transitional housing for homeless families. The Project is supportive of this ancillary RCPG policy.

3.25 *Encourage efforts of local jurisdictions, employers and service agencies to provide adequate training and retraining for workers, and prepare the labor force to meet the future challenges of the regional economy.*

SCAG staff comments. The Draft EIR/EIS acknowledges on page 2-6 that: "Many of the buildings in the existing base community services area along the western edge of the site will be reused for educational purposes. A Community College District and a coalition of education institutions intends to provide community college level programs, job training, and incubator (start-up) business development opportunities for students." The Project is supportive of this ancillary RCPG policy.

3.27 *Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.*

SCAG staff comments. The Draft EIR/EIS acknowledges on page 2-4 that a supporting goal of the Project is a "Sustainable Environment: The land and water should be clean and safe to use, now and in the future; and native plants and animals selectively re-introduced into the design". For the built-environment, the Draft EIR/EIS addresses "efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection" in sections 3.4, 4.4 (Public Services and Facilities), 3.13, 4.13 (Utilities) and 4.16 (Mitigation Measures). The adequacy of project specific mitigation and the feasibility of further mitigation of these impacts should be carefully considered by the Cities of Tustin and Irvine during the approval process for specific development proposals within the MCAS Tustin Specific Plan Project. The Project is supportive of this ancillary RCPG policy.

2. The Regional Mobility Chapter (RMC) also has policies, all of which are core, that pertain to the proposed project. This chapter links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations. Among the relevant policies in this chapter are the

Transportation Demand Management and Regional Transit Program Policies

- 4.01 *Promote Transportation Demand Management programs along with transit and ridesharing facilities as a viable and desirable part of the overall program while recognizing the particular needs of individual subregions.*
- 4.03 *Support the extension of TDM program implementation to non-commute trips for public and private sector activities.*
- 4.04 *Support the coordination of land use and transportation decisions with land use and transportation capacity, taking into account the potential for demand management strategies to mitigate travel demand if provided for as a part of the entire package.*
- 4.06 *Support efforts to educate the public on the efficacy of demand management strategies and increase the use of alternative transportation.*
- 4.07 *Public transportation programs should be considered an essential public service because of their social, economic, and environmental benefits.*
SCAG staff comments. See SCAG staff comments on policy 3.12, which deal in part with TDM and transit improvements and mitigation measures. We encourage the Cities of Tustin and Irvine, in the crafting of air quality operational measures generally described in measure AQ-2, for individual development projects, to consider the concepts inherent in these five SCAG policies. The Project is consistent with these five core TDM/transit RCPG policies.
- 4.09 *Specific service types, levels and configuration should be determined by the local transit providers, transit users, local jurisdictions, and applicable county transportation commissions.*
 - a o *Public transit services shall be designed to provide the maximum availability at times convenient for use.*
 - b o *Public transit services shall be designed to be available for use without impediments.*
 - c o *Public transit services should be designed to provide maximum user utility.*
 - d o *New and expansion transit programs which are designed to meet the objectives of Transportation Control Measures contained in the AQMP shall receive priority for funding.*
 - e o *Local funding resources for transit should be used to leverage all available federal funding sources as applicable.*

- f o All existing and new public transportation services, facilities, and/or systems shall be fully accessible to persons with disabilities as defined, mandated, and required under the applicable Titles and Sections of the Americans With Disabilities Act, 1990 and the Rehabilitation Act, 1974.
- g o All existing and new public transit services shall be provided in a manner which does not preclude use on the basis of race, color, and/or national origin as defined, mandated and required under Title 6 of the Civil Rights Act, 1964.
- h o All existing and new public transit services, facilities, and/or systems shall evaluate the potential for private sector participation through the use of competitive procurement based on Fully Allocated Costing methodologies.

SCAG staff comments. See previous SCAG staff comments on TDM/transit policies. The Project is consistent with this core RCPG policy.

Regional Streets and Highways Program Policies

10 Potential down-stream congestion impacts from capacity enhancing projects will be studied.

SCAG staff comments. The Draft EIR/EIS acknowledges in sections 3.10 and 4.10 (Traffic/Circulation) extensive analysis of the traffic impacts associated with the proposed Project. These studies have relied on dated transportation modeling ("Central County Traffic Model, November 1994" and "Irvine Transportation Analysis Model, October 1993") which may have incorporated then current county/regional growth and transportation forecasts and transportation system plans. Based on the information contained in Appendix I: Traffic Study and Traffic Study Appendices, we are unable to determine the relationship of these transportation modeling efforts to current county/regional transportation models and associated Regional Transportation Plan. The SCAG Regional Transportation plan is currently being revised, with adoption anticipated in spring 1998. Subsequent transportation analysis at the project level within the MCAS Tustin site should utilize the most current regional transportation analysis modeling or local models that are consistent with the regional model.

The circulation plan for the MCAS Tustin Project features a north-south link (Tustin Ranch Road-Von Karman Avenue) and an east-west link (Warner Avenue and Tustin Ranch Road are proposed to be classified as major arterials, including an interchange at Tustin Ranch Road and Edinger Avenue. Amendment to the Master Plan of Arterial Highways is necessary to reflect these proposed improvements. The Cities of Tustin and Irvine are encouraged to continue to work with OCTA, Orange County and SCAG to incorporate the proposed arterial improvements into the regional highway network. Mechanisms are proposed as mitigation measures to assure funding of required street and highway improvements both within and outside the Project boundaries. The adequacy of project specific mitigation and the feasibility of further mitigation of these impacts should be carefully considered by the Cities of Tustin and Irvine during the

Dana Ogden
February 9, 1998
Page 16

approval process for specific development proposals within the MCAS Tustin Specific Plan Project. We are unable to determine whether the Project is consistent with this core RCPG policy.

4.19 *Necessary steps to develop and implement Smart Corridors and Smart Streets to achieve regional mobility objectives shall be initiated.*

SCAG staff comments. The Draft EIR/EIS acknowledges in section 4.10 (Traffic/Circulation) traffic mitigation funding of smart street improvements in the form of short- and long-range Advanced Traffic Management System (ATMS) improvements along arterial systems impacted by the proposed Project. We encourage the Cities of Tustin and Irvine to continue to work with the Orange County Transportation Agency to support ongoing smart street and smart corridor planning activities, as they relate to the proposed Project. The Project is consistent with this core RCPG policy.

4.20 *Expanded transportation system management by local jurisdictions will be encouraged.*

4.21 *The development and application of management systems by local jurisdictions as a means of optimizing the expenditure of scarce maintenance, operating, and capital funds should be supported.*

4.22 *New transportation infrastructure will incorporate advanced system technologies, where appropriate.*

4.23 *TSM activities throughout the region shall be coordinated among jurisdictions.*

4.24 *Methods to improve safety and reduce incidents on the regional transportation system will be considered.*

SCAG staff comments. The Draft EIR/EIS, includes a detailed discussion of the relationship of the Project's congestion management, intersection improvements and proposed air quality/transportation mitigation measures are discussed in sections 3.10 and 4.10 (Traffic/Circulation) and 3.11 and 4.11 (Air Quality) and on pages 4.16-5 through 4.16-10. These efforts acknowledge application of management systems to relieve congestion, reliance on advanced system technologies, and coordination of transportation system management among impacted jurisdictions (Cities in the vicinity, Orange County, OCTA, Transportation Corridors Agency and CALTRANS). The adequacy of project specific mitigation and the feasibility of further mitigation of these impacts should be carefully considered by the Cities of Tustin and Irvine during the approval process for specific development proposals within the MCAS Tustin Specific Plan Project. The Project is consistent with these five core RCPG policies.

Regional Non-Motorized Transportation Program Policies

4.25 *The development of the regional transportation system should include a non-motorized transportation system that provides an effective alternative to auto travel for appropriate trips.*

The planning and development of transportation projects and systems should incorporate the following, as appropriate:

- a o *Provision of safe, convenient, and continuous bicycle and pedestrian infrastructure to and throughout areas with existing and potential demand such as activity areas, schools, recreational areas (including those areas served by trails), which will ultimately offer the same or better accessibility provided to the motorized vehicle.*
- b o *Accessibility to and on transit (bus terminals, rail stations, Park-And-Ride lots), where there is demand and where transit boarding time will not be significantly delayed.*
- c o *Maintenance of safe, convenient, and continuous non-motorized travel during and after the construction of transportation and general development projects. Existing bikeways and pedestrian walkways should not be removed without mitigation that is as effective as the original facility.*

SCAG staff comments. Draft EIR/EIS acknowledges on Figure 2 3-1 a conceptual plan for a regional riding and hiking trail along the Peters Canyon Channel right-of-way. Existing biking and hiking trails are described on pages 3.4-6 through 3.4-8 and proposed facilities on pages 4.4-11 through 4.4-14. Air quality mitigation measure AQ-2 (o, t, v, v1, v2, w, x, and y) further details non-motorized transportation mitigations. The Project is consistent with this core RCPG policy.

4.27 *Urban form, land use and site-design policies should include requirements for safe and convenient non-motorized transportation, including the development of bicycle and pedestrian-friendly environments near transit.*

SCAG staff comments. The MCAS Tustin Specific Plan includes urban form, land use and site-design policies that support non-motorized transportation as noted previously under SCAG policies 3.12 and 4.25. The Project is consistent with this core RCPG policy.

Goods Movement Program Policies

4.28 *Growth in the demand for goods movement will be accommodated through the provision of adequate multi-modal and intermodal infrastructure that is consistent with overall regional goals, objectives, and policies.*

4.31 *Demand for increased goods movement will be given consideration where system connectivity and gap closure projects are being planned.*

4.36 *Arterial truck access routes will be coordinated for the purpose of improving system connectivity, eliminating circuitous routings, and reducing delays.*

SCAG staff comments. Draft EIR/EIS and Appendix I: Traffic Study and Traffic Study Appendices, do not appear to address the various issues raised in these three SCAG policies. The proposed Project could have significant goods movement impacts given the extent of commercial land uses. Furthermore, the proposed Tustin Ranch Road-Von Karman Avenue gap closure and its relationship to the Eastern Transportation Corridor, could have similar goods movement impacts. The Final EIR/EIS should address the manner in which the proposed MCAS Tustin Project relates to these three SCAG policies. We are unable to determine if the Project is consistent with these three core RCPG policies.

4.38 *Planning to accommodate multi-modal and inter-modal goods movement shall be an integral part of the land use and circulation elements of local government general plans and specific plans.*

SCAG staff comments. Draft EIR/EIS and Appendix I: Traffic Study and Traffic Study Appendices, does not appear to address multi-modal and inter-modal goods movement as referenced in this SCAG policy. The Final EIR/EIS should address the manner in which the proposed MCAS Tustin Project relates to this SCAG policy. We are unable to determine if the Project is consistent with this core RCPG policy.

4.39 *Local governments shall consider requiring off-street dock facilities for all new buildings and for existing buildings that are approved for extensive renovation; the facilities should be sufficient to accommodate the shipping and receiving needs of such buildings.*

SCAG staff comments. Draft EIR/EIS acknowledges on page 4.16-10 two air quality operational mitigation measures (AQ-2a and -2e) which address the intent of this SCAG policy. The adequacy of project specific mitigation and the feasibility of further mitigation of these impacts should be carefully considered by the Cities of Tustin and Irvine during the approval process for specific development proposals within the MCAS Tustin Specific Plan Project. The Project is consistent with this core RCPG policy.

Regional Aviation System Program Policies

4.43 *For those military air bases which are, or will be, closed by the Department of Defense, support conversion to commercial air service if such bases have been determined to have technical or market potential for use as commercial airports. This policy most strongly applies to those subregions which cannot otherwise provide sufficient, environmentally acceptable capacity to meet their own local, short-haul air passenger demand.*

SCAG staff comments. Draft EIR/EIS acknowledges on page 2-36 that "the Federal Aviation Administration has concluded that local Orange County resistance and lack of a sponsor will inhibit aviation reuse and that no short- or long-term aviation operations at the site are anticipated by FAA". It further notes that "discussions between FAA and the City of Tustin concluded that the runways are not suitable for general aviation mainly because the station was never designed for fixed wing aircraft". Detailed discussion on this matter is also included in Draft EIR/EIS sections 3.14 and 4.14 (Airfield Operations). The Project is consistent with this core RCPG

3. The Air Quality Chapter (AQC) core actions that are generally applicable to the MCAS Tustin Specific Plan are as follows:

5.07 *Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community based shuttle services, provision of demand management based programs, or vehicle-miles-traveled/emissionfees) so that options to command and control regulations can be assessed.*

SCAG staff comments. The Draft EIR/EIS addresses these types of programs and actions as noted in our comments on SCAG policies 3.12, 4.01, 4.03, 4.04, 4.06, 4.07, and 4.09. The Project is consistent with this core RCPG policy.

5.11 *Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.*

SCAG staff comments. The Draft EIR/EIS fails to acknowledge that the Project incorporates regional growth forecasts which in turn form the basis for regional transportation and air quality modeling. Regional transportation/air quality impacts therefore may not be mitigated. We are unable to determine whether the Project is consistent with this core RCPG policy.

The Water Quality Chapter (WQC) core recommendations and policy options that are particularly applicable to the MCAS Tustin Specific Plan include the following:

11.02 *Encourage "watershed management" programs and strategies, recognizing the primary role of local governments in such efforts.*

SCAG staff comments. The Draft EIR/EIS references a number of "watershed management" programs and strategies which acknowledge the primary role of the Cities of Tustin and Irvine in facilitating their implementation in coordination with other water resource management agencies. These programs and strategies are included in Sections 3.8 and 4.8 (Water Resources) and 3.13 and 4.13 (Utilities), along with mitigation measures in section 4.16. The adequacy of project mitigation measures and the feasibility of further mitigation of these impacts should be carefully considered by the Cities of Azusa and Irvine, Orange County Flood Control District, Santa Ana Regional Water Quality Control Board and U.S. Army Corps of Engineers. The Project is consistent with this core RCPG policy.

11.07 *Encourage water reclamation throughout the region where it is cost-effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.*

SCAG staff comments. The Draft EIR/EIS addresses the use of reclaimed water within Sections 3.13 and 4.13 (Utilities). Mitigation measures U-2 through U-7 address the provision and

funding of reclaimed water facilities within the Project area. The Project is consistent with this core RCPG policy.

11.08 Ensure wastewater treatment agency facility planning and facility development be consistent with population projections contained in the RCPG, while taking into account the need to build wastewater treatment facilities in cost-effective increments of capacity, the need to build well enough in advance to reliably meet unanticipated service and storm water demands, and the need to provide standby capacity for public safety and environmental protection objectives.

SCAG staff comments. The Draft EIR/EIS addresses the waste water service to the Project within Sections 3.13 and 4.13 (Utilities). Mitigation measures U-2 through U-6 and U-8 address the provision and funding of waste water facilities within the Project area. The Orange County Sanitation Districts provide wastewater treatment for the Project and their facilities are sized to be consistent with SCAG's growth forecasts. The Project is consistent with this core RCPG policy.

Consistency with the 208 Plan for the South Coast Planning Area

As the designated Areawide Waste Treatment Management Agency for Southern California, SCAG is mandated under Section 208 of the Federal Clean Water Act [33 U.S.C. §1288] to engage in a comprehensive waste treatment planning process the primary product of which is the Areawide Waste Treatment Management Plan for the South Coast Planning Area (or "208 Plan"). Section 208(e) of the Clean Water Act provides that no NPDES permit may be issued for any point source which conflicts with the 208 Plan.

The current 208 Plan was prepared by SCAG in 1979. Due to a lack of federal or state funds, SCAG has been unable to update the Plan. Given the great demographic and environmental changes which have taken place in Southern California over the last two decades, the Regional Council has recognized that it is not feasible to determine whether a given project is consistent with the Plan.

While the statutes and regulations designate SCAG to make the conformity and consistency findings, the legal responsibility for these findings rest with the Regional and State Water Boards.

SCAG staff comments: As previously noted, the Project is consistent with SCAG's adopted population forecasts. These forecasts, however, have not been incorporated into the 208 Plan for the South Coast Planning Area. SCAG and the State Water Resources Control Board are precluded from carrying out their mandated review responsibilities and the Project is currently inconsistent with the 208 Plan for the South Coast Planning Area and any NPDES permit issued for any point source associated with the Project would conflict with the 208 Plan.

Conclusions and Recommendations

As noted in the staff comments, the proposed MCAS Tustin Disposal and Reuse Specific Plan and Draft Environmental Impact Report/Environmental Impact Statement is consistent with or supports many of the core and ancillary policies in the Regional Comprehensive Plan and Guide. The Project

Dana Ogden
February 9, 1998
Page 21

is partially consistent with core policy 3.01. Furthermore, based on the information in the Draft Environmental Impact Report, we are unable to determine whether the Project is consistent with core policies 4.10, 4.36 and 4.38 and supportive of ancillary policies 3.04 and 3.07.

(2) For the reasons stated herein, SCAG is unable to make a finding that the Project is consistent with the 208 Plan for the South Coast Planning Area.

(3) All mitigation measures associated with the project should be monitored in accordance with AB 3180 requirements.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

Roles and Authorities

THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS is a *Joint Powers Agency* established under California Government Code Section 6502 et seq. Under federal and state law, the Association is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). Among its other mandated roles and responsibilities, the Association is:

- Designated by the federal government as the Region's *Metropolitan Planning Organization* and mandated to maintain a continuing, cooperative, and comprehensive transportation planning process resulting in a Regional Transportation Plan and a Regional Transportation Improvement Program pursuant to 23 U.S.C. §134(g)-(h), 49 U.S.C. §1607(i)-(j) et seq., 23 C.F.R. §450, and 49 C.F.R. §613. The Association is also the designated *Regional Transportation Planning Agency*, and as such is responsible for both preparation of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) under California Government Code Section 65080.
- Responsible for developing the demographic projections and the integrated land use, housing, employment, and transportation programs, measures, and strategies portions of the *South Coast Air Quality Management Plan*, pursuant to California Health and Safety Code Section 40460(i)-(c). The Association is also designated under 42 U.S.C. §7504(a) as a *Co-Lead Agency* for air quality planning for the Central Coast and Southeast Desert Air Basin District.
- ¹ Responsible under the Federal Clean Air Act for determining *Conformity* of Projects, Plans and Programs to the State Implementation Plan, pursuant to 42 U.S.C. §7506.
- Responsible, pursuant to California Government Code Section 65089.2, for reviewing all *Congestion Management Plans (CMPs)* for consistency with regional transportation plans required by Section 65080 of the Government Code. The Association must also evaluate the consistency and compatibility of such programs within the region.
- The authorized regional agency for *Inter-Governmental Review* of Programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12,372 (replacing A-95 Review).
- Responsible for reviewing, pursuant to Sections 15125(i) and 15206 of the CEQA Guidelines, *Environmental Impact Reports* of projects of regional significance for consistency with regional plans.
- The authorized *Areawide Waste Treatment Management Planning Agency*, pursuant to 33 U.S.C. §1288(a)(2) (Section 208 of the Federal Water Pollution Control Act)
- Responsible for preparation of the *Regional Housing Needs Assessment*, pursuant to California Government Code Section 65584(a).
- Responsible (along with the San Diego Association of Governments and the Santa Barbara County/Cities Area Planning Council) for preparing the *Southern California Hazardous Waste Management Plan* pursuant to California Health and Safety Code Section 25135.3.



ALLISON E. HARRIS, City Manager

RECEIVED
AUG 27 1999
REDEVELOPMENT AGENCY

L6-1 The commenter's clarification that the revised draft EIS/EIR (July 1999) has addressed many of the previous comments on the initial draft EIS/EIR (December 1997) is noted.

August 27, 1999

Mr. Dana Ogden
Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, CA 92780

Subject: City of Irvine Comments on Draft EIS/EIR for Reuse of MCAS Tustin

Dear Mr. Ogden:

Attached to this letter are the City of Irvine's comments on the Joint Draft Environmental Impact Statement/Environmental Impact Report for the disposal and reuse of Marine Corps Air Station, Tustin (State Clearinghouse No. 94-071005). Pursuant to the enclosed letter signed by both cities, this comment letter is being submitted within the new timeframe established therein.

L6-1 Considering previous discussions between our two cities regarding the scope and content of the traffic impact analysis, I want to acknowledge that the following revisions have been made to address the City's concerns:

- The traffic study area has been expanded per the City of Irvine's request. This expansion has allowed for a more thorough examination of project impacts.
- The socioeconomic data has been updated to reflect OCP 96 modified. This update has addressed a significant concern that was previously raised regarding the use of the most current growth projections.
- The City of Tustin has also included socioeconomic data for Post 2020 where the most intense uses for the City of Irvine's General Plan or OCP 96 modified were used. This information has allowed the City of Irvine to evaluate project impacts at the build-out of the City's General Plan.
- Project mitigation is based on year 2005 and year 2020 conditions. Interim year information has allowed us to better understand the project's phasing toward build-out.

Mr. Dana Ogden
August 27, 1999
Page 2

L6-2

The commenter's request for cooperation on a study of downgrading Harvard Avenue and establishment of a connection to the planned PRT system is noted.

Through the implementation of Reuse Plan for MCAS Tustin, we would like to note the City of Irvine's interest in two areas. First, as you know, the City has been and continues to be interested in downgrading Harvard Avenue between Walnut and Irvine Center Drive to a two lane roadway to reduce the potential through traffic adjacent to established residential neighborhoods. The City plans to initiate a study to achieve this objective and we invite your cooperation to achieve the City's objective in downgrading Harvard. Second, the City is presently engaged in a study and design for a Personal Rapid Transit (PRT) system in the Irvine Business Complex, adjacent to the Tustin base. The viability of such a system would be enhanced by a connection through the base to the future Tustin train station. As the PRT analysis moves forward, I would like to request the initiation of a cooperative work effort with Tustin to explore the feasibility of such a connection.

Thank you for the opportunity to respond to the Draft EIS/EIR. We look forward to working with the City of Tustin to resolve our concerns. If you have any questions, please contact Peter Hersh at (949) 724-6456.

Sincerely,


ALLISON HART
City Manager

AH/gdw

Enclosures

1. City of Irvine comments on Joint Draft EIS/EIR
 2. City of Irvine letter, dated August 18, 1999, regarding extended comment period
- c: Peter Hersh, Assistant to the City Manager
Sheri Vander Dussen, Director of Community Development
Glen Worthington, Community Development Department

Attachment I

to

City of Irvine Comments on Draft EIS/EIR for Reuse of MCAS Tustin

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

**COMMENTS ON THE CITY OF TUSTIN
JOINT DRAFT ENVIRONMENTAL IMPACT STATEMENT/
ENVIRONMENTAL IMPACT REPORT
FOR THE DISPOSAL AND REUSE OF MARINE CORPS AIR STATION, TUSTIN
(STATE CLEARINGHOUSE NO. 94-071005)**

Following its review of the City of Tustin's Joint Draft Environmental Impact Statement/Environmental Impact Report for the disposal and reuse of Marine Corps Air Station, Tustin, the City of Irvine concludes that additional mitigation measures are necessary to adequately address significant environmental impacts outlined in the Draft EIS/EIR ("Draft EIS/EIR"). The City of Irvine is proposing additional mitigation measures to address the areas of concern detailed in the comments provided below. Our comments are divided between substantive issues and administrative/clerical corrections and are provided below.

SUBSTANTIVE ISSUES

GENERAL

To clarify the responsibility of each jurisdiction, it should be noted that the mitigation measures adopted with the Draft EIS/EIR apply only to the City of Tustin. Lead agency mitigation measures cannot bind other jurisdictions. Therefore, to the extent that multi-jurisdictional mitigation measures are proposed, the mitigation measure must include the requirement for a cooperative study between jurisdictions to clarify responsibility, timing, funding, and specific improvement requirements, such as the mitigation measure proposed to address traffic impacts in Section 4.12 Traffic/Circulation.

EXECUTIVE SUMMARY

- p. ES-7. The third paragraph contains a statement that Irvine may need to certify this EIR and would be required to adopt a Statement of Overriding Considerations if significant unavoidable impacts are identified. As a point of clarification, the City of Irvine would consider certifying an EIR or adopting a Statement of Overriding Considerations only after all comments have been adequately addressed and all mitigation options thoroughly explored.

3.4 PUBLIC SERVICES AND FACILITIES

- p. 3-54. In Figure 3.4-3, Existing Bikeways, the footnote regarding grade separations of an interim bike trail along Harvard in Irvine is incorrect and must be removed. Although this note is in apparent response to a request in the City of Irvine's letter of March 2, 1998, the grade separation note requested in that letter referred to the Peters Canyon channel Class I bike trail, not the Harvard Class II bike trail.

- L6-3** Such a cooperative study was identified where appropriate (e.g., mitigation measure TC-9 in Section 4.12). No additional mitigation measure has been added per this comment.
- L6-4** The commenter's clarification that the City of Irvine's certification would not occur until all comments are adequately addressed and mitigation explored is noted. EIS/EIR certification by the City of Irvine would apply to future discretionary actions within that portion of the reuse plan area in Irvine.
- L6-5** The requested clarifications have been incorporated into Section 3.4 of the FEIS/EIR.

- p. 3-57. The last sentence in the first paragraph is incorrect and should be deleted. The Class II bikeway along Harvard Avenue is not an interim trail. The bike lane will remain and not be replaced by the Peters Canyon trail.

4.1 LAND USE

- p. 4-4. The City of Irvine has consistently expressed its concerns about the proposed development in the Reuse Plan Planning Area 20, especially with regard to density and design issues. These concerns are not fully satisfied by the change in the density range to 16 to 25 units per acre. To adequately address this issue, we request that an additional mitigation measure be added as follows:

"The City of Tustin shall coordinate with the City of Irvine during the review of any development proposal for Planning Area 20 and will ensure that the land use compatibility issues, especially with regard to density and design, are satisfactorily addressed."

4.4 PUBLIC SERVICES AND FACILITIES

- p. 4-65. The Draft EIS/EIR does not acknowledge the off-road bikeway planned by the City of Irvine north of Barranca Parkway to serve both Tustin and Irvine. Please make this addition to both the Draft EIS/EIR and the Reuse Plan.

4.5 AESTHETICS

- p. 4-85. Mitigation Measure Vis-1 must be modified to include "harmony with existing adjacent landscape" as a consideration. The City of Irvine has adopted a City-wide Master Streetscapes Plan specifying trees, shrubs and groundcovers for each of the major arterials, including Harvard. The intent is to ensure visual harmony and preserve landscape quality as the City develops. Attachment 1 is an extract from the City-wide Master Streetscapes Plan showing the streets adjacent to the project site. This plan specifies the following plants for Harvard between Irvine Center Drive and the San Diego Freeway: *Tristania conferta*, *Eucalyptus*, *Platanus Acerifolia*, *Bougainvillea*, *Coprosma*, *Mahonia*, *Rhamnus*, turf and *Lorceria*. Plants for the section of Jamboree adjacent to the project are: *Tristania*, *Cedrus brevifolia*, *Jacaranda mimosifolia* and *Rhaphiolepis indica*. Plants for the southern side of Barranca adjacent to the project are: *Fraxinus velutina*, evergreen shrubs and turf. A unified tree species along most of the length of the shared arterials would best enhance the visual quality of these streets.

To further that end and adequately address this compatibility issue, we request that an additional mitigation measure be added as follows:

"The City of Tustin shall coordinate with the City of Irvine during the review of any streetscape program for Jamboree, Harvard, and Barranca and will ensure that the compatibility issues with regard to the visual quality of these streets are satisfactorily addressed."

L6-6

Planning Area 20 (PA20) is a Specific Plan designation; this comment refers to the CEQA-only analysis in Chapter 7.0. PA20 is bounded by Edinger Avenue, Harvard Avenue, and Jamboree Road and would be designated medium high density residential (16 to 25 du/acre) under the Specific Plan. As shown on Figure 3.1-2 in the EIS/EIR, the adjacent land uses in Irvine include recreation (abutting Harvard Avenue) and residential along both sides of Irvine Center Road. These two areas of residential are designated medium high density and are bounded by community commercial uses and other residential uses designated as medium density. To ensure compatibility, the Specific Plan would require landscaping and site design to buffer and screen development and would require additional set-backs and height restrictions along Harvard Avenue. During the regular entitlement review and approval process for any future development within PA20, the City of Irvine may participate in the public review and comment process. Given the general compatibility of this area with nearby locations and the site design mechanisms associated with the Specific Plan, the recommended mitigation measure is not necessary.

L6-7

Based on further clarification with City of Irvine staff, the comment is incorrect. No modifications are necessary.

L6-8

Mitigation measure Vis-1 has been modified to add visual harmony as a consideration in the EIS/EIR. As clarified in response to comment L6-6, the City of Irvine would have the opportunity to participate in review and comment on the landscape concept plans for streetscapes that abut the City of Irvine. The City of Irvine receives an advance copy of all agendas of upcoming Tustin City Council and Planning Commission meetings. No additional mitigation measure is necessary to institutionalize this current process. Please refer to comment letter O1 in which the commenter recommends very detailed modifications to the Specific Plan text regarding land use and aesthetic compatibility. The recommendations are addressed in response O1-19.

4.12 TRAFFIC/CIRCULATION AND APPENDIX F TRAFFIC TECHNICAL REPORT

In this section of the Draft EIS/EIR, the City of Tustin fails to adequately assess the impacts of the proposed project on the circulation system in three key areas: (1) lack of commitment to specificity; (2) lack of commitment to mitigation measures; and (3) lack of identified funding for assumed improvements. The mitigation measures as proposed are vague and non-committal, inadequate for failing to specify the agency responsible for implementation, inadequate for failing to provide the appropriate time trigger, and inadequate for failing to identify a source of funds to implement each mitigation measure.

For example, although the calculated trip generation for 2005 conditions is equivalent to the capacity of two major (six lane divided) arterials, no additional through roadways are proposed as part of the 2005 Phase 1 development. In addition, the traffic analysis indicates the proposed 2005 development will impact only two intersections within the City of Irvine.

The recently completed City of Irvine Circulation Phasing Analysis leads to substantially different conclusions as outlined below:

1. The EIS/EIR assumes that improvements will occur for 2005 conditions at 61 intersections within the study area as outlined in Attachment 2 (Table 1 - 2005 Intersection Improvements). A comparison of the City of Irvine database to the improvements assumed in the MCAS Tustin traffic study indicates that some or all of the improvements at 27 intersections within the City of Irvine do not have a committed funding source. Attachment 3 (Exhibit A - Year 2005 Assumed Intersection Improvement Locations Without Identified Funding Source) shows these 27 intersections. Further information about how these intersection improvements are to be funded must be included in the Final EIS/EIR.

2. The Draft EIS/EIR goes on to assume that intersection improvements will occur as 18 additional intersections for 2020 conditions. Attachment 4 (Exhibit B - Year 2020 Assumed Intersection Improvement Locations [Beyond 2005 Assumed Improvements]) indicates the additional City of Irvine intersection improvements that lack identified funding sources. Further information about how these intersection improvements are to be funded must be included in the Final EIS/EIR.

3. Attachment 5 (Exhibit C - Year 2005 Mitigation Comparison Between Tustin Base Reuse & Irvine Circulation Phasing Studies) compares the two intersections identified in the Draft EIS/EIR as being impacted in 2005 and the City of Irvine's internal analysis of intersections that will require improvements by 2005. Further information about project impacts to these additional intersections and required improvements must be included in the Final EIS/EIR.

4. Attachment 6 (Exhibit D - 2005 Irvine Circulation Phasing Locations Without Identified Improvement Needs In Tustin Study) presents the locations which the City of Irvine has identified as requiring improvements by 2005, but which were not

L6-9

The definition of committed roadway network has been corrected. If roadway projects are in the Capital Improvements Program of a jurisdiction, or are a condition of approval of a specific project, or required mitigation measure of a previous environmental document, or in a special fee program, this EIS/EIR considered the improvements as "probable future projects" (14 Cal. Code of Regulations § 15130). Based on this definition, the committed roadway network is defined not by current funding criteria, but on whether it is identified or conditioned in some approved document. If subsequent environmental review of specific development proposals reveals that improvements in the committed roadway network can no longer be viewed as "probable future projects," additional mitigation may be required as conditions of approval of such proposals.

Based on this comment, the committed roadway network was carefully reconsidered. In some instances, intersections or arterial improvements were incorrectly included as probable future projects. Both Appendix F and the FEIS/EIR have been corrected. Based on this "corrected" committed network, the future operation of each intersection was reconsidered for each of the three reuse alternatives in year 2005. The results of the analysis are presented in Final Appendix F. There would be no significant impacts in the City of Irvine beyond that which were previously disclosed in Section 4.12 of the EIS/EIR and no new mitigation would be required.

L6-10

As indicated in response to comment L6-9, the committed roadway network has been revised in Appendix F and the EIS/EIR. Based on the "corrected" committed roadway network, the year 2020 operation of each intersection was reconsidered for each reuse alternative. The results are provided in Final Appendix F. As in the year 2005, there would be no significant impacts beyond those that were previously disclosed in Section 4.12, and no new mitigation would be required.

L6-11

The City of Irvine's analysis and MCAS Tustin Reuse Plan traffic study are based on two different models. The main difference is that the MCAS Tustin traffic study relies on OCP-96 Modified 2005 projections outside the reuse plan area, whereas Irvine's model reflects 2005 land uses projected by the City of Irvine. It is possible that City of Irvine's Circulation Phasing identifies more locations needing improvements than MCAS Tustin traffic study because the City's model anticipates more aggressive growth than OCP-96 Modified projects. In fact, the MCAS Tustin traffic study does show a need for most of these City of Irvine identified improvement locations to be in place by year 2020.

Any measurable impact to City of Irvine locations by the MCAS Tustin Reuse Plan has been analyzed. Appropriate mitigation has also been identified and presented in accordance with OCTA CMP/GMP guidelines.

Refer to response to comment L6-11.

L6-12

identified in the Draft EIS/EIR. Further information about project impacts to these additional intersections and how these additional intersection improvements are to be accomplished must be included in the Final EIS/EIR.

5. In addition to the above, the proposed mitigation improvements at Red Hill Avenue and Main Street include a southbound free right turn lane. The Draft EIS/EIR does not adequately address the feasibility of this improvement given the existing building locations and the existing rights-of-way. Please correct this deficiency and fully address the feasibility of this improvement in order for the City of Irvine to determine the efficacy of this mitigation measure.

L6-13

As stated in Section 1.5 of the EIS/EIR, this program-level EIR identified impacts and mitigation appropriate for a "program, plan, policy or ordinance." Subsequent environmental review under CEQA would be required at the appropriate time once development proposals are processed through the entitlement process. Site-specific mitigation (e.g., Red Hill Avenue and Main Street) would be evaluated in detail at that time. Fair share cost allocations in Section 4.12 assume right-of-way costs would be part of mitigation responsibility.

L6-14

Mitigation measure T/C-9 establishes a mechanism whereby the City of Tustin will enter into agreements with the cities of Irvine and Santa Ana as well as Caltrans to ensure that roadway improvements are constructed pursuant to programs established by the respective jurisdiction. Final Appendix F, Section 4.12 and subsection 7.2.11 have been modified to include ADT thresholds to trigger on-site and off-site improvements and identifies the fair share percentage of project contribution for all traffic mitigation measures. These modifications will serve the intent of the suggested mitigation measure.

- In order to address the City of Irvine's concerns with the Draft EIS/EIR traffic/circulation impact analysis and mitigation program in a complete and comprehensive manner, the following additional mitigation measure must be added:

L6-14 "Notwithstanding mitigation measures T/C 1 through 13, prior to the issuance of any building permits east of the Armstrong Avenue/Severns roadway connection between Edinger and Barranca, the cities of Tustin and Irvine (and, if feasible, the City of Santa Ana and the Orange County Transportation Authority (OCTA)) shall define the parameters of and undertake a cooperative, comprehensive traffic study through project build-out that shall contain, as a minimum, the following components:

1. A means of achieving and maintaining adopted level of service standards for links and intersections in the traffic study area defined in the Draft EIS/EIR.
2. A funding and/or improvement program for all links and intersections in Irvine to which the project contributes measurable traffic, either in the form of a direct improvement subject to reimbursement, or through a fair share contribution.
3. The development of a comprehensive area-wide program and cooperative agreement to ensure that master planned roadways can be fully improved and implemented, including all roadway improvements which are assumed in the traffic study but for which funding and/or improvement commitments have not been identified. This program and agreement shall also ensure that Level of Service "E" is maintained for the following CMP locations throughout project build-out:

- Jamboree Road & Irvine Blvd
- Jamboree Road & I-5 Northbound Ramps
- Jamboree Road & I-5 Southbound Ramps
- Jamboree Road & Edinger Avenue
- Jamboree Road & I-405 Northbound Ramps
- Jamboree Road & I-405 Southbound Ramps
- Jamboree Road & MacArthur Blvd
- ETC East Leg Northbound Ramps & Irvine Blvd

- ETC East Leg Southbound Ramps & Irvine Blvd
- SR-55 Northbound Ramps & Edinger Avenue
- SR-55 Southbound Ramps & Edinger Avenue

The comprehensive area-wide program and cooperative agreement between the City of Irvine and the City of Tustin shall also determine the jurisdictional responsibility, timing and funding for improvements along the following corridors:

- Red Hill Avenue from I-405 to I-5
- Jamboree Road from I-405 to I-5
- Dyer Rd/Barranca Parkway from SR-55 to Culver Drive
- Edinger Avenue from SR-55 to Culver Drive
- Von Kaman Avenue from Michelson Drive to I-5

4. The development of a comprehensive, area-wide phasing plan for the project to ensure that improvements are completed in a timely manner to ensure that the level of services standards of the cities of Tustin and Irvine are not exceeded during any phase of development.

5. Since this project changes the baseline assumptions for the improvement agreement entered into between the cities of Tustin and Irvine, primarily for improvements along Red Hill Avenue, the Irvine Business Complex funding and mitigation program adopted by the City of Irvine in 1991 shall be reevaluated and revised as necessary to address the new "fair share" of improvements that results from the development of this project.

6. A biennial monitoring program between the two cities to ensure that the requirements of this mitigation measure are being met and that the project results in no traffic system deficiencies over the lifetime of the project."

- p. 4-134 and Exhibit 4.12-1. The Draft EIS/EIR fails to identify that an additional right-of-way will be required to widen Barranca Parkway to its full right-of-way width across the frontage of the Armed Forces Reserve Center. At present, Barranca Parkway is not built to its full width in this area in accordance with the OCTA Master Plan of Arterial Highways. The Draft EIS/EIR must provide an explanation of how this right-of-way will be acquired and how the necessary improvements will be completed, including jurisdictional responsibility, timing, phasing, and source of funding.

L6-15

L6-15

The EIS/EIR traffic analysis was performed in conformance with the OCTA *Master Plan of Arterial Highways* (MPAH), as is appropriate for a regional transportation planning analysis. It is not the responsibility of every project which uses the model to determine how the myriad of improvements assumed in the future model would be accomplished.

L6-16

The committed roadway network assumptions in the FEIS/EIR for the Jamboree Road/Barranca Parkway intersection is based in part upon the 1998 MOA between the City of Tustin, the City of Irvine, and the Transportation Corridor Agency (TCA). In that MOA, some interim improvements were defined, that have now been constructed, and a funding agreement with a maximum dollar amount was established for future improvements to maintain an acceptable level of service to be agreed to by the cities of Tustin and Irvine at this location. Those future improvements are currently being negotiated between the Cities of Irvine and Tustin. Per the MOA, a future grade-separated intersection at this location was determined to be financially infeasible. Impacts from reuse would have significant traffic impacts that would not be mitigable.

Adequate right-of-way for future Barranca Parkway improvements will be reserved in conjunction with any agreement between the City of Tustin and the Army/Reserves and in conjunction with approval of any site development permits for other segments of Barranca Parkway, as required.

- p. 4-134 and Exhibit 4.12-1. The Draft EIS/EIR fails to identify the additional right-of-way which will be required for the potential grade separation at the Jamboree - Barranca intersection. It is our understanding that the grade separation is a requirement of a Memorandum of Understanding between the City of Tustin and the Transportation Corridor Agencies (TCA). The Draft EIS/EIR must provide an explanation of how the necessary improvements will be completed, including jurisdictional responsibility, timing, phasing, and

L6-16

source of funding, and a revised graphic to show the future right-of-way needed for the planned grade separation.

- p. 4-138. The traffic study attempts to identify impacts related to a certain level of development but does not limit the project to that level of development. An additional mitigation measure must be added to require the adoption of an areawide trip cap. Without this trip cap, the project could grow larger than the impacts analyzed. To adequately address this issue, an additional mitigation measure must be added as follows:

"No development will be permitted within the project site which would exceed the project trip cap of 215,093 daily trips, 17,185 a.m. peak hour trips, and 22,067 p.m. peak hour trips."

- p. 4-138. The 2005 and 2020 scenarios do not provide any sensitivity analysis for the impact of changes within the project itself. As presently written, the Draft EIS/EIR fails to address that the actual trip generation rates may vary from the anticipated trip generation rates in the traffic study for any planning area. To adequately address this issue, an additional mitigation measure must be added as follows:

"A supplemental traffic analysis will be prepared and appropriate traffic impact mitigation measures, if necessary, will be completed if the trip generation rates for any planning area vary by more than 10% from the EIR traffic study."

- p. 4-180 and 4-182. In the note following Tables 4.12-26 and 4.12-27, the wording "Fair share contributions shall be no greater than required for capacity improvements consistent with and assumed in the Draft EIS/EIR, as defined by the City of Tustin Traffic Engineer" must be changed to indicate that fair share contributions for impacts within Irvine will be mutually agreed to by the City of Irvine and the City of Tustin. Failure to make this change will incorrectly imply that the City of Irvine will accept the decisions of the City of Tustin Traffic Engineer, which is not accurate.

4.14 NOISE

- pp. 4-210 through 4-214. The noise analysis states that significant impacts of 8.5 CNEL would occur on Warner west of Harvard in Irvine because of traffic increases attributable to the project. In a previous comment letter dated March 2, 1998, the City of Irvine requested that the Draft EIS/EIR also analyze noise impacts on Warner east of Harvard. New development in City of Irvine Planning Area 38, located along Warner between Harvard and Culver, includes a neighborhood park, an elementary school and multi family residences with no sound walls. According to Table 4.14-1, the noise level at 75 feet from the centerline of Warner west of Harvard will be 66.6 dB CNEL. This exceeds the City standard for residences and parks. Figure 4-5 of the Traffic Technical Report shows a total ADT on Warner east of Harvard at buildout of Alternative 1 to be greater than the total ADT west of Harvard. A comparison with the baseline ADT in Figure 3-6 indicates that about 40% of these trips will be project related. Project impacts along this segment of Warner must be analyzed and appropriate mitigation measures identified and implemented, if necessary.

L.6-17

Mitigation measures have been modified in Section 4.12 of the FEIS/EIR which limit development at a set ADT threshold until roadway infrastructure is implemented to accommodate growth. The mitigation measure is not warranted.

L.6-18

The term "planning area" is used only in the context of the Specific Plan, not the three reuse alternatives evaluation in the EIS/EIR, so this comment applies to the CEQA-only analysis in Chapter 7.0. Implementation Action IA-2 has been modified in this FEIS to explicitly link any trip budget transfer to the guidelines in subsection 3.2.4 of the Specific Plan.

L.6-19

These two tables have been modified in the FEIS/EIR as suggested.

L.6-20

Additional information on potential noise impacts and mitigation has been added to Section 4.14 of the FEIS/EIR. There may be the potential for trips generated by reuse to incrementally contribute to the exceedence of Irvine noise standards at this location. A mitigation measure has been added to the FEIS/EIR to require an acoustical study at the appropriate phase of development.

An additional mitigation measure must be added as follows:

"Prior to the recordation of the first final subdivision map within the MCAS Tustin Reuse Plan project area, an acoustical study shall be conducted to assess project noise impacts on the existing residences, park and school along Warner east of Harvard. The study shall include data based on existing sound attenuation at these sites and shall provide for improvements, as necessary, for additional attenuation in order to maintain City of Irvine noise standards."

- p. 4-210. The discussion of impacts states that the area west of Harvard in Irvine is designated as Business and Industrial under the City of Irvine General Plan. The correct designation is "Urban and Industrial." The conclusion that because of this designation noise impacts would not be significant is not accurate. Page 3-147 of the Draft EIS/EIR acknowledges that the SRO hotel at Warner west of Jamboree is considered a sensitive receptor, suggesting that the EIR should address impacts to this facility.

L6-21

An additional mitigation measure must be added as follows:

"Prior to the recordation of the first final subdivision map within the MCAS Tustin Reuse Plan project area, an acoustical study shall be conducted to assess project noise impacts on the existing SRO hotel at Warner west of Jamboree. The study shall include data based on existing sound attenuation at this site and shall provide for improvements, as necessary, for additional attenuation in order to maintain City of Irvine noise standards."

APPENDIX D SUMMARY OF REVISIONS

- p. D-6. The summary of changes in Appendix D states that the interim year analysis assumes "phased build out of each reuse alternative at 2005." This is confusing because the condition studied is a *partial* build out. Please clarify the meaning of this section.

L6-22

ADMINISTRATIVE/CLERICAL CORRECTIONS

EXECUTIVE SUMMARY

- p. ES-31. The City of Irvine General Plan designates the Irvine portion of the project area as Military and Recreation (not Development Reserve). Please correct this reference in the first and second sentences of the third paragraph.

L6-23

3.1 LAND USE

- p. 3-5. There is an error in the last paragraph. The land recently developed in City of Irvine Planning Area 38 extends south of Irvine Center Drive, not Walnut. Please make this correction.

L6-24

L6-21

During preparation of the Mitigated Negative Declaration for the project (City of Irvine, January 1994, 12533-CPS and 13626-VA), acoustical analyses were prepared regarding both aircraft noise and traffic noise sources. Measures were incorporated into the project to reduce interior noise levels by 31 dBA. Future noise levels along Jamboree Road with reuse of MCAS Tustin would be up to 74.4 dBA (Table 4.14-1) and there would be no aircraft noise. Therefore, the mitigation measures already instituted would be sufficient to ensure acceptable interior noise levels of 45 dBA at the SRO. No additional study is warranted.

L6-22

The word "phased" has been replaced with "partial" in Appendix D of the FEIS/EIR to more accurately convey the meaning.

L6-23

The requested revisions have been incorporated into the FEIS/EIR. Information pertaining to the City of Irvine General Plan was presented in the draft EIR/EIS based on consultation with City of Irvine staff, who provided a City of Irvine General Plan dated 1995. The "interim" General Plan dated March 9, 1999 was not acknowledged until after the draft EIS/EIR was published (July 1999). As of September 15, 1999 that "interim" version was not available for the public to purchase. Changes made to the City of Irvine General Plan text and graphics, which are now reflected in this FEIS/EIR per this comment letter, do not affect the analysis in the EIS/EIR.

L6-24

Section 3.1 of the FEIS/EIR has been modified as suggested.

- p. 3-8. Figure 3.1-2, General Plan Designations, contains errors in the land use description referencing the City of Irvine General Plan. It appears that zoning terms were mixed in with General Plan land uses. On Figure 3.1-2, categories 16 (IBC Industrial), 17 (IBC Multi Use), 21 (development reserve) and 23 (hotel) should be removed. These do not exist in the City of Irvine General Plan. The following must be corrected:
 - a) Areas 16 and 17 are designated Urban and Industrial.
 - b) Area 23 is also Urban and Industrial.
 - c) Area 21 adjacent to Barranca is Military.
 - d) Area 21 adjacent to Warner is Military.
 - e) Area 22 immediately north of this parcel is Recreation.
- p. 3-10. The City of Irvine Zoning Ordinance does not contain a separate land use designation for Ihotel. The area shown as "i1" on the diagram is actually zoned 5.2 IBC Industrial. Please make this correction.
- p. 3-11. The corresponding errors in the text describing General Plan land uses should also be corrected. All zoning terms must be removed. Attachment 7 (General Plan land uses) provides pen and ink corrections to the Draft EIS/EIR pages. Please make these corrections.
- p. 3-11. For your information, the current City of Irvine General plan is dated March 9, 1999.

3.2 SOCIOECONOMICS

- p. 3-19. In the references to census tracts under Socioeconomic characteristics, please clarify that the tract numbers and data refer to the 1990 census.

3.4 PUBLIC SERVICES AND FACILITIES

- p. 3-57. There is a typographical error. "Culver" should be replaced by "Barranca" in the fourth line.

3.5 AESTHETICS

- p. 3-65 and 3-67. The visual analysis presented in this section of the Draft EIS/EIR is based on an inaccurate premise. Both "middle ground" and "background" views of the hangars exist from the Eastern Transportation Corridor (both legs), Jamboree Road and other arterials. Because of their large size, these buildings are an important feature in the landscape and visible from more than three miles away, especially as drivers descend from the foothills into Tustin and Irvine. Contrary to the statement in the final sentence on page 3-67, the south hangar is highly visible from the park at the Irvine Civic Center. Please make this correction.

L6-25

Section 3.2 of the FEIS/EIR has been modified as suggested.

L6-26

Section 3.3 of the FEIS/EIR has been modified as suggested.

L6-27

In the middle-ground views discussion, the FEIS/EIR states that "very clear views are available from the ETC." Jamboree Road has been added to the discussion. The discussion of background views in the FEIS/EIR has been modified to reflect the visibility of the hangars from both legs of the ETC. The discussion on viewer sensitivity from recreational areas has been modified in the FEIS/EIR to indicate the visibility of the south hangar from the Irvine Civic Park.

4.4 PUBLIC SERVICES AND FACILITIES

- p. 4-57. The statement in the last paragraph that the City of Irvine Police would require additional funds of \$80,000 but no new equipment or staff is inaccurate. The City of Irvine Public Safety Department has updated this statement regarding expanded services. Serving the approximately 500 dwelling units located in Irvine would create a need for 1,875 sworn police officers. Additional personnel and equipment would be required according to the following formula: 1 support employee per 10 officers; 1 supervisor per 10 officers; 1 vehicle per 4.5 sworn officers. Please make this correction.

4.7 BIOLOGICAL RESOURCES

- p. 4-101. There appears to be a typographical error in the sixth line of the second paragraph regarding reconstruction of the Peter's Canyon channel. This channel does not cross SR55. Currently, Peters Canyon channel improvements are either planned or recently constructed from its northernmost intersection with the Tustin/Irvine boundary southward to Walnut.

APPENDIX F TRAFFIC TECHNICAL REPORT

- p. 1-1. The project site is described as including "30 acres of privately owned property east of the air station near (the) Harvard Avenue and Edinger Avenue intersection." It is our understanding that the amount of acreage in private ownership at this location is 4.9 acres. Please reconcile this information and make this correction, if appropriate.

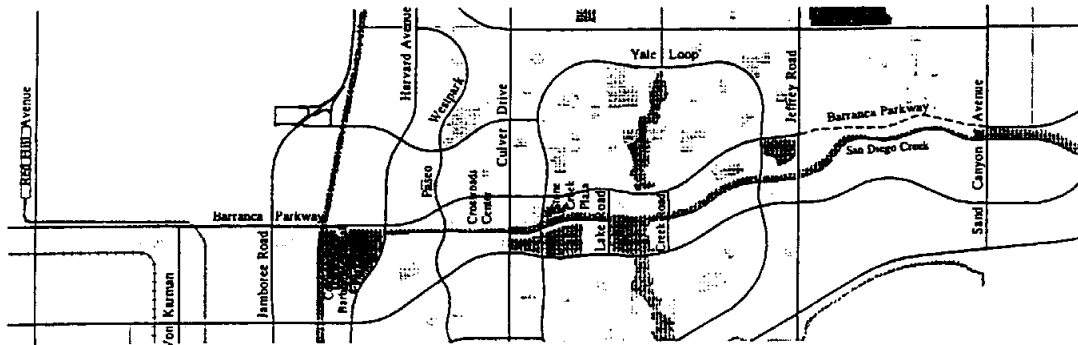
Attachments

1. Extract from the City-wide Master Streetscapes Plan
2. Table 1 - 2005 Intersection Improvements
3. Exhibit A - Year 2005 Assumed Intersection Improvement Locations Without Identified Funding Source
4. Exhibit B - Year 2020 Assumed Intersection Improvement Locations [Beyond 2005 Assumed Improvements]
5. Exhibit C - Year 2005 Mitigation Comparison Between Tustin Base Reuse & Irvine Circulation Phasing Studies
6. Exhibit D - 2005 Irvine Circulation Phasing Locations Without Identified Improvement Needs in Tustin Study
7. General Plan land uses

L6-28 Section 4.4 of the FEIS/EIR has been modified as suggested.

L6-29 There was an error in Section 4.7, and the FEIS/EIR has been modified to replace SR-55 with I-5.

L6-30 The correct area is 4.1 acres, and Appendix F has been revised.



Red Hill Avenue to Peters Canyon Wash

South Parkway
Dominant tree
Accent tree
Shrub
Ground Cover
Sidewalks
Median
Tree
Shrub
Ground Cover

Frazinus velutina (Arizona Ash)
None
Evergreen, not specified
Turf
Linear, set back from curb
Lagerstroemia indica (Crape Myrtle)
Rhaphiolepis indica
Evergreen, not specified

Peters Canyon Wash to Culver Drive

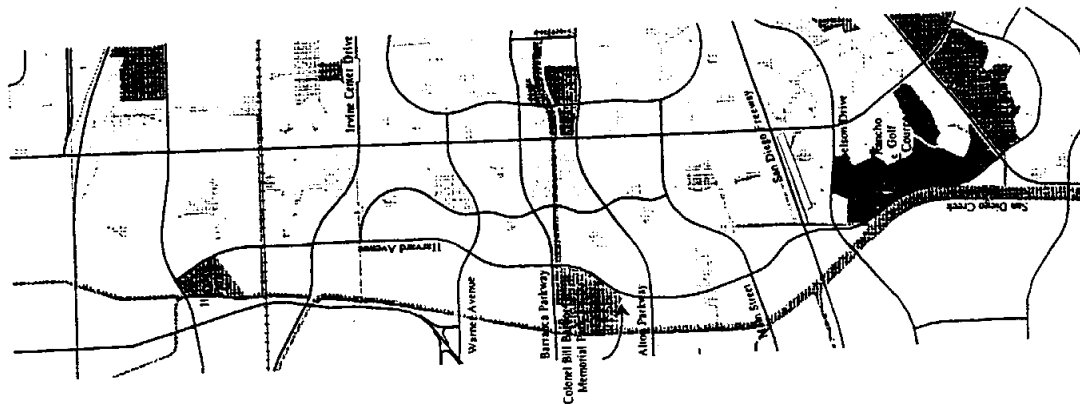
Parkway
Dominant tree
Accent tree
Shrub
Ground Cover
Sidewalks
Median
Dominant tree
Accent tree
Shrub
Ground Cover

North side: *Pinus brutia* (Calabrian Pine)
South side: *Brachychiton acerifolius* (Australian Flame)
Crocker Center: *Tristania conferta* (Brisbane Box)
North side: *Brachychiton acerifolius* (Australian Flame)
South side: *Pinus brutia* (Calabrian Pine)
Pittosporum species, *Bougainvillea* species
Vinca species, and evergreen ground cover, not specified
Meandering, set back from curb
(commercial frontage) linear, set back from curb
Brachychiton acerifolius (Australian Flame)
Pinus brutia (Calabrian Pine)
None
Turf

Culver Drive to Jeffrey Road

Parkway
Dominant tree
Accent tree
Shrub
Ground Cover
Sidewalks
Median
Dominant tree
Shrub
Ground Cover
Lake Edge
Tree

North side: *Pinus* species
South side: *Liquidambar styraciflua* (American Sweet Gum)
North side: *Liquidambar styraciflua* (American Sweet Gum)
Pittosporum species and evergreen shrubs, not specified
Turf
Meandering, set back from curb
commercial frontage: linear, set back from curb
Liquidambar styraciflua (American Sweet Gum) and
Pinus pinea (Italian Stone Pine)
None
Turf
Platanus acerifolia (London Plane Tree)



North of Walnut Avenue to Irvine Center Drive

Parkway
 Dominant tree *Platanus acerifolia* (London Plane Tree)
 Accent tree *Tabebuia impetiginosa* (Pink Trumpet Tree)
 Shrub None
 Ground cover Turf
Sidewalks Meandering, set back from curb

Irvine Center Drive to San Diego Freeway

Parkway
 Dominant tree *Tristania conferta* (Brisbane Box) and *Eucalyptus* species
 Accent tree *Platanus acerifolia* (London Plane Tree)
 Shrub *Bougainvillea* species, *Coprosma* species, *Mahonia* species, *Rhamnus* species behind sidewalk
 Ground cover Turf, curb to sidewalk
Lonicera species (Honeysuckle) behind sidewalk
Sidewalks Meandering, set back from curb

Median Tree
Platanus acerifolia (London Plane Tree) and *Eucalyptus* species
 Shrub None
 Ground cover *Trachelospermum jasminoides* (Star Jasmine), *Vincetoxicum* major (Periwinkle), and *Lonicera* species (Honeysuckle)

San Diego Freeway to University Drive

Parkway
 Dominant tree *Alnus rhombifolia* (White Alder)
 Accent tree *Platanus racemosa* (California Sycamore)
 Shrub None
 Ground cover *Baccharis* species
Sidewalks None, replaced by off-street bicycle path

University Drive to Culver Drive

Parkway
 Dominant tree *Pinus pinea* (Italian Stone Pine); *Eucalyptus* species at Mason Park
 Accent tree South edge - *Koeleuteria bipinnata* (Chinese Flame Tree)
 Shrub Miscellaneous, behind sidewalk
 Ground cover Turf, curb to sidewalk
Sidewalks Linear, set back from curb

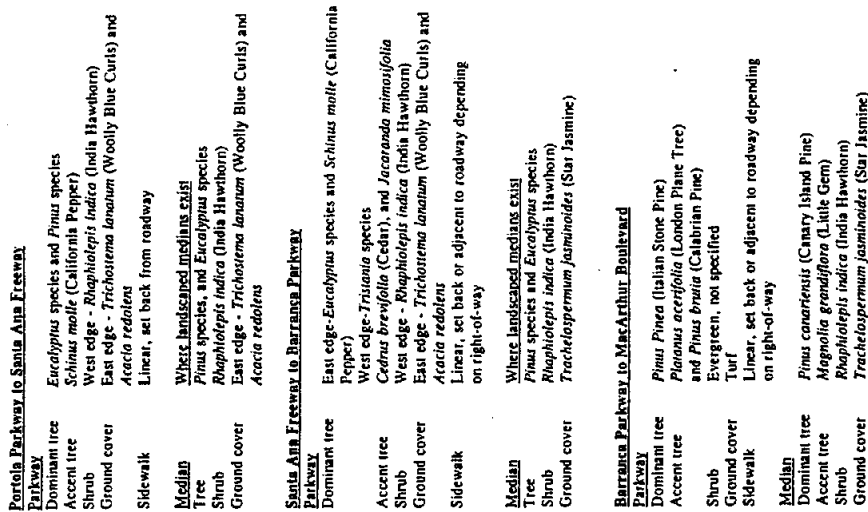


TABLE 1
2005 INTERSECTION IMPROVEMENTS

LOCATION	INTERSECTION NAME	IMPROVEMENT	COMMENT
2 Newport	(NS) & Old Irvine	(EW) Convert NB Defacto Right Turn Lane into NB Through-Right Lane. Convert SB Defacto Right Turn Lane into SB Through-Right Lane.	Not in Circulation Phasing Area
3 Newport	(NS) & Irvine	(EW) Construct NB Left Turn Lane. Convert NB Right Turn Lane into Through-Right Lane. Construct SB Left Turn Lane. Construct SB Through Lane. Construct EB Left Turn Lane. Construct EB Through Lane. Construct WB Left Turn Lane. Construct WB Through Lane.	Not in Circulation Phasing Area
14 Newport	(NS) & Sycamore	(EW) Construct NB Left Turn Lane. Construct NB Through Lane. Construct NB Right Turn Lane. Construct SB Through Lane. Convert SB Right Turn Lane into Through-Right Lane. Construct EB Left Turn Lane. Construct EB Right Turn Lane.	Not in Circulation Phasing Area
15 Newport	(NS) & Edinger	(EW) Construct 2 NB Left Turn Lanes. Construct 3 NB Through Lanes. Construct NB Defacto Right Turn Lane. Construct 2 SB Left Turn Lanes. Construct 2 SB Through Lanes. Construct SB Through-Right Lane. Construct SB Right Turn Lane. Construct 2 EB Left Turn Lanes. Construct 3 EB Through Lanes. Construct EB Right Turn Lane. Construct WB Left Turn Lane. Construct 3 WB Through Lanes. Construct WB Free Right Turn Lane.	Not in Circulation Phasing Area
16 Newport	(NS) & SR-55 NB Ramps	(EW) Construct 3 NB Through Lanes. Convert NB Right Turn Lane into Defacto Right Turn Lane. Construct SB Left Turn Lane. Construct 3 SB Through Lanes. Construct SB Right Turn Lane. Construct 2 EB Left Turn Lanes. Convert EB Free Right Turn Lane into Right Turn Lane.	Not in Circulation Phasing Area
17 Old Irvine	(NS) & Irvine	(EW) Convert EB Defacto Right Turn Lane into Through-Right Lane. Construct WB Through Lane.	Not in Circulation Phasing Area

TABLE 1 (CONTD)
2005 INTERSECTION IMPROVEMENTS

LOCATION	INTERSECTION NAME			IMPROVEMENT	COMMENT
20	Newport	(NS) & Valencia	(EW)	Construct NB Left Turn Lane. Construct NB Through Lane. Construct NB Right Turn Lane. Construct 2 SB Left Turn Lanes. Construct SB Through Lane. Construct SB Right Turn Lane. Construct EB Left Turn Lane. Construct EB Through Lane. Construct EB Through-Right Lane. Construct WB Left Turn Lane. Construct WB Through Lane. Construct 2 WB Right Turn Lanes.	Not in Circulation Phasing Area
21	Red Hill	(NS) & Irvine	(EW)	Convert EB Defacto Right Turn Lane into Through-Right Lane. Convert WB Defacto Right Turn Lane into Through-Right Lane.	Not in Circulation Phasing Area
25	Red Hill	(NS) & I-5 SB Ramps	(EW)	Construct EB Shared Left/Right Turn Lane.	Not in Circulation Phasing Area
26	Red Hill	(NS) & Walnut	(EW)	Convert NB Right Turn Lane into Through-Right Lane. Construct SB Left Turn Lane. Construct SB Through Lane. Construct WB Left Turn Lane.	Not in Circulation Phasing Area
29	Red Hill	(NS) & Sycamore	(EW)	Convert NB Right Turn Lane into Through-Right Lane. Construct SB Through Lane.	Not in Circulation Phasing Area
30	Red Hill	(NS) & Edinger	(EW)	Construct NB Through Lane. Construct SB Left Turn Lane. Construct WB Through Lane.	Not in Circulation Phasing Area
31	Red Hill	(NS) & Valencia	(EW)	Construct NB Left Turn Lane. Construct NB Right Turn Lane. Construct SB Left Turn Lane. Construct SB Right Turn Lane. Construct EB Through Lane. Construct WB Through Lane. Construct WB Right Turn Lane.	Not in Circulation Phasing Area
32	Browning	(NS) & Irvine	(EW)	Convert EB Defacto Right Turn Lane into Through-Right Lane. Convert WB Defacto Right Turn Lane into Through-Right Lane.	Not in Circulation Phasing Area
43	Tustin Ranch	(NS) & Edinger	(EW)	2 NB Left Turn Lanes. 2 NB Right Turn Lanes. 2 EB Through Lanes. 1 EB Right Turn Lane. 2 WB Left Turn Lanes. 2 WB Through Lanes.	Not in Circulation Phasing Area Does not exist in 2005 ICU Sheets
47	Main	(NS) & Warner	(EW)	Construct NB Right Turn Lane. Construct SB Right Turn Lane. Construct EB Through Lane. Construct WB Through Lane. Construct WB Right Turn Lane.	Not in Circulation Phasing Area

TABLE 1 (CONTD)
2005 INTERSECTION IMPROVEMENTS

LOCATION	INTERSECTION NAME			IMPROVEMENT	COMMENT
48	Main	(NS)	& Dyer	(EW) Construct NB Left Turn Lane. Convert NB Right Turn Lane into Through-Right Lane. Construct SB Left Turn Lane. Construct EB Through Lane. Construct WB Through Lane.	Not in Circulation Phasing Area
51	Main	(NS)	& MacArthur	(EW) Construct NB Right Turn Lane. Construct SB Right Turn Lane. Construct EB Right Turn Lane. Construct WB Right Turn Lane.	Not Funded Not Funded Not Funded Not Funded
54	SR-55 SB Ramps	(NS)	& MacArthur	(EW) Construct EB Through Lane. Construct WB Through Lane.	Not Funded Not Funded
57	Standard	(NS)	& Warner	(EW) Construct NB Through Lane. Construct SB Through Lane. Convert SB Right Turn Lane into Through-Right Lane. Construct WB Left Turn Lane. Remove WB Right Turn Lane.	Not in Circulation Phasing Area
69	Lyon	(NS)	& McFadden	(EW) Construct NB Right Turn Lane.	Not in Circulation Phasing Area
70	Lyon	(NS)	& Edinger	(EW) Construct SB Right Turn Lane. Construct WB Right Turn Lane.	Not in Circulation Phasing Area
72	Rachey	(NS)	& Edinger	(EW) Construct NB Through Lane. Construct NB Right Turn Lane. Construct WB Left Turn Lane.	Not in Circulation Phasing Area
75	SR-55 SB Ramps	(NS)	& Edinger	(EW) Convert NB Free Right Turn Lane into 2 Right Turn Lanes. Construct EB Through Lane. Construct WB Left Turn Lane. Construct WB Through Lane.	Not in Circulation Phasing Area
76	SR-55 NB Ramps	(NS)	& MacArthur	(EW) Construct EB Through Lane.	Not Funded
80	Red Hill	(NS)	& MacArthur	(EW) Construct NB Left Turn Lane. Construct NB Through Lane. Convert NB Free Turn Right into Defacto Right Turn Lane. Construct SB Through Lane. Construct EB Through Lane. Convert EB Right Turn Lane into Defacto Right Turn Lane. Construct WB Through Lane.	IBC IBC Not Funded IBC IBC Not Funded IBC
91	Jamboree	(NS)	& Irvine	(EW) Construct NB Through-Right Lane. Convert NB Defacto Right Turn Lane into Right Turn Lane. Construct WB Through Lane. Convert WB Right Turn Lane into Defacto Right Turn Lane.	Not in Circulation Phasing Area
92	Jamboree	(NS)	& Bryan	(EW) Construct NB Through Lane. Convert NB Right Turn Lane into NB Defacto Right Turn Lane.	Not in Circulation Phasing Area
95	Jamboree	(NS)	& I-5 SB Ramps	(EW) Construct SB Through Lane.	Not Funded
98	Jamboree (SB)	(NS)	& Walnut	(EW) Remove SB Through Lane. Construct EB Through Lane. Convert WB Through-Left Lane into Left Turn Lane. Construct 2 WB Through Lanes.	TCA TCA TCA

TABLE 1 (CONTD)
2005 INTERSECTION IMPROVEMENTS

LOCATION	INTERSECTION NAME		IMPROVEMENT	COMMENT
99	Jamboree (NB)	(NS) & Walnut	(EW) Convert 1 NB Through Lane into Right Turn Lane. Convert NB Through Lane and Left Turn Lane into Shared Through-Left Lane. Convert EB Shared Through-Left Lane into Left Turn Lane. Construct 2 EB Through Lanes. Construct WB Through-Right Lane.	Not Funded TCA TCA TCA
100	Jamboree	(NS) & Edinger	(EW) Remove 1 NB Left Turn Lane. Remove 3 NB Through Lanes. Remove 3 SB Through Lanes. Convert EB Right Turn Lane into Free Right Lane.	TCA
103	Jamboree	(NS) & Barranca	(EW) Construct NB Through Lane. Construct SB Through Lane. Convert SB Defacto Right Turn Lane into Free Right Lane. Convert EB Through Lane into Through-Right Lane. Convert WB Defacto Right Turn Lane into Free Right Lane.	TCA Not Funded TCA Not Funded Not Funded
106	Jamboree	(NS) & Allon	(EW) Construct EB Defacto Right Turn Lane. Construct WB Defacto Right Turn Lane.	Not Funded Not Funded
107	Jamboree	(NS) & Main	(EW) Construct NB Through Lane. Construct SB Through Lane. Convert SB Right Turn Lane into Free Right Lane.	IBC Not Funded Not Funded
108	Jamboree	(NS) & I-405 NB Ramps	(EW) Construct 2 NB Through Lanes. Construct SB Through Lane.	1-IBC; 1-Not Funded IBC
109	Jamboree	(NS) & I-405 SB Ramps	(EW) Construct NB Through Lane. Construct SB Through Lane.	Not Funded IBC
111	Carlson	(NS) & Michelson	(EW) Construct EB Through Lane. Convert EB Defacto Right Turn Lane into Free Right Lane. Construct WB Left Turn Lane. Construct WB Through Lane. Convert WB Right Turn Lane into Free Right Lane.	Not Funded Not Funded Not Funded Not Funded Not Funded
112	ETC West Leg SB	(NS) & Irvine	(EW) Construct SB Left Turn Lane. Construct SB Shared Left/Right Lane. Construct SB Right Turn Lane. Construct 3 EB Through Lanes. Construct EB Right Turn Lane. Construct 2 WB Left Turn Lanes. Construct 3 WB Through Lanes.	Not in Circulation Phasing Area
113	ETC West Leg NB	(NS) & Irvine	(EW) Construct NB Left Turn Lane. Construct NB Shared Left/Right Lane. Construct NB Right Turn Lane. Construct EB Left Turn Lane. Construct 3 EB Through Lanes. Construct 3 WB Through Lanes. Construct WB Right Turn Lane.	Not in Circulation Phasing Area

TABLE 1 (CONTD)
2005 INTERSECTION IMPROVEMENTS

LOCATION	INTERSECTION NAME			IMPROVEMENT	COMMENT	
114	Harvard	(NS)	& Walnut	(EW)	Construct NB Left Turn Lane. Construct NB Through Lane. Construct SB Left Turn Lane. Construct SB Through Lane. Convert SB Right Turn Lane into Defacto Right Turn Lane.	PA-38 Assessment District Not Funded PA-10 Residential PA-10 Residential Not Funded
121	Culver	(NS)	& Irvine	(EW)	Construct NB Left Turn Lane. Construct 2 NB Through Lanes. Convert NB Right Turn Lane into Defacto Right Turn Lane. Construct SB Left Turn Lane. Construct SB Through Lane. Convert SB Right Turn Lane into Defacto Right Turn Lane. Construct EB Left Turn Lane. Construct EB Through Lane. Construct WB Through Lane. Convert WB Right Turn Lane into Defacto Right Turn Lane.	Lower Peter's Canyon 1-Northwood Point; 1-Not Funded Not Funded Lower Peter's Canyon Lower Peter's Canyon Not Funded Lower Peter's Canyon Lower Peter's Canyon Lower Peter's Canyon Not Funded
122	Culver	(NS)	& Bryan	(EW)	Construct NB Left Turn Lane. Construct NB Through Lane. Construct SB Left Turn Lane. Construct SB Through Lane. Construct EB Left Turn Lane. Construct EB Through-Right Lane. Construct WB Left Turn Lane. Construct WB Through Lane. Convert WB Right Turn Lane into WB Defacto Right Turn Lane.	Lower Peter's Canyon Northwood Point Lower Peter's Canyon Lower Peter's Canyon Lower Peter's Canyon Lower Peter's Canyon Lower Peter's Canyon Lower Peter's Canyon Not Funded
123	Culver	(NS)	& I-5 NB on/Trabuco	(EW)	Construct NB Through Lane. Construct SB Left Turn Lane. Convert WB Left Turn Lane into Shared Left/Right Lane.	Northwood Point Not Funded Not Funded
144	Jeffrey	(NS)	& Bryan	(EW)	Construct NB Defacto Right Turn Lane. Construct SB Left Turn Lane. Construct EB Through Lane. Convert EB Right Turn Lane into Defacto Right Turn Lane. Construct WB Left Turn Lane. Construct WB Through-Right Lane.	Not Funded Not Funded Not Funded Not Funded Not Funded Not Funded
147	Jeffrey	(NS)	& Walnut-5 SB	(EW)	Construct NB Through Lane.	PA-12
149	Jeffrey	(NS)	& Barranca	(EW)	Construct NB Through Lane. Construct NB Defacto Right Turn Lane. Construct 2 SB Left Turn Lanes. Construct 2 EB Through Lanes. Convert EB Right Turn Lane into Defacto Right Turn Lane. Construct 2 WB Left Turn Lanes. Construct 2 WB Through Lanes. Construct WB Defacto Right Turn Lane.	PA-12 PA-12 PA-12 Not Funded Not Funded PA-12 PA-12 PA-12
150	Jeffrey	(NS)	& Alton	(EW)	Construct NB Through Lane. Convert NB Defacto Right Turn Lane into a Free Right Lane. Convert WB Through Lane into Left Turn Lane.	Not Funded Not Funded Not Funded

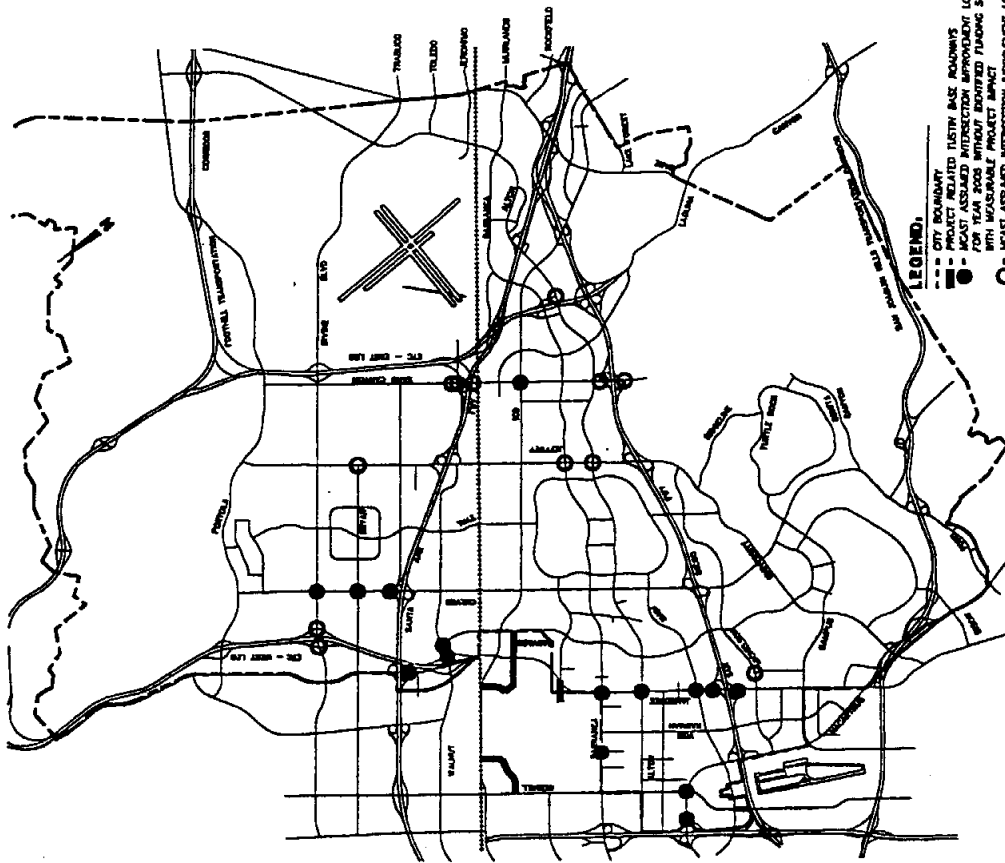
TABLE 1 (CONT'D)
2005 INTERSECTION IMPROVEMENTS

LOCATION	INTERSECTION NAME			IMPROVEMENT	COMMENT
154	Red Hill	(NS)	& Carnegie	(EW) Remove SB Left Turn Lane. Remove WB Left Turn Lane.	
158	Armstrong	(NS)	& Barranca	(EW) 1 NB Left Turn Lane. 1 NB Through Lane. 1 NB Shared Through-Right Lane. 1 NB Right Turn Lane. 1 SB Left Turn Lane. 2 SB Through Lanes. 1 SB Defacto Right Turn Lane. 2 EB Left Turn Lanes. 4 EB Through Lanes. 1 EB Defacto Right Turn Lane. 2 WB Left Turn Lanes. 4 WB Through Lanes. 1 WB Defacto Right Turn Lane.	Does not exist in 2005 ICU Sheets
159	West Connector	(NS)	& Edinger	(EW) Remove WB Left Turn Lane.	
166	East Connector	(NS)	& Edinger	(EW) Remove NB Right Turn Lane.	
180	Sand Canyon	(NS)	& I-5 NB Ramps	(EW) Construct NB Through Lane. Construct NB Defacto Right Turn Lane. Construct SB Left Turn Lane. Construct SB Through Lane. Construct EB Through Lane. Construct WB Left Turn Lane. Construct WB Through Lane. Construct WB Right Turn Lane.	Not Funded Not Funded Not Funded Not Funded Not Funded Not Funded Not Funded
181	Sand Canyon	(NS)	& Marine	(EW) 2 NB Through Lanes. 1 NB Right Turn Lane. 1 SB Left Turn Lane. 2 SB Through Lanes. 1 WB Left Turn Lane. 1 WB Right Turn Lane.	Does not exist in 2005 ICU Sheets
182	Sand Canyon	(NS)	& I-5 SB Ramps	(EW) Construct NB Through Lane. Construct NB Defacto Right Turn Lane. Construct SB Left Turn Lane. Construct SB Through Lane. Construct EB Shared Left/Right Lane.	PA-12 Not Funded Not Funded PA-12 Not Funded
183	Sand Canyon	(NS)	& Oak Canyon	(EW) Construct NB Through Lane. Construct SB Through Lane.	PA-12 PA-12

TABLE 1 (CONTD)
2005 INTERSECTION IMPROVEMENTS

LOCATION	INTERSECTION NAME		IMPROVEMENT	COMMENT
184	Sand Canyon	(NS) & Irvine Center	(EW) Construct NB Through Lane. Construct NB Right Turn Lane. Construct SB Left Turn Lane. Construct SB Through Lane. Construct EB Through Lane. Convert EB Defacto Right Turn Lane into Right Turn Lane. Construct WB Through Lane. Convert WB Defacto Right Turn Lane into Right Turn Lane.	PA-12 PA-12 PA-12 PA-12 PA-12 Not Funded PA-12 PA-12
185	Sand Canyon	(NS) & Barranca	(EW) Construct 2 NB Left Turn Lanes. Construct NB Through Lane. Construct SB Left Turn Lane. Construct SB Through Lane. Construct SB Defacto Right Turn Lane. Construct 2 EB Left Turn Lanes. Construct 2 EB Through Lanes. Construct EB Defacto Right Turn Lane. Construct 2 WB Through Lanes.	PA-12 PA-12 PA-12 PA-12 PA-12 PA-12 PA-12 PA-12(not defacto) PA-12
188	Sand Canyon	(NS) & I-405 SB Ramps	(EW) Construct NB Through Lane. Construct NB Free Right Lane. Construct SB Through Lane. Convert 1 EB Left Turn Lane into Shared Left/Right Lane.	PA-22 Not Funded Not Funded Not Funded
195	Pacific	(NS) & Alton	(EW) Construct NB Left Turn Lane. Construct 2 NB Through Lanes. Construct NB Defacto Right Turn Lane. Construct SB Through Lane. Construct EB Defacto Right Turn Lane. Construct WB Left Turn Lane.	Not Funded Not Funded Not Funded Not Funded Not Funded Not Funded
198	Bristol	(NS) & Warner	(EW) Convert EB Right Turn Lane into Through-Right Lane. Construct WB Through Lane.	Not in Circulation Phasing Area

EXHIBIT A
YEAR 2005 ASSUMED INTERSECTION IMPROVEMENT
LOCATIONS WITHOUT IDENTIFIED FUNDING SOURCE



RKJK
 ASSOCIATES

ATTACHMENT 3

LEGEND.

- CITY BOUNDARY
- PROJECT RELATED INTERSECTION IMPROVEMENTS
- ACUT ASSUMED INTERSECTION IMPROVEMENTS FOR YEAR 2005 WITHOUT IDENTIFIED FUNDING
- ACUT ASSUMED INTERSECTION IMPROVEMENTS FOR YEAR 2005 WITHOUT IDENTIFIED FUNDING

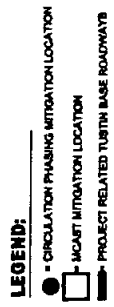
- - - - - CITY BOUNDARY
 - - - - - PROJECT RELATED TUSTIN BASIS ROADWAYS
 ● - - - - - HCAST ASSUMED INTERSECTION IMPROVEMENT LOCATIONS
 ○ - - - - - HCAST ASSUMED INTERSECTION IMPROVEMENT LOCATIONS
 - - - - - FOR YEAR 2050 WITHOUT IDENTIFIED FUNDING SOURCE
 - - - - - WITH MEASURABLE PROJECT IMPACT
 - - - - - HCAST ASSUMED INTERSECTION IMPROVEMENT LOCATIONS
 - - - - - FOR YEAR 2050 WITHOUT IDENTIFIED FUNDING SOURCE
 - - - - - FOR OTHER STUDY AREA INTERSECTIONS

RKJK
ASSOCIATES, INC.

0605-00-05:03
EAST NEWS, INC., CALIFORNIA

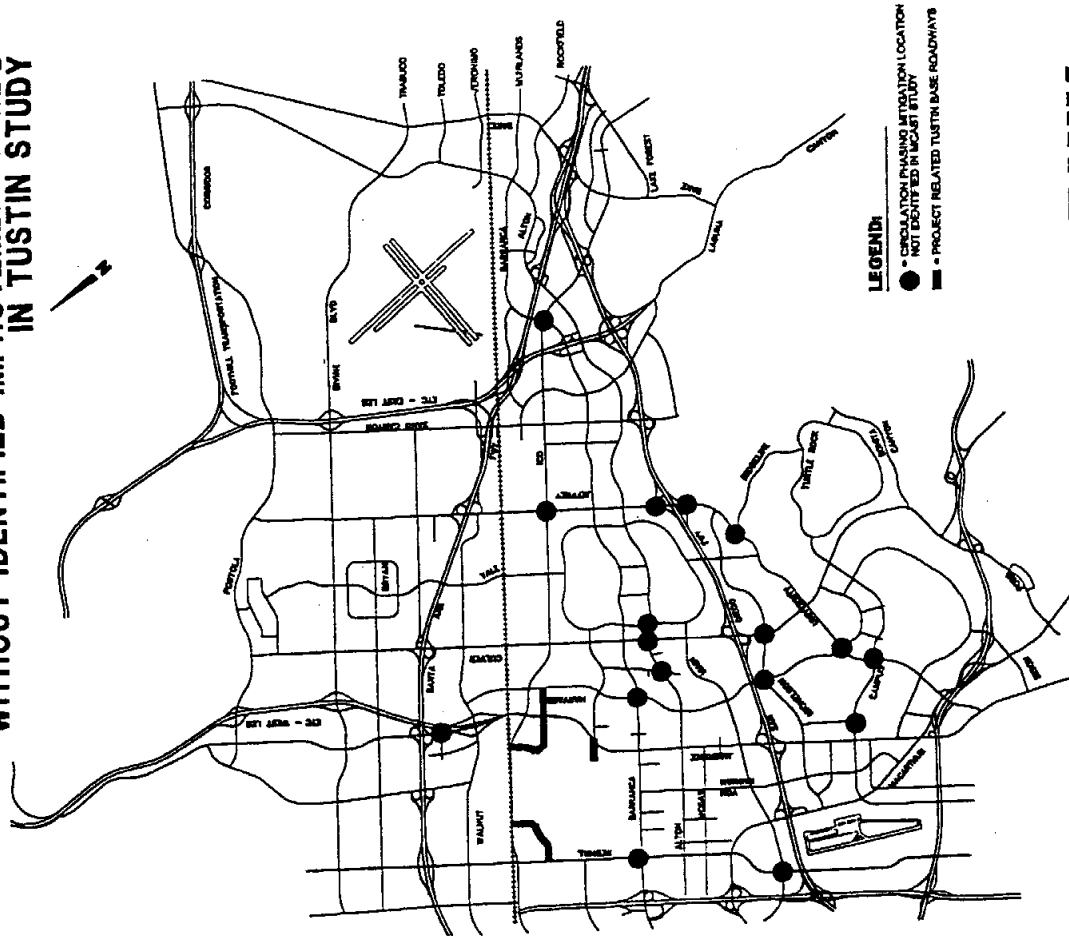
ATTACHMENT 4

EXHIBIT C



PKJK
ASSOCIATES, INC.

EXHIBIT D
YEAR 2005 IRVINE CIRCULATION PHASING LOCATIONS
WITHOUT IDENTIFIED IMPROVEMENT NEEDS
IN TUSTIN STUDY



RKJK
 ASSOCIATES, INC.

ATTACHMENT 6

City of Irvine

General Plan

Approximately 95 acres of the reuse plan area are located within the jurisdiction of the City of Irvine. This area, located within Planning Area 38 (Westpark II), is designated in the *City of Irvine General Plan Land Use Element* (City of Irvine 1995a) as Military and ~~Development Reserve~~ ^{Research and Development Reserve} (Figure 3.1-2). The Military designation applies to all of the military family housing development within the City of Irvine. ~~Two small undeveloped areas, one adjacent to Warner Avenue and one adjacent to Barranca Parkway, are designated Development Reserve.~~

There are numerous land use designations in the portion of the City of Irvine that surrounds the site. General plan designations in the area are: ~~Low-Density-Residential~~, Medium Density Residential, Medium High Density Residential, Neighborhood Commercial, Community Commercial, ~~Hotel~~, ~~General Industrial~~, ~~Irvine Business Complex (IBC)~~, ~~Industrial~~, ~~IBC~~, Multi-Use, Institutional, Recreational, ~~Conservation/Open Space Reserve~~, ~~Development Reserve~~, and Military.

Research and Industrial, Urban and Industrial

~~The Low-Density Residential area, located to the east of the site, has an allowable density of 0.5 dwelling units per acre with single-family attached and detached homes. The Medium Density Residential designation provides for detached and attached residences with a density of 6-10 dwelling units per acre. Areas with this designation are located to the southeast and south of the reuse plan area. There are two pockets of Medium High Density Residential east of the intersection of Harvard Avenue and Irvine Center Drive. This category is intended for multi-family housing with a maximum density of 11-25 dwelling units per acre.~~ *0 to 25*

The Neighborhood Commercial area south of the site provides for a variety of local convenience retail and service businesses. The Community Commercial area, also to the south of the site, serves a larger community area with such establishments as service businesses, retail stores, and professional/administrative offices. A triangular-shaped area to the northeast is designated *General Research* and Industrial, which allows for research and development, manufacturing, administrative offices, and employee-oriented retail services. To the southwest of the reuse plan area is the IBC which generally provides for ~~industrial use (IBC industrial) or for a variety of uses (IBC multi-use)~~ including industrial, professional offices, support commercial, and high-density residential.

limited

3.1 Land Use

The Institutional land use category (southeast of the site) accommodates non-profit land uses such as hospitals, schools, government buildings, libraries, fire stations and city administrative offices. The Recreational designation encompasses areas to the northeast (Harvard Community Athletic Park) and southeast (Civic Center Park), as well as greenbelts to the southeast. ~~The Hotel designation to the south of the intersection of Warner Avenue/Lambert Road reflects this land's use for a single room occupancy hotel.~~

As a federal installation, MCAS Tustin is currently not subject to planning requirements of the City of Irvine.

Zoning

The City of Irvine zoning ordinance and map designates the portion of the Air Station within Irvine as Military and Development Reserve (Figure 3.1-3). These categories are compatible with the general plan designations. Zoning in the adjacent area is also considered consistent with general plan designations.

City of Santa Ana

General Plan

Although the reuse plan area is located within the City of Tustin and the City of Irvine, the western boundary of the site abuts the boundary of the City of Santa Ana (Figure 3.1-2). The area immediately adjacent to the reuse plan area is designated Industrial in the *City of Santa Ana General Plan Land Use Element* (City of Santa Ana 1998). Beyond this area lies an area designated General Commercial. The Industrial designation applies to areas developed with industrial and manufacturing uses and the General Commercial area is intended for business and professional offices, retail and service establishments, vocational, cultural, and entertainment uses, and vocational schools.

Zoning

Zoning in the Santa Ana area adjacent to the reuse plan area is Limited Manufacturing (Figure 3.1-3). This is consistent with the Industrial general plan designation.

Attachment 2

to

City of Irvine Comments on Draft EIS/EIR for Reuse of MCAS Tustin



114 030 1002 P.02/02

ALLISON H. HART, City Manager

City of Irvine, One Civic Center Plaza, P.O. Box 18575, Irvine, California 92623-8575 (949) 724-6000

August 18, 1999

Mr. William A. Huston
City Manager
City of Tustin
300 Centennial Way
Tustin, CA 92780

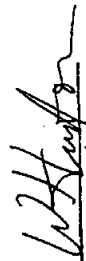
Dear Bill:

As I understand, Peter Hersh and Chris Shingleton were unable to meet this week to discuss Irvine's comments on the MCAS Tustin Draft EIS/EIR, and that a meeting has been scheduled for Tuesday morning. Since this meeting will occur after the close of the comment period, Chris had requested that we send this letter to request to extend the comment period to August 27. Therefore, please consider this a formal request from the City of Irvine to extend the comment period on the EIS/EIR to August 27, 1999.

Please let me know if you have any concerns with this request. We look forward to working with you to address development issues of mutual concern.

Sincerely,


ALLISON HART
City Manager

Concur: 
William A. Huston
City Manager, Tustin

ERSON, WILES & GIANNONE
INCLUDING PROFESSIONAL CORPORATIONS
ATTORNEYS AT LAW

RECEIVED

AUG 24 1999

REDEVELOPMENT AGENCY

4930 CAMPUS DRIVE
PORT BEACH, CALIFORNIA 91460
(714) 381-1300

103 TENTH STREET, SUITE 715
VERDE, CALIFORNIA 91361
(909) 221-2750

RESPOND TO AIRPORT BEACH
REF. OUR FILE

31 TOURNAY ROAD, SUITE 200B
ALENCIA, CALIFORNIA 91355
(641) 24-2508

17055.14

August 23, 1999

RECEIPT REQUESTED

Impact Statement/Environmental Impact Report on Base
Marine Corps Air Station, Tustin, California
a Unified School District

Ana Unified School District ("District"). On behalf of the
to comment on the "Draft Environmental Impact
ort" ("EIS/EIR") prepared by the joint lead agencies, City
("Tustin") and the Department of the Navy ("DON"). The
half of the District, in response to the Draft EIR/EIS and
S") Tustin Specific Plan/Reuse Plan ("Reuse Plan").

the finding of "no significant impact" upon the District as a
ished in the draft EIS/EIR. Specifically, the District takes
and in the *Updated Report on the School Facility Indirect*
SS Tustin Site on the Santa Ana Unified School District
Report on the School Facility Indirect Impact of
ite Upon Household Growth in the Santa Ana Unified
(Growth Report") upon which the finding of "no significant

L9-1

The commenter disagrees with several financial assumptions in two reports prepared by consultants to the City of Tustin. These reports were prepared in response to a Santa Ana Unified School District (SAUSD) study that was submitted to the City of Tustin during preparation of the initial draft EIS/EIR (December 1997). From the inception of the EIS/EIR process in 1993, SAUSD has claimed that reuse of MCAS Tustin would increase student enrollment and this would have adverse financial impacts on the SAUSD that the City of Tustin must fully mitigate to a level of insignificance. The commenter's concerns about the City of Tustin's reports reiterate this theme. While the City of Tustin attempted to address these financial issues, it was not required to do so by CEQA or any other applicable California law. CEQA requires public agencies to focus on changes in physical conditions that a project may cause (14 Cal. Code of Regs. § 15126.2(a)). In fact, Government Code § 65995, as amended in 1998, forbids the City of Tustin from imposing a "fee, charge, dedication, or other requirement" for the "construction or reconstruction of school facilities" as a condition of project approval. The only fees permitted are the fees that can be collected by the SAUSD allowed by Education Code § 17620. Since the revised draft EIS/EIR was prepared, the voters approved a multi-million dollar bond measure for school construction in the SAUSD. This funding was not assumed by consultants to Santa Ana or Tustin in their reports regarding financial impacts of the reuse of MCAS Tustin. As to the potential for the construction of new facilities to serve new SAUSD students who are indirectly generated by development at MCAS Tustin, the EIS/EIR concludes that:

Since the need for new facilities is not yet confirmed, there is no facility design or location that could be evaluated in the EIS/EIR for physical impacts to the environment. Such physical impacts may be significant, and, if so, mitigation would be the responsibility of SAUSD.

This is consistent with 14 Code of Regs. § 15145 (impact is too speculative for evaluation) and the court's discussion in *Goleta Union School District v. Regents of University of California*, 32 Cal. 3d 779, 1032-1034 (1995).

The EIS/EIR does not find that the SAUSD would be required to construct new facilities as a result of reuse of MCAS Tustin. Any additional students will reside throughout the school district. There is no evidence establishing that new facilities would be required.

BOWIE, ARNESON, WILES & GIANNONE

Mr. Dana Ogdon
August 23, 1999
Page 2

L9-2

The CEQ Guidelines state that social and economic impacts are "effects" that must be addressed under NEPA (40 CFR § 1508.8). Section 4.3 of this EIS/EIR quantifies the potential fiscal impacts and addresses this "social and economic impact." Some clarifying language regarding mitigation responsibility and the likelihood of financial measures succeeding or being approved has been added to the FEIS/EIR. To the extent that the comment addresses NEPA, DON notes that NEPA does not require that a federal lead agency present a detailed mitigation plan or commit to implementing the mitigation measures *Robertson v. Methow Valley Citizens* (490 U.S. 332 (1989)). Nonetheless, specific financial measures have been identified in the FEIS/EIR that would adequately compensate the SAUSD for financial impacts due to indirect student generation if the measures are undertaken and approved by the appropriate authorities. Because a federal lead agency is not required to implement mitigation measures, the uncertainty regarding whether the mitigation measures would be adopted by the applicable local agency does not render the measures unduly speculative.

1. *The Updated Report has incorrectly identified State Cost Allowances for School Facilities Construction*

As more fully set forth in "Attachment 1" hereto, the Updated Report has failed to properly account for State of California School Facility Cost Allowances and has assumed availability of funds where, in fact, State funding may be either inadequate or not available to the District. As such, the findings of the Updated Report are misleading and not supported by substantial evidence.

2. *Household Growth Calculations Under-estimate the Impacts of the Reuse Plan upon the District.*

The Updated Household Growth Report understates the impact of the Reuse Plan upon the District based upon the misuse of data incorporated in the Updated Household Growth Report, as illustrated by "Attachment 2" hereto.

3. *The Updated Report Erroneously Assumes the Availability of Redevelopment Funds*

The Updated Report assumes the District will receive approximately \$2,775,555 in Redevelopment dollars to fund capital school facilities projects as a result of formation of a Redevelopment Project area within the Reuse Plan area; however, the income assumed is from a proposed redevelopment project, not an adopted project. Therefore, the receipt of redevelopment funds by the District is speculative at best, and has been grossly overstated, as fully set forth in "Attachment 3" hereto.

As a result of the incorrect findings made in both the Updated Report and the Updated Household Growth Report, the draft EIS/EIR has failed to present adequate mitigation measures necessary to reduce the impacts of the MCAS Reuse Plan to a level of insignificance upon the District in direct contravention of the requirements of the California Environmental Quality Act ("CEQA"). Further, because CEQA is modeled on the National Environmental Policy Act ("NEPA"), the Draft Environmental Impact Statement ("EIS") component of the draft EIS/EIR requires special attention to mitigation of all "human" impacts (40 CFR § 1508.8; 42 U.S.C. § 4332, subd. (C)). The draft EIS/EIR may not ignore the potential for a significant impact upon the District, nor may it ignore its own finding that the District will be forced to construct new school facilities and may well face a \$3.3 million dollar deficit to fund necessary school facilities as a result of the Reuse Plan. (EIS/EIR, p. 4-63.) Mitigation measures based on the occurrence of speculative events present an insufficient basis upon which to make a finding of "no significant impact" for purposes of CEQA (*San Franciscans for Reasonable Growth*, 151 Cal.App.3d at 79,

BOWIE, ARNESON, WILES & GIANNONE

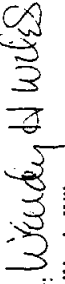
Mr. Dana Ogdon
August 23, 1999
Page 3

198 Cal Rptr. at 643.) All such potential impacts upon the District must be mitigated to a actual level of insignificance prior to the approval of the EIS/EIR.

CEQA Guidelines clearly require that if the administrative record reveals substantial evidence of a significant environmental impact, as herein, the EIR must analyze those effects and suggest feasible means to mitigate or avoid the impacts. (Public Resources Code Sections 21002.1, 21061; CEQA Guidelines Sections 15080 - 15096, 15160 - 15170.) To this end, we welcome the opportunity to discuss mitigation of the potential effects upon the District with you in greater detail. We would be pleased to provide any additional information you may require.

Very truly yours,

BOWIE, ARNESON,
WILES & GIANNONE

By: 
Wendy Wiles

CAB/ad

Enclosures

cc: Mr. Mike Vail

Attachment 1

State School Facility Cost Allowances

The Updated Report School Facility Construction Cost Impact of Redevelopment of the MCAS Tustin Site on the Santa Ana Unified School District (the "JCJ Report" dated June 1999 prepared by JCJ Associates) incorrectly identifies State cost allowances for constructing school facilities under the California State School Facility Program (implemented in 1998 by Senate Bill 50).

Specifically, the basic State school facility construction allowances identified in the JCJ Report are as follows (cost per student):

	Elementary	Middle School	High School
50% Base Building Grant	\$5,240	\$5,542	\$7,255
50% Local Match	\$5,240	\$5,542	\$7,255
Site Acquisition	\$3,702	\$4,696	\$6,620
Total	\$14,182	\$15,780	\$21,130

These costs fail to account for the following:

1. Site development/Utility costs (also funded by the State). This is assumed to be an additional \$150,000 per acre. This includes site clearing, demolition and removal, removal and rerouting of existing utilities, rough grading, soil compaction, on-site drainage, erosion control, embankments, outside stairways/ramps/retaining walls, relocation of existing portable buildings, fire code requirements, off-site curbs/gutters/paving, off-site sidewalks, street lighting, special district fees, storm drains, and utility service fees.
2. Adjustments to the Base Building Grant for (i) special education students, (ii) multi-level construction, and (iii) urban/security/impacted sites (also funded by the State).
3. Adjustments to the Base Building Grant are anticipated based on a mandated review of the adequacy of building grants by the Office of Public School Construction. Most participants in the review process believe that base building grants will be increased.
4. Site acquisition costs for recent district land purchases ranged from \$490,000 per acre to \$1,342,000 per acre. Land costs in the JCJ Report are based on 1997-98 land sales not 1999 land sales (all other figures are in 1999 dollars) and do not reflect the anticipated cost of actual school sites the District will purchase. Land costs are also to be adjusted so that they include the cost per net usable acre plus an allowance of 4.0 percent for transaction costs (appraisal, escrow, environmental assessments, etc.).

Revised figures are shown below.

Public Economics, Inc.

August 23, 1999
11:13 AM

Attachment 1
Page 2 of 2

	Elementary	Middle School	High School
School Site Size in Acres	6	15	33
School Capacity in Students	850	1,500	2,000
Site Development Cost per Acre	\$150,000	\$150,000	\$150,000
Site Development Cost per Student	\$1,059	\$1,500	\$2,475
Base Site Acquisition Cost per Acre	\$750,000	\$750,000	\$750,000
Transaction Cost per Acre	\$30,000	\$30,000	\$30,000
Total Site Acquisition Cost per Acre	\$780,000	\$780,000	\$780,000
Site Acquisition Cost per School	\$4,680,000	\$11,700,000	\$25,740,000
Site Acquisition Cost per Student	\$5,506	\$7,800	\$12,870
50% Base Building Grant	\$5,240	\$5,542	\$7,255
50% Local Match	\$5,240	\$5,542	\$7,255
Site Acquisition	\$5,506	\$7,800	\$12,870
Site Development	\$1,059	\$1,500	\$2,475
Special Ed. (3.14%)	\$329	\$348	\$456
Multi-Level Construction	\$1,258	\$1,330	\$1,741
Urban Security/Impacted Site	\$838	\$887	\$1,161
Total	\$19,470	\$22,949	\$33,213

By far the most important factor related to State funding is the potential lack of availability of funding when needed by the District. Many people familiar with the State funding program believe that the "new construction" portion of the Proposition 1A bond proceeds will be committed by Fall 2000, leaving no funding available when needed by Santa Ana Unified School District. Furthermore, the ability to raise additional funds through the so-called Level III developer fees may not be possible if building permits are pulled before State funding runs out and before the District is able to lock in State funding for its projects. Additionally, the so-called Level II and Level III developer fees often do NOT provide the estimated 50% or 100% mitigation due to the nature of the statutorily required formulas.

Attachment 2

Household Growth Calculations

The Updated Report On The Indirect Impact of Redevelopment of the MCAS Tustin Site Upon Household Growth in the Santa Ana Unified School District (the "DMC Report" dated May 1999 prepared by Dennis Macheski Consulting) includes at least three basic assumptions which are contributing to an under-estimate of impacts at this time. Specifically:

A. Use of "Household Capture" from OCP-96.

The DMC Report references the following statistic from OCP-96:

"3.8% of the housing growth in Orange County from 2000-2020 will be captured by Santa Ana."

The DMC Report further goes on to apply this statistic by assuming that 4% of households created by jobs at MCAS Tustin will also be located within Santa Ana.

While the OCP-96 statistic may be accurate, it is being inappropriately applied in the DMC Report. The inaccuracy is that DMC is multiplying the County-wide factor of 4% by a localized number of households rather than households that are equally distributed throughout the County. It is qualitatively easy to see that if Santa Ana captures 4% of households from new employees throughout the County, Santa Ana is much more likely to capture a higher percentage of employees from jobs in Central Orange County and a lower number of employees from jobs in North or South Orange County--with a weighted average capture of 4%. For example, if employees are equally generated throughout the County, Santa Ana might capture 1% of employees in South/North Orange County and 10% of employees in Central Orange County for a combined average of 4% of all employees.

The OCP-96 analysis speaks to this County-wide figure. An analysis of jobs just within the MCAS Tustin area requires the use of the higher 10% figure.

B. Statistical Significance of Referenced Job Survey

The DMC Report backs up the OCP-96 figure by a survey of seven firms located "near" the MCAS Tustin site (with 6,011 workers). However, a sampling of seven firms is not adequate to create a statistically significant result. Furthermore, no evidence regarding the selection procedure, survey procedure, description of the type of businesses, or specific location of the businesses is provided. We believe it is inappropriate to backup a County-wide figure which should not apply in the MCAS Tustin calculations with a survey sampling only seven firms. We believe that the results are not accurate and that the results understate the true impact.

Attachment 2
Page 2 of 2

C. Use of "10% New Jobs" In Computation

The DMIC Report provides an "alternative" calculation scenario in which it reduces impacts by 90% through a statement that only 10% of jobs at MCAS Tustin will be new to Orange County. There are a few reasons why this assumption causes an understatement of impacts and concern to reviewers:

1. There is no discussion of the tendency for "backfill" impacts if existing OC firms relocate to MCAS Tustin. Economic projections typically call for overall growth, subject to land and building availability. For Orange County, relocation of firms within the County will create space which will be "backfilled" by new firms or firms from outside of Orange County, rather than creating an increased vacancy rate within Orange County commercial properties. This backfill impact is created by the MCAS Tustin site development providing available land for new or existing businesses. We are certain that stall economists with The Irvine Company and brokers at Grubb & Ellis would not advise DMIC that development of MCAS Tustin will cause 22,410 jobs to relocate from elsewhere in Orange County and create 7.8 million square feet of vacant business properties elsewhere in Orange County. The indirect and induced backfill impact should be accounted for in the analysis.
2. The assumption that 90% of jobs will relocate from elsewhere in Orange County is problematic in that the City of Tustin proposes to create a redevelopment project area at MCAS Tustin. However, redevelopment powers are intended to assist cities and counties in creating new jobs for the State of California, not in having businesses relocate from adjacent cities. In fact, recent tightening of redevelopment legislation has been aimed at avoiding instances where large redevelopment projects shift jobs between cities.

Redevelopment Entitlement Assumptions

1. The redevelopment income is from a proposed redevelopment project, not an adopted project. In fact, the City is inconsistent in requesting formation of a project area when it intends to attract jobs from elsewhere in the County rather than creating new jobs (note the City's assumption that 90% of jobs will relocate from elsewhere in Orange County). Redevelopment powers are intended to assist cities and counties in creating new jobs for the State of California, not in having businesses relocate from adjacent cities. In fact, recent tightening of redevelopment legislation has been aimed at avoiding instances where large redevelopment projects shift jobs between cities. It is possible that the redevelopment project will not be formed for a number of reasons, including the fact that the City intends to attract jobs from elsewhere in the County rather than create net new jobs.

2. Redevelopment income is dependent on development of taxable property within the portion of the project area that overlaps the District. This income is speculative and obtaining \$2.78 million in 1999 would require a tremendous amount of risk on the part of the District. Risk is so high, that only a significantly lower amount could be obtained in an open market place by the District selling its annual entitlement for up-front funds. Therefore, unless the City proposes to loan the District \$2.78 million in 1999, to be repaid solely from the projected income shown in the City's report, the revenues are overstated and the net impact on the District is understated.

In summary, the redevelopment income is speculative and risky until (i) redevelopment project is adopted and (ii) the City loans the District \$2.78 million up-front to fund facilities projects. Until both of these factors have occurred, \$0 of redevelopment income should be included.

PROOF OF SERVICE OF MAILING

I am a resident of the State of California, over the age of eighteen years. My business address is Bowie, Ameson, Wiles & Giannone, 4920 Campus Drive, Newport Beach, California 92660. On August 23, 1999, I served the within document:

Letter dated August 23, 1999 from Bowie, Ameson, Wiles & Giannone to Mr. Dana Ogdon, of the City of Tustin, 300 Centennial Way, Tustin, California, 92780, regarding *Draft Environmental Impact Statement/Environmental Impact Report on Base Disposal and Reuse of Marine Corps Air Station, Tustin, California* - Response of Santa Ana Unified School District

☐ by transmitting via facsimile the document(s) listed above to the fax number(s) set forth below on this date before 5:00 p.m.

☒ by placing the document(s) listed above in a sealed envelope with postage thereon fully prepaid, **via Certified Mail, Return Receipt Requested**, in the United States mail at Newport Beach, California addressed as set forth below.

☐ by causing personal delivery by First Legal Support Services of the document(s) listed above to the person(s) at the address(es) set forth below.

☐ by personally delivering the document(s) listed above to the person(s) at the address(es) set forth below.

Mr. Dana Ogdon
Senior Redevelopment Project Manager
City of Tustin
300 Centennial Way
Tustin, California 92780

I am readily familiar with the firm's practice of collection and processing correspondence for mailing. Under that practice it would be deposited with the U.S. Postal Service on that same day with postage thereon fully prepaid in the ordinary course of business.

I declare under penalty of perjury under the laws of the State of California that the above is true and correct.

Executed on August 23, 1999, at Newport Beach, California.


Kerry V. Kette

L10-1 Refer to response to comment letter L9.

**WRITTEN
COMMENTS OR
QUESTIONS**

**Environmental Impact Statement for the
Disposal and Reuse of MCAS Tustin**

The Santa Ana Unified School District ("District") submits the following comments to the Draft EIR/EIS and the "Marine Corps Air Station ("MCAS") Tustin Specific Plan/Reuse Plan ("Reuse Plan"), as more fully set forth in the District's comment letter attached hereto.

The District disputes the finding of "no significant impact" upon the District as a result of the MCAS Reuse Plan established in the draft EIS/EIR which was based upon the Updated Report on the School Facility Indirect Impact of Redevelopment of the MCAS Tustin Site on the Santa Ana Unified School District (Updated Report"), and the Updated Report on the School Facility Indirect Impact of Redevelopment of the MCAS Tustin Site Upon Household Growth in the Santa Ana Unified School District ("Updated Household Growth Report") for the following reasons:

1. The Updated Report has incorrectly identified State Cost allowances for School Facilities Construction.
2. Household Growth Calculations underestimate the impacts of the Reuse Plan upon the District.
3. The Updated Report erroneously assumes the availability of Redevelopment Funding.

Please Send Comments / Questions to:

Dana Ogdon
City of Tustin
300 Centennial Way
Tustin, CA 92680



**South Coast
Air Quality Management District**

21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • <http://www.aqmd.gov>

RECEIVED

SEP 07 1999

REDEVELOPMENT AGENCY

FACSIMILE TO (714) 573-3113

August 27, 1999

Mr. Dana Ogdon
City of Tustin
300 Centennial Way
Tustin, CA 92780

Dear Mr. Ogdon:

Re: Draft Environmental Impact Statement (EIS)/Environmental Impact
Report (EIR) for the Disposal and Reuse of MCAS Tustin

The South Coast Air Quality Management District (SCAQMD) is a regional public agency with responsibility for improving air quality in the four-county South Coast Air Basin (Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties) and the Riverside County portions of the Salton Sea Air Basin and Mojave Desert Air Basin. In addition to adopting, implementing, and enforcing air pollution control regulations, the SCAQMD reviews California Environmental Quality Act (CEQA) documents prepared by other public agencies to evaluate the adequacy of the air quality analyses. The SCAQMD may provide recommendations to the lead agency for improving the air quality analyses and identifying additional feasible mitigation measures, if necessary.

The SCAQMD would like to make the following comments to assist the City of Tustin with a more informative and effective Environmental Impact Statement/Environmental Impact Report:

- Tables 4.13-4 and 4.13-5 discuss project-related emissions and "peak reduced emissions." The SCAQMD requests clarification regarding the peak reduced emissions. Specifically, control efficiencies should be included and more detail provided regarding how emission reductions will be achieved. The SCAQMD is unclear about what "reductions associated with control measures" are being assumed. It is inappropriate to assume that future mitigation measures will be implemented to offset the adverse impacts of the proposed project.
- Please provide additional clarification regarding the statement on page 4-194 regarding the SCAQMD's RECLAIM program. RECLAIM credits are not transferable between a RECLAIM and non-RECLAIM source. Please clarify what the baseline emissions are for NOx emissions and whether or not it is the year that the base was designated for closure.

L11-1

Clarifications have been provided in Section 4.13 of the Final EIS/EIR to better define reduced emissions. Calculation of emissions with and without mitigation measures is included in the EIS/EIR in accordance with the procedures in Chapter 9.0 of the SCAQMD CEQA Handbook.

The SCAQMD requires that all construction sites be watered in order to reduce PM₁₀ emissions. Since this requirement is mandatory, it is appropriate to include reductions in PM₁₀ emissions. Both the cities of Tustin and Irvine have implemented TDM ordinances that mandate businesses with 100 employees or more to devise TR/TDM plans. Both cities also have bicycle transportation plans and policies to encourage bicycle use. All control efficiencies are derived from the SCAQMD CEQA Handbook (Appendix to Chapter 11). Both the cities of Tustin and Irvine have included plans to implement these measures; therefore, it is appropriate to assume that these reductions will be achieved.

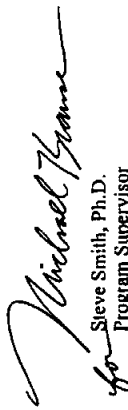
L11-2

Clarification regarding the transferability of RECLAIM credits has been added to Section 4.13 of the FEIS/EIR.

Baseline NO_x emissions were calculated from a number of different sources to account for emissions from automobile traffic, helicopters, stationary sources on MCAS Tustin, and utilities. Baseline vehicular emissions were derived using 12,300 ADT which was the traffic volume generated at MCAS Tustin in 1993, the year the Air Station was designated for closure. Baseline helicopter emissions are also from 1993. Utility usage is based on a 1992 study. Clarification regarding the year and sources has been added to Table 3.13-5. Also, baseline vehicular emissions were inadvertently calculated in the draft EIS/EIR with 1991 emission factors. Table 3.13-5 has been revised in the FEIS/EIR to show emissions with 1993 emission factors. This correction does not change any significance conclusions in the analysis.

The SCAQMD comments are intended to advise the lead agency in addressing and mitigating the potential adverse air quality impacts of the project. The SCAQMD appreciates the opportunity to review the air quality study for the draft EIS/EIR of the Disposal and Reuse of MCAS Tustin in the City of Tustin. SCAQMD staff is available to answer any questions you may have, or provide further assistance regarding air quality issues. Questions should be addressed to Tara Tisopulos at (909) 396-3102.

Sincerely,


for Steve Smith, Ph.D.
Program Supervisor
Planning, Rule Development & Area Sources

SS:TT

MAYOR
Miguel A. Polido
MAYOR PRO TEM
Thomas E. Iuz
COUNCILMEMBERS
Lisa Bitt
Alberta D. Christy
Brett Franklin
Patricia A. McGuigan
Ted B. Morenc



CITY OF SANTA ANA
PUBLIC WORKS AGENCY
101-A W. Fourth Street, M21 • P.O. BOX 1988
Santa Ana, California 92702

CITY MANAGER
David N. Ream
CITY ATTORNEY
Joseph W. Fletcher
CLERK OF THE COUNCIL
Janice C. Goy

August 31, 1999

Mr. Dana Ogdon
Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, California 92780

RE: MCAS TUSTIN EIS/EIR COMMENTS/SCH No. 94071005

Dear Mr. Ogdon:

Attached are the City of Santa Ana's comments on the Draft MCAS Tustin EIS/EIR. The reuse of the 1,600 acres for the construction of over 11 million square feet of development and 3,000 homes immediately adjacent to Santa Ana will obviously result in a dramatic increase from the activity levels of MCAS Tustin. As you will see from our comments, we continue to be deeply concerned regarding the potential traffic impacts to our community resulting from the reuse plan. We do not see a clear, accurate picture of potential impacts in the EIS/EIR traffic study and, therefore, cannot feel secure that impacts are adequately defined and fully mitigated.

We appreciate the time extensions granted to the City for our preparation of comments. We believe that our two communities have worked extremely well together through our joint powers authority to advance economic prosperity in both cities without sacrificing quality of life. It is our intent to continue to work cooperatively in this regard. We trust that Tustin will, in turn, work diligently to provide us with the information and assurances necessary to fully address our concerns over the base reuse plan and its environmental consequences.

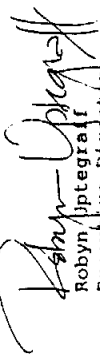
RECEIVED

AUG 31 1999

REDEVELOPMENT AGENCY

Please feel free to contact me if there are any questions.

Sincerely,


Robyn Uptegraff
Executive Director
Planning and Building Agency

RU/klp

Attachment

CITY OF SANTA ANA COMMENTS ON MCAS TUSTIN DISPOSAL/RE-USE EIS/EIR

General Comments

Table 2-16 on page 2-45 of the EIS/EIR provides a listing of various approvals and permits required to implement the Project, along with the Responsible Agencies charged with the responsibility for such actions. This table does not recognize the City of Santa Ana as a Responsible Agency. According to Section 21080 of the CEQA Statutes, a Responsible Agency is "a public agency, other than the Lead Agency, responsible for carrying out a project." In this regard, the City of Santa Ana will be responsible for approving street improvements and traffic signal upgrades within the boundaries of the City of Santa Ana. If the Project is approved, and circulation measures in EIS/EIR document are implemented, the City of Santa Ana will be required to amend its Circulation Element of the Santa Ana General Plan.

L12-1

Program Level EIR

Chapter 7.0 of the EIS/EIR indicates that the document is a program level EIR as defined by Section 15168 of the CEQA Guidelines. Justification is given for this depiction based upon the following five Implementing Actions:

- Adoption of the MCAS Tustin Specific Plan;
- Amendments to the General Plans and Zoning Ordinances for the City of Tustin and the City of Irvine;
- Amendment to the County of Orange Master Plan of Arterial Highways;
- Final designation for MCAS Tustin by the California Trade and Commerce Agency under the LAMBRA Act; and
- Designation of MCAS Tustin and adjacent areas as a redevelopment project under California Community Redevelopment Law.

The City of Santa Ana disagrees with this assumption by the City of Tustin based upon the following:

- Program EIRs have enough information to cover a series of actions. The Implementing Actions noted by the City of Tustin are all at the general plan and zoning levels. None go to a subdivision or area plan level.
- Program EIRs provide the specificity and detail to cover a wide spectrum of activity. The EIS/EIR provides details appropriate for the General Plan and Zoning levels, only. Information and analysis in the EIS/EIR are insufficient to adjudge its appropriateness for construction level development.

L12-1

CEQA defines Responsible Agency as "all public agencies other than the Lead Agency which have discretionary approval power over the project" (§ 15381 italics added). The City of Santa Ana is not a Responsible Agency under CEQA because it has no responsibility for approving the Reuse Plan/Specific Plan project, nor does MCAS Tustin lie within the jurisdictional boundaries of the City of Santa Ana. To the extent mitigation measures for traffic generated by development projects in the reuse plan area may require the City of Tustin and the City of Santa Ana to cooperate on the improvement of intersections in the traffic study area, such cooperation by Santa Ana does not make it a Responsible Agency under CEQA. Nevertheless, the City of Tustin has consulted with Santa Ana at every stage of the EIS/EIR process, especially on traffic issues, and will continue to do so.

This comment specifically addresses CEQA rather than NEPA requirements; therefore no response is required to address NEPA compliance.

L12-2

The guidelines for implementing CEQA require the City of Tustin and City of Irvine to examine subsequent proposed activities requiring a discretionary action in light of the Program EIR to determine whether additional environmental documents are required (14 Cal. Code of Regs. § 15168(c)). Once those individual, project-specific development applications are received, they will be evaluated under CEQA via the Initial Study process to determine whether or not project-specific impacts would be greater than those disclosed and mitigated in this Program EIR. If impacts would be different, then construction level EIRs or Mitigated Negative Declarations would be prepared. The Program EIR does not eliminate subsequent CEQA compliance. However, NEPA compliance would be fully satisfied by this joint FEIS/EIR for the federal action of disposal.

Chapter 7.0 describes the triggers for the mitigation of traffic impacts. This chapter incorporates by reference the mitigation and implementation measures in Chapter 4.0 for Alternative 1 as well. Measures in Chapter 4.0 also provide very specific processes to ensure that utilities and public services are provided concurrent with demand, and that impacts associated with cultural and paleontological resources, biological resources, soils and geology, water resources, hazardous materials, air quality, and noise would be mitigated. The mitigation measures for land use and aesthetics in Chapter 4.0 would be implemented via the Specific Plan implementation and review process.

This comment specifically addresses CEQA rather than NEPA requirements; therefore no response is required to address NEPA compliance.

- Program EIRs provide specific mitigation measures appropriate for the various levels of the program. The EIS/EIR provides specificity in mitigating future traffic impacts only.

- The City of Santa Ana regards the EIS/EIR as a Tiered EIR that will be followed by more detailed, construction level EIRs and Negative Declarations at project implementation levels.

Project Description Fails To Meet CEQA's Requirements

"An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." (*San Joaquin Raptor v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 729; 32 Cal.Rptr.2d 704.) The Draft EIS/EIR totally fails to meet this test.

The Draft EIS/EIR fails to meet the *San Joaquin Raptor* test in a number of crucial areas. First, the document flails back and forth between being a Program and a Project EIR, and as such fails to meet CEQA's obligation that the each and every discretionary act for which this document will used must be clearly identified.

In so doing, the issue of whether and when deferred environmental analysis will be performed becomes nothing more than a shell game, with any person who wishes to comment being left in a quandary. CEQA does not allow the lead agency to defer environmental analysis that can be performed now to a later date simply by calling a portion of this document a Program EIR.

A number of critical impacts, such as mitigation of lost wetlands, traffic mitigation, and preservation of biological diversity do not have mitigation measures imposed. Instead, such mitigation measures are deferred to a later, unknown date.

For example, mitigation measure IA-8 calls for Tustin to "enter into agreements with Caltrans and the cities of Santa Ana and Irvine to ensure that off-site roadway improvements . . . are constructed." (Page 7-39.) This mitigation measure is illusory, regardless of whether the EIS/EIR is called a program or a project EIR. CEQA imposes on Tustin the following obligation with respect to significant traffic impacts:

- Identify mitigation measures for project impacts
- For impacts that can be reduced by alternative mitigation measures, determine which measure has the least impacts of its own
- Determine whether the significant impacts, after imposition of mitigation measures, are reduced to a level of insignificance.

L12-3

This environmental document is intended to serve three actions and integrates the NEPA and CEQA compliance needs of several agencies, which is potentially confusing. As stated in Section 1.1, the first action is the federal (DON) action to "dispose of surplus federal property at MCAS Tustin for subsequent reuse." The second action is the local action (cities of Tustin and Irvine) defined in Section 1.2, as "implement a civilian reuse plan" with the purpose of reuse to offset the negative socioeconomic effects caused by BRAC, with a plan that provides housing and employment, addresses existing circulation and parkland deficiencies, and generates revenue to provide for infrastructure. To address the indirect and direct effects of both the federal and local actions, the joint EIS/EIR evaluates three possible reuse alternatives as well as the No Action Alternative. Those four alternatives are described in Chapter 2.0 and are analyzed at an equal level of detail in Chapter 4.0. A third action, which is subject to CEQA compliance only, is the required discretionary approvals for five implementing action items that together provide the mechanisms to implement the LRA Reuse Alternative (one of the three reuse alternatives evaluated in the joint EIS/EIR). Section 7.1 provides a description of the five implementing actions which serves as the project description for the CEQA-only portion of the document. The CEQA-only analyses of the implementing actions are provided in Section 7.2. Section 1.5 of the FEIS/EIR has been modified to provide further clarification on the distinction between the NEPA/CEQA analysis and the CEQA-only analysis; however, each discretionary action is listed in Chapter 1 of the FEIS/EIR, and detailed descriptions of those actions are provided in Chapters 2.0 and 7.0, as appropriate.

Mitigation is not being deferred in this EIS/EIR. Where significant impacts are identified, mitigation measures are identified to reduce that impact. However, since implementation of certain mitigation measures would occur at later times as build-out of the project occurs (i.e., when project-specific development impacts would actually occur), the measures provide for conditions to be placed on specific development projects or when impacts actually occur under those developments. For the cited issue areas of biological resources, the EIS/EIR identifies significant impacts to all wetland habitat on site which is the most conservative, reasonably foreseeable impact, given the lack of site-specific development proposals for the numerous, discontinuous wetland parcels. The required mitigation measure is to obtain necessary permits from resource agencies. It is most appropriate to link obtaining the actual permit to site-specific impacts because it is unknown at this time what proposals for avoidance and/or off-site mitigation may be possible. Additionally, the 404 permit process includes evaluation of alternatives.

Traffic mitigation is addressed similarly. It would be unreasonable to construct all the necessary roadway improvements for full build-out (+2020) at this point in time, so the mitigation measures (which are based on performance standards in the EIS/EIR) identify the type of improvement necessary to mitigate traffic impacts and define an ADT threshold that requires specific improvements to be constructed. Implementation of the mitigation would occur when the mitigation threshold is reached. Development projects would be conditioned to fund that project's share of improvements.

The traffic mitigation measures in Section 4.12 and subsection 7.2.11 have been carefully reviewed and, where necessary, clarification has been added to identify the timing, appropriate thresholds, and responsibility for necessary improvements. Those impacts that would remain significant even after mitigation are identified for all issue areas, including traffic. Section 6.1 of the EIS/EIR provided a complete list of significant, unmitigable impacts.

The EIS/EIR fails to do this. Given the very detailed land uses set forth in the three projects analyzed in the EIS/EIR, there is no doubt but that specific traffic impacts on the SR55 and streets in Santa Ana and Irvine can be identified at this time. Tustin is required to identify these impacts and to describe all feasible mitigation measures – not to defer this analysis. It is a separate question whether such analysis will be adequate when actual development approvals are put before Tustin; CEQA does not allow the use of the phrase “program EIR” to be an excuse to defer mitigation.

Worst Case Scenario

The CEQA Guidelines requires the use of a worst case scenario in analyzing the impacts of projects. In the MCAS Tustin EIS/EIR, the traffic model does not appear to use a “worst case analysis”. For example, presuming that the current “toll road” will be free at the time of ultimate project buildout is a best case analysis, and is contrary to factual information on the low level of ridership that exists at the time of drafting the EIS/EIR.

L12-4

As an additional example, the traffic model assumes that the Santa Ana will change its current policy and allow a number of major streets to be restriped from 4 lanes to 6 lanes of traffic. A “worst case scenario” would assume that Santa Ana will continue to allow parking on these streets. Elimination of curb parking would in itself create a significant impact on businesses that use such parking – an impact which is not analyzed in the EIS/EIR despite CEQA’s requirement that mitigation measures which cause significant impacts must be identified and studied.

Reasonable Range Of Alternatives

CEQA requires that an EIR 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. (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553; *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376). The Draft EIS/EIR fails to do so, including only two different alternatives to the proposed Project, all of which fall into a mixed use of housing, commercial and support uses. (The “No Project” alternative must be included in all EIRs.)

L12-5

The reuse of the Tustin MCAS is a once in a century opportunity, not only to Tustin but to all of the citizens of Orange County. Table 2-2 at page 2-5 mentions a number of alternatives that were discarded and not analyzed. None of these potential alternatives were studied in the EIS/EIR.

CEQA provides that factors which allow alternatives to be discarded include: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. (State CEQA Guidelines §

L12-4

The worst-case scenario is analyzed and mitigated as appropriate in the 2020 scenario, which assumes full project build-out and toll conditions on the corridors. The analysis of corridors with no-toll conditions is in the post 2020 analysis (subsection 4.12.7 of the EIS/EIR). That discussion is more qualitative in nature.

When performing transportation planning in Orange County, cities are required to be consistent with the OCTA’s *Master Plan of Arterial Highways* (MPAH). All major arterials, including those in Santa Ana, are assumed to be six lanes as assumed in the MPAH, therefore the traffic model for this project assumed that condition. It is not the responsibility of every project which uses the model to determine how the myriad improvements assumed in the model (i.e., no on-street parking) would be accomplished.

L12-5

The commentor expresses concern regarding the process by which alternatives were considered and either accepted or rejected for detailed consideration in the EIS/EIR. There appears to be some confusion by the commentor about the discussion of the reuse planning process and the Task Force system by which the LRA Reuse Alternative was derived (Section 2.2), and the process by which alternatives were selected for detailed consideration in the EIS/EIR (Section 2.3). Instead of addressing every point, this response will clarify the distinction between the two processes.

Section 2.2 provides an overview of the reuse planning process which occurred from 1992 to 1998 when the Department of Housing and Urban Development (HUD) approved the reuse plan submitted by the LRA. Tables 2-1, 2-2, and 2-3 are related to that process only. The Task Force recommendations regarding various reuse scenarios were judged on criteria established by the LRA, the Task Force, and members of the community. This process is analogous to a feasibility study whereby the LRA, Task Force, and members of the community developed a Reuse Plan for further study in an EIS/EIR. The Reuse Plan and land use alternatives considered by the Task Force were approved by a vote, of which Santa Ana’s representative concurred.

As part of this EIS/EIR process a separate screening process was completed to define the “reasonable range of alternatives” for detailed consideration in the EIS/EIR. That effort is summarized in Section 2.3. This screening effort did not use the criteria used by the Task Force. Instead it used five criteria based on CEQA and NEPA. Criterion 2 in Section 2.3 correlates to item (i) in the comment letter, criterion 3 correlates to item (iii) in the comment letter, and criteria 4 and 5 correlate to item (ii) in the comment letter. Criterion 1 is related to (ii) in the comment letter because if an alternative would not be large enough to use a substantial portion of the site it would

not be feasible. Several alternatives were considered in Section 2.3, including an alternative site. These alternatives were eliminated from detailed consideration consistent with the criteria set forth in CEQA and NEPA.

For purposes of this joint NEPA/CEQA document, the No Project Alternative is called the No Action Alternative and is discussed in subsection 2.4.4 and evaluated in Chapter 4. As discussed in subsection 2.3.2, certain aspects of Alternatives 2 or 3 would have lesser significant effects than Alternative 1. Alternative 3 would have fewer dwelling units than Alternative 1. Fewer students would be expected to be indirectly generated for the Santa Ana Unified School District under Alternatives 2 and 3. CEQA does not require the alternatives considered to lessen all of the impacts; nor does it require alternatives that lessen impacts in the areas cited by the commenter. The requirement in CEQA is to look at alternatives that would lessen "any" of the significant effects of the project. The EIS/EIR satisfies this requirement.

15126.6(c).) Finally, it is the obligation of Tustin as lead agency, which is not delegable to any "task force," to determine what alternatives should be analyzed under CEQA. State CEQA Guidelines § 15126.6(a).)

Table 2-2 does not show that the discarded alternatives fail to meet "most" of the basic project objectives, are infeasible or are not environmentally superior. Many of the discarded alternatives appear to have been left out because they fail to meet an "issue of highest concern" set forth in a "community opinion survey"; the "need to create a positive financial impact" on Tustin's local economy. Alternatives eliminated as not being profitable enough for Tustin include the Rancho San Diego College Educational alternative (section 2.3.1 of Draft EIS/EIR), and a regional park such as Balboa or Golden Gate Park (section 2.3.2). It is impermissible under CEQA to eliminate alternatives because they are insufficiently profitable to Tustin (i.e., as stated at page 2-11, they do not "generate high sales tax or property tax revenues").

While the EIS/EIR claims to be analyzing three alternatives, for CEQA purposes, which require identification and description of the "project," Alternative 1 is the project 1 and Alternatives 2 and 3 are the alternative to the project. The EIS/EIR admits that these two alternatives have greater traffic (and other) impacts than the Project itself (i.e., "Alternative 1"). This violates CEQA. The major alternative that should have been analyzed in the EIS/EIR is a less intense mixed use alternative to the project itself – a lower density alternative that generates fewer impacts to traffic, air quality, noise, loss of biological diversity and less need for potable water, sewer capacity and solid waste disposal.

Deferral of Mitigation Measures

Another major error in the EIS/EIR is deferring of major mitigation measures. For example, the EIS/EIR identifies a number of streets and intersections in Santa Ana where the Project will create or contribute to significant environmental impacts. At this point, however, the EIS/EIR basically halts its analysis.

CEQA does not permit such half measures. Having identified the Project as having significant impact on these streets and intersections, CEQA imposes the following additional requirements:

- Identify mitigation measure at each such street segment and intersection to reduce these significant environmental impacts to a level of insignificance. (State CEQA Guidelines § 15126.4.) This would require design of traffic improvements, such as additional lanes of traffic, dedicated right and/or left turn lanes, and realignments of streets. For each such intersection or street segment, the EIS/EIR must identify the additional right-of-way that would

L.12-6

Section 4.12 of the EIS/EIR identifies mitigation measures for each intersection which would have significant impacts, and where there is no adequate mitigation, the impact is identified as significant and unmitigable. CEQA does not require the specific design of potential future off-site traffic improvements and of right-of-way acquisitions in this Program EIS/EIR. It would be premature to design future off-site traffic improvements at this "program" stage and serves no useful purpose to speculate on property needed for right-of-way acquisition to accomplish future potential traffic improvements. The City of Santa Ana will have the opportunity, as future project subdivision and other development approvals are considered, to comment on and provide input as project-specific development applications are considered, and to comment on and provide input during the subsequent CEQA process (L12-2). The City of Santa Ana will have control over the proposed design of off-site improvements and right-of-way acquisition in Santa Ana. The City of Tustin intends to work cooperatively with the City of Santa Ana on future off-site improvements in Santa Ana and where the two cities share intersections that would need improvements.

need to be acquired (condemned) and specify the properties involved.¹ The major purpose of CEQA is to advise the public of the environmental impacts of proposed projects. (State CEQA Guidelines § 15121.) Failure to identify these properties leaves private property owners without knowledge that approval will require them to lose their property.

- If there are more than one option to reduce environmental impacts to a level of insignificance, compare the options. By failing to design and analyze each intersection and road segment, the EIS/EIR impermissibly defers to a later date analysis of whether these significant impacts *can* be mitigated. At a minimum, this requires a cost estimate of every mitigation measure. If there is more than one way to mitigate the impact, the EIS/EIR must analyze all such methods and select the mitigation which would create the minimum impacts of its own. (*Stevens v. City of Glendale* (1981) 125 Cal.App.3d 986.) Each such mitigation measure must be fully enforceable.

- Only after imposition of every feasible mitigation measure, determine whether a statement of overriding consideration is required. The EIS/EIR jumps directly to this point, but skips the first two elements in the required analysis, violating State CEQA Guidelines § 15126.4(a)(1)(B).

- As an additional example, the EIS/EIR takes this same approach with mitigating impacts on wetlands. The EIS/EIR defers the mitigation of such impacts to issuance of a 404 permit. Again, CEQA does not permit such deferred analysis when the impacts themselves are fully known and apparent at the time of preparation of the environmental document. If the analysis of the significant impact of losing these wetlands is not analyzed in the EIS/EIR when will it be? Consultation with the Army Corps of Engineers need not, and cannot be deferred. The EIS/EIR must also examine the alternative of expanding or altering the open space/park element of the Project to preserve all of the wetland area.

Mitigation Measures

The CEQA Guidelines require that Mitigation Measures be appropriate to carry out the whole of the action. In the MCAS Tustin EIS/EIR, the traffic model includes mitigation measures that are non-funded capital traffic improvements in the City of Santa Ana. These measures are speculative, since the improvements may or may not ever be funded. A new mitigation measure must be added, to read:

¹ For all such properties located in the City of Santa Ana, the City will be a "responsible agency" under CEQA, and must use the EIS/EIR to support its discretionary act of acquisition and/or condemnation. (*Burbank-Glendale-Pasadena Airport Auth. v. Heller* (1991) 233 Cal.App.3d 577.) As noted in this comment letter, the EIS/EIR errs in not recognizing Santa Ana as a responsible agency.

L12-7

All of the recommended mitigation measures have been evaluated whether or not there are feasible options for mitigation. The evaluation of mitigation options for significant impacts to agricultural resources (Section 4.8) is one example where the EIS/EIR examines various possible options and incorporates cost as a factor in determining feasibility. For other issue areas, the feasible mitigation measure(s) was more clear cut and such a detailed analysis was not warranted. CEQA Guidelines § 15126.4(a)(1)(B) clearly state that "measures may specify performance standards which would mitigate the significant effect of a project and which may be accomplished in more than one specified way." Further, § 15126.4(a)(1)(D)(2) states that measures must be enforceable through "permit conditions, agreements or other instruments" and mitigation measures may be "incorporated into the plan, policy, regulation or project design" that is being adopted. For every identified significant impact in the EIS/EIR, mitigation measures are identified, where feasible. In many cases, measures are incorporated into the project design or defined as implementing measures that would be required by the cities of Tustin and Irvine as appropriate. Some sections of the FEIS/EIR have been modified (primarily Section 4.12) to more clearly identify a threshold or permit condition that would ensure timely implementation of an identified mitigation measure.

This comment specifically addresses CEQA rather than NEPA requirements; therefore no response is required to address NEPA compliance. Refer to response to comment L12-3 regarding deferral of mitigation measures.

L12-8

The only reference to overriding considerations in the EIS/EIR is in Section 1.5 (Use of An Integrated Document). The reference merely identifies the process under CEQA which a lead agency must follow if selecting an alternative that would have significant, unmitigable impacts. The EIS/EIR analyses does not jump past exploration and identification of feasible mitigation measures.

This comment specifically addresses CEQA rather than NEPA requirements; therefore no response is required to address NEPA compliance.

L12-9

Refer to response to comment E2-2 regarding wetland impacts and mitigation and L12-3 regarding deferred mitigation measures. As shown in Figure 3.7-1, the jurisdictional waters outside of Peters Canyon Channel consist of small discontinuous parcels scattered in the remnants of isolated drainage ditches. It would not be feasible to encompass all of these locations in an expanded park element and still satisfy the LRA's purpose and need for reuse.

This comment specifically addresses CEQA rather than NEPA requirements, therefore no response is required to address NEPA compliance except as addressed in response to comment F2-2.

L12-10

In the traffic section, mitigation measures are provided for identified significant impacts that would result from reuse-generated traffic when added to other projected traffic (cumulative impacts) on the anticipated future circulation network. That future network is the "committed roadway network" as defined in Section 3.4 of Appendix F and Section 3.12 of the EIS/EIR. This committed network has been corrected in the Final EIS/EIR as described in response to comment L6-9. It is not based on funding as a criteria because it is based on the CEQA definition of "probable future projects." The commenter's recommended mitigation measure is not necessary or appropriate. Future development projects would be required to contribute in a timely manner the project's fair share of improvements. Refer to response to comment L12-3.

Where a proposed reuse alternative would cause a traffic impact, mitigation would be the full responsibility of the alternative's project proponent. Where the alternative would merely contribute to an impact, it is not appropriate to require full mitigation. CEQA Guidelines clearly state that there must be an "essential nexus (i.e., connection) between the mitigation measure and a legitimate government interest" (§ 15126.4(a)(4)(A)) and the "mitigation measure must be roughly proportional to the impacts of the project" (§ 15126.4(a)(4)(B)). The suggested mitigation measure for full funding of mitigation for which the reuse alternative would be only partially responsible is not appropriate.

For each street improvement in the City of Santa Ana identified as mitigating the project's impact which is not currently listed as fully funded in the City of Santa Ana's Capital Improvement Plan, the City of Tustin shall fully fund such improvement, subject to repayment pursuant to a Reimbursement Agreement between the City of Tustin and the City of Santa Ana.

The traffic model includes other speculative mitigation measures in that it assumes that other, currently non-existent funding will exist to contribute to traffic improvements at intersections identified as "c" (i.e., the project will contribute to a significant effect at these intersections). A new mitigation measure must be added, to read:

For each street improvement proposed in the City of Santa Ana for which the project is identified as contributing or "c," and for which funds are not currently available to pay for the City of Santa Ana's share of such improvements, the City of Tustin shall fully fund such improvement, subject to repayment pursuant to a Reimbursement Agreement between the City of Tustin and the City of Santa Ana.

Potable Water

The EIS/EIR states that the Irvine Ranch Water District (IRWD) has "indicated" that it can obtain sufficient potable water from the Metropolitan Water District (MWD) to supply the 3 million gallons per day that the Project needs. (Pages 4-46.) This is insufficient. Unless the IRWD has provided Tustin with a "will serve" letter, then it must be presumed that water will not be available to serve the Project – in other words that provision of potable water will be another major significant environmental impact not analyzed in the EIS/EIR. MWD relies heavily on water from the Colorado River, and under U.S. Supreme Court orders, this water is being diverted away from California. In addition, it was only a few short years ago that MWD adopted mandatory cut-backs on all of its member agencies due to drought. If the Project is relying on well water, then it must analyze how such a major increase in pumping will not dangerously dewater the aquifer or deprive pre-existing users of their water rights.

Hazardous Waste

The Project includes alternatives showing residential development on areas that are currently contaminated with hazardous waste. Such a use may violate SB 501, California Health & Safety Code § 25220 et seq., which in general bars in perpetuity residential and other sensitive land uses within 2,000 feet of contaminated property. The EIS/EIR provides no analysis of the risks, healthwise or financial, of developing expensive homes over property that was formerly contaminated.

L12-11

A "will serve" letter is typically issued when a subdivision or other specific development activity is under consideration, not at the time of consideration of reuse plans. However, civilian reuse of MCAS Tustin would lead to an increase in demand ranging from 1.5 to 2.8 million gallons per day of potable water. IRWD has indicated that it can supply this incremental increase in potable water demand (Section 4.3). Further, IRWD submitted a comment letter on the draft EIS/EIR which did not dispute the statement in Section 4.3 and, in fact, commented that the documents' measures to implement facility requirements were thorough (refer to comment letter L3).

IRWD provides potable water from a mix of imported water from MWD and local well water. Section 4.10 of the EIS/EIR addresses new wells proposed by IRWD on site and addresses potential impacts to groundwater. It is not expected that IRWD would increase groundwater withdrawals over its historical production levels.

L12-12

Each of the reuse alternatives proposes future residential development over identified hazardous waste sites. All IRP sites overlain by residential uses under Alternatives 1, 2, or 3 would meet residential standards. Remediation on most applicable sites has been performed and the sites are recommended for No Further Action. Sections 3.11 and 4.11 have been modified in the FEIS/EIR to address this issue. In general, deeds transferring lands from DON will contain institutional controls, such as deed restrictions and long-term monitoring, where necessary to protect human health.

Community Financing Plan

The City of Tustin has not provided the City with the "Community Financing Plan" or its "Business Offer to Navy." These documents are critical to the City's review of the Draft EIS/EIR. In addition, at a meeting held between the two cities last week, the City was provided copies of portions of what appears to be a prior, non-circulated versions of the Draft EIS/EIR dated June 6, 1989. As can be seen from the attached excerpt, the list of impacted intersections was reduced in the 2+ week period between this screen check draft and the circulated Draft EIS/EIR. Since the traffic study, Appendix F, did not change over this time, it is not clear on what basis these intersections were removed. Public Resources Code § 21167.6(e)(10) provides that "all internal agency communications, including staff notes and memoranda related to the project or to compliance with this division" are part of the record of an EIR. Santa Ana requests copies of these documents including this screen check EIR pursuant to the provisions of the Public Records Act, Government Code section 6250 et seq.

L12-13

Endangered Species Act Consultation

The EIS/EIR does not include the preliminary consultation with United States Fish & Wildlife Service regarding the existence of endangered or threatened species on the subject property. This appears to defer the CEQA requirement that the public be informed of the environmental impacts of proposed projects. Moreover, such a consultation may possibly reveal, for example, that there were major flaws in the methodology of the diversity study performed and reported in the EIS/EIR, such as failure to include a sufficient number of on-site investigations, failure to schedule investigations during times most likely to discover flowering or migratory species of concern, etc.

L12-14

COMPARISON WITH EARLIER DRAFT EIS/EIR COMMENTS:

We have compared our prior March 2, 1988 review comments with the June 1989 draft EIS/EIR document. Following this review it appears that:

1. Our previous comments regarding the study area boundaries were partially addressed. However, we are not clear why the overall study area was not increased. There could be other associated impacts beyond the current boundaries.
2. A significant issue from our March 2, 1988 comments continues to be a problem in this document and has still not been addressed. The cumulative projects and their impacts are included but not separated from the 2005, 2020 build-out, and post build-out project analyses. This methodology prevents the actual project traffic impacts from being accurately disclosed separate from cumulative impacts. Additional scenarios separating out these analyses are

L12-16

L12-13

The City of Tustin's financial estimates of how it will fund infrastructure and other public facilities at MCAS Tustin, and its "Business Offer to the Navy" are not relevant to the City of Santa Ana's review of the EIS/EIR. Any internal drafts of the EIS/EIR are part of the "record of proceedings" that may be obtained should the City of Santa Ana file an action to challenge city's decision based on the EIR (Pub. Res. Code § 21167.6). However, there is no California legal authority to require their release at this time before the Final EIS/EIR and a project is approved. Under these circumstances the city relies on California Government Code Section 6255 that "the public interest served by not making the record public clearly outweighs the public interest served by disclosure." Such a premature release may harm the integrity of the decision-making process on the EIS/EIR and Reuse Plan/Specific Plan.

The text that was handed out inadvertently from the June 6, 1999 screencheck is very similar to the version that was distributed to the public in July 1999. Some minor clarifications were made regarding TSIA; some corrections were also made to the funding share percentage in Table 7-5, etc. These simply reflect comments and corrections from peer review at the federal and local agency level as is typical in the preparation of any document of this complexity and magnitude.

L12-14

As described in Chapter 8.0, consultation and coordination was initiated with the USFWS, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, California Department of Fish and Game, and many other agencies as part of this EIS/EIR. None of these agencies submitted written or oral comment during the scoping period. A biological survey was completed as part of this environmental process which included focused surveys for likely sensitive, threatened, or endangered species (American peregrine falcon, San Diego and Riverside fairy shrimp, southwestern pond turtle, loggerhead shrike, and burrowing owl). A wetlands survey was performed in concert with staff from the U.S. Army Corps of Engineers. As stated in Section 4.7, there are no federally listed threatened or endangered plant or animal species on the site so no Section 7 consultation was required. The USFWS and other resource agencies were also provided a copy of the EIS/EIR for review and comment.

L12-15

The study area for each issue is defined in an appropriate manner for that topic based on regulatory guidelines and standard professional practice. Refer to Chapter 3.0 of the EIS/EIR and individual issue areas in Chapter 3.0. As described in Appendix D, the traffic study area was enlarged in the revised traffic analysis in response to comments on the initial draft EIS/EIR (December 1997). As described in Section 3.12 of the EIS/EIR, the study area boundary for traffic was defined as those areas where reuse-

generated ADT would result in 1,000 more trips than under the future condition without reuse. This criteria is commonly utilized within the County of Orange in transportation studies. Additionally, in response to a request from the City of Santa Ana made during the initiation of the traffic study, four intersections outside this defined study area were included as well. A more detailed discussion of the rationale for the traffic study area is provided in Appendix F.

L12-16

The impacts associated with cumulative projects were included for the 2005 and 2020 project analyses. The 2005 Baseline and the 2020 Baseline analyses, in subsection 3.12.7 of the EIS/EIR, describe the cumulative project conditions and their traffic impacts, but they are labeled "reference" traffic. For clarity, the word "cumulative" has been added to the text of the EIS/EIR. The 2005 and 2020 Alternative 1 analyses in subsection 4.12.3 of the EIS/EIR describe the future traffic conditions without reuse (i.e., cumulative) as compared with reuse. Subsections 4.12.4 and 4.12.5 contain similar project impact analyses for Alternatives 2 and 3. The impact and mitigation tables, Tables 4.12-6 and 4.12-9 for example, identify whether each impact is attributed solely to the project, or jointly to the cumulative and project effects.

needed. Until the study clearly separates-out the cumulative from project impacts, the identification of mitigation measures and which ones belong to the project versus cumulative projects is premature and cannot realistically be addressed.

3. Several of the remaining comments in our March 2, 1998 letter, have still not been either partially or fully addressed in this 1999 document. These are comments numbers 2-7, 9, 11 (due to lack of diagrams with peak hour traffic volumes), 13, 16, 20, 28-30, 32 (in general), 33-35, and 37-39.

4. Although the traffic study has been repackaged since the City of Santa Ana provided our comments on March 2, 1998, we are concerned regarding some of the significant changes in the methodology and the results. For example:

A. The June 1998 study utilized a different traffic distribution pattern than the 1998 study. It is unclear why the distribution pattern significantly changed. For example, the percent distribution for traffic on Edinger & Warner is 4% & 7% in the 1998 study and increased to 10% and 13%, respectively in the 1999 study. Given this increase, why are the recommended improvements for Edinger and Warner less in the 1999 study? It seems more likely that the improvements would stay the same or increase. This creates questions regarding the validity of the data.

B. The June 1999 study utilized a base year (1993 data, Section 3.3) scenario approach that reduces the actual project impacts by approximately 25%. The City of Santa Ana has a maximum of two years to give credit for existing buildings and State CEQA guidelines, Section 15229, limits such credit to EIR's completed and certified within five years from the date that the federal record of decision was rendered. The credit for the MCAS Base does not accommodate City of Santa Ana or State CEQA requirements.

C. The June 1999 study does not use the mid-block assessment methodology adopted by the City of Santa Ana's General Plan Circulation Element and by the County of Orange MPAH. (This comment was already given in 1998.) Instead, peak hour volumes were used. In some cases, this methodology indicates no impact where the County's Average Daily Traffic (ADT) analysis (and Santa Ana's) show an impact for the same location. We do not agree with this peak hour methodology due to its misleading results. Consequently, we again request that the appropriate City and County method be utilized so that the impacts are not underestimated.

D. The June 1998 study states that any average volumes under 2% of the daily volume is "nominal". This is incorrect especially considering the high trip generation of this project. A 1.5% of daily traffic for Alternative 3 equates to approximately 4500 vehicles per day (VPD) or 450 vehicles per hour (VPH). We request that all traffic increases be re-included in the analyses without the introduction of this assumption.

L12-17

The March 1998 letter follows this comment letter, with responses for only those specific comments referenced in this letter.

L12-18

Differences in project internal trips, general trip distribution, and trip assignment compared to the previous traffic study are due to the incorporation of more recent data; specifically, OCTAM 2.8 and OCP-96 Modified data in the model forecasts (refer to Appendix D). Therefore, results of the traffic analysis, impacts, and mitigation, may be different from the previous traffic study. Traffic would increase on Edinger and Warner Avenues because the 1999 study assumes improvements on those roads are consistent with MPAH and the Santa Ana Circulation Element.

L12-19

As described in Section 3.1, the baseline year for analysis under BRAC documents is the year the entire MCAS Tustin, including family housing, was designated for closure (1993). This is a federal determination. Under CEQA, the baseline year is the year the NOP was issued (1994). The physical conditions within the reuse plan area were the same in 1993 and 1994. Because the federal record of decision has not been rendered, the referenced CEQA Guideline is not applicable.

L12-20

Before the advent of more sophisticated modeling capable of forecasting peak hour volumes, ADT volumes were often used as a basis for analyzing highway networks. With current peak hour modeling capability, the focus has been on the peak hour performance of the intersections comprising a roadway link. The County of Orange and OCTAGMP/CMP guidelines defer the determination of actual roadway link deficiencies to the peak hour performance of the intersections. The methodology for the MCAS Tustin EIS/EIR is consistent with those guidelines.

To help understand why the roadway link analysis is not used by those agencies, an example is discussed in this response. As shown in Table L12-20 following this response, the 2005 ADT V/C ratios on Dyer Road east of SR-55 would increase from 1.04 at baseline to 1.18, 1.21, and 1.20 for Alternatives 1, 2, and 3, respectively. Under the City of Santa Ana's guidelines, that would make this location a candidate for roadway widening from six to eight lanes. However, the intersections at either end of the link (#67 and #68 - SR-55 northbound ramps/Dyer Road and Pullman Avenue/Dyer Road) would both operate at level of service "C" or better. In addition, the peak hour midblock volumes also show that this link operates at level of service "D" or better. Roadway widening doesn't appear logical given that the peak hour midblock roadway section and intersections comprising the roadway link operate at acceptable levels.

L12-21

Volumes under two percent in reference to reuse trip generation are not nominal, and this is not an assumption in the traffic analysis. The word nominal was only mentioned in Appendix F in context of the No Action Alternative, which would have approximately 100 trips per day. This word is not used in Sections 3.12 or 4.12 of the EIS/EIR.

Table L12-20

LINK VOLUME SUMMARY
Santa Ana ADT Roadway Link Analysis

Link Location	No of Lanes	ADT Cap	Pk Hr Cap	BASELINE				REUSE ALT. 1				REUSE ALT. 2				REUSE ALT. 3			
				ADT Vol	Peak Hour V/C	Peak Hour Vol	Peak Hour V/C	ADT Vol	Peak Hour V/C	Peak Hour Vol	Peak Hour V/C	ADT Vol	Peak Hour V/C	Peak Hour Vol	Peak Hour V/C	ADT Vol	Peak Hour V/C	Peak Hour Vol	Peak Hour V/C
2005																			
82. Dyer e/o SR-55	6	56,000	4,800	58,000	1.04	3,480	.73	66,000	1.18	3,960	.83	68,000	1.21	4,080	.85	67,000	1.20	4,020	.84
2020																			
490. Edinger w/o Broadway	4	38,000	3,200	37,000	.97	2,220	.69	-	-	-	-	-	-	-	-	38,000	1.00	2,280	.71
493. Edinger e/o Grand	6	56,000	4,800	57,000	1.02	3,420	.71	-	-	-	-	-	-	-	-	58,000	1.04	3,480	.73
60. Edinger w/o SR-55	6	56,000	4,800	59,000	1.05	3,540	.74	-	-	-	-	-	-	-	-	60,000	1.07	3,600	.75
487. Lyon n/o Edinger	2	13,000	1,600	12,000	.92	720	.45	13,000	1.00	780	.49	13,000	1.00	780	.49	13,000	1.00	780	.49

- Not impacted

E. The June 1989 study eliminated a number of mid-block locations potentially impacted by the project and previously included in the 1998 study. For example, some of the eliminated segments are:

- Dyer e/o Halladay
- Dyer e/o Redhill
- Edinger e/o Ritchey
- Halladay s/o Dyer
- Halladay s/o Warner
- Lyon s/o McFadden
- Main s/o Alton
- Main n/o Sunflower

Additionally some of the segments included in the analysis show a reduction in daily volume resulting from MCAS which does not appear realistic.

F. The June 1989 study also eliminated a number of intersections that would be impacted by the proposed MCAS.

G. For the short-range scenario (2005), the June 1999 study eliminated almost all of the recommended arterial improvements in the 1998 study. The original trip generation for the short-range scenario is 27,000 VPD; current trip generation for the short-range scenario (2005) is over 105,000 VPD. It is unclear why the findings of the methodology excluded the following improvements.

LOCATION	EXCLUDED IMPROVEMENTS
Alton (Main to Standard)	Improve to 4 lanes
Alton (Daimler to Standard)	SR-55 4-lane overcrossing
Alton (Jamboree to Harvard)	Improve to 6 lanes
Bryan (Newport to Main)	Improve to 4 lanes
Columbine (Main to Halladay)	Improve to 4 lanes
Del Amo (SR 55 NB Ramps to Edinger)	Realign with SR-55 NB Ramps
Dyer/Barranca (SR-55 to Jamboree)	Improve to 8 lanes
Halladay/Standard (Dyer to Warner)	Realign Halladay to Standard
Harvard (Walnut to ICD)	Improve to 4 lanes
MacArthur (SR-55 to Campus)	Improve to 8 lanes
Main (Sunflower to San Diego Creek)	Improve to 6 lanes
Warner (Bristol to Main)	Improve to 6 lanes

L12-22

The locations listed were not eliminated but are included within a larger link that has different end points. The links in the 1999 study which correspond are identified below. Refer to Figure 3.2 of Appendix F.

1998 Traffic Study	1999 Traffic Study
Dyer east of Halladay	81. Dyer west of Hotel Terrace
Dyer east of Red Hill	83. Barranca east of Red Hill
Edinger east of Ritchey	60. Edinger west of SR-55
Halladay south of Dyer	511. Standard Halladay west of Dyer (misprint)
Halladay south of Warner	507. Standard Halladay west of Warner (misprint)
Lyon south of McFadden	487. Lyon north of Edinger
Main south of Alton	513. Main north of MacArthur
Main north of Sunflower	117. Main north of Sunflower

Because of a "redistribution" effect in the traffic model, traffic volume decreases as well as increases may occur throughout the study area. Refer to Appendix D.

L12-23

The 1999 traffic study evaluated a larger study area and more intersections overall; the actual intersections which would be impacted vary from the 1998 study. This variation is due to the different demographic (OCP-96 Modified v. OCP-92) input and the more current traffic model (OCTAM 2.8 instead of OCTAM 2.0). Refer to Appendix D for further clarification in the difference between the two traffic reports.

L12-24

The facts supporting the committed roadway network assumptions were reviewed between the two traffic technical reports. Response to comment L6-9 describes the criteria used to establish the committed roadway network in the 1999 traffic report. Because the committed roadway network changed, some improvements identified in the 1998 report as part of the "background" would no longer be assumed as completed in the 1999 committed network. Additionally, as part of the response to comment process on the draft EIS/EIR (July 1999), the facts supporting the committed roadway network assumptions were reviewed in Santa Ana and corrected as appropriate. Each arterial questioned in the comment is addressed below:

Location	Status in November 1999 Revised Traffic Study
Alton (Main to Standard)	Not part of corrected committed roadway network.
Alton (Daimler to Standard)	Not part of corrected committed roadway network.
Alton (Jamboree to Harvard)	Not part of corrected committed roadway network.
Bryan (Network to Main)	Not part of corrected committed roadway network.
Columbine (Main to Halladay)	Not part of corrected committed roadway network.
Del Amo	Was within 1999 study, no change from 1998.
Dyer/Barranca	Not part of corrected committed roadway network.
Halladay/Standard	Not part of corrected committed roadway network.
MacArthur (SR-55 to Campus)	From SR-55 to Main, not a part of corrected committed roadway network; from Main to Campus exists as 8 lanes.
Main	Exists as 6 lanes.
Warner	Not part of background in 1998 study and not part of corrected committed roadway network.

L12-25 H. The same in g) above applies for intersection improvements. The following locations were recommended for intersection improvements in the original study but eliminated in the June 1999 study.

- Redhill & Dyer/Barranca
- Standard at Warner
- Main at MacArthur

Please note that the original trip generation for short range is approximately 80,000 VPD in the 2005 scenario (short range).

L12-26 I. The same phenomenon applies for g) & h) above (short range or 2005) also applies for the long-range analysis.

See attached Table 1 for previous recommended improvements eliminated in the June 1999 study.

L12-27 5. With the large amount of data in this study, peak hour traffic volume exhibits are needed for all study intersections for adequate review, not just for the project area intersections that were provided. An exhibit showing all study intersections' peak hour volume scenarios for each alternative is critical to our agency's review. We request that peak hour traffic volume exhibits for all study area intersections be provided.

Although this document notes that the peak hour intersection analyses are the basis for mitigation measures, with the exception of Figure 6-2 and 6-3 (development site), there are no peak hour traffic volume exhibits for the rest of the study area. Instead the data is listed only in Intersection Capacity Utilization (ICU) tables which is cumbersome and unclear for review.)

L12-28 6. In Table 1-2, Traffic Analysis Performance Criteria: 1700 capacity is used for all lanes. Santa Ana uses 1600 for left-turn lanes and 1700 for all other lanes at an intersection. Additionally, Santa Ana does not allow credit for the right-turn-on-red (RTOR). This comment was already made in the March 2, 1998 letter. The City requests that its traffic analyses guidelines be utilized for Santa Ana intersections for this document. Additionally, mid-block link analyses are typically done on an Average Daily Traffic (ADT) basis rather than on a lane capacity basis as indicated. Why was 1600 per hour per lane used for mid-block lane capacity? This appears to create different results which are less conservative.

L12-25

Refer to response to comment L12-24 for an explanation of why some "background" improvements in the 1998 traffic study are not assumed in the 1999 traffic study committed roadway network. All three of the intersections listed are not a part of the corrected committed roadway network (November 1999).

L12-26

As clarified in Appendix D, the 1999 traffic analysis assumed a slightly different committed roadway network. Refer to response to comments L12-24 and L12-25. A detailed review of Table 1 was completed and the June 1999 committed roadway network was reconsidered as defined in response to comment L6-9. As a result, the committed roadway network in the June 1999 study was corrected and the traffic model re-run. Resulting modifications to the network and impacts from reuse and mitigation are provided in Final Appendix F and Sections 3.12, 4.12, and 6.1 of the FEIS/EIR.

L12-27

The EIS/EIR contains a summary of technical information to help the lay person focus on the potential impacts associated with each of the alternatives and the mitigation. More detailed and technical information is retained in the traffic technical report (Appendix F). The information requested is contained in Appendix F.

L12-28

The traffic technical report for the EIS/EIR was prepared using regionally accepted methodology consistent with the Orange County Subarea Modeling Guidelines Manual adopted by the OCTA (August 1998) and Congestion Management Program/Growth Management Plan (CMP/GMP) guidelines as is appropriate for an action of this size with traffic impacts spanning several jurisdictions. It should be noted that subsequent to the referenced March 1998 letter, the City of Tustin contacted staff at the City of Santa Ana regarding various assumptions for the revised traffic analysis to be undertaken in response to comments received on the initial Draft EIS/EIR. In a letter to the City of Santa Ana dated August 17, 1998, the City of Tustin stated their intent to base the traffic modeling on the OCTA modeling guidelines and their understanding that Santa Ana would accept the Orange County methodology for ICU analysis instead of an earlier intersection capacity utilization (ICU) methodology only specific to Santa Ana. In a September 1998 meeting between traffic department staff members from Santa Ana and Tustin, the regional ICU methodology received verbal agreement.

7. In Table 3-4, Roadway System Committed Improvements: This EIR appears to assume that all General Plan Improvements will have been constructed by 2020. However, this is not a valid assumption since many needed improvements do not yet have funding commitments. The only committed improvement for Santa Ana is Edinger Avenue from Ritchey Street (rather than Lyon Street) to the east of Red Hill Avenue. The limits for this project should be corrected. With the exception of these Edinger Avenue improvements, all other Santa Ana "committed to" projects should be removed from this table and should not be in the base model analysis. These improvements must be listed as recommended instead. Additionally, this document's assumptions should be modified to reflect that while these projects may be needed, they are not necessarily funded. Also, there is no funded widening project on Warner Avenue from Bristol to Main Street. There is a rehabilitation project, but no widening project scheduled for this street. Additionally, for this table, the percent of commitment level that each funding source will be contributing should be indicated. (Also see prior comments.)

L12-29

8. With regard to mitigation measures, it is not clear which mitigation measures require restriping only versus lane additions with right-of-way "takes". In some locations it may not be feasible to provide the additional lanes without obtaining street widening and/or right-of-way. Please indicate throughout the document all improvements that will require street widening and right-of-way and indicate that those costs will be included and paid for by either fair share (Chapter 4 of the draft EIS/EIR) or 100 percent by the project, as applicable. For example, in Tables 4.12-8, 4.12-9, and 4.12-10, lane changes for mitigation are shown in bold with a note "without mitigation". What does this mean? Does it mean that a restriping of the lanes is feasible within the existing roadway width and right-of-way? Please clarify this information. For example, in Table 4.12-9, it is not feasible to add the lanes indicated for Grand and Dyer, Bristol and Warner, Standard and Edinger, Hutton Center and MacArthur without additional right-of-way. The need for right-of-way should be clearly indicated for each mitigation measure and all improvement costs must be identified. (This is a significant comment that was also made in 1998.)

L12-30

9. A statement regarding intersection improvements at interchanges occurs in several places (example on page 4-67). This statement says: "The exact nature of the improvement in each case would be the subject of special design studies in association with Caltrans." Understandably a Project Study Report (PSR)/Project Report (PR) might be required for these Caltrans improvements. However, in what manner will these currently non-identified improvements be insured to be fully tied-back, financially to the project?

L12-31

L12-29

The committed roadway network is not defined based on funding as a criteria (refer to response to comment L6-9). The facts supporting the committed roadway network assumptions have been reviewed based on comments from the public, and corrections have been made to match the definition of "probable future projects." Based on the corrected committed network, traffic impacts in Santa Ana have been modified. Refer to revised Appendix F and Sections 3.12 and 4.12 of the FEIS/EIR. Refer to response to comment L12-26.

L12-30

Fair share responsibility of the various reuse alternatives and 100 percent responsibility has been identified in Section 4.12 of the FEIS/EIR. Mitigation costs for any future improvements are defined to include right-of-way as necessary. The referenced note is taken out of context. The footnote refers to any bold numbers in those tables. When bold, they reflect a change from the "base" condition (prior to mitigation). Determination of the exact mechanism for providing the number of lanes identified under mitigations best evaluated at the future CEQA compliance stage when proposed developments proceed through the entitlement process. Future conditions may change so lanes may be added via restriping or require right-of-way.

L12-31

The mitigation measure necessary to ensure adequate LOS at freeway ramp intersections, the appropriate fair share financial responsibility, and ADT threshold trigger is provided in Section 4.12 of the FEIS/EIR. The referenced mitigation measure has been modified slightly for clarification.

MAJOR CONCERNS WITH THE TRAFFIC STUDY DOCUMENT:

10. With approximately 300,000 vehicles per day being generated by the project (in the worst case—Alternative 3), this document shows that traffic volume will decrease for several intersection turning movements in Santa Ana:

L12-32

- fifteen years into the future from the "baseline" (2005 to 2020), and
- when the projects (Alt 1, 2, and 3) are each added to the 2005 and 2020 "baseline" conditions. (*Numerous examples can be found throughout the calculation sheets in Appendix F.*)

The above data will not reflect actual traffic impacts. Traffic over 15 years is likely to increase not decrease, and the magnitude of this development can be expected to add further additional traffic to the roadway network under any of the alternatives, not less for many turning movements. Although the data were presented in a different manner, our 1998 comments also stated this similar and significant concern.

11. So many critical aspects in the document require extensive review by traffic engineering professionals that we feel that this document does not meet the intention of CEQA guidelines, regarding having a readable document. For example:

L12-33

- The Draft EIS/EIR states that cumulative impacts have been addressed within the 2005 and 2020 project analysis. The City of Santa Ana finds that this methodology prevents the real circulation impact of the project from being accurately disclosed. Additionally, since the "project" impacts are inaccurately characterized, the resulting mitigation program is cumulative-based rather than reflecting the true project-level mitigation. The California Environmental Quality Act (CEQA) requires that the direct effects of a project be discussed within the EIR. The City of Santa Ana requests that the traffic study include separate impacts and mitigation measures for both projects and cumulative impact scenarios as requested in this document, our 1998 comments, and in our original correspondence to Ms. Gray of HNTB.

L12-34

- The term "baseline" is used with respect to 1983 and 1997 traffic and the term "base" is used in Tables such as 4-8 with yet a different meaning. The terminology is similar but appears to be applied differently. Although very pertinent, this is ambiguous and it remains unclear as to how the "baseline" relates to "existing". For example, the Military Base was open in 1993 "existing" and closed in 1997 (also "existing"). And which "existing" is being compared to the project—1993 or 1997. This is key to knowing if the project has an impact and it remains illusive in document. It is also unclear in Tables such as 4-8 if the alternatives are being compared to the "baseline" or "alternative + baseline" condition. This type of important information must not be ambiguous.

L12-32

Traffic volumes throughout the region and study area will increase in the future as projected by demographic data (OCP-96 Modified) and the County of Orange's current traffic model (OCTAM 2.8). However, the future condition will also include improvements to current roads, new roads, new land use patterns, and more choices for drivers. The traffic model redistributes traffic throughout the region, and at selected location volumes may either increase or decrease. Refer to Appendix D.

L12-33

Refer to response to comment L12-16.

L12-34

The term "baseline" is used for the 2005 and 2020 analysis referring to the cumulative traffic from surrounding area plus the volumes generated at the Air Station in 1993 (when Congressional action was taken to close MCAS Tustin). The term "existing" is used only in the context of the project stand-alone analysis. Here, "existing" identifies study area traffic counts made in 1997 and 1998, when there was still considerable activity at MCAS Tustin. The project stand-alone analysis is an unrealistic condition that was not mitigated.

For the impact analyses at 2005 and 2020, the 1993 baseline traffic volumes in the reuse plan area were used, plus anticipated future traffic for the surrounding area. To describe a future cumulative condition, ICU values were calculated at each intersection. The trips associated with reuse were added to that condition and ICU values calculated again. In this way the net impact of reuse was identified. Footnotes have been added as appropriate to clarify the meaning of the word "baseline" in this context. Table 4-8 in Appendix F and others like it use the term "base" to denote project impacts without mitigation. The definition of base is provided in the referenced table.

- L12-35**
- The study needs to clarify what the project is. Alternative 3 appears to represent the worst case in terms of generating the most traffic. However, in several instances, it appears that Alternative 1 is being referred to as "the project," instead. This needs to be absolutely clear in this CEQA document and the assumptions should be on the conservative side—alternatives with more traffic, if that alternative is to be cleared.
- L12-36**
- On page 2-23, 2nd paragraph, the document states that: *Project traffic volumes that would be generated according to the trip distribution shown in figures 2-7 through 2-9 would not be directly added to the existing or projected volumes on the indicated roadways. Interaction between the project and the surrounding land uses results in a unique "redistribution" effect for each alternative which is derived by the traffic model.* A close review of the data indicate that existing traffic is actually replaced by the MCAS traffic. This results in the minimizing of the actual traffic impacts. We disagree with these assumptions.
- L12-37**
- By the time the trips generated have been reduced several times down for internal trips, "interactions with surrounding area land uses," etc. (also see later detailed comment #14), the approximately 300,000 vehicles per day generated by the worst case project scenario results in very little new traffic on the roadway. We disagree with this significant underestimation of how much traffic will be on the streets. And, as a result, very little mitigation is needed due to the project when the opposite would be expected.
- L12-38**
- This document states any volumes under 2% of daily volume are considered "nominal". With the high trip generation of this project (approximately 300,000 vehicles per day (VPD) Alternative 3), significant trips have been ignored due to this assumption. A 1.5% of daily traffic for Alternative 3 equates to approximately 4500 VPD or 450 vehicles per hour (VPH). We request that all traffic increases be included in the analyses and not simply disregarded. If these significant traffic volumes are ignored, the actual project impacts will be underestimated.
- L12-39**
- Regarding other inconsistent assumptions in this study, the Eastern Toll Road Corridor (ETC) opened in February of 1999. However, the baseline of either 1987 or 1993 (whichever was actually used) should not include the ETC being open.
- L12-39**
- On page 1-3, last 2 paragraphs, the document states: *In analyzing the reuse alternatives, three time periods are addressed in the impact analysis: 1. Existing (Project stand-alone analysis) – Year 1997; 2. Short-Range – Year 2005; 3. Long-Range – Year 2020. In the existing time period analysis, project buildout is added to the existing (1997) transportation system and identifies the resulting impacts.* After reading this section and the document, what is the "project buildout" (alternative 1, 2, or 3)? And, where is the "No Action" or "No Project" Alternative. Later in the same

L12-35

The term "project" in Final Appendix F refers to the variety of reuse alternatives that could be implemented in the reuse plan area, including caretaker status (No Action Alternative). Refer to Section 2.2 of Final Appendix F. For further clarification, the reference to project site has been replaced by reuse plan area in Section 1.0. Each of the three reuse alternatives and No Action are analyzed at an equal level of detail in Chapter 4.0 of Appendix F. There is no "project" in the CEQA sense.

L12-36

It is noted that the commentor disagrees with this assumption. However, Section 2.4 of Final Appendix F explains how the traffic model provides a more realistic portrayal of future traffic patterns by redistributing them based on interactions with future land uses in anticipated future travel patterns. The model was prepared by OCTA, the regional transportation planning authority in Orange County.

L12-37

Refer to response to comment L12-21 regarding use of the word nominal and L12-22 and L12-32 regarding trip distribution and interaction via the model.

L12-38

The ETC was not assumed to be open under existing conditions (refer to Figure 3.2 of Appendix F).

L12-39

As defined in Section 2.2 of Appendix F, "project buildout" refers to the total number of trips generated under each reuse alternative. Alternative 1 would have a buildout ADT of 109,804, Alternative 2 would have a buildout ADT of 108,246, Alternative 3 would have a buildout ADT of 114,534, and the No Action Alternative would have a buildout ADT of approximately 100. The text in Section 1.2 has been revised in the Final Appendix F to use the term "reuse alternative" instead of project. "Projected growth" and future transportation improvements in 2005 and 2020 are based on projections in OCP-96 Modified and OCTAM 2.8 as stated in the next paragraph on Page 1-4 of Appendix F.

paragraph, it says: *The 2020 analysis also includes projected growth in the surrounding area plus changes in the transportation system. Where is the "projected growth" elsewhere in the document that follows? This information should be clearly stated to satisfy CEQA requirements.*

- On page 1-4, 2nd paragraph, the document states: *In the analysis, such projects include roadway improvements that are projected to be funded in some manner, such as through a capital improvement program, a special funding program, or they are conditions of approval of specific projects. Such roadway improvements will be referred to hereinafter in this report as the "committed roadway network."* This gives the impression that all improvements are already programmed and funded, hence the project will have nothing left to mitigate. However, the reality is quite different. Many so-called committed projects are not funded at all or are at best are only partially funded. Since the analyses include all of these as completed, the analyses show a much "rosier" picture than will be the case and the project does not have to mitigate its true impacts. This needs to be corrected throughout.

- The associated level of service values should be listed adjacent to the ICU results in all tables rather than having to cross-check the ICU data with a table elsewhere in the document.

- The methodology used by the author for street segment analyses determined that no mitigation would be needed for locations such as Edinger Avenue (49,000 vehicles per day (VPD)) west of Broadway and east of Main Street. However, when Santa Ana's (and County of Orange's MPAH) methodology is used for the same segment, 45,000 vehicles per day is the maximum allowed such that improvements are actually required for the volume of traffic forecasted. Hence, we again request that the MPAH (County's) methodology be utilized so that the project's impacts are not underestimated.

- Table 3-6 identifies what this study accepts as "intersection lane changes for 2005." For Santa Ana's intersections, several non-existent funding commitments are cited

GENERAL TRAFFIC AND CIRCULATION COMMENTS:

- The trip generation, distribution, and all of the reductions applied result in a significant and unrealistic reduction in the amount of traffic being assigned to the roadway network. This contributes to the document indicating significantly fewer impacts than would be anticipated for this magnitude of a project. Here is a list of the process used:

- Gross trip generation rates were utilized and not appropriately "sourced" or referenced. We request that all references and assumptions be incorporated into the trip generation tables.

L12-40 The committed roadway network is not based on current funding as a criteria. Refer to response to comment L6-9. The final text of Appendix F has been corrected.

L12-41 The LOS values corresponding to ICU values have been added as a footnote to each table in the EIS/EIR containing ICU values. This allows the reader to easily determine the LOS for any ICU value without cross referencing another table.

L12-42 Refer to response to comment L12-20.

L12-43 Refer to response to comment L6-9 regarding funding criteria and the definition of committed network.

L12-44 a) Trip rates were taken from accepted and recent sources such as the ITE Trip Generation (6th Ed.) and SANDAG (1996) and this footnote has been added to Table 2-1 of Final Appendix F. Additionally, a column has been added to the appropriate tables in Section 4.12 of the FEIS/EIR to clarify the source. Refer to Appendix A to Appendix F for detailed trip rate sources. (Note: Appendix A to Appendix F is bound separately from the two volumes of the FEIS/EIR.)

- b) It appears that all of the project trips were then reduced by 12% for "internal" trips. On what basis is this being assumed? In addition to being too high of a percentage, this type of reduction should not be generally applied to all land uses. Rather at most, perhaps a significantly smaller percentage might be applied to only residential land use.
- c) The trips were further adjusted by assuming that MCAS trips are not directly added to existing and projected traffic volumes due to the interaction between MCAS and the surrounding land uses.
- d) The trips were again reduced or "adjusted" based upon the "interaction between MCAS and the surrounding land uses." This document asserts that the land use will not generate "new" trips to and from the study area network. Instead, the current trips already being generated by existing land uses will disappear or simply be replaced by an MCAS trip. Hence, the project's impacts are further minimized.
- e) The trips were even further reduced by applying/crediting the baseline scenario with up to 25% (see baseline trip generation Table 3-3). As noted earlier, the baseline scenario has already "expired" according to Santa Ana's two year and CEQA's five year allowance.
- f) The impact assessment was then compromised by using traffic analyses guidelines not adopted by Santa Ana, resulting in a better LOS (Table 1-2).
- g) Impact assessment was further compromised by applying RTOR Saturation flow factors not used in Santa Ana, resulting in a better LOS.
- h) Impact assessment was compromised by allowing the application of defacto lane assumptions to present a better LOS.
- i) Actual LOS was further compromised by applying inconsistent traffic distribution percentage for base line condition resulting in the traffic pattern favoring the MCAS traffic over on street traffic; i.e. the model distributes traffic to accommodate MCAS generation (for example while Edinger Avenue at baseline would increase by approximately 25,000 VPD, the same segment on Warner Avenue will decrease).
- j) The actual distribution is compromised by assuming a "committed street network" and intersection improvements at over 12 intersections where these improvements are not committed and/or funded. This presents a best case for MCAS by providing and assigning improvement by others that would be utilized by MCAS traffic without their contribution.

- b) Project trip generation is not reduced. Some of the project trips are assigned internally by the traffic model. This internal trip distribution reflects the interaction of uses within the reuse plan area itself. Trip distribution patterns for the entire project in the reuse plan area (internal trip distribution) are derived from OCTAM 2.8. Refer to Section 2.4 of Final Appendix F.
- c) Project trip generation is not adjusted (Section 2.4 of Appendix F). See response to comment L12-22 for an explanation of changes in areawide travel patterns with and without the project.
- d) Project trip generation is not adjusted nor is the project impact minimized (Section 2.4 of Appendix F). Refer to response to comment L12-22 for an explanation of changes in areawide travel patterns with and without the project.
- e) Refer to response to comment L12-19 regarding the applicability of Santa Ana and CEQA's five-year allowance for baseline. The reuse traffic generation net baseline traffic is typical BRAC practice.
- f) Refer to response to comment L12-28 regarding use of Santa Ana's ICU methodology and to Section 1.4 of Appendix F describing the methodology for this study.
- g) Refer to response to comment L12-28 regarding use of Santa Ana's ICU methodology and to Section 1.4 of Appendix F describing the methodology for this study.
- h) No de facto right turn lanes were assumed for any location entirely within the City of Santa Ana. De facto right turn lanes were assumed elsewhere in the traffic study for locations in the cities of Irvine, Tustin, and Newport Beach.
- i) The distribution patterns are in large part due to the assumptions within the regional model (Section 2.4 of Final Appendix F). Edinger Avenue is a regional facility and is expected to increase in traffic due to growth between 2005 and 2020 baseline. Unlike Edinger Avenue, Warner Avenue is not a regional facility. Furthermore, the development that directly loads onto Warner Avenue near the proposed reuse area is generally built out under future 2020 conditions without reuse. Therefore, the ADT would not be expected to change significantly with and without reuse on Warner Avenue east of Main Street and east of Grand Avenue.
- j) Refer to response to comments L6-9 and L12-26 regarding the corrected committed roadway network and traffic impacts within Santa Ana.

k) The resulting impacts were yet further reduced in at least some cases by applying the ATMS credit of 0.05 which can completely erase an impact at an intersection.

l) The project's actual impacts have been further compromised by not analyzing the mid-block location's congestion using the methodology commonly know in the profession, adopted in the City of Santa Ana General Plan Circulation Element, and included in the County of Orange MPAH.

m) Last but not the least, the analyses focus more on Alternative 1. However, the worse case scenario is alternative 3, which generates approximately 80,000 VPD more than Alternative 1. All three alternatives will be approved and/or the EIS/EIR will probably clear all alternatives to be utilized, but without having to mitigate the difference and worst case impacts.

15. A close look at the daily traffic forecasted indicates major discrepancies and inconsistencies in traffic volumes. As an example, please note the traffic volumes on Edinger and Warner. (For additional examples, please refer to the attached tables in the back of these comments.)

L12-45

TRAFFIC VOLUME SUMMARY			
LOCATION	1997	BASELINE	CHANGE
Edinger e/o Main	30,000	48,000	+18,000 VPD
Warner e/o Main	25,000	28,000	+31,000 VPD
Edinger e/o Grand	32,000	57,000	+25,000 VPD
Warner e/o Grand	19,000	18,000	- 1,000 VPD

It is unclear why Edinger east of Grand increases by approximately 25,000 VPD while Warner decreases by 1000 VPD for the same segment. Does the model use capacity constraints or other assumptions that force vehicles from one link to favor or transfer vehicles to another location?

16. The study states that baseline is developed by utilizing the estimated external trip generation for the MCAS Base in 1993. The baseline volumes developed by the model appear to be considerably higher than actual 1993 counts for the same segment. City of Santa Ana records indicates that 1993 traffic volumes

L12-46

k) ATMS is not assumed for any location entirely within the City of Santa Ana, in accordance with that city's policy. ATMS was mistakenly placed on intersection #51 (Main at MacArthur) and replaced with "convert northbound right-turn lane to a fourth northbound through lane." This has been corrected in the FEIS/EIR and Final Appendix F.

l) Refer to response to comment L12-20.

m) Both the traffic technical report and Sections 3.12 and 4.12 of the EIS/EIR evaluate the potential impacts and identify mitigation for all three reuse alternatives at an equal level of detail. Mitigation for traffic impacts are identified for Alternative 3 as well as Alternatives 1 and 2.

L12-45

Refer to response to comment L12-44i regarding the differences between Edinger and Warner Avenues.

L12-46

The term baseline can be confusing in the EIS/EIR and traffic technical report. There is a 1993 federal "baseline" traffic volume of approximately 12,000 ADT for MCAS Tustin operation at the time of the decision to close the facility. The impact tables in Section 4.0 of Appendix F use the term "baseline" to define cumulative future projected traffic at a specified year (i.e., 2005) with 1993 traffic from MCAS Tustin. This allows for comparison of the same time frame with reuse, thereby identifying both the net increase from reuse, as well as cumulative future traffic without reuse. For clarity, a footnote has been added to the tables in Final Appendix F.

for Edinger Avenue at the freeway are approximately 30,000 VPD. The baseline developed by the study is considerably higher.

17. The EIS/EIR uses 1993 as the "baseline" for all traffic. As such, a traffic credit for the base was applied. The EIS/EIR is bound by Santa Ana's and CEQA's guidelines. In Santa Ana, a credit can only be given for up to 2 years from the date of building vacancy or demolition. Additionally, the use of a 1993 baseline violates State CEQA Guideline section 15229(f), which addresses this issue. This Guideline allows the use of a 1993 baseline only if this EIS/EIR were completed and certified within five years from 1993.

L12-47

State CEQA Guidelines, Section 15229

15229. Baseline Analysis for Military Base Reuse Plan EIRs

(f) This section may be applied to any reuse plan EIR for which a notice of preparation is issued within one year from the date that the federal record of decision was rendered for the military base or reservation closure or realignment and reuse, or prior to January 1, 1997, whichever is later, but only if the EIR is completed and certified within five years from the date that the federal record of decision was rendered.

Note: Authority cited: Sections 21083 and 21087, Public Resources Code;
Reference: Section 21083.1, Public Resources Code.

18. The Post 2020 analysis is unrealistic in that the model assumes the transportation corridors operating as "free facilities". This assumption assigns a disproportionate amount of project traffic to the adjacent corridor instead of local surrounding roadways, again masking the true impact of the project. The post project build-out scenario should analyze traffic impacts with "toll" and "no toll" scenarios for the Foothill/Eastern and San Joaquin Transportation Corridors. The current traffic analysis assumes a "no toll" scenario. This is not acceptable to the City of Santa Ana.

L12-48

19. The TSIA fee approved by the Board in 1992 identified a specific list of projects with limited opportunity for partial funding. Mitigation associated with the reuse of the Marine Corps Air Station was not included in the approved list. Increasing the list of mitigations will minimize the opportunity for the original list to be implemented and necessitate the TSIA to amend all of its existing Transportation System Improvement Fee Resolutions. This is an action that we do not support nor see warranted by the project. Additionally, the improvements presented in Table 7-5 shall not be fully or partially funded by TSIA.

L12-49

20. The City of Santa Ana does not concur that mitigation measures in the Draft EIS/EIR that defer disclosing improvements to subsequent studies. This is also supported by the CEQA Guidelines Section 15168, Subd. (c) (5), which

L12-50

L12-47

Refer to response to comment L12-19. Because the federal record of decision has not been rendered, the referenced CEQA Guideline is not applicable.

L12-48

The detailed impact analysis has been carried out for an interim year (2005) and year 2020, representing a 20-year planning horizon. This is consistent with transportation planning studies in Orange County in which the impacts are regional in nature. The use of data for a time frame beyond 2020 involves much speculation, and hence is only carried out on a limited basis.

The accepted (and indeed encouraged) procedure for traffic analyses of this regional scale is to use the 2020 traffic models and demographic data developed by OCTA for such purposes. The post-2020 data was included primarily for informational purposes and shows future traffic under two conditions. One condition is increases in land use in the city of Irvine (corresponding to buildout of the general plan) and the other is the eventual operation of the toll roads as free facilities. The toll free assumption was requested in comments on the initial draft EIS/EIR. Both conditions involve speculation with respect to the data being used and the time frame in which these conditions could possibly occur. The post-2020 scenario is not mitigated precisely because it is so speculative and possibly unrealistic. It may not be more realistic if the analysis did assume a toll scenario.

L12-49

The EIS/EIR identifies mitigation to address traffic impacts but does not identify utilizing TSIA fees for any of those measures. Table 7-5 of the EIS/EIR identifies the off-site mitigation summary for 2020 and does not indicate funding via TSIA fees.

L12-50

Refer to response to comments L12-3 and L12-6.

states a program EIR will be most helpful in dealing with subsequent activities as it deals with the effects of the program as specifically and comprehensively as possible. Further, the CEQA court case of Sundstrom vs. County of Mendocino (1st Dist. 1988) 202 Cal.App.3d296, found that by deferring the identification of project mitigation, the County had evaded its responsibility to engage in comprehensive environmental review. Our concerns with the deferral of project mitigation are related to several locations.

21. The list of 2005 mitigation measures is unclear regarding who will be responsible for the cost of these improvements; and what activity (i.e., issuance of building permits) would trigger the need to construct these improvements. The claim of committed improvements and/or a "committed network" as presented in the document is not valid and incorrect. These assumptions further contribute toward a gross underestimation of the actual impacts of the proposed project.

L12-51

22. In a letter to Kathryn Gray dated June 4, 1983, the City of Santa Ana identified certain intersections and ICU analysis methodology to be incorporated into the traffic study. These requests have been ignored and the Draft EIS/EIR does not reflect the scope of work requested in that letter. Our current guidelines are:

L12-52

a) With respect to the ICU methodology for calculation, the City of Santa Ana does not allow for RTOR saturation flow factor of 0.75 or for the use of "defacto" right-turn lanes. The calculation and results, therefore, do not reflect actual intersections' level of service. Santa Ana's intersections need to be analyzed using the following criteria:

- 1700 through and right-turn movements.
- 1600 left-turn movements.
- signal clearance interval factor = 0.05.
- With no reference to RTOR saturation flow factors.
- Without crediting "defacto" right-turn lanes.

b) Additionally, level of service values (LOS) should be noted adjacent to v/c (volume to capacity) ratios throughout the document. This will help the public review the document. This type of information should not need to be found elsewhere in the document.

c) The intersection of Technology Center and Dyer was not considered in the analysis.

L12-51

Refer to response to comments L6-9 and L12-26 regarding the committed roadway network. Various traffic mitigation measures are modified in Section 4.0 of Appendix F to more clearly identify phasing, performance thresholds, and mechanisms to ensure implementation of traffic mitigation.

L12-52

- a) Refer to response to comment L12-28 for a discussion of the re-evaluation of intersections using the City of Santa Ana criteria.
- b) Refer to response to comment L12-41.
- c) The intersection of Technology Center and Dyer Road was considered in the analysis. Refer to intersection #58, Suttler and Dyer Road, of which Technology Center forms the north leg.

d) The City requested that ICU analyses be conducted for the following scenarios:

- Existing.
- Existing plus entitled (cumulative).
- Existing plus entitled (cumulative) plus project by phase of project development.
- Existing plus entitled (cumulative) plus project build-out.
- Project alternatives plus existing and entitled (cumulative).

This requirement was not considered. Most importantly, the project by phase scenario, as it affects the implementation of mitigation measures, is associated with the various project phases. It is unclear why the project was included in its entirety in the analysis while it is recognized that a project of such magnitude will eventually be implemented utilizing several phases.

L12-53 23. The baseline traffic volumes are outdated. The data appear to be based on 1992/1993 traffic counts.

OTHER TRAFFIC AND CIRCULATION COMMENTS:

L12-54 24. In Table 3-7, Existing OCTA Bus Service: The bus service on Warner Avenue should be extended by OCTA.

L12-55 25. On page 4-17, there is no mention of lane closures during construction. This is a potential construction impact surrounding the development. Other construction impacts should also be listed. Additionally, construction should be phased to ensure minimum disruption to the Public.

L12-56 26. In Table 4-8, the City does not agree with advanced transportation management systems (ATMS) contributions replacing mitigation measures such as lane additions. For example, on page 4-18 and throughout the document, we do not concur with the ATMS reductions being taken at intersections where an ICU Analysis has been used. From a traffic perspective, a key assumption in the use of ICU analyses is that the most efficient signal operation of an intersection is already in place. If that is not the case but the ICU method is still used, then the v/c ratio should actually be increased by 0.05 (rather than credited by that amount) to more accurately reflect intersection conditions. Instead, this document credits the intersection with the 0.05 reduction. This appears to be "double dipping". We disagree that this 0.05 reduction in the v/c ratio should be taken for ATMS improvements. Also, since a significant impact ranges from 0.01 to 0.03, how is this reduction of 0.05 in the ICU "conservative"? Rather, it appears to be quite generous and not realistic as related to ICU analyses. The phasing plan thresholds for off-site improvements should be revised with these ATMS credits removed.

d) The ICU analyses requested were performed as part of the MCAS Tustin traffic technical analysis, as described below for each bullet point. The referenced tables from Chapter 4 of Appendix F are the ICU summaries for the impacted intersections. The complete analyses are in Appendix D to Appendix F, which contains the ICU results, and Appendix E to Appendix F, which contains the ICU worksheets. There are tables in Sections 3.12 and 4.12 of the FEIS/EIR that correspond to the tables listed below for Appendix F.

- Existing - Table 3-1, Existing (1997) ICU Summary

For Alternative 1

- Existing plus entitled (cumulative) - Tables 4-3 and 4-4, Columns 1 and 2 plus Tables 4-5 and 4-6, Columns 1 and 2
- Existing plus entitled (cumulative) plus project by phase of project development - Tables 4-3 and 4-4, Columns 3 and 4.
- Existing plus entitled (cumulative) plus project buildout - Tables 4-5 and 4-6, Columns 3 and 4
- Project alternatives plus existing and entitled (cumulative) - Alternatives 2 and 3 are analyzed in the same detail as Alternative 1. There are corresponding tables in Appendix F, Appendices D and E to Appendix F, and the EIS/EIR.

For this technical report, the impact analysis was performed for both full buildout (year 2020) and a partial buildout (2005) reflecting the fact that development would occur in phases over many years. The 2005 analysis considers only that part of the reuse alternative that would be developed by 2005, as specified in the trip generation tables, not full buildout.

L12-53 Refer to response to comment L12-19 regarding baseline for BRAC projects and L12-34 regarding baseline traffic volumes.

L12-54 The commentor's preference for an extended bus route is noted but does not have substantive value to the EIS/EIR analysis.

L12-55 The analysis of construction impacts in Section 4.12 of the FEIS/EIR has been modified to reflect these comments.

L12-56 Refer to response to comment L12-44k regarding application of ATMS in the City of Santa Ana. ATMS is a part of the approved IBC rezoning mitigation program and is appropriate for this analysis within the IBC. A footnote on all appropriate tables denotes those IBC intersections where the ATMS credit is applied (e.g., Table 4-1 of Appendix F).

Regarding the application of the ATMS reduction, it has been applied to at least some of Santa Ana's shared intersections with other agencies. We request this 0.05 significant reduction be removed from our shared or Santa Ana only intersections. However, page 4-2 end of last paragraph, further confuses this issue by stating that: *The ATMS credit of 0.05 for IBC locations and for locations in Irvine identified as an ATMS intersection are not shown in the ICU Table...or the calculation worksheets...but have been included in the analysis.* How can we be sure that this credit was not taken at all Santa Ana intersections also?

L12-57 27. Page 6-14, Section 6-3-B, Phasing Plan for Off-site Improvements: A reference should be made to Table 4-32 on Page 4-68 for the example of Jamboree Road and Barranca Parkway for better understanding of the numbers used in Step 1 and 2. Also, the Step 1 title ("Percentage of project causing the impact threshold to be exceeded") is confusing. In fact, the entire Section 6-3 is problematic. On page 6-14 and page 6-15: the phasing of off-site improvements needs to be clarified. And, it is not clear who is paying for what with regard to "fair share costs" and at what point. As conditions change, how would the phased improvements be implemented and "triggered"? Instead, Santa Ana prefers to have the study attempt to identify which Agency should handle which improvements (subject to negotiation). Otherwise, constant revisions would be required as entitlements change.

L12-58 28. Page 6-15: It is not clear if the fair share costs of construction contributed by the City of Tustin would include right-of-way costs for Grand Avenue and Edinger Avenue.

L12-59 29. Page 6-16: Off-site Improvement Responsibilities, a clarification is needed regarding who will pay for "fair share improvements"? The City of Tustin, the developer or other?

L12-60 30. Page 6-18, Table 6-4: A clarification is needed regarding the percentage share of intersection mitigation. Does it refer to the financial responsibilities for the City of Tustin or the developer?

L12-61 31. Which improvements are intended to be exacted from MCAS? The study is not clear regarding this key issue. Santa Ana wants to insure that those impacts that the development is responsible for will be taken as exactions from the developer only and not paid for by TSIA funds.

L12-62 32. It is not clear where the fair share equation listed in the document came from. The consultant alluded to it being associated with OCP and/or OCTA. However, communication with OCTA on this matter indicates that the said equation is not "sanctioned" by them. We disagree with this formula and will want to consider other equations that are more directly tied to trips generated prior to them being extensively reduced.

L12-63 33. Long range assumptions assume that all transportation corridors will operate as toll free facilities. However, the latest estimates anticipate that the corridors

L12-57

The requested edits have been made in Final Appendix F. Section 6.3 of Appendix F demonstrates the amount of reuse (using trip generation as a measure) that would "trigger" off-site improvements by taking into consideration the available capacity of the intersection (as given by the ICU).

L12-58

Refer to response to comment L12-30.

L12-59

Refer to response to comment L12-10.

L12-60

Refer to response to comment L12-10.

L12-61

Refer to response to comment L12-49.

L12-62

Other equations can be used to show fair share responsibilities on a case-by-case basis. However, the EIS/EIR reflects the commonly used methodology by the County of Orange. The methodology takes into consideration the resulting ICUs with mitigation.

L12-63

Ultimate project buildout is assumed for year 2020 when toll conditions on the corridors are anticipated to still be in place. Refer to response to comment L12-48 regarding the toll-free scenario in the post-2020 scenario and the speculative nature of any traffic analysis beyond the 20-year timeframe.

won't be "toll-free" for 40 years (Year 2040). Under the "toll-free" scenario, some of the traffic on SR-55 might switch to the toll facilities, instead. However, as the tolls remain for 40 years, SR-55 can be expected to serve additional traffic then it would under "toll-free" conditions. The traffic projections need to be revised to accurately reflect this additional traffic on SR-55 and other adjacent roadways. The project build-out scenario should analyze traffic impacts with both a toll and toll free scenario and for the appropriate year.

L12-64 34. The mitigation for each specific project phase should be indicated.

35. At this time, it is unclear as to how the City of Tustin intends to impose traffic impact fees, especially for residential development. How will the residential development within this project pay its fair share costs if not through TSIA fees? Will the residential developments within the project and all residential developments in the City be assessed for Traffic Impact Fees? If not, how will residential development be paying its fair share? The development of a significant number of residential units (ranging from 3500 to 5300 DU in the City of Tustin for build-out) does have an impact to the street system.

L12-66 36. A traffic study for a project of this magnitude—1600 acres— (generating approximately 300,000 vehicles per day) should carefully look at the potentially impacted areas. Traffic impacts associated with a project of such magnitude should be analyzed until project traffic would have no impact upon Santa Ana Intersections.

L12-67 37. The discussion pertaining to ADT link deficiencies is unclear. Additionally, City of Santa Ana staff do not agree with the statement, "...for locations in the Cities of Tustin and Santa Ana, an ADT link deficiency is considered theoretical rather than actual if the intersection at the end of the link operates at acceptable levels." Please indicate the source for this assumption. Mitigation measures and recommendations made in this study based on this assumption must be corrected and MCAS's obligation(s) to mitigate roadway segments in Santa Ana should be identified.

L12-68 38. The study did not analyze the CMP intersection of 4th Street/Irvine Boulevard @ SR-55 in the City of Santa Ana. Because of its close proximity to the project, this intersection may be significantly impacted.

City of Santa Ana Projects and Related Improvements

L12-69 39. Some City of Santa Ana projects and their related mitigation improvements are assumed to be implemented when said this project comes on line. For example, MCAS traffic study assumes that the MacArthur Place development will be built at its original density and that all associated transportation improvements will be fully built on time. This is incorrect. The following are similar examples that should be carefully evaluated and compared to the study mitigation assumptions:

L12-64 Detailed mitigation measures are provided for a short-term scenario (2005) and the ultimate buildout (2020). Refer to response to comment L12-52d. ADT thresholds have been added to Section 4.12 of the FEIS/EIR for all three alternatives to ensure that improvements are in place as development proceeds over the buildout period.

L12-65 Refer to response to comment L12-10 regarding fair share responsibility for traffic improvements and L12-49 clarifying that TSIA funds would not be used to mitigate impacts associated with any reuse alternatives.

L12-66 Refer to response to comment L12-15.

L12-67 Refer to response to comment L13-20.

L12-68 The intersection location of Fourth Street/Irvine Boulevard at SR-55 northbound is outside the defined study area. Refer to response to comment L12-15.

L12-69 Refer to response to comments L6-9 and L12-22 regarding the assumed committed roadway network in the traffic analysis. Improvements described in the Santa Ana Circulation Element Final EIR were assumed for year 2020 analysis including Main Street/MacArthur Boulevard, Grand Avenue/Warner Avenue, Main Street/Warner Avenue intersection improvements, and Grand Avenue widening. The Main/Halladay Street alignment improvement is assumed for Post-2020 only.

- **Main/MacArthur Intersection Upgraded to Dual Lefts:**

Three through and separate right turn lanes all four legs. Funding source: Private development. Funding for improvements are based on build-out of Hutton Center and MacArthur Place. These projects are not funded if these projects do not proceed.

- **South Grand and Warner:**

Enhanced intersection ultimately to allow for dual lefts, 3 throughs, and separate right at all 4 legs. Funding source: No obligated source at this time. Dedication and improvements shall be secured as affected properties develop. One leg of each intersection conditioned at this time.

- **Main and Warner:**

Enhanced intersection ultimately to allow for dual lefts, 3 throughs, and separate right on south leg; single left, 3 through, and separate right on east/west leg; and 3 through, dual left, and separate right on north leg. Funding source: No obligated source at this time. Dedication and improvements shall be secured as affected properties develop. One leg conditioned at this time.

- **Main/Halladay Street Alignment:**

Realign and upgrade street segments between Dyer and Columbine to 4 lanes. Funding source: No obligated source at this time.

- **Grand Avenue Widening:**

- Widen Grand to 3 lanes each direction with landscaped median.
- Funding source: No obligated source at this time. Dedication and improvements shall be secured as affected properties develop. Nothing conditioned at this time.

- **NOTE:** None of the above referenced projects are "committed" improvements without the related supporting development. Enhanced intersections are implemented in pieces and ultimate build-out should require additional funding as revenues allow. The enhanced intersections would be completed. Potential funding sources for enhanced intersections are private development and TSIA fees, grants, etc.

- The MCAS traffic study is incorrect in assuming that all mitigation and roadway improvements will be built before MCAS and the MCAS traffic can then utilize the access capacity generated by those improvements. Many projects are developing much more slowly than anticipated due to economic

factors, resulting in a lower level of traffic, thereby deferring the need for many of the mitigation programs.

OTHER YEAR 2005 AND 2020 ANALYSES COMMENTS:

L12-70 40. This impact analysis should be placed before the mitigation section to justify the lists of recommended improvements.

L12-71 41. The City of Tustin's share of planned roadway improvements should be identified specifically as related to the MCAS impacts.

L12-72 42. In general, the volume/capacity ratios calculated for Santa Ana were lower than expected from previous work conducted for Santa Ana, including TSIA studies. This applies to existing calculations, existing with project, and existing without project, and for both the short and long terms.

L12-73 43. Additional discrepancies worth investigation are the ICU/LOS comparisons between the analysis scenarios with and without the project. The traffic study indicates that volumes will be reduced for several turning movements at the majority of Santa Ana intersections and that the mid-block level of service will actually improve as a result of adding project traffic. This appears specifically in Santa Ana intersections, and in the majority of study intersections in general. We disagree with these results and feel they are suspect.

L12-74 44. Based on our previous comments regarding trip distribution forecast and ICU methodology used in the MCAS study, we request recalculation of all impacted intersections in Santa Ana. The current analyses and (pertaining to Santa Ana) are not acceptable and would not be used to determine mitigation measures at Santa Ana intersections.

ADDITIONAL OBSERVATIONS:

L12-75 45. The report did not provide a means for City Staff to evaluate and assess the individual project impacts upon streets and intersections. A close look at the ICU calculation sheets presented in the appendix of the report reveals numbers and values that do not correspond to the amount of increase in traffic would be expected as a result of the project. The calculation sheets show that traffic volume is expected to "decrease" as a result of adding the MCAS traffic to the street system. For example, when baseline is compared to the various alternatives, traffic decreased noticeably at several intersections. These are Redhill & Warner, Tustin Village & McFadden, SR-55 SB ramps & Edinger, Redhill & Dyer, Redhill & Allon, Bristol & MacArthur, Bristol & Segerstrom, and Bristol & Warner. It appears that the model unloads specific movements to provide for anticipated MCAS traffic. This approach and the methodology are not acceptable. It provides for a much better level

L12-70 Section 4.12 of the EIS/EIR is structured so that impacts are discussed first and mitigation is linked to those locations with significant impacts.

L12-71 Refer to response to comments L12-10 and L12-16.

L12-72 The commenter's statement that the study results in lower V/C ratios than other studies done in Santa Ana is so noted.

L12-73 Refer to response to comment L12-32.

L12-74 Refer to response to comment L12-28.

L12-75 Refer to response to comment L12-32 regarding model results which may appear unlikely and response to comment L12-20 regarding the mid-block analysis.

of service (LOS) at intersections where improvements may be needed, instead.

The methodology used for analyzing mid-block segments does not reflect actual operating conditions per the County of Orange MPAH and per the City of Santa Ana standards, both of which use LOS "C" for link capacities. As only one example, the calculation sheet in the appendix indicates a V/C ratio of 0.87 for Edinger Avenue w/o Broadway and e/o Main Street. Using the method developed by the writer of this report, no mitigation is needed. However, using MPAH and Santa Ana's standards, those segments carry approximately 49,000 vehicles per day which exceeds the maximum operating capacity for LOS "C" (45,000 VPD). Consequently, improvements are required. All mid-block analyses must therefore be developed using MPAH method so that the impacts are not underestimated.

L12-76 46. Under the baseline conditions in the link analyses, several incorrect roadway lanes are assumed as "existing." Please recheck all.

L12-77 47. Warner Avenue was assumed to have 6 lanes under not only the baseline but also the 2020 analyses. It is not funded for a widening nor is it anticipated to be at this time.

L12-78 48. The EIS/EIR also failed to include the extension of Alton Avenue as a viable transportation improvement to mitigate the MCAS impacts.

49. Additional comments for the summary tables are as follows:

Missing Information:

- **L12-79** Table 4-5, Intersection 79 - Red Hill/Alton is missing from the ICU tables.
- Table 4-30 is missing Intersection 79 - Red Hill/Alton.
- Intersections are missing from mitigation lane and summary tables yet still included in ICU tables. See Table 4-8, and 4-14; Intersection 59 - Hotel Terrace/SR55/Dyer.
- Intersections in mitigation lane and summary tables are missing from ICU tables. See Table 4-5, Intersection 79 - Red Hill/Alton, etc.
- Other tables i.e. "summary of intersection mitigation results" or "summary of impacted intersections" are also missing a comparison for other intersections in the project.

Confusing Information:

L12-80 Throughout the project all tables for "mitigation lanes for ... impacted intersections" the term "base" is used to define "intersection lanes without mitigation". "Baseline" ICU calc tables should have been compared instead of "reuse alternative 1" ICU calc tables. In most cases shown these tables were

L12-76

Refer to response to comments L13-19 and L13-46 regarding the discussion of baseline. In that analysis, the term "baseline" refers to the future cumulative traffic and future road network without reuse for a specified time period (2005 or 2020). Because it assumes implementation of the future committed roadway network, lane assumptions would not necessarily correlate to existing conditions. For example, eight lanes are assumed on Red Hill Avenue between Valencia Avenue and Dyer Road/Barranca Parkway for 2005 baseline and 2020 baseline, not six lanes as exist today. This improvement is assumed committed with the IBC project.

L12-77

Refer to response to comments L6-9 and L12-26.

L12-78

The extension of Alton Avenue at SR-55 was not analyzed as a viable transportation improvement because it was not needed to mitigate reuse impacts.

L12-79

Intersection #79, Red Hill Avenue and Alton Parkway, is listed in Table 4-5 of Appendix F as impacted, prior to the ATMS credit. An asterisk on that table specifically addresses this intersection. Because the ICU would be within acceptable levels with application of the ATMS credit, this intersection does not appear in other summary and mitigation tables. This location is recognized as an IBC intersection which assumes 1.05 (1.00 plus .05 for ATMS) as an acceptable level of service. This same explanation is a footnote at the bottom of Table 4-5. Intersection #79 in Table 4-30 was found under the Irvine heading in the draft EIS/EIR. The table has been revised in the FEIS/EIR to place it under a new Irvine/Santa Ana heading. Mitigation for ramp intersection #59, Hotel Terrace/SR-55 Northbound Ramps and Dyer Road, is included in Tables 4-9, 4-20, and 4-31. This intersection is not impacted in year 2005 and thus is not included in Tables 4-4, 4-15, and 4-26.

Careful review has been made of "summary of intersection mitigation results" and "summary of impacted intersections" for any locations in the study area that should be included and none are missing.

L12-80

Refer to response to comment L13-34.

the same with the exception of intersection 77 - Red Hill/Warner (Tustin/Santa Ana). Tables 4-8, 4-18, 4-29, & 4-30.

Other Errors:

- L12-81a • Table 4-5, Intersection 79 - Red Hill/Alton location is identified as an ATMS intersection and therefore discounted by .05 and thus shows no project impact but PM ICU is still .98 (not < .91).
- L12-81b • Table 4-30 intersections 77 - Red Hill/Warner and 51 - Main/MacArthur are showing as "ATMS." Santa Ana disagrees with this reduction being applied as stated earlier.
- L12-81c • If alternatives result in no increase to ICU's, regardless of resulting ICU after mitigation they are just shown as "non-impacted." This may not actually be true especially in the case where an ICU is still > .91. i.e. Table 4-22 intersection 198 - Bristol/Warner PM ICU = .94.
- L12-81d • Table 4-19 intersection 79 - Red Hill/Alton and it's corresponding ICU table identifies lanes as "d" for de-facto right-turns. This is not Santa Ana policy.
- L12-81e • Table 4-20 intersection 67 - SR-55 NB Ramps/Dyer for WB through lane uses 3 in the mitigation table but 4 in ICU table. This also occurs in Table 4-31.
- L12-81f • Table 4-22 intersection 78 - Red Hill/Alton results show "ma" ("mitigated to adequate level of service") yet PM ICU reads .97 (> .91) This result should read "mp" ("project impact mitigated") only. This also occurs in Table 4-33.
- L12-81g • PM ICU for intersection 51 - Main/MacArthur shows as .95 on Table 4-33 and the results show "mp". Yet ICU table clearly indicates ICU = 1.0 which would result in "nm" ("project impact not mitigated"). Similarly, intersection 198 - Bristol/Warner is showing AM and PM ICU's as .88 and .88 respectively and "ma" for each in T 4-33 yet ICU tables clearly indicate AM and PM ICU's = .85 and .97 respectively. This results in "mp" only (not ma).

L12-81

- a. Impacts at Red Hill Avenue and Alton Parkway would not be significant because the intersection is within the IBC where the performance criteria allow LOS E as a non-significant impact. The ICU value is 1.03 which is less than the 1.06 value that would trigger a significant impact.
- b. ATMS has not been applied to any intersection entirely within the City of Santa Ana. Intersection #77, Red Hill Avenue and Warner Avenue, is within both Tustin and Santa Ana. Because no other feasible mitigation can be identified, ATMS is recognized by the City of Tustin and has been proposed to mitigate the intersection. Because intersection #51 is entirely within Santa Ana, ATMS was removed at Main and MacArthur. Mitigation for Alternative 3 year 2020 is identified as "convert northbound right-turn lane to a fourth northbound through lane."
- c. Intersections with significant impacts have been identified according to OCTA CMP/GMP guidelines. At intersection #98, Bristol Street/Warner Avenue, the AM peak hour ICU would increase from .88 to .92 and the PM peak hour ICU does not change with and without reuse. Any future project proponent would only be required to mitigate the intersection based on AM peak hour significant impacts, as there would be no reuse impacts in the PM.
- d. No de facto right-turn lanes were assumed for any location entirely within the City of Santa Ana. Intersection #79, Red Hill Avenue and Alton Parkway, is recognized as an IBC intersection. De facto right-turn lanes are recognized in IBC and City of Irvine ICU calculations.
- e. The intersection of SR-55 northbound ramps at Dyer Road should actually reflect an eastbound free right-turn lane and four northbound through lanes per existing conditions. This correction has been reflected in the FEIS/EIR and Final Appendix F. With this correction, future operations would be acceptable for 2005, and no mitigation would be necessary. Additionally, corrections have been made as suggested to intersection #198, Bristol and Warner.
- f. The results for intersection #79, Red Hill Avenue and Alton Parkway, in Tables 4-22 and 4-33 of Appendix F are labeled correctly as "ma" because this location is recognized as an IBC intersection which assumes 1.05 (1.00 plus .05 for ATMS) as an acceptable level of service.
- g. Because intersection #51 is entirely within Santa Ana, ATMS was removed. Mitigation for Main and MacArthur (under Alternative 3 year 2020) is replaced with "convert northbound right-turn lane to a fourth northbound through lane." Results of this mitigation show that the "mp" label is correct. Corrections have been made as suggested in the Final Appendix F and FEIS/EIR to intersection #198, Bristol and Warner.

TABLE 1

ARTERIALS

LOCATION	SHORT RANGE		LONG RANGE		MCAS MITIGATION	
	IMPROVEMENT	SOURCE	IMPROVEMENT	SOURCE	IMPROVEMENT	SHARE
San Joaquin Hills Transportation Corridor (SJHTC east of Jamboree)			Construct as tollway	1		
Alton (Main to Standard)	Improve to 4 lanes	3				
Alton (Daimler to Standard)	Sr-55 4-lane overcrossing					
Alton (at SR-55)			Construct HOV ramps	18		
Alton (Red Hill to Jamboree)			Improve to 6 lanes	5		
Alton (Jamboree to Harvard)	Improve to 6 Lanes	5				
Armstrong (Barranca to Loop Road North)					Extend from Barranca northerly to Loop Road north as a 4-lane roadway	100%
Bryan (Newport to Main)	Improve to 4 lanes	10				
Columbine (Main to Halladay)	Improve to 4 lanes	NC				
Del Amo (SR 55 NB Ramps to Edinger)	Realign with SR-55 NB Ramps	9				
Dyer / Barranca (SR-55 to Jamboree)	Improve to 8 lanes	5				
East Connector (Edinger to Loop Road)					Construct 4-lane roadway	100%
Edinger (east to Red Hill to east of West Connector)					Dedicate right-of-way (short range)	100%
Edinger (SR-55 to east of Red Hill)			Improve to 6 lanes	9, 10		
Edinger (SR-55 to Del Amo)			Augment sections	NC		
Edinger (east of Red Hill to west of Jamboree)			Improve to 6 lanes	10	Improve to 6 lanes along frontage (3rd EB)	100%
Edinger (west of Jamboree to Harvard)			Improve to 6 lanes	10		
Halladay / Standard (Dyer to Warner)	Realign Halladay to Standard	3				
Harvard (Walnut to ICD)	Improve to 4 lanes	6				
MacArthur (SR-55 to Campus)	Improve to 8 lanes	5				
Main (Sunflower to San Diego Creek)	Improve to 6 lanes	5				
Main (Red Hill to Harvard)			Improve to 8 lanes	5	Construct as per community Facilities & Infrastructure Plan	100%
McFadden (Standard to Main)			Improve to 4 lanes	NC		
Warner (Bristol to Main)	Improve to 6 lanes	3				
Warner (Main to Grand)			Improve to 6 lanes	NC		

TABLE 1

INTERSECTIONS						
LOCATION	SHORT RANGE		LONG RANGE		MCAS MITIGATION	
	IMPROVEMENT	SOURCE	IMPROVEMENT	SOURCE	IMPROVEMENT	SHARE
47. Main & Warner			SBR	NC	2nd EBL	23%
			3rd WBT, WBR	NC		
			NBR	NC		
			3rd EBT	NC		
48. Main & Dyer			2nd SBL			
			Shared 3rd WBT/R			
			2nd NBL, convert NBR to shared 3rd NBT/R			
			3rd EBT			
49. Main & Alton			WBR, convert WBT to shared 2nd WBL/T	NC	3rd NBT (short range)	100%
			2nd NBT, shared d3rd			
			2nd NBT, shared 3rd NBT/R, convert shared NBL/2nd NBT to NBL	NC		
51. Main & MacArthur A43 (Santa Ana)	SBR	14			4th WBT	23%
	WBR	14				
	NBR	14				
	EBR	14				
54. SR-55 SB Ramps & MacArthur	3rd WBT	3				
	3rd EBT	3				
55. Halladay & Warner			Shared 3rd EBT/R	NC		
			2nd WBT	NC		
56. Halladay & Dyer			Shared 2nd SBT/R	NC	2nd EBL	15%
			Convert WBR to shared 3rd WBT/R	NC		
			Shared 2nd NBT/R	NC		
			Shared 3rd EBT/R	NC		
57. Standard & Warner	Halladay realigned with Standard: Provide L, T & shared 2nd T/R all lanes	3	Shared 3rd WBT/R	NC	NBR	63%
			Shared 3rd EBT/R	NC	WBR	63%
59. Hotel Terrace / SR-55 & Dyer					4th EBT, EBR (short range)	38%
60. Grand & McFadden			2nd SBL, SHR	NC		
			2nd WBL, 3rd WBT	NC		
			WBR	NC		
			2nd NBL, NBR	NC		
			2nd EBL, 3rd EBT, EBR	NC		

TABLE 1

TABLE 1

INTERSECTIONS

LOCATION	SHORT RANGE		LONG RANGE		MCAS MITIGATION	
	IMPROVEMENT	SOURCE	IMPROVEMENT	SOURCE	IMPROVEMENT	SHARE
61. Grand & Edinger		2nd SBL	9	Shared 4th EBT/R	30%	
		NBR	9	WBR	30%	
				2nd EBL (short-range)	30%	
63. Grand & Warner		2nd SBL	13	2nd NBL (short-range)	69%	
		3rd SBT	NC			
		2nd WBL, 3rd WBT	NC			
		3 NBT	13			
		NBR	NC			
		2nd EBL, EBR	NC			
66. Grand & Dyer		3rd EBT	13			
		3rd WBT	NC	Convert 3rd WBT to shared 3rd WBT/2nd WBR	33%	
67. SR-55 NB Ramps & Dyer		Delete shared 2nd NBL/2nd NBR, convert NBR to free right	NC			
		Convert EBR to free right	NC			
68. Pullman & Dyer		Shared 4th WBT/R	NC	Convert shared 2nd NBL/T/R to 2nd NBL & add shared NBT/R	13%	
		Shared 4th EBT/R				
69. Lyon & McFadden		Convert shared SBL/T to SBL, convert SBR to shared SBT/R	NC			
		Convert shared WBL/2nd SBT to WBL & convert WBR to shared 2nd WBT/R	NC			
70. Lyon & Edinger		WBR	13			
		SBR	9			
71. Richey & McFadden (deficient under Santa Ana guidelines)		NBR	13	EBR	16%	
		Convert shared BNT/R to shared NBT/2nd NBR	NC			
72. Richey & Edinger		2 WBL	9			
		2 NBT, NBR	NC			

TABLE 1

INTERSECTIONS

LOCATION	SHORT RANGE		LONG RANGE		MCAS MITIGATION	
	IMPROVEMENT	SOURCE	IMPROVEMENT	SOURCE	IMPROVEMENT	SHARE
73. Williams & McFadden					Convert SBT to shared 2nd SBL/T & modify signal to provide N/S split phasing (short-range only)	100%
74. Tustin Village & McFadden			EBR	13		
			Convert full SBT to SBL	NC		
75. SR-55 SB Ramps & Edinger	2nd WBL, shared 3rd WBT/R 3rd EBT Convert free NBR to dual NBR	3, 9, 13 3, 9, 13 13				
76. SR-55 NB Ramps & MacArthur	3rd EBT	5				
77. Red Hill & Warner (deficient under Santa Ana guidelines)			2nd EBR	NC	Construct east leg of intersection: provide dual SBL	
			SBR	5, 9, 13		
			4th SBT	5	Dual WBL, triple WBT, WBR NBR Triple EBT	
			4th NBT	5		100%
78. Red Hill & Dyer / Barranca	4th SBT	5			EBR	21%
	2nd WBL, 3rd & 4th WBT	5			Dedicate right-of-way	100%
	4th NBT	5			Participate in future study	(C)
	2nd EBL, shared 4th EBT/R	5				
79. Red Hill & Alton			2nd WBT	5		
			2nd EBL	5		
			4th SBT	5		
			4th NBT	5		

SOURCE:

3. City of Santa Ana project.
4. Joint Cities of Irvine and Santa Ana project.
5. Implemented through or identified project conditioned improvements in the Irvine Business complex (IBC) Rezoning Mitigation Program.
6. Assumed by City of Irvine ITAM's database.
9. Conditioned for implementation with development of Pacific Center East
13. Implemented through or identified project conditioned improvements in the Santa Ana/Tustin Transportation System Improvement Program (ASTTSIP).
14. Conditioned for implementation with development of MacArthur Place.
18. Joint OCTA and Cities of Irvine and Santa Ana project.

NC = NON-COMMITTED IMPROVEMENTS

2005 ALT 1

ORIGINAL MCAS ARTERIAL VOLUMES AND V/C'S COMPARISON

ROAD SEGMENT	LONG-RANGE ADT V/C RATIOS				No-Project		With Project		JUNE 1999 STUDY				Change (Alt1-Baseline)
	ADT -		CITY		No-Project		With Project		No-Project		With Project		
	Capacity	STD	Volume	V/C	Volume	V/C	Volume	V/C	Volume	V/C	Volume	V/C	
Altos s/o Main	25,000	20,000	14,000	0.56	14,000	0.56	5,000	0.20	5,000	0.20	0	0	0
Dyer s/o Main	56,300	45,000	41,000	0.73	41,000	0.73	31,000	0.55	32,000	0.57	1,000	0.02	1,000
Dyer s/o Halladay	56,300	45,000	40,000	0.71	4,000	0.71	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Dyer s/o Hotel Terrace	56,000						41,000	0.73	41,000	0.73	0	0	0
Dyer s/o SR-46	56,000						58,000	1.04	66,000	1.18	8,000	0.14	8,000
Dyer s/o Red Hill	75,000	60,000	73,000	0.97	79,000	1.05	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Edinger s/o Broadway	38,000						31,000	0.82	32,000	0.84	1,000	0.02	1,000
Edinger s/o Main	56,300						37,000	0.66	38,000	0.67	1,000	0.01	1,000
Edinger s/o Standard	56,300	45,000	38,000	0.67	37,000	0.66	35,000	0.62	37,000	0.66	2,000	0.04	2,000
Edinger s/o Grand	56,300	45,000	43,000	0.76	44,000	0.78	38,000	0.67	41,000	0.73	3,000	0.06	3,000
Edinger s/o Lyon	56,300	45,000	45,000	0.8	46,000	0.82	39,000	0.69	42,000	0.75	3,000	0.06	3,000
Edinger s/o SR-46	56,300						37,000	0.66	40,000	0.71	3,000	0.05	3,000
Edinger s/o Ritchey	56,300	45,000	52,000	0.92	52,000	0.92	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Grand s/o Edinger	56,300	45,000	43,000	0.76	49,000	0.87	26,000	0.46	28,000	0.50	2,000	0.04	2,000
Grand s/o Edinger	56,300	45,000	35,000	0.62	42,000	0.75	29,000	0.52	30,000	0.53	1,000	0.01	1,000
Grand s/o Warner	56,300	45,000	36,000	0.64	41,000	0.73	29,000	0.52	31,000	0.55	2,000	0.03	2,000
Grand s/o Warner	56,300	45,000	28,000	0.50	28,000	0.5	23,000	0.41	24,000	0.43	1,000	0.02	1,000
Grand s/o Dyer	56,300	45,000	29,000	0.52	28,000	0.5	23,000	0.41	23,000	0.41	0	0	0
Halladay s/o Dyer	25,000	20,000	23,000	0.92	22,000	0.88	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Halladay s/o Warner	25,000	20,000	17,000	0.68	17,000	0.68	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Lyon s/o McFadden	12,500	10,000	11,000	0.88	11,000	0.88	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Lyon s/o Edinger	13,000						9000	0.69	10,000	0.77	1,000	0.08	1,000
Lyon s/o Dyer	12,500	10,000	5,000	0.40	5,000	0.4	6,000	0.48	6,000	0.48	0	0	0
MacArthur s/o Main	56,300	45,000	45,000	0.80	45,000	0.8	44,000	0.78	44,000	0.78	0	0	0
Main s/o Edinger	37,500	30,000	36,000	0.96	36,000	0.96	28,000	0.75	28,000	0.75	0	0	0
Main s/o Warner	56,300						30,000	0.53	30,000	0.53	0	0	0
Main s/o Warner	56,300	45,000	46,000	0.82	44,000	0.78	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Main s/o Dyer	56,300	45,000	52,000	0.92	51,000	0.91	32,000	0.57	32,000	0.57	0	0	0
Main s/o MacArthur	56,300						27,000	0.48	32,000	0.57	5,000	0.09	5,000
Main s/o Sunflower	56,300						27,000	0.48	27,000	0.48	0	0	0
Main s/o Altos	56,300	45,000	48,000	0.85	48,000	0.85	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Main s/o MacArthur	56,300	45,000	37,000	0.66	37,000	0.66	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
McFadden s/o Standard	25,000	20,000	25,000	1.00	26,000	1.04	17,000	0.68	17,000	0.68	0	0	0
McFadden s/o Grand	37,500	30,000	27,000	0.72	27,000	0.72	20,000	0.53	20,000	0.53	0	0	0
McFadden s/o Williams	37,500	30,000	33,000	0.88	32,000	0.85	21,000	0.56	20,000	0.53	-1,000	-0.03	-1,000
Ritchey s/o Edinger	25,000	20,000	10,000	0.4	10,000	0.4	6,000	0.24	6,000	0.24	0	0	0
Ritchey s/o Edinger	25,000	20,000	14,000	0.56	15,000	0.6	11,000	0.44	11,000	0.44	0	0	0
Standard s/o Warner	25,000	20,000	18,000	0.72	18,000	0.72	8,000	0.32	8,000	0.32	0	0	0
Standard s/o Warner	25,000						8,000	0.32	8,000	0.32	0	0	0
Standard s/o Dyer	25,000						4,000	0.16	4,000	0.16	0	0	0
Vanago Way s/o McFadden	25,000	20,000	19,000	0.76	18,000	0.72	16,000	0.64	15,000	0.60	-1,000	-0.04	-1,000
Warner s/o Main	56,300	45,000	40,000	0.71	49,000	0.87	31,000	0.55	33,000	0.59	2,000	0.04	2,000
Warner s/o Main	56,300	45,000	30,000	0.53	41,000	0.73	25,000	0.44	27,000	0.48	2,000	0.04	2,000
Warner s/o Standard	56,300	45,000	29,000	0.52	42,000	0.75	22,000	0.39	26,000	0.46	4,000	0.17	4,000
Warner s/o Grand	56,300	45,000	31,000	0.55	44,000	0.78	24,000	0.43	29,000	0.52	5,000	0.21	5,000
Warner s/o Grand	56,300	45,000	37,000	0.66	57,000	1.01	17,000	0.30	24,000	0.43	7,000	0.40	7,000
IRVINE/SANTA ANA													
Altos s/o Red Hill (S)	37,500	30,000	35,000	0.93	39,000	1.04	4,000	0.11	4,000	0.11	0	0	0
Red Hill s/o Altos (S)	75,000	100,000	58,000	0.77	65,000	0.87	32,000	0.43	38,000	0.51	6,000	0.18	6,000
TUSTIN/SANTA ANA													
McFadden s/o Williams	38,000						27,000	0.71	27,000	0.71	0	0	0
Red Hill s/o Dyer/Barranca	56,000						22,000	0.39	41,000	0.73	19,000	0.84	19,000
Warner s/o Red Hill	54,000						12,000	0.22	20,000	0.37	8,000	0.33	8,000

2005 ALT 2

ORIGINAL MCAS ARTERIAL VOLUMES AND VIC'S COMPARISON

ORIGINAL MCAS ARTERIAL VOLUMES AND V/C'S COMPARISON											
ROAD SEGMENT	LONG-RANGE ADT VIC RATIOS		No-Project		With Project		JUNE 1999 STUDY		Change (Alt2-Baseline)		
	Capacity	CITY	No-Project		With Project		No-Project			With Project	
			Volume	V/C	Volume	V/C	Volume	V/C		Volume	V/C
Alton s/o Main	25,000	20,000	14,000	0.56	14,000	0.56	5,000	0.20	5,000	0.20	0
Dyer s/o Main	56,300	45,000	41,000	0.73	41,000	0.73	31,000	0.55	32,000	0.57	1,000
Dyer s/o Halladay	56,300	45,000	40,000	0.71	4,000	0.71	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Dyer s/o Hotel Terrace	56,000						41,000	0.73	42,000	0.75	1,000
Dyer s/o SR-66	56,000						58,000	1.04	68,000	1.21	10,000
Dyer s/o Red Hill	75,000	60,000	73,000	0.97	78,000	1.05	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Edinger s/o Broadway	38,000						31,000	0.82	31,000	0.82	0
Edinger s/o Main	56,300						37,000	0.66	38,000	0.66	1,000
Edinger s/o Standard	56,300	45,000	38,000	0.87	37,000	0.86	35,000	0.62	37,000	0.66	2,000
Edinger s/o Grand	56,300	45,000	43,000	0.76	44,000	0.78	38,000	0.68	123,000	2.18	84,000
Edinger s/o Lyon	56,300	45,000	45,000	0.8	46,000	0.82	37,000	0.66	40,000	0.71	3,000
Edinger s/o SR-66	56,300						NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Edinger s/o Ritchey	56,300	45,000	52,000	0.92	52,000	0.82	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Grand s/o Edinger	56,300	45,000	43,000	0.76	49,000	0.87	26,000	0.46	28,000	0.50	2,000
Grand s/o Warner	56,300	45,000	35,000	0.62	42,000	0.76	29,000	0.52	31,000	0.55	2,000
Grand s/o Dyer	56,300	45,000	36,000	0.64	41,000	0.73	29,000	0.52	32,000	0.57	3,000
Halladay s/o Warner	25,000	20,000	23,000	0.92	22,000	0.88	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Lyon s/o McFadden	12,500	10,000	11,000	0.88	11,000	0.88	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Lyon s/o Edinger	13,000						9,000		10,500	0.77	1,500
Lyon s/o Edinger	12,500	10,000	5,000	0.40	5,000	0.4	5,000	0.48	6,000	0.48	0
MacArthur s/o Main	56,300	45,000	45,000	0.80	45,000	0.8	44,000	0.78	43,000	0.76	-1,000
Main s/o Edinger	37,500	30,000	36,000	0.96	36,000	0.96	30,000	0.75	28,000	0.75	0
Main s/o Warner	56,300						30,000		30,000	0.53	0
Main s/o Dyer	56,300	45,000	46,000	0.82	44,000	0.78	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Main s/o MacArthur	56,300	45,000	52,000	0.92	51,000	0.91	32,000	0.57	32,000	0.57	0
Main s/o Sunflower	56,300						27,000	0.48	31,000	0.55	4,000
Main s/o Alton	56,300	45,000	48,000	0.85	48,000	0.85	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
McFadden s/o Standard	25,000	20,000	25,000	1.00	26,000	1.04	17,000	0.68	17,000	0.68	0
McFadden s/o Grand	37,500	30,000	27,000	0.72	27,000	0.72	20,000	0.53	20,000	0.53	0
McFadden s/o Williams	37,500	30,000	33,000	0.88	32,000	0.85	21,000	0.56	21,000	0.56	0
Ritchey s/o Edinger	25,000	20,000	10,000	0.4	10,000	0.4	6,000	0.24	6,000	0.24	0
Ritchey s/o Edinger	25,000	20,000	14,000	0.56	15,000	0.6	11,000	0.44	11,000	0.44	0
Standard s/o Warner	25,000	20,000	18,000	0.72	18,000	0.72	8,000	0.32	8,000	0.32	0
Standard s/o Warner	25,000						4,000	0.16	4,000	0.16	0
Standard s/o Dyer	25,000						16,000	0.64	15,000	0.60	-1,000
Village Way s/o McFadden	25,000	20,000	18,000	0.76	18,000	0.72	15,000	0.55	33,000	0.59	2,000
Warner s/o Main	56,300	45,000	40,000	0.71	49,000	0.87	31,000	0.44	27,000	0.48	2,000
Warner s/o Main	56,300	45,000	30,000	0.53	41,000	0.73	25,000	0.39	26,000	0.46	4,000
Warner s/o Standard	56,300	45,000	29,000	0.52	42,000	0.75	22,000	0.43	29,000	0.52	5,000
Warner s/o Grand	56,300	45,000	31,000	0.55	44,000	0.78	24,000	0.30	24,000	0.43	7,000
Warner s/o Grand	56,300	45,000	37,000	0.66	57,000	1.01	17,000	0.30	24,000	0.43	7,000
IRVING/SANTA ANA											0
Alton s/o Red Hill (S)	37,500	30,000	35,000	0.93	38,000	1.04	4,000	0.11	4,000	0.11	0
Red Hill s/o Alton (S)	75,000	100,000	58,000	0.77	65,000	0.87	32,000	0.43	38,000	0.51	6,000
TUSTIN/SANTA ANA											0
McFadden s/o Williams	38,000						27,000	0.71	27,000	0.71	0
Red Hill s/o Dyer/Barranca	54,000						22,000	0.38	44,000	0.79	22,000
Warner s/o Red Hill	54,000						12,000	0.22	20,000	0.37	8,000

2005 ALT 3

ORIGINAL MCAS ARTERIAL VOLUMES AND V/C'S COMPARISON

ROAD SEGMENT	LONG-RANGE ADT V/C RATIOS				No-Project				With Project				JUNE 1999 STUDY				Change (Alt-Base)
	ADT *	CITY	Capacity	STD	Volume	V/C	Volume	V/C	Volume	V/C	Volume	V/C	Volume	V/C	Volume	V/C	
Alton to Main	25,000	20,000	14,000	0.56	14,000	0.56	14,000	0.56	5,000	0.20	5,000	0.20	5,000	0.20	5,000	0.20	0
Dyer to Main	56,300	45,000	41,000	0.73	41,000	0.73	41,000	0.73	31,000	0.55	31,000	0.55	31,000	0.55	31,000	0.55	0
Dyer to Halladay	56,300	45,000	40,000	0.71	4,000	0.71	4,000	0.71	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Dyer to Hotel Terrace	56,300								41,000	0.73	41,000	0.73	41,000	0.73	41,000	0.73	0
Dyer to SR-66	56,300								58,000	1.04	67,000	1.20	67,000	1.20	67,000	1.20	9,000
Dyer to Red Hill	75,000	60,000	73,000	0.97	79,000	1.05	79,000	1.05	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Edinger to Broadway	38,000								31,000	0.82	31,000	0.82	31,000	0.82	31,000	0.82	0
Edinger to Main	56,300								37,000	0.66	38,000	0.67	38,000	0.67	38,000	0.67	1,000
Edinger to Standard	56,300	45,000	36,000	0.67	37,000	0.66	37,000	0.66	35,000	0.62	37,000	0.66	37,000	0.66	37,000	0.66	2,000
Edinger to Grand	56,300	45,000	43,000	0.76	44,000	0.78	44,000	0.78	38,000	0.67	40,000	0.71	40,000	0.71	40,000	0.71	2,000
Edinger to Lyon	56,300	45,000	45,000	0.8	46,000	0.82	46,000	0.82	39,000	0.69	41,000	0.73	41,000	0.73	41,000	0.73	2,000
Edinger to SR-66	56,300								37,000	0.66	39,000	0.69	39,000	0.69	39,000	0.69	2,000
Edinger to Richey	56,300	45,000	52,000	0.92	52,000	0.92	52,000	0.92	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Grand to Edinger	56,300	45,000	43,000	0.76	49,000	0.87	49,000	0.87	26,000	0.46	28,000	0.50	28,000	0.50	28,000	0.50	2,000
Grand to Edinger	56,300	45,000	35,000	0.62	42,000	0.75	42,000	0.75	29,000	0.52	31,000	0.55	31,000	0.55	31,000	0.55	2,000
Grand to Warner	56,300	45,000	36,000	0.64	41,000	0.73	41,000	0.73	29,000	0.52	31,000	0.55	31,000	0.55	31,000	0.55	2,000
Grand to Warner	56,300	45,000	28,000	0.50	28,000	0.5	28,000	0.5	23,000	0.41	24,000	0.43	24,000	0.43	24,000	0.43	1,000
Grand to Dyer	56,300	45,000	29,000	0.52	28,000	0.5	28,000	0.5	23,000	0.41	24,000	0.43	24,000	0.43	24,000	0.43	1,000
Halladay to Dyer	25,000	20,000	23,000	0.92	22,000	0.88	22,000	0.88	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Halladay to Warner	25,000	20,000	17,000	0.68	17,000	0.68	17,000	0.68	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Lyon to McFadden	12,500	10,000	11,000	0.88	11,000	0.88	11,000	0.88	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Lyon to Edinger	13,000								9,000		10,000	0.77	10,000	0.77	10,000	0.77	1,000
Lyon to Edinger	12,500	10,000	5,000	0.40	5,000	0.4	5,000	0.4	6,000	0.48	6,000	0.48	6,000	0.48	6,000	0.48	0
MacArthur to Main	56,300	45,000	45,000	0.80	45,000	0.8	45,000	0.8	44,000	0.78	44,000	0.78	44,000	0.78	44,000	0.78	0
Main to Edinger	37,500	30,000	36,000	0.96	36,000	0.96	36,000	0.96	28,000	0.75	28,000	0.75	28,000	0.75	28,000	0.75	0
Main to Warner	56,300								30,000		30,000	0.53	30,000	0.53	30,000	0.53	0
Main to Warner	56,300	45,000	46,000	0.82	44,000	0.78	44,000	0.78	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Main to Dyer	56,300	45,000	57,000	0.92	51,000	0.91	51,000	0.91	32,000	0.57	32,000	0.57	32,000	0.57	32,000	0.57	0
Main to MacArthur	56,300								27,000	0.48	32,000	0.57	32,000	0.57	32,000	0.57	5,000
Main to Sunflower	56,300								27,000	0.48	27,000	0.48	27,000	0.48	27,000	0.48	0
Main to Alton	56,300	45,000	48,000	0.85	48,000	0.85	48,000	0.85	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Main to MacArthur	56,300	45,000	37,000	0.66	37,000	0.66	37,000	0.66	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
McFadden to Standard	25,000	20,000	26,000	1.00	26,000	1.04	26,000	1.04	17,000	0.68	17,000	0.68	17,000	0.68	17,000	0.68	0
McFadden to Grand	37,500	30,000	27,000	0.72	27,000	0.72	27,000	0.72	20,000	0.53	20,000	0.53	20,000	0.53	20,000	0.53	0
McFadden to Williams	37,500	30,000	33,000	0.88	32,000	0.85	32,000	0.85	21,000	0.56	20,000	0.53	20,000	0.53	20,000	0.53	-1,000
Richey to Edinger	25,000	20,000	10,000	0.4	10,000	0.4	10,000	0.4	8,000	0.24	8,000	0.24	8,000	0.24	8,000	0.24	0
Richey to Edinger	25,000	20,000	14,000	0.56	15,000	0.6	15,000	0.6	11,000	0.44	11,000	0.44	11,000	0.44	11,000	0.44	0
Standard to Warner	25,000	20,000	18,000	0.72	18,000	0.72	18,000	0.72	8,000	0.32	8,000	0.32	8,000	0.32	8,000	0.32	0
Standard to Warner	25,000								8,000	0.32	8,000	0.32	8,000	0.32	8,000	0.32	0
Standard to Dyer	25,000								4,000	0.16	4,000	0.16	4,000	0.16	4,000	0.16	0
Village Way to McFadden	25,000	20,000	18,000	0.76	18,000	0.72	18,000	0.72	16,000	0.64	15,000	0.60	15,000	0.60	15,000	0.60	-1,000
Warner to Main	56,300	45,000	40,000	0.71	49,000	0.87	49,000	0.87	31,000	0.55	34,000	0.60	34,000	0.60	34,000	0.60	3,000
Warner to Main	56,300	45,000	30,000	0.53	41,000	0.73	41,000	0.73	25,000	0.44	26,000	0.50	26,000	0.50	26,000	0.50	3,000
Warner to Standard	56,300	45,000	29,000	0.52	42,000	0.75	42,000	0.75	22,000	0.39	27,000	0.48	27,000	0.48	27,000	0.48	5,000
Warner to Grand	56,300	45,000	31,000	0.55	44,000	0.78	44,000	0.78	24,000	0.43	30,000	0.53	30,000	0.53	30,000	0.53	6,000
Warner to Grand	56,300	45,000	37,000	0.86	57,000	1.01	57,000	1.01	17,000	0.30	26,000	0.46	26,000	0.46	26,000	0.46	9,000
IRVINE/SANTA ANA																	
Alton to Red Hill (S)	37,500	30,000	35,000	0.93	39,000	1.04	39,000	1.04	4,000	0.11	4,000	0.11	4,000	0.11	4,000	0.11	0
Red Hill to Alton (S)	75,000	100,000	58,000	0.77	65,000	0.87	65,000	0.87	32,000	0.43	39,000	0.52	39,000	0.52	39,000	0.52	7,000
TUSTIN/SANTA ANA																	
McFadden to Williams	38,000								27,000	0.71	27,000	0.71	27,000	0.71	27,000	0.71	0
Red Hill to Dyer/Berrance	56,000								22,000	0.39	43,000	0.77	43,000	0.77	43,000	0.77	21,000
Warner to Red Hill	54,000								12,000	0.22	22,000	0.41	22,000	0.41	22,000	0.41	10,000

2020 ALT 1

ORIGINAL MCAS ARTERIAL VOLUMES AND VIC'S COMPARISON

LONG-RANGE ADT VIC RATIOS											JUNE 1999 STUDY				CHANGE (Alt1-Baseline)
ROAD SEGMENT	ADT	STD	No-Project		With Project		No-Project		With Project		VIC	V/C			
			Capacity	Volume	V/C	Volume	V/C	Volume	V/C	Volume			V/C		
Alton s/o Main	25,000	20,000	14,000	0.56	14,000	0.56	5,000	0.20	5,000	0.20	0	0			
Dyer s/o Main	56,300	45,000	41,000	0.73	41,000	0.73	38,000	0.56	39,000	0.68	1,000	NO DATA			
Dyer s/o Halladay	56,300	45,000	40,000	0.71	41,000	0.71	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA			
Dyer s/o Hotel Terrace	56,000						45,000	0.73	46,000	0.82	1,000	13,000			
Dyer s/o SR-66	56,000						64,000	1.04	77,000	1.38	NO DATA	NO DATA			
Dyer s/o Red Hill	75,000	60,000	73,000	0.97	78,000	1.05	NO DATA	NO DATA	NO DATA	NO DATA	0.87	0			
Edinger s/o Broadway	38,000						37,000	0.97	37,000	0.97	0	0			
Edinger s/o Main	56,300						48,000	0.85	48,000	0.85	0	0			
Edinger s/o Main	56,300						47,000	0.82	48,000	0.85	1,000	0			
Edinger s/o Standard	56,300	45,000	38,000	0.67	37,000	0.66	57,000	0.87	57,000	1.01	0	0			
Edinger s/o Grand	56,300	45,000	43,000	0.76	44,000	0.78	58,000	0.89	58,000	1.03	0	0			
Edinger s/o Lyon	56,300	45,000	45,000	0.8	46,000	0.82	58,000	1.05	58,000	1.03	-1,000	NO DATA			
Edinger s/o SR-66	56,300						NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA			
Edinger s/o Richey	56,300	45,000	52,000	0.92	52,000	0.92	NO DATA	NO DATA	NO DATA	NO DATA	5,000	0			
Grand s/o Edinger	56,300	45,000	43,000	0.76	49,000	0.87	36,000	0.46	41,000	0.73	6,000	0			
Grand s/o Edinger	56,300	45,000	38,000	0.62	42,000	0.75	36,000	0.52	42,000	0.75	7,000	0			
Grand s/o Warner	56,300	45,000	36,000	0.64	41,000	0.73	36,000	0.52	43,000	0.76	-1,000	0			
Grand s/o Warner	56,300	45,000	28,000	0.50	28,000	0.5	29,000	0.41	28,000	0.50	-2,000	NO DATA			
Grand s/o Dyer	25,000	20,000	23,000	0.92	22,000	0.88	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA			
Halladay s/o Dyer	25,000	20,000	17,000	0.68	17,000	0.68	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA			
Lyon s/o McFadden	12,500	10,000	11,000	0.88	11,000	0.88	NO DATA	NO DATA	NO DATA	NO DATA	1,000	1,000			
Lyon s/o Edinger	13,000						12,000				1,000	1,000			
Lyon s/o Edinger	12,500	10,000	5,000	0.40	5,000	0.4	7,000	0.48	8,000	0.64	1,000	0			
MacArthur s/o Main	56,300	45,000	45,000	0.80	45,000	0.8	54,000	0.78	54,000	0.96	0	0			
Main s/o Edinger	37,500	30,000	36,000	0.96	36,000	0.96	32,000	0.75	32,000	0.85	0	0			
Main s/o Warner	56,300	45,000	46,000	0.82	44,000	0.78	NO DATA	NO DATA	NO DATA	NO DATA	-1,000	0			
Main s/o Warner	56,300	45,000	52,000	0.92	51,000	0.91	38,000	0.57	36,667	0.85	-1,333	0			
Main s/o Dyer	56,300	45,000	52,000	0.92	51,000	0.91	37,000	0.66	36,000	0.64	-1,000	0			
Main s/o MacArthur	56,300						31,000	0.55	30,000	0.53	-1,000	0			
Main s/o Sunflower	56,300						NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA			
Main s/o Alton	56,300	45,000	48,000	0.85	48,000	0.85	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA			
Main s/o MacArthur	56,300	45,000	37,000	0.66	37,000	0.66	NO DATA	NO DATA	NO DATA	NO DATA	0	0			
McFadden s/o Standard	25,000	20,000	25,000	1.00	26,000	1.04	20,000	0.58	20,000	0.80	-1,000	0			
McFadden s/o Grand	37,500	30,000	27,000	0.72	27,000	0.72	25,000	0.53	24,000	0.64	-1,000	0			
McFadden s/o Williams	37,500	30,000	33,000	0.88	32,000	0.85	23,000	0.61	23,000	0.61	0	0			
Richey s/o Edinger	25,000	20,000	10,000	0.4	10,000	0.4	8,000	0.32	8,000	0.32	-1,000	0			
Richey s/o Edinger	25,000	20,000	14,000	0.56	15,000	0.6	13,000	0.52	12,000	0.48	1,000	0			
Standard s/o Warner	25,000	20,000	18,000	0.72	18,000	0.72	10,000	0.40	11,000	0.44	1,000	0			
Standard s/o Warner	25,000						4,000	0.16	4,000	0.16	0	0			
Standard s/o Dyer	25,000						16,000	0.64	16,000	0.64	0	0			
Village Way s/o McFadden	56,300	45,000	40,000	0.71	49,000	0.87	37,000	0.86	43,000	0.76	6,000	0			
Warner s/o Main	56,300	45,000	30,000	0.53	41,000	0.73	28,000	0.50	35,000	0.82	10,000	0			
Warner s/o Main	56,300	45,000	29,000	0.52	42,000	0.75	24,000	0.43	34,000	0.67	10,000	0			
Warner s/o Standard	56,300	45,000	31,000	0.55	44,000	0.78	26,000	0.46	36,000	0.67	12,000	0			
Warner s/o Grand	56,300	45,000	37,000	0.66	57,000	1.01	18,000	0.32	40,000	0.71	22,000	0			
IRVING/SANTA ANA															
Alton s/o Red Hill (S)	37,500	30,000	35,000	0.93	39,000	1.04	5,000	0.13	4,000	0.11	-1,000	0			
Red Hill s/o Alton (S)	75,000	100,000	58,000	0.77	63,000	0.87	35,000	0.47	42,000	0.56	7,000	0			
TUSTIN/SANTA ANA															
McFadden s/o Williams	38,000						31,000	0.82	30,000	0.79	-1,000	0			
Red Hill s/o Dyer/Barranca	\$6000						28,000	0.46	33,000	0.59	7,000	0			
Warner s/o Red Hill	\$4000						12,000	0.22	38,000	0.72	27,000	0			

2020 ALT 2

ORIGINAL MCAS ARTERIAL VOLUMES AND V/C'S COMPARISON

LONG-RANGE ADT V/C RATIOS										JUNE 1999 STUDY	
ROAD SEGMENT	ADT *	CITY	No-Project	With Project	No-Project	With Project	No-Project	With Project	CHANGE	(ADT-Baseline)	
Capacity	STD	Volume	V/C	Volume	V/C	Volume	V/C	Volume	V/C		
Alton to Main	25,000	20,000	14,000	0.56	14,000	0.56	5,000	0.20	5,000	0.20	0
Dyer to Main	56,300	45,000	41,000	0.73	41,000	0.73	38,000	0.55	38,000	0.68	1,000
Dyer to Halladay	56,300	45,000	40,000	0.71	4,000	0.71	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Dyer to Hotel Terrace	56,000						45,000	0.73	47,000	0.84	2,000
Dyer to SR-66	75,000						64,000	1.04	79,000	1.41	15,000
Dyer to Red Hill	75,000	60,000	73,000	0.97	79,000	1.05	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Edinger to Broadway	38,000						37,000	0.97	37,000	0.97	0
Edinger to Main	56,300						48,000	0.85	48,000	0.85	0
Edinger to Standard	56,300	45,000	38,000	0.67	37,000	0.66	47,000	0.62	48,000	0.85	1,000
Edinger to Grand	56,300	45,000	43,000	0.76	44,000	0.78	57,000	0.67	57,000	1.01	0
Edinger to Lyon	56,300	45,000	45,000	0.8	46,000	0.82	58,000	0.69	59,000	1.05	1,000
Edinger to SR-66	56,300						58,000	1.05	59,000	1.05	0
Edinger to Ritchey	56,300	45,000	52,000	0.92	52,000	0.92	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Grand to Edinger	56,300	45,000	43,000	0.76	49,000	0.87	36,000	0.46	42,000	0.75	6,000
Grand to Edinger	56,300	45,000	35,000	0.62	42,000	0.75	36,000	0.52	44,000	0.78	8,000
Grand to Warner	56,300	45,000	36,000	0.64	41,000	0.73	36,000	0.52	45,000	0.80	9,000
Grand to Warner	56,300	45,000	28,000	0.50	28,000	0.5	29,000	0.41	29,000	0.52	0
Grand to Dyer	56,300	45,000	29,000	0.52	28,000	0.5	30,000	0.41	28,000	0.50	-2,000
Halladay to Dyer	25,000	20,000	23,000	0.92	22,000	0.86	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Halladay to Warner	25,000	20,000	17,000	0.68	17,000	0.68	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Lyon to McFadden	12,500	10,000	11,000	0.88	11,000	0.88	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Lyon to Edinger	12,500	10,000	5,000	0.40	5,000	0.4	7,000	0.48	8,000	0.64	1,000
MacArthur to Main	56,300	45,000	45,000	0.80	45,000	0.8	54,000	0.78	53,000	0.94	-1,000
Main to Edinger	37,500	30,000	36,000	0.96	36,000	0.96	32,000	0.75	30,833	0.82	-1,167
Main to Warner	56,300						36,000		34,000	0.60	-2,000
Main to Warner	56,300	45,000	46,000	0.82	44,000	0.78	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Main to Dyer	56,300	45,000	52,000	0.92	51,000	0.91	38,000	0.57	36,000	0.64	-2,000
Main to MacArthur	56,300						37,000	0.66	35,000	0.62	-2,000
Main to Sunflower	56,300						31,000	0.55	29,000	0.52	-2,000
Main to Alton	56,300	45,000	48,000	0.85	48,000	0.85	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Main to MacArthur	56,300	45,000	37,000	0.66	37,000	0.66	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
McFadden to Standard	25,000	20,000	25,000	1.00	26,000	1.04	20,000	0.68	21,000	0.84	1,000
McFadden to Grand	37,500	30,000	27,000	0.72	27,000	0.72	25,000	0.53	25,000	0.67	0
McFadden to Williams	37,500	30,000	33,000	0.88	32,000	0.85	23,000	0.61	23,000	0.61	0
Ritchey to Edinger	25,000	20,000	10,000	0.4	10,000	0.4	8,000	0.32	9,000	0.36	1,000
Ritchey to Edinger	25,000	20,000	14,000	0.56	15,000	0.6	13,000	0.52	12,000	0.48	-1,000
Standard to Warner	25,000	20,000	18,000	0.72	18,000	0.72	10,000	0.40	11,000	0.44	1,000
Standard to Warner	25,000						10,000	0.40	10,000	0.40	0
Standard to Dyer	25,000						4,000	0.16	4,000	0.16	0
Village Way to McFadden	25,000	20,000	19,000	0.76	18,000	0.72	16,000	0.64	16,000	0.64	0
Warner to Main	56,300	45,000	40,000	0.71	49,000	0.87	37,000	0.66	44,000	0.78	7,000
Warner to Main	56,300	45,000	30,000	0.53	41,000	0.73	28,000	0.50	37,000	0.66	9,000
Warner to Standard	56,300	45,000	29,000	0.52	42,000	0.75	24,000	0.43	37,000	0.66	13,000
Warner to Grand	56,300	45,000	31,000	0.55	44,000	0.78	26,000	0.46	41,000	0.73	15,000
Warner to Grand	56,300	45,000	37,000	0.66	57,000	1.01	18,000	0.32	45,000	0.80	27,000
WYNES-SANTA ANA											0
Alton to Red Hill (S)	37,500	30,000	35,000	0.93	38,000	1.04	5,000	0.13	4,000	0.11	-1,000
Red Hill to Alton (S)	75,000	100,000	58,000	0.77	65,000	0.87	35,000	0.47	44,000	0.59	9,000
TUSTIN-SANTA ANA											0
McFadden to Williams	38,000						31,000	0.82	30,000	0.79	-1,000
Red Hill to Dyer/Barranca	56,000						26,000	0.46	35,000	0.63	9,000
Warner to Red Hill	54,000						12,000	0.22	44,000	0.81	32,000

ORIGINAL MCAS ARTERIAL VOLUMES AND V/C'S COMPARISON

JUNE 1999 STUDY

[illegible]

MAYOR
Miguel A. Pulido
MAYOR PRO TEM
Robert L. Richardson
COUNCILMEMBERS
Tony Espinoza
Brett Franklin
Thomas E. Lutz
Patricia A. McGuigan
Ted R. Moreau



CITY OF SANTA ANA

PLANNING & BUILDING AGENCY
20th W. Fourth Street, (Rt. 19) • P.O. BOX 1900
Santa Ana, California 92702
Fax (714) 647-5808

CITY MANAGER
David N. Ream
CITY ATTORNEY
Joseph W. Fletcher
CLERK OF THE COUNCIL
Janice C. Gray

This letter was submitted in March 1998 in response to the initial draft EIS/EIR. Only those comments specifically identified in the preceding August 1999 comment letter are responded to because only those items were raised by the City of Santa Ana during the public comment period on this revised EIS/EIR. Responses are limited to comments 2 through 7, 9, 11, 13, 16, 20, 28, 29, 30, 32, and 33 through 39.

March 2, 1998

Mr. Dana Ogden
City of Tustin
300 Centennial Way
Tustin, CA 92780

RE: DRAFT EIR/EIS ON BASE DISPOSAL AND REUSE OF MARINE CORPS AIR STATION

Dear Mr. Ogden:

Thank you for the opportunity to review the Draft EIR/EIS for the Marine Corps Air Station. We appreciate the City of Tustin's community outreach and including Santa Ana in the planning process. Due to the scale of the proposed project, we have concerns regarding the potential traffic impacts upon Santa Ana. We offer the following comments for your consideration.

GENERAL TRAFFIC AND CIRCULATION COMMENTS:

1. Staff has been provided the opportunity to comment on various circulation-related documents over the past three years (e.g., Phasing Plan, Community Facilities & Infrastructure Report, Screencheck Traffic Study); however, it was not until the release of the Draft EIR/EIS that an integrated analysis of traffic impacts and a mitigation program was presented.
2. The Draft EIS/EIR states on page 4.10-33 that cumulative impacts and thus cumulative projects have been addressed within the short-range and long-range project analysis. The City of Santa Ana finds that this methodology prevents the real circulation impact of the project from being accurately disclosed. Additionally, since the "project" impacts are inaccurately characterized, the resulting mitigation program is cumulative-based rather than reflecting the true project-level mitigation. The California Environmental Quality Act (CEQA) requires that the direct effects of a project be discussed within the EIR. The City of Santa Ana requests that the traffic study includes separate impacts and mitigation

L12-82 Refer to response to comment L12-16 regarding analysis of cumulative traffic and traffic generated by the various reuse alternatives.

L12-82

- L12-83** Refer to response to comment L12-63 regarding analysis of reuse impacts with various toll conditions on the ETC.
- L12-84** Refer to response to comment L12-61 regarding revisions made to mitigation measures in Section 4.12 of the FEIS/EIR to state that TSIA funds would not be used for mitigating reuse impacts.
- L12-85** See response to comment L12-3. Based on the traffic forecasts in the 1999 traffic technical report, intersection #78, Red Hill and Dyer/Barranca, would not have significant impacts. Mitigation for intersections #59, Hotel Terrace/SR-55 northbound and Dyer, and #67, SR-55 northbound ramps and Dyer, identified in the FEIS/EIR and Final Appendix F based on the 1999 traffic forecasts.

measures for both projects and cumulative impact scenarios as requested in our original correspondence to Ms. Gray of HNTB dated June 4, 1993.

Additionally, please indicate what cumulative projects were assumed for the traffic model.

- 3. The long-range analysis is unrealistic in that it indicates (pages 1-3 and 1-4 of Appendix 1) that the model assumes the transportation corridors operating as "free facilities". This assumption assigns a disproportionate amount of project traffic to the adjacent corridor instead of local surrounding roadways, again masking the true impact of the project. The project build-out scenario should analyze traffic impacts with "toll" and "no toll" scenarios for the Foothill/Eastern and San Joaquin Transportation Corridors.

- 4. Mitigation Measure No. 3 on page 4.10-35 of the Draft EIS/EIR states:

L12-84 "The City of Santa Ana and the City of Tustin shall implement necessary roadway improvements for affected locations within the City of Santa Ana jurisdiction, in accordance with a prior agreement (Transportation System Improvement Authority (TSIA)). For other deficient Tustin intersections that are not covered in the TSIA agreement, the City of Tustin will include the improvements for these locations as part of future City Capital Improvement Programs, and will participate in these improvements on a fair share basis."

We request that the wording of this mitigation measure be strengthened to indicate that the TSIA mitigation list will not be expanded to include the base.

- 5. **L12-85** The City of Santa Ana has concerns with the traffic mitigation measures in the Draft EIR/EIS that defer disclosing improvements to subsequent studies. We find this to be supported by the CEQA Guidelines Section 15168, Subd. (c) (5), which states a program EIR will be most helpful in dealing with subsequent activities as it deals with the effects of the program as specifically and comprehensively as possible. Further, the CEQA court case of Sundstrom vs. County of Mendocino (1st Dist. 1988) 202 Cal.App.3d296, found that by deferring the identification of project mitigation, the County had evaded its responsibility to engage in comprehensive environmental review. Our concerns with the deferral of project mitigation are related to several locations including the following intersections:

- a. 78. Redhill & Dyer/Barranca; EBR.
- b. 59. Hotel Terrace/SR-55 & Dyer; 4th EBT, EBR.
- c. 67. SR-55 NB Ramps & Dyer; 2nd NBL.

Additionally, regarding intersections 59 and 67 mentioned above, there appears to be an inconsistency on page 4.10-34 of the Draft EIS/EIR. These two intersections are listed on the page without referencing that they will be studied at some future date, as stated on page 4.10-48.

6. L12-86 There is no discussion regarding ICU/LOS after the implementation of the mitigation measures. Please provide this information for all Santa Ana intersections.
7. On page 4.10-33, in the list of short-range mitigation measures for intersections 59, 61, 63, and 73, it is unclear who will be responsible for the cost of these improvements; and what factor (i.e., issuance of building permits) would trigger the need to construct these improvements.
8. L12-87 What is the time frame of "long-range" circulation phasing described in the traffic section? This is specifically important for the review and overall assessment of the document.
9. L12-88 In a letter to Kathryn Gray dated June 4, 1993, the City of Santa Ana identified certain intersections and ICU analysis methodology to be incorporated into the traffic study. The Draft EIS/EIR does not fully reflect the scope of work requested in this letter. For example:
- With respect to the ICU methodology for calculation, the City of Santa Ana does not allow for RTOR saturation flow factor of 0.75. The calculation and results, therefore, do not reflect actual intersections' level of service. The City of Santa Ana requested the following criteria:
 - 1600 through and right-turn movements.
 - 1500 left-turn movements.
 - Signal clearance interval factor = 0.02.
- No reference was made to RTOR saturation flow factor.
- b) The intersection of Technology Center and Dyer was not considered in the analysis.
- c) The City requested that ICU analyses be conducted for the following scenarios:
- Existing
 - Existing plus entitled.
 - Existing plus entitled plus project by phase of project development.
 - Existing plus entitled plus project build-out plus cumulative projects
 - Project alternatives plus existing and entitled

This request was not considered. Most importantly, our request to phase the mitigation according to specific project phases appears by have been ignored. It is unclear why the project was included in its entirety in the analysis while it is recognized that a project of such magnitude will eventually be implemented utilizing several phases.

L12-86 The requested information is in Appendix F. The summary tables contain three columns of data for all impacted intersections (for example refer to Table 4-11). The first column is ICU values in year "2020 baseline" which refers to future buildout of cumulative projects without reuse. The second column is "2020 Reuse Alternative 1" which provides the ICU values with implementation of that reuse alternative. The third column shows the ICU values after implementation of recommended mitigation measures.

L12-87 Clarification regarding payment of fair share mitigation and triggers to ensure implementation of required mitigation has been added in Section 4.12 of the FEIS/EIR.

L12-88 Refer to response to comment L12-28 regarding the Santa Ana ICU methodology. Refer to response to comment L12-52c regarding the intersection of Technology Center and Dyer. Refer to response to comment L12-52d regarding the ICU analysis process.

Additionally, for scenarios iii, iv, and v above, the City of Santa Ana requested that the traffic study identify feasible project mitigation measures to acceptable levels of service or existing level of service which ever is worse. Again, this request was not considered.

10. In order to reflect more accurate assessment of project impact in Santa Ana, the study area should be expanded to include the following:

- a) Intersections along Edinger west of Grand.
- b) Intersections along Warner west of Main.
- c) Intersections along McFadden west of Grand.
- d) Intersections along Dyer west of Main.
- e) Intersections along Main, Standard, and Grand north and south of the project.

L12-89 11. In general, evaluation of the appropriate study area is difficult due to the lack of project-specific traffic volume data.

12. A "Year 2000" interim year traffic analysis does not appear to be practical. Little, if anything will be built and occupied on the base at that time. A more realistic interim period would be in the year 2010 time frame.

L12-90a 13. The traffic study and related Traffic/Circulation analysis in the EIR/EIS presents the data and findings in a manner which is very difficult to interpret, draw conclusions and compare results.

L12-90b • The traffic distribution data does not completely cover the study area, which is already limited.

L12-90c • Short-range future ADT volumes are not shown.

L12-90d • Short-range future peak hour volumes are not shown.

L12-90e • Long-range future ADT volumes are not shown.

L12-90f • Long-range peak hour volumes are not shown.

L12-90g • The study is missing analysis of access to freeway on-ramps.

L12-89 Project-specific traffic volumes are distributed to the network in Figures 2-7, 2-8, and 2-9 of Appendix F. Refer to response to comment L12-15 regarding the definition of the study area.

L12-90 a. All the requested data and figure are contained in Appendix F and appendices to that appendix. Selected data focusing on impacts and mitigation is carried into the EIS/EIR.

b. Project trip distribution for each reuse alternative can be found in Figures 2-7, 2-8 and 2-9 of Appendix F. A percentage is shown for roadway segments with two percent or more of project-generated trips. Segments with no percentage shown would have one percent or less project-generated trips.

c. Short-range (2005) future ADT volumes are shown in Figures 3-7, 4-3, 4-9, and 4-15 of Appendix F.

d. Short-range (2005) future peak hour volumes are given in Appendix D to Appendix F.

e. Long-range (2020) future ADT volumes are shown in Figures 3-6, 4-5, 4-11, and 4-17 of Appendix F.

f. Long-range (2020) future peak hour volumes are given in Appendix D to Appendix F.

g. Ramp intersections are included in the analysis.

SPECIFIC TRAFFIC AND CIRCULATION COMMENTS:

Study Area:

14. Page 1-4—The study must clearly indicate the logic beyond selecting such a study area as presented in Figure 1-2. While the study states that most of the City of Tustin was included in the analysis, areas in Santa Ana closer to the base than those in Tustin were not considered. A traffic study for a project of this magnitude—1600 acres— (generating approximately 225,000 vehicles per day) should carefully look at the potentially impacted areas.

Analysis Scope:

15. Page 1-3, paragraph 2—The short range is defined as year 2000 and is not consistent with the statement in the same paragraph stating that the County Growth Management Plan and Congestion Management Program require 5 to 7 years.
16. The long-range assumption is also unrealistic. It assumes that all County transportation corridors would be operating as "free facilities". It would take almost 30 years to accomplish this task. The project build-out scenario should analyze traffic impacts with toll and no toll scenarios. Also, please include when the model assumes said long-range plan would be implemented.
17. Page 1-3, last paragraph—Please clarify the time frame for the long-range analyses.
18. Page 1-4, paragraph 1—It is unclear how the traffic model was used to forecast Santa Ana traffic. The discussion included County of Orange, City of Tustin, and City of Irvine with no reference to Santa Ana.
19. Page 1-7—The ADT volumes are not related to generally acceptable methodology for mid-block location. The City follows OCTA MPAH guidelines. Countywide LOS "C" is used for link capacity and LOS "D" is used for intersections. Regardless of link V/C ratios, if a link volume exceeds LOS "C", widening is required. Please refer to the OCTA MPAH and revise your mitigation methodology approach accordingly.
20. Page 1-8—The traffic analysis performance criteria for Santa Ana is not correct with respect to RTOR. This approach does not reflect actual operating conditions at the intersection.
21. Page 1-9—The discussion pertaining to ADT link deficiencies is unclear. Additionally, City of Santa Ana staff does not agree with the statement, "...for locations in the Cities of Tustin and Santa Ana, an ADT link deficiency is considered theoretical rather than actual if the intersection at the end of the link operates at acceptable levels." Please indicate the source of this assumption. Mitigation measures and recommendations made

L12-91

Refer to response to comments L12-4 and L12-48 regarding future impacts with and without a toll on the ETC.

L12-92

Refer to response to comment L12-28 regarding Santa Ana's ICU methodology.

in this study based on this assumption must be corrected and MCAS obligation(s) to mitigate roadway segments in Santa Ana should be identified.

22. Page II-3, paragraph 3—It is unclear why the study referred to Phase I as being representative of "no project". Please clarify.

Trip Distribution:

23. Page II-9-11—The table shows a difference in internal trips between total trips and total trip ends. Additionally, the subsequent discussion indicates that each trip has two ends. This assumption generates a questionable reduction in the project trip generation and an overall underestimation of project traffic impacts. It is almost universally recognized that the 8% (17,000 trips) already accounts for a trip with two ends—one at the origin and one at the destination within the study area. Please clarify.

24. It is unclear how many internal trips are actually considered in the calculation. Figure II-4 indicates 7% for short range and 15% for long range while the table on page II-9 indicates 8% of total trips and 15% for total ends. Please clarify.

25. Page II-11, paragraph 2—Indicates that the percent of trips interacting with land uses within the study area is 36% and outside the study area is 56%, for a total of 92%. The actual distribution percentages presented on Figure II-4 indicate only 80% of the trips for the short range and 78% for the long range, i.e., 12% to 14% of the trips are missing. Please clarify whether the remainder of the trips are being distributed internally within the study area or outside the study area.

Area Wide Travel Pattern:

26. We agree with the reuse area internal trips and trips within the study area presented in the previous section. However, we do not agree with the conclusion that the number of trips within the study area are lower with the project compared to without the project. The change in trip distribution pattern as a result of the introduction of a land use to an area is understood, but those trips will not disappear, just impact other intersections. Please provide clarification.

Transportation Settings:

27. Page III 6 & 7—V/C ratio and the resultant mitigation measures are not per city standards. The V/C ratio calculations for mid-block locations are somewhat meaningless and do not follow the County of Orange and the Orange County Transportation Authority guidelines for link capacities and mitigations.

L12-93	It is unclear why Table III-4 on page 22 was included without subsequent analysis and justification of mitigation measures.	New traffic forecasts and a revised traffic technical report make this comment non-applicable. Refer to Appendix D.
L12-94	Page III-43, paragraph 3, indicates that the long-range circulation system assumes build-out of the County and cities' Master Plan of Arterial highways. This appears unlikely to happen, as all circulation improvements are subject to uncertain funding.	Refer to response to comments L6-9 and L12-26 regarding the definition of committed roadway network and funding as a criteria.
L12-95	Page III-11 The study did not analyze the CMP intersection of 4 th St./Irvine Boulevard @ SR- 55 in the City of Santa Ana. Because of its close proximity to the project, this intersection may be significantly impacted.	Refer to response to comment L12-68.
L12-96	The traffic study used an outdated City of Santa Ana Capital Improvement Program as a basis for assumed improvements. Many of these assumed improvements have been deferred due to the recession and other factors. The City of Santa Ana will be pleased to provide an updated CIP.	Refer to response to comment L12-69.

32. The City of Santa Ana projects related mitigation improvements are assumed to be implemented when the projects come on line. For example, the MCAS traffic study assumes that the MacArthur Place development will be built at its original intensity and all associated transportation improvement will be constructed. At this time it appears that the MacArthur Place development will not be built at its original intensity, and the roadway improvements recommended in the study will not be constructed as originally programmed. The following are similar examples that should be carefully evaluated and compared to the study mitigation assumptions:

- Main/MacArthur Intersection Upgraded to Dual Lefts:

Three through and separate right turn lanes all four legs. Funding source: Private development. Funding for improvements are based on build out of Hutton Center and MacArthur Place. These projects are not funded if the development projects do not proceed fully conditioned at this time.

- South Grand/Warner:

Enhanced intersection ultimately to allow for dual lefts, 3 throughs, and separate right at all 4 legs. Funding source: No obligated source at this time. Deductions and improvements shall be secured as affected properties develop. One leg of each intersection is conditioned at this time.

- Main and Warner:

Enhanced intersection ultimately to allow for dual lefts, 3 throughs, and separate right on south leg; single left, 3 through, and separate right on east/west leg; and 3 through, dual left, and separate right on north leg. Funding source: No obligated source at this time.

Dedications and improvements shall be secured as affected properties develop. One leg is conditioned at this time.

- Grand Avenue Widening:

Widen Grand to 3 lanes in each direction with landscaped median.

Funding source: No obligated source at this time. Dedications and improvements shall be secured as affected properties develop. Nothing is conditioned at this time.

- Balance of Near Term Improvements Documented in Tustin/Santa Ana JPA Study.

No project is fully funded at this time.

NOTE: None of the above referenced projects are "committed" improvements without the related supporting development. Enhanced intersections are implemented incrementally and ultimate build out will require additional funding as revenues allow. Potential funding sources for enhanced intersections are private development, TSIA fees, grants, MCAS Reuse Plan, etc.

33. The MCAS traffic study assumes that all mitigations and roadway improvements will be built before MCAS, and the MCAS traffic can then utilize the access capacity generated by those improvements. This assumption is unrealistic because many projects are developing more slowly than anticipated due to economic factors, resulting in a lower level of traffic, thereby deferring the need for many of the mitigation programs.

34. The proposed phasing of major roadways and other on- and off-site improvements does not appear to be synchronized with development phasing.

35. The City of Tustin should contribute its fair share toward the construction of the Alton Bridge over the SR-55 (Costa Mesa Freeway).

Long Range Impact Analysis:

36. The long-range impact analysis should precede the mitigation section to justify the lists of recommended improvements.

37. The traffic study assumes that certain non-master-planned roadway and intersection improvements will be built, with or without the project. Such assumed improvements should be deleted from the traffic study unless these improvements have funding commitments and/or are programmed capital improvements.

L12-97 Refer to response to comment L12-26.

L12-98 Refer to response to comment L13-64.

L12-99 Refer to response to comment L12-78.

L12-100 Refer to response to comments L6-9 and L12-26.

38. Pages IV-1 through IV-16 include all mid-block and link capacity calculations. These calculations and the resulted recommended changes in the number of lanes and mitigation do not follow the County CMP and MPAH guidelines for mid-block improvements.
39. The City of Tustin's share of planned roadway improvements should be identified specifically as related to the MCAS impacts.
40. When planning the arterial system, the generally acceptable practice is to use LOS C for link capacities, with LOS D at intersections. A comparison of the values used in this analysis and the values used by the City of Santa Ana and Countywide is presented on Table 1. Applying the County guidelines would significantly change the results and conclusions presented in Table IV-2. It is also anticipated that the number of roadway links that would require mitigation as a result of MCAS will increase. Please also refer to our comments under the Analysis Scope section regarding the methodology used in this analysis.
41. The City of Santa Ana is not aware of any methodology that relates recommended mitigation at a specific link to the adjacent intersections' LOS. The results and recommendations presented in Table IV-3 and Figure IV-3 are not acceptable.
42. In general, the volume/capacity ratios calculated for Santa Ana were lower than expected based on previous analysis conducted for Santa Ana, including TSIA studies. This applies to existing calculations, existing with project, and existing without project, and for both the short and long terms.
43. Additional discrepancies worth investigation are the ICU/LOS comparisons between the analysis scenarios with and without the project. The traffic study indicates that intersection and mid-block level of service will actually improve as a result of adding project traffic. This appears in the 153 study intersections in general, and specifically in Santa Ana intersections.
44. A close look at Table IV-5, page IV-22, would support this phenomenon. It indicates that of the 153 study intersections, the project would impact only 28 intersections. The majority of the 28 intersections has nominal impact (i.e. between 2% and 5%). This also appears unrealistic for a project that generates 225,000 vehicles per day.
45. The attached Table 2 summarizes Santa Ana intersections ICUs. A close look at the table would indicate that ICUs have improved at 22 locations during the AM and PM peak hours as a result of adding traffic associated with the base. This appears to be unrealistic. Examples of the improved locations are presented below:
- Main at Warner
 - Main at Dyer
 - Main at Allion
 - Southbound SR-55 Ramps at MacArthur
- L12-101 Refer to response to comment L12-20.
- L12-102 The traffic analysis (Appendix F and Section 4.12 of the FEIS/EIR) has been modified to better identify the percentage share of planned roadway improvements associated with impacts resulting from any reuse alternative. The City of Tustin and City of Irvine, as applicable, are responsible for ensuring that future developers are conditioned to fund necessary improvements.

Significant discrepancies also exist if MCAS traffic study results are compared to the results from the City of Santa Ana's recent General Plan Circulation Element. Please refer to the "no base scenario comparison" at any of the ten listed intersections.

46. Based on our previous comments regarding trip distribution forecast and ICU methodology used in the MCAS study, we request recalculation of all impacted intersections in Santa Ana. The analysis and conclusions presented from page IV-17 to IV-42 (pertaining to Santa Ana) are not acceptable to determine mitigation measures at Santa Ana intersections.

47. Please identify if the percentage presented in Table IV-6 is to be applied to the fullest to mitigate an intersection to an acceptable LOS or for only a small portion of the mitigation. Use Main/MacArthur as an example.

48. With respect to project alternatives analysis, the analysis follows the same methodology used to evaluate the impacted intersections and link locations. Therefore, the results and recommendations are not acceptable to the City of Santa Ana and we request recalculation using the City of Santa Ana standards. Some observations are noted as follows:

- Although Alternative 2 is approximately 25,000 vehicles per day higher than Alternative 1, link volumes tend to decrease. Examples include Grand S/O Warner, Main S/O Edinger, Main S/O Dyer, etc.
- The same applies for the intersection capacity analysis when ICUs during the critical PM peak hour either remained the same or decreased for Alternative 2 as compared to Alternative 1. Examples include the intersections of Main/Alton, Grand/Dyer, and Richey/Edinger. Again, this is unrealistic since Alternative 2 generates 25,000 more cars than Alternative 1.

Short Range Analysis:

49. It is unclear why the short-range analysis is placed after the long-range analysis.

50. Please refer to our previous comments pertaining to intersection capacity utilization mid-block analysis, recommended mitigations, and analysis methodology. All of our comments for the long range are applicable for the short-range analysis herein.

51. The short range generates approximately 2,300 vehicles during the morning peak hour and 3,100 during the evening peak hour. Based on this trip generation, a close look at Table V-2 would indicate that impacts on Santa Ana intersections will be higher than those associated with Main/Alton, Grand/Edinger, Grand/Warner, etc.

Transportation Improvements:

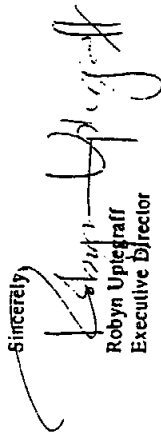
52. This section represents additional discussion regarding the recommended mitigations and analyses conducted in the report. We believe that the foregoing comments remain valid for this section; however, we reserve the right to review this section once calculations and analyses are revised to the satisfaction of City of Santa Ana staff.

Land Use:

53. The proposed land use plan included in the specific plan and project alternatives is generally compatible with adjacent land uses in Santa Ana. We have no issues related to the general plan amendment or land use plan.

This concludes our comments on the draft EIR/EIS. We thank you for your continued willingness to work toward the resolution of transportation and planning issues. Please contact Shahir Gobran at (714) 647-5615 for any specific questions related to our traffic comments.

Sincerely,


Robyn Uptegraff
Executive Director

RU/MD

Attachment

- c. George Alvarez, Engineering Services Manager
Joyce Amerson, Transportation Manager
Shahir Gobran, Transportation Analyst
Maya DeRosa, Environmental Coordinator

Road Segment	Existing Conditions					Long-Range ADT V/C Ratios						
	Lanes	MCAS STD		Volume	V/C	Lanes	ADT	City	No Project		With Project	
		Capacity	STD						Volumes	V/C	Volumes	V/C
Alton e/o Main	4	25,000	20,000	4,000	0.16	4	25,000	20,000	14,000	0.56	14,000	0.56
Dyer e/o Main	6	56,300	45,000	23,000	0.41	6	56,300	45,000	41,000	0.73	41,000	0.73
Dyer e/o Halladay	6	56,300	45,000	29,000	0.52	6	56,300	45,000	40,000	0.71	4,000	0.71
Dyer e/o Red Hill	6	56,300	45,000	28,000	0.50	8	75,000	60,000	73,000	0.97	79,000	1.05
Edinger e/o Standard	4	37,500	30,000	28,000	0.75	6	56,300	45,000	38,000	0.67	37,000	0.66
Edinger e/o Grand	6	56,300	45,000	32,000	0.57	6	56,300	45,000	43,000	0.76	44,000	0.78
Edinger e/o Lyon	4	37,500	30,000	31,000	0.83	6	56,300	45,000	45,000	0.80	46,000	0.82
Edinger e/o Ritchey	4	37,500	30,000	32,000	0.85	6	56,300	45,000	52,000	0.92	52,000	0.92
Grand n/o Edinger	6	56,300	45,000	26,000	0.46	6	56,300	45,000	43,000	0.76	49,000	0.87
Grand s/o Edinger	6	56,300	45,000	24,000	0.43	6	56,300	45,000	35,000	0.62	42,000	0.75
Grand n/o Warner	6	56,300	45,000	26,000	0.46	6	56,300	45,000	36,000	0.64	41,000	0.73
Grand s/o Warner	6	56,300	45,000	22,000	0.39	6	56,300	45,000	28,000	0.50	28,000	0.50
Grand n/o Dyer	6	56,300	45,000	21,000	0.37	6	56,300	45,000	29,000	0.52	28,000	0.50
Halladay s/o Dyer						4	25,000	20,000	23,000	0.92	22,000	0.88
Halladay s/o Dyer						4	25,000	20,000	17,000	0.68	17,000	0.68
Lyon s/o McFadden	2	12,500	10,000	11,000	0.88	2	12,500	10,000	11,000	0.88	11,000	0.88
Lyon s/o Edinger	2	12,500	10,000	4,000	0.32	2	12,500	10,000	5,000	0.40	5,000	0.40
MacArthur e/o Main	6	56,300	45,000	35,000	0.62	6	56,300	45,000	45,000	0.80	45,000	0.80
Main s/o Edinger	4	37,500	30,000	28,000	0.75	4	37,500	30,000	36,000	0.96	36,000	0.96
Main w/o Warner	6	56,300	45,000	28,000	0.50	6	56,300	45,000	46,000	0.82	44,000	0.78
Main s/o Dyer	6	56,300	45,000	26,000	0.46	6	56,300	45,000	52,000	0.92	51,000	0.91
Main s/o Alton	6	56,300	45,000	26,000	0.46	6	56,300	45,000	48,000	0.85	48,000	0.85
Main s/o MacArthur	6	56,300	45,000	22,000	0.39	6	56,300	45,000	37,000	0.66	37,000	0.66
McFadden e/o Standard						4	25,000	20,000	25,000	1.00	26,000	1.04
McFadden e/o Grand						4	37,500	30,000	27,000	0.72	27,000	0.72
McFadden w/o Williams						4	37,500	30,000	33,000	0.88	32,000	0.85
Ritchey n/o Edinger	4	25,000	20,000	8,000	0.32	4	25,000	20,000	10,000	0.40	10,000	0.40
Ritchey s/o Edinger	4	25,000	20,000	9,000	0.36	4	25,000	20,000	14,000	0.56	15,000	0.60
Standard n/o Warner	4	25,000	20,000	11,000	0.44	4	25,000	20,000	18,000	0.72	18,000	0.72
Village Way s/o McFadden	4	25,000	20,000	17,000	0.68	4	25,000	20,000	19,000	0.76	18,000	0.72
Warner w/o Main	4	37,500	30,000	27,000	0.72	6	56,300	45,000	40,000	0.71	49,000	0.87
Warner e/o Main	4	37,500	30,000	25,000	0.67	6	56,300	45,000	30,000	0.53	41,000	0.73
Warner e/o Standard	4	37,500	30,000	23,000	0.61	6	56,300	45,000	29,000	0.52	42,000	0.75
Warner w/o Grand	4	37,500	30,000	22,000	0.59	6	56,300	45,000	31,000	0.55	44,000	0.78
Warner e/o Grand	6	56,300	45,000	19,000	0.34	6	56,300	45,000	37,000	0.66	57,000	1.01
Irvine/Santa Ana												
Alton w/o Red Hill (S)	4	37,500	30,000	5,000	0.13	4	37,500	30,000	35,000	0.93	39,000	1.04
Red Hill n/o Alton (S)	6	56,300	45,000	25,000	0.44	8	75,000	100,000	58,000	0.77	65,000	0.87

TABLE 1

Capacity at LOS E City of Santa Ana uses MPAH standard; Max LOS is "C"

Blank cell indicates no data was provided

Existing ICU Summary	Short-range ICU Summary Phase 1 Proposed Project								Long Range ICU Summary Proposed Project								City Future Baseline No Marine Base	
			No Project		With Project		Change				No Project		With Project		Change			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Tustin/Virvine/Santa Ana																		
Red Hills & Dyer/Barranca	0.57	0.91	0.63	0.79	0.67	0.79	0.04	0.00										
Red Hills & Dyer/Barranca	0.60	0.95	0.63	0.82	0.70	0.81	0.07	-0.01										
Santa Ana																		
Main & Warner	0.63	0.82	0.85	0.97	0.89	0.92	0.04	-0.05	0.80	1.03	0.84	1.08	0.04	0.05			1.18	1.19
Main & Dyer	0.85	1.31	0.87	1.08	0.82	1.04	-0.05	-0.04	0.91	1.15	0.89	1.16	-0.02	0.01			1.00	1.65
Main & Alton	0.39	0.44	0.89	1.09	0.91	1.07	0.02	-0.02	0.68	1.08	0.68	1.03	0.00	-0.05			1.01	1.17
Main & Columbine	0.28	0.36	0.42	0.57	0.43	0.56	0.01	-0.01	0.56	0.73	0.54	0.72	-0.02	-0.01				
Main & MacArthur	0.84	0.91	0.82	0.90	0.85	0.85	0.03	-0.05	0.98	1.10	0.99	1.15	0.01	0.05			1.20	1.13
Main & Sandpointe	0.24	0.42	0.35	0.56	0.33	0.53	-0.02	-0.03	0.44	0.63	0.45	0.62	0.01	-0.01				
Hutton Circle & MacArthur	0.64	0.77	0.73	0.85	0.78	0.85	0.05	0.00	0.84	1.25	0.83	1.17	-0.01	-0.08				
SR-55 SB Ramps & MacArthur	0.75	0.57	0.66	0.59	0.66	0.57	0.00	-0.02	0.84	0.69	0.84	0.64	0.00	-0.05				
Halladay & Warner	0.46	0.55	0.48	0.57	0.50	0.58	0.02	0.01	0.30	0.44	0.41	0.54	0.11	0.10				
Halladay & Dyer	0.50	0.61	0.68	0.98	0.70	0.96	0.02	-0.02	0.83	0.95	0.81	0.96	-0.02	0.03				
Standard & Warner	0.41	0.64	0.80	0.87	0.82	0.84	0.02	-0.03	0.74	0.81	0.88	1.01	0.14	0.20				
Sutter & Dyer	0.30	0.39	0.39	0.46	0.37	0.46	-0.02	0.00	0.58	0.58	0.55	0.61	-0.03	0.02				
Hotel Terrace & Dyer	0.56	0.77	0.66	0.96	0.68	0.98	0.02	0.02	0.81	1.07	0.79	1.20	-0.02	0.13				
Grand & McFadden	0.66	0.70	1.07	0.86	1.08	0.85	0.01	-0.01	0.76	0.64	0.82	0.72	0.06	0.06			1.02	0.95
Grand & Edinger	0.62	0.81	0.90	1.01	0.88	1.07	-0.02	0.06	0.81	0.90	0.88	0.99	0.07	0.09			1.37	1.19
Grand & St. Andrew Pl.	0.36	0.56	0.48	0.67	0.46	0.71	-0.02	0.04	0.48	0.56	0.49	0.63	0.01	0.07				
Grand & Warner	0.82	0.77	1.13	1.10	1.07	1.12	-0.06	0.02	0.57	0.60	0.79	0.89	0.22	0.29			1.02	1.18
Grand & Hotel Terrace	0.38	0.57	0.39	0.55	0.39	0.56	0.00	0.01	0.52	0.63	0.50	0.61	-0.02	-0.02				
Grand & SR-55 SB Off Ramp	0.45	0.38	0.45	0.49	0.47	0.49	0.02	0.00	0.75	0.70	0.70	0.68	-0.05	-0.02				
Grand & Dyer	0.72	0.87	0.82	0.92	0.83	0.87	0.01	-0.05	1.27	1.18	1.16	1.20	-0.11	0.02			1.00	1.18
SR-55 NB Ramps & Dyer	0.76	0.60	0.75	0.66	0.80	0.66	0.05	0.00	1.21	0.97	1.18	1.03	-0.03	0.06			1.04	0.99
Pulman & Dyer	0.47	0.65	0.70	0.81	0.67	0.83	-0.03	0.02	0.85	0.89	0.84	0.93	-0.01	0.04			0.81	1.14
Lyon & McFadden	0.71	0.90	0.83	1.01	0.81	0.96	-0.02	-0.05	0.91	1.22	0.86	1.23	-0.05	0.01				
Lyon & Edinger			0.85	0.78	0.83	0.74	-0.02	-0.04	0.64	0.76	0.66	0.76	0.02	0.00				
Ritchey & Edinger			0.69	1.04	0.64	1.04	-0.05	0.00	0.79	1.18	0.80	1.16	0.01	-0.02				
SR-55 SB Ramps & Edinger			0.86	0.92	0.85	0.98	-0.01	0.06	0.92	1.09	0.91	1.08	-0.01	-0.01			0.87	1.16
Ritchey & McFadden	0.53	0.65																
Ritchey & McFadden	0.53	0.66																
Williams & McFadden	0.70	0.65																
Williams & McFadden	0.73	0.67																
Tustin Village & McFadden	0.70	0.77																
Tustin Village & McFadden	0.72	0.78																
Red Hill & Alton (S)			0.92	0.89	0.94	0.93	0.02	0.04	0.89	0.78	0.92	0.88	0.03	0.10				
Red Hill & Alton (I)			0.87	0.86	0.88	0.89	0.01	0.03	0.78	0.74	0.87	0.84	0.09	0.10				
Red Hill & Warner	0.45	0.56																
Red Hill & Warner	0.45	0.58																

TABLE 2

Blank cell indicates
no data availableNegative number
improvement in
LOS as a result of
MCAS

MAYOR
Miguel A. Pulido
MAYOR PRO TEM
Thomas E. Lutz
COUNCIL MEMBERS
Lisa Blitt
Alberia D. Christy
Brett Franklin
Patricia A. McColligan
Ted R. Moreno



CITY OF SANTA ANA
OFFICE OF THE CITY ATTORNEY
20 CIVIC CENTER PLAZA, M-25 • P.O. BOX 1968
SANTA ANA, CALIFORNIA 92702
(714) 647-5201 • FAX (714) 647-5515

CITY MANAGER
David N. Ream
CITY ATTORNEY
Joseph W. Fletcher
CLERK OF THE COUNCIL
Janice C. Guy

RECEIVED
AUG 27 1999
ADMINISTRATION

VIA FACSIMILE (714.838.1602) AND FIRST CLASS MAIL

Christine Shingleton, Assistant City Manager
City of Tustin
300 Centennial Way
Tustin, California 92680

Re: Tustin MCAS Base Disposal and Reuse EIS/EIR
State Clearinghouse No. 94071005

Dear Ms. Shingleton:

L13-1 This letter is provided in an attempt to clarify the date by which comments are to be provided to the City of Tustin, which is the lead agency on the above referenced EIS/EIR. Previously, you had graciously agreed to extend the date by which comments were due.

Your written response advising the City of Santa Ana of this extension, dated August 18, 1999, stated that the comment period would be extended until "5pm on September 27."

It is my understanding that at the meeting between the City of Tustin and the City of Santa Ana late Tuesday afternoon, you stated that it was your intention to provide an extension only until August 27 and not September 27. As I am sure you understand, it is difficult for our staff to be advised at the end of the day Tuesday that Tustin takes the position that the extension provided now expires only two short days from now and not another month.

This difficulty is exacerbated by the fact that it was only discovered this morning that a number of pages that Tustin passed out at this meeting late Tuesday were not excerpts from the EIS/EIR as was represented, but were rather excerpts from a prior non-circulated draft of the document. These earlier draft pages included a number of subtle yet crucial differences from the publicly circulated EIS/EIR. Since the pages that were passed out included a number of critical portions of the EIS/EIR, such as Table 7-5 at page 7-39 (the Offsite Intersection Mitigation Summary), this has naturally intensified staff's confusion.

L13-1 This letter clarifies the date of the extended comment period. The formal written response from the City of Santa Ana was received on August 31, 1999 and is included as comment letter L12.

Christine Shingleton, Assistant City Manager
August 25, 1999
Page 2

While Santa Ana has no desire to delay finalization of the EIS/EIR, it must be recognized that this is an extensive document and is time consuming to review. The EIS/EIR is over 550 pages and the accompanying brand new Attachment F exceeds this length. An asserted one week extension to review over 1,000 pages of environmental documentation is rather short – and it is particularly short given the fact that Tustin created the confusion by explicitly extending the comment period in writing to September 27. The 45 day minimum comment period set forth in CEQA is based upon the fact that draft EIRs should be less than 150 pages in length, and even if of unusual scope or complexity, less than 300 pages. (State CEQA Guidelines § 15141.)

In an effort to amicably resolve this question, and to allow Tustin to move forward with this process in the most expeditious fashion possible, the City of Santa Ana is willing to not hold Tustin to the September 27 deadline for comments set forth in your August 18 written communication. Santa Ana is perfectly willing to provide you with its comments no later than the close of business on Friday September 3, 1999. In order to meet this schedule, numerous Santa Ana employees will have to redirect their efforts to this response in lieu of other pressing matters. However, Santa Ana is willing to do so in order to keep the process moving forward.

Please let either me at the number above, or Robyn Uplegraff, Executive Director of Planning and Building Agency, at (714) 667-2700, that this proposal is acceptable at your earliest convenience. I am certain that you regret the error contained in your August 18 communication and share Santa Ana's wish to avoid making a miscommunication into a issue between our two cities.

Please make this letter part of the administrative record for both the Record of Decision and CEQA certification of the EIS/EIR. It constitutes a comment of the City of Santa Ana to the Draft EIS/EIR. Thank you for your kind consideration and attention to this matter.

Very truly yours,

Joseph W. Fletcher, City Attorney

By 
Benjamin Kaufman
Chief Assistant City Attorney

Christine Shingleton, Assistant City Manager
August 25, 1999
Page 3

cc. Lois Jeffrey, City Attorney, City of Tustin
Robyn Uplegraff, Executive Director, PBA
George Alvarez, Engineering Services Manager



GABRIELENO / TONGVA TRIBAL COUNCIL

RECEIVED

August 23, 1999

AUG 25 1999

REDEVELOPMENT AGENCY

N1-1

As stated in mitigation measure Arch-2 (Section 4.6), Native American consultation would be initiated if buried resources are found during grading activities.

Sent by Facsimile and U. S. Mail

Dana Ogdon
Senior Project Manager
City of Tustin
Tustin, CA 92780

RE: Joint Draft EIS/EIR Marine Corps Air Station, Tustin, CA

Dear Mr. Ogdon:

This tribal council wishes to express our gratitude for being allowed to review and comment on the draft EIS/EIR for disposal and reuse of the Marine Corps Air Station, Tustin, California.

As the project area lies within the cultural sphere of influence of the Gabrieleno/Tongva Tribal Council, we wish to stress to you the need for Native American representation that is both adequate and legitimate. Gabrieleno/Tongva tribal boundaries encompass the entire area that is addressed within the draft EIS/EIR document. As a result, this tribal entity recommends and requests that all archaeological and cultural resource issues include our recommendations and viewpoint. We request that direct Native American involvement, by means of Native American monitors, be implemented in any archaeological data recovery program, or program that involves the observation of grading during construction, or observation of any subsurface activity that may impact buried cultural deposits.

Our cultural resource representative, Samuel H. Dunlap, may be reached at (909) 507-1958 (voice mail). He would be the person responsible for the implementation of qualified and legitimate Native American monitors from this tribal council.

THE EXECUTIVE BOARD OF THE GABRIELENO/TONGVA TRIBAL COUNCIL

Anthony Morales, Chairperson
Roger Castillo, Spokesperson
Joanne M. Garcia, Secretary
Linda Longshore, Packet/Membership
Elicanor Solo, Treasure
Mary Ann Moore, Cultural Affair
Message Phone (626) 286-1632
Fax (626) 286-1262
P.O. BOX 693 · SAN GABRIEL, CA 91778

Dana Ogdon
August 23, 1999
Page Two

We look forward to future dialogue with the City of Tustin and the Department of the Navy on this interesting and viable project. If you have any questions, please feel free to contact us.

Sincerely,


ANTHONY MORALES
Tribal Chairman

cc: S. Dunlap
Dept. of the Navy

PROFESSIONAL NATIVE AMERICAN CULTURAL RESOURCE MONITORS

P. O. BOX 1391
TEMECULA, CA 92593
(909) 507-1958 (voice)

August 23, 1999

N2-2 Refer to response to comment N-1.

RECEIVED
AUG 25 1999
REDEVELOPMENT AGENCY

Sent by Facsimile and U. S. Mail

Dana Ogdon
Senior Project Manager
City of Tustin
Tustin, CA 92780

RE: Joint Draft EIS/EIR Marine Corps Air Station, Tustin CA

Dear Mr. Ogdon:

I am writing this letter after conferring with the Gabrieleno/Tongva Tribal Council on the Joint Draft EIS/EIR Marine Corps Air Station, Tustin CA document. As the cultural resource representative for this tribal group, I have been delegated to act on their behalf for this project.

N2-1 It is the desire of the Gabrieleno/Tongva Tribal Council to appoint qualified Native American cultural resource monitors to be involved in any archaeological and/or cultural resource mitigation measures that may be required for this proposed project.

I will look forward to working with your office to implement the recommendations made by the Gabrieleno/Tongva Tribal Council. Please feel to contact me at any time.

Very truly yours,


Samuel H. Duhalap
Director

SHD/hec

cc: Gabrieleno Tongva Tribal Council - San Gabriel
Dept of the Navy



THE IRVINE COMPANY

Monica Florian
Sr. Vice President

August 23, 1999

Mr. Dana Ogdon,
Sr. Project Manager
City of Tustin
300 Centennial Way
Tustin, California 92780

Dear Mr. Ogdon:

RE: JOINT DRAFT ENVIRONMENTAL IMPACT STATEMENT/
ENVIRONMENTAL IMPACT REPORT FOR DISPOSAL AND
REUSE OF MCAS - TUSTIN, CALIFORNIA

We have reviewed the referenced Draft EIR/EIS and offer the attached comments on that document. The focus of our review has been threefold:

1. To insure that the Reuse Plan and Implementing Actions incorporate adequate improvements, funding, and phasing programs to fully mitigate traffic and other infrastructure impacts in surrounding areas;
2. To assure that the overall appearance of the redevelopment is the same high quality as other master planned areas in Tustin and adjacent Irvine and that design themes and streetscape character are compatible with those adjacent areas; and
3. To assure that all measures -- both proposed mitigation measures and proposed implementation measures -- required or assumed to mitigate the impacts of the proposed project are clearly documented as official mitigation measures and incorporated into the mitigation monitoring program established by the EIR.

We believe the City and The Irvine Company share the goal of assuring that future development of the Base complies with the same rigorous mitigation standards which govern our developments in Tustin and Irvine. This approach is fair and equitable. Of equal importance, attention to community design and insistence upon quality will help

The responses to this comment letter are tied to more specific comments in an attachment following this cover letter.

Mr. Dana Ogdon,
Sr. Project Manager
City of Tustin
Page 2.

assure the project's appeal to potential investors and businesses and enhance its overall marketability and long-term economic value. We appreciate the City's consideration of our recommendations in this context.

If you have any questions regarding these comments, please feel free to call me.

Sincerely,



Monica Florlan

MF/jd
Attachment

cc: Christine Shingleton, Assistant City Manager

THE IRVINE COMPANY COMMENTS
MCAS - TUSTIN DEISEIR

CLARIFICATION OF REQUIRED MITIGATION

1. The draft EIS/EIR includes a number of measures necessary to mitigate the impacts of the project, which are identified as "implementation" measures, but are not included in the summarized list of mitigation measures. (See, e.g. pp 7-33 through 7-40 and 4-43 through 4-69.) These measures are equally important for the avoidance of impacts from the projects as other mitigation measures. They should be treated like all other mitigation measures and included in the summary listing of mitigation measures and the mitigation monitoring program.

TRANSPORTATION ISSUES:

Post-2020 Analysis

2. Chapter 5.0 of the traffic study includes Post-2020 traffic volume forecasts for an assumed Post-2020 circulation system. However, no analysis of the impacts from the Reuse of the Tustin Base has been included. For consistency with the normal requirements of the Cities of Tustin and Irvine, the traffic study should be expanded to include an analysis of project impacts and corresponding mitigation measures for Post-2020. Such an additional analysis would also seem justified since Tables 2-8, 2-11 and 2-14 indicate that as much as 2,800,000 sq. ft. of commercial uses would be phased after the Year 2020.

Roadway Link Analysis

3. The traffic study includes a peak hour analysis of intersections but does not include an analysis of roadway links. To be consistent with normal City study requirements, a roadway link analysis should be included.

Committed Improvements

4. The roadway improvements assumed in the Year 2020 analysis are identified as those committed by jurisdictions and other projects. However, all IBC-related improvements are assumed as fully committed in this time period, even though many are not fully funded. It is recommended that the City coordinate with the City of Irvine to determine reasonable assumptions to make relative to what IBC improvements can be anticipated to be completed by the Year 2020.

Consistency of Land Use Assumptions

5. Table 2-8 of the DEIR/EIS summarizes the land use proposal for Alternative 1. This Table is inconsistent with Table 2-2 of the traffic study in Appendix F. Why are the land use assumptions different? For example, it appears that the housing assumptions in Table 2-8 would result in a higher trip generation than used in the traffic study. These tables and resulting analysis should be corrected

O1-1

Project implementation measures that are needed to comply with the City's General Plan (such as a Phasing Plan for the construction of on-site and off-site traffic improvements or measures to require utility systems to be provided concurrent with demand) that do not mitigate identified significant effects on the environment are not required by CEQA to be described as mitigation measures or included in a Mitigation Monitoring and Reporting Program. (Public Resources Code §§ 21002 and 21081(a); Cal. Code Regs., Title 14, §§ 15021(a)(2), 15091(a)(1), and 15097.) In this case, the implementation measures are described in the EIS/EIR and a commitment is made to include them as conditions of approval of the Specific Plan (see Chapter 7.0) or of individual projects (see subsection 4.3.3). Thus, the commenter's concern, while not required by CEQA, is satisfied.

O1-2

Refer to response to comment L12-48.

O1-3

Appendix B to the Traffic /Circulation Technical Report (which is Appendix F of the EIS/EIR) contains roadway link analyses that consider peak hour data consistent with the City of Irvine roadway link analysis methodology.

O1-4

Refer to response to comment L6-9 regarding the corrected committed roadway network in Irvine.

O1-5

There was an error in assigning housing types within Table 2-2 of Appendix F. When Final Appendix F is corrected to match Table 2-8 of the EIS/EIR, an additional 1,350 ADT would be generated. This is approximately one percent of total trips. A sensitivity analysis was performed and the results are provided in Final Appendix F. There would be no change to the conclusion of significance at any individual intersection, and no additional mitigation would be required.

Jamboree/Barranca Intersection

- 01-6
6. Alternatives 1, 2 and 3 provide for a roadway right-of-way designation or reservation for the Jamboree/Edinger and Tustin Ranch/Edinger grade separations. No similar right-of-way provision has been made for the future Jamboree/Barranca grade separation. This right-of-way provision should be made as this grade separation is an integral part of the IBC mitigation program and has been identified by the TCA as a needed future project to accommodate ETC traffic. The City of Tustin entered into a Memorandum of Understanding with the TCA whereby the TCA has placed into escrow \$1,000,000 for future improvements to the Jamboree/Barranca intersection and which acknowledges that the TCA has no further fair share obligation towards the future grade separation at this location. It is recommended that the following mitigation measure be added:

"Prior to the issuance of any building permits for planning area 27, a project study report shall be conducted jointly between the Cities of Tustin and Irvine which addresses the right-of-way requirements for a future grade separation for the Jamboree/Barranca intersection. The development plan for planning area 27 shall make provisions for reservation of the necessary right-of-way as identified in this cooperative study."

- 01-7
Table 4-3 of the traffic study in Appendix F identifies that the project causes a deficiency at the Jamboree/Barranca intersection for the Year 2005 analysis. Table 4-5 demonstrates that the project contributes significantly to a deficiency at this intersection for the Year 2020. Table 4-10 reviews how this deficiency could be mitigated by a new access to Warner Avenue for the Year 2020. While this new Warner Avenue access would reduce the ICU at the Jamboree/Barranca intersection, it does not reduce the ICU to an acceptable level of service. (Please note that Table 4-10 indicates that this reduction would result in mitigating to an adequate level of service. This statement should be revised. This is not correct as an ICU of 1.00 is the criteria for acceptability for this City of Irvine intersection.)

- 01-8
We are concerned that the DEIS/EIR on page 4-146 states that there is no identifiable mitigation for this deficiency. This conclusion is in conflict with the above-mentioned Memorandum of Understanding and also with Table 5-2 of Appendix F which states that the Jamboree/Barranca grade separation has been assumed as a Post Year 2020 improvement. Therefore, we believe that a mitigation measure should be added to require a fair share responsibility towards construction of this project and which would identify when such improvement is necessary within the development thresholds identified in Implementation Measure 1A-1 and the corresponding Table 7-3.

- 01-9
It is also noted that Page 4-147 states that the new access to Warner Avenue, west of Jamboree, is included as a Year 2005 mitigation measure. However, it is not

01-6

Refer to response to comment L6-16 regarding the 1998 MOA for Jamboree and Barranca.

01-7

Access to Warner Avenue is presented as mitigation for year 2005, not 2020. This would mitigate to an adequate level of service since in the IBC the acceptable level of service with assumed ATMS is 1.05 (1.00 plus .05 for ATMS). The ICU at this location would be at 1.05.

01-8

Table 5-2 has been corrected in Final Appendix F to remove the Jamboree/Barranca grade separation under post-2020 condition because the MOA found it to be financially infeasible. The FEIS/EIR has been changed as well. Refer to response to comment L6-16 regarding other Jamboree/Barranca grade separation issues.

01-9

Table 4.12-8 is part of mitigation measure T/C-2 and identifies the Warner Avenue access west of Jamboree Road as a partial mitigation measures for the intersection of Jamboree Road and Barranca Parkway in the year 2005. This is consistent with the narrative.

The Irvine Company Comments
MCAS Tustin DEIS/DEIR
Page 3.

Included in any mitigation measure list throughout the document. This access connection should be incorporated into the official list of mitigation measures.

Phasing of Improvements

7. The traffic implementation measure (IA-9) for the timing of off-site improvements between Years 2005 and 2020 is vague, open to interpretation and only requires mitigating the effects of the project pursuant to the improvement programs established by the City. This does not assure adequate mitigation. For example, how will the City establish the timing of the extension of Tustin Ranch Road from Walnut to Edinger, including the needed railroad grade separation, if the City does not have the funds in its CIP when the roadway is needed? This language should be amended to insure implementation of improvements tied to level of service performance criteria rather than improvement programs established -- but not necessarily assured -- by the respective jurisdictions.

O1-10

Tustin Ranch Road

8. Page 4-14 indicates that the extension of Tustin Ranch Road from Walnut Avenue to Edinger Avenue is a planned City of Tustin project and is not a part of Alternative 1. Later, it states that the grade separation is included in Alternative 1. It should be clarified that the project is responsible for the full cost of the grade separation and the timing of the grade separation should be included in Measure IA-1.

O1-11

Myford/I-5 Overcrossing

9. In response to concerns expressed by the City of Tustin during the processing of the Planning Area 10 Industrial Zoning and Map applications, the City of Irvine placed a condition of development on the project to participate in a fair share funding of the Myford/I-5 overcrossing. A draft agreement was developed and approved by the City of Tustin staff which specifically required the Base Reuse Plan to participate in funding the overcrossing which is included in the City's General Plan Circulation Element. This commitment should be incorporated into a mitigation measure in the DEIR/EIS.

O1-12

Corridor Fee Program

10. There is no mitigation measure requiring payment of Corridor Fees for the Foothill/Eastern Major Thoroughfare and Bridge Fee Program. Since this project area falls within the Corridor's Area of Benefit, fees should be required of all development, unless specifically exempted. The recommended mitigation measure is as follows:

O1-13

O1-10 Table 7-5 of the FEIS/EIR has been revised to identify traffic volume thresholds for implementation of the off-site mitigation improvements to ensure that the study area circulation system would be adequate to accommodate planned development.

O1-11 Table 4-5 of the Final Appendix F entitled "Summary of Impacted Intersections (2020 Reuse Alternative 1)" assumes that Tustin Ranch Road will be extended to Barranca Parkway with Alternative 1 (includes grade separation at Edinger Avenue) and to Edinger Avenue with grade separation without Alternative 1. The extension of Tustin Ranch Road from Walnut Avenue to Edinger Avenue is a City of Tustin Capital Improvement Program project. As such, it was assumed as a committed improvement in the traffic analysis. The exact timing of this overcrossing is dependent upon future build-out patterns and when ADT thresholds are reached. The earliest likely construction would be Phase III in Table 4.12-10 when Tustin Ranch Road is planned for connection from Edinger to the North Loop Road.

O1-12

Highway network assumptions are consistent with the current versions of OCTAM and the County of Orange MHPA. The Myford/I-5 overcrossing is not included in either of those master plan networks. Chapter 5 of the Final Appendix F has been modified to address the long-range (post 2020) status of this overcrossing.

O1-13

The Major Thoroughfare and Bridge Fee Program is not a mitigation measure. However, pursuant to the requirements of the Joint Powers Agreement creating the Foothill/Eastern Transportation Corridor Agency, fees must be paid into this program as development occurs.

"All development within the Project area shall be responsible for payment of Corridor Fees as specified in the Foothill/Eastern Major Thoroughfare and Bridge Fee Program (MTBFP). Types of development exempt from the program shall only be those which are consistent with the exemption criteria within the MTBFP, whether developed by a public agency or private sector."

Trail Improvements

11. Implementation Measure (W) on page 4-68 requires an agreement for participation in improvements for the Peters Canyon Regional Trail as well as the Barranca Channel Trail within the Reuse Area "should the Cities establish such a program." This is in contrast to the manner in which private projects have been historically conditioned where improvements of the trail adjacent to the project has been a requirement to construct. These improvements should be identified as a required mitigation measure which must be constructed at a certain threshold of development.

FLOOD CONTROL:

Peters Canyon Channel Improvements

12. The project has limited its obligation on the Peters Canyon Channel to dedication of the existing 180 ft. wide easement, plus 40 ft. of additional right-of-way. No physical improvements to the Channel are proposed since the OCFCD has included the Channel in its Five Year Plan. This is not consistent with how private projects have been historically conditioned by the City. Therefore, the Plan should address the requirements to fully improve the Channel in conjunction with on-going development consistent with the Master Plan, in the event the County's improvement plan is not funded.

LAND USE COMPATIBILITY:

13. We concur with the Draft EIR conclusion that there is the potential for land use incompatibility with adjacent uses or internally if development is not sensitively designed and that "... potentially significant land use compatibility impacts would require mitigation." While the proposed mitigation measures attempt to address this issue generally, they do not adequately mitigate potential compatibility problems.

The mitigation measures should be expanded to clarify that the goals of these measures are to assure that the overall appearance of the development on Base is of the same high quality as other master planned areas in Tustin and adjacent Irvine and that the design themes and streetscape character are consistent or compatible with those established in the adjacent communities. Achieving these goals is not only important as mitigation of potential impacts. These goals are also important to achieving the City's economic objectives for the project because they enhance the

O1-14

Implementation measure (w) has been modified in Section 4.4 of the FEIS/EIR to reflect the process for identification of project-specific fair share contributions for various trail improvements.

O1-15

In the event that Peters Canyon Channel improvements are not funded by the county, implementation measure (I) has been added to Section 4.3 of the FEIS/EIR.

O1-16

Mitigation measures LU-1 and LU-2 in Section 4.1 of the FEIS have been modified to add a statement of goals, as requested. The infrastructure and urban design guidelines promulgated in the Specific Plan are considered adequate by the lead agency to mitigate potential land use compatibility impacts associated with the LRA Reuse Alternative (Chapter 7.0, CEQA only). Response to comment O1-19 provides an item by item evaluation of the suggested modifications to the Specific Plan. While these suggestions are not technically a comment on the adequacy of the EIS/EIR, the evaluation is provided as a courtesy.

THE IRVINE COMPANY COMMENTS
MCAS TUSTIN DEIS/EIR
Page 5.

long-term economic value of the development which will increase its attractiveness to potential investors, tenants, and residents.

We do not believe the infrastructure and urban design plans included in the Specific Plan achieve these objectives and therefore they do not adequately mitigate land use compatibility impacts. Attached "Appendix A" contains specific recommendations to address potential incompatibilities.

AESTHETICS:

14. We concur with the Draft EIR conclusion that "... there would be potential for significant impacts if landscaping and urban design would not fully address aesthetic consideration." We also concur with the proposed mitigation measure VIS-1 requiring an urban design plan to address these issues. If, however, the "13 plans for infrastructure and urban design to support planned land uses" (referenced on page ES-30) are intended to satisfy Mitigation Measure VIS-1, we believe that the potential aesthetic impacts identified in the EIR are not adequately mitigated.

Attached "Appendix A" identifies specific modifications to the proposed Specific Plan that should be incorporated to assure compatibility of the proposed project with adjacent communities and mitigation of potential negative aesthetic/visual impacts.

IMPACTS TO AGRICULTURE:

15. The property includes prime agricultural land, under the criteria adopted by the California Department of Conservation. Appendix G to the CEQA Guidelines provides that ...

"[a] project may be deemed to have a significant effect on the environment if it will ... [c]onvert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land."

Applying this direction to the project, the loss of agricultural potential for this land might be classified as significant. There are, however, regional and local factors that argue against that conclusion. Given these regional and local factors, the conversion of prime agricultural land on MCAS Tustin to urban uses should not be considered a "significant adverse impact."

While the central and south Orange County area has a significant agricultural history, over the last forty years the area has undergone a conversion from a rural area to an urban center. Agriculture remains a viable interim economic use of isolated portions of this area, but the land value differentials that have been created through the urbanization of Orange County, and the inherent conflicts that exist between agricultural operations and urban uses (i.e., pesticides and urban pollution conflicts,

O1-17

The design guidelines promulgated in the Specific Plan would be appropriate to mitigate potential aesthetics impacts from implementation of the LRA Reuse Alternative (Chapter 7.0). Refer to response to comment O1-19 which contains detailed responses to Appendix A of this comment letter.

O1-18

Appendix G of the CEQA Guidelines has been revised and no longer includes the referenced quotation. Appendix G of the CEQA Guidelines is now the Environmental Checklist form. The significance criteria for agricultural resources in the EIS/EIR were based on the current Appendix G of the CEQA Guidelines (October 1998), which implies that any conversion of Farmland would be significant. Although the commenter's discussion about the interim nature of agricultural land in Orange County presents an interesting viewpoint, the conversion of farmland is considered significant in this EIS/EIR under both CEQA and NEPA. However, there is a separate analysis of farmland per the FPPA which concludes that farmland at MCAS Tustin is not warranted federal protection under that act.

urban vandalism and theft of ag resources, loss of marketing, packaging and distribution support systems, etc.) make long-term preservation of agricultural operations in Central Orange County of doubtful viability. Protection provided for agricultural uses of lands at MCAS Tustin by USMC ownership and operation of this area has insulated such uses somewhat from urban interferences, but the directed closure and reuse of MCAS Tustin will remove that protection.

Additionally, preservation of existing agricultural operations in central Orange County from in-fill urbanization would have adverse indirect impacts on other prime agricultural areas of Southern California where agriculture remains a viable land use. The demand for new urban expansion in Southern California continues to be strong. Where new homes, retail services, and office and industrial uses are not provided in in-fill areas such as central Orange County, that demand forces new development, and accelerated conversion of agricultural land, to be displaced to more rural areas, such as in the Corona and Chino areas of Riverside County.

Under these circumstances, the conversion of prime agricultural land on MCAS Tustin to urban uses is not a significant adverse impact, and the document should be revised to reflect this conclusion.

THE IRVINE COMPANY
MCAS - TUSTIN DEIS/EIR
"APPENDIX A"

These recommendations are presented to assure that the overall appearance of the development on Base is of the same high quality as other master-planned areas in Tustin and adjacent Irvine and that the design themes and streetscape character are consistent or compatible with those established in the adjacent communities. The attention to detail and insistence upon quality suggested here will not only promote compatibility with surrounding land uses and the visual environment, it will enhance the development's appeal to potential investors and its marketability. The Cities of Tustin and Irvine have already established a high standard in the area. The project's ability to compete successfully in the marketplace and meet the City's economic objectives will be enhanced to the degree the urban design components of the project reinforce the perception of quality and long-term value to potential developers and consumers.

Need for coordination of landscape along streets:

If the landscape along the streets at the Base is to be installed by the future landowners, then either the landscape policies in the Specific Plan need to be more specific, or the subsequent more-specific design guidelines need to be mandatory. For instance, Figure 2-30b states that the tree on Redhill Avenue between the curb and sidewalk is an "upright vertical tree." The Specific Plan should identify a specific tree type, size, and spacing for each street to promote investor confidence that the streets in and around the new community will have visual continuity and will not look like a hodge-podge.

Need for landscape on Jamboree Road:

Jamboree Road is an important cross-county arterial highway linking Pacific Coast Highway in Newport Beach with Chapman Avenue in Orange, passing by or through Newport Center, Big Canyon, Eastbluff, Newport North, the Irvine Business Complex, MCAS Tustin, Tustin Market Place, Tustin Ranch, West Irvine, and Santiago Hills. The public's perception of the quality of life of these communities is enhanced or diminished by the landscape treatment of this road.

The proposed zero (0)-foot landscape setback along Jamboree Road through the Base (pages 3-128, 3-130, 3-132, and 3-134) will continue the current negative experience of MCAS Tustin being the least inviting segment of the road, which is unfortunate since this portion of Jamboree, as the terminus to State Route 261, is also now the "front door" to the project.

The Specific Plan should require that the existing wall and barbed wire along Jamboree Road be removed and a 25-foot landscaped setback and a 14-foot wide landscaped median be created to match the road's appearance in Tustin Ranch.

Need for landscape along railroad line:

The portion of the rail line bordering the Base (between Jamboree Road and Harvard; and

01-19

The following response is provided in reaction to Irvine Company recommendations, not the adequacy of the EIS/EIR.

Coordination of Landscaping Along Streets – The urban design concept in the MCAS Tustin Specific Plan establishes a general framework for achieving aesthetic integration of uses within the site and with surrounding uses, while also providing identity to the plan area and guidelines which will permit, not restrict, creative solutions.

At the Specific Plan level these guidelines are consistent with the level of design information that has been required of other noted planned communities in both the cities of Tustin and Irvine and will be used to evaluate more specific project level submittals. As identified in Section 4.2 of the Specific Plan, submittal of more detailed concept landscaping plans will be evaluated during design review and plan check process and will be subject to City of Tustin landscaping standards and submittal requirements. Specific review criteria are designed to ensure design quality and continuity while still providing for design creativity.

Need for Landscaping on Jamboree Road – Jamboree Road from its intersection with Edinger Avenue southwest to Barranca Parkway functions as a transition area for the southerly terminus of the west leg of the Eastern Transportation Corridor. As such, this portion of road functions very much like a freeway, with no sidewalks or bicycle lanes permitted. Significant environmental concerns and safety concerns have also required the recent installation of raised walls and security fencing that will not be removed. While landscaping installation within the right-of-way is not possible, the Urban Design Plan does identify property adjacent to Jamboree Road for edge or perimeter planting (see subsection 2.17.1 of the Specific Plan). This installation will occur with development.

Need for Landscaping Along Railroad Line – The perimeter of the project along the railroad line between Jamboree Road and Harvard Avenue is shown in the Specific Plan Urban Design Plan as a plan edge where perimeter planting will occur. There is a discussion of this concept in the Specific Plan. The north side of Edinger Avenue between Severnyns Road and Jamboree Road is outside of the MCAS Tustin Specific Plan project area. As this area privately developed, landscaping installation will be reviewed for consistency with any approved streetscape plan for the south side of Edinger Avenue.

THE IRVINE COMPANY COMMENTS
MCAS TUSTIN DE/SE/IR
"Appendix A"
Page 2.

along the north side of Edinger between Severnys Road and Jamboree Plaza) should be landscaped with a continuous row of evergreen trees to provide an attractive image of the Base to passengers as trains slow down at the future Tustin Commuter Rail Station at Jamboree Plaza, recognizing that the railroad is another critical frontage shaping the public's image of the project. The landscape of the segment of the rail line at Harvard Avenue could be designed as a gateway to Tustin.

Need for new landscape to be sensitive to existing context:

The new landscape on the streets that surround the Base should be sensitive to the existing context. The plan shows new landscape which could be very different than the existing landscape on these streets, such as the exclusive use of palms on the north side of Barranca (per Figure 2-32a and 2-32b) when large canopy trees are used on the south side of the street. To respect the existing context, the Specific Plan should require that the new landscape on the streets at the Base match the existing landscape on these streets outside the Base:

Street	Tree Type	Tree Size	Spacing
Redhill	Eucalyptus maculata	15-gallon, min.	Irregular (1 tree/30 l.f.)
Edinger	Eucalyptus leucosylon	15-gallon, min.	45 ft. o.c. in tree wells in sidewalk
Harvard	Eucalyptus camaldulensis	15-gallon, min.	25 ft. on center
Warner	Ficus "Florida"	24-inch box, min.	25 ft. on center
Jamboree	Tristania conferta	24-inch box, min.	25 ft. on center
Barranca	Fraxinus velutina	24-inch box, min.	30 ft. on center

Potential difficulty in creating distinguishable borders when perimeter is discontinuous:

The perimeter of the Base is discontinuous. The southern perimeter is interrupted by a portion of the existing Irvine Business Complex; the eastern perimeter is interrupted by a wide Southern California Edison right-of-way; and the northern perimeter is

Need for New Landscaping to be Sensitive to Existing Context – The quality of design and interface with adjacent communities does not necessarily need to be accomplished by requesting the exact landscaping materials to match all existing material outside of the plan area. The Specific Plan does require compatibility and design quality for all landscaping and landscape theme and treatments. Review of specific future submittals for compatibility does not mean that exact replication is needed; design creativity should be encouraged. In addition, the Urban Design Plan and community structure exhibit and narrative focus on conceptual design features intended to build a community structure including community boundaries, edge treatments, community entries, and circulation corridors.

Potential Difficulty in Creating Distinguishable Borders When Perimeter is Discontinuous – The Urban Design Plan provides an approach for creating structure for community identity for the site. It addresses the entries to the project, internal backbone roadways, and other site-wide design considerations. Even if off-site properties around MCAS Tustin are discontinuous, it does not mean that a perimeter treatment for the project is not achievable. Compatibility also does not mean that a design treatment has to exactly replicate surrounding properties. In fact, there are probably properties in the vicinity, such as on the east side of Jamboree Road, where there is a very poor visual appearance that no project should be required to replicate.

THE IRVINE COMPANY COMMENTS
MCAS TUSTIN DEIS/EIR
"Appendix A"
Page 3.

interrupted by Jamboree Plaza. Creating a distinguishable border may be problematic. Perhaps the perimeter of the Base should be blended within the surroundings and the distinction placed on the entries and internal roads.

Potential difficulty in creating high quality landscaping when setbacks are minimal:

The proposed minimum setbacks are generally less than currently required at existing master-planned development in Tustin, such as the Irvine Industrial Complex-Tustin and Tustin Ranch. For instance, according to the Planned Community Regulations of June 1980 for IIC-Tustin, the minimum landscape setback for Tustin Ranch Road is 46 ft. from the street right-of-way; Walnut, 30 ft.; and the local streets, 10 ft. In the Specific Plan, the minimum landscape setback for Tustin Ranch Road appears to be 30 ft. from the street curb; Warner, 20 ft.; and the local streets, 0 ft. The Specific Plan should be modified so that the setbacks for non-residential development match the existing standards in IIC-Tustin; and the setbacks for residential development match the existing standards in Tustin Ranch.

Harvard Wall:

The existing wall along Harvard Avenue which is within 30 ft. of the curb should be removed and rebuilt 42 ft. from the street curb and finished to match the other walls in Westpark.

Chain Link:

Section 3.11.6 should be revised to prohibit chain link fences along streets.

Lighting:

Section 3.11.14 should be revised to prohibit roof-mounted lights, wall-mounted lights with exposed lenses, and tilted light fixtures, so that the off-site glare is not generated.

Roof-mounted equipment:

Section 3.11.16 should be retitled "Roof-Mounted Equipment" and should address standards for television antennas and satellite dishes.

Loading Docks:

Loading docks should be addressed in the Plan and should not be visible from streets.

Difficulty in Creating High Quality Landscaping When Setbacks are Minimal – Tustin Ranch is a considerable distance from the project and cannot be characterized as having the same land use mix as the MCAS Tustin project. A closer and perhaps more comparable project is the Pacific Center East Specific Plan Area. Table O1-19 provides a summary of landscaping setback in those projects mentioned in the Irvine Company's letter. As can be clearly seen, MCAS Tustin landscape setbacks are comparable to those other planned developments in the City of Tustin.

Harvard Wall – Provisions in Chapter 3 of the MCAS Tustin Specific Plan for areas adjacent to Harvard Avenue require the walls and streetscapes to be upgraded to create greater compatibility with Village 38. However, walls are not required to be removed.

Chain Link – Fencing installations are reviewed on a case-by-case basis during design review. Chain link fencing has not been prohibited on adjacent surrounding properties in the City of Irvine (i.e., the east side of Irvine). It needs to be recognized that the MCAS Tustin project would be developed over time and existing chain link fencing around the perimeter of the site will facilitate security until development occurs.

Lighting – Provisions of the Specific Plan require that lighting be designed to confine direct rays and glare to the boundaries of a parcel. Individual installations will also be reviewed during design review.

Roof-mounted Equipment – Subsection 3.11.16 of the Specific Plan does not need to be revised since television antennas and satellite dishes are separately dealt with in subsection 3.11.2.

Loading Docks – Loading requirements are located in subsection 3.13.5 of the Specific Plan. As noted in this section, the size, location, and design treatment of these spaces are subject to design review approval. Subsection 3.11.8 identifies that screening may be required for loading. Subsection 3.11.3 requires screening in certain locations that will be determined and evaluated during the design review process.

THE IRVINE COMPANY COMMENTS
MCAS TUSTIN DEIS/EIR
"Appendix A"
Page 4.

Billboards and electronic message signs:

Billboards and electronic message signs along Jamboree Road and other locations should be addressed in the plan and should be prohibited.

Screening of existing military housing:

If it remains, the existing military housing along Edinger and Harvard should be screened with groves of evergreen trees between the wall and buildings to improve the appearance of the project.

Use of coral trees:

Section 2.17.1.B recommends Corals as an accent tree. We are concerned that this will prove an infeasible program and therefore not accomplish its objective. These plants are being removed from older neighborhoods in the area due to liability concerns.

Linear sidewalks:

The requirement for meandering sidewalks should be modified to permit a linear sidewalk with a landscaped pathway, which is the current standard in the area.

Screening of buildings in winter:

The 40% minimum requirement for deciduous trees should be modified to allow 100% evergreen trees to screen development in winter.

Consistent information in street sections:

Figure 2-24 provides more detail than the other street sections. Some sections state that palms are shown as an example; others do not. Some sections state that the sidewalk may be at curb or meander; others do not. All street sections should provide the same level of detail.

Prohibition of smooth stucco:

Section 2.17.3-A.2c (page 2-184) should allow stucco to be smooth, not only textured. Smooth stucco is the current standard in the area.

Billboards and Electric Message Boards – All signage in the MCAS Tustin project area will be subject to provisions of the Tustin Sign Code. These provisions prohibit off-site signage/billboards and require a Conditional Use Permit and public hearing process for any changeable copy area.

Screening of Existing Military Housing – Provisions of Subsections 3.9.4 J and 3.10.2 F of the Specific Plan provide specific development and upgrade requirements that will significantly improve the appearance of any future residential project in the event that existing housing remains.

Use of Local Trees – The use of local trees is not required. All landscaping and streetscape applications within the public right-of-way will be reviewed by the City of Tustin Public Works Department for practical issues to ensure landscape and maintenance costs are managed.

Linear Sidewalks – The Specific Plan does not require meandering sidewalks in all locations. However, meandering sidewalks are located in the vicinity of the Pacific Center East Specific Plan, and the City of Tustin believes that they can be very aesthetically appealing. They also provide the added benefit of improving the safety of pedestrians.

Screening of Buildings in Winter – This recommendation is something that has not been implemented or required in any other master planned development community in the City of Tustin. Landscaping guidelines are just that. Submitted Landscaping Concept Plans will be reviewed for consistency with the City of Tustin's adopted landscaping guidelines and standards and any requirements of state or local statute.

Inconsistent Information in Street Section – The landscaping design approach is provided as a guideline. Submittals of detailed information will be required with the required landscaping concept plan submittals. Considerably more detail is provided in the MCAS Tustin Specific Plan than the Irvine Company provided in the East Tustin Specific Plan. The Irvine Company also provided no guidelines or detail on street sections for the Irvine Business Complex regulations.

Prohibition of Smooth Stucco – Provisions of subsection 2.17.3 of the Specific Plan and page 2-184 do not prohibit the use of smooth stucco. The statements says that "wall surface may include textured stucco wood or wood-product siding ..." the word "shall" is not stated. Section 2.1 of the Specific Plan states that where a section is a "directive" it shall be implemented according to the language provided. Other language is conceptual and intended to guide and not restrict solutions.

Potential for excessive decoration:

The statement in Section 2.17.3.B.2.a (page 2-188) that "larger buildings require more relief than do smaller buildings" should be deleted, since this statement may lead to excessive decoration which is inconsistent with existing award-winning industrial and retail buildings in Tustin.

Potential for pitched roof industrial buildings:

The statement in Section 2.17.3.B.2.a (page 2-188) that "it is desirable to accompany a plan offset with changes in roof pitch orientation" should be deleted, since this statement may lead to metal industrial buildings with sloping roofs, which is a style that is incompatible with the existing development in the area. Pitched-roof metal buildings should be prohibited in the Plan.

Potential for Excessive Decorations – The specific statement in the Specific Plan referred to does not imply that there will be excessive decoration. The guideline states "allow for visual relief for interest and to break-up long planar surfaces."

Potential for Pitched Roof Industrial Buildings – The statement referred to in the Specific Plan will not result in metal industrial buildings with sloped roofs. This would certainly be inconsistent with the guidelines provided for materials and finishes. The City of Tustin has a thorough design review process which allows each project to be reviewed against a common set of criteria. Compatibility is an important finding that is required to be made.

Table O1-19
A Comparison of Landscape Setbacks in MCAS Tustin Specific Plan
and Other Planned Developments in Tustin

	East Tustin		Pacific Center	Irvine Business Center	MCAS Tustin
	From Curb	From Centerline	From Curb	From Curb	From Curb
Major Arterials					
Landscaping Setbacks					
Bryant (in side)	25'	37'		N/A	
Bryant (s side)	15'	67'		N/A	
Irvine Boulevard	20-25'	71-76'		N/A	
Jamboree	25'	62-76'		N/A	30'
Tustin Ranch Rd	21-25'	72-76'		N/A	
Newport Ave		N/A	30'	N/A	30'
Redhill			30'		
Edinger (in side)			20'		30 ^(a)
Edinger (s side)			30'		20'
Warner					30'
Barranca					
Secondary					
Portola	20'	62'			
La Lolina	N/A	52'			
Browning	15'	63.5'			20'
Armstrong					20-20 ^(a)
Loop Road					20'
West and East Connections					
Del Amo			30'		
Valencia			25'		
Harvard					30'
Collectors					
Major or Primary Intersection Entry ⁽¹⁾	N/A	N/A	20'	10'	10-20 ^(b)
Secondary Intersection Entry ⁽²⁾	N/A	N/A	80'	N/A	80'
			60'	N/A	60'

⁽¹⁾ As measured from intersection of curb lines; a corner triangular shaped section

⁽²⁾ Marble Mountain setback is 25 feet

⁽³⁾ Exception is adjacent to Santa Fe/Santa Ana Channel

⁽⁴⁾ Existing buildings will be permitted to remain



North Irvine Villages Association

August 20, 1999

RECEIVED

AUG 25 1999

REDEVELOPMENT AGENCY

City of Tustin
300 Centennial Way
Tustin, CA 92780

RE: MCAS TUSTIN REUSE EIR/EIS

We appreciate the opportunity to comment and provide the following.

Page ES-13 should read CC Community Core

Page 1-14 should state that the San Joaquin Hills Transportation Corridor was completed prior to 1998.

Page 3-123 on Table 3.13-4 "Committed Improvements" to the nearby circulation system that the ETC East Leg and West Leg will be six lanes by 2005. We have no knowledge that this is true. If this expansion from the existing 4 lanes to 6 lanes is not completed by then, it will have a significant impact on local streets as the reuse plan moves forward. Please verify this fact with the Transportation Corridor Agencies.

Page 4-7 please correct spelling of Bryan in first paragraph.

Traffic and Circulation Issues:

We feel that 200,000 ADT generated by this project in its "lightest" scenario is pushing the capacity limits of the surrounding area.

The connection of Tustin Ranch Road with VonKarman at the earliest phase of development is essential to regional mobility.

We feel that any arterial or intersection impact which exceeds LOS D is unacceptable. Unfortunately, the EIR/EIS predicts many. The impact of this project particularly to the Jamboree/Harvard area is unacceptable to those we represent.

Traffic Technical Report - Page 1-1, 1.1 Project Site states that 30 acres of private property are included. Please clarify the amount; we believe it to be much less.

We conclude that this document assumes improvements which are not guaranteed to be in place at the time needed.

O2-1 Figures ES-5 and 2-1 have been modified in the FEIS/EIR as suggested.

O2-2 The text of the FEIS/EIR has been modified to include SR-73 and SR-261.

O2-3 Table 3.13-4 includes the two existing auxiliary lanes in addition to the four existing lanes, which provide the capacity of six lanes throughout most sections of the ETC East and West Legs. In general, facilities are described with lanes representing a majority of the roadway section. Therefore, the 2005 committed roadway network does not assume expansion beyond existing, and there would be no significant impacts to local streets.

O2-4 The FEIS/EIR has been modified as suggested.

O2-5 It is noted that the commenter feels reuse would generate traffic that would "push" capacity.

O2-6 It is noted that the commenter wants early connection of Tustin Ranch Road at Von Karman.

O2-7 It is noted that the commenter finds any intersection operation below LOS D unacceptable; however, the EIS/EIR was prepared using OCTA guidelines and implementing guidelines of the IBC and CMP. The later two programs allow LOS E as acceptable in selected locations. A footnote is provided in all tables to identify all IBC and CMP intersections.

O2-8 There are 4.1 acres of private ownership within the MCAS Tustin reuse area. Final Appendix F has been revised accordingly.

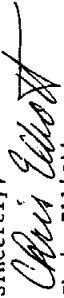
O2-9 Refer to response to comments L6-9 and L12-26 regarding the committed roadway network, as well as response to comment L12-3 regarding mechanisms to require phased traffic improvements consistent with need.

August 20, 1999

Page 2
EIR/EIS

- O2-10 We conclude that some of the traffic mitigation measures are technically infeasible or so costly as to be unrealistic. You must find a way to work this out.
- O2-11 The long term solution to the Jamboree/Barranca impacts are not realistically explained.
- O2-12 We continue to conclude that this traffic analysis underestimates the impact to intersections and the partial cause for this is the use of old data. A document published in mid-1999 should include data no older than late-1998. This one doesn't.
- O2-13 The area we are most concerned with (Irvine north of ICD/Edinger) was a massive construction area until last week and we contend that traffic data and analysis based on it dating from mid-1996 is of some questionable value. We request that updated traffic studies been done every two years until buildout of this reuse project.
- O2-14 We find no reference to the construction of Myford Road over Interstate 5 as a planned major road improvement. It should be included.
- O2-15 We do not support the widening of Harvard Avenue to 4 lanes between the railroad tracks and Walnut Avenue.
- O2-16 This reuse plan is still 2 to 3 times more intense in its traffic generation per acre than the lower Peters Specific Plan nearby and there are fewer opportunities for circulation improvements.
- O2-17 In conclusion, we do not support any land use on PA20 in excess of 25 units per acre.
- O2-18 We are disappointed to have journeyed 6 years in this process and find only peripheral plans for a "mass transit" system which we feel is perfectly suited to the reuse plan you have proposed and would make some progress in mitigating the off site traffic impacts. We feel you missed a golden opportunity to demonstrate "better" urban development.
- We look forward to working with you through the remainder of the process. Please keep us informed of all future meetings as we look forward to receipt of the Response to Comments. Please change our address to PMB 254 instead of Box 254. The rest of the address remains the same.

Sincerely,


Chris Elliott

- O2-10 Refer to response to comment L12-7 regarding feasibility of mitigation measures.
- O2-11 Refer to response to comment L6-16 regarding the MOA for Jamboree and Barranca.
- O2-12 All traffic forecast data were completed in January 1999. Existing counts compiled in 1997 and 1998 are presented for information purposes only to show the transportation setting of the reuse project. In terms of traffic modeling, these counts do not affect the future forecasts (2005 and 2020) analyzed in the traffic study.
- O2-13 Development of the reuse plan area would proceed under a series of project-specific development plans sponsored by individual proponents. As individual projects are processed through the entitlement process, they would be subject to subsequent CEQA review. If future conditions are different or new information is available, subsequent EIRs or Mitigated Negative Declarations may be required. As part of the subsequent CEQA process, changed conditions, such as the example raised, could be accommodated. Subsequent traffic studies may be required.
- O2-14 Refer to response to comment O1-12 regarding this overcrossing.
- O2-15 Four lanes on Harvard Avenue between Walnut Avenue and the railroad tracks are not assumed for either 2005 or 2020. The comment is noted.
- O2-16 It is noted that reuse of MCAS Tustin would generate more traffic than the Lower Peters Canyon Specific Plan. Reuse would result in connections of several north-south and east-west roads that are currently disconnected by the Air Station, thus providing additional regional circulation connections.
- O2-17 The commenter's preference for a maximum density of 25 units per acre on PA 20 is noted.
- O2-18 Mass transit opportunities would be provided under reuse. A Metro-link station is proposed immediately adjacent to the site. Other elements such as bus-laneways and a system of bike lanes would serve non-automobile traffic.

IBC CONSORTIUM
3311 Michelson Drive
Irvine, California 92612
(949) 553-1220
(949) 553-1154 (Facsimile)

RECEIVED

AUG 24 1999

REDEVELOPMENT AGENCY

August 23, 1999

Mr. Dana Ogdon
Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, CA 92780

Subject: Draft EIS/EIR for the Disposal and Reuse of MCAS Tustin

Dear Mr. Ogdon:

On behalf of the Irvine Business Complex (IBC) Consortium, I have reviewed the traffic impact analysis and traffic section of the above referenced document and offers the following comments.

The traffic impact analysis (TIA) acknowledges that the development of the reuse project will have impacts to the arterial street system within IBC. As noted on page 2-23 of the TIA, "future residents in the project area . . . would travel to activity centers such as the Irvine Business Complex". Furthermore, Figures 2-7 through 2-9 indicate that fully 20 percent of the traffic generated by the reuse project will travel south and have a destination within the IBC. Depending on the land use alternative selected, the IBC will experience an additional daily traffic burden of between 43,000 to 59,000 average daily trips.

COMMITTED ROADWAY NETWORK

The TIA assesses this additional traffic load upon a 2005 and 2020 year horizon. In these analyses virtually every arterial and signalized intersection within IBC is assumed to be improved in either 2005 or 2020. The source of these committed roadway improvements is the IBC Rezone Mitigation Program. The TIA defines "committed roadway improvements" as those that are "funded in some manner".

The IBC Rezone Mitigation Program is not a funded program. As indicated in the *Annual Irvine Business Complex Fee Program Report*, July 1998, the City of Irvine staff as estimated that \$222 million would be needed to implement the full mitigation program. The City staff identified that \$155 million would ultimately come from development impact fees

03-1

As noted in response to comments L6-9 and L12-26, the committed roadway network is based on those traffic improvements that are planned for funding in a manner such as a capital improvement program, a special funding program, or conditions of approval on a specific project. Therefore, each of the unfunded links identified in the IBC were double-checked to verify whether or not it fit the committed definition. The corrected committed network is described in Final Appendix F and Sections 3.12 and 4.12 of the FEIS. The traffic analysis was re-run using the corrected network. There would be no significant impacts in the IBC beyond that which were previously disclosed in Section 4.12, and no new mitigation would be required.

Mr. Dana Ogdon
August 23, 1999
Page 2

and \$39 million would come from other sources. Approximately \$28 million of the needed improvement funding is unallocated. As the MCAS Tustin Reuse project will add a substantial traffic burden to the IBC and this traffic burden is dependent on the improvements contemplated, but unfunded in the IBC Rezone Mitigation Program, an impact should be identified and a mitigation to participate in the funding of the IBC Rezone Mitigation Program should be included in the EISEIR.

More specifically, the TIA lists individual arterials and intersections that are assumed to be improved vis-a-vis the IBC Rezone Mitigation Program by the year 2005 and/or 2020. Of these improvements, many have not been funded by collection of development fees or programmed by the City of Irvine. Funding of IBC improvements occurs as development within IBC takes place and fees can be collected. This process is a function of the real estate market and cannot be assigned a schedule of implementation with any degree of certainty. According to the *Annual Irvine Business Complex Fee Program Report*, July 1998, the list of unfunded/unprogrammed IBC improvements includes, but is not limited to, the following locations.

Arterial Improvements

1. Alton Parkway - Red Hill to San Diego Creek (including all intersection improvements)
2. Barranca Parkway - Red Hill to Jamboree (including all intersection improvements)
3. Von Karman Avenue - Barranca to Main (including all intersection improvements)

Intersection Improvements

1. Red Hill/Barranca
2. Jamboree/Alton
3. MacArthur/Main
4. MacArthur/Jamboree

As the funding and implementation of these improvements is unknown, they should be considered infeasible due to economic considerations. Use of these infeasible improvements means that the analysis of circulation impacts associated with the MCAS Tustin Reuse project relies on mitigation measures deferred. In order to address any interim impacts associated with the uncertainty of implementation of IBC Rezone Mitigation Program projects, the TIA should be revised to eliminate these improvements from the assumed future roadway network. Arterial and intersection operations should be reanalyzed, and mitigation measures should be drafted to acknowledge the MCAS Tustin Reuse project's contribution to the need for improvements in IBC. These mitigation

Mr. Dana Ogdon
August 23, 1999
Page 3

measures should identify a fair share participation program developed to address the contribution of MCAS Tustin to the IBC circulation system.

IMPROVEMENTS MADE IN IBC

The method used in the TIA to assess circulation impacts adds the contribution of MCAS Tustin Reuse project traffic to future 2005 and 2020 conditions. These two baseline conditions include arterial and intersection improvements in IBC. As pointed out previously, many of these improvements are not funded and cannot be considered committed in either horizon year. Some of the improvements, however, are funded and programmed for implementation, are under construction paid for in part or in whole by IBC development fees, or are already constructed paid for in part or in whole by IBC development fees.

The circulation improvements planned or constructed in IBC are significant capacity enhancements at key gateway locations. Examples include MacArthur/I-405 freeway ramp and Jamboree/I-405 freeway interchange projects; major widenings to improve access to IBC, and ultimately to MCAS Tustin from the south. As such, the MCAS Tustin Reuse project is utilizing capacity that has been paid for and constructed by the corporate citizens of IBC.

While this capacity grab may not meet the strict interpretation of "significant impact" as defined by CEQA, we insist that the MCAS Tustin Reuse project be responsible to pay for that increment of recently constructed or funded capacity enhancements within IBC used by the reuse project. Sample locations of recently completed arterial and intersection improvements are listed in the attached table.

One method to assign fair share cost is to multiply the estimated cost by a fraction equal to the "effective capacity decrease" attributable to the project over the "effective capacity increase" that is attributable to the improvement. The "effective capacity decrease" is the ICU for the 2020 condition with project with completed improvements minus the ICU for the 2020 condition without the project with completed improvements. The "effective capacity increase" is the ICU for the 2020 condition without the project without the improvement minus the ICU for the 2020 condition without the project with the improvement.

Regardless of the method selected, the EIS/EIR should acknowledge that the MCAS Tustin Reuse project utilizes circulation system capacity enhancements that have been conditioned on and paid for by IBC developments. The EIS/EIR should disclose the increment of capacity enhancements used by the project that have been provided directly by others and identify a method by which the project participates in funding these direct project needs.

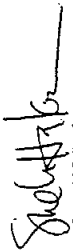
03-2

Where there would be impacts associated with traffic generated by buildout of the reuse plan, the impact summary tables in Sections 4.12 and 7.11 identify whether or not the project-generated traffic would cause or contribute to the deficiency. Further, mitigation measures in Sections 4.12 and 7.11 require development projects to contribute on a fair share basis to improvements that are necessary. The percentage share of off-site improvements associated with development is provided in the FEIS/EIR as well as an ADT threshold to trigger future improvements.

Mr. Dana Ogdon
August 23, 1989
Page 4

Thank you for the opportunity to submit these comments. I eagerly await a response and appropriate revisions to the EIS/EIR traffic analysis and mitigation measures.

Sincerely,


Sue Whitaker
IBC Consortium

RECEIVED
AUG 24 1999
REDEVELOPMENT AGENCY

**RESPONSE TO THE DRAFT
ENVIRONMENTAL IMPACT
STATEMENT/ENVIRONMENTAL IMPACT
REPORT FOR THE DISPOSAL AND REUSE OF THE
MARINE CORPS AIR STATION TUSTIN**

**LAW OFFICES OF IVAN K. STEVENSON
IVAN K. STEVENSON, BAR NUMBER: 62906
JEFFREY L. BOYLE, BAR NUMBER: 129990
501 Deep Valley Drive, Suite 315
Rolling Hills Estates, CA 90274
(310) 541-9344
Attorneys for Osumi Farms, Inc.**

**RESPONSE TO THE DRAFT
ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT
REPORT FOR THE DISPOSAL AND REUSE OF THE MARINE CORPS
AIR STATION TUSTIN**

The following is a response and comment to the Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR), which was issued in July of 1999. This response is hereby submitted on behalf of Osumi Farms, Inc., as well as for, and on behalf of, the citizens of the State of California, the County of Orange, the City of Tustin, City of Irvine, City of Santa Ana and other surrounding communities, as well as for all taxpayers and concerned citizens.

Historical Aspects of the Marine Corp Helicopter Station

The Draft EIS/EIR clearly delineates the historical background of the Marine Corp Air Station in Tustin (MCAS). This Draft describes the history of the area, including the fact that the County of Orange and the surrounding areas were primarily agricultural communities from the 19th and into the 20th century. The reasons for the historical agricultural use is due to the existence of prime farmland soils in and about the Orange County area. The prime quality of this farming land is recognized and confirmed to exist within the Marine Corp Air Station by the Draft EIS/EIR, as well as by the U. S. Department of Agriculture, Soil Conservation Service.

Farming - Historically

History shows that most successful societies and economic systems have commenced on an agricultural basis. It has shown further that once it has established and developed its agricultural foundation, it was able to divert manpower from immediate food product concerns to other endeavors from the fine arts to the construction of public buildings to the development and refining of the sciences. Those societies which existed from other than an agricultural base, tended to be nomadic in nature and hunting and gathering as they roamed from area to area. However, by doing so, nomadic populations historically have ceased to exist as an entity or have been assimilated into other societies.

The purpose and intent of an agricultural based economy have been to establish a pattern of livelihood not only for the people involved in the farming, but for the surrounding areas as well. Orange County provided fruits and vegetables to the southern half of the State of California as well as the United States, Japan and Europe during the high point of the agricultural development within Orange County. Orange County continues to provide a wide variety of fresh agricultural produce for the area, given the limited farming operations still in the county.

As urbanization and development occurred, more and more of these prime farmlands were destroyed and replaced with either residential or commercial development. What was once mile after mile of fruit and vegetable farming, has now turned into mile after mile of blacktop and

ment. This removal of vegetation from agricultural lands, in its own way, has contributed to the ever present and highly touted global warming effect.

Although the United States has long condemned the destructive slash and burn methods employed in third world countries, the three Alternatives that are strongly urged by the Draft EIS/EIR is nothing more than a modern world slash and burn method. Instead of cutting back the forest, this Draft EIS/EIR recommends that prime farming land be destroyed. Instead of the burn method, the Draft EIS/EIR recommends building and covering the ground with cement and buildings, or environmentally worse, a golf course.

CEQA, California Public Resources, §21000 et seq., states that California's policy is to: (a) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate and enhance the environment quality of the state. (CEQA, §21001(a)).

The destruction of established agricultural fields by covering them with cement and blacktop, contributes to the global warming process and fails to comply with California Public Resources, §21000 et seq. Although there are nay sayers to the global warming process, one needs only to look at the hole in the ozone, combined with the melting of the glaciers, thawing of the frozen tundra in the arctic areas and the unusual weather patterns seen worldwide and nationwide, including tornados in California, Utah and the greater magnitude storms worldwide, wreaking devastation in the billions of dollars, to give credence to the Global Warming argument. The irreversible impact of the loss of prime farmland is in blatant ignorance of California's environmental policy.

Agriculture Today

For the last 15 years, farming has taken place on the Marine Corp Air Station in Tustin by Osumi Farms. Prior to that, farming was performed by others on the base for at least ten years prior to that. This area has been designated as prime farmland as evidenced by the Draft EIS/EIR and the Department of Agriculture. These 400 plus acres have been constantly put to farming use and have provided fresh food to the local area, as well as providing an environmentally healthy environment, not just to the Marine Corp Air Station, but to the surrounding residential areas as well. Not only has the agricultural development on the military base consistently been maintained, so as to provide an aesthetically clean environment, but the crops themselves have contributed to the welfare and benefit of the environment in general and more importantly to the local economy.

Due to the fact that very strict environmental farming procedures have been followed, the land where the farming has taken place is and continues to be designated as prime farmland.

Quite often prime farmland loses that distinction as it is destroyed by overuse or improper use of chemicals, in the form of fertilization and pesticides. That has not occurred in this

The comment letter contains three key themes which are questioned in various aspects: (1) the document fails to comply with the intent of CEQA and fails to provide adequate mitigation for impacts to agricultural resources; (2) the document fails to comply with the intent of NEPA and the Farmland Protection Policy Act (FPPA), and (3) the document fails to address an alternative that would retain agricultural operations on MCAS Tustin. In order to provide a concise and clear response to each of these three key themes, the response will be structured by theme instead of responding to each individual comment point.

Failure to Comply with CEQA and Inadequate Mitigation - CEQA is the foundation of environmental law and policy in California. When enacted, four objectives were identified by the California Legislature in the CEQA implementing guidelines (Cal. Code Regs. Title 14, §15002 (1998)):

- (1) Inform government decision-makers and the public about the potential, significant environmental effects of proposed activities.
- (2) Identify the ways that environmental damage can be avoided or significantly reduced.
- (3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- (4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Two additional objectives have been added through amendments and court interpretations. These objectives focus on interagency coordination in the review of projects and enhancement of public participation in the planning process (Cal. Code Regs. Title 14, §15086 and 15087).

In this EIS/EIR the loss of prime farmland is disclosed as a significant impact (objective 1). There is an analysis of several possible mitigation measures which would reduce the identified impact (objective 2). These include agricultural conservation easements, transfer of development rights, right-to-farm ordinances, and enrollment in Williamson Act contracts, although for various reasons they were all found to be infeasible. Further, two alternatives were evaluated which would avoid impacts to prime farmland (Civilian Accommodation of Existing Facilities and No

case. In fact, the Draft EIS/EIR confirms that these farmlands do not need any form of hazardous waste clean up, because of the environmentally safe, high quality farming procedures that have been utilized throughout the years.

Further, the subject farming provides 200 to 300 immediate jobs to carry out crop planting, maintenance and harvesting. Once harvested, the crops provide jobs to thousands of interrelated industries including equipment sellers, maintenance workers, truckers to transport the harvested crops, the packing houses and their employees, the wholesalers, and retailers, down to the box boy or girl who bags the produce in the grocery stores which were grown by Osumi Farms. The removal of the farmlands will result in interference or disruption of the chain of commerce involving agriculture.

The destruction of this prime farmland will also have a negative impact upon the quality of life in the Orange County area. Aside from the loss of open space there will be less fresh produce available which means that Orange County will be forced to rely more on shipping in produce from Central California and other areas.

Lastly, the crops that are grown, harvested and sold provide food to as many as 12,000,000 million households. Hence, by allowing the destruction of the subject prime farmland the impact will be felt by more than the farmers who have been cultivating this land.

Purpose of the Draft EIS/EIR

The purpose of the Draft EIS/EIR appears to be headed in only one direction, which is to develop the property for residential and commercial purposes, without realistic consideration provided to utilizing the existing farmlands as part of the overall development. The theme of the Draft EIS/EIR seems to be that the only means to make the subject land beneficial to society and the economic system is to pave it, with no serious consideration provided to more environmentally friendly uses, such as farming, which still play a vital economic role in our economy. Further, it appears that the direction indicated in the Draft EIS/EIR is consistently one that is to generate a fast dollar, rather than what is in fact good for the environment and the people that surround that environment.

Throughout the Draft EIS/EIR discussion of the Alternative uses for the land, these Alternatives make absolutely no recommendations that account for the integration of the farming lands, other than to destroy them and use them for other than agricultural purposes. Farming is treated in the Report as nothing more than an annoyance. Further, the Draft EIS/EIR disregards California and Federal policy and findings regarding the protection of farmland. California has found that "the preservation of a maximum amount of the limited supply of agricultural land is necessary to the conservation of the state's economic resources and is necessary . . . to the maintenance of the agricultural economy of this state." (Cal. Government, §51220(a)). Also, it is in the public interest to discourage the "premature and unnecessary conversion of agricultural land." (Cal. Government, §51220(c)).

Action). The Civilian Accommodation of Existing Facilities Alternative was found to be infeasible and the No Action Alternative would not satisfy the purpose and need of the action (Objective 3). Objective 4 would be satisfied with adoption of a Statement of Overriding Considerations when appropriate. Therefore, this EIS/EIR discloses the significant impact to prime farmlands and is in conformance with the objectives of CEQA as defined in the implementing guidelines.

Regarding mitigation measures, CEQA requires public agencies to adopt "feasible" mitigation measures in order to substantially lessen or avoid otherwise significant adverse environmental impacts (P.R.C. 3321002, 21081(a); Cal. Code of Regs. Title 14 §§ 15002(a)(3), 15021(a)(2), 15091(a)(1)). The commenter raises the "possibility" that agricultural land be provided at another location. The commenter does not present any facts to support an argument that such is feasible. The City of Tustin does not have the economic means to purchase or lease farmland; nor does it have the legal authority to purchase or lease farmland for use by private parties. Such a purchase is likely to be viewed by a state court as an unlawful gift of public funds (Article XVI, Section 6, California Constitution). In summary, providing land at another location is not feasible for the City of Tustin.

The commenter also raises the "possibility" that the federal government would retain the land and enter into a "Williamson Act type contract" with the city or county. Again, the commenter does not present any facts to support the feasibility of such an arrangement. For this to occur the federal government would require special legislation, as MCAS Tustin has been ordered closed and DON is in the process of disposing surplus property in accordance with federal law (Subsection 1.1.1 of the EIS/EIR). In addition, a "Williamson Act type" contract between the City of Tustin and the federal government is not feasible. The premise of the Williamson Act is to provide tax incentives to keep land in agricultural production. The federal government is not subject to taxation. In summary, the commenter's suggestion is infeasible because there is no legal authority for the federal government to enter into such an agreement and no practical incentive for it to do so.

The commenter suggests that the City of Tustin consider leasing "the land" from Orange County and the city sublease to Osumi Farms. Orange County does not own any farmland at MCAS Tustin. The County has submitted a request to operate a regional park only. There is no public purpose served for the City of Tustin to enter into a lease to benefit a private party. Again, it is not known whether such a lease could legally be allowed. In summary, there is no evidence to support an argument that this is a feasible mitigation measure.

Under the Federal Farmland Protection Policy, Congress has found that farmland is a unique natural resource. The continued decrease of farmland and irrevocable conversion thereof may threaten the ability of the United States to meet domestic needs, and the Federal Government should take actions to assure the irreversible conversion of farmland to nonagricultural uses where the benefit of maintaining and protecting farmland resources outweigh the national interest. (7 U.S.C. §4201).

The only time that farming is considered as an Alternative is under Alternative 4, or the "No Change Alternative," where the Federal Government keeps all of the property. However, farming should be an important part of the development of the land because, although Alternative 4 with the "No Change" provides for farming, it is not necessarily the Alternative that benefits the public at large. However, a modification of the Alternatives with a farming or agricultural inclusion consistent with State and Federal policies should be further explored, as explained below.

Such exploration is important because the Federal Government has recognized the importance of preserving natural resources such as prime farmland.

In 1974, a U.S. Department of Agriculture (USDA) study concluded that "Although thousands of acres of farmland are converted annually to other uses * * * we are in no danger of running out of farmland." A shift in USDA policy began the next year. By 1976, the Secretary of Agriculture announced a new USDA policy aimed at discouraging federal government activities that would convert prime agricultural land to other uses and at encouraging state and local authorities to advocate the protection of such land. (Report to the Congress by the Comptroller General, Preserving America's Farmland - A Goal the Federal Government Should Support, (CED-79-109) 7 (1979).

In 1978, the USDA issued a revised and considerably stronger policy directed toward committing USDA agencies to intercede with all other federal government agencies when conversation of prime farmland was threatened.

The second most significant federal government policy revision in regard to farmland preservation, was the action taken in 1976 by the Council on Environmental Quality (CEQ) directing all federal agencies to consider the loss of prime farmland when preparing the environmental impact statements (EIS) required by the National Environmental Policy Act of 1969. Compliance was purely voluntary under the 1976 action, but in 1980 CEQ made the requirement mandatory.

In spite of the changes in federal agency policies, federal government programs were still considered the cause of the loss of thousands of acres of prime agricultural land annually. Continuing concern over such government activities led to the establishment in June 1979 of the National Agricultural Lands Study (NALS) to assess and propose remedies for the problem. The recommendations contained in the final report of the NALS are broad and extensive and directed toward five objectives: (1) information sharing by state and local governments concerning successful agricultural lands preservation programs; (2) articulation of a national policy on agricultural lands preservation and its implementation; (3) federal support of state and local government programs; (4)

The commenter suggests that the City of Tustin delay development of the farming areas and make it the last to be developed. First, this suggestion does not significantly lessen or avoid the loss of farmland. Second, it conflicts with the land use provisions of the proposed Specific Plan (Chapter 7.0 of the EIS/EIR) which do not allow agricultural uses. If the City of Tustin acquires the land for such temporary uses, it may incur relocation costs and expenses which it does not wish to incur. In summary, the delayed development suggestion is not a feasible mitigation measure.

Failure to Comply with NEPA and the FPPA - NEPA and CEQ guidelines have been interpreted to require evaluation of impacts on agricultural lands as part of the range of environmental impacts that must be addressed, independent of the FPPA. Consideration of impacts to agricultural resources is clearly provided in Sections 3.8 and 4.8, which meets the requirement of NEPA.

The guidelines for implementing the FPPA are contained in C.F.R., Title 7, Chapter VI, Part 658. Section 658.4 describes the process to be used by federal agencies in considering adverse effects of federal programs on farmland. Using site criteria and the Farmland Conversion Impact Rating worksheet (Form AD 1006), the agency is able to make a determination regarding the suitability of the site for protection as farmland. Parts V and VI of Form 1006 entail rating the effect of the proposed action and alternatives on farmlands. The U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) rates the site of the proposed action on a scale of zero to 100, and the respective federal agency rates each site on a scale of zero to 160. The total of these two ratings (maximum 260) is the site's overall rating. In general, the higher the rating, the higher the amount of consideration that needs to be given to protecting the respective farmland. The cutoff for protection consideration is 160 points—sites rating less than a combined total of 160 points do not need to be considered for protection.

A Farmland Conversion Impact Rating worksheet was completed by DON for MCAS Tustin in May 1999 and was inadvertently omitted from the DEIS/EIR. That completed form is now provided in Section 3.8 of the FEIS/EIR. As shown, the combined score is 131, so this farmland does not warrant protection under the FPPA.

financial assistance for protection programs; and (5) clarification of land information base statistics and data. (*Land Use Planning and Control Law* (1998), West Group, Julian Conrad Juergensmeyer and Thomas E. Roberts, §13.7, pages 608 through 609).

Hence, the lack of consideration applied to farmland protection concerns, as reflected by the Draft EIS/EIR, is no inadequate and improper when determining what to do with this former Marine Air Corp Station. As such the entire 1999 Draft EIS/EIR is void on its face since it does not comply with Federal regulations.

Alternative Considerations

At the present time there are four Alternatives, which are being addressed by the Draft EIS/EIR. The first, second and third Alternatives all involve development, to varying degrees, with the total elimination of the farming lands. Ironically, it is noted that in each and every one of those three Alternatives that have a commercial - residential overlay, one issue that runs consistently through the Alternative, is the development of a golf course in place of the agricultural land, which will be more fully addressed later.

The only Alternative that keeps the agricultural fields in place is Alternative 4, which is or the "No Action Alternative." For purposes of this response, the "No Change Alternative" will be referenced as Alternative Number 4.

Alternative Number 4

Alternative Number 4 provides for the base remaining in the hands of the United States Government. At this point, one would agree that Alternative Number 4 may not be a fully viable option for different reasons. The first reason would be that boarding up the buildings on the base, can only lead to a certain degree of deterioration and/or the improper use of the buildings by persons other than military personnel.

Further Alternative Number 4 would prevent the use of the recreational lands on the base for the citizens in the surrounding communities.

At this point, there are several other Alternatives that have not even been considered in the Draft EIS/EIR, which should be considered.

Alternatives that Provide Combined Agricultural and Recreational Use of the Property in Question

The following Alternative would provide the best all around result, for all concerned.

Alternatives to Retain Agriculture - The EIS/EIR does consider two alternatives that would retain agricultural operations at MCAS Tustin. Subsection 2.3.3 evaluates a potential alternative defined as Civilian Accommodation of Existing Facilities Alternative and subsection 2.4.4 describes the No Action Alternative which is evaluated throughout Chapter 4.0.

Under the Civilian Accommodation of Existing Facilities Alternative, land uses at MCAS Tustin would be retained identical to their use under military ownership, but under private ownership instead. All existing agricultural operations would remain in place. The document acknowledges that this alternative would eliminate or reduce impacts to a variety of resources including prime farmlands. This alternative was eliminated from detailed consideration for a variety of reasons including the fact that retaining the property in agricultural production would not generate sales or property tax necessary to compensate for costly improvements in infrastructure.

The No Action Alternative clearly states that while under caretaker status existing leases (agriculture and building) could continue. Subsection 4.8.6 of the EIS/EIR identifies that under this alternative "agricultural production on the leased land could continue. No impacts would result." That analysis has been expanded to more clearly acknowledge this alternative's avoidance of an otherwise significant impact.

The drafters of the Draft EIS/EIR have totally eliminated farming use as a component of any of the Alternatives. This is a major deficiency in the report and reflects the tunnel vision used concerning the best environmental use of the land, with the least impact on the land, the surrounding communities and the tax dollars of the citizens.

The agricultural grounds would be kept under the Federal Government. Hence, all of the rules and regulations imposed by the Federal Government for the care and maintenance of the land and utilization of pesticides, as well as other material on the farmlands, would be tightly controlled by the Federal Government. Thus, the farming would be maintained at a higher level than is required by the State of California. As a result, there would be continued oversight of the utilization of the farming land in question.

Secondly, all of the recreational facilities, including the baseball, football and soccer fields, as well as the basketball and tennis courts, would be turned over to the local city governments for utilization as park lands and recreational lands. The buildings, single family homes and residences that are presently constructed could be turned over to the respective city in which they are located. Those cities could then determine whether to use them for homeless or other projects, rather than knocking them down only to create other environmental problems.

The buildings within the main part of the base could be turned over to the respective cities and/or school districts to be used for education in the form of preschools, schools, high schools and college facilities. In addition, it is extremely important to consider working some form of coordinated educational program, where the buildings could be used in conjunction with an agricultural education program on the Federal lands, in conjunction with the farming entity that leases the property from the Federal Government. Thus the farmlands could be used as an educational forum, in addition to its role of providing crops to the local area and the employment for literally thousands of workers in the agricultural stream of commerce.

The foregoing alternative would provide the city with additional parklands, educational facilities, a possible public and learning village, and residential and commercial facilities without the irreparable destruction of prime agricultural resources, with minimal detrimental environmental impact.

Environmental Consequences

One of the considerations used in the Draft EIS/EIR has been the land use and the environmental impact of that land use.

At the present time, the land is being used for what it was intended to be used from a historical point of view. That is an agricultural use. The entire area started with agricultural use, and that farming was maintained, even while the military operated the base. This traditional farming use should remain in place. The use of the land for agricultural purposes has the least impact upon the land itself and the surrounding area involving that land while playing an undeniably

vital economic function.

The careful development of the agricultural plots over the years, has created the least impact possible upon that land. All three Alternatives provided for in the Draft EIS/EIR have a tremendous impact on the land and the surrounding areas. The first three Alternatives alter the basic land. It changes the drainage aspects of the land and as a result, imposes the long term effect of other failures that come into play with the development of housing or other buildings. One must also take into account the soil under that construction. There will be higher costs in construction since the concrete to be utilized raises the costs across the board for not only the development of commercial buildings, but more importantly for residential buildings, if any one of the three Alternatives are eventually used. Further, due to the extreme expansive soil present, combined with the water table only three feet below the surface lays the groundwork for future construction litigation.

The No Change Alternative Number 4 obviously has the least impact because the land is already utilized in the method that it has been utilized for the last 48 years.

However, the Alternative suggested by this response which we will call Alternative Number 5, recommended herein, is a combined utilization of the property for recreational, agricultural and educational usages. Even if the educational usage is not acceptable, then that area can be turned over and used for residential utilization or light commercial use. However, in that case, there will only be a minimal impact upon certain portions of the base, as opposed to the entire base.

Further, in each and every case of Alternatives 1 through 3, there is a failure to take into consideration mitigation factors. The Alternative proposed in this response takes into account a mitigation factor by maintaining the agricultural lands as agricultural lands and at the same time keeping the recreational lands as recreational lands, for use and enjoyment by the local citizens.

The promotion of constructing building on this farmland over preservation of this prime farmland is a consistent problem other areas through this nation have fallen into. It has been observed that a severe threat to farmland exists particularly on the urban fringe due to the competition between developers and farmers for use of the same land. Normal economic conditions place a much higher value on land used for development than on land used for agricultural production thus predetermining the victory of development interests over agricultural interests. (Land Use Planning and Control Law (1998) West Group, Julian Conrad Juergensmeyer & Thomas E. Roberts, pages 594 through 595).

This response by Oaumi Farms is to highlight the importance of avoiding falling into the trap of immediately assigning higher priority to development of land than to vital agricultural use.

Golf Courses

The Alternatives suggested in the Draft EIS/EIR all include a golf course replacing the agricultural lands.

In order to maintain the greens and the beauty of the golf course, one must use a large amount of pesticides and fertilizers. It has been shown consistently in the development of golf courses that there is not only the high use of pesticides, in order to maintain the beauty of the golf course, but there is a greater amount of watering in order to maintain the golf courses. This results in infiltration of that water back into the water table, but now that water has been contaminated by a heavy degree of pesticides. As a result, the water table is forever damaged.

The Alternative that golf designers use is to provide fast run off of the water which then results in fertilizers and pesticides being washed into the drainage channels and directly into the ocean. The environment does not win.

Due to the imposition of tight controls by the Federal Government to ensure the quality of the agricultural development within the Marine Corp Helicopter Station, a tremendous amount of care has been taken to ensure integrated pest management methods, with pest inspections, combined with appropriate irrigation methodology which prevents the infiltration of contaminating material into the ground water under its present agricultural use. Such will not occur once a golf course is developed. The golf course will result in the heavy infiltration of polluted water and pesticides. One must remember that the constant planting, cultivation and harvesting of agricultural row crops mean a constant turning of the ground and the soil allowing for appropriate absorption, without dispersal into the ground water table. In the case of golf courses, they are long term and must be kept in their constant state, which does not allow for appropriate reabsorption, but rather an eventual deterioration of the water table beneath it, or run off to the ocean.

As a result, none of the proposed three Alternatives presented in the Draft EIS/EIR take into consideration the long term impact on the environment, by replacing farming with a golf course.

Employment Impacts

Another key issue in the Draft EIS/EIR has been the issue of employment and the need to create employment. However, on the flip side of the coin is the fact that there has been no consideration given to the fact that the elimination of all of the agricultural lands, will have a direct effect on as many as 200 to 300 employees who work the farm directly.

Further, what the Draft EIS/EIR fails to recognize and address is that the removal of the farmland does not only affect the 200 to 300 individuals that are retained by Osumi Farms to handle the agricultural work. The elimination of farming will create a vacuum. Sucked into that vacuum are all of the support companies and personnel who provided support to the farms including

mechanics, equipment suppliers, as well as seed and agriculture suppliers. Further, eliminated from jobs are the trucking personnel who transport the crops to the processing facilities and he packing house, which then has an effect on the packing house and warehouses, which then has an effect on the wholesalers, middlemen and retailers at the other end, who eventually sell those products to local citizenry.

The promoters of the proposed development of the subject farmland may argue that eliminates the Osumi Farms on the former air station will yield not remarkable impact. However, such a conclusion is not well founded. It is observed that an aspect of farm economics that is not always recognized in the development of farmland preservation plans, is what farm economists would call "critical mass." In order for a single farm to survive, there have to be enough other farms in the area to warrant the presence of vital support services. To have access to seed supplies, fertilizer dealers, farm implement dealers and service areas, produce distributors and so forth, it is vital to have enough farms that those industries will remain in the area. If they leave, the farmer will increase the costs to the farmer and make the enterprise less viable. In this sense, there is an observable domino effect. If some farms leave, other will leave. If too many leave, the support structure leaves as well. If the support structure leaves, other farmers may be forced to leave farming no matter how well conceived the preservation program is. The economic reality is that it may no longer be feasible to continue farming in that area. For years, the data has suggested that for every five farms to leave farming, one support industry leaves. Most planning approaches do not consider the relationship between farms and the vast support structure that farming needs. (*Land Use Planning and Control Law*, cited supra, §13.5, pages 605 through 606).

As a result, the Draft EIS/EIR Alternatives 1 through 3 affect not just the Osumi Farm's jobs, but affects an entire chain of agriculture commerce dealing with the issue of the sale of agricultural products grown on the subject Marine base. One must remember that the farming on the base has been in effect for over 15 years. That is over 15 years of long term dependency upon that farm from not only the workers that provide agricultural planning and harvesting, but also everyone interrelated with that farming process, which has not been addressed by the Draft EIS/EIR Report. The socioeconomic effects of the removal of that farm have a far greater effect than the short shift that it has been given in the Draft EIS/EIR. The elimination of the farm affects everyone including the citizenry themselves, who no longer will have access to the fresh produce that is grown and harvested on the agricultural lands on the military base.

Instead of affecting only 200 or 3000 jobs, the Alternatives proposed by the Draft EIS/EIR are affecting as many as 1,000 to 2,000 jobs in the long run, depending on how far the agricultural produce from this field are spread.

Although it starts as a simple removal of land from the agricultural base, the effect is long term and long ranging. Further, the destruction of this farmland will render the Orange County area more dependent upon other areas for the growth of our own food.

Once again we create a more dependent situation which is not necessary, with crops currently being grown in the local area.

Socioeconomic and Cultural Impact

As previously described, the socioeconomic impact of removal of the agricultural lands has a domino or black hole effect. Such a negative effect sucks everything in by its removal, therefore damaging or destroying the surrounding economic systems, in the form of support provided to the farming industry and the related industries involved. What starts as an apparent ripple, has long term, far reaching effects on those that have been dependent upon Osumi Farms to conduct the necessary harvesting operations, to provide products within the chain of agricultural commerce.

Evidence has already been presented at previous hearings on this matter, that the removal of the farmlands actually reaches 12 million households who utilize the produce grown on the farming land in question.

Accordingly, the effect of destroying the farmland is of a much greater nature than has been considered by the drafters of the EIS/EIR.

One of the factors in the consideration of the Draft EIS/EIR is the issue of the impact that the Alternatives have overall. The effect on the socioeconomic and the environmental issues have been so downplayed in the Draft EIS/EIR that it puts the entire Draft EIS/EIR into question as to its validity.

The 1997 EIS/EIR sought "to create results that are very special and worthy of the site's present and historical importance to the City of Tustin and the region." However, the 1999 EIS/EIR fails to take all of the historical factors into account. The complete destruction of the farmlands eliminates the historical aspects of the agricultural community. It also leads to the creation of an unsightly development that destroys the community and the historical aspects of that community.

NEPA's policy requires that all practicable means be taken to "foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic and other requirements of present and future generations of Americans." (NEPA, 42 USC, §4331(a)).

To carry the policy stated above, the Federal Government must coordinate and improve Federal programs so that we, as a nation, may attain the widest range of beneficial uses of the environment, preserve important historical, cultural and natural aspects of our national heritage, maintain an environment which supports diversity and variety of individual choice and achieve a balance between population and resource use which will permit a wide sharing of life's amenities.

The suggested Alternative 5 will allow development of much of the base while allowing some characteristics of history, a diverse environment of commercial, residential and agricultural activities, with a balance between the need and desire for progress while maintaining prime farmland for nature's intended use. The Draft EIS/EIR casts aside all of these considerations with regard to the elimination of agricultural resources.

As a result, the Draft EIS/EIR does not meet the necessary requirements of NEPA and CEQA, as cited herein.

Major Differentials Between the Initial EIS/EIR (1997) and Current EIS/EIR (1999)

It is interesting to note that the major differentials between the original EIS/EIR for disposal of the MCAS prepared in 1997 had a section within it regarding the objectives of the proposed Reuse Plan/Specific Plan raised by the City of Tustin. The present draft EIS/EIR seems to be totally devoid of these objectives, because the supporting goals could not be met.

Such issues as the "Good Neighbor" aspect raised in the 1997 EIS/EIR requires that there be new uses and designs that peacefully coexist with the surrounding residents and businesses. The farmlands were present long before the military base and the housing. It has existed before the new residential areas were developed. However, they have coexisted equally for over 15 years. Prior to that, and before the base was ever built, the subject area was all agricultural land.

By injecting commercial and dense residential development with the accompanying increased traffic impact and utilization of infrastructure services, the quality of life will not be raised. Rather, such will create an adverse impact upon the local residents.

Development of the subject farmland also removes the safety factor. Presently, 400 acres of land are not being utilized for anything other than agricultural use. There is no housing, electrical, sewer and water run off that would affect the surrounding area. More development means increased traffic flow and people, giving rise to an increase in the number of accidents and crimes.

Another issue addressed in the 1997 EIS/EIR, which was totally avoided in the 1999 EIS/EIR is the issue of the self sufficiency. The farming land is self sufficient in that the water that is utilized is directly on the base. The soil is present for them to be able to work and produce grown is put into the local economy. The land in its present form is self sufficient. An appropriate suggestion to the Draft EIS/EIR Alternatives, raised previously as Alternative 5, which involves the utilization of the recreational areas and the buildings for education purposes or utilization as the city deems, would be appropriate for the public good. However, the farming land is a key to the overall environmental stability that is necessary by law. The recreational areas would be used by local residents, as would the educational facilities. The farm would continue to be worked by existing work personnel from the surrounding communities. This meets state and Federal environment requirements.

base. It is a known factor, and has been the subject of numerous articles, that development actually costs more money than leaving the ground in its current state. It has already been conceded within the 1997 EIS/EIR that it would be necessary to expand most of the infrastructure to try to accommodate the large number of additional houses and other developments that will occur in the form of business, commercial settings and housing. The structures that are present on the base have been already assimilated into the presently existing infrastructure.

To develop the base now as outlined in Alternatives 1 through 3, will result in the removal of existing infrastructure and its rebuilding to meet current structural standards, at a much greater expense to the local taxpayers. Minimizing the development, leaving the acreage as farming and leaving the recreational areas for recreation, will involve a reduction in the overall development of the area and limits the impact on the infrastructure. This in turn creates a sound fiscal policy that will not result in undue hardship upon the cities and local governmental agencies, upon whom development will have a tremendous impact.

The impact on the traffic and infrastructure will also affect the surrounding taxpayers who will have to bear the brunt of the reconstruction of the infrastructure, by the issuance of construction bonds and other financing, for which the taxpayers become ultimately responsible.

One other issue is "Valued Heritage," or the historical aspects to be maintained by the City of Tustin. Does the destruction of 400 acres of agricultural land, that has been farmed since before the Marine Corp Helicopter Station was established, actually keep that historical perspective in mind? The answer obviously is no, and it is a resounding no. In fact, the removal of the agricultural lands, in effect, takes away the history of what is part of Orange County overall, not just the City of Tustin. Further, the fact that this is a working, producing agricultural farm also means that you are taking away food stock that is being provided to the local area as well. As indicated previously, by the time one gets done assessing the impact of the removal of the subject agricultural lands, you are affecting close to 12 million consumers by the products that are being developed and sold through the farming operation.

Sustainable Environment

Sustainable Environment was another issue raised by the City of Tustin in their prior EIS/EIR. The effect is that by the removal of the clean agricultural land, exposes the land to the harsh realities of construction and all of the impacts of that construction, including water run off, irrigation problems, traffic congestion, and an increase in environmental toxins in the air.

The land has been used for farming consistently for a century. The removal of that farm use does not stay consistent with the goal of a sound sustainable environment.

Economic Developments

The City of Tustin raised the issue of fostering economic development. While it is true that development will create temporary construction jobs, once construction is done, those jobs are gone, in addition to the agricultural jobs being gone, permanently. The maintenance of the jobs in the commercial development will depend on the businesses and the economy, but as in all businesses it can be temporary. The agricultural farming has had a long history of employment. More importantly, it is the tremendous loss of employment, as described previously, that is of more significant importance, if the farmlands are eliminated.

The goal is to promote coexistence between commercial, residential, recreational and agricultural development. This can be done while preserving the farm land for agriculture use. That keeps jobs locally and it prevents the black hole effect, if agriculture is removed, as proposed in the Draft EIS/EIR. This loss of related jobs is not addressed in the 1997 EIS/EIR nor in the 1999 EIS/EIR, which in itself makes the Draft EIS/EIR a deficient report. As such the 1999 EIS/EIR does not meet the necessary requirements of NEPA and CEQA, nor the other federal laws concerning base closures cited within the 1999 EIS/EIR Report and herein.

Public Services and Facilities

The 1999 EIS/EIR seems to take the ostrich approach to the Public Services and Facilities Impact. California's policy under CEQA is to "create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations." (CEQA, California Public Resources, §21001(e)). By increasing population through building homes to the tune of 4,000 to 6,000 homes within this area alone, means a tremendous impact on public services and facilities. This results in an increase in the need for fire support and police support facilities, as well as hospital, medical and other facilities that come into play when bringing that many people into a city. With a mere 4,000 homes being involved, you are looking at least two persons per home, which means you are increasing the area by a minimum of 8,000 people who have the potential for accidents, injuries, fires and other matters that take place. In reality, you are probably looking at a minimum household of four people, which means you have now taken 4,000 homes and turned it into 16,000 residents that are going to be dependent upon the public facilities and services. This creates a negative impact, both of a financial nature and upon the quality of life.

By using Alternative 5, as suggested herein, usage results in minimal impact while promoting economic growth.

Earthquake Impact

There is no getting around the fact that the location of the Marine Corp Helicopter Station runs the possibility of severe earthquake damage. The proximity to a number of faults, combined with the soil make up, increases the possibility of severe damage with each earthquake.

As indicated within the earthquake chart, the possibility for a severe earthquake are moderate to very high for this area, with resulting liquefaction, soil failures and damages that occur concurrent therewith.

By maintaining the agricultural lands, you are removing from the possibility of damage several hundred acres of land, for which emergency services would be needed, thereby taxing the emergency services at a critical time.

Further, one must also remember that in the event of a severe event, such as an earthquake, the farmlands can be used to provide immediate food to the local area as well as an open storage area for emergency services which would be taken away from the threat of building collapse or fallen, broken electrical or gas lines. The removal of that land means becoming dependent, once again, on obtaining foods from other sources, that are farther away and can be interrupted completely by the failure of roads, railways and other transportation modes. At least by maintaining some farming lands within the local areas, you maintain an available food source.

Significant Adverse Impact and Mitigation Possibility

What is consistent between the 1997 and 1999 EIS/EIR's is the fact that there will be a significant environmental impact by the removal of prime agricultural lands. To remove this prime farming lands means you are removing food stock from the local community. You are also removing the historical values of an agricultural era which now gives way to roads and buildings. Lastly, you are removing jobs and the domino effect on other jobs described previously. There is no real provision for any mitigation in the event that these agricultural lands are taken.

The present farming has been in existence for over 15 years. The base started as agricultural land and it is and will continue to be agricultural land unless the City of Tustin totally ignores and overrides the real environmental impact that comes into play. Further, there has been no provision for mitigation for the loss of this agricultural land. What the 1999 EIS/EIR fails to consider is the fact that there is a mitigation possibility. One mitigation in this situation would be based on historical action for this location. If Alternatives 1, 2 or 3 go forward with removing all agricultural land, the Alternative mitigation is to provide agricultural land at another location. Historically, when the land was taken over by the Federal Government for the purposes of setting up the lighter than aircraft station, land was traded to the owner at that time and the agricultural function was relocated to a local area.

The same thing can occur here. Basically, you are taking prime farmland and removing it from production. However, in doing so, other land should be traded to restart the agricultural process at another location. As a result, there is a mitigation factor that has not been realistically considered and should be considered as part of the Draft EIS/EIR. The Draft EIS/EIR seems to believe the cost is too high. But the cost is not a factor where the state and Federal Government mandate protection of farm lands.

Another means to mitigate the complete destruction of agricultural farmland is for the City of Tustin or the County of Orange to enter into a Williamson Act ten-year contract. (Cal. Government, §51220 et seq.), with the option of extending the lease after the initial ten year period. The Draft EIS/EIR Report dismisses the measure as infeasible, simply because there is no assurance that the City of Tustin or the County of Orange would agree to this arrangement. However, the EIS/EIR does not address the possibility that the Federal Government retain the farmland, pursuant to its farmland protections policies, and entering into a Williamson Act type contract with the city or county. Rather, the Draft EIS/EIR focuses on the persuasion of private landowners where the current farm on the MCAS would be relocated. The former scenario would mitigate the significant impact for at least ten years. Thus, at a minimum, allowing Osumi Farms adequate time to locate a suitable site to move its farming operations and to work out alternatives with others involved in the agricultural chain of commerce.

The Draft EIS/EIR considers the purchase of off-site Farmland Agricultural Land. It determines that this mitigation measure is not feasible because of the costs of purchasing other farmland. However, the alternative of the City of Tustin leasing the land from Orange County and the city subsequently subleasing the land to Osumi Farms was not addressed. The cost of this arrangement would be significantly less than the outright purchase of the land and enables the City of Tustin to remain fiscally responsible.

Another mitigation aspect is to make the farming land the last land to be developed, if any of the three Alternatives are used. If it is decided that Alternatives 1, 2, or 3 are going to be utilized, as opposed to Alternative 4, which is the "No Action" or Alternative 5, which is Osumi's recommendation for an Alternative, then the farming land should be the last land to be destroyed, so to delay the killing of the subject agricultural jobs and to delay the killing of the support jobs that are affected by the agricultural operations. This will allow the farming to continue at least until the year 2002 to 2005, when the last of the development is proposed to occur.

This way the land, which is prime farming land, will continue to be used to produce fresh produce to the last possible moment.

From the looks of the Draft EIS/EIR, it is the intent to take out the farming land first, which would be inconsistent with that which is best for the overall environment and the local community and files in the face of the Federal and State Farm Protections Policy.

CEQA requires that "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environment effects of such projects." (CEQA, California Public Resources, §21001). The Draft EIS/EIR has failed to consider many social, economical and environmentally feasible mitigation measures that would preserve what little prime farmland remains in Orange County.

Lack of Overriding Consideration

As of this time, none of the documentation that has been submitted confirms that there has been a statement of overriding consideration as to the reason why the agricultural lands should be totally eliminated solely for the purpose of development. Development is not always the highest or best use of land. That is evident by the fact that as countries develop more, the need and dependency upon other countries and/or other areas for food, and other natural resources, becomes necessary. Therefore countries lose their ability to be self-sufficient.

7 CFR, §658.4 provides that Federal agencies, when disposing of Federal lands, take into account the adverse effects of Federal programs or the protection of farmland. This includes the assessments of certain criteria which are designed to assure the protections of farmland. This should have been part of the NEPA process (7 CFR, §658.4(e)). A sufficiently high total score corresponds with the degree of protection farmland should receive. Nothing in the Draft EIS/EIR indicates that such a study was completed.

Conclusion

For the reasons outlined above, it appears that the 1999 Draft EIS/EIR has not met all of the necessary requirements under NEPA and CEQA and related Federal rules and regulations as cited herein. What needs to be done is a reevaluation of the impact of the removal of agricultural land and other mitigation factors that should be considered. In the alternative, utilization of the property as outlined in Alternative 5, as recommended by this Response to the Draft EIS/EIR.

The Draft EIS/EIR seems to have only one intent and purpose at this point and that is fast development at all costs. This is not the intent of the law, nor what is the intent of the turnover of military property for civilian use. CEQA provides that all subsequent development at a military base shall be subject to all applicable Federal, state and local laws. CEQA, California Public Resources, §21083.8.1(e)). In fact, the Draft EIS/EIR flies in the face of the intent and meaning of legislative history of what is required for the development of properties for reuse from military control. Several State and Federal policies have been ignored as cited herein.

For these reasons, the current Draft EIS/EIR should be set aside and a further more in depth study of the impact of the removal of the agricultural lands and the impact on the economies that derive therefrom, in the form of support personnel, support equipment and the movement of crops within the Federal Chain of Commerce, should be considered. At this point, the Draft EIS/EIR does not meet these Federal requirements and the removal of that farming land runs afoul of interstate commerce issues.

Orange County is not faced with a dearth of housing tracts or strip malls. Before the last orange tree is cut down or the last farm land is paved over in Orange County to make room for yet another strip mall, serious objective consideration must be provided to the long term impact of the destruction of such a vital natural resource as prime farm land.

As a result, it is respectfully requested that the undersigned be advised for and on behalf of Osumi Farms of the intent and actions of the parties involved as to the current Draft EIS/EIR.

Respectfully Submitted By:



Ivan K. Stevenson
Law Offices of Ivan K. Stevenson
Attorney for OSUMI FARMS

**DISTRIBUTION & NOTIFICATION LIST FOR RESPONSE TO THE DRAFT
ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL REPORT FOR THE
DISPOSAL AND REUSE OF THE MARINE CORPS AIR STATION, TUSTIN**

Federal Agencies

Advisory Council on Historic Preservation
U.S. Army Corps of Engineers, LA District, Environmental Resources Program
U.S. Department of Education
U.S. Department of Justice, Office of Justice Programs
U.S. Department of Health and Human Services
U.S. Department of Housing and Urban Development
U.S. Environmental Protection Agency, Region 9
U.S. Department of Agriculture

Department of Defense

Naval Facilities Engineering Command, Alexandria, VA.
Naval Facilities Engineering Command, SOUTHWESTDIV
Base Realignment and Closure Office, MCAS Tustin
Office of Economic Adjustment
Secretary of the Navy

Department of the Interior

Fish and Wildlife Service
National Park Service
Office of Environmental Affairs
Office of Environmental Policy and Compliance

Department of Transportation

Federal Highway Administration
Environmental Division

State Agencies

California Air Resources Board
California Department of Education
California Department of Fish and Game, Region 5
California Department of Health Services
California Department of Toxic Substance Control
California Department of Parks and Recreation
California Department of Transportation, District 12
California Department of Water Resources

California State Lands Commission
Governor's Office of Planning and Research
State of California, Clearinghouse
State Office of Historic Preservation

Politicians

Honorable Dianne Feinstein
Honorable Barbara Boxer
Honorable Loretta Sanchez
Honorable Christopher Cox

Regional Agencies/Special Purpose Agencies

South Coast Air Quality Management District
Southern California Association of Governments
Transportation Corridor Agency
Regional Water Quality Control Board

County Agencies

Orange County Board of Supervisors
Orange County Flood Control District
Orange County Sanitation District
Orange County Transportation Authority
Orange County Environmental Management Agency
Orange County Chief Executive Officer of Strategic Affairs

Other Special Interests

California Preservation Foundation
Heritage Orange County, Inc.
Irvine Historical Society
National Trust for Historic Preservation
Orange County Historical Society

Libraries

Orange County Public Library, Administrative Office
Orange County Public Library, Irvine Heritage Park
Orange County Public Library, Tustin Branch
University of California, Irvine, Main Library

Local Jurisdictions

City of Tustin
City Manager's Office
Planning Commission
Mayor and City Council

City of Irvine
City Manager's Office

City of Santa Ana
Community Development

Utilities/Public Services

Utilities

Irvine Ranch Water District
Southern California Edison Company
Southern California Gas Company

Public Services

Irvine Unified School District
Santa Ana Unified School District
South Orange County Community College District
Tustin Unified School District

Newspapers

Los Angeles Times
Orange County Register
Tustin Weekly

Dana Ogden
Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, CA 92680

Roger McCullough
2302 Coco Palm Drive
Tustin, CA 92780

August 23, 1999

Dana Ogdon
City of Tustin
300 Centennial Way
Tustin, CA 92780

RECEIVED

AUG 25 1999

REDEVELOPMENT AGENCY

To whom it may concern:

I live on Coco Palm Drive in the Pepper Tree housing development. Most homes are two stories and susceptible to hearing noises not isolated by sound walls. My concerns with the reuse plans presented are noise related, and how the quality of life will be impacted.

1. The planning of a high school next to residential areas fails to take in consideration the extra curricular activities always identified with high schools. The noise from these activities (band, football practices and games, track, soccer, etc.) and the related traffic only makes living nearby unpleasant. (Please note: Sound carries as the Marine Corp calisthenics were always audible.) I recommend that the high school be moved as far away from residential areas as possible.

2. The location of the village services again fails to take into consideration those who live around it. Village Services will be across the street from the South east side of Pepper Tree and adjacent to the low and medium residential areas. Having lived near a convenience area I will attest to the fact that they become a hangout for kids, car stereos blasting at all hours in addition to the noise generated by additional traffic. I recognize the need for such facilities, but locating near homes is a mistake.

Sincerely,

12-1

The planned high school under Alternative 1 would be located in the Community Core, adjacent to the regional park. Land use in the Community Core would consist of mixed uses, including residential uses. Land use across Tustin Ranch Road would be Golf Village, which might include residential uses. Land use across Valencia Avenue would be Village Services, not residential.

As the commenter notes, baseline general activity noise at MCAS Tustin (such as Marine Corps calisthenics) includes activities similar to what may occur at the future high school, such that the net change in noise levels from such activity-noise under Alternative 1 might be similar to baseline conditions. Other baseline noise-generating activities, such as helicopter operations, would cease upon closure, resulting in a beneficial impact (see Section 4.14 of the EIS/EIR).

Under any reuse alternative with a school, the school district must comply with existing noise regulations concerning general activity noise. Sound levels fall with distance due to absorption by the atmosphere and the spherical spreading of the sound energy. Considering that the high school under Alternative 1 would be more than 1,000 feet from the closest existing homes outside MCAS Tustin, which are also located north of the SCRRRA/OCTA railway, and that noise from high school activities would ultimately be partially blocked by intervening structures, noise from the high school at these locations would not exceed any local standards. The school district would be responsible for CEQA compliance of the facility. The EIS/EIR analyzes traffic noise, including noise from high school-related traffic, in Section 4.14 of the EIS/EIR.

12-2

Village Services consisting of local commercial retail and service uses are proposed at the referenced site under Alternative 1 (page 2-19 of the EIS/EIR) and would be located between Valencia Loop Road, Edinger Avenue, Tustin Ranch Road, and the West Connector. Within the reuse plan area (given Alternative 1), medium density residential would be located across the West Connector, Regional Park and High School would be located across Valencia Loop Road to the south, and Golf Village would be located across Tustin Ranch Road and Valencia Loop Road to the east/southeast (Figure 2-1 of the EIS/EIR). As shown in Figure 3.1-1 of the EIS/EIR, land use to the northeast of the referenced site presently consists of residential and business/commercial land uses.

Typically, commercial land uses (such as Village Services) are not considered incompatible with residential areas as long as appropriate buffering is included. The MCAS Tustin Reuse Plan/Specific Plan includes such buffering between Village Services and nearby residential areas. Existing residential areas to the northeast of the reuse plan area would be further buffered by Edinger Avenue and the SCRRA/OCTA railway. Existing noise walls further buffer these residential areas from this busy transportation corridor.

Existing rules and regulations limit the amount of noise from typical on-site activities, such as from car stereos. Compliance with these noise regulations will ensure that impacts related to noise generated in Village Services under Alternative 1 would be less than significant. Additionally, some on-site noise-generating activities under baseline, such as helicopter operations, would cease upon closure, resulting in a beneficial impact (see Section 4.14 of the EIS/EIR).

The impact of vehicular-generated noise under Alternative 1, which includes traffic from Village Services, was evaluated in Section 4.12 of the EIS/EIR. Mitigation measure N-2 would ensure that impacts related to noise from the grade-separated intersection of Tustin Ranch Road/Edinger Avenue would be less than significant under Alternative 1. As stated in Section 4.14 of the EIS/EIR, existing uses on roadways surrounding the site would not experience noise levels that exceed those established as acceptable for the affected land use resulting from Alternative 1, and impacts would be less than significant.

August 15, 1999

Dana Ogdon
Senior Project Manager
City of Tustin
300 Centennial Way
Tustin, CA 92780

Marsha Lindsey
2372 Caper Tree Drive
Tustin, CA 92780
714.544.7715

RECEIVED

AUG 19 1999

REDEVELOPMENT AGENCY

13-1

The extension of Tustin Ranch Road from Walnut Avenue to Edinger Avenue is not a part of this reuse plan development. It is a conditioned requirement of the approval of the Irvine Business Center. However, the grade separation of the intersection of Tustin Ranch Road/Edinger Avenue and extension of Tustin Ranch Road from Edinger Avenue to Barranca Parkway would be a part of the reuse plan development. Subsequent analyses of that roadway extension project would be most appropriate because accurate noise modeling to locate sound walls for noise attenuation must utilize engineering design drawings, not conceptual planning locations. Construction schedules are also best addressed when more engineering details are known about the roadway design. Mitigation measure N-2 requires subsequent noise evaluation of the interchange, and future environmental evaluation of the roadway extension from Walnut Avenue to Edinger Avenue itself would be required under state law and local regulations.

Dear Dana Ogdon,

I want to voice my concerns about the increase in noise that I expect when Tustin Ranch Road is extended from Walnut to and through Tustin Legacy. Our property backs up to the land that will become the road. Will a sound barrier be built? Can the sidewalk be limited to the other side, as was done by Laurelwood? Will trucks be off limit, so we won't be woke by shaking and rattling? Trucks could easily use Jamboree and impact us much less. What about soundproofing our homes? Will there be any funds dedicated to helping us bear the burden of progress? How do we know that the increase in car exhaust won't make us ill? Will there be any monitoring? What is the status? When do you expect to start and finish? Will you limit the construction to business hours so we won't suffer too terribly? All these questions concern us. Do you have any answers?

Sincerely,



Marsha Lindsey

14-1 The commenter's preference for a central park is noted.

August 17, 1999

Dear Ms. Ogdon:

14-1 I would like to put a vote in for a central park to be put into the vacancy left by the marine base. We have too many people in this area and not enough green and beauty.

Sincerely,


Kay Shafer
14352 Cloverbrook Dr.
Tustin Ca 92780

RECEIVED
AUG 19 1999
REDEVELOPMENT AGENCY

IS-1

Interim leases for the land at MCAS Tustin are outside the scope of this environmental document. However, if the LRA Reuse Alternative is selected, the Specific Plan does have provisions which permit interim uses.

WRITTEN COMMENTS OR QUESTIONS	Environmental Impact Statement for the Disposal and Reuse of MCAS Tustin
August 13, 1999	
MR. John C. McDonald Orange Coast Radio Control Club, Inc. 194 N. Shirley Dr. Orange, CA 92667 phone (714) 771-2402	
Dear MR. Ogden:	
As we understand it, the helicopter pad is not a part of any planned development at this time.	
It is possible to obtain an interim temporary use permit for recreational use. As it is by the Orange Coast Radio Control Flyers. During the time at which they work out the planned reuse of the 84.5 acres of land parcel designated as the Urban Regional Park, with the country of Orange (as recommended by Dana Ogden's letter dated August 3, 1999).	
Sincerely,	
<i>John C McDonald</i>	

Please Send Comments / Questions to:

Dana Ogden
City of Tustin
300 Centennial Way
Tustin, CA 92680

RECEIVED
AUG 17 1999
REDEVELOPMENT AGENCY

1 second speaker will be John Higgins.

2 MS. WILES: Thank you. Good evening. My name
3 is Wendy Wiles, that's W-I-L-E-S. I'm legal counsel for the
4 Santa Ana Unified School District. My business address is
5 4920 Campus Drive, Newport Beach, California. I am here
6 tonight on behalf of the Santa Ana Unified School District
7 and wanted to make some preliminary oral comments on the
8 documentation that we have received so far.

9
10 Currently, the data in the EIS/EIR makes it
11 clear that there will be some unmitigated impacts on the
12 Santa Ana Unified School District as a result of the
13 alternatives considered in the Reuse Plan.

14 The EIS/EIR, however, contends that any impact
15 on the Santa Ana Unified School District will be indirect.
16 In other words, via the creation of new employment
17 opportunities in the Reuse Area Plan, for the reason that
18 only commercial development is planned within Santa Ana
19 Unified School District boundaries.

20 This has been a foregone conclusion that the
21 impacts will only be indirect, and therefore, considered
22 differently than impacts considered for the other school
23 district. We are in the process of reviewing the reports
24 which are included as part of the EIS/EIR and will submit
25 our written comments prior to August 23rd.

However, we do note certain statements in the

17

TJ-I

Refer to response to comment letter L-9 which is the written correspondence from the
firm of Bowie, Ameson, Wiles and Giannone, where Ms. Wiles is employed. That
firm represents the SAUSD.

TJ-I

1 EIS/EIR which we wanted to address. First of all, it does
2 recognize impacts to Santa Ana Unified School District. As
3 a result of the plan development, there will be somewhere
4 between a minimum of 88 and a maximum of 547 new households
5 created within Santa Ana Unified School District which would
6 then result in impacts to the school district.

7 The report also acknowledges that somewhere
8 between 82 and 509 new students within Santa Ana Unified
9 School District would be generated as a result of this new
10 Reuse Plan. Similarly, it recognizes that a cost to the
11 Santa Ana Unified School District of somewhere between 1.3
12 million and 8.1 million dollars would be incurred by the
13 Santa Ana Unified School District as a result of this
14 project.

15 The EIS/EIR goes on to make assumptions about
16 revenues that would be available, without specifics, and it
17 is our position that these assumptions are not only
18 erroneous, but cannot serve as a determination for no impact
19 to the Santa Ana Unified School District.

20 The report recognizes that Santa Ana Unified is
21 heavily impacted. Santa Ana operates 33 elementary schools,
22 eight middle schools, five high schools and one continuation
23 high school. An alarming number of students within Santa
24 Ana Unified are housed currently in portable classrooms, and
25 the EIS/EIR admits that all but two schools are in an

1 overcrowded condition within the district, and that the
2 district is seriously overcapacity at the present.

3 A public benefit land conveyance was approved
4 on behalf of the Tustin Unified School District for
5 approximately 59 acres to allow for the construction of
6 three new schools. A public benefit conveyance for the
7 Irvine Unified School District has also been approved for
8 approximately 20 acres for the construction of new school
9 facilities, and yet the Santa Ana Unified School District
10 request for public benefit conveyances have been denied.

11 Is it a coincidence that both the City of
12 Irvine and the City of Tustin are lead agencies and that
13 both Irvine Unified School District and Tustin Unified
14 School District's public conveyances have been approved,
15 while the Santa Ana School Unified School District's
16 conveyance has been denied? Or is the justification which
17 is referenced in the EIR/EIS simply because there is no
18 residential housing proposed within the boundaries of the
19 Santa Ana Unified School District?

20 Students are students, regardless of where they
21 come from. The EIR/EIS recognizes that new students will be
22 impacting the Santa Ana Unified School District, and yet no
23 provision has been made to address these impacts.

24 It is the position of the Santa Ana Unified
25 School District that presently these impacts have not been

19

T2-1 Refer to response to comment 13-1.

T2-2 Refer to response to comment 12-2.

considered in a similar fashion as have been considered for other school districts. It is also the position of Santa Ana Unified that there are mitigation measures which should be considered as part of this EIS/EIR in order to provide for school facilities necessary for the Santa Ana Unified School District.

Thank you.

LT. COLONEL LINDBOE: Thank you for your comments.

Our next speaker will be John Higgins.

MR. HIGGINS: Good evening. I am John Higgins -- it's H-I-G-G-I-N-S. I live at 2342 Caper Tree. That's in the Pepper Tree residence area just to the east of the Navy base.

Two comments on noise, basically. All three alternatives show an extension of Tustin Ranch Road which will increase noise in the locations, especially at the interchange of Edinger, because it goes over Edinger and over the railroad tracks. It should be indicated in the document, according my discussions with Mr. Ogdon and Mr. Anderson, that this is a future project and will be addressed separately from this document. And that way it keeps that noise issue into a future Tustin project.

Also alternatives show the convenience center at the southwest corner of Edinger at that interchange. That convenience center should be as far away from

20

1 residential areas as possible, and if built before the
2 interchange is put in, mitigation should be included for
3 noise in that development. Thank you.

4 LT. COLONEL LINDBOE: Thank you. Are there any other
5 persons who wish to speak?

6 LT. COLONEL LINDBOE: In that case, this concludes
7 this meeting. I would like to thank the speakers for your
8 ideas and comments. Please send us any added thoughts you
9 may have to aid us in our decision making using the written
10 comments form at the sign-in table.

11 Again, thank you for coming.

12 (Conclusion of proceedings.)

APPENDIX F
TRAFFIC TECHNICAL REPORT

APPENDIX F
TO THE
FEIS/EIR FOR DISPOSAL
AND REUSE OF MARINE CORPS
AIR STATION (MCAS) TUSTIN

***FINAL* TRAFFIC TECHNICAL REPORT**

***JUNE NOVEMBER* 1999**

FINAL

**MARINE CORPS AIR STATION (MCAS) TUSTIN
DISPOSAL AND REUSE TRAFFIC STUDY**

Prepared by:

Austin-Foust Associates, Inc.
2020 North Tustin Avenue
Santa Ana, California 92705-7827
(714) 667-0496

~~June 25, 1999~~ *November 17, 1999*

CONTENTS

	Page
PREFACE	
1.0 INTRODUCTION	
1.1 ~~Project Site~~ <i>Reuse Plan Area</i>	1-1
1.2 Analysis Scope	1-3
1.3 Study Area	1-4
1.4 Traffic Forecasting Methodology	1-6
1.5 Relationship to Other Programs and Studies	1-7
A. Congestion Management Program (CMP)	1-7
B. Growth Management Plan	1-8
C. Other Studies	1-8
1.6 Performance Criteria	1-9
1.7 Definitions	1-13
1.8 References	1-14
2.0 DESCRIPTION OF ALTERNATIVES	
2.1 Land Use and Trip Generation	2-1
2.2 Project Alternatives	2-2
A. Reuse Alternative 1	2-2
B. Reuse Alternative 2	2-11 12
C. Reuse Alternative 3	2-14 18
D. No Action Alternative	2-22 21
2.3 Trip Distribution	2-22 24
2.4 Areawide Travel Patterns	2-23 24
3.0 TRANSPORTATION SETTING	
3.1 Existing Circulation Network	3-1
3.2 Existing Traffic Conditions	3-3 1
3.3 Baseline Conditions	3-3 4
3.4 Committed Roadway Network	3-12

CONTENTS (cont)

	Page
3.0 TRANSPORTATION SETTING (cont)	
3.5 Year 2005 Baseline Conditions	3-15
3.6 Non-Roadway Modes	3-28
A. Public Transit	3-28
B. Existing and Planned Bikeways	3-37
4.0 IMPACT ANALYSIS	
4.1 Significance Criteria	4-1
4.2 Impact Analysis Scope and Methodology	4-1
4.3 Disposal of MCAS Tustin	4-3
4.4 Impact Analysis - Reuse Alternative 1	4-3
A. Impacts (Reuse Alternative 1)	4-3
1. Project Stand-Alone Roadway Impacts (Reuse Alternative 1)	4-3
2. Year 2005 Roadway Impacts (Reuse Alternative 1)	4-4
3. Year 2020 Roadway Impacts (Reuse Alternative 1)	4-12
4. Public Transit Impacts (Reuse Alternative 1)	4-12
5. Pedestrian and Bicycle Impacts (Reuse Alternative 1)	4-17
6. Construction Impacts (Reuse Alternative 1)	4-17
B. Mitigation Measures (Reuse Alternative 1)	4-17
1. Year 2005 Mitigation Measures (Reuse Alternative 1)	4-18
2. Year 2020 Mitigation Measures (Reuse Alternative 1)	4-18
3. <i>Additional Mitigation Measures (Reuse Alternative 1)</i>	4-22a
C. Level of Significance After Mitigation (Reuse Alternative 1)	4-22
1. <i>ADT Threshold Methodology</i>	4-22d
2. <i>Reuse Plan (Project) Share Methodology</i>	4-22e
4.5 Impact Analysis - Reuse Alternative 2	4-22
A. Impacts (Reuse Alternative 2)	4-25
1. Project Stand-Alone Roadway Impacts (Reuse Alternative 2)	4-25
2. Year 2005 Roadway Impacts (Reuse Alternative 2)	4-30

CONTENTS (cont)

	Page
4.0 IMPACT ANALYSIS (cont)	
4.5 Impact Analysis - Reuse Alternative 2 (cont)	
A. Impacts (Reuse Alternative 2) (cont)	
3. Year 2020 Roadway Impacts (Reuse Alternative 2)	4-30
4. Public Transit Impacts (Reuse Alternative 2)	4-38
5. Pedestrian and Bicycle Impacts (Reuse Alternative 2)	4-38
6. Construction Impacts (Reuse Alternative 2)	4-39
B. Mitigation Measures (Reuse Alternative 2)	4-39
1. Year 2005 Mitigation Measures (Reuse Alternative 2)	4-39
2. Year 2020 Mitigation Measures (Reuse Alternative 2)	4-41
3. <i>Additional Mitigation Measures (Reuse Alternative 2)</i>	4-45a
C. Level of Significance After Mitigation (Reuse Alternative 2)	4-45
4.6 Impact Analysis - Reuse Alternative 3	4-45
A. Impacts (Reuse Alternative 3)	4-45
1. Project Stand-Alone Roadway Impacts (Reuse Alternative 3)	4-45
2. Year 2005 Roadway Impacts (Reuse Alternative 3)	4-49
3. Year 2020 Roadway Impacts (Reuse Alternative 3)	4-56
4. Public Transit Impacts (Reuse Alternative 3)	4-56
5. Pedestrian and Bicycle Impacts (Reuse Alternative 3)	4-61
6. Construction Impacts (Reuse Alternative 3)	4-61
B. Mitigation Measures (Reuse Alternative 3)	4-61
1. Year 2005 Mitigation Measures (Reuse Alternative 3)	4-62
2. Year 2020 Mitigation Measures (Reuse Alternative 3)	4-62
3. <i>Additional Mitigation Measures (Reuse Alternative 3)</i>	4-66a
C. Level of Significance After Mitigation (Reuse Alternative 3)	4-67
4.7 No Action Alternative	4-67
A. Project Stand-Alone Traffic Impacts (No Action Alternative)	4-67
B. Year 2005 Traffic Impacts (No Action Alternative)	4-72
C. Year 2020 Traffic Impacts (No Action Alternative)	4-72

CONTENTS (cont)

	<u>Page</u>
5.0 POST-2020 ANALYSIS	
5.1 Demographic Data	5-1
5.2 Planned Circulation Improvements	5-1
5.3 Post-2020 Traffic Forecasts	5-9
5.4 Project Involvement in Post-2020 Improvements	5-9
6.0 IMPLEMENTING ACTIONS	
6.1 Internal Roadway System	6-1
6.2 Tustin Ranch Road/Warner Avenue Connection	6-7
6.3 Roadway Implementing Actions and Phasing Plan	6-11
A. Phasing Plan for On-Site Improvements	6-11
B. Phasing Plan for Off-Site Improvements	6-14
C. Off-Site Improvement Responsibilities	6-16 17
D. General Circulation Improvements	6-17 18
6.4 Conclusion	6-19 21

LIST OF FIGURES

	Page
1-1 Project Site <i>Reuse Plan Area</i>	1-2
1-2 Study Area	1-5
2-1 DON Disposal/Alternative 1 (LRA Reuse Plan)	2-5
2-2 Reuse Alternative 1 Circulation System	2-7
2-3 DON Disposal/Alternative 2 (Arterial Grid Pattern/No Core/High Residential) ..	2-12 13
2-4 Reuse Alternative 2 Circulation System	2-13 14
2-5 DON Disposal/Alternative 3 (Arterial Loop Pattern/Low Residential)	2-17 19
2-6 Reuse Alternative 3 Circulation System	2-19 20
2-7 Trip Distribution - 2020 Reuse Alternative 1	2-24 25
2-8 Trip Distribution - 2020 Reuse Alternative 2	2-25 26
2-9 Trip Distribution - 2020 Reuse Alternative 3	2-26 27
3-1 Existing (1997) Circulation System	3-2
3-2 Existing (1997) ADT Volumes (000s)	3-4 3
3-3 Existing (1997) Intersection Location Map	3-5
3-4 Existing On-Base Circulation System	3-14
3-5 Committed Circulation System Improvements	3-16
3-6 2020 ADT Volumes (000s) - Baseline	3-27
3-7 2005 ADT Volumes (000s) - Baseline	3-33
3-8 Existing Public Bus Routes (as of February 1999)	3-34
3-9 Existing Bikeways	3-38
3-10 Master Plan of Bikeways	3-40
4-1 Existing Plus Reuse Alternative 1 ADT Volumes (000s)	4-5
4-2 Existing Plus Reuse Alternative 1 Impacted Intersections	4-8
4-3 2005 ADT Volumes (000s) - Reuse Alternative 1	4-9
4-4 2005 Impacted Intersections - Reuse Alternative 1	4-11
4-5 2020 ADT Volumes (000s) - Reuse Alternative 1	4-13
4-6 2020 Impacted Intersections - Reuse Alternative 1	4-16
4-7 Existing Plus Reuse Alternative 2 ADT Volumes (000s)	4-26
4-8 Existing Plus Reuse Alternative 2 Impacted Intersections	4-29
4-9 2005 ADT Volumes (000s) - Reuse Alternative 2	4-31
4-10 2005 Impacted Intersections - Reuse Alternative 2	4-33
4-11 2020 ADT Volumes (000s) - Reuse Alternative 2	4-34
4-12 2020 Impacted Intersections - Reuse Alternative 2	4-37
4-13 Existing Plus Reuse Alternative 3 ADT Volumes (000s)	4-48
4-14 Existing Plus Reuse Alternative 3 Impacted Intersections	4-52
4-15 2005 ADT Volumes (000s) - Reuse Alternative 3	4-53
4-16 2005 Impacted Intersections - Reuse Alternative 3	4-55
4-17 2020 ADT Volumes (000s) - Reuse Alternative 3	4-57
4-18 2020 Impacted Intersections - Reuse Alternative 3	4-60
4-19 Existing ADT Volumes (000s) - No Action Alternative	4-70

LIST OF FIGURES (cont)

	<u>Page</u>
4-20 2005 ADT Volumes (000s) - No Action Alternative	4-73
4-21 2020 ADT Volumes (000s) - No Action Alternative	4-75
5-1 Master Plan of Arterial Highways (MPAH)	5-2
5-2 Post-2020 Circulation System Improvements <i>Consistent With MPAH</i>	5-4
5-3 Post-2020 ADT Volumes (000s) - Reuse Alternative 1	5-10
5-4 Post-2020 ADT Volumes (000s) - Reuse Alternative 2	5-11
5-5 Post-2020 ADT Volumes (000s) - Reuse Alternative 3	5-12
6-1 Specific Plan Signal Locations	6-2
6-2 Specific Plan 2020 AM Peak Hour Volumes - Project Vicinity	6-3
6-3 Specific Plan 2020 PM Peak Hour Volumes - Project Vicinity	6-4
6-4 Specific Plan 2020 Lane Configurations- Project Vicinity	6-5
6-5 Specific Plan Peak Hour Volumes - Tustin Ranch Road/Warner Avenue Alignment Alternatives	6-8
6-6 Specific Plan Lane Configurations - Tustin Ranch Road/Warner Avenue Alignment Alternatives	6-9
6-7 Tustin Ranch Road/Warner Avenue South Intersection Concept	6-10

LIST OF TABLES

	Page
1-1 Peak Hour Level of Service Descriptions	1-10
1-2 Traffic Analysis Performance Criteria	1-11
2-1 Land Use Categories for Reuse Alternatives	2-3
2-2 Land Use and Trip Generation Summary (Reuse Alternative 1)	2-8
2-3 Land Use and Trip Generation Summary (Reuse Alternative 2)	2-15 16
2-4 Land Use and Trip Generation Summary (Reuse Alternative 3)	2-20 22
3-1 Existing (1997) ICU Summary	3-6
3-2 Existing Intersection Deficiencies	3-11
3-3 Baseline Trip Generation for Project Area (External Vehicle Trips)	3-13
3-4 Roadway System Committed Improvements	3-17
3-5 Summary of Intersection Lane Changes for 2020	3-21
3-6 Summary of Intersection Lane Changes for 2005	3-29
3-7 Existing OCTA Bus Service	3-35
3-8 Bikeway Classification Descriptions	3-39
4-1 Summary of Impacted Intersections (Existing Plus Reuse Alternative 1)	4-6
4-2 Freeway Ramp Intersection Impact Summary (Existing Plus Reuse Alternative 1)	4-7
4-3 Summary of Impacted Intersections (2005 Reuse Alternative 1)	4-10
4-4 Freeway Ramp Intersection Impact Summary (2005 Reuse Alternative 1)	4-10
4-5 Summary of Impacted Intersections (2020 Reuse Alternative 1)	4-14
4-6 Freeway Ramp Intersection Impact Summary (2020 Reuse Alternative 1)	4-15
4-7 Mitigation Lanes for 2005 Reuse Alternative 1 Impacted Intersections	4-19
4-8 Freeway Ramp Intersection Mitigation Summary (2005 Reuse Alternative 1)	4-18a
4-8 9 Mitigation Lanes for 2020 Reuse Alternative 1 Impacted Intersections	4-20
~~4-9 Freeway Ramp Intersection Mitigation Summary (2020 Reuse Alternative 1)~~	~~4-22~~
4-10 Summary of Intersection Mitigation Results (2005 Reuse Alternative 1)	4-23
4-11a On-Site ADT Development Thresholds (Reuse Alternative 1)	4-22c
4-11 Summary of Intersection Mitigation Results (2020 Reuse Alternative 1)	4-24
4-12 Summary of Impacted Intersections (Existing Plus Reuse Alternative 2)	4-27
4-13 Freeway Ramp Intersection Impact Summary (Existing Plus Reuse Alternative 2)	4-28
4-14 Summary of Impacted Intersections (2005 Reuse Alternative 2)	4-32
4-15 Freeway Ramp Intersection Impact Summary (2005 Reuse Alternative 2)	4-32
4-16 Summary of Impacted Intersections (2020 Reuse Alternative 2)	4-35
4-17 Freeway Ramp Intersection Impact Summary (2020 Reuse Alternative 2)	4-36
4-18 Mitigation Lanes for 2005 Reuse Alternative 2 Impacted Intersections	4-40
4-18a Freeway Ramp Intersection Mitigation Summary (2005 Reuse Alternative 2)	4-41a
4-19 Mitigation Lanes for 2020 Reuse Alternative 2 Impacted Intersections	4-42
4-20 Freeway Ramp Intersection Mitigation Summary (2020 Reuse Alternative 2)	4-44
4-21 Summary of Intersection Mitigation Results (2005 Reuse Alternative 2)	4-46
4-22 Summary of Intersection Mitigation Results (2020 Reuse Alternative 2)	4-47

LIST OF TABLES (cont)

		Page
4-22a	<i>On-Site ADT Development Thresholds (Reuse Alternative 2)</i>	4-45c
4-23	Summary of Impacted Intersections (Existing Plus Reuse Alternative 3)	4-50
4-24	Freeway Ramp Intersection Impact Summary (Existing Plus Reuse Alternative 3) ..	4-51
4-25	Summary of Impacted Intersections (2005 Reuse Alternative 3)	4-54
4-26	Freeway Ramp Intersection Impact Summary (2005 Reuse Alternative 3)	4-54
4-27	Summary of Impacted Intersections (2020 Reuse Alternative 3)	4-58
4-28	Freeway Ramp Intersection Impact Summary (2020 Reuse Alternative 3)	4-59
4-29	Mitigation Lanes for 2005 Reuse Alternative 3 Impacted Intersections	4-63
4-29a	<i>Freeway Ramp Intersection Mitigation Summary (2005 Reuse Alternative 3)</i>	4-62a
4-30	Mitigation Lanes for 2020 Reuse Alternative 3 Impacted Intersections	4-64
4-31	Freeway Ramp Intersection Mitigation Summary (2020 Reuse Alternative 3)	4-66
4-32	Summary of Intersection Mitigation Results (2005 Reuse Alternative 3)	4-68
4-33	Summary of Intersection Mitigation Results (2020 Reuse Alternative 3)	4-69
4-33a	<i>On-Site ADT Development Thresholds (Reuse Alternative 3)</i>	4-66c
4-34	ICU Summary (Existing No Action Alternative)	4-71
4-35	ICU Summary (2005 No Action Alternative)	4-74
4-36	ICU Summary (2020 No Action Alternative)	4-76
5-1	Roadway System Differences	5-3
5-2	Post-2020 Roadway Circulation System Improvements	5-5
6-1	2020 Specific Plan ICU Summary (Reuse Alternative 1)	6-6
6-2	ICU Summary (Tustin Ranch Road/Warner Avenue Connection)	6-7
6-3	Phasing Plan - On-Site ADT Development Thresholds	6-12
6-4	Intersection Mitigation Shares Summary (2020 Reuse Alternative 1)	6-18 19

PREFACE

This Final Traffic Technical Report for Disposal and Reuse of MCAS Tustin (November 1999) contains corrections and clarifications to the Draft Traffic Technical Report (June 1999). Any new text is shown in "bold/italics" while changes to the tables are in "italics/underline" and any deleted text is shown as cross-out. There are two primary areas of change in the final report: (1) corrections to the committed roadway network, and (2) corrections to the land use breakdown for Alternative 1 resulting in generation of approximately 1,350 new trips (less than one percent).

Chapter 1.0

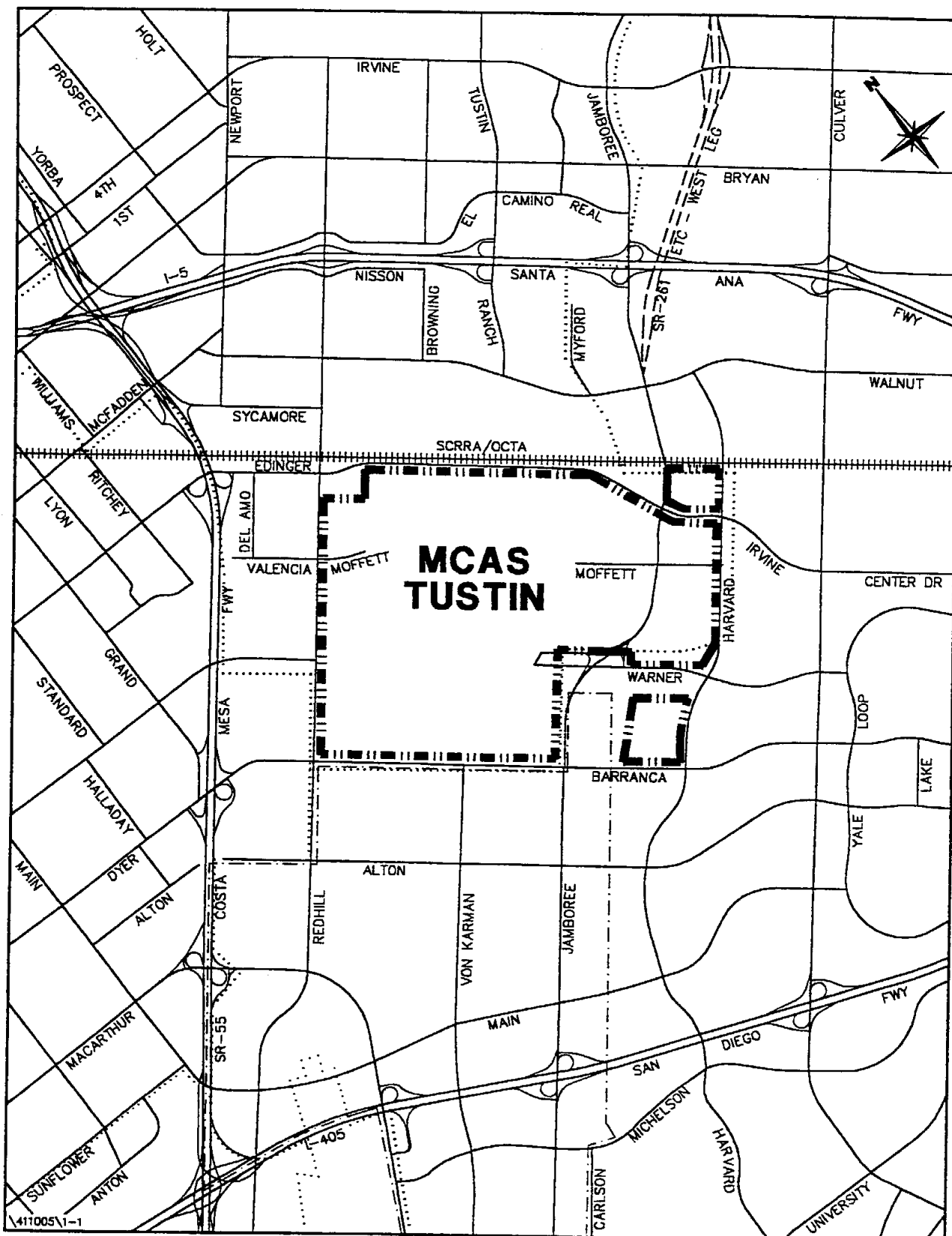
INTRODUCTION

This report summarizes the results of a circulation analysis performed as part of the revised Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) addressing the disposal and reuse of Marine Corps Air Station (MCAS) Tustin. The initial Draft EIS/EIR was circulated for a 45-day public review period which ended in March 1998. Comments on that document indicated the need to expand the circulation study area and to provide supplementary analyses for other issues. Given the amount of new information to be provided, the City of Tustin elected to re-circulate the entire EIS/EIR as a revised document. This traffic study addresses the traffic impacts related to the reuse alternatives and the No Action Alternative and provides the circulation analysis for the EIS/EIR. The report contains documentation of the methodology and assumptions used in the analysis, and presents the results and findings of the capacity impacts of alternative reuse plans.

1.1 ~~PROJECT SITE~~ REUSE PLAN AREA

The ~~project site~~ *reuse plan area*, illustrated in Figure 1-1, is bounded by Harvard Avenue to the southeast, Red Hill Avenue to the northwest and Barranca Parkway to the southwest. Edinger Avenue serves as the northeasterly ~~project site~~ boundary. Except for the southern portion of the site southeast of Jamboree Road which is in the City of Irvine, the ~~project site~~ is in the City of Tustin. The ~~project site~~ includes the area within the MCAS Tustin boundary plus ~~30~~ 4.1 acres of privately owned property east of the air station near Harvard Avenue and Edinger Avenue intersection.

Three freeways provide regional accessibility to the site. These are the Santa Ana Freeway (Interstate 5 [I-5]) to the northeast, the Newport-Costa Mesa Freeway (State Route 55 [SR-55]) to the northwest, and San Diego Freeway (Interstate 405 [I-405]) to the southwest. The west leg of the Eastern Transportation Corridor (ETC) northeast of the site in the vicinity of Jamboree Road and Edinger Avenue also provides regional access for the ~~project site~~. Access to the ~~project site~~ is currently via two gates, one off Red Hill Avenue at Valencia Avenue/Moffett Drive, and the other off Harvard Avenue at Moffett Drive. The southern portion of the site has access to Harvard Avenue via a local roadway (Marble Mountain Road).



LEGEND

- ETC-West leg opened to traffic in Feb. 1999.
- Irvine Business Complex
- City boundary limits

Figure 1-1
REUSE PLAN AREA

The Orange County Transportation Authority (OCTA) provides bus service to the site. The project *site* would also be served by a planned Tustin commuter rail station immediately east of the site, in the vicinity of the northern corner of Jamboree Road and Edinger Avenue. The commuter rail station is not a part of the proposed reuse. Discussions on the transportation setting for the project site can be found in Chapter 3.0 of this report.

1.2 ANALYSIS SCOPE

The purpose of this analysis is to identify the traffic impacts associated with the disposal and proposed alternatives for reuse of the MCAS Tustin properties, and to recommend mitigation measures that could provide adequate levels of service on the surrounding circulation system. Impacts of the reuse alternatives and No-Action Alternative are identified by analyzing short-range and long-range traffic conditions within a defined traffic analysis study area (see discussion later in this chapter). The analysis primarily focuses on peak hour level of service impacts at major intersections and freeway interchanges throughout the study area.

In analyzing the reuse alternatives *and the No Action Alternative*, three time periods are addressed in the impact analysis (*see discussion on reuse alternatives in Chapter 2.0 of this report*):

1. Existing (Project stand-alone analysis) - Year 1997
2. Short-Range - Year 2005
3. Long-Range - Year 2020

In the existing time period analysis, project buildout *of the site* is added to the existing (1997) transportation system and identifies the resulting impacts. The analysis for the second time period examines partial buildout of the project *each reuse alternative* in the year 2005 and includes growth in the surrounding area plus changes in the transportation system anticipated for 2005. The third analysis examines conditions 20 years into the future with full buildout of the project *each of the three reuse alternatives and the No Action Alternative*. The 2020 analysis also includes projected growth in the surrounding area plus changes in the transportation system. ~~In each time period, the analysis addresses three reuse alternatives plus a No Action Alternative (see discussion on reuse alternatives~~

in Chapter 2.0 of this report).

Socioeconomic data forecasts adopted by the County of Orange as OCP-96 Modified (July 1997 August 1998) and quantified in the Orange County Traffic Analysis Model (OCTAM 2.8) were used as the basis for the 2005 and 2020 traffic forecasts. These provide an areawide set of demographic projections that are consistent with local and regional forecast data. ~~In each case, with project and baseline conditions~~ *Each of the three reuse alternatives and the No Action Alternative* are compared *with baseline conditions*, project impacts are identified, and cumulative impacts are considered. The cumulative impact analysis includes "probable future projects" as defined in Title 14, California Code of Regulations Section 15130. - *Insert (see page 1-4a)* - ~~In the analysis, such projects include roadway improvements that are projected to be funded in some manner, such as through a capital improvement program, a special funding program, or they are conditions of approval of specific projects.~~ Such roadway improvements will be referred to hereinafter in this report as the "committed roadway network."

A Post-2020 set of data is also included in this report to show long-range conditions beyond the year 2020. The land use database for these forecasts corresponds to General Plan buildout for those portions of the Cities of Irvine, Tustin, Santa Ana and Newport Beach in the study area (see study area definition in the next section). In that Post-2020 time frame, completion of the County of Orange Master Plan of Arterial Highways (MPAH) is assumed, and the Orange County Transportation Corridors - Eastern, Foothill and San Joaquin Hills (referred to as the "Toll Roads" through year 2020) are assumed to be operating as free facilities.

The year 2020 analysis conforms to Countywide guidelines with respect to traffic forecasting and transportation planning and thereby provides a consistent basis for that impact analysis. The Post-2020 data is presented here for informational purposes.

1.3 STUDY AREA

The study area used in this analysis is shown in Figure 1-2. It includes most of the City of Tustin and portions of the City of Irvine, City of Santa Ana, City of Newport Beach and the County

Insert page 1-4 as fifth sentence of first full paragraph

This includes those roadway improvements that are "probable future projects" per the CEQA Guidelines (Cal. Code of Regs., Title 14 § 15130) such as roadway projects included in capital improvement programs of a jurisdiction, projects which are a condition of approval of a specific development project or a required mitigation measure of a previous environmental document or projects included in a specific special fee program.

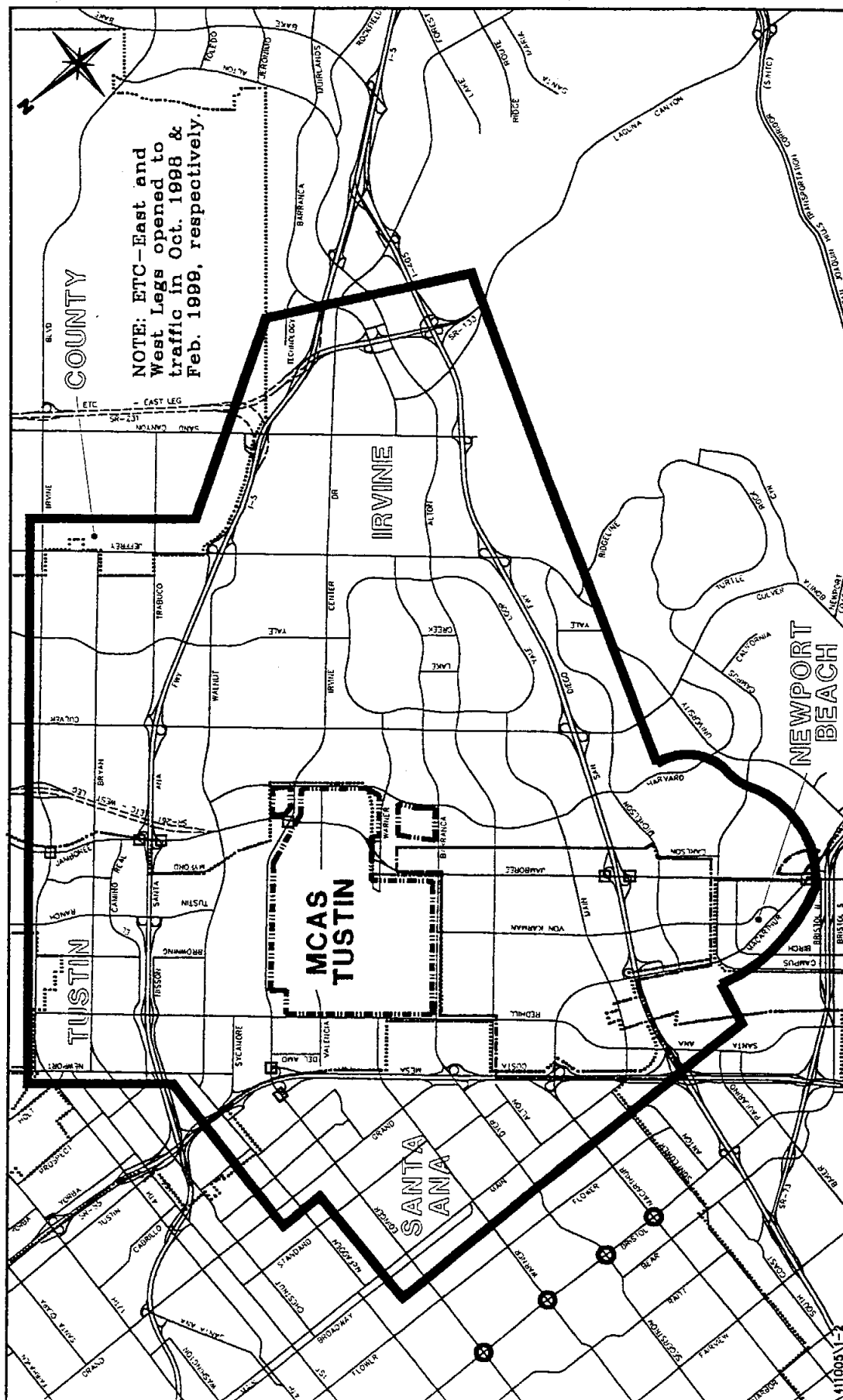


Figure 1-2
STUDY AREA

of Orange. This area was established as being the sphere of impact of the proposed ~~project~~ *reuse alternatives*. The general criteria used in establishing the study area is based on including those roadways which show differences between ~~with-project~~ *the reuse alternative* and baseline conditions of more than 1,000 average daily traffic (ADT). This is a criteria that has been used by the County of Orange in transportation studies and has been accepted as a general guideline for establishing an appropriate study area for impact analysis purposes. In addition, the study area boundary has been the subject of discussions and agreements with the adjacent Cities of Irvine and Santa Ana. Within this study area, all major intersections are analyzed. In addition, four intersections west of the study area (Bristol Street at MacArthur Boulevard, Segerstrom Avenue, Warner Avenue and Edinger Avenue) were analyzed in response to requests by the City of Santa Ana to identify potential ~~project~~ *reuse plan* impacts at these specific locations.

1.4 TRAFFIC FORECASTING METHODOLOGY

Traffic forecast data for the analysis has been derived from the Central County Traffic Model (CCTM), a subarea derivation of the OCTAM 2.8 model where in the last circulated traffic study OCTAM 2.0 was used. (See Reference 1 at the end of this chapter for a description of the CCTM.) This subarea model was prepared using the consistency guidelines for subarea traffic model derivation as prepared by OCTA. Those guidelines require subarea model derivation from the current version of OCTAM (in this case version 2.8), and specify certain procedures for developing and using the resulting subarea model.

The demographic database in the CCTM is that contained in the OCTAM 2.8, and corresponds to the OCP-96 Modified projections used for transportation planning in Orange County. Previous assumptions in the last circulated traffic study (dated May 21, 1996) contained OCP-88 projections. So together with OCP-96 Modified projections and OCTAM 2.8, the traffic forecasts in this study may differ than those reflected in the last traffic study. Furthermore, so as to comply to the consistency guidelines prepared by OCTA, the long-range analysis is based on 2020 conditions rather than Post-2020 as in the previous traffic study.

The trip generation procedures in the CCTM are likewise those used in OCTAM 2.8. The CCTM incorporates an allowance for reduced home-based work trips. This may not respond to transportation demand management (TDM) requirements established as part of local and regional trip reduction plans and ordinances. To maintain consistency with OCTAM 2.8, no additional trip reduction has been assumed in the traffic analysis.

While OCP-96 Modified contains data for MCAS El Toro, that data was replaced with specific information for the currently adopted MCAS El Toro Reuse Plan. That plan, which assumes a 38 million air passenger (MAP) airport plus ancillary activities, is the project being analyzed in an EIS for MCAS El Toro, and the project trip generation from that EIS was used here.

1.5 RELATIONSHIP TO OTHER PROGRAMS AND STUDIES

Various studies and programs that have been carried out or are currently in effect are pertinent to the information contained in this traffic study. Brief discussions on each follow.

1.5.A CONGESTION MANAGEMENT PROGRAM (CMP)

The CMP administered by OCTA is a requirement of the Proposition 111 Gas Tax Increase passed in 1990. It requires that designated intersections throughout Orange County maintain a specified level of service. The CMP system monitoring is carried out by OCTA every two years, the latest report being for 1998.

There are nine designated CMP intersections in the study area as follows:

- Jamboree Road and Irvine Boulevard
- Jamboree Road and I-5 northbound ramps
- Jamboree Road and I-5 southbound ramps
- SR-55 northbound ramps and Edinger Avenue
- SR-55 southbound ramps and Edinger Avenue
- Jamboree Road and Edinger Avenue
- Jamboree Road and I-405 northbound ramps
- Jamboree Road and I-405 southbound ramps
- MacArthur Boulevard and Jamboree Road

Since freeways are also part of the CMP system (monitored by Caltrans) ramp connections between a CMP intersection and the freeway are also considered to be subject to the CMP level of service and impact criteria.

Guidelines with respect to CMP traffic studies promulgated by the Congestion Management Agency, OCTA in Orange County, require analyzing the CMP intersections in a five to seven year time frame for any significant land use decision (Reference 10 at the end of this chapter). The year 2005 analysis in this report provides the required CMP information and satisfies the guidelines set out in the CMP documentation.

1.5.B GROWTH MANAGEMENT PLAN

Embodied in the approved Revised Traffic and Growth Management Ordinance (Measure M), is the Countywide Growth Management Plan component of the Countywide Traffic Improvement and Growth Management Program, developed by the Orange County Division, League of California Cities. Central to the program is the requirement that each jurisdiction adopt a Growth Management Element of its General Plan to be applied in the development review process in order to receive transportation revenues generated from the ½ cent sales tax increase. The Growth Management Plan (GMP) includes guidelines for traffic impact studies, establishing LOS thresholds and requirements for mitigation. The year 2005 analysis contained in this report satisfies the requirements of those traffic study guidelines, which requires that ~~the project~~ *each reuse alternative* be analyzed in a short-range time frame (five to seven years), achieve specified LOS thresholds, and present mitigation measures for ~~project reuse plan~~ impacts.

1.5.C OTHER STUDIES

Several traffic studies in the study area have resulted in land use entitlement and related transportation conditions of approval. Pertinent studies are referenced at the end of this chapter. Their primary importance in the context of this traffic study is in providing a basis for defining the “committed network” described in Chapter 3.0.

1.6 PERFORMANCE CRITERIA

The traffic analysis utilizes a set of performance criteria to evaluate future operating conditions on roadways within the study area and to establish thresholds of significance for impact analysis purposes. The performance criteria specify desired performance standards on the arterial roadway system and use these performance standards in defining impact thresholds of significance and mitigation requirements. Traffic levels of service (LOS) are designated "A" through "F," with LOS "A" representing free flow conditions and LOS "F" representing severe traffic congestion (see Table 1-1 for description of LOS designations). Various operating LOS standards have been established in Orange County which serve both as a guideline for evaluating observed traffic conditions and as a target or goal when evaluating future development plans and circulation system modifications.

The performance criteria used in this traffic analysis are based on peak hour intersection volumes and are summarized in Table 1-2. While traffic impact analyses are sometimes based on 24-hour average daily traffic (ADT) volumes on roadway links, the use of peak hour data provides a more detailed evaluation of traffic conditions. For this reason, ADT link analyses are not used for impact analysis (ADT volumes are however provided for use in air quality and noise impact analyses). While the emphasis in this analysis is on intersection performance, an arterial link analysis component has been included to check midblock lane adequacy, the purpose being to verify consistency between intersection and midblock capacity.

Inherent in the performance criteria are the specific LOS thresholds for satisfactory performance. At the regional planning level, the statewide CMP specifies LOS "E" as the desired performance standard for roadways and intersections on the CMP highway system. At the County and local level, the Cities of Tustin, Irvine, Santa Ana and Newport Beach have established LOS "D" as the desired performance standard for the roadway system. An exception is that the City of Irvine has established LOS "E" as the desired performance standard within the Irvine Business Complex (IBC). It should be noted that traffic impact analyses for Tustin, Santa Ana and Newport Beach essentially follow CMP/GMP guidelines. They do not have a source document outlining traffic study guidelines such as prepared by the City of Irvine.

Table 1-1

PEAK HOUR LEVEL OF SERVICE DESCRIPTIONS

LEVEL OF SERVICE	TRAFFIC FLOW QUALITY	ICU VALUE
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	0 - .60
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	.61 - .70
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	.71 - .80
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues. This level is typically associated with design practice for peak periods.	.81 - .90
E	Poor operation. Some long-standing vehicular queues develop on critical approaches. Delays may be up to several minutes.	.91 - 1.00
F	Forced flow. Represents jammed conditions. Back ups from locations downstream or on the cross street may restrict or prevent movements of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	Above 1.00

ICU - intersection capacity utilization

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

Table 1-2

TRAFFIC ANALYSIS PERFORMANCE CRITERIA

I. PEAK HOUR INTERSECTION CAPACITY UTILIZATION (ICU)

Level of service to be based on peak hour ICU values. The methodology used for calculating ICU values was originally proposed by the Orange County Transportation Authority and is used by all jurisdictions in the study area for use in CMP monitoring. It is based on the following assumptions:

Saturation Flow Rate: 1,700 vehicles/hour/lane
Clearance Interval: .05
Right-Turn-On-Red (RTOR) Allowed: Yes*
RTOR Saturation Flow Factor: .75
No minimum volume/capacity assumed

PERFORMANCE STANDARDS:

Non-CMP or non-IBC intersections - Level of Service D (peak hour ICU less than or equal to .90)
CMP or IBC intersections - Level of Service E (peak hour ICU less than or equal to 1.00)

MITIGATION REQUIREMENT

For ICU greater than the acceptable level of service, mitigation of the ~~project reuse plan~~ contribution if greater than .03 at CMP locations and greater than .01 at all other locations is required to bring intersection back to acceptable level of service or to baseline conditions when baseline conditions already at unacceptable level of service.

II. MIDBLOCK LANE CHECK

Adequacy of midblock lanes is checked by comparing the peak hour one directional volume (highest direction) with capacity of 1,600 vehicles per hour per lane. Requirement is for V/C not to exceed .90 (level of service "D"). If this value is exceeded under ~~with project reuse alternative~~ conditions, mitigation as listed under the intersection criteria is required.

The performance criteria are used to establish the thresholds for identifying ~~project reuse plan~~ impacts and for requiring mitigation measures to address those ~~project~~ impacts. ~~Project Reuse plan~~ impacts are determined by comparing the calculated performance of each study area intersection for each alternative with the performance at "baseline" conditions. The baseline concept, used for base closing and reuse projects, is described in Section 3.3 of this report. Except for CMP locations, a project impact occurs when the desired performance standard is not achieved and the project contribution to the V/C ratio or the peak hour *intersection capacity utilization* (ICU) value is greater than .01. For CMP locations, the project contribution increment must be greater than .03 to result in a project impact. Mitigation of the project contribution is then required to bring the performance back to an acceptable LOS, or back to the LOS under baseline conditions for those cases in which baseline conditions are already at an unacceptable LOS. The ~~project reuse plan~~ is not required by CEQA to mitigate existing adverse conditions.

Additional comments on the performance criteria listed in Table 1-2 follow.

Peak hour ~~intersection capacity utilization~~ (ICU) values (item I in this table) determine intersection performance based on turn movement volumes and the intersection lane geometry. The methodology used here ~~was originally developed by the OCTA for use in CMP monitoring (see previous discussion in this chapter) and is used by the individual jurisdictions in the study area for all traffic analysis applications.~~ *is regionally accepted and consistent with the Orange County Subarea Modeling Guidelines Manual adopted by the OCTA (August 1998) and CMP/GMP guidelines as is appropriate for a project of this size with traffic impacts spanning several jurisdictions.*

The midblock lane check (item II in the table) replaces the ADT link analyses used in more generalized traffic studies. Its purpose is to verify the adequacy of the number of midblock lanes based on peak hour volumes for each roadway link. Since intersection performance determines arterial highway capacity, it is only of importance where midblock lanes may be less than the number of thru-lanes at adjacent intersections (e.g., an interim stage in widening a roadway to its ultimate width). The procedure utilized here corresponds to that used by the City of Irvine for midblock lane verification.

1.7 DEFINITIONS

Certain terms used throughout this report are defined below to clarify their intended meaning:

ADT	Average Daily Traffic. Typically used in reference to traffic volumes on a roadway segment.
VPD	Vehicles Per Day. Has the same meaning as ADT, but more typically used in a trip generation context.
VPH	Vehicles Per Hour.
DU	Dwelling Unit.
V/C	Volume-to-Capacity Ratio. This is typically described as the proportion of capacity utilized by existing or projected traffic on a particular facility such as an arterial segment.
ICU	Intersection Capacity Utilization. A measure used to determine intersection level of service. It is a summation of the V/C for each of the critical movements of an intersection.
LOS	Level of Service. A scale used to evaluate circulation system performance based on ICU values or volume to capacity ratios. The levels, which range from "A" to "F," are described in Table 1-1.
Peak Hour	This refers to the hour during the AM peak period (typically 7 AM - 9 AM) or the PM peak period (typically 3 PM - 6 PM) in which the greatest number of vehicle trips are generated by a given land use or are traveling on a given roadway.
TSF	Thousand Square Feet of building area (used in describing land use).
NB,SB, EB, WB	Northbound, southbound, eastbound and westbound, respectively, used in depicting intersection turn movements and freeway interchange ramp directionalities.

1.8 REFERENCES

The following references are for information used and/or cited in this report.

1. *"Marine Corps Air Station (MCAS) Tustin Disposal and Reuse, Central (Orange) County Traffic Model Version 2.8 (CCTM 2.8) Model Description and Validation,"* Austin-Foust Associates, Inc., April July 1999.
2. *"Lower Peters Canyon Specific Plan Environmental Impact Report (EIR No. 557) ,"* P&D Environmental Services/P&D Consultants, Inc., March 1995.
3. *"Irvine Business Complex (IBC) EIR, General Plan Amendment and Rezoning,"* Robert Bein, William Frost Associates, August 1992.
4. *"Santa Ana/Tustin Transportation System Improvement Program,"* Austin-Foust Associates, Inc., November 1992.
5. *"Master Plan of Arterial Highways,"* County of Orange, Environmental Management Agency, Transportation Planning, August 1995.
6. *"Highway Capacity Manual,"* Highway Research Board, Special Report 209, National Academy of Sciences, Washington D.C., 1997.
7. *"Traffic Manual,"* State of California, Department of Transportation, 1985.
8. *"Trip Generation, Sixth Edition,"* Institute of Transportation Engineers, 1997.
9. *"Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region,"* San Diego Association of Governments (SANDAG), December 1996.
10. *"Orange County Congestion Management Program,"* Orange County Transportation Authority, 1998.
11. *"1997 Traffic Volumes on the California State Highway System,"* Caltrans, June 1998.
12. *"County of Orange [Growth Management Plan] Transportation Implementation Manual,"* Adopted by the Orange County Board of Supervisors, March 1994.
13. *"Traffic Study Guidelines,"* City of Irvine Community Development, Department of Transportation Services, Adopted May 26, 1992.
14. *"Traffic Study Guidelines [Modified for consideration of ATMS measures],"* City of Irvine Transportation Commission, November 16, 1992.

15. "Tustin Special Area Traffic Circulation Study," Dames & Moore, September 1993.
16. "Regional Transportation Improvement Program (RTIP)," Orange County Transportation Authority (OCTA), 1998.
17. "Combined Transportation Improvement Funding Program (CTIFP)," OCTA, 1998.
18. "Pacific Center East EIR," PBR, November 1990.
19. "MacArthur Place EIR (No. 87-042909)," The Planning Center, November 1987.
20. "Planning Area 12 Zoning EIR (No. 93-071051)," Michael Brandman & Associates, August 1994.
21. "Spectrum 6 [Planning Area 31] EIR (No. 540)," LSA, May 1992.
22. "Northwood Point Traffic Analysis (Map No. 14540)," Austin-Foust Associates, Inc., April 1993.
23. "Spectrum 5 EIR (No. 85-120404)," LSA, 1985.
24. *"General Plan Circulation Element," City of Santa Ana, December 1997.*
25. *"Orange County Subarea Modeling Guidelines," OCTA, August 1998.*

Chapter 2.0

DESCRIPTION OF ALTERNATIVES

This chapter describes the traffic generation characteristics associated with each of the reuse alternatives and with the No Action Alternative. Land use and trip generation estimates for the alternatives are presented, together with descriptions of their on-site circulation systems. The distribution of project generated trips onto the roadway system in and around the project site are also discussed.

2.1 LAND USE AND TRIP GENERATION

The traffic analysis for the reuse alternatives is based on the trip generation characteristics of the land uses in each of those alternatives. Trip generation is calculated from the amount and type of land use in an area and requires a quantification of the land use into designated units (e.g., square feet of floor area, number of dwelling units, etc). The most widely accepted trip rate sources are the Institute of Transportation Engineers' (ITE) Trip Generation manual-6th Edition, and the San Diego Association of Governments' (SANDAG) Brief Guide of Vehicular Traffic Generation Rates. Trip rates derived from these sources have been incorporated into the traffic model, and Appendix A provides descriptions of the trip rates which were applied to develop trip generation estimates for the project land uses. As noted in the discussion on traffic modeling procedures in Chapter 1.0, trip generation for the surrounding area (the study area and the remainder of the region) were taken directly from the regional traffic model used as the basis for the modeling work applied here.

The land use categories used for traffic forecasting sometimes do not correspond directly to those used for land use planning. In most cases, the categories for trip generation are more highly differentiated than the land use designations in a land use plan, since land use plan designations may imply a mix of uses within a given designation (e.g., a "commercial business" land use designation may contain a mix of commercial, office, and industrial uses, each of which is a different land use type for trip generation purposes). The assumptions of specific types of land uses likely to occur within a

broader land use designation, for each alternative, were based on market demand data and projections developed in the reuse planning process.

The relationship between land use designations in the reuse alternatives and the corresponding land use types used for trip generation can be seen in Table 2-1. The land use designations on the left side of the table are used to depict the proposed land use for each area, as contained in the reuse alternatives. The land use types on the right of the table show the corresponding land use category or categories used for trip generation purposes. Trip generation for each reuse alternative has been calculated according to these designated land use types.

2.2 PROJECT ALTERNATIVES

Four alternatives are analyzed in this traffic study. They are as follows:

- Reuse Alternative 1 - DON Disposal/Alternative 1 (LRA Reuse Plan)
- Reuse Alternative 2 - DON Disposal/Alternative 2 (Arterial Grid Pattern/No Core/High Residential)
- Reuse Alternative 3 - DON Disposal/Alternative 3 (Arterial Loop Pattern/Low Residential)
- No Action Alternative - "Caretaker" status for most of the site, with minimal trip generation

For the three reuse alternatives, a buildout level of development has been estimated and also a level of development that could be built by year 2005. Brief descriptions of each of these follow.

2.2.A REUSE ALTERNATIVE 1

This is the Local Reuse Authority (LRA) Reuse Plan, and the location of specific land uses can be seen in Figure 2-1. The designated land uses and their distribution throughout the reuse area provide the basic project description for traffic analysis purposes, forming the basis for determining trip generation and project impacts. For land use planning purposes, the project site was subdivided into planning areas, as previously depicted in Figure 2-1.

Table 2-1

LAND USE CATEGORIES FOR REUSE ALTERNATIVES

REUSE LAND USE DESIGNATION	TRIP GENERATION LAND USE TYPE(S)*
I. RESIDENTIAL	
LDR = Low Density Residential (1-7 DU/Acre)	1. LDR (1-7 DU/Acre)
MDR = Medium Density Residential (8-15 DU/Acre)	2. MDR (8-15 DU/Acre)
MHDR = Medium High Density Residential (16-25 DU/Acre)	3A. MHDR (16-25 DU/Acre)
HDR = High Density Residential (16-25 DU/Acre)	3B. HDR (16-25 DU/Acre)
T/EH = Transitional/Emergency Housing	4. Transitional Housing
GV = Golf Village	1. LDR (1-7 DU/Acre)
	2. MDR (8-15 DU/Acre)
	5. Hotel
	6. Elementary School
	10. Community Commercial (50-200 TSF)
	19. Golf Course
G = Golf	19. Golf Course
II. COMMERCIAL/BUSINESS	
CB = Commercial Business	9. Neighborhood Commercial (<50 TSF)
	10. Community Commercial (50-200 TSF)
	11. Shopping Center (> 200 TSF)
	12. General Office
	13. Office Park
	15. Light Industrial/R&D
	16. Industrial Park
C = Commercial	9. Neighborhood Commercial (<50 TSF)
	10. Community Commercial (50-200 TSF)
	11. Shopping Center (> 200 TSF)
	14. Military (Office)
CR = Commercial Recreation	20. Community Facility
VS = Village Services	11. Shopping Center (> 200 TSF)
CC = Community Core	3A. MHDR (16-25 DU/Acre)
	7. High School
	10. Community Commercial (50-200 TSF)
	13. Office Park
	16. Industrial Park
H = Hotel	5. Hotel

(Continued)

Table 2-1 (cont)
LAND USE CATEGORIES FOR REUSE ALTERNATIVES

REUSE LAND USE DESIGNATION	TRIP GENERATION LAND USE TYPE(S)*
III. INSTITUTIONAL/RECREATIONAL	
LV = Learning Village	8. Learning Center 9. Neighborhood Commercial (<50 TSF)
CP = Community Park	17. Park
RP = Urban Regional Park	10. Community Commercial (50-200 TSF) 18. Regional Park
NP = Neighborhood Park	17. Park
ES = Elementary School (K-6)	6. Elementary School
ES-8 = Elementary School (K-8)	6. Elementary School
HS = High School	7. High School
IV. PUBLIC INSTITUTIONAL/COMMERCIAL/BUSINESS/CULTURAL	
PI/CB = Village Mixed Use/Public Institutional/Commercial Business/Residential Mixed Use	3B. HDR (16-25 DU/Acre) 10. Community Commercial (50-200 TSF) 12. General Office 20. Community Facility
PI/C = Public Institutional/Commercial	11. Shopping Center (> 200 TSF) 20. Community Facility
PI (Park) = Public Institutional Community Park	17. Park
PI (Cultural) = Public Institutional Cultural Center	20. Community Facility
V. RESERVE AREA	
Reserve Area	3B. HDR (16-25 DU/Acre) 11. Shopping Center (> 200 TSF) 13. Office Park 16. Industrial Park

* Numbering for land use types refers to the numbered land use categories used for calculating trip generation (see Appendix A)

Source: ITE Trip Generation, Sixth Edition (1997) and SANDAG (1996). Detailed trip rate sources are provided in Appendix A.

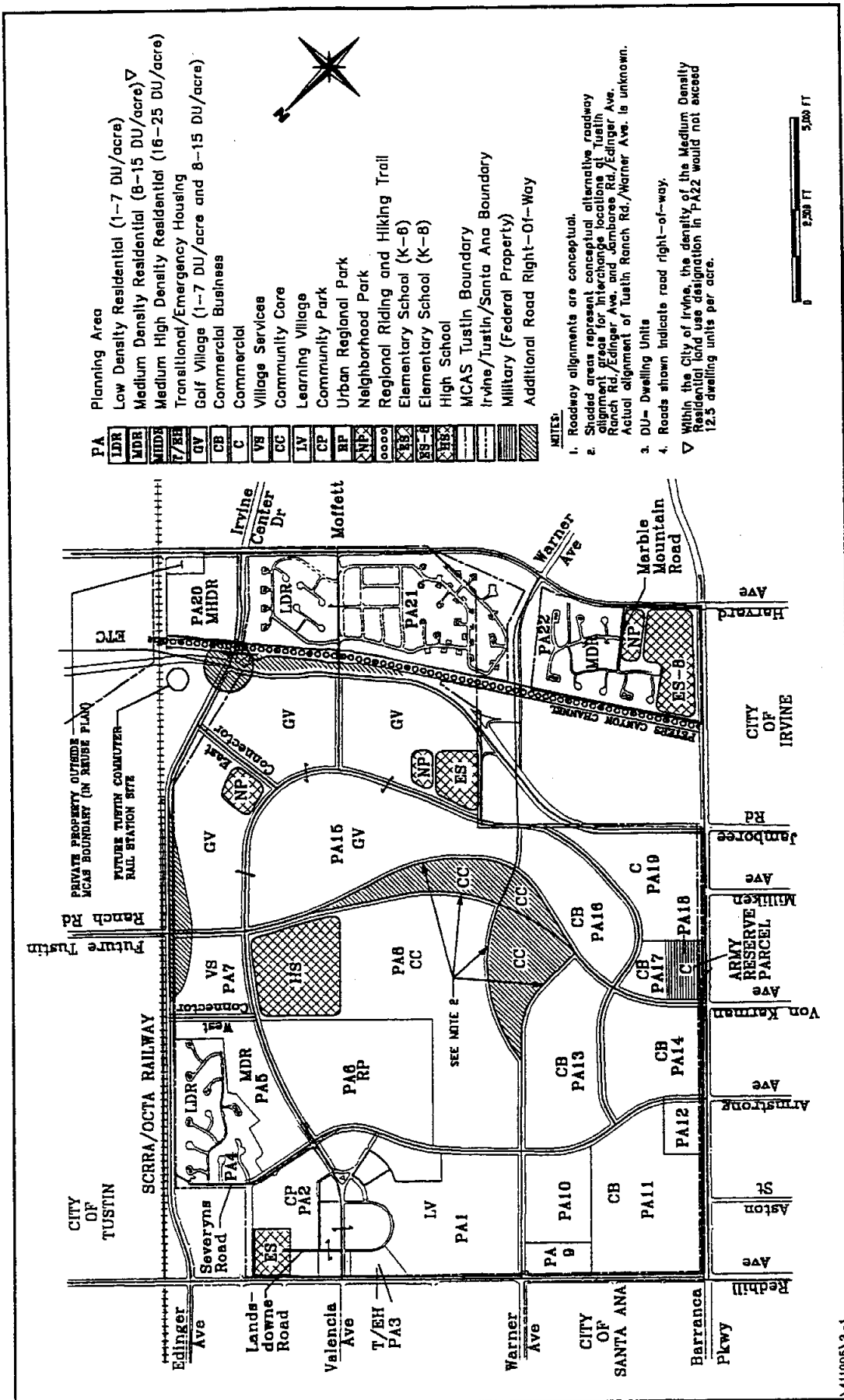


Figure 2-1
DON DISPOSAL/ALTERNATIVE 1
(LRA REUSE PLAN)

The land use plan is served by a proposed roadway network which includes a hierarchy of arterial facility types serving a variety of functions. Figure 2-2 shows the circulation system according to arterial highway classifications. Under this reuse alternative, the roadway system would be oriented around North and South Loop Roads, which would connect to Valencia Avenue on the northwest, Moffett Drive on the northeast, Warner Avenue on the southeast, Armstrong Avenue on both the southwest and the northeast, and Edinger Avenue via two connector roads and Tustin Ranch Road. Armstrong Avenue would be extended northerly first to connect to South Loop Road, which connects southeasterly to Von Karman Avenue, and second to North Loop Road. Warner Avenue, which is currently cut off by MCAS Tustin, would be extended and would bisect the area created by South Loop Road. Warner Avenue would still be discontinuous if the southern blimp hangar is retained, and hence alternate alignments for Tustin Ranch Road and Warner Avenue are shown in this alternative. Right-of-way and/or design improvements would also be made to Red Hill Avenue, Barranca Parkway, Harvard Avenue, and Edinger Avenue. On-base streets (i.e., Severyns, Landsdowne, Marble Mountain, etc.) would connect to the arterial street network and be oriented to efficiently serve neighborhoods and districts within the Reuse Plan area. Amendments to the County Master Plan of Arterial Highways (MPAH) would be made for all roadways classified as Major, Primary or Secondary Arterials.

The Orange County Transportation Authority (OCTA) carries out regular updates of the Countywide transit system. Each phase of development on the project site should be included as part of that update program so that these impacts and opportunities related to development of the project site can be addressed with each system update.

A Class I (off-street) bike trail is planned along Peters Canyon Wash which bisects the Project site east of Jamboree Road and traverses both the Cities of Tustin and Irvine city limits. Class II (on-street) bike trails are assumed on all streets within the project site. (See Section 3.6.B for bikeway classification definitions.)

Table 2-2 summarizes the land use and trip generation for Reuse Alternative 1. With full development of the project site, the proposed project would generate ~~215,093~~ 216,445 average daily trips (ADT). The estimated level of absorption for year 2005 would result in an ADT trip generation

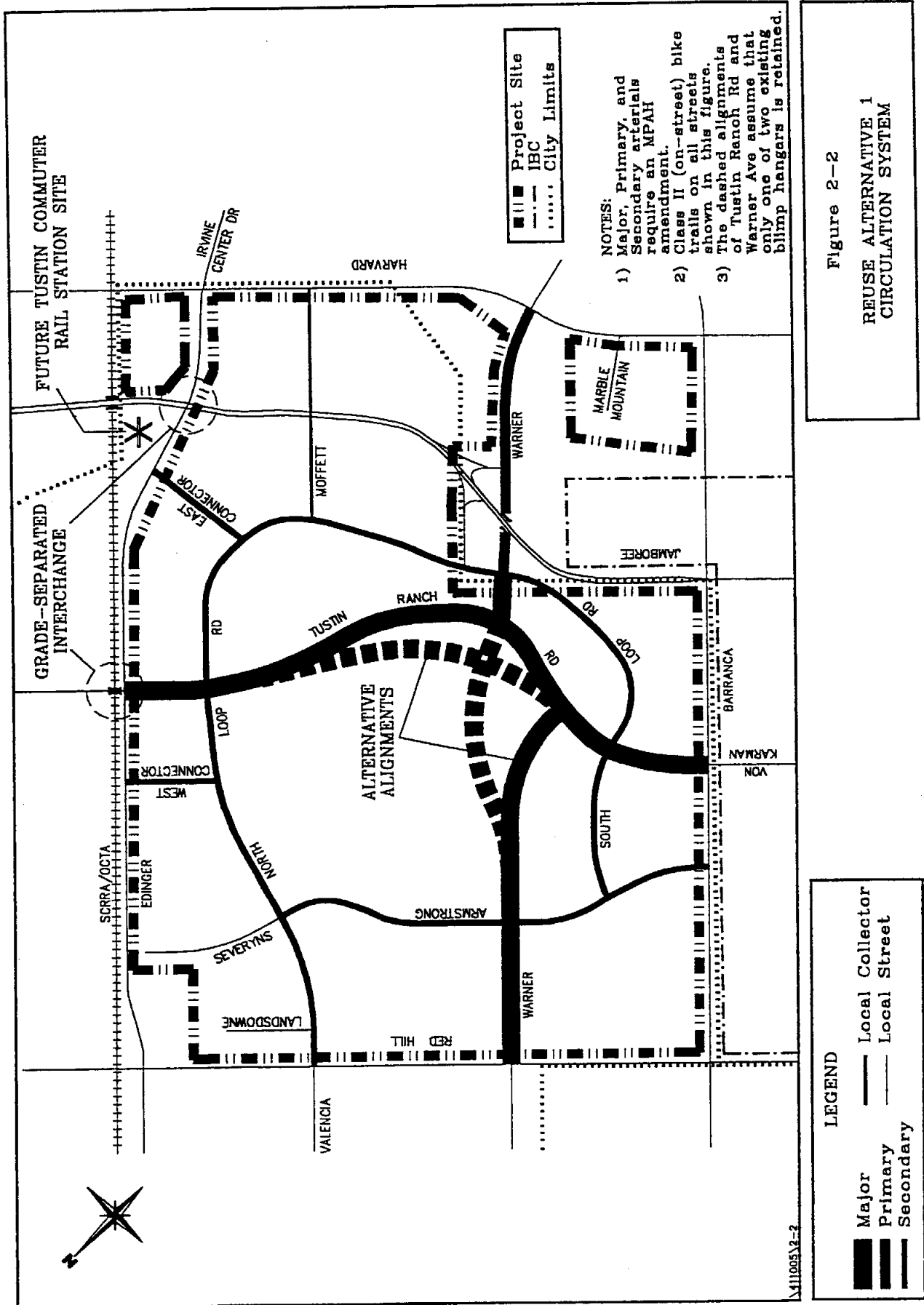


Table 2-2

LAND USE AND TRIP GENERATION SUMMARY
(Reuse Alternative 1)

LAND USE TYPE	UNITS	-- AM PEAK HOUR --			-- PM PEAK HOUR --			ADT
		IN	OUT	TOTAL	IN	OUT	TOTAL	
PROJECT BUILDOUT								
City of Tustin								
1. LDR (1-7 DU/Acre)	~~576.00~~ DU	~~110~~	~~322~~	~~432~~	~~375~~	~~207~~	~~582~~	~~5,512~~
	<u>1,287.00</u>	<u>245</u>	<u>720</u>	<u>965</u>	<u>837</u>	<u>463</u>	<u>1,300</u>	<u>12,316</u>
2. MDR (8-15 DU/Acre)	~~1,994.00~~ DU	~~259~~	~~1,018~~	~~1,277~~	~~1,117~~	~~479~~	~~1,596~~	~~15,952~~
	<u>1,283.00</u>	<u>167</u>	<u>655</u>	<u>822</u>	<u>719</u>	<u>308</u>	<u>1,027</u>	<u>10,264</u>
3. MHDR (16-25 DU/Acre)	1,479.00 DU	118	636	754	621	296	917	9,805
4. Transitional Housing	192.00 ROOM	40	33	73	35	42	77	941
5. Hotel	500.00 ROOM	170	110	280	160	145	305	4,115
6. Elementary School	650.00 STU	111	78	189	0	0	0	663
7. High School	1,850.00 STU	592	259	851	111	167	278	3,312
8. Learning Center	1,385.53 TSF	914	97	1,011	208	471	679	8,479
9. Neighborhood Commercial	156.97 TSF	255	163	418	735	793	1,528	17,552
10. Community Commercial	554.08 TSF	555	355	910	1,579	1,712	3,291	37,772
11. Shopping Center (EQ)	988.16 TSF	549	351	900	1,566	1,696	3,262	37,490
12. General Office	524.03 TSF	864	120	984	162	781	943	6,955
13. Office Park (EQ)	2,769.59 TSF	2,911	397	3,308	535	2,611	3,146	23,301
14. Military (Office)	40.85 TSF	67	9	76	13	61	74	542
15. Light Industrial/R&D	204.68 TSF	211	43	254	33	189	222	1,660
16. Industrial Park (EQ)	3,897.00 TSF	4,267	581	4,848	784	3,827	4,611	34,145
17. Park	24.10 ACRE	0	0	0	0	0	0	121
18. Regional Park	84.50 ACRE	0	0	0	0	0	0	423
19. Golf Course	159.30 ACRE	61	16	77	35	80	115	1,274
TOTAL		~~12,054~~	~~4,588~~	~~16,642~~	~~8,069~~	~~13,557~~	~~21,626~~	~~210,014~~
		<u>12,097</u>	<u>4,623</u>	<u>16,720</u>	<u>8,133</u>	<u>13,642</u>	<u>21,775</u>	<u>211,130</u>
City of Irvine								
1. LDR (1-7 DU/Acre)	<u>150.00</u> DU	<u>29</u>	<u>84</u>	<u>113</u>	<u>98</u>	<u>54</u>	<u>152</u>	<u>1,436</u>
2. MDR (8-15 DU/Acre)	~~552.00~~ DU	~~72~~	~~282~~	~~354~~	~~309~~	~~132~~	~~441~~	~~4,416~~
	<u>402.00</u>	<u>52</u>	<u>205</u>	<u>257</u>	<u>225</u>	<u>96</u>	<u>321</u>	<u>3,216</u>
6. Elementary School	650.00 STU	111	78	189	0	0	0	663
TOTAL		~~183~~	~~360~~	~~543~~	~~309~~	~~132~~	~~441~~	~~5,079~~
		<u>192</u>	<u>367</u>	<u>559</u>	<u>323</u>	<u>150</u>	<u>473</u>	<u>5,315</u>
Entire Reuse Area								
1. LDR (1-7 DU/Acre)	~~576.00~~ DU	~~110~~	~~322~~	~~432~~	~~375~~	~~207~~	~~582~~	~~5,512~~
	<u>1,437.00</u>	<u>274</u>	<u>804</u>	<u>1,078</u>	<u>935</u>	<u>517</u>	<u>1,452</u>	<u>13,752</u>
2. MDR (8-15 DU/Acre)	~~2,546.00~~ DU	~~331~~	~~1,300~~	~~1,631~~	~~1,426~~	~~611~~	~~2,037~~	~~20,368~~
	<u>1,685.00</u>	<u>219</u>	<u>860</u>	<u>1,079</u>	<u>944</u>	<u>404</u>	<u>1,348</u>	<u>13,480</u>
3. MHDR (16-25 DU/Acre)	1,479.00 DU	118	636	754	621	296	917	9,805
4. Transitional Housing	192.00 ROOM	40	33	73	35	42	77	941
5. Hotel	500.00 ROOM	170	110	280	160	145	305	4,115
6. Elementary School	1,300.00 STU	222	156	378	0	0	0	1,326
7. High School	1,850.00 STU	592	259	851	111	167	278	3,312
8. Learning Center	1,385.53 TSF	914	97	1,011	208	471	679	8,479
9. Neighborhood Commercial	156.97 TSF	255	163	418	735	793	1,528	17,552
10. Community Commercial	554.08 TSF	555	355	910	1,579	1,712	3,291	37,772
11. Shopping Center (EQ)	988.16 TSF	549	351	900	1,566	1,696	3,262	37,490

(Continued)

Table 2-2 (cont)
LAND USE AND TRIP GENERATION SUMMARY
(Reuse Alternative 1)

LAND USE TYPE	UNITS	- AM PEAK HOUR -			- PM PEAK HOUR -			ADT
		IN	OUT	TOTAL	IN	OUT	TOTAL	
PROJECT BUILDOUT (cont)								
Entire Reuse Area (cont)								
12. General Office	524.03 TSF	864	120	984	162	781	943	6,955
13. Office Park (EQ)	2,769.59 TSF	2,911	397	3,308	535	2,611	3,146	23,301
14. Military (Office)	40.85 TSF	67	9	76	13	61	74	542
15. Light Industrial/R&D	204.68 TSF	211	43	254	33	189	222	1,660
16. Industrial Park (EQ)	3,897.00 TSF	4,267	581	4,848	784	3,827	4,611	34,145
17. Park	24.10 ACRE	0	0	0	0	0	0	121
18. Regional Park	84.50 ACRE	0	0	0	0	0	0	423
19. Golf Course	159.30 ACRE	61	16	77	35	80	115	1,274
TOTAL		~~12,337~~	~~4,948~~	~~17,185~~	~~8,378~~	~~13,689~~	~~22,067~~	~~215,093~~
		<u>12,289</u>	<u>4,990</u>	<u>17,279</u>	<u>8,456</u>	<u>13,792</u>	<u>22,248</u>	<u>216,445</u>
YEAR 2005								
City of Tustin								
1. LDR (1-7 DU/Acre)	~~504.00~~ DU	96	382	378	328	181	509	4,823
	<u>1,215.00</u>	<u>231</u>	<u>680</u>	<u>911</u>	<u>790</u>	<u>437</u>	<u>1,227</u>	<u>11,627</u>
2. MDR (8-15 DU/Acre)	~~1,507.00~~ DU	196	769	965	844	362	1,206	12,056
	<u>796.00</u>	<u>104</u>	<u>406</u>	<u>510</u>	<u>446</u>	<u>191</u>	<u>637</u>	<u>6,368</u>
3. MHDR (16-25 DU/Acre)	588.00 DU	47	253	300	247	118	365	3,898
4. Transitional Housing	192.00 ROOM	40	33	73	35	42	77	941
8. Learning Center	1,385.53 TSF	914	97	1,011	208	471	679	8,479
9. Neighborhood Commercial	80.39 TSF	130	83	213	377	406	783	8,989
10. Community Commercial	236.88 TSF	237	152	389	675	732	1,407	16,148
11. Shopping Center (EQ)	665.59 TSF	432	277	709	1,233	1,336	2,569	29,528
12. General Office	289.83 TSF	478	67	545	90	432	522	3,847
13. Office Park (EQ)	615.50 TSF	630	86	716	116	565	681	5,042
14. Military (Office)	40.85 TSF	67	9	76	13	61	74	542
15. Light Industrial/R&D	204.68 TSF	211	43	254	33	189	222	1,660
16. Industrial Park (EQ)	683.89 TSF	700	95	795	129	628	757	5,602
17. Park	24.10 ACRE	0	0	0	0	0	0	121
18. Regional Park	84.50 ACRE	0	0	0	0	0	0	423
19. Golf Course	159.30 ACRE	61	16	77	35	80	115	1,274
TOTAL		~~4,239~~	~~3,262~~	~~6,501~~	~~4,363~~	~~5,603~~	~~9,966~~	~~103,373~~
		<u>4,282</u>	<u>2,297</u>	<u>6,579</u>	<u>4,427</u>	<u>5,688</u>	<u>10,115</u>	<u>104,489</u>
City of Irvine								
1. LDR (1-7 DU/Acre)	<u>150.00</u> DU	29	84	113	98	54	152	1,436
2. MDR (8-15 DU/Acre)	~~552.00~~ DU	72	382	354	309	132	441	4,416
	<u>402.00</u>	52	205	257	225	96	321	3,216
6. Elementary School	650.00 STU	111	78	189	0	0	0	663
TOTAL		~~183~~	~~360~~	~~543~~	~~309~~	~~132~~	~~441~~	~~5,079~~
		<u>192</u>	<u>367</u>	<u>559</u>	<u>323</u>	<u>150</u>	<u>473</u>	<u>5,315</u>
Entire Reuse Area								
1. LDR (1-7 DU/Acre)	~~504.00~~ DU	96	382	378	328	181	509	4,823
	<u>1,365.00</u>	260	764	1,024	888	491	1,379	13,063

(Continued)

Table 2-2 (cont)
LAND USE AND TRIP GENERATION SUMMARY
 (Reuse Alternative 1)

LAND USE TYPE	UNITS	- AM PEAK HOUR -			- PM PEAK HOUR -			ADT
		IN	OUT	TOTAL	IN	OUT	TOTAL	
YEAR 2005 (cont)								
Entire Reuse Area (cont)								
2. MDR (8-15 DU/Acre)	~~2,059.00~~ DU	268	~~1,051~~	~~1,319~~	~~1,153~~	494	~~1,647~~	16,472
	<u>1,198.00</u>	<u>156</u>	<u>611</u>	<u>767</u>	<u>671</u>	<u>287</u>	<u>958</u>	<u>9,584</u>
3. MHDR (16-25 DU/Acre)	588.00 DU	47	253	300	247	118	365	3,898
4. Transitional Housing	192.00 ROOM	40	33	73	35	42	77	941
6. Elementary School	650.00 STU	111	78	189	0	0	0	663
8. Learning Center	1,385.53 TSF	914	97	1,011	208	471	679	8,479
9. Neighborhood Commercial	80.39 TSF	130	83	213	377	406	783	8,989
10. Community Commercial	236.88 TSF	237	152	389	675	732	1,407	16,148
11. Shopping Center (EQ)	665.59 TSF	432	277	709	1,233	1,336	2,569	29,528
12. General Office	289.83 TSF	478	67	545	90	432	522	3,847
13. Office Park (EQ)	615.50 TSF	630	86	716	116	565	681	5,042
14. Military (Office)	40.85 TSF	67	9	76	13	61	74	542
15. Light Industrial/R&D	204.68 TSF	211	43	254	33	189	222	1,660
16. Industrial Park (EQ)	683.89 TSF	700	95	795	129	628	757	5,602
17. Park	24.10 ACRE	0	0	0	0	0	0	121
18. Regional Park	84.50 ACRE	0	0	0	0	0	0	423
19. Golf Course	159.30 ACRE	61	16	77	35	80	115	1,274
TOTAL		<u>4,422</u>	<u>2,622</u>	<u>7,044</u>	<u>4,672</u>	<u>5,735</u>	<u>10,407</u>	<u>108,452</u>
		<u>4,474</u>	<u>2,664</u>	<u>7,138</u>	<u>4,750</u>	<u>5,838</u>	<u>10,588</u>	<u>109,804</u>

TRIP RATES

1. <u>LDR (1-7 DU/Acre)</u>	<u>DU</u>	<u>.19</u>	<u>.56</u>	<u>.75</u>	<u>.65</u>	<u>.36</u>	<u>1.01</u>	<u>9.57</u>
2. <u>MDR (8-15 DU/Acre)</u>	<u>DU</u>	<u>.13</u>	<u>.51</u>	<u>.64</u>	<u>.56</u>	<u>.24</u>	<u>.80</u>	<u>8.00</u>
3. <u>HDR (16-25 DU/Acre)</u>	<u>DU</u>	<u>.08</u>	<u>.43</u>	<u>.51</u>	<u>.42</u>	<u>.20</u>	<u>.62</u>	<u>6.63</u>
4. <u>Transitional Housing</u>	<u>ROOM</u>	<u>.21</u>	<u>.17</u>	<u>.38</u>	<u>.18</u>	<u>.22</u>	<u>.40</u>	<u>4.90</u>
5. <u>Hotel</u>	<u>ROOM</u>	<u>.34</u>	<u>.22</u>	<u>.56</u>	<u>.32</u>	<u>.29</u>	<u>.61</u>	<u>8.23</u>
6. <u>Elementary School</u>	<u>STU</u>	<u>.17</u>	<u>.12</u>	<u>.29</u>	<u>.00</u>	<u>.00</u>	<u>.00</u>	<u>1.02</u>
7. <u>High School</u>	<u>STU</u>	<u>.32</u>	<u>.14</u>	<u>.46</u>	<u>.06</u>	<u>.09</u>	<u>.15</u>	<u>1.79</u>
8. <u>Learning Center</u>	<u>TSF</u>	<u>.66</u>	<u>.07</u>	<u>.73</u>	<u>.15</u>	<u>.34</u>	<u>.49</u>	<u>6.12</u>
9. <u>Neighborhood Commercial</u>	<u>TSF</u>	<u>1.63</u>	<u>1.05</u>	<u>2.68</u>	<u>4.68</u>	<u>5.06</u>	<u>9.74</u>	<u>111.82</u>
10. <u>Community Commercial</u>	<u>TSF</u>	<u>1.00</u>	<u>.64</u>	<u>1.64</u>	<u>2.85</u>	<u>3.09</u>	<u>5.94</u>	<u>68.17</u>
12. <u>General Office</u>	<u>TSF</u>	<u>1.65</u>	<u>.23</u>	<u>1.88</u>	<u>.31</u>	<u>1.49</u>	<u>1.80</u>	<u>13.27</u>
14. <u>Military (Office)</u>	<u>TSF</u>	<u>1.65</u>	<u>.23</u>	<u>1.88</u>	<u>.31</u>	<u>1.49</u>	<u>1.80</u>	<u>13.27</u>
15. <u>Light Industrial/R&D</u>	<u>TSF</u>	<u>1.03</u>	<u>.21</u>	<u>1.24</u>	<u>.16</u>	<u>.92</u>	<u>1.08</u>	<u>8.11</u>
17. <u>Park</u>	<u>ACRE</u>	<u>.00</u>	<u>.00</u>	<u>.00</u>	<u>.00</u>	<u>.00</u>	<u>.00</u>	<u>5.00</u>
18. <u>Regional Park</u>	<u>ACRE</u>	<u>.00</u>	<u>.00</u>	<u>.00</u>	<u>.00</u>	<u>.00</u>	<u>.00</u>	<u>5.00</u>
19. <u>Golf Course</u>	<u>ACRE</u>	<u>.38</u>	<u>.10</u>	<u>.48</u>	<u>.22</u>	<u>.50</u>	<u>.72</u>	<u>8.00</u>
20. <u>Community Facility</u>	<u>TSF</u>	<u>2.00</u>	<u>.25</u>	<u>2.25</u>	<u>.89</u>	<u>1.97</u>	<u>2.86</u>	<u>25.00</u>

(Continued)

Table 2-2 (cont.)

LAND USE AND TRIP GENERATION SUMMARY
(Reuse Alternative 1)

TRIP EQUATION RATES

UNITS	Coefficients		AM PEAK HOUR			PM PEAK HOUR		
	A	B	PK/ADT RATIO	IN	OUT	PK/ADT RATIO	IN	OUT
11. Shopping Center (EQ)	TSF	.643 5.866	.024	61%	39%	.087	48%	52%
13. Office Park (EQ)	TSF	.768 3.654	.142	88%	12%	.135	17%	83%
16. Industrial Park (EQ)	TSF	.768 3.654	.142	88%	12%	.135	17%	83%

(EQ) Equation-based trip rate with equation form: $LN(T) = A * LN(X) + B$ where X = Land Use Amount & T = Daily Trips

Abbreviations: ADT - average daily traffic

DU - dwelling unit

EQ - based on equation-based trip rate

LDR - low density residential

MDR - medium density residential

HDR - high density residential (Reuse Alternatives 2 and 3 only)

MHDR - medium high density residential

R&D - research and development

SG - special generator

TSF - thousand square feet

Trip Rate Sources: Land use categories 2,8,17-19 are based on the San Diego Association of Governments (SANDAG) "Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (1996)," and land use categories 1,3,4,7,9-16,20 are based on the Institute of Transportation Engineers (ITE) "Trip Generation, Sixth Edition (1997)." For a more detailed explanation on trip rate derivation see Appendix A of this technical report.

Note: A correction was made to the residential land use breakdown in Planning Area 21 (PA21) of this alternative which resulted in an additional 1,352 ADT. A sensitivity run for year 2020 showed that no other locations than those currently identified in Chapter 4.0 would be adversely impacted by this additional ADT.

of ~~108,452~~ 109,804. Appendix A contains tables that show the land use allocations and corresponding trip generation for each planning area.

In Planning Area 21 (PA21) the breakdown between multi-family and single family units was incorrect in the June 1999 analysis. As shown in Table 2-2, the increase of 1,352 ADT changes the 2005 trip generation from 108,452 to 109,804 and the 2020 trip generation from 215,093 to 216,445. To determine whether or not this increase in ADT would result in any traffic impacts, a sensitivity analysis was completed for the worst-case year 2020 scenario. Given the relatively small number of new trips, less than one percent of the total buildout, the additional volume would disperse throughout the network with minimal effect. A listing of the analyzed intersections can be found in Appendix D with actual intersection capacity utilization (ICU) calculations in Appendix E. The greatest change in ICU value would occur at the intersection of Harvard Avenue and Moffett Drive which is closest to PA21. Here, the PM peak hour ICU of .75 (previous analysis) is corrected to .80 with the additional ADT. At this value, this intersection would operate at an acceptable level. Overall, the additional volume would not result in any changes to the significance conclusions presented in Chapter 4.0 of this report.

Except for the southern portion of the site southeast of Jamboree Road, which is in the City of Irvine, the project site is in the City of Tustin. The Irvine portion of Reuse Alternative 1 is planned for Medium Density Residential units with a density not to exceed 12.5 dwelling units per acre and an elementary school serving Kindergarten through eighth grade. These uses are assumed built by year 2005.

2.2.B REUSE ALTERNATIVE 2

Figure 2-3 illustrates the land use distribution and circulation system for Reuse Alternative 2. The land uses in this plan have a focus on enhancing housing and cultural opportunities for the residents of Tustin and nearby communities.

The circulation system for this reuse alternative would be designed in a grid fashion to maximize network efficiency (for both local traffic and through traffic). Figure 2-4 shows the circulation system for Reuse Alternative 2 according to MPAH arterial highway classifications. Valencia Avenue would be connected to Moffett Drive, Warner Avenue would be extended directly

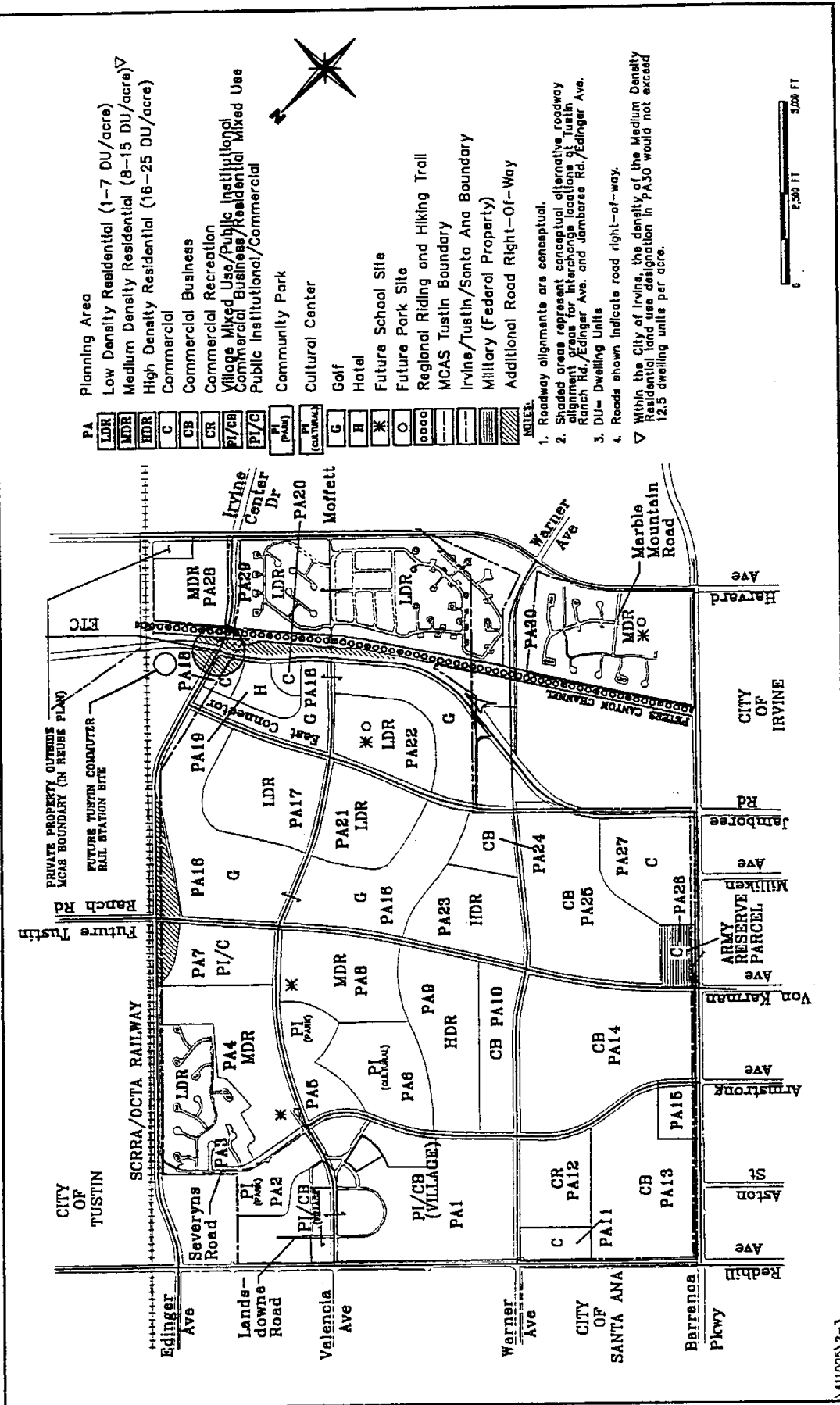
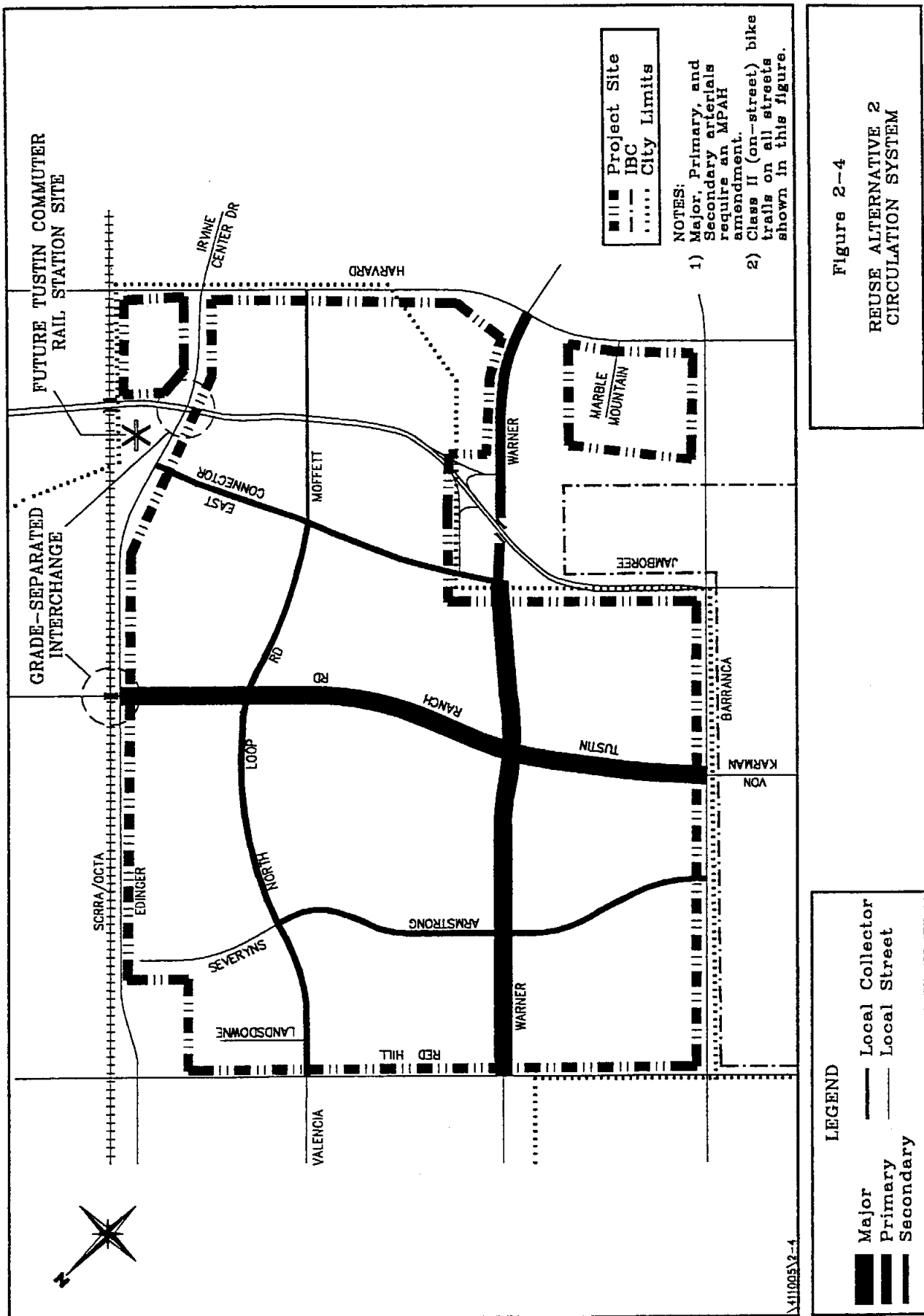


Figure 2--3

DON DISPOSAL/ALTERNATIVE 2
(ARTERIAL GRID PATTERN/NO CORE
/HIGH RESIDENTIAL)

MAP SOURCE: HNTB



through the Reuse Plan area (unlike in Alternative 1), Armstrong Avenue would be extended to Valencia Avenue, and Tustin Ranch Road would be connected to Von Karman Avenue. An as-yet unnamed road (East Connector) would connect Edinger Avenue to Warner Avenue between Jamboree Road and Tustin Ranch Road. Right-of-way and/or design improvements would also be made to Red Hill Avenue, Barranca Parkway, Harvard Avenue, and Edinger Avenue. Other on-base streets (i.e., Severyns, Landsdowne, Marble Mountain, etc.) would connect to the arterial grid street network and be oriented to efficiently serve neighborhoods and districts within the Reuse Plan area. Amendments to the County MPAH would be made for the on-site roadways classified as Major, Primary, or Secondary Arterial.

OCTA carries out regular updates of the Countywide transit system. Each phase of development on the project site should be included as part of that update program so that these impacts and opportunities related to development of the project site can be addressed with each system update.

A Class I (off-street) bike trail is planned along Peters Canyon Wash which bisects the Project site east of Jamboree Road and traverses both the Cities of Tustin and Irvine city limits. Class II (on-street) bike trails are assumed on all streets within the project site. (See Section 3.6.B for bikeway classification definitions.)

Table 2-3 summarizes the land use and trip generation for Reuse Alternative 2. It assumes that the project site is developed with a higher residential density than Reuse Alternative 1, and overall trip generation is thereby higher. Full buildout of this alternative would generate 268,130 ADT while 108,246 ADT would be generated for year 2005. Although Reuse Alternative 2 would have greater traffic generation at buildout than Reuse Alternative 1, the forecast for year 2005 is approximately the same as for Reuse Alternative 1 because the estimated land use absorption is generally the same in magnitude by year 2005. Appendix A contains tables that show the land use allocations and corresponding trip generation for each planning area.

Except for the southern portion of the site southeast of Jamboree Road, which is in the City of Irvine, the project site is in the City of Tustin. The Irvine portion of Reuse Alternative 2 is planned

Table 2-3

LAND USE AND TRIP GENERATION SUMMARY
(Reuse Alternative 2)

LAND USE TYPE	UNITS	-- AM PEAK HOUR --			-- PM PEAK HOUR --			ADT
		IN	OUT	TOTAL	IN	OUT	TOTAL	
PROJECT BUILDOUT								
City of Tustin								
1. LDR (1-7 DU/Acre)	1,579.00 DU	300	884	1,184	1,027	568	1,595	15,111
2. MDR (8-15 DU/Acre)	1,410.00 DU	184	719	903	789	338	1,127	11,280
3. HDR (16-25 DU/Acre)	2,344.00 DU	188	1,008	1,196	985	469	1,454	15,541
5. Hotel	500.00 ROOM	170	110	280	160	145	305	4,115
10. Community Commercial	751.06 TSF	752	481	1,233	2,140	2,321	4,461	51,200
11. Shopping Center (EQ)	1,750.63 TSF	1,090	697	1,787	3,110	3,369	6,479	74,464
12. General Office	92.94 TSF	153	21	174	29	138	167	1,233
13. Office Park (EQ)	2,032.19 TSF	2,232	304	2,536	410	2,001	2,411	17,858
14. Military (Office)	327.79 TSF	541	75	616	102	488	590	4,349
15. Light Industrial/R&D	987.94 TSF	1,018	207	1,225	158	909	1,067	8,012
16. Industrial Park (EQ)	1,464.91 TSF	1,500	205	1,705	275	1,345	1,620	12,000
17. Park	46.70 ACRE	0	0	0	0	0	0	234
19. Golf Course	177.00 ACRE	67	18	85	39	89	128	1,416
20. Community Facility	1,764.18 TSF	3,528	441	3,969	1,570	3,476	5,046	44,105
TOTAL		11,723	5,170	16,893	10,794	15,656	26,450	260,918
City of Irvine								
1. LDR (1-7 DU/Acre)	150.00 DU	29	84	113	98	54	152	1,436
2. MDR (8-15 DU/Acre)	722.00 DU	94	368	462	404	173	577	5,776
TOTAL		123	452	575	502	227	729	7,212
Entire Rense Area								
1. LDR (1-7 DU/Acre)	1,729.00 DU	329	968	1,297	1,125	622	1,747	16,547
2. MDR (8-15 DU/Acre)	2,132.00 DU	278	1,087	1,365	1,193	511	1,704	17,056
3. HDR (16-25 DU/Acre)	2,344.00 DU	188	1,008	1,196	985	469	1,454	15,541
5. Hotel	500.00 ROOM	170	110	280	160	145	305	4,115
10. Community Commercial	751.06 TSF	752	481	1,233	2,140	2,321	4,461	51,200
11. Shopping Center (EQ)	1,750.63 TSF	1,090	697	1,787	3,110	3,369	6,479	74,464
12. General Office	92.94 TSF	153	21	174	29	138	167	1,233
13. Office Park (EQ)	2,032.19 TSF	2,232	304	2,536	410	2,001	2,411	17,858
14. Military (Office)	327.79 TSF	541	75	616	102	488	590	4,349
15. Light Industrial/R&D	987.94 TSF	1,018	207	1,225	158	909	1,067	8,012
16. Industrial Park (EQ)	1,464.91 TSF	1,500	205	1,705	275	1,345	1,620	12,000
17. Park	46.70 ACRE	0	0	0	0	0	0	234
19. Golf Course	177.00 ACRE	67	18	85	39	89	128	1,416
20. Community Facility	1,764.18 TSF	3,528	441	3,969	1,570	3,476	5,046	44,105
TOTAL		11,846	5,622	17,468	11,296	15,883	27,179	268,130

(Continued)

Table 2-3 (cont)

LAND USE AND TRIP GENERATION SUMMARY
 (Reuse Alternative 2)

LAND USE TYPE	UNITS	-- AM PEAK HOUR --			-- PM PEAK HOUR --			ADT	
		IN	OUT	TOTAL	IN	OUT	TOTAL		
YEAR 2005									
City of Tustin									
1. LDR (1-7 DU/Acre)	985.00 DU	187	551	738	640	355	995	9,426	
2. MDR (8-15 DU/Acre)	723.00 DU	94	369	463	405	173	578	5,784	
10. Community Commercial	42.34 TSF	42	27	69	121	131	252	2,886	
11. Shopping Center (EQ)	576.77 TSF	362	232	594	1,033	1,119	2,152	24,733	
13. Office Park (EQ)	1,051.47 TSF	1,139	155	1,294	210	1,022	1,232	9,116	
14. Military (Office)	156.11 TSF	257	36	293	49	233	282	2,072	
15. Light Industrial/R&D	63.29 TSF	65	13	78	10	58	68	513	
16. Industrial Park (EQ)	725.57 TSF	743	101	844	136	666	802	5,944	
17. Park	46.70 ACRE	0	0	0	0	0	0	234	
19. Golf Course	177.00 ACRE	67	18	85	39	89	128	1,416	
20. Community Facility	1,658.80 TSF	3,317	415	3,732	1,476	3,268	4,744	41,470	
TOTALS - City of Tustin		6,273	1,917	8,190	4,119	7,114	11,233	103,594	
City of Irvine									
1. LDR (1-7 DU/Acre)	150.00 DU	29	84	113	98	54	152	1,436	
2. MDR (8-15 DU/Acre)	402.00 DU	52	205	257	225	96	321	3,216	
TOTAL		81	289	370	323	150	473	4,652	
Entire Reuse Area									
1. LDR (1-7 DU/Acre)	1,135.00 DU	216	635	851	738	409	1,147	10,862	
2. MDR (8-15 DU/Acre)	1,125.00 DU	146	574	720	630	269	899	9,000	
10. Community Commercial	42.34 TSF	42	27	69	121	131	252	2,886	
11. Shopping Center (EQ)	576.77 TSF	362	232	594	1,033	1,119	2,152	24,733	
13. Office Park (EQ)	1,051.47 TSF	1,139	155	1,294	210	1,022	1,232	9,116	
14. Military (Office)	156.11 TSF	257	36	293	49	233	282	2,072	
15. Light Industrial/R&D	63.29 TSF	65	13	78	10	58	68	513	
16. Industrial Park (EQ)	725.57 TSF	743	101	844	136	666	802	5,944	
17. Park	46.70 ACRE	0	0	0	0	0	0	234	
19. Golf Course	177.00 ACRE	67	18	85	39	89	128	1,416	
20. Community Facility	1,658.80 TSF	3,317	415	3,732	1,476	3,268	4,744	41,470	
TOTAL		6,354	2,206	8,560	4,442	7,264	11,706	108,246	

Abbreviations: ADT - average daily traffic
 DU - dwelling unit
 EQ - based on equation-based trip rate
 HDR - high density residential
 LDR - low density residential
 MDR - medium density residential
 R&D - research and development
 TSF - thousand square feet

NOTE: See Table 2-2 for trip rates and their sources.

for Low and Medium Density Residential units. The density for the Medium Density Residential land use is planned not to exceed 12.5 dwelling units per acre. All Low Density Residential units and over half of the Medium Density Residential units are assumed built by year 2005.

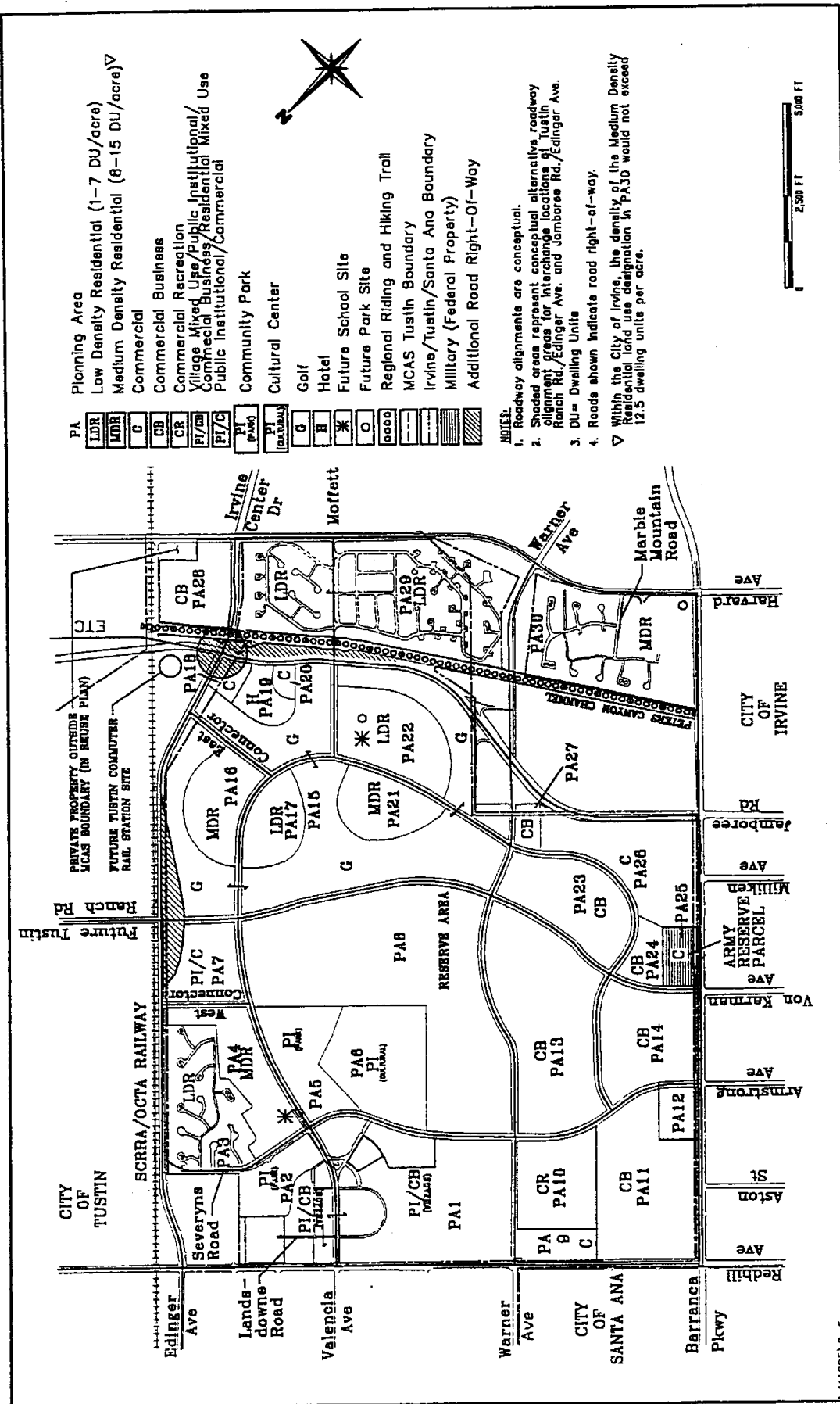
2.2.C REUSE ALTERNATIVE 3

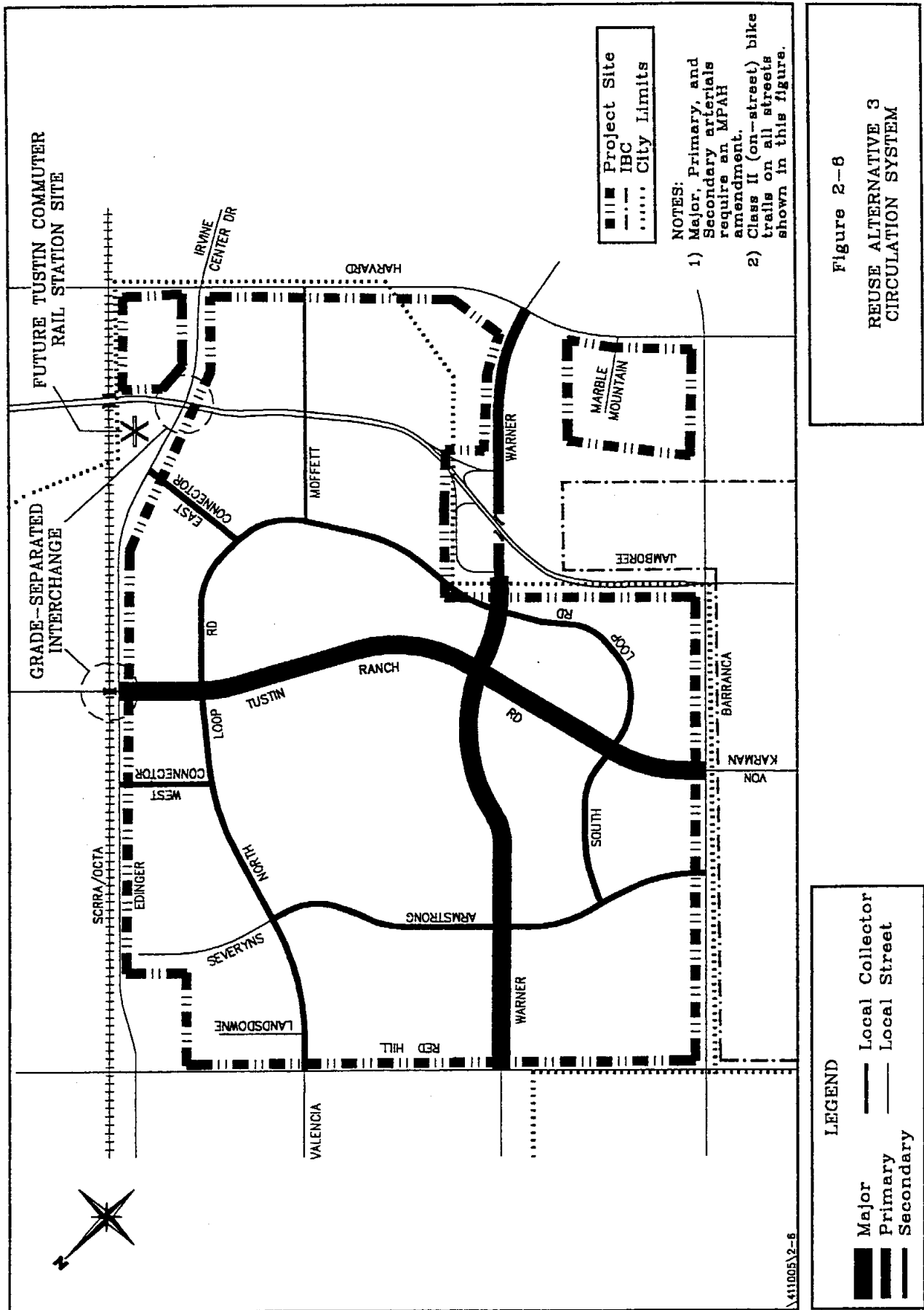
Figure 2-5 illustrates the land use allocation and circulation system for Reuse Alternative 3. The land use plan for this alternative has a focus on enhancing employment and cultural opportunities for the residents of Tustin and nearby communities.

The circulation system for this reuse alternative would be around a central area. Figure 2-6 shows the circulation system for this reuse alternative according to MPAH arterial highway classifications. A new road called North/South Loop Road would create this central area and would provide direct access to Valencia Avenue, Moffett Drive, Warner Avenue, Von Karman Avenue, Tustin Ranch Road, and Edinger Avenue via two connector roads. Armstrong Avenue would be extended to Valencia Avenue. Warner Avenue would be made continuous through the Reuse Plan area. Moffett Drive would be extended to South Loop Road. Tustin Ranch Road would be completed to Von Karman Avenue. Right-of-way and design improvements would also be made to Red Hill Avenue, Barranca Parkway, Harvard Avenue, and Edinger Avenue. Other on-base streets (i.e., Landsdowne Severyns, Marble Mountain, etc.) would connect to the arterial street network and be oriented to efficiently serve neighborhoods and districts with the Reuse Plan area. Amendments to the County MPAH would be made for the on-site roadways classified a Major, Primary, or Secondary Arterial.

OCTA carries out regular updates of the Countywide transit system. Each phase of development on the project site should be included as part of that update program so that these impacts and opportunities related to development of the project site can be addressed with each system update.

A Class I (off-street) bike trail is planned along Peters Canyon Wash which bisects the Project site east of Jamboree Road and traverses both the Cities of Tustin and Irvine city limits. Class II (on-





street) bike trails are assumed on all streets within the project site. (See Section 3.6.B for bikeway classification definitions.)

Table 2-4 summarizes the land use and trip generation for Reuse Alternative 3. Full buildout of this alternative would generate 294,887 ADT, while 114,534 ADT would be generated for year 2005. Appendix A contains tables that show the land use allocations and corresponding trip generation for each planning area.

Except for the southern portion of the site southeast of Jamboree Road, which is in the City of Irvine, the project site is in the City of Tustin. The Irvine portion of Reuse Alternative 3 is planned for Low and Medium Density Residential units. The density for the Medium Density Residential land use is planned not to exceed 12.5 dwelling units per acre. All Low Density Residential units and one-third of the Medium Density Residential units are assumed built by year 2005.

2.2.D NO ACTION ALTERNATIVE

The No Action Alternative evaluated in the EIS/EIR is in compliance with NEPA (40 C.F.R. § 1502.14(d)). Under the No Action Alternative, the Marine Corps would retain ownership of approximately 1,585 acres of surplus federal property. Except for the existing agricultural and building leases, all buildings would remain vacant and all other facilities would remain in place but would be unused. The Marine Corps property would remain under caretaker status. The area would be fenced off, the buildings would be boarded up, and a military security and maintenance staff of approximately 10 persons would be present. The grounds, infrastructure, and buildings would be maintained and repaired as necessary to prevent deterioration. Site environmental cleanup would continue and be completed. Leases would allow for continued agricultural activity. No new construction would occur under this alternative except as allowed by existing lease authorization. Approximately 17 acres of property would be transferred to the Army Reserve.

For traffic analysis purposes, the No Action Alternative is assumed to have trip generation of less than 100 trips per day.

Table 2-4

LAND USE AND TRIP GENERATION SUMMARY
(Reuse Alternative 3)

LAND USE TYPE	UNITS	- AM PEAK HOUR -			- PM PEAK HOUR -			ADT
		IN	OUT	TOTAL	IN	OUT	TOTAL	
PROJECT BUILDOUT								
City of Tustin								
1. LDR (1-7 DU/Acre)	1,310.00 DU	248	733	981	851	472	1,323	12,536
2. MDR (8-15 DU/Acre)	577.00 DU	75	294	369	323	138	461	4,616
3. HDR (16-25 DU/Acre)	1,645.00 DU	131	707	838	691	329	1,020	10,906
5. Hotel	500.00 ROOM	170	110	280	160	145	305	4,115
10. Community Commercial	600.05 TSF	601	385	986	1,710	1,854	3,564	40,904
11. Shopping Center (EQ)	3,525.19 TSF	1,942	1,240	3,182	5,537	6,000	11,537	132,596
12. General Office	177.08 TSF	293	40	333	55	264	319	2,349
13. Office Park (EQ)	1,342.06 TSF	1,374	188	1,562	252	1,232	1,484	10,994
14. Military (Office)	327.79 TSF	541	75	616	102	488	590	4,349
15. Light Industrial/R&D	101.06 TSF	104	21	125	16	93	109	820
16. Industrial Park (EQ)	2,507.49 TSF	2,598	354	2,952	477	2,330	2,807	20,788
17. Park	51.30 ACRE	0	0	0	0	0	0	257
19. Golf Course	186.90 ACRE	71	19	90	41	93	134	1,495
20. Community Facility	1,658.51 TSF	3,317	413	3,730	1,475	3,267	4,742	41,462
TOTAL		11,465	4,579	16,044	11,690	16,705	28,395	288,187
City of Irvine								
1. LDR (1-7 DU/Acre)	150.00 DU	29	84	113	98	54	152	1,436
2. MDR (8-15 DU/Acre)	658.00 DU	86	336	422	368	158	526	5,264
TOTAL		115	420	535	466	212	678	6,700
Entire Reuse Area								
1. LDR (1-7 DU/Acre)	1,460.00 DU	277	817	1,094	949	526	1,475	13,972
2. MDR (8-15 DU/Acre)	1,235.00 DU	161	630	791	691	296	987	9,880
3. HDR (16-25 DU/Acre)	1,645.00 DU	131	707	838	691	329	1,020	10,906
5. Hotel	500.00 ROOM	170	110	280	160	145	305	4,115
10. Community Commercial	600.05 TSF	601	385	986	1,710	1,854	3,564	40,904
11. Shopping Center (EQ)	3,525.19 TSF	1,942	1,240	3,182	5,537	6,000	11,537	132,596
12. General Office	177.08 TSF	293	40	333	55	264	319	2,349
13. Office Park (EQ)	1,342.06 TSF	1,374	188	1,562	252	1,232	1,484	10,994
14. Military (Office)	327.79 TSF	541	75	616	102	488	590	4,349
15. Light Industrial/R&D	101.06 TSF	104	21	125	16	93	109	820
16. Industrial Park (EQ)	2,507.49 TSF	2,598	354	2,952	477	2,330	2,807	20,788
17. Park	51.30 ACRE	0	0	0	0	0	0	257
19. Golf Course	186.90 ACRE	71	19	90	41	93	134	1,495
20. Community Facility	1,658.51 TSF	3,317	413	3,730	1,475	3,267	4,742	41,462
TOTAL		11,580	4,999	16,579	12,156	16,917	29,073	294,887

(Continued)

Table 2-4 (cont)
LAND USE AND TRIP GENERATION SUMMARY
 (Reuse Alternative 3)

LAND USE TYPE	UNITS	-- AM PEAK HOUR --			-- PM PEAK HOUR --			ADT
		IN	OUT	TOTAL	IN	OUT	TOTAL	
YEAR 2005								
City of Tustin								
1. LDR (1-7 DU/Acre)	985.00 DU	187	551	738	640	355	995	9,426
10. Community Commerical	161.61 TSF	162	103	265	461	499	960	11,017
11. Shopping Center (EQ)	896.27 TSF	612	392	1,004	1,746	1,893	3,639	41,823
12. General Office	63.29 TSF	104	15	119	20	94	114	840
13. Office Park (EQ)	875.55 TSF	896	122	1,018	165	804	969	7,173
14. Military (Office)	194.84 TSF	321	44	365	61	290	351	2,585
16. Industrial Park (EQ)	756.74 TSF	775	106	881	142	695	837	6,199
17. Park	51.30 ACRE	0	0	0	0	0	0	257
19. Golf Course	186.90 ACRE	71	19	90	41	93	134	1,495
20. Community Facility	1,220.95 TSF	2,442	304	2,746	1,086	2,405	3,491	30,523
TOTAL		5,570	1,656	7,226	4,362	7,128	11,490	111,338
City of Irvine								
1. LDR (1-7 DU/Acre)	150.00 DU	29	84	113	98	54	152	1,436
2. MDR (8-15 DU/Acre)	220.00 DU	29	112	141	123	53	176	1,760
TOTAL		58	196	254	221	107	328	3,196
Entire Reuse Area								
1. LDR (1-7 DU/Acre)	1,135.00 DU	216	635	851	738	409	1,147	10,862
2. MDR (8-15 DU/Acre)	220.00 DU	29	112	141	123	53	176	1,760
10. Community Commercial	161.61 TSF	162	103	265	461	499	960	11,017
11. Shopping Center (EQ)	896.27 TSF	612	392	1,004	1,746	1,893	3,639	41,823
12. General Office	63.29 TSF	104	15	119	20	94	114	840
13. Office Park (EQ)	875.55 TSF	896	122	1,018	165	804	969	7,173
14. Military (Office)	194.84 TSF	321	44	365	61	290	351	2,585
16. Industrial Park (EQ)	756.74 TSF	775	106	881	142	695	837	6,199
17. Park	51.30 ACRE	0	0	0	0	0	0	257
19. Golf Course	186.90 ACRE	71	19	90	41	93	134	1,495
20. Community Facility	1,220.95 TSF	2,442	304	2,746	1,086	2,405	3,491	30,523
TOTAL		5,628	1,852	7,480	4,583	7,235	11,818	114,534

Abbreviations: ADT - average daily traffic
 DU - dwelling unit
 EQ - based on equation-based trip rate
 HDR - high density residential
 LDR - low density residential
 MDR - medium density residential
 R&D - research and development
 TSF - thousand square feet

NOTE: See Table 2-2 for trip rates and their sources.

2.3 TRIP DISTRIBUTION

As discussed in the previous chapter, traffic impacts due to the reuse alternative were analyzed using traffic forecast data from the Central County Traffic Model (CCTM). This model adds project generated trips into the local and regional travel patterns in the area, thereby allowing a comparison between the different alternatives. Since the CCTM is a derivative of the OCTAM 2.8, use of this model in a study such as this is consistent with regional forecasting requirements and places the project in a suitable regional context for EIS/EIR purposes. The trip distribution of each alternative is determined by the traffic model and the project land uses interact with the surrounding land uses to provide the associated traffic forecasts. The distribution of traffic generated by Reuse Alternatives 1, 2 and 3 are illustrated in Figures 2-7 through 2-9, respectively. The internal trip distribution of 11 to 12 percent (depending on the reuse alternative) is based on the relationship between residential and non-residential trips in the project area and off-site trips and their relative trip distances. *As can be seen in these figures, regional impacts are minimal. The short trip lengths and internal trip distribution are based on OCTAM 2.8 in accordance with the consistency requirements contained in OCTA's Subarea Modeling Guidelines.* Also, it should be noted that no trip distribution diagram is given for the No Action Alternative due to the nominal trips that would be generated by this alternative.

Project traffic volumes that would be generated according to the trip distribution shown in Figures 2-7 through 2-9 would not be directly added to existing or projected traffic volumes on the indicated roadways. Interaction between the project and the surrounding land uses results in a unique "redistribution" effect for each alternative which is derived by the traffic model. This effect is discussed further in Section 2.4 below.

2.4 AREAWIDE TRAVEL PATTERNS

As land uses within the reuse area develop over time, travel patterns in the surrounding area will evolve in relation to those land uses. Future residents in the project area would make daily trips within and around the reuse area itself (for school, convenience shopping, etc.), and they would travel to activity centers such as the Irvine Business Complex (IBC) and the Santa Ana business and industrial areas for work trips and major shopping trips. Likewise, the commercial land uses in the

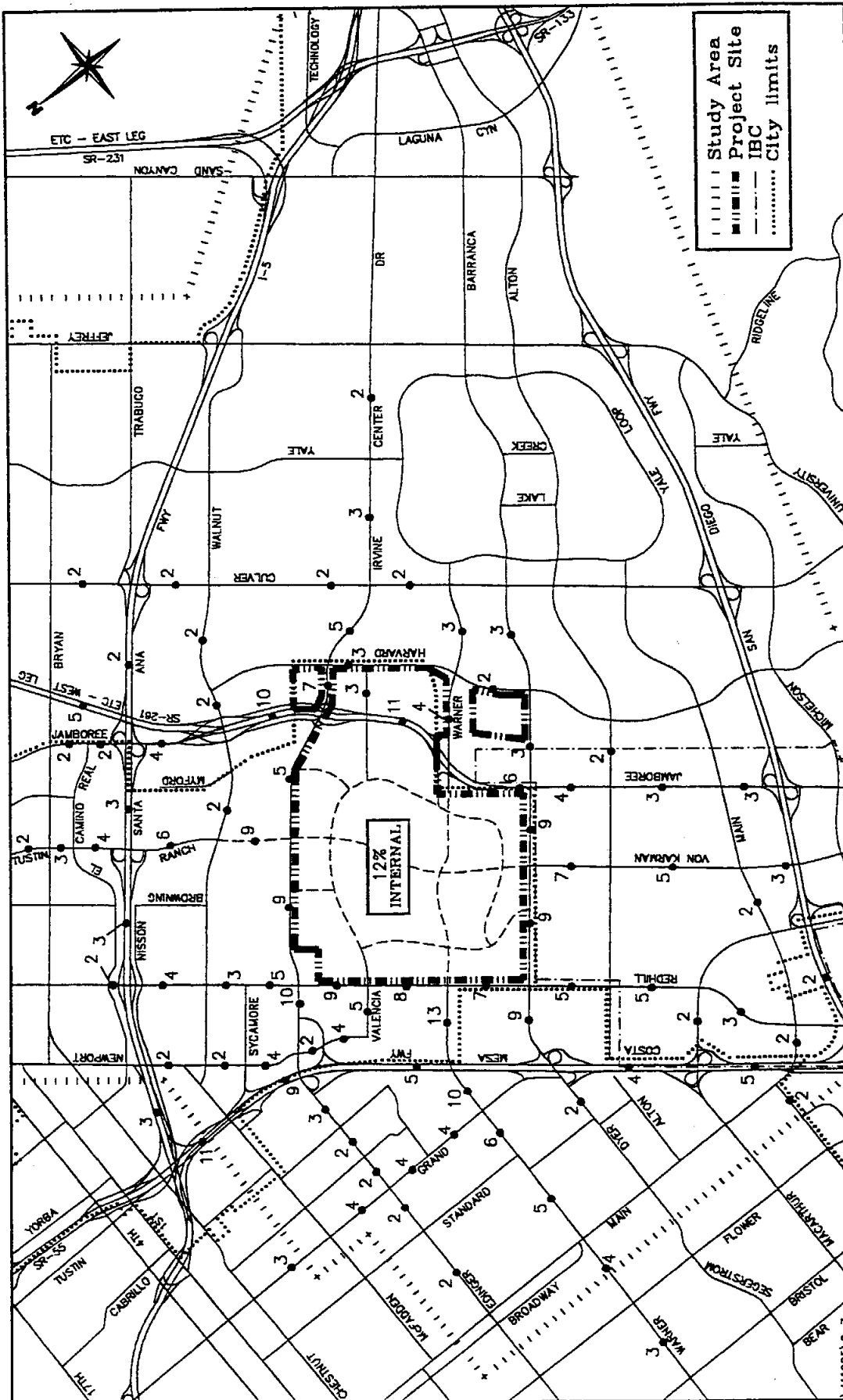


Figure 2-7

TRIP DISTRIBUTION
- 2020 REUSE ALTERNATIVE 1

LEGEND

- X • Percent of project trip distribution one percent or less on segments within study area with no value shown

project area would attract trips from the surrounding residential area. These long-range travel patterns are forecast by the CCTM, and can be compared to those for a scenario in which no new land uses would be developed on the site. The resulting differences in traffic volumes form the basis for the project impact analysis.

It is assumed that no changes occur to the surrounding land uses and trip generation as a result of the base reuse. Hence, with the interaction between the reuse area and the surrounding area, different travel patterns occur under each project alternative. Study area trips interact with surrounding land uses, and do not necessarily generate "new" trips as far as the study area road system is concerned. The trips are already being generated by those land uses and are "redirected" or "intercepted" by the land uses on the base.

This change in trip distribution is important in understanding the effects of the project. The project trips are not merely "overlaid" (i.e., added) to the no-project trips, but interact with future land uses in a manner that changes future travel patterns. *Therefore decreases as well as increases in volume may be seen for certain intersection turn movements or for roadway links.* These trip patterns are derived by the traffic model by considering all future land uses in the area (and in fact the whole region). The resulting composite thereby reflects this redistribution effect and provides a realistic model of future conditions for impact analysis purposes.

Chapter 3.0

TRANSPORTATION SETTING

This chapter describes the transportation setting for the proposed Marine Corps Air Station (MCAS) Tustin Reuse Plan. It is prepared for input to the "Affected Environment" section of the EIS/EIR. The transportation setting for an analysis of military base closure and reuse includes an element called the Baseline. The Baseline establishes conditions which would occur if the military base had not been closed and continued to operate in the mode that existed prior to the Congressional action which decreed base closure. The baseline condition is described in Section 3.3.

3.1 EXISTING CIRCULATION NETWORK

Figure 3-1 illustrates the existing roadway system in the traffic analysis study area together with the number of existing midblock travel lanes on individual roadway segments. Figure 3-1 describes the roadway system in late 1997/early 1998, the time period when the traffic count data was collected. Since changes occurred to this system later in 1998, the 1997/early 1998 period is referenced throughout this report as "1997." The west and east legs of the Eastern Transportation Corridor illustrated here, opened to traffic in February 1999 and October 1998, respectively. As noted however, the existing traffic count data presented in this report is for 1997/98 and does not reflect the opening of these facilities.

The *existing* roadways included here are those designated on the County of Orange Master Plan of Arterial Highways (MPAH) or individual City Circulation Element in cases where these may differ from the MPAH. Except in special circumstances, non-MPAH roadways are not included in the traffic analysis. Only those roadways in existence in 1997 are shown here and future MPAH roadways can be seen in Chapter 5.0 which addresses full buildout of the MPAH.

3.2 EXISTING TRAFFIC CONDITIONS

Figure 3-2 illustrates existing average daily traffic (ADT) volumes on the study area circulation

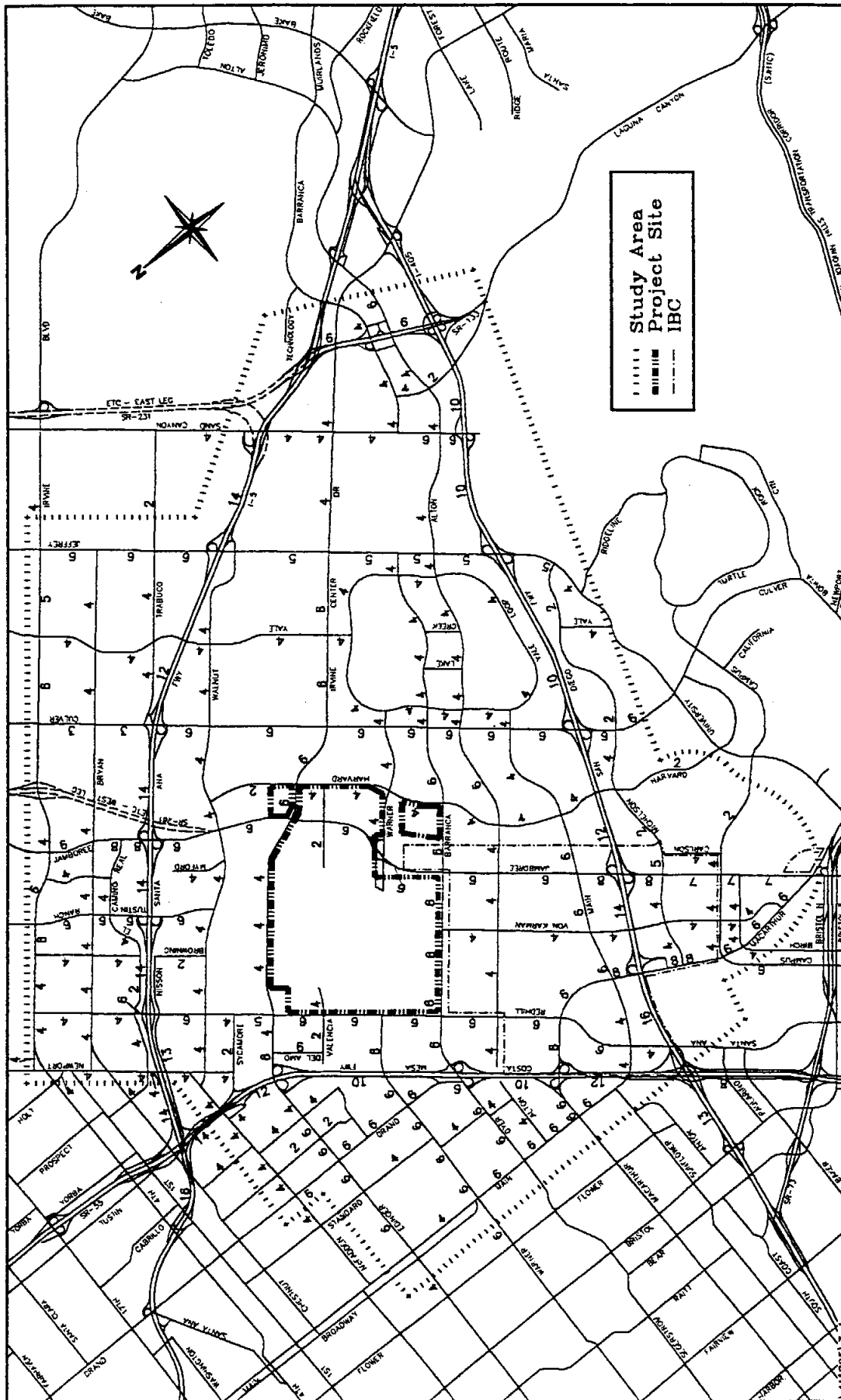


Figure 3-1
EXISTING (1997) CIRCULATION SYSTEM

LEGEND
XX Midblock lanes
--- ETC-West & East Legs opened to traffic in Feb. 1999 & Oct. 1998, respectively.

system. The arterial volumes are taken from traffic counts collected in 1997/8 and the ADT freeway volumes are from 1997 Caltrans counts (see Reference 12 in Chapter 1.0).

To determine peak hour operating conditions on the study area circulation system, existing AM and PM peak hour turn movement counts were obtained for all major intersections. Existing intersection capacity utilization (ICU) values were calculated using these peak hour counts in combination with the geometric lane configurations of each location. As discussed in Chapter 1.0, the Cities of Tustin and Santa Ana use an ICU value of .90 (LOS "D") as a desirable operating condition. The City of Irvine also uses this threshold except in the Irvine Business Complex (IBC) where 1.00 (LOS "E") is the maximum acceptable ICU value. The CMP intersections throughout the study area also use 1.00 as the maximum ICU value, consistent with the performance criteria for CMP locations.

Figure 3-3 illustrates the intersection locations for which existing traffic count data was collected and Table 3-1 summarizes the peak hour ICU values. Actual intersection turn volumes and lane geometrics as well as the ICU calculation worksheets are included in Appendix E.

Table 3-2 lists those locations that do not meet LOS criteria. There are nine CMP intersection locations in the study area, and one of these, the intersection of Jamboree Road/I-405 northbound ramps in the AM and PM peak hours, currently operates worse than the CMP LOS "E" performance standard. For the non-CMP locations in the study area, nine do not meet the applicable performance standard. The ten intersections that do not meet applicable standards are shown in Figure 3-3.

3.3 BASELINE CONDITIONS

The traffic impact information presented in this report compares traffic conditions for each reuse alternative and the No Action Alternative with a corresponding "baseline" condition under existing, short-range and long-range time frames. The baseline condition for each of these time frames assumes that traffic generation for the project area is maintained at the volumes which were presented when Congressional action was taken to close MCAS Tustin. For purposes of the MCAS Tustin Disposal and Reuse EIS/EIR, the traffic generation of the project area in 1993, the year that the entire base (including family housing as well as the other facilities) was designated for closure, is

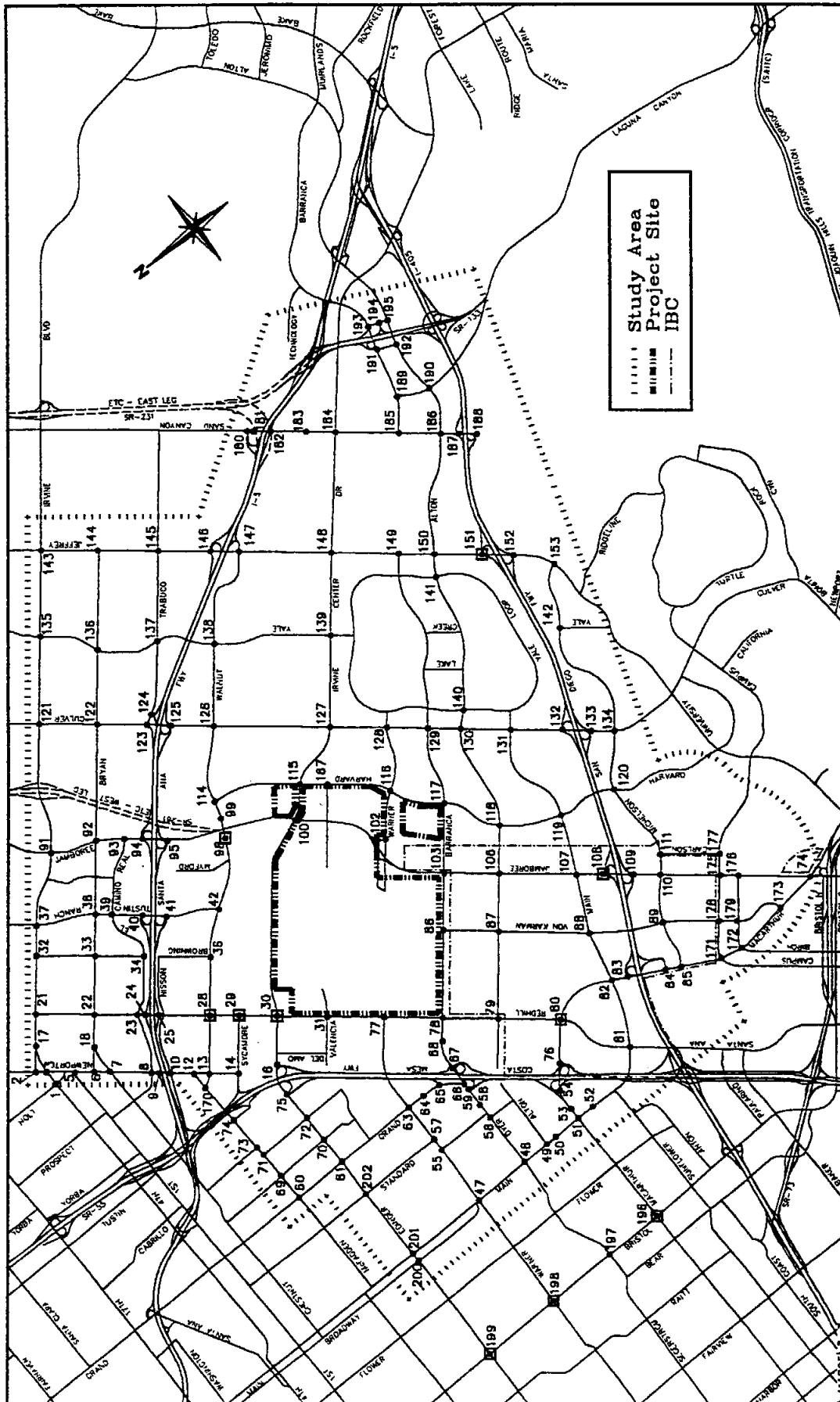


Figure 3-3
EXISTING (1997)
INTERSECTION LOCATION MAP

LEGEND

--- ETC--West & East Legs opened to traffic in Feb. 1998 & Oct. 1998, respectively.

□ Intersection performance below standard

Table 3-1

EXISTING (1997) ICU SUMMARY

INTERSECTION	-- AM PEAK HOUR --			-- PM PEAK HOUR --		
	ICU	LOS	DATE	ICU	LOS	DATE
TUSTIN						
1. Holt & Irvine	.73	C	11/05/97	.64	B	11/05/97
2. Newport & Old Irvine	.45	A	11/05/97	.84	D	10/30/97
3. Newport & Irvine ^s	.83	D	11/04/97	.78	C	11/04/97
5. Newport & 1st ^s	.57	A	10/30/97	.67	B	10/29/97
6. Newport & Bryan	.47	A	11/04/97	.57	A	10/30/97
7. Newport & Main ^s	.62	B	11/05/97	.57	A	10/29/97
8. Newport & El Camino Real	.68	B	09/10/97	.68	B	09/10/97
9. Newport & I-5 NB Ramp	.49	A	09/10/97	.54	A	09/10/97
10. Newport & I-5 SB/Nisson ^s	.76	C	09/10/97	.78	C	09/10/97
12. Newport & McFadden	.57	A	09/09/97	.58	A	09/09/97
13. Newport & Walnut ^s	.50	A	09/09/97	.52	A	09/09/97
14. Newport & Sycamore ^s	.50	A	10/28/97	.50	A	10/28/97
16. SR-55 NB Ramps & Edinger ^{CS}	.66	B	10/23/97	.68	B	10/23/97
17. Old Irvine & Irvine	.63	B	11/04/97	.59	A	11/04/97
18. Main & Bryan	.27	A	11/06/97	.34	A	10/30/97
21. Red Hill & Irvine	~~.78~~ .74	C	10/30/97	~~.87~~ .90	D	10/29/97
22. Red Hill & Bryan	.60	A	11/04/97	.63	B	10/28/97
23. Red Hill & El Camino Real	.64	B	10/29/97	.62	B	10/30/97
24. Red Hill & I-5 NB Ramps ^s	.74	C	10/28/97	.83	D	10/21/97
25. Red Hill & I-5 SB Ramps ^s	.65	B	10/23/97	.80	C	10/28/97
28. Red Hill & Walnut ^s	.97*	E	10/23/97	.89	D	10/28/97
29. Red Hill & Sycamore ^s	.94*	E	10/29/97	.80	C	10/29/97
30. Red Hill & Edinger ^s	.83	D	10/28/97	1.00*	E	10/30/97
31. Red Hill & Valencia ^s	.71	C	10/22/97	.68	B	10/08/97
32. Browning & Irvine	.64	B	10/29/97	.64	B	10/30/97
33. Browning & Bryan	.38	A	11/04/97	.34	A	11/06/97
34. Browning & El Camino Real	.30	A	10/29/97	.31	A	10/29/97
36. Browning & Walnut	.44	A	10/28/97	.51	A	10/28/97
37. Tustin Ranch & Irvine	.75	C	10/29/97	.67	B	10/30/97
38. Tustin Ranch & Bryan	.49	A	11/04/97	.47	A	11/05/97
39. Tustin Ranch & El Camino Real	.66	B	11/04/97	.52	A	11/06/97
40. Tustin Ranch & I-5 NB Ramps	.45	A	10/30/97	.47	A	10/30/97
41. Tustin Ranch & I-5 SB Ramps	.55	A	10/30/97	.51	A	10/30/97
42. Tustin Ranch & Walnut	.75	C	12/02/97	.74	C	12/02/97
100. Jamboree & Edinger ^{CS}	.79	C	12/03/97	.82	D	12/04/97
170. Walnut & McFadden	.31	A	09/10/97	.38	A	09/09/97
TUSTIN/SANTA ANA						
71. Ritchey & McFadden ^s	.61	B	05/21/98	.67	B	05/21/98
73. Williams & McFadden	.50	A	05/21/98	.61	B	05/21/98
74. Tustin Village & McFadden ^s	.65	B	05/21/98	.64	B	06/03/98
77. Red Hill & Warner ^s	.63	B	10/08/97	.59	A	10/09/97

(Continued)

Table 3-1 (cont)
EXISTING (1997) ICU SUMMARY

INTERSECTION	— AM PEAK HOUR —			— PM PEAK HOUR —		
	ICU	LOS	DATE	ICU	LOS	DATE
TUSTIN/IRVINE						
86. Von Karman & Barranca ¹	.57	A	10/08/97	.79	C	10/29/97
91. Jamboree & Irvine ^C	.75	C	10/29/97	.76	C	10/29/97
92. Jamboree & Bryan	.50	A	10/23/97	.62	B	10/23/97
93. Jamboree & El Camino Real	.47	A	10/21/97	.53	A	10/23/97
103. Jamboree & Barranca ^{1,3}	.78	C	10/09/97	.84	D	10/08/97
115. Harvard & Edinger/ICD ⁵	.57	A	12/04/97	.49	A	12/03/97
TUSTIN/IRVINE/SANTA ANA						
78. Red Hill & Dyer/Barranca ^{1,3}	.83	D	10/14/97	.75	C	01/14/98
SANTA ANA						
47. Main & Warner	.76	C	05/27/98	.88	D	06/04/98
48. Main & Dyer	.64	B	05/21/98	.88	D	06/03/98
49. Main & Alton	.35	A	05/28/98	.48	A	05/27/98
50. Main & Columbine	.44	A	05/28/98	.39	A	06/04/98
51. Main & MacArthur	.66	B	10/14/97	.90	D	10/29/97
52. Main & Sandpointe	.33	A	05/27/98	.46	A	05/27/98
53. Hutton Centre & MacArthur	.71	C	05/27/98	.83	D	05/28/98
54. SR-55 SB Ramps & MacArthur	.77	C	10/09/97	.66	B	10/09/97
55. Halladay & Warner	.52	A	05/21/98	.51	A	06/03/98
56. Halladay & Dyer	.52	A	05/27/98	.70	B	05/28/98
57. Standard & Warner	.51	A	05/27/98	.55	A	05/20/98
58. Sutter & Dyer	.35	A	05/28/98	.51	A	06/04/98
59. Hotel Terrace/SR-55 & Dyer ⁵	.63	B	10/09/97	.80	C	10/09/97
60. Grand & McFadden ⁵	.55	A	05/21/98	.70	B	05/21/98
61. Grand & Edinger ⁵	.71	C	10/14/97	.88	D	10/22/97
63. Grand & Warner ⁵	.54	A	10/09/97	.75	C	10/07/97
64. Grand & Hotel Terrace	.51	A	05/27/98	.55	A	05/21/98
65. Grand & SR-55 SB Off-Ramp	.52	A	05/27/98	.39	A	05/28/98
66. Grand & Dyer ⁵	.62	B	10/08/97	.82	D	10/07/97
67. SR-55 NB Ramps & Dyer ⁵	.70	B	10/22/97	.83	D	10/28/99
68. Pullman & Dyer ⁵	.48	A	05/21/98	.73	C	06/03/98
69. Lyon & McFadden ⁵	.56	A	05/27/98	.85	D	06/03/98
70. Lyon & Edinger ⁵	.78	C	05/27/98	.65	B	05/21/98
72. Ritchey & Edinger ⁵	.51	A	05/27/98	.84	D	05/21/98
75. SR-55 SB Ramps & Edinger ^{C,5}	.77	C	10/23/97	.98	E	10/23/97
196. Bristol & MacArthur	.75	C	09/16/98	.93*	E	09/16/98
197. Bristol & Segerstrom/Dyer	.57	A	09/16/98	.84	D	09/16/98
198. Bristol & Warner	.85	D	09/16/98	.91*	E	09/16/98
199. Bristol & Edinger	1.13*	F	09/16/98	.98*	E	09/16/98
200. Broadway & Edinger	.55	A	09/16/98	.62	B	09/16/98
201. Main & Edinger	.76	C	09/16/98	.85	D	09/16/98
202. Standard & Edinger	.61	B	09/16/98	.66	B	09/16/98

(Continued)

Table 3-1 (cont)
EXISTING (1997) ICU SUMMARY

INTERSECTION	— AM PEAK HOUR —			— PM PEAK HOUR —		
	ICU	LOS	DATE	ICU	LOS	DATE
IRVINE						
76. SR-55 NB Ramps & MacArthur ¹	.82	D	10/29/97	.67	B	10/15/97
80. Red Hill & MacArthur ¹	.78	C	10/14/97	1.01*	F	10/07/97
81. Red Hill & Main ¹	.60	A	10/14/97	.82	D	10/28/97
82. MacArthur & Main ¹	.55	A	10/16/97	.87	D	10/15/97
83. MacArthur & I-405 NB Ramps ¹	.60	A	10/28/97	.54	A	10/14/97
84. MacArthur & I-405 SB Ramps ¹	.62	B	10/29/97	.76	C	10/15/97
85. MacArthur & Michelson ¹	.60	A	10/15/97	.93	E	10/22/97
87. Von Karman & Alton ¹	.65	B	10/16/97	.71	C	10/09/97
88. Von Karman & Main ¹	.60	A	10/15/97	.69	B	10/16/97
89. Von Karman & Michelson ¹	.60	A	10/21/97	.82	D	10/14/97
94. Jamboree & I-5 NB Ramps ^C	.57	A	10/30/97	.75	C	10/30/97
95. Jamboree & I-5 SB Ramps ^C	.93	E	10/29/97	.71	C	10/28/97
98. Jamboree (SB) & Walnut	.93*	E	12/02/97	.60	A	12/02/97
99. Jamboree (NB) & Walnut	.37	A	12/03/97	.80	C	12/03/97
102. Jamboree NB Ramps & Warner	.14	A	11/06/97	.15	A	11/05/97
106. Jamboree & Alton ¹	~~.69~~ .67	B	10/08/97	~~.68~~ .64	B	10/08/97
107. Jamboree & Main ¹	.76	C	10/28/97	.85	D	10/28/97
108. Jamboree & I-405 NB Ramps ^C	1.21*	F	10/22/97	1.06*	F	10/22/97
109. Jamboree & I-405 SB Ramps ^C	.96	E	10/21/97	.76	C	10/21/97
110. Jamboree & Michelson ¹	.82	D	10/30/97	.88	D	10/22/97
111. Carlson & Michelson ¹	.54	A	06/04/98	.55	A	06/04/98
114. Harvard & Walnut	.36	A	12/04/97	.37	A	12/03/97
116. Harvard & Warner	.32	A	10/14/97	.43	A	10/16/97
117. Harvard & Barranca	.57	A	10/09/97	.64	B	10/14/97
118. Harvard & Alton	.68	B	09/24/97	.61	B	09/24/97
119. Harvard & Main	.50	A	10/16/97	.58	A	10/28/97
120. Harvard & Michelson	.79	C	10/15/97	.70	B	10/14/97
121. Culver & Irvine	.63	B	01/05/98	.58	A	10/23/97
122. Culver & Bryan	.78	C	11/06/97	.64	B	10/07/97
123. Culver & I-5 NB On/Trabuco	.56	A	10/08/97	.73	C	10/09/97
124. I-5 NB Ramps & Trabuco	.44	A	01/13/98	.46	A	10/02/97
125. Culver & I-5 SB Ramps	.69	B	10/09/97	.84	D	10/09/97
126. Culver & Walnut	.69	B	10/28/97	.68	B	10/28/97
127. Culver & Irvine Center	.65	B	09/16/97	.66	B	09/16/97
128. Culver & Warner	.74	C	09/09/97	.67	B	09/09/97
129. Culver & Barranca	.72	C	09/18/97	.79	C	09/11/97
130. Culver & Alton	.90	D	09/11/97	.88	D	09/09/97
131. Culver & Main	.69	B	09/09/97	.72	C	09/10/97
132. Culver & I-405 NB Ramps	.54	A	10/30/97	.76	C	10/22/97
133. Culver & I-405 SB Ramps	.65	B	10/28/97	.72	C	10/30/97

(Continued)

Table 3-1 (cont)
EXISTING (1997) ICU SUMMARY

INTERSECTION	— AM PEAK HOUR —			— PM PEAK HOUR —		
	ICU	LOS	DATE	ICU	LOS	DATE
IRVINE (cont)						
134. Culver & Michelson	.71	C	10/14/97	.79	C	10/14/97
135. Yale & Irvine	.62	B	10/09/97	.56	A	10/09/97
136. Yale & Bryan	.45	A	10/14/97	.35	A	11/05/97
137. Yale & Trabuco	.42	A	10/08/97	.37	A	11/04/97
138. Yale & Walnut	.41	A	10/09/97	.58	A	10/15/97
139. Yale & Irvine Center	.69	B	09/09/97	.42	A	09/16/97
140. West Yale Loop & Alton	.70	B	09/16/97	.70	B	09/11/97
141. East Yale Loop & Alton	.64	B	09/11/97	.67	B	09/11/97
142. Yale & Michelson	.29	A	10/14/97	.30	A	10/14/97
143. Jeffrey & Irvine	.74	C	10/28/97	.63	B	10/07/97
144. Jeffrey & Bryan	.54	A	10/22/97	.38	A	10/08/97
145. Jeffrey & Trabuco	.57	A	01/14/98	.47	A	11/06/97
146. Jeffrey & I-5 NB Ramps	.50	A	10/21/97	.47	A	10/07/97
147. Jeffrey & Walnut/I-5 SB	.68	B	10/09/97	.82	D	10/09/97
148. Jeffrey & Irvine Center	.63	B	09/17/97	.73	C	09/17/97
149. Jeffrey & Barranca	.61	B	09/11/97	.63	B	09/11/97
150. Jeffrey & Alton	.81	D	09/17/97	.86	D	09/18/97
151. Jeffrey & I-405 NB Ramps	.91*	E	09/11/97	.84	D	09/09/97
152. Jeffrey & I-405 SB Ramps	.85	D	10/23/97	.72	C	10/16/97
153. University & Michelson	.55	A	09/10/97	.64	B	09/10/97
177. Carlson & Campus ¹	.64	B	06/10/98	.78	C	06/09/98
180. Sand Canyon & I-5 NB Ramps	.47	A	12/16/97	.43	A	12/17/97
181. Sand Canyon & Marine	.42	A	12/17/97	.47	A	12/17/97
182. Sand Canyon & I-5 SB Ramps	.60	A	12/16/97	.73	C	12/18/97
183. Sand Canyon & Oak Canyon	.48	A	10/29/97	.33	A	11/04/97
184. Sand Cyn & Irvine Center	.56	A	09/09/97	.50	A	09/09/97
185. Sand Canyon & Barranca	.36	A	09/10/97	.31	A	09/10/97
186. Sand Canyon & Alton	.67	B	09/10/97	.44	A	09/11/97
187. Sand Cyn & I-405 NB Ramps	.39	A	09/16/97	.25	A	10/01/97
188. Sand Cyn & I-405 SB Ramps	.26	A	11/06/97	.21	A	09/16/97
189. Laguna Canyon & Barranca	.11	A	09/16/97	.14	A	09/30/97
190. Laguna Canyon & Alton	.52	A	09/16/97	.50	A	09/16/97
191. Banting & Barranca	.23	A	09/09/97	.16	A	09/11/97
192. Banting & Alton	.55	A	09/17/97	.47	A	09/17/97
193. Pacifica & Barranca	.51	A	09/11/97	.44	A	09/09/97
194. Pacifica & SR-133/Gateway	.40	A	09/11/97	.21	A	09/09/97
195. Pacifica & Alton	.49	A	09/11/97	.33	A	09/11/97
IRVINE/NEWPORT BEACH						
171. MacArthur & Campus ¹	.56	A	10/15/97	.72	C	10/14/97
174. MacArthur & Jamboree [□]	.86	D	10/23/97	.96	E	10/23/97
175. Jamboree & Campus ¹	.68	B	10/21/97	.69	B	10/21/97
176. Jamboree & Birch	.45	A	10/21/97	.58	A	10/22/97
178. Von Karman & Campus ¹	.63	B	10/22/97	.86	D	10/22/97

(Continued)

Table 3-1 (cont)
EXISTING (1997) ICU SUMMARY

INTERSECTION	— AM PEAK HOUR —			— PM PEAK HOUR —		
	ICU	LOS	DATE	ICU	LOS	DATE
NEWPORT BEACH						
172. MacArthur & Birch	.49	A	10/22/97	.62	B	10/16/97
173. MacArthur & Von Karman	.39	A	10/23/97	.62	B	10/21/97
179. Von Karman & Birch	.42	A	10/22/97	.49	A	10/23/97
IRVINE/SANTA ANA						
79. Red Hill & Alton ¹	.47	A	10/07/97	.84	D	10/07/97

- Exceeds level of service (LOS) "D" for non-CMP and non-IBC locations or LOS "E" for CMP and IBC locations
- ^c CMP monitored intersection
- ¹ IBC intersection
- ^s SATTSIP intersection

Level of service ranges: .00 - .60 A
.61 - .70 B
.81 - .80 C
.81 - .90 D
.91 - 1.00 E
Above 1.00 F

Table 3-2

EXISTING INTERSECTION DEFICIENCIES

LOCATION	PEAK HOUR	ICU	LOS
TUSTIN			
28. Red Hill & Walnut ^s	AM	.97	E
29. Red Hill & Sycamore ^s	AM	.94	E
30. Red Hill & Edinger ^s	PM	1.00	E
SANTA ANA			
196. Bristol & MacArthur	PM	.93	E
198. Bristol & Warner	PM	.91	E
199. Bristol & Edinger	AM	1.13	F
	PM	.98	E
IRVINE			
80. Red Hill & MacArthur ^l	PM	1.01	F
98. Jamboree (SB) & Walnut	AM	.93	E
108. Jamboree & I-405 NB Ramps ^c	AM	1.21	F
	PM	1.06	F
151. Jeffrey & I-405 NB Ramps	AM	.91	E

^c CMP monitored intersection^l IBC intersection^s SATTSSIP intersection

included in the baseline condition for each of the time frames analyzed in this report. The most representative data for this traffic generation at MCAS Tustin was found in the *Tustin Special Area Traffic Circulation Study* (Dames & Moore, 1993). The estimated external trip generation included in the baseline condition for each of the time frames is shown in Table 3-3. The circulation system within the project area under baseline conditions is shown in Figure 3-4 which reflects the existing on-base street system.

As described in Section 1.2 of this report, project impacts are analyzed for three time periods; existing - 1997/1998; short-range - 2005; and long-range - 2020. The existing analysis is based on study area traffic counts made in 1997 and 1998, when there was still considerable activity at MCAS Tustin. Comparison between the 1997 data and 1994 traffic counts, the best available data relative to the 1993 project site trip generation data, shows similar peak hour volumes for the two years. Hence, the 1997 counts give a close representation of baseline conditions for an existing time frame, and were used for the existing plus project impact analysis, referred to as the project "stand-alone" analysis.

For the 2005 analyses, the baseline condition combines the trip generation and circulation system for the project area shown in Table 3-3 and Figure 3-4, respectively, with the projected 2005 traffic generation and road network for the entire study area as presented in the next section. For the 2020 analysis, the baseline condition combines the trip generation and circulation system for the project area shown in Table 3-3 and Figure 3-4, respectively, with the projected 2020 traffic generation and road network for the entire study area as presented in the next section.

3.4 COMMITTED ROADWAY NETWORK

The year 2020 analysis is carried out using what is referred to here as the "committed" roadway network. This includes those roadway improvements that are funded in some manner such as a "probable future projects" per the CEQA Guidelines (Cal. Code of Regs., Title 14 § 15130) such as roadway projects included in capital improvement programs of a jurisdiction, a special funding program, or projects which are a conditions of approval on specific of a specific development or a required mitigation measure of a previous environmental document or projects included in a specific fee program. It thereby represents a set of roadway improvements that are expected to be in place by the year 2020.

Table 3-3

**BASELINE TRIP GENERATION FOR PROJECT AREA
(External Vehicle Trips)**

<u>ACCESS LOCATION</u>	<u>AM PEAK HOUR</u>	<u>PM PEAK HOUR</u>	<u>ADT</u>
VALENCIA AVENUE/MOFFETT DRIVE (Red Hill Avenue)	500	700	4,900
MOFFETT DRIVE (Harvard Avenue)	750	800	4,700
MARBLE MOUNTAIN ROAD (Harvard Avenue)	300	300	2,800
TOTAL	1,550	1,800	12,400

Source: Based on data from the "Tustin Special Area, Traffic Circulation Study," Dames & Moore, September 1993.

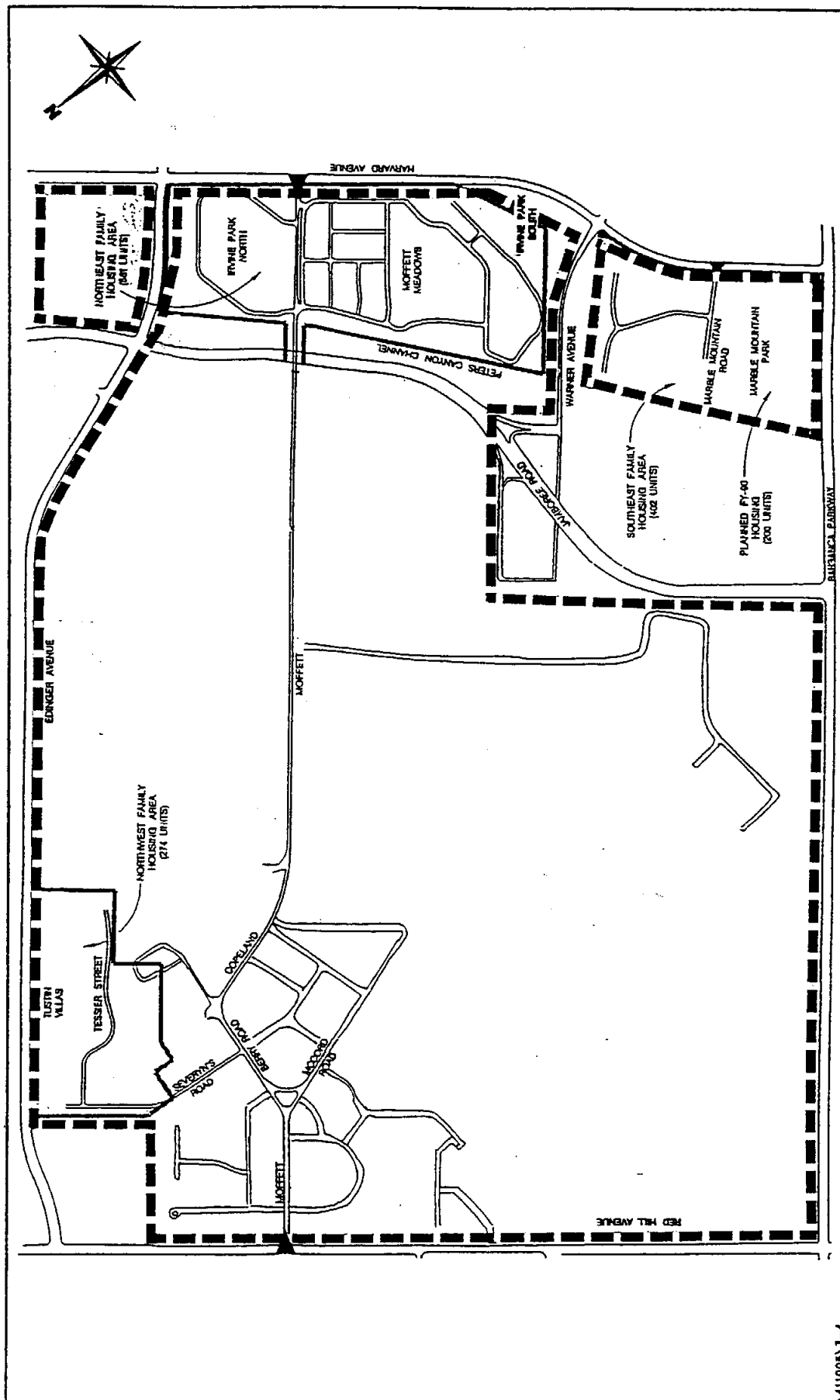


Figure 3-4
EXISTING ON-BASE
CIRCULATION SYSTEM

▲ Gate Entry
SOURCE: MCAS Tustin Special Area
Circulation Study, Dames
& Moore, September 1993.

Since the 2020 land use database for the study area includes development that has yet to undergo a formal entitlement/approval process, it is likely that improvements, in addition to the committed roadways, will be implemented to service the 2020 land use. The committed roadway network thereby represents a "worst case" for impact analysis purposes.

Figure 3-5 illustrates the *corrected* committed roadway network in and around the study area, and Table 3-4 lists the specific improvements together with the basis for their inclusion in the committed network. Intersection lane changes for the 2020 committed network where lanes will be added or changed compared to existing configurations are listed in Table 3-5. Figure 3-6 presents the ADT volumes for 2020 baseline conditions reflecting this committed roadway network. Improvements to roadways outside the study area have been included in Figure 3-5 and Table 3-4 because they influence travel patterns within the study area.

Operating efficiency improvements achieved by advanced transportation management systems (ATMS) are also part of the committed network. ATMS measures involve a variety of actions such as camera surveillance and centralized system control, and is part of traffic signal system improvements planned for implementation by Tustin and other Orange County jurisdictions over time. It should be noted that the City of Irvine implements ATMS measures for certain intersections within their City, including all of the intersection locations within the Irvine Business Complex. The ATMS identified for these locations are part of the committed network by 2005. A conservative .05 reduction in intersection capacity utilization (ICU) is used for ATMS improvements at individual locations. The ATMS credit of .05 for IBC locations and for locations in Irvine identified as ATMS intersections are not shown in the ICU tables in Chapter 4.0 and Appendix D or in the calculation worksheets in Appendix E, but have been included in the analysis.

3.5 YEAR 2005 BASELINE CONDITIONS

The short-range analysis contained in this report includes traffic forecasts and levels of service for 2005, an interim year. It represents a five to seven year time frame for development on the project site and in the surrounding area. The information is used to show the type of transportation

Table 3-4

ROADWAY SYSTEM COMMITTED IMPROVEMENTS

FACILITY	LIMITS	JURISDICTION	IMPROVEMENT	SOURCE	YEAR
FREeway/TRANSPORTATION CORRIDOR IMPROVEMENTS					
Eastern Transportation Corridor (ETC) East Leg	SR-91 Fwy to ETC West Leg	Anaheim/TCA	Construct as tollway with six multi-purpose lanes	1	2005
ETC East Leg	ETC West Leg to I-5	TCA	Construct as tollway with six multi-purpose lanes and with an interchange at Irvine Blvd	1	2005
ETC West Leg	ETC East Leg to Walnut Ave	Irvine/TCA	Construct as tollway with six multi-purpose lanes and with interchanges at Portola Pkwy and Irvine Blvd	1	2005
Foothill Transportation Corridor (FTC)	Portola Pkwy to ETC East Leg	TCA	Construct as tollway with six multi-purpose lanes and with an interchange at Portola Pkwy	1	2005
FTC	Antonio Pkwy to Oso Pkwy	TCA	Construct as tollway with six multi-purpose lanes	1	2005
FTC South	Oso Pkwy to I-5 Fwy	TCA	Construct as tollway with six multi-purpose lanes	2	2020
ARTERIAL IMPROVEMENTS					
Alton Pkwy	Red Hill Ave to Harvard Ave	Irvine	Improve to six lanes including associated improvements at the Von Karman Ave intersection	3	2020
Bake Pkwy	Irvine Center Dr to Lake Forest Dr	Irvine	Construct as six lane major arterial	9	2020
Barranca Pkwy	Red Hill Ave to Jamboree Rd	Irvine	Improve to eight lanes including associated improvements at the Von Karman Ave intersection	3	2020
Barranca Pkwy	Jeffrey Rd to Sand Cyn Ave	Irvine	Construct as four lane primary arterial and associated improvements at the Jeffrey Rd and Sand Cyn Ave intersections	5	2005
Bison Ave	SH/TC to California Ave	Irvine	Construct as four lane arterial	1	2005
Bryan Ave	Jamboree Rd to Culver Dr	Irvine	Improve to four lanes including associated improvements at the Culver Dr intersection	1	2005
Culver Dr	north of Irvine Blvd to I-5	Irvine	Improve to six lanes including associated improvements at the Irvine Blvd, Bryan Ave and I-5 ramp intersections	1	2005
Culver Dr	north of Irvine Blvd to Portola Pkwy	Irvine	Construct as six lane major arterial	1	2005
Dyer Rd	SR-55 to Red Hill Ave	Irvine/Santa Ana	Improve to eight lanes including associated improvements at the Pullman St and Red Hill Ave intersections	3	2020
Edinger Ave	Lyon St to east of Red Hill Ave	Santa Ana/Tustin	Improve to six lanes including associated improvements at the Red Hill Ave and SR-55 ramp intersections	2,4,6	2005
Edinger Ave	east of Red Hill Ave to Jamboree Rd	Tustin	Improve to six lanes	2,12	2005
El Camino Real	Red Hill Ave to Browning Ave	Tustin	Improve to four lanes including associated improvements at the Red Hill Ave and Browning Ave intersections	7,12	2020

(Continued)

Table 3-4 (cont)
ROADWAY SYSTEM COMMITTED IMPROVEMENTS

FACILITY	LIMITS	JURISDICTION	IMPROVEMENT	SOURCE	YEAR
ARTERIAL IMPROVEMENTS (cont)					
Irvine Ave	Bristol St to University Dr	Newport Beach/Orange County	Improve to six lanes including associated improvements at the Mesa Dr and University Dr intersections	2	2005
Irvine Blvd	Newport Ave to Browning Ave	Tustin/Orange County	Improve to six lanes including associated improvements at the Newport Ave, Old Irvine Blvd, Red Hill Ave and Browning Ave intersections	2, 7	2005
Irvine Blvd	Jamboree Rd to Culver Dr	Irvine	Improve to six lanes including associated improvements at the Jamboree Rd and Culver Dr intersections	1	2005
Irvine Center Dr	Jeffrey Rd to Sand Cyn Ave	Irvine	Improve to six lanes including associated improvements at the Sand Cyn Ave intersection	5	2005
Irvine Center Dr	Sand Cyn Ave to Barranca Pkwy	Irvine	Improve to six lanes including associated improvements at the Sand Cyn Ave intersection	1	2005
Irvine Center Dr	I-405 to Lake Forest Dr	Irvine	Improve to six lanes including associated improvements at the Bake Pkwy, Lake Forest Dr and I-405 ramp intersections	9	2005
Jamboree Rd	Irvine Blvd to Tustin Ranch Rd	Tustin	Improve to six lanes including associated improvements at the Tustin Ranch Rd, Portola Pkwy and Irvine Blvd intersections	7	2005
Jamboree Rd	Bryan Ave to Irvine Blvd	Tustin	Improve to eight lanes including associated improvements at the Bryan Ave intersection	7	2005
Jamboree Rd	Walnut Ave to Barranca Pkwy	Irvine/Tustin	Improve to eight lane thoroughfare with an urban interchange at Edinger Ave and associated improvements at the Barranca Pkwy intersection ⁴	1, 2, 15	2005
Jamboree Rd	Barranca Pkwy to Main St	Irvine	Improve to eight lanes including associated improvements at the Barranca Pkwy and Main St intersections	1, 15	2005
Jeffrey Rd	I-5 to I-405	Irvine	Improve to six lanes including associated improvements at the Walnut Ave, Irvine Center Dr, Barranca Pkwy and Alton Pkwy intersections	5	2005
Laguna Cyn Rd	Sand Cyn Ave to Irvine Center Dr	Irvine	Construct as four lane primary arterial	8	2010
Laguna Cyn Rd	Irvine Center Dr to Barranca Pkwy	Irvine	Construct as four lane primary arterial	8	2005
Laguna Cyn Rd	I-405 to El Toro Rd	Irvine/Orange County	Improve to four lanes	2	2005
Lake Forest Dr	I-5 to west of Moulton Pkwy	Irvine/Laguna Hills	Improve to six lanes including associated improvements at the Irvine Center Dr/Moulton Pkwy intersection	9	2005
Lake Forest Dr	west of Moulton Pkwy to Bake Pkwy	Irvine	Construct as six lane major arterial	9	2020

(Continued)

Table 3-4 (cont)
ROADWAY SYSTEM COMMITTED IMPROVEMENTS

FACILITY	LIMITS	JURISDICTION	IMPROVEMENT	SOURCE	YEAR
ARTERIAL IMPROVEMENTS (cont)					
Main St	Sunflower Ave to MacArthur Blvd	Irvine	Improve to six lanes	1	2005
Michelson Dr	Carlson Ave to Harvard Ave	Irvine	Improve to four lanes including associated improvements at the Carlson Ave intersection	1	2005
Newport Ave	Sycamore Ave to Valencia Ave	Tustin	Construct as six lane major arterial and relocate SR-55 northbound ramps to south of Edinger Ave including associated improvements at the Sycamore Ave and Edinger Ave intersections	6	2005
Portola Pkwy	Jamboree Rd to ETC	Irvine/Orange County	Construct as six lane major arterial	1	2005
Portola Pkwy	ETC to Culver Dr	Irvine/Orange County	Construct as two lane arterial	7	2005
Portola Pkwy	Culver Dr to Jeffrey Rd	Irvine/Orange County	Construct as two lane arterial	10	2005
Red Hill Ave	Walnut Ave to Valencia Ave	Tustin	Improve to six lanes including associated improvements at the Walnut Ave, Sycamore Ave, Edinger Ave and Valencia Ave intersections	2,4,12	2005
Red Hill Ave	Valencia Ave to Dyer Rd/Barranca Pkwy	Tustin/Santa Ana	Improve to eight lanes including associated improvements at Valencia Ave, Warner Ave, and Carnegie Ave intersections	3	2020
Sand Cyn Ave	Oak Cyn Rd to Barranca Pkwy	Irvine	Improve to six lanes including associated improvements at the Oak Cyn Rd, Irvine Center Dr and Barranca Pkwy intersections	5,8	2005
Technology Dr	west of Barranca Pkwy to Laguna Cyn Rd	Irvine	Construct as four lane arterial	8	2020
Tustin Ranch Rd	Walnut Ave to Edinger Ave	Tustin	Construct as six lane major arterial including a grade separated interchange at Edinger Avenue and associated improvements at the Walnut Ave intersection	1,2	2020
Valencia Ave	Newport Ave to Red Hill Ave	Tustin	Improve to four lanes including associated improvements at the Red Hill Ave intersection	6,12	2005
Von Karman Ave	Barranca Pkwy to Michelson Dr	Irvine	Improve to six lanes including associated improvements at the Barranca Pkwy, Alton Pkwy and Main St intersections	3	2020
Walnut Ave	Jamboree Rd to Harvard Ave	Irvine	Improve to six lanes including associated improvements at the Harvard Ave intersection	1	2005
Warner Ave	Bristol St to Main St	Santa Ana	Improve to six lanes including associated improvements at the Bristol St and Main St intersections	14	~~2005~~ 2020
ATMS INTERSECTIONS WITHIN STUDY AREA					
<i>All IBC intersections analyzed within study area</i>					
Culver Dr	at Irvine Center Dr	Multi Irvine	ATMS	3	2005
Culver Dr	at Barranca Pkwy	Irvine	ATMS	13	2005
Culver Dr	at Alton Pkwy	Irvine	ATMS	13	2005

(Continued)

Table 3-4 (cont)
ROADWAY SYSTEM COMMITTED IMPROVEMENTS

FACILITY	LIMITS	JURISDICTION	IMPROVEMENT	SOURCE	YEAR
ATMS INTERSECTIONS WITHIN STUDY AREA (cont)					
Jamboree southbound ramps Jeffrey Rd	at Walnut Ave at Alton Pkwy	Irvine Irvine	ATMS ATMS	13 13	2005 2005
Consideration has been given to grade-separate the Jamboree Road and Barranca Parkway intersection. For example, the overall HBC Rezoning mitigation program contains a measure calling for a grade separation at this location TCA - Transportation Corridor Agencies Note: Refer to Tables 3-5 and 3-6 for intersection improvements Source: - Under construction or recently completed - Included in the Orange County Transportation Authority's (OCTA) Regional Transportation Improvement Program (RTIP) or Combined Transportation Improvement Funding Program (CTIFP) - Implemented through the Irvine Business Complex (IBC) Rezoning Mitigation Program - Implemented through the Santa Ana/Tustin Transportation System Improvement Program (SATTSIP) - Conditioned for implementation with development of Irvine Planning Area 12 (PA12) - Conditioned for implementation with development of Pacific Center East - Conditioned for implementation with development of Lower Peters Canyon - Conditioned for implementation with development of Irvine Planning Area 31 (PA31) - Conditioned for implementation with development of Irvine Spectrum 5 - Conditioned for implementation with development of Northwood Point - Conditioned for implementation with development of MacArthur Place - City of Tustin project - Implemented through the City of Irvine's Advanced Transportation Management Systems (ATMS) Program - City of Santa Ana project - Currently unidentified future improvements beyond those presented for 2005 will be made to the Jamboree Road and Barranca Parkway intersection to maintain an acceptable level of service pursuant to the Transportation Corridor Agencies (TCA), Cities of Irvine and Tustin 1998 Memorandum of Agreement (MOA).					

Table 3-5

SUMMARY OF INTERSECTION LANE CHANGES FOR 2020

LOCATION		—SB—			—WB—			—NB—			—EB—			SOURCE
		L	T	R	L	T	R	L	T	R	L	T	R	
TUSTIN														
2. Newport & Old Irvine	1997	1	2	d	-	1	1	1	2	d	-	1	-	
	2020	1	3	-	-	1	1	1	3	-	-	1	-	10
3. Newport & Irvine	1997	1	2	1	1	2	1	1	2	1	1	2	1	
	2020	2	3	1	2	3	1	2	3	-	2	3	1	2,7,10
14. Newport & Sycamore	1997	1	1	1	.5	1.5	-	1	1	-	1	1	-	
	2020	1	3	-	.5	1.5	-	2	2	1	2	1	1	6
15. Newport & Edinger	1997	-	-	-	-	-	-	-	-	-	-	-	-	
	2020	2	2.5	1.5	1	3	f	2	3	d	2	3	1	6
16. Newport & SR-55 NB Ramps	1997	-	-	-	1	2	-	2	-	1	-	2	f	
	2020	1	3	1	1	2	-	2	3	d	2	2	1	6
17. Old Irvine & Irvine	1997	1.5	.5	-	1	2	f	1.5	.5	-	1	2	d	
	2020	1.5	.5	-	1	3	f	1.5	.5	-	1	3	-	2,7
21. Red Hill & Irvine	1997	1	2	-	1	2	d	~~±2~~	~~±1~~	<u>1</u>	1	2	d	
	2020	1	2	-	1	3	-	~~±2~~	~~±1~~	<u>1</u>	1	3	-	2,7
23. Red Hill & El Camino Real	1997	1	3	0	1	1	0	2	3	0	1	1	1	
	2020	1	3	0	1.5	1.5	0	2	3	0	1	1.5	1.5	7,10
25. Red Hill & I-5 SB Ramps	1997	1	3	-	-	-	-	-	3	1	1	-	1	
	2020	1	3	-	-	-	-	-	3	1	1.5	-	1.5	18
28. Red Hill & Walnut	1997	1	2	-	1	2	-	1	2	1	1	2	-	
	2020	2	3	-	1	2	1	1	3	-	1	2	-	2,4,10
29. Red Hill & Sycamore	1997	1	2	-	1	1	1	1	2	1	1	1	1	
	2020	1	3	-	1	1	1	1	3	-	1	1	1	2,4,10
30. Red Hill & Edinger	1997	1	3	1	2	2	1	2	2	1	2	3	1	
	2020	2	3	1	2	3	1	2	3	1	2	3	1	2,4,10
31. Red Hill & Valencia	1997	1	3	-	1	1	-	1	3	-	1	1	1	
	2020	2	3	1	1	2	1	2	4	1	1	2	f	3,4,6,10
32. Browning & Irvine	1997	1	1	-	1	2	d	1	1	1	1	2	d	
	2020	1	1	-	1	3	-	1	1	1	1	3	-	2,7
34. Browning & El Camino Real	1997	1	0	1	0	1	1	0	0	0	.5	1.5	0	
	2020	1	0	1	0	2	1	0	0	0	1	2	0	7,10
42. Tustin Ranch & Walnut	1997	1.5	-	1.5	-	2	d	-	-	-	1	2	-	
	2020	2	3	d	1	2	1	2	3	d	1	2	1	10

(Continued)

Table 3-5 (cont)
SUMMARY OF INTERSECTION LANE CHANGES FOR 2020

LOCATION		—SB—			—WB—			—NB—			—EB—			SOURCE
		L	T	R	L	T	R	L	T	R	L	T	R	
TUSTIN (cont)														
100. Jamboree & Edinger	1997	2	3	1	2	3	1	2	3	1	2	3	1	
	2020	2	-	1	2	3	1	1	-	1	2	3	f	1,2
TUSTIN/SANTA ANA														
74. Tustin Village & McFadden	1997	.5	1.5	-	2	2	-	1.5	.5	1	1	2	-	
	2020	1.5	.5	-	2	2	-	1.5	.5	1	1	2	1	4
77. Red Hill & Warner	1997	1	3	-	-	1	-	2	3	-	2	-	1	
	2020	-	4	1	-	1	-	2	4	-	2	-	2	3
TUSTIN/IRVINE														
86. Von Karman & Barranca	1997	-	-	-	2	3	-	2	-	1	-	3	d	
	2020	-	-	-	2	-	1	2	-	1	-	4	1	3
91. Jamboree & Irvine	1997	2	3	1	2	2	1	2	2	d	2	3	1	
	2020	2	3	1	2	3	d	2	2.5	1.5	2	3	1	1,7
92. Jamboree & Bryan	1997	2	4	d	2	2	1	2	3	1	2	2	d	
	2020	2	4	d	2	2	1	2	4	d	2	2	d	7
103. Jamboree & Barranca	1997	2	3	d	2	3	d	2	3	f	2	3	1	
	2020	2	4	f	2	3	f	2	4	f	2.5	2.5	1	1,2,19
TUSTIN/IRVINE/SANTA ANA														
78. Red Hill & Dyer/Barranca	1997	2	3	d	1	3	d	2	3	d	1	3	-	
	2020	2	3	d	2	4	d	2	3	d	2	4	-	3
SANTA ANA														
47. Main & Warner	1997	2	3	-	1	2	-	2	3	-	1	2	1	
	2020	2	3	1	+2	3	1	2	3	1	+2	3	1	12
48. Main & Dyer	1997	1	3	-	1	2	-	1	2	1	1	2	1	
	2020	2	3	1	+2	3	1	2	3	1	+2	3	1	12
51. Main & MacArthur	1997	2	3	-	2	3	-	2	3	-	2	3	-	
	2020	2	3	1	2	3	1	2	3	1	2	3	1	9
54. SR-55 SB Ramps & MacArthur	1997	2	-	f	-	2	f	-	-	-	-	2	f	
	2020	2	-	f	-	3	f	-	-	-	-	3	f	9
56. Halladay & Dyer	1997	1	1	-	1	2	1	1	1	-	1	2	-	
	2020	1	2	-	+2	3	1	1	2	-	1	3	1	12

(Continued)

Table 3-5 (cont)
SUMMARY OF INTERSECTION LANE CHANGES FOR 2020

LOCATION			—SB—			—WB—			—NB—			—EB—			SOURCE
			L	T	R	L	T	R	L	T	R	L	T	R	
SANTA ANA (cont)															
57. Standard & Warner	1997		1	-	1	-	2	1	1	1	-	1	2	-	
	2020		1	2	-	1	3	-	1	2	-	1	3	-	12
<u>59. Hotel Terrace/SR-55 & Dyer</u>	<u>1997</u>		<u>.5</u>	<u>1.5</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>1.5</u>	<u>.5</u>	<u>2</u>	<u>1</u>	<u>3</u>	<u>-</u>	
	<u>2020</u>		<u>.5</u>	<u>1.5</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>1.5</u>	<u>.5</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>12</u>
60. Grand & McFadden	1997		1	3	-	1	2	-	1	3	-	1	2	-	
	2020		2	3	1	-	1	2	1	2	3	-	1	2	- 6,12
61. Grand & Edinger	1997		1	3	-	1	3	-	1	3	-	1	3	-	
	2020		2	3	<u>1</u>	+2	3	<u>1</u>	+2	3	1	+2	3	<u>1</u>	6,12
63. Grand & Warner	1997		1	3	-	2	2	1	1	3	-	2	3	1	
	2020		2	3	<u>1</u>	2	3	1	+2	3	<u>1</u>	2	3	1	4,12
<u>66. Grand & Dyer</u>	<u>1997</u>		<u>2</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>2</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>3</u>	<u>-</u>	
	<u>2020</u>		<u>2</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>3</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>2</u>	<u>3</u>	<u>-</u>	<u>12</u>
68. Pullman & Dyer	1997		1	.5	1.5	1	3	-	1.5	.5	1	1	3	-	
	2020		1	.5	1.5	1	4	-	1.5	.5	-	1	4	-	3
72. Ritchey & Edinger	1997		1	2	-	1	3	-	1	1	-	1	3	-	
	2020		1	2	-	2	3	-	1	2	1	1	3	-	6,12
75. SR-55 SB Ramps & Edinger	1997		1	1	-	1	2	-	1.5	.5	f	1	2	f	
	2020		1	1	-	2	3	-	1.5	.5	2	1	3	f	4,6,12
<u>197. Bristol & Segerstrom/Dyer</u>	<u>1997</u>		<u>1</u>	<u>3</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>1</u>	<u>3</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>-</u>	
	<u>2020</u>		<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>12</u>
198. Bristol & Warner	1997		1	3	-	1	2	-	1	2	1	1	2	1	
	2020		+2	3	<u>1</u>	+2	3	<u>1</u>	+2	3	<u>1</u>	+2	3	<u>1</u>	12
<u>199. Bristol & Edinger</u>	<u>1997</u>		<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>1</u>	
	<u>2020</u>		<u>1</u>	<u>3</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>1</u>	<u>3</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>12</u>
<u>201. Main & Edinger</u>	<u>1997</u>		<u>1</u>	<u>2</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>1</u>	
	<u>2020</u>		<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>12</u>
IRVINE															
76. SR-55 NB Ramps & MacArthur	1997		-	-	-	-	3	f	2	-	f	-	2	f	
	2020		-	-	-	-	3	f	2	-	f	-	3	f	9
80. Red Hill & MacArthur	1997		2	2	f	1	2	f	1	2	f	2	2	1	
	2020		2	3	f	1	4	3	f	2	3	d	3	d	3
81. Red Hill & Main	1997		1	2	d	2	3	d	2	2	1	1	3	d	
	2020		1	3	d	2	3	d	2	3	f	1	3	d	3

(Continued)

Table 3-5 (cont)
SUMMARY OF INTERSECTION LANE CHANGES FOR 2020

LOCATION		—SB—			—WB—			—NB—			—EB—			SOURCE
		L	T	R	L	T	R	L	T	R	L	T	R	
IRVINE (cont)														
82. MacArthur & Main	1997	2	4	1	2	3	f	2	4	f	1	3	1	
	2020	2	4	1	3	2	f	2	4	f	1	3	1	3
85. MacArthur & Michelson	1997	2	4	-	2	1	1	1	4	1	2	2	-	
	2020	2	4	-	2	1	1	2 <u>1</u>	4	1	2	2	-	3
87. Von Karman & Alton	1997	1	2	d	1	2	d	1	2	d	1	2	d	
	2020	1	3	d	1	3	d	1	3	d	1	3	d	3
88. Von Karman & Main	1997	1	2	d	2	3	d	2	2	1	2	3	f	
	2020	1	3	d	2	4	d	2	3	1	2	4	d	3
95. Jamboree & I-5 SB Ramps	1997	-	2	f	-	-	-	-	3	f	1	-	2	
	2020	-	3	f	-	-	-	-	3	f	1	-	2	1
107. Jamboree & Main	1997	2	3	1	2	3	f	2	3	f	2	3	f	
	2020	2	4	f	2	3	f	2	4	f	2	4 <u>3</u>	f	3
108. Jamboree & I-405 NB Ramps	1997	-	3	f	2	-	1	-	2	f	-	-	-	
	2020	-	4	f	2	-	1	-	4	f	-	-	-	3
109. Jamboree & I-405 SB Ramps	1997	-	3	f	-	-	-	-	3	f	1.5	-	2.5	
	2020	-	4	f	-	-	-	-	4	f	1.5	-	2.5	3
110. Jamboree & Michelson	1997	2	3	f	2	2	f	1	4	-	2	2	d	
	2020	2	4	f	2	3 <u>2</u>	f	1	4	f <u>-</u>	2	3 <u>2</u>	1 <u>d</u>	3
~~111. Carlson & Michelson~~	~~1997~~	~~1~~	~~2~~	~~1~~	~~1~~	~~2~~	~~1~~	~~1~~	~~1~~	~~d~~	~~2~~	~~2~~	~~d~~	
	~~2020~~	~~1~~	~~2~~	~~1~~	~~2~~	~~3~~	~~f~~	~~1~~	~~1~~	~~d~~	~~2~~	~~3~~	~~f~~	~~1~~
114. Harvard & Walnut	1997	-	1	1	1	2	d	1	1	d	1	2	d	
	2020	1	2	d	1	2	d	2	2	d	1	2	d	11
117. Harvard & Barranca	1997	1	2	1	2	3	d	1	2	1	2	3	1	
	2020	2	2	1	2	3	1	2	2	1	2	3	1	3
119. Harvard & Main	1997	2	2	1	2	3	d	2	2	1	2	3	d	
	2020	2	2	f	2	3	d	2	2	1	2	3	d	3
~~120. Harvard & Michelson~~	~~1997~~	~~1~~	~~2~~	~~1~~	~~1~~	~~2~~	~~d~~	~~1~~	~~2~~	~~d~~	~~2~~	~~2~~	~~f~~	
	~~2020~~	~~1~~	~~2~~	~~f~~	~~1~~	~~2~~	~~d~~	~~1~~	~~2~~	~~d~~	~~2~~	~~2~~	~~f~~	~~3~~
121. Culver & Irvine	1997	1	2	1	2	2	1	1	1	1	1	2	d	
	2020	2	3	d	2	3	d	2	3	d	2	3	d	1
122. Culver & Bryan	1997	1	2	d	1	1	1	1	2	1	1	1	1	
	2020	2	3	d	2	2	d	2	3	1	2	1.5	1.5	1

(Continued)

Table 3-5 (cont)
SUMMARY OF INTERSECTION LANE CHANGES FOR 2020

LOCATION			—SB—			—WB—			—NB—			—EB—			SOURCE
			L	T	R	L	T	R	L	T	R	L	T	R	
IRVINE (cont)															
123. Culver & I-5 NB On/Trabuco	1997		1	3	f	2	-	1	-	2	f	-	-	-	
	2020		2	3	f	1.5	-	1.5	-	3	f	-	-	-	1
~~134. Culver & Michelson~~	~~1997~~		~~2~~	~~3~~	~~d~~	~~1~~	~~2~~	~~d~~	~~1~~	~~3~~	~~d~~	~~2~~	~~1~~	~~1~~	
	~~2020~~		~~2~~	~~3~~	~~d~~	~~1~~	~~2~~	~~d~~	~~2~~	~~3~~	~~d~~	~~2~~	~~1~~	~~1~~	~~3~~
144. Jeffrey & Bryan	1997		-	3	1	-	-	-	2	3	-	1	-	1	
	2020		1	3	1	1	1	-	2	3	d	1	1	d	15
147. Jeffrey & Walnut/I-5 SB	1997		2	3	d	2	1	1	2	2	d	1	1	1	
	2020		2	3	d	2	1	1	2	3	d	1	1	1	5
148. Jeffrey & Irvine Center	1997		2	3	1	2	3	d	2	2	1	2	3	f	
	2020		2	3	1	2	3	d	2	3	1	2	3	f	5
149. Jeffrey & Barranca	1997		-	3	d	-	-	-	2	2	-	2	-	1	
	2020		2	3	d	2	2	d	2	3	d	2	2	d	5
150. Jeffrey & Alton	1997		2	3	d	1	3	d	2	2	d	2	2	d	
	2020		2	3	d	2	2	d	2	3	f	2	2	d	5
180. Sand Canyon & I-5 NB Ramps	1997		-	2	1	-	-	-	2	2	-	2	-	1	
	2020		1	3	1	1	1	1	2	3	d	2	1	1	16
182. Sand Canyon & I-5 SB Ramps	1997		1	2	-	-	-	-	-	2	-	1	-	1	
	2020		2	3	-	-	-	-	-	3	d	1.5	-	1.5	1,16
183. Sand Canyon & Oak Canyon	1997		-	2	1	-	-	-	1	2	-	2	-	1	
	2020		2	3	1	.5	1.5	d	1	3	1	.5	1.5	d	5,8
184. Sand Cyn & Irvine Center	1997		1	2	1	2	2	d	2	2	-	2	2	d	
	2020		2	3	1	2	3	1	2	3	1	2	3	1	5,8
185. Sand Canyon & Barranca	1997		1	2	-	2	-	1	-	2	1	-	-	-	
	2020		2	3	d	2	2	1	2	3	1	2	2	d	5,8
~~186. Sand Canyon & Alton~~	~~1997~~		~~2~~	~~3~~	~~1~~	~~2~~	~~2~~	~~1~~	~~2~~	~~3~~	~~1~~	~~1~~	~~3~~	~~d~~	
	~~2020~~		~~2~~	~~3~~	~~1~~	~~2~~	~~3~~	~~d~~	~~2~~	~~3~~	~~1~~	~~2~~	~~3~~	~~d~~	~~5,14~~
187. Sand Cyn & I-405 NB Ramps	1997		-	1.5	1.5	.5	-	1.5	-	2	-	-	-	-	
	2020		-	.5	1.5	.5	-	1.5	-	2	f	-	-	-	17
188. Sand Cyn & I-405 SB Ramps	1997		-	-	2	-	-	-	-	-	-	2	-	-	
	2020		-	1	2	-	-	-	-	1	f	1.5	-	.5	17
195. Pacifica & Alton	1997		2	-	1	-	2	1	-	-	-	2	3	-	
	2020		2	1	1	1	3	2	1	1	2	d	2	3	d

(Continued)

Table 3-5 (cont)
SUMMARY OF INTERSECTION LANE CHANGES FOR 2020

LOCATION	— SB —			— WB —			— NB —			— EB —			SOURCE
	L	T	R	L	T	R	L	T	R	L	T	R	
IRVINE (cont)													
202. Laguna Cyn Rd & Irvine Center	1997	—————											1
	2020	2	2	d	2	3	d	2	2	d	2	3	d
204. Technology & Oak Canyon	1997	—————											8
	2020	2	2	d	2	2	d	2	2	d	2	2	d
IRVINE/NEWPORT BEACH													
174. MacArthur & Jamboree	1997	1	3	f	2	3	f	1	3	-	2	3	f
	2020	1	3	f	2	3	f	2	3	1.5	2	3	f 3

Notes: L, T, R - left, through, right
SB, WB, NB, EB - southbound, westbound, northbound, eastbound
d - de facto right-turn
f - free right-turn
Enlarged/Bold - notation indicates lane changes
A .5 or 1.5 lane designation represents lane sharing between different movements

- Sources:
1. Under construction or recently completed
 2. Included in the Orange County Transportation Authority's (OCTA) Regional Transportation Improvement Program (RTIP) or Combined Transportation Improvement Funding Program (CTIFP)
 3. Implemented through the Irvine Business Complex (IBC) Rezoning Mitigation Program
 4. Implemented through the Santa Ana/Tustin Transportation System Improvement Program (SATTISIP)
 5. Conditioned for implementation with development of Irvine Planning Area 12 (PA12)
 6. Conditioned for implementation with development of Pacific Center East
 7. Conditioned for implementation with development of Lower Peters Canyon
 8. Conditioned for implementation with development of Irvine Planning Area 31 (PA31)
 9. Conditioned for implementation with development of MacArthur Place
 10. City of Tustin project
 11. Conditioned for implementation with development of Irvine Planning Area 10 (PA10)
 12. City of Santa Ana Project General Plan Circulation Element, December 1997
 13. Conditioned for implementation with development of Irvine Center (PA33)
 14. Conditioned for implementation with development of Irvine Planning Area 13 (PA13)
 15. Conditioned for implementation with development of Irvine Planning Area 9 (PA9)
 16. Conditioned for implementation with development of the proposed MCAS El Toro Community Reuse Plan
 17. Conditioned for implementation with development of Irvine Planning Areas 17 and 22 (PA17 and PA22)
 18. Caltrans project
 19. Currently unidentified future improvements beyond those presented for 2005 will be made to the Jamboree Road and Barranca Parkway intersection to maintain an acceptable level of service pursuant to Transportation Corridor Agencies (TCA), Cities of Irvine and Tustin 1998 Memorandum of Agreement (MOA).

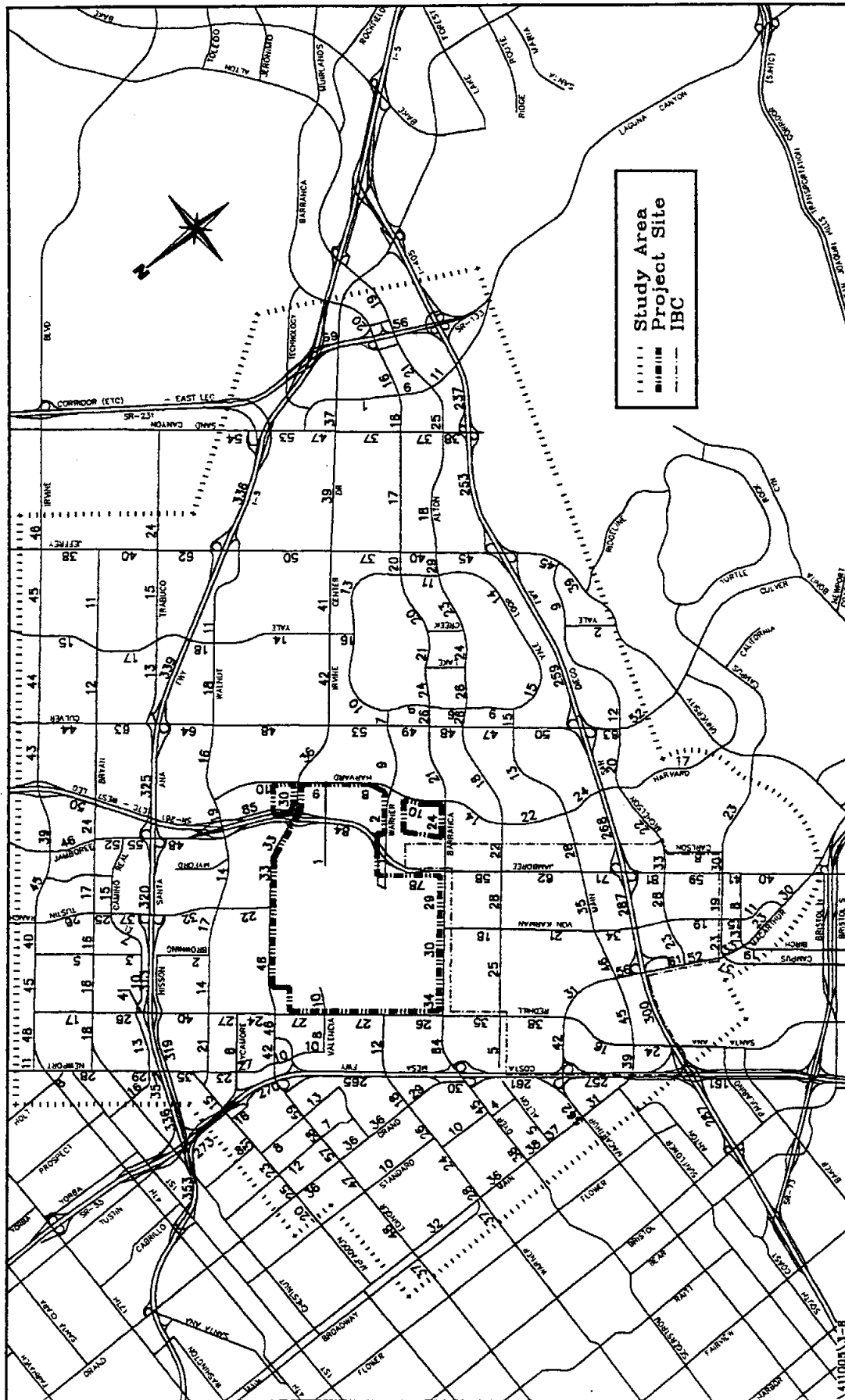


Figure 3-6

2020 ADT VOLUMES (000s)
- BASELINE

improvements that could be needed to support an interim level of development on the site in this general time frame.

The circulation system for the 2005 analysis derives from the committed network described above, and includes those projects anticipated to be completed in this time frame. The previously referenced Table 3-4 and Figure 3-5 include the year 2005 improvements, and Table 3-6 lists the intersections where lanes will be added or changed in 2005 compared to existing configurations. Figure 3-7 presents the ADT volumes for 2005 baseline conditions reflecting the committed roadway network by year 2005.

3.6 NON-ROADWAY MODES

This section summarizes information on non-roadway modes of transportation serving the study area.

3.6.A PUBLIC TRANSIT

Bus Service

An existing network of public bus routes within the study area providing access to employment centers, shopping and recreational areas can be seen in Figure 3-8. This service is provided by the Orange County Transportation Authority (OCTA). Table 3-7 summarizes the origin and destination of these routes within the study area. It is the policy of the City of Tustin to work with OCTA on an on-going basis to maximize the services provided to the City. Also, the City has a policy to provide bus turn-outs wherever possible.

Paratransit

Paratransit services, or transportation services for the mobility-impaired, are provided by OCTA's Dial-A-Ride for senior citizens and the disabled, and by special services for senior citizens

Table 3-6

SUMMARY OF INTERSECTION LANE CHANGES FOR 2005

LOCATION			—SB—			—WB—			—NB—			—EB—			SOURCE
			L	T	R	L	T	R	L	T	R	L	T	R	
TUSTIN															
2. Newport & Old Irvine	1997		1	2	d	-	1	1	1	2	d	-	1	-	
	2005		1	3	-	-	1	1	1	3	-	-	1	-	10
3. Newport & Irvine	1997		1	2	1	1	2	1	1	2	1	1	2	1	
	2005		2	3	1	2	3	1	2	3	-	2	3	1	2,7,10
14. Newport & Sycamore	1997		1	1	1	.5	1.5	-	1	1	-	1	1	-	
	2005		1	3	-	.5	1.5	-	2	2	1	2	1	1	6
~~15. Newport & Edinger~~	~~1997~~		~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~	
	~~2005~~		~~2~~	~~2.5~~	~~1.5~~	~~1~~	~~3~~	~~f~~	~~2~~	~~3~~	~~d~~	~~2~~	~~3~~	~~1~~	~~6~~
16. Newport & SR-55 NB Ramps	1997		-	-	-	1	2	-	2	-	1	-	2	f	
	2005		1	3	1	1	2	-	2	3	d	2	2	1	6
17. Old Irvine & Irvine	1997		1.5	.5	-	1	2	f	1.5	.5	-	1	2	d	
	2005		1.5	.5	-	1	3	f	1.5	.5	-	1	3	-	2,7
21. Red Hill & Irvine	1997		1	2	-	1	2	d	<u>+2</u>	<u>±1</u>	<u>1</u>	1	2	d	
	2005		1	2	-	1	3	-	<u>+2</u>	<u>±1</u>	<u>1</u>	1	3	-	2,7
25. Red Hill & I-5 SB Ramps	1997		1	3	-	-	-	-	-	3	1	1	-	1	
	2005		1	3	-	-	-	-	-	3	1	1.5	-	1.5	16
28. Red Hill & Walnut	1997		1	2	-	1	2	-	1	2	1	1	2	-	
	2005		2	3	-	2	2	-	1	3	-	1	2	-	2,4,10
29. Red Hill & Sycamore	1997		1	2	-	1	1	1	1	2	1	1	1	1	
	2005		1	3	-	1	1	1	1	3	-	1	1	1	2,4,10
30. Red Hill & Edinger	1997		1	3	1	2	2	1	2	2	1	2	3	1	
	2005		2	3	1	2	3	1	2	3	1	2	3	1	2,4,10
31. Red Hill & Valencia	1997		1	3	-	1	1	-	1	3	-	1	1	1	
	2005		2	3	1	1	2	1	2	3	1	1	2	1	2,4,10
32. Browning & Irvine	1997		1	1	-	1	2	d	1	1	1	1	2	d	
	2005		1	1	-	1	3	-	1	1	1	1	3	-	2,7
100. Jamboree & Edinger	1997		2	3	1	2	3	1	2	3	1	2	3	1	
	2020		2	-	1	2	3	1	1	-	1	2	3	f	1,2
TUSTIN/IRVINE															
91. Jamboree & Irvine	1997		2	3	1	2	2	1	2	2	d	2	3	1	
	2005		2	3	1	2	3	d	2	2.5	1.5	2	3	1	1,7

(Continued)

Table 3-6 (cont)

SUMMARY OF INTERSECTION LANE CHANGES FOR 2005

LOCATION		— SB —			— WB —			— NB —			— EB —			SOURCE
		L	T	R	L	T	R	L	T	R	L	T	R	
TUSTIN/IRVINE (cont)														
92. Jamboree & Bryan	1997	2	4	d	2	2	1	2	3	1	2	2	d	
	2005	2	4	d	2	2	1	2	4	d	2	2	d	7
103. Jamboree & Barranca	1997	2	3	d	2	3	d	2	3	f	2	3	1	
	2005	2	4	f	2	3	f	2	4	f	2.5	2.5	1	1,2,19
SANTA ANA														
47. Main & Warner	1997	2	3		1	2		2	3		1	2	1	
	2005	2	3	1	1	3	1	2	3	1	1	3	1	12
48. Main & Dyer	1997	1	3		1	2		1	2	1	1	2	1	
	2005	2	3		1	3		2	3		1	3	1	12
50. Main & MacArthur	1997	2	3		2	3		2	3		2	3		
	2005	2	3	1	2	3	1	2	3	1	2	3	1	9
54. SR 55 SB Ramps & MacArthur	1997	2		f	2	f					2	f		
	2005	2		f	3	f					3	f		9
57. Standard & Warner	1997	1		1	2	1	1	1	1		1	2		
	2005	1	2		1	2		1	2		1	2		12
72. Ritchey & Edinger	1997	1	2		1	3		1	1		1	3		
	2005	1	2		2	3		1	2	1	1	3		6,12
75. SR 55 SB Ramps & Edinger	1997	1	1		1	2		1.5	5	f	1	2	f	
	2005	1	1		2	3		1.5	5	2	1	3	f	4,6,12
198. Bristol & Warner	1997	1	3		1	2		1	2	1	1	2	1	
	2005	1	3		1	3		1	2	1	1	3		12
IRVINE														
76. SR 55 NB Ramps & MacArthur	1997				3	f	2		f		2	f		
	2005				3	f	2		f		3	f		9
80. Red Hill & MacArthur	1997	2	2	f	1	2	f	1	2	f	2	2	1	
	2005	2	3	f	1	3	f	2	3	d f	2	3	d 1	3
95. Jamboree & I-5 SB Ramps	1997	-	2	f	-	-	-	-	3	f	1	-	2	
	2005	-	3	f	-	-	-	-	3	f	1	-	2	1
107. Jamboree & Main	1997	2	3	1	2	3	f	2	3	f	2	3	f	
	2005	2	4 3	f 1	2	3	f	2	4	f	2	3	f	1
108. Jamboree & I-405 NB Ramps	1997	-	3	f	2	-	1	-	2	f	-	-	-	
	2005	-	4	f	2	-	1	-	4 3	f	-	-	-	3

(Continued)

Table 3-6 (cont)
SUMMARY OF INTERSECTION LANE CHANGES FOR 2005

LOCATION		—SB—			—WB—			—NB—			—EB—			SOURCE
		L	T	R	L	T	R	L	T	R	L	T	R	
IRVINE (cont)														
109. Jamboree & I-405 SB Ramps	1997	-	3	f	-	-	-	-	3	f	1.5	-	2.5	
	2005	-	4	f	-	-	-	-	4 <u>3</u>	f	1.5	-	2.5	3
~~111. Carlson & Michelson~~	~~1997~~	~~1~~	~~2~~	~~1~~	~~1~~	~~2~~	~~1~~	~~1~~	~~1~~	~~d~~	~~2~~	~~2~~	~~d~~	
	~~2005~~	~~1~~	~~2~~	~~1~~	~~2~~	~~3~~	~~f~~	~~1~~	~~1~~	~~d~~	~~2~~	~~3~~	~~f~~	~~1~~
114. Harvard & Walnut	1997	-	1	1	1	2	d	1	1	d	1	2	d	
	2005	1	2	d <u>-</u>	1	2	d	2	2 <u>1</u>	d	1	2	d	11,17
121. Culver & Irvine	1997	1	2	1	2	2	1	1	1	1	1	2	d	
	2005	2	3	d	2	3	d	2	3	d	2	3	d	1
122. Culver & Bryan	1997	1	2	d	1	1	1	1	2	1	1	1	1	
	2005	2	3	d	2	2	d	2	3	1	2	1.5	1.5	1
123. Culver & I-5 NB On/Trabuco	1997	1	3	f	2	-	1	-	2	f	-	-	-	
	2005	2 <u>1</u>	3	f <u>1.5</u>	2 <u>1.5</u>	-	1 <u>1</u>	-	3	f	-	-	-	1
144. Jeffrey & Bryan	1997	-	3	1	-	-	-	2	3	-	1	-	1	
	2005	1	3	1	1	1	-	2	3	d	1	1	d	13
147. Jeffrey & Walnut/I-5 SB	1997	2	3	d	2	1	1	2	2	d	1	1	1	
	2005	2	3	d	2	1	1	2	3	d	1	1	1	5
148. Jeffrey & Irvine Center	1997	2	3	1	2	3	d	2	2	1	2	3	f	
	2005	2	3	1	2	3	d	2	3	1	2	3	f	5
149. Jeffrey & Barranca	1997	-	3	d	-	-	-	2	2	-	2	-	1	
	2005	2	3	d	2	2	d	2	3	d	2	2	d	5
150. Jeffrey & Alton	1997	2	3	d	1	3	d	2	2	d	2	2	d	
	2005	2	3	d	2 <u>1</u>	2 <u>3</u>	d	2	3	f <u>d</u>	2	2	d	5
180. Sand Canyon & I-5 NB Ramps	1997	-	2	1	-	-	-	2	2	-	2	-	1	
	2005	1	3	1	1	1	1	2	3	d	2	1	1	14
182. Sand Canyon & I-5 SB Ramps	1997	1	2	-	-	-	-	-	2	-	1	-	1	
	2005	2	3	-	-	-	-	-	3	d	1.5	-	1.5	1,14
183. Sand Canyon & Oak Canyon	1997	-	2	1	-	-	-	1	2	-	2	-	1	
	2005	-	3	1	-	-	-	1	3	-	2	-	1	5,8
184. Sand Cyn & Irvine Center	1997	1	2	1	2	2	d	2	2	-	2	2	d	
	2005	2	3	1	2	3	1	2	3	1	2	3	1 <u>d</u>	5,8

(Continued)

Table 3-6 (cont.)
SUMMARY OF INTERSECTION LANE CHANGES FOR 2005

LOCATION		— SB —			— WB —			— NB —			— EB —			SOURCE
		L	T	R	L	T	R	L	T	R	L	T	R	
IRVINE (cont)														
185. Sand Canyon & Barranca	1997	1	2	-	2	-	1	-	2	1	-	-	-	5,8
	2005	2	3	d	2	2	1	2	3	1	2	2	d	
187. Sand Cyn & I-405 NB Ramps	1997	-	1.5	1.5	.5	-	1.5	-	2	-	-	-	-	15
	2005	-	.5	1.5	.5	-	1.5	-	2	f	-	-	-	
188. Sand Cyn & I-405 SB Ramps	1997	-	-	2	-	-	-	-	-	-	2	-	-	15
	2005	-	1	2	-	-	-	-	1	f	1.5	-	.5	
<u>195. Pacifica & Alton</u>	<u>1997</u>	<u>2</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>2</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>2</u>	<u>3</u>	<u>-</u>	<u>18</u>
	<u>2020</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>d</u>	<u>2</u>	<u>3</u>	<u>d</u>	
203. Laguna Canyon Rd & Irvine Center	1997	-	-	-	-	-	-	-	-	-	-	-	-	1
	2020	2	2	d	2	3	d	2	2	d	2	3	d	

Notes: L, T, R - left, through, right
SB, WB, NB, EB - southbound, westbound, northbound, eastbound
d - de facto right-turn
f - free right-turn
Enlarged/Bold - notation indicates lane changes
A .5 or 1.5 lane designation represents lane sharing between different movements

- Sources:
- Under construction or recently completed
 - Included in the Orange County Transportation Authority's (OCTA) Regional Transportation Improvement Program (RTIP) or Combined Transportation Improvement Funding Program (CTIFP)
 - Implemented through the Irvine Business Complex (IBC) Rezoning Mitigation Program
 - Implemented through the Santa Ana/Tustin Transportation System Improvement Program (SATTSSIP)
 - Conditioned for implementation with development of Irvine Planning Area 12 (PA12)
 - Conditioned for implementation with development of Pacific Center East
 - Conditioned for implementation with development of Lower Peters Canyon
 - Conditioned for implementation with development of Irvine Planning Area 31 (PA31)
 - Conditioned for implementation with development of MacArthur Place
 - City of Tustin project
 - Conditioned for implementation with development of Irvine Planning Area 10 (PA10)
 - City of Santa Ana Project
 - Conditioned for implementation with development of Irvine Planning Area 9 (PA9)
 - Conditioned for implementation with development of the proposed MCAS El Toro Community Reuse Plan
 - Conditioned for implementation with development of Irvine Planning Areas 17 and 22 (PA17 and PA22)
 - Caltrans project
 - City of Irvine PA38 Assessment District
 - Conditioned for implementation with development of Irvine Center (PA33)
 - Currently unidentified future improvements beyond those presented for 2005 will be made to the Jamboree Road and Barranca Parkway intersection to maintain an acceptable level of service pursuant to Transportation Corridor Agencies (TCA), Cities of Irvine and Tustin 1998 Memorandum of Agreement (MOA).

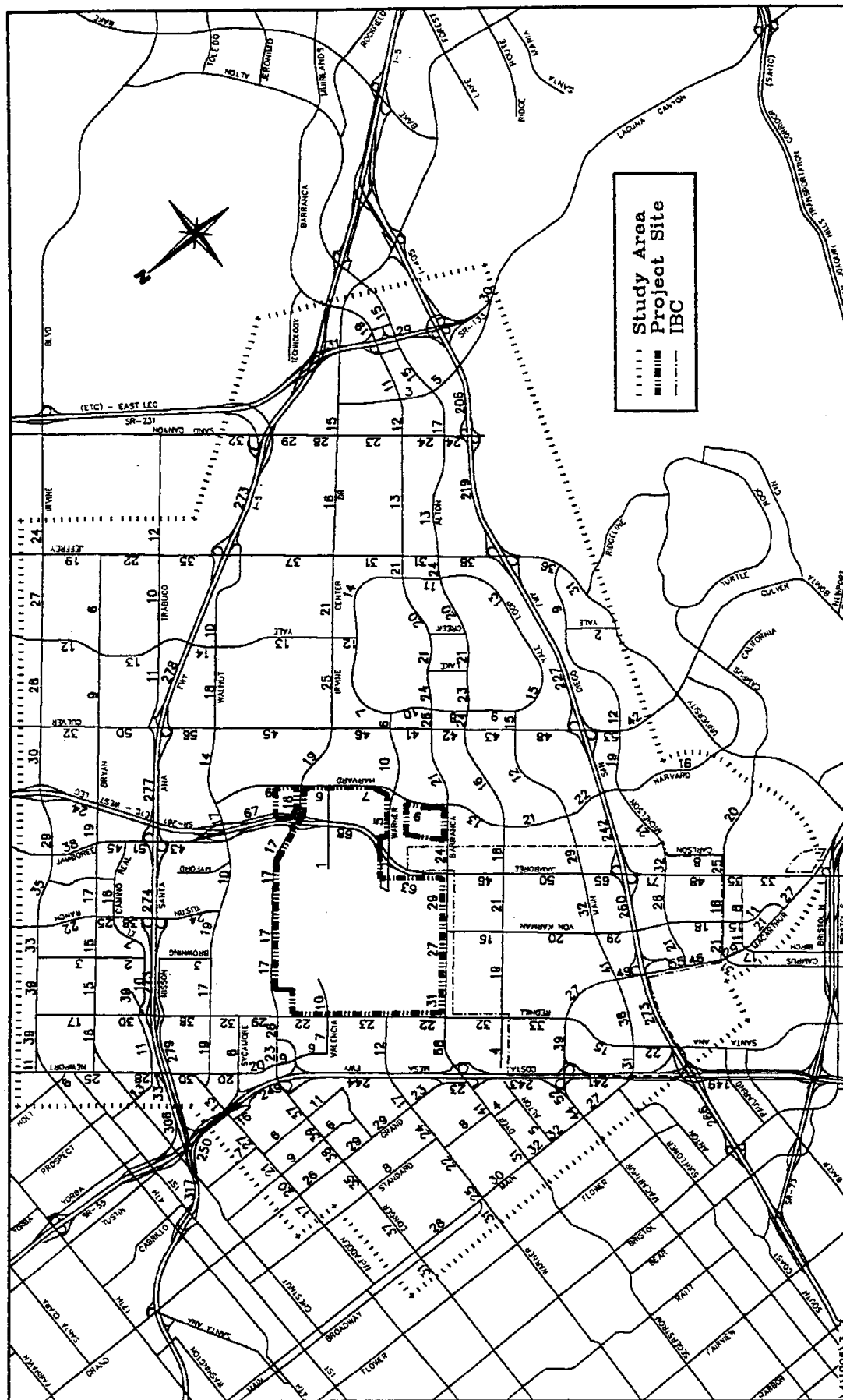
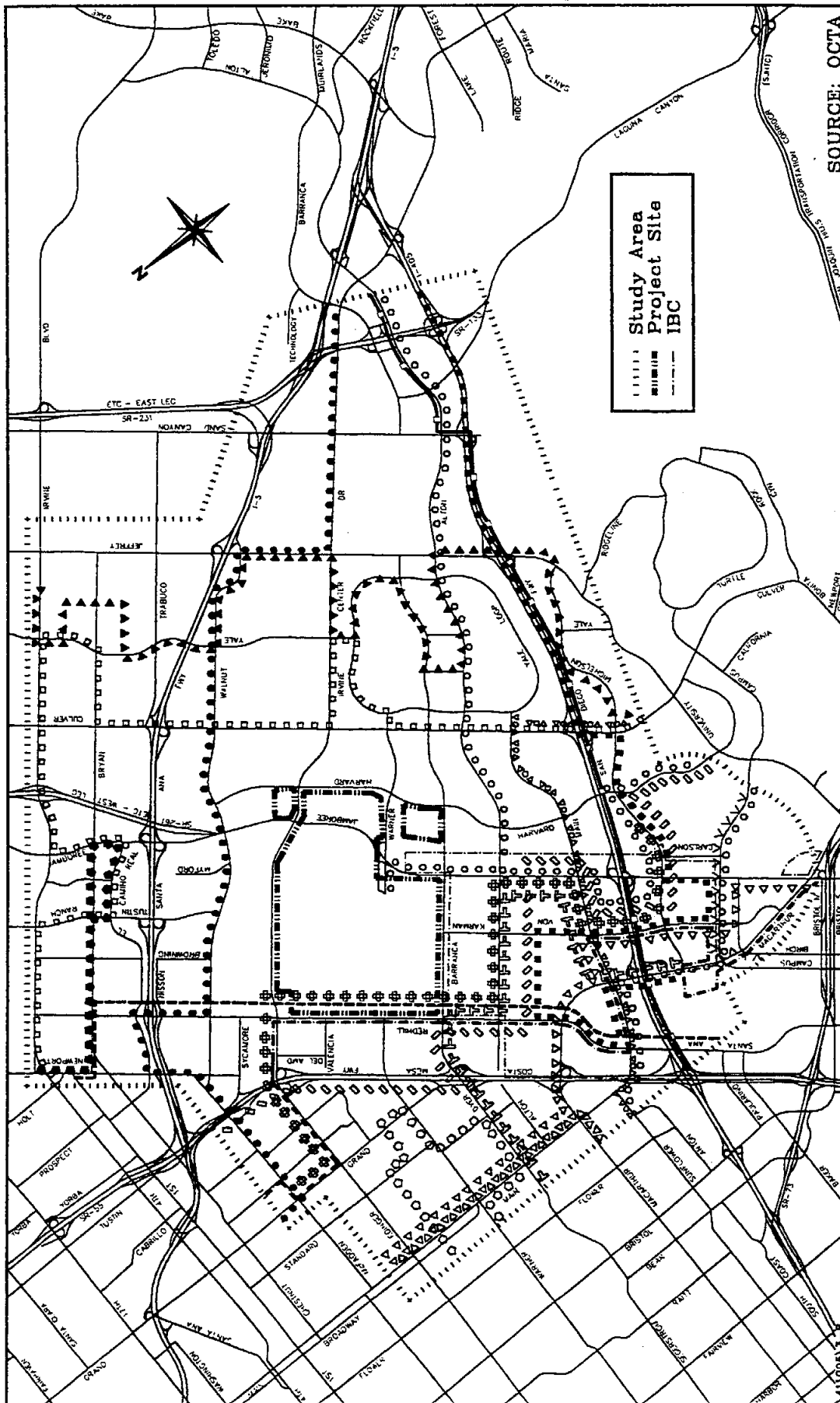


Figure 3-7
2005 ADT VOLUMES (000s)
- BASELINE



SOURCE: OCTA

Figure 3-8
EXISTING PUBLIC
BUS ROUTES
(AS OF FEBRUARY 1999)

LEGEND

Route 39	Route 71	Route 175	Route 481
Route 53	Route 72	Route 211	Route 483
Route 61	Route 74	Route 306	
Route 65	Route 75	Route 373	
Route 67	Route 76	Route 382	

Table 3-7

EXISTING OCTA BUS SERVICE

LINE	ORIGIN/DESTINATION
Route 39	John Wayne Airport to Anaheim (Disneyland) via Dyer, Red Hill, Alton, Main and MacArthur
Route 53	Mall of Orange to Balboa Peninsula via Main and MacArthur in Santa Ana
Route 61	Santa Ana Civic Center to Newport Beach (Newport Center/Fashion Island) via Lyon, McFadden, Grand, Edinger, Red Hill, Main, Von Karman, Campus, and MacArthur
Route 65	Santa Ana Civic Center to Balboa Peninsula via Newport, Irvine Blvd, Tustin Ranch, El Camino Real, Jamboree, Yale, Culver, Irvine Center Dr and Yale Loop
Route 67	Brea Mall to Tustin Marketplace via Newport, Bryan, Tustin Ranch, El Camino Real and Jamboree
Route 71	Mall of Orange to John Wayne Airport via Newport, Bryan and Red Hill
Route 72	Santa Ana Civic Center to Sunset Beach via Warner, Main, Halladay, Grand and Standard
Route 74	UC Irvine to Huntington Beach via Sunflower, Main and Culver
Route 75	Santa Ana Civic Center to Laguna Hills Mall/Laguna Hills Transportation Center via McFadden, Newport, Nissan, Walnut, Jeffrey and Irvine Center Dr
Route 76	UC Irvine to Huntington Beach via Campus, MacArthur and Birch
Route 175	UC Irvine to Irvine (Northwood) via Yale, Yale Loop, Jeffrey/University, Michelson and Culver
Route 211	Irvine Transportation Center to Seal Beach via Alton, Sand Canyon Ave and I-405
Route 306	John Wayne Airport to San Juan Capistrano via MacArthur, Main, Red Hill, McGaw, Von Karman, Campus, Jamboree, Michelson, Culver and I-405
Route 373	Brea Mall to UC Irvine via SR-55, Dyer, Red Hill, McGaw, Jamboree, Main, Von Karman, Michelson and Harvard
Route 382	South Coast Plaza to Irvine Transportation Center via Alton, Jamboree, Main, Von Karman, Michelson, Harvard, Campus, MacArthur and Sunflower
Route 461	Santa Ana Regional Transportation Center to Irvine Business Complex via Jamboree, Campus, Von Karman, Main, MacArthur and Main
Route 463	Santa Ana Regional Transportation Center to Park Place, Irvine via Grand, Edinger, Red Hill, Alton, Jamboree, Main, Von Karman and Michelson

Source: Bus Book, Orange County Transportation Authority (OCTA), February 1999.

participating in programs at senior centers. The OCTA is also planning for future facilities and could introduce "Park-N-Ride" facilities into the area, thereby enhancing ridership for non-local trips.

Rail

Currently Amtrak runs daily passenger service on the SCRRA/OCTA Railroad line directly east of the project site, with stops at nearby Santa Ana and Irvine stations.

Commuter rail service is planned under the Los Angeles/San Diego (LOSSAN) Corridor Commuter Rail Action Plan. Commuter service within the corridor will require stations at different locations. Already proposed is a commuter rail station which is planned to be located in the City of Tustin on the northwest corner of Jamboree Road and Edinger Avenue near the SCRRA/OCTA Railroad.

At maximum operation capacity, the LOSSAN line could also include as many as nine commuter rail round trips, nine Amtrak round trips, and four freight trains.

OCTA is also evaluating the regional rail system through its Countywide Rail Study (CRS). This study is assessing congested traffic corridors and identifying rail and bus enhancement to the existing transportation system. While additional rail lines and improved service are being evaluated as part of this study, stops in Tustin are not currently proposed.

Air

John Wayne Airport, located less than five miles from the project site, provides a comprehensive schedule of commercial flights for Orange County. In addition, airports at Los Angeles (LAX), Long Beach, and Ontario provide regional, national, and international flight service.

3.6.B EXISTING AND PLANNED BIKEWAYS

The existing bikeway system within the study area is illustrated in Figure 3-9. Table 3-8 describes and summarizes classifications relating to the bikeway plan. Currently, in the immediate vicinity of the project site, there are two bikeways along the MCAS Tustin boundary. One is along Barranca Parkway and the other along Edinger Avenue. These bikeways are Class II facilities, or the lanes which provide a restricted right-of-way on a roadway's shoulder for the exclusive or semi-exclusive use of bicycles.

As for other parts of the study area, there is a Class I bike trail along Newport Avenue between El Camino Real and Irvine Boulevard, and several Class II bike lanes throughout the remainder of the City and study area. The network of bicycle routes is only partially established, and with few exceptions, most cyclists share street right-of-way with automobiles.

A Master Plan of Bikeways, which is managed by OCTA and developed to accommodate future bikeway needs, is illustrated in Figure 3-10. Missing links in the existing system and constraints for future routes were considered which resulted in this Bikeway Plan. The future network is comprehensive with several new facilities and extensions to existing routes. To the extent possible, this Plan achieves a continuity of routes and trails that do not terminate except at logical locations such as schools or parks.

The Plan upgrades the Barranca Parkway bikeway to Class I and designates a Class II bike lane along Red Hill Avenue. In addition, a Class I bikeway is proposed along the Peters Canyon Wash which bisects the Reuse Area east of Jamboree Road and traverses both Cities of Tustin and Irvine City Limits. This bikeway will be part of a regional multi-use trail developed by the County in connection with the Peters Canyon Regional Park north of the study area near Jamboree Road and Portola Parkway intersection which should open in the near future.

The City of Irvine also has a network of bicycle paths throughout the City. In addition, future plans by the City of Irvine include constructing a Class I bike path along Peters Canyon Channel, including a grade separation at Warner Avenue.

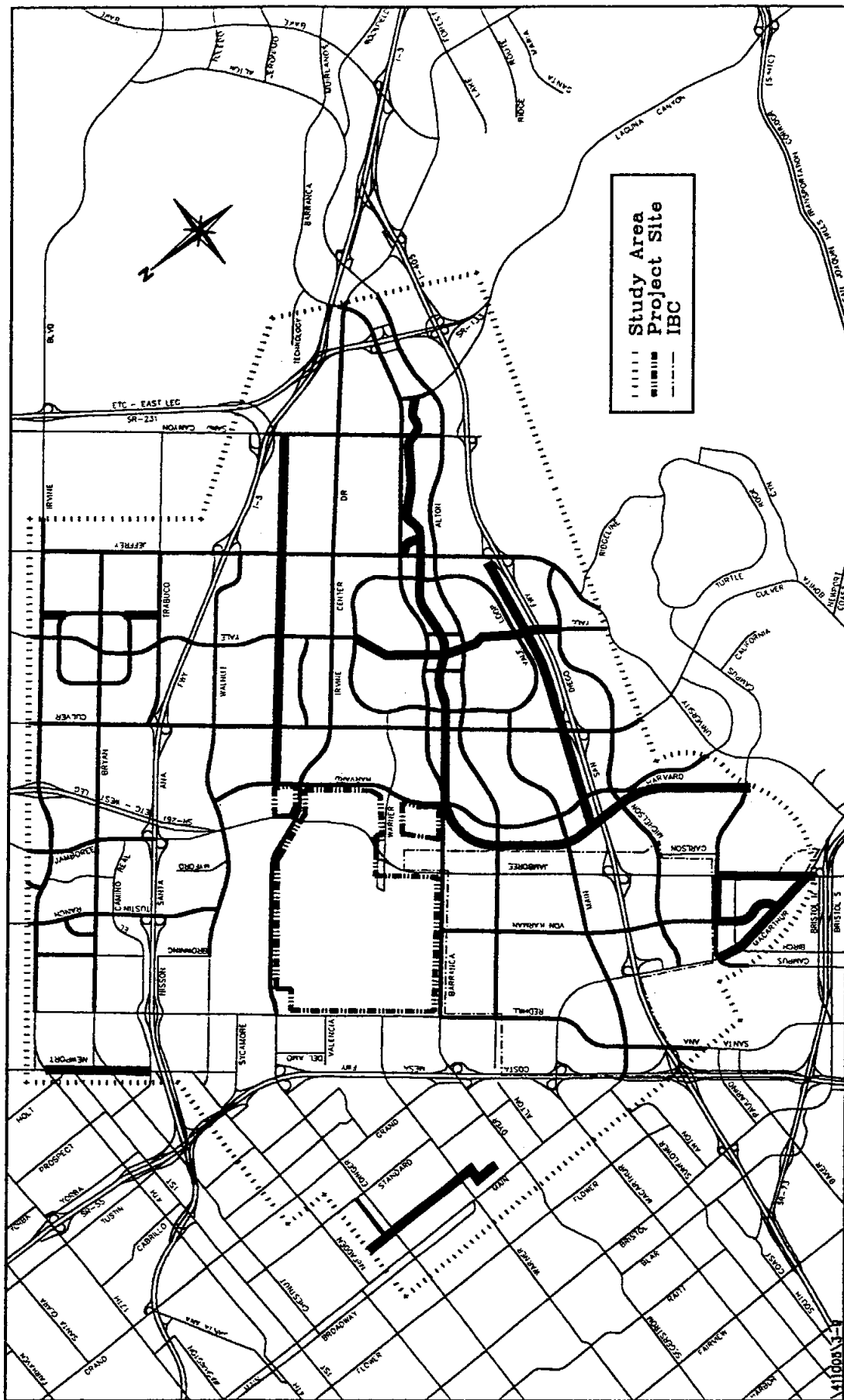


Figure 3-9
EXISTING BIKEWAYS

LEGEND
 Class I Bikeway
 Class II Bikeway
 SOURCE: OCTA

Table 3-8

BIKEWAY CLASSIFICATION DESCRIPTIONS

CLASS I BIKE PATH or BIKE TRAIL (OFF-STREET)

Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians; crossflows with motorized vehicles minimized.

Sizing: Minimum width for Class I (two-way) is eight feet. Desirable width is 10-12 feet. Minimum shoulder width of two feet each side.

Minimum width for Class I (one-way) is five feet. Minimum shoulder width of two feet each side.

CLASS II BIKE LANE (ON-STREET)

Provides a restricted right-of-way on a roadway's shoulder designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited; vehicle parking and crossflows by pedestrians and motorists permitted. Vehicle parking in a Class II bike lane is not desirable and shall be discouraged. Additional lane width (12 feet minimum and 13 feet desirable) shall be required if on-street parking is permitted.

Sizing: Typical width of eight feet. A reduction in width to allow for restriping of an existing roadway or for added turning lanes may be permitted. In such cases, a five foot width, or gutter width plus three feet, whichever is greater, is the minimum width.

- References:
1. Caltrans "Planning and Design Criteria for Bikeways in California"
 2. County of Orange adopted standard Plans for Bikeways

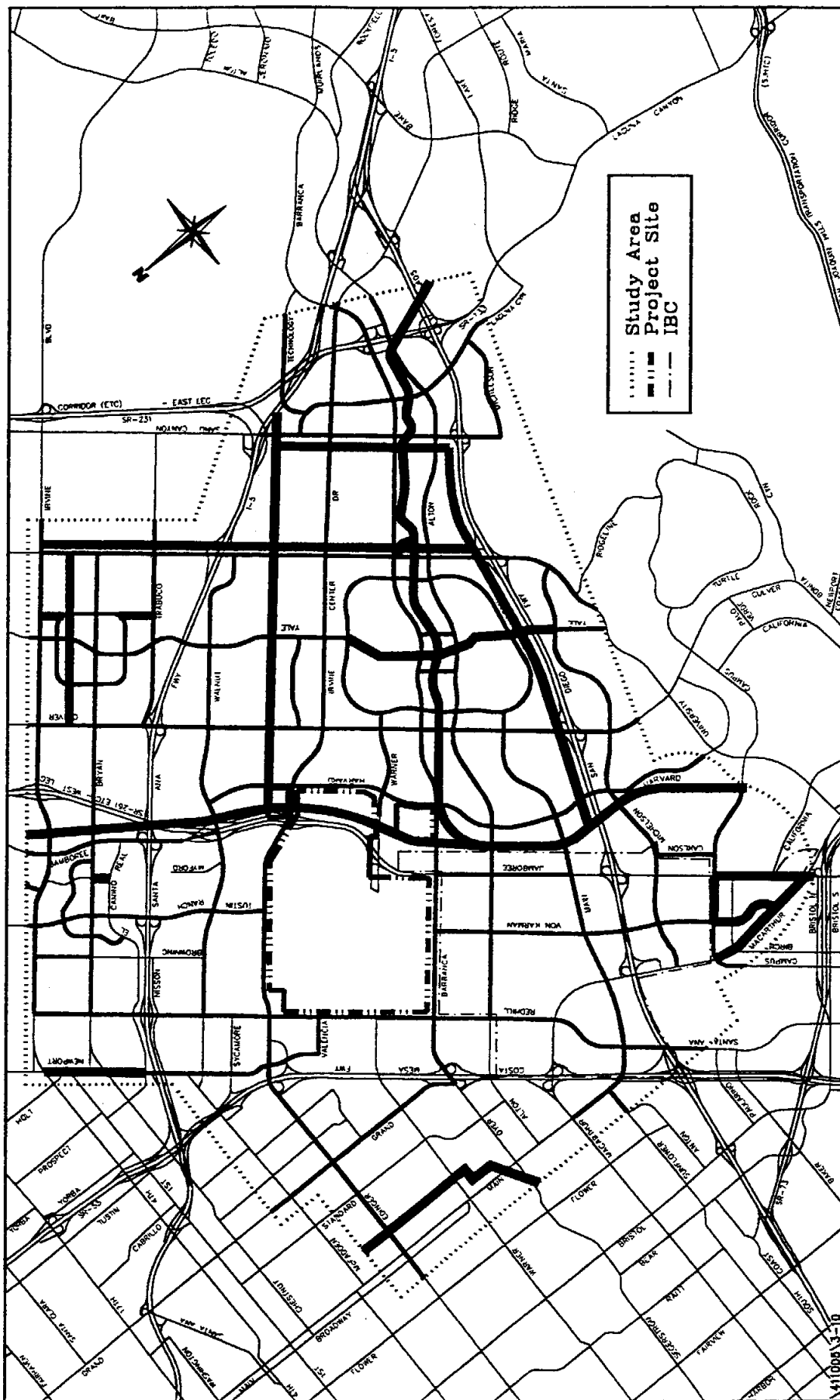


Figure 3-10
MASTER PLAN OF BIKEWAYS

LEGEND
 — Class I Bikeway
 - - - Class II Bikeway
 SOURCE: OCTA, City of Tustin and City of Irvine

Chapter 4.0

IMPACT ANALYSIS

In this chapter, traffic impacts related to the three reuse alternatives and the No Action Alternative are determined by comparing the calculated performance of each study area intersection for each alternative with the performance of "baseline" conditions under existing (1997), year 2005, and year 2020 time frames. The baseline concept, used for base closing and reuse projects, is described in Section 3.3 of this report. The analysis also identifies mitigation measures.

4.1 SIGNIFICANCE CRITERIA

The significance criteria used to determine project impacts were discussed in detail under "performance criteria" in Chapter 1.0 of this report. Those criteria describe how level of service (LOS) is measured and how a significant project impact is defined. They also note the mitigation requirements to achieve a finding that the project has mitigated its impacts. These criteria have been used in the impact analysis results presented in this chapter.

4.2 IMPACT ANALYSIS SCOPE AND METHODOLOGY

Three impact time periods are used for evaluating the reuse alternatives and the No Action Alternative. In the first, project "stand-alone" impacts are determined by superimposing the full project onto existing traffic conditions (1997). For the second scenario, an interim level of development on the project site is analyzed in a year 2005 time frame. The purpose of this 2005 analysis is to determine the type of transportation improvements that would be needed to support partial development of the project site. On-site roadways are assumed constructed as adjacent development occurs. Off-site improvements that are committed were presented in Chapter 3.0. The land uses assumed for 2005 are based on the projected land use absorption by 2005. As discussed in Chapter 1.0, this 2005 analysis also addresses the requirements of the Growth Management Plan (GMP) and Congestion Management Program (CMP). Finally, full project impacts are analyzed for

a year 2020 time frame, using year 2020 land uses and the committed roadway network described in Chapter 3.0.

The reuse alternatives and the No Action Alternative are analyzed in each of these impact time frames, and the impact determination is based on a comparison between the particular project alternative being analyzed and the baseline condition for each of the time frames described in the previous chapter. Each reuse alternative is a broad conceptual plan for developing a 1,606-acre reuse plan area with a variety of residential, commercial, and public uses over a 20-plus year period. As such, each has general land use planning designations (residential, commercial, recreation, institutional, etc.) that allow for a range of different types of land use and intensity of development. Alternative 1 is the LRA Reuse Plan; Alternative 2 is a reuse plan based on an arterial grid pattern with no community core and a high residential component; Alternative 3 is a reuse plan based on an arterial loop pattern with a low residential component. The No Action Alternative corresponds to minimal, caretaker activities on the base, as described in Chapter 2.0.

Traffic forecasts for the circulation system within the traffic analysis study area were prepared using the Central County Traffic Model (CCTM) as described in Chapter 1.0. The information contained in this chapter includes average daily traffic (ADT) volumes and peak hour intersection performance data including freeway interchange ramp intersections. Mitigation measures for the identified impacts include intersection improvements or freeway interchange ramp intersection improvements. For intersections, the improvements involve changes (additions or restriping) to the lane configurations in the committed network, and/or operating efficiency improvements achieved by advanced transportation management systems (ATMS). The ATMS program involves a variety of actions such as camera surveillance and centralized system control, and is part of traffic signal system improvements planned for implementation by the City of Tustin and other Orange County jurisdictions over time. It should be noted that the City of Irvine implements ATMS measures for certain intersections within their City, including all of the intersection locations within the Irvine Business Complex (IBC). A conservative .05 reduction in intersection capacity utilization (ICU) is used for ATMS improvements at individual locations. The ATMS credit of .05 for IBC locations and for locations in Irvine identified as an ATMS intersection are not shown in the ICU tables (Chapter 4.0 or Appendix D) or the calculation worksheets (Appendix E) but have been included in the analysis *as marked as a footnote at all IBC intersections.* (See Table 3-4 for non-IBC ATMS locations.)

The following sections describe the impacts of the reuse alternatives and the No Action Alternative using the baseline conditions for each of the time frames as the comparison reference for impact identification. As described in Section 3.3, the baseline condition for any time frame assumes that the traffic within the reuse area is generated at the 1993 level.

4.3 DISPOSAL OF MCAS TUSTIN

Disposal, which is essentially a transfer of title, would not directly affect traffic or circulation. Disposal of MCAS Tustin would not create any vehicular traffic impacts. No mitigation is necessary.

4.4 IMPACT ANALYSIS - REUSE ALTERNATIVE 1

This alternative features new arterial roadway connections through the base, and hence the project not only adds traffic to the study area circulation system, but also changes the traffic patterns of non-project traffic in the area. The traffic volumes presented in this section reflect both these effects.

The traffic impact analysis information presented in this section compares traffic conditions under the reuse alternative with a corresponding "baseline" condition for each time frame which was presented in Chapter 3.0. The baseline condition assumes the level of activity on the site in 1993 (refer to Chapter 3.0 for further discussion on this condition). The following sections address the impacts and associated mitigation measures for Reuse Alternative 1. Public transit, pedestrian and bicycle, and construction impacts are addressed following the operational roadway analyses.

4.4.A IMPACTS (Reuse Alternative 1)

4.4.A.1 Project Stand-Alone Roadway Impacts (Reuse Alternative 1)

This part of the analysis examines buildout of the full project in the existing transportation setting (1997), which is representative of a 1997 baseline. For this analysis, no modifications or

additions were assumed to the existing circulation system outside the reuse area. The roadway system within the reuse area is that shown in Figure 2-2.

Figure 4-1 shows the ADT volumes for existing plus Reuse Alternative 1 conditions. These can be compared with existing baseline volumes presented in Figure 3-2. The volumes in Figure 4-1 reflect the theoretical trip redistribution effects that would be inherent when reuse land uses attract trips to and from surrounding land uses.

A complete summary of ICU values for existing (1997) baseline and with-project conditions can be found in Appendix D with actual ICU calculations in Appendix E. The project stand-alone (existing analysis) also includes an evaluation of the study area freeway interchange ramp intersections. Tables 4-1 and 4-2 list those arterial locations and ramp intersections that would have a significant impact due to the project, and these locations are illustrated in Figure 4-2. One location in the City of Irvine (#151, Jeffrey Road and I-405 northbound ramps) would be improved from an unacceptable level during existing AM peak hour baseline conditions to an acceptable level (ICU .90 or below) with the project.

4.4.A.2 Year 2005 Roadway Impacts (Reuse Alternative 1)

Year 2005 ADT traffic forecasts on the year 2005 committed network for this alternative are illustrated in Figure 4-3. A listing of the 2005 link volume data (the ADTs shown in Figure 4-3 and corresponding peak hour volumes) can be found in Appendix B. While this information is not used directly in the determination of project impacts, it is used to supplement the peak hour intersection data used in the actual impact analysis by checking the adequacy of the midblock lanes on the study area arterial network during peak hour with-project conditions. The 2005 link data shows that no roadway links would be inadequate for this alternative.

A complete listing of the year 2005 baseline and with-project ICUs can be found in Appendix D with actual ICU calculations in Appendix E. The year 2005 analysis also includes an evaluation of the study area freeway interchange ramp intersections. Those arterial locations and ramp intersections that would have a significant project impact are listed in Tables 4-3 and 4-4 and shown in Figure 4-4. One location in the City of Irvine (#120, Harvard Avenue and Michelson Drive) would

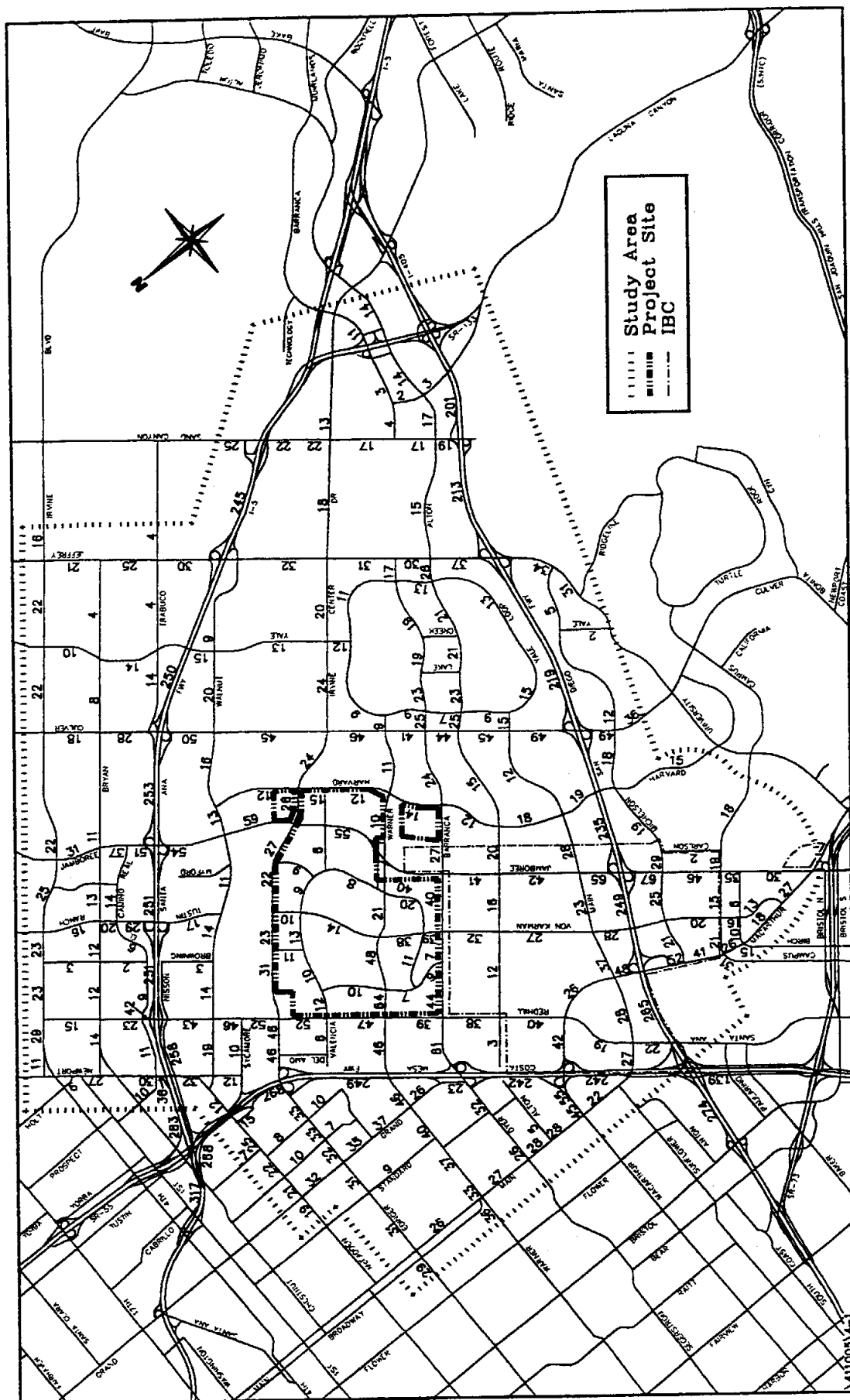


Figure 4-1
EXISTING PLUS
REUSE ALTERNATIVE 1
ADT VOLUMES (000s)

Table 4-1

SUMMARY OF IMPACTED INTERSECTIONS
(Existing Plus Reuse Alternative 1)

LOCATION	EXISTING BASELINE 1997		EXISTING + REUSE ALT 1		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN								
28. Red Hill & Walnut ¹	.97	.89	1.26	1.09	.29	.20	c	p
29. Red Hill & Sycamore ¹	.94	.80	1.36	1.04	.42	.24	c	p
30. Red Hill & Edinger ¹	.83	1.00	1.20	1.59	.37	.59	p	c
31. Red Hill & Valencia ¹	.71	.68	.93	1.02	.22	.34	p	p
100. Jamboree & Edinger ¹	.79	.82	.87	1.07	.08	.25	-	p
TUSTIN/SANTA ANA								
77. Red Hill & Warner ¹	.63	.59	1.54	1.98	.91	1.39	p	p
TUSTIN/IRVINE								
86. Von Karman & Barranca ²	.57	.79	1.19	1.08	.62	.29	p	p
TUSTIN/IRVINE/SANTA ANA								
78. Red Hill & Dyer/Barranca ^{1,2}	.83	.75	1.09	.93	.26	.18	p	-
SANTA ANA								
47. Main & Warner	.76	.88	.90	1.02	.14	.14	-	p
48. Main & Dyer	.64	.88	.66	.91	.02	.03	-	p
51. Main & MacArthur	.66	.90	.68	.92	.02	.02	-	p
61. Grand & Edinger ¹	.71	.88	.77	.95	.06	.07	-	p
63. Grand & Warner ¹	.54	.75	1.09	1.10	.55	.35	p	p
66. Grand & Dyer ¹	.62	.82	.75	.97	.13	.15	-	p
68. Pullman & Dyer ¹	.48	.73	.76	1.06	.28	.33	-	p
198. Bristol & Warner	.85	.91	.92	.92	.07	.01	p	-
199. Bristol & Edinger	1.13	.98	1.15	.93	.02	-	c	-
IRVINE								
80. Red Hill & MacArthur ²	.78	1.01	.97	1.15	.19	.14	-	c
98. Jamboree (SB) & Walnut	.93	.60	1.15	.76	.22	.16	c	-
99. Jamboree (NB) & Walnut	.37	.80	.41	.94	.04	.14	-	p
128. Culver & Warner	.74	.67	.76	.96	.02	.29	-	p
130. Culver & Alton	.90	.88	.91	.87	.01	-	p	-

c - project contributes to deficiency

p - project causes deficiency

¹ SATTSIP intersection² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUsLevel of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Table 4-2

FREEWAY RAMP INTERSECTION IMPACT SUMMARY
(Existing Plus Reuse Alternative 1)

LOCATION	EXISTING BASELINE 1997		EXISTING + REUSE ALT 1		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN								
10. Newport & I-5 SB/Nisson ¹	.76	.78	1.00	.86	.24	.08	p	-
16. SR-55 NB Ramps & Edinger ^{1,2}	.66	.68	1.01	1.22	.35	.54	p	p
24. Red Hill & I-5 NB Ramps ¹	.74	.83	.78	1.02	.04	.19	-	p
SANTA ANA								
67. SR-55 NB Ramps & Dyer ¹	.70	.83	.97	1.43	.27	.60	-	p
75. SR-55 SB Ramps & Edinger ^{1,2}	.77	.98	.74	1.08	-	.10	-	c
IRVINE								
95. Jamboree & I-5 SB Ramps ²	.93	.71	1.13	.78	.20	.07	p	-
108. Jamboree & I-405 NB Ramps ^{2,3}	1.21	1.06	1.31	1.09	.10	.03	c	c

p - project causes deficiency

c - project contributes to deficiency

¹ SATTSIP intersection² CMP monitored intersection³ IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

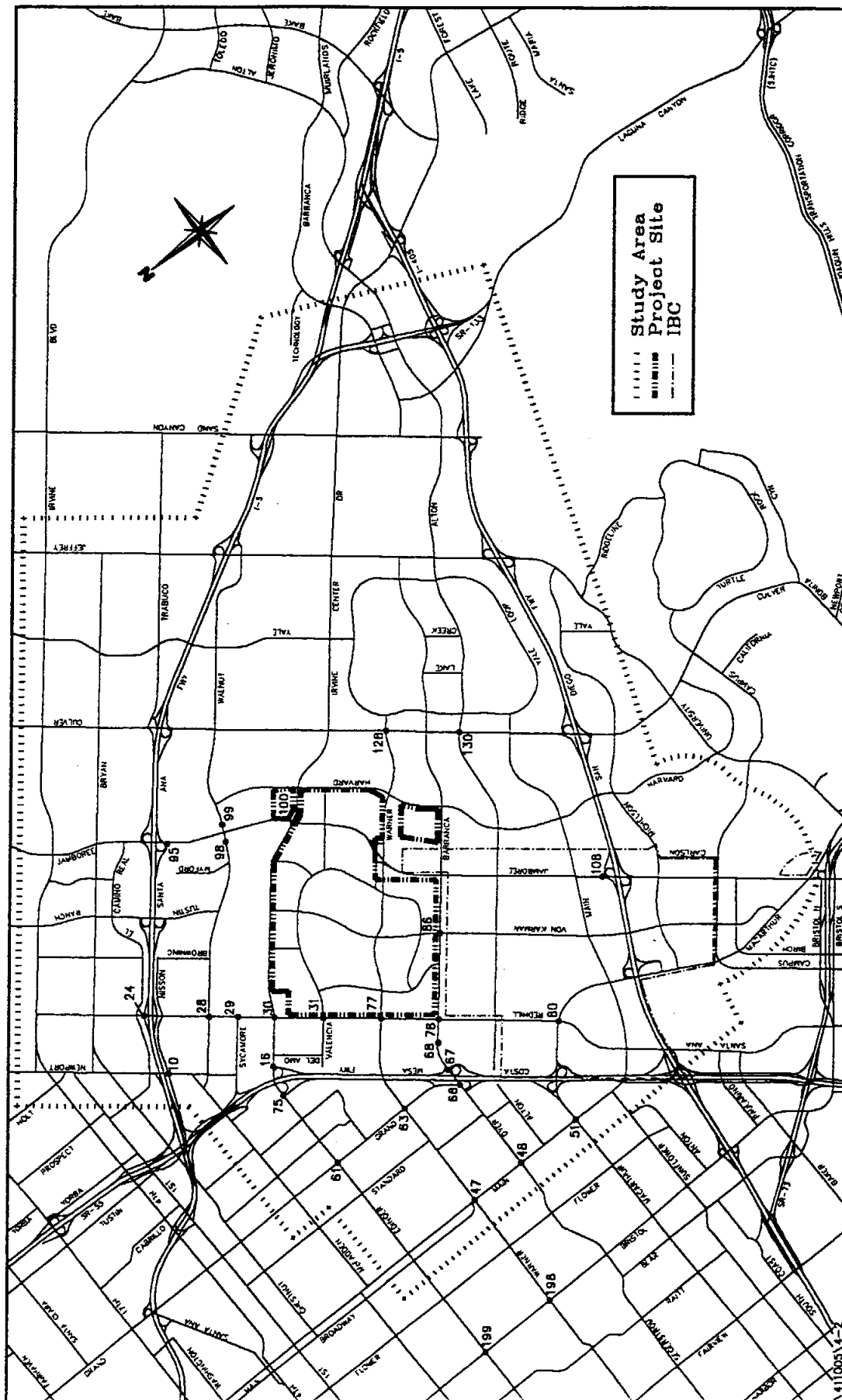


Figure 4-2
EXISTING PLUS
REUSE ALTERNATIVE 1
IMPACTED INTERSECTIONS

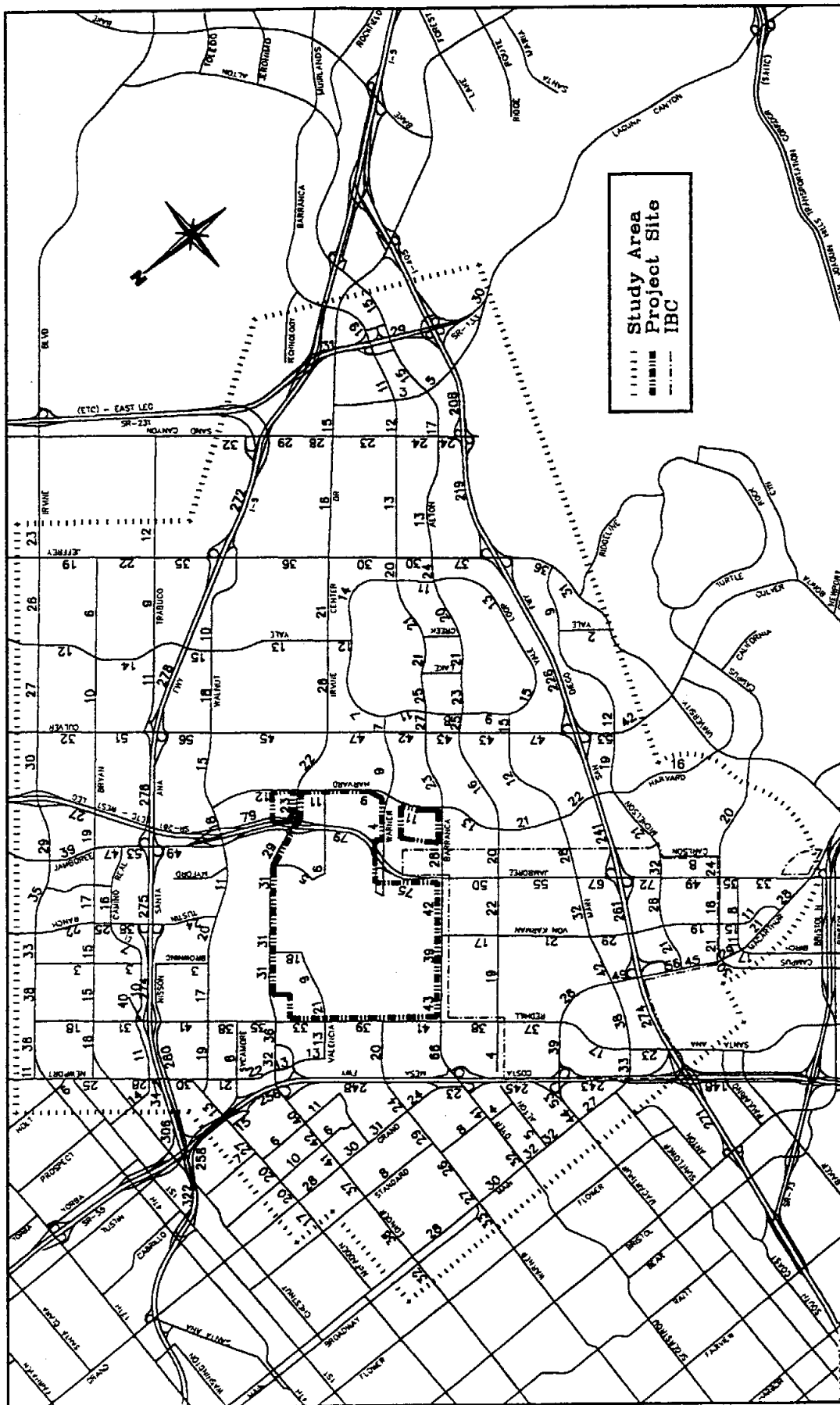


Table 4-3

SUMMARY OF IMPACTED INTERSECTIONS
(2005 Reuse Alternative 1)

LOCATION	2005 BASELINE ²		2005 REUSE ALT 1		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN/IRVINE								
86. Von Karman & Barranca ¹	.63	.95	.62	1.07	-	.12	-	p
103. Jamboree & Barranca ^{1,2}	.76	.97	.82	1.08	.06	.11	-	p
SANTA ANA								
47. Main & Warner	.74	1.05	.79	1.08	.05	.03	-	c
48. Main & Dyer	.79	1.03	.79	1.06	.00	.03	-	c
61. Grand & Edinger ²	.82	.90	.85	.95	.03	.05	-	p
72. Ritchey & Edinger ²	.52	.87	.52	.92	.00	.05	-	p

p - project causes deficiency

c - project contributes to deficiency

¹ IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs² SATTSSIP intersection³ 2005 baseline represents cumulative future development in year 2005 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

- Insert (see page 4-10a) -

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Table 4-4

FREEWAY RAMP INTERSECTION IMPACT SUMMARY
(2005 Reuse Alternative 1)

LOCATION	2005 BASELINE ²		2005 REUSE ALT 1		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
{No freeway ramp intersection impacted}								
SANTA ANA								
75. SR-55 SB Ramps & Edinger ¹	.88	1.19	.90	1.27	.02	.08	-	c

c - project contributes to deficiency

¹ SATTSSIP & CMP intersection² 2005 baseline represents cumulative future development in year 2005 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Insert page 4-10 (Table 4-3) as footnote

* Currently unidentified future improvements beyond those presented for 2005 will be made to this intersection to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Therefore, impacts of the reuse plan are difficult to quantify at this time and could be less at this location because of unknown improvements.

be improved from an unacceptable level during 2005 AM peak hour baseline conditions to an acceptable level (ICU .90 or below) with the project.

- Insert (see page 4-12a) -

4.4.A.3 Year 2020 Roadway Impacts (Reuse Alternative 1)

Year 2020 ADT traffic forecasts on the committed network for Reuse Alternative 1 are illustrated in Figure 4-5. A listing of 2020 link volume data (the ADTs shown in Figure 4-5 and corresponding peak hour volumes) can be found in Appendix B. No roadway links would be inadequate for this alternative.

A complete listing of the year 2020 ICUs can be found in Appendix D with actual ICU calculations in Appendix E. The year 2020 analysis also includes an evaluation of the study area freeway interchange ramp intersections. Those arterial locations and ramp intersections that would have a significant project impact are listed in Tables 4-5 and 4-6 and shown in Figure 4-6.

- Insert (see page 4-12a) -

Mitigation measures for these impacted locations are discussed later in Section 4.4.B. Two locations in the study area would be improved from an unacceptable level during 2020 baseline conditions to an acceptable level (ICU .90 or below) with the project; #22, Red Hill Avenue at Bryan Avenue, in the AM peak hour and #91, Jamboree Road at Irvine Boulevard, in the AM and PM peak hours. These locations would meet the desired performance standard under this alternative.

4.4.A.4 Public Transit Impacts (Reuse Alternative 1)

The land uses in Reuse Alternative 1 would impact public transit in Orange County by creating additional demand for transit service. At the same time, the new arterial roadways across the Base would provide opportunities for future bus routing, serving both future land uses on the base and also public transit riders that might benefit from the new bus routing opportunities. The Orange County Transportation Authority (OCTA) carries out regular updates of the Countywide transit system. Each phase of development on the Base should be included as part of that update program so that these impacts and opportunities related to development of the Base can be addressed with each system update.

Insert page 4-12 as last paragraph under Section 4.4.A.2 and after second paragraph of Section 4.4.A.3

It should be noted that currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). The MOA defined interim improvements, which in this traffic report are assumed completely constructed by year 2005, and established a funding agreement with a maximum dollar amount for future improvements to maintain an acceptable level of service at this location. Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible.

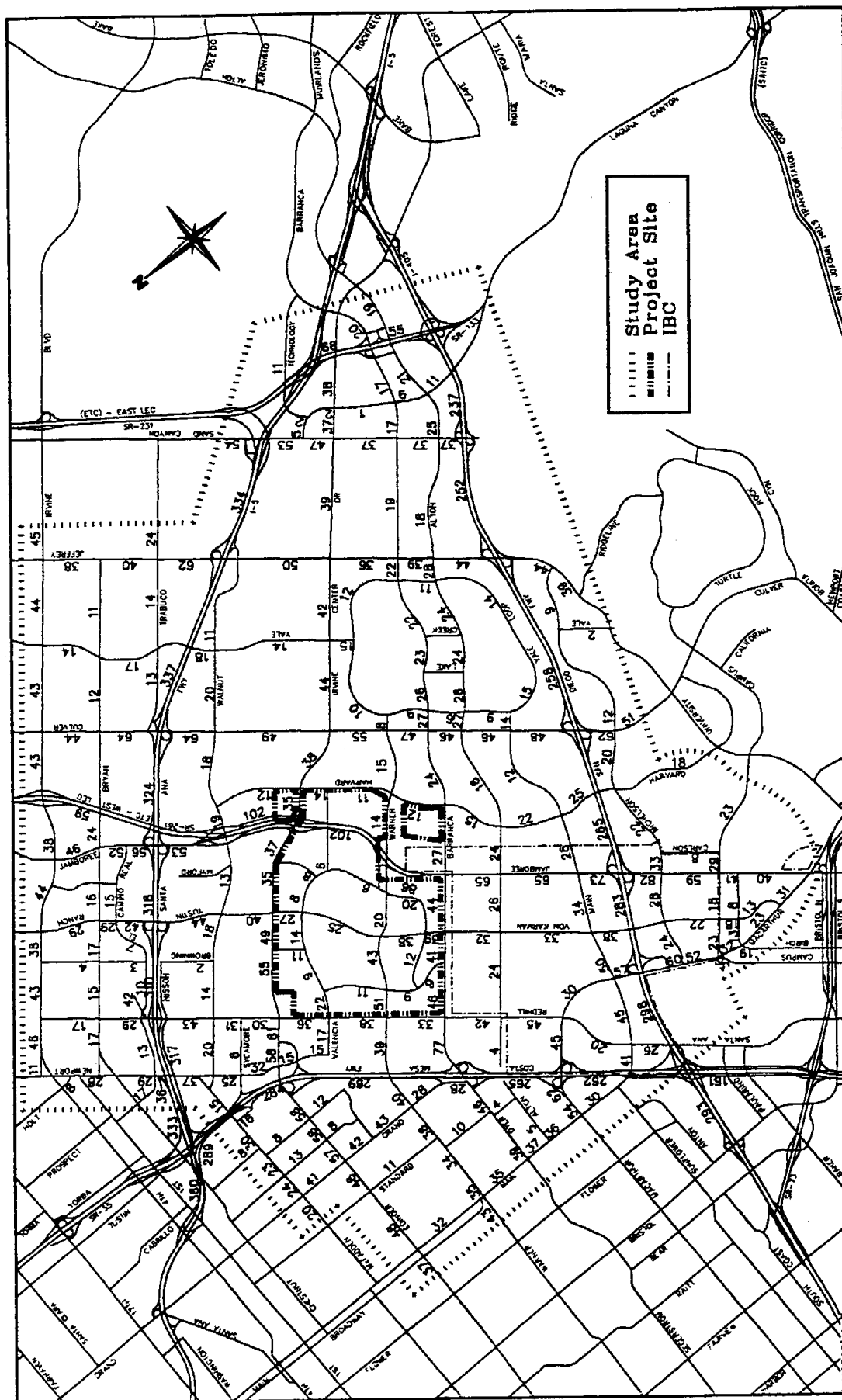


Figure 4-5

2020 ADT VOLUMES (000s)
- REUSE ALTERNATIVE 1

Table 4-5

SUMMARY OF IMPACTED INTERSECTIONS
(2020 Reuse Alternative 1)

LOCATION	2020 BASELINE ²		2020 REUSE ALT 1		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN								
15. Newport & Edinger ¹	.85	.87	.90	.91	.05	.04	-	p
30. Red Hill & Edinger ¹	.75	.88	.83	.93	.08	.05	-	p
42. Tustin Ranch & Walnut	.84	.89	1.11	1.07	.27	.18	p	p
TUSTIN/SANTA ANA								
77. Red Hill & Warner ¹	.50	.46	.90	.96	.40	.50	-	p
TUSTIN/IRVINE								
86. Von Karman & Barranca ²	.61	.77	.90	1.01	.29	.24	-	*
103. Jamboree & Barranca ^{1,2}	.83	1.15	1.01	1.22	.18	.07	-	e**
SANTA ANA								
~~48. Main & Dyer~~	~~.74~~	~~1.10~~	~~.80~~	~~1.15~~	-	.05	-	e
53. Hutton Centre & MacArthur	.73	.91	.72	.93	-	.02	-	c
61. Grand & Edinger ¹	~~.98~~ <u>.75</u>	~~1.05~~ <u>.84</u>	~~1.03~~ <u>.80</u>	~~1.15~~ <u>.96</u>	.05	~~.10~~ <u>.12</u>	e-	e ₂
63. Grand & Warner ¹	~~.61~~ <u>.57</u>	~~.90~~ <u>.71</u>	~~.85~~ <u>.80</u>	~~1.02~~ <u>.96</u>	~~.24~~ <u>.23</u>	~~.12~~ <u>.25</u>	-	p
66. Grand & Dyer ¹	~~.73~~ <u>.66</u>	~~.97~~ <u>.94</u>	~~.72~~ <u>.72</u>	~~1.09~~ <u>1.04</u>	.06	~~.12~~ <u>.10</u>	-	c
70. Lyon & Edinger ¹	.86	.97	.90	1.02	.04	.05	-	c
~~198. Bristol & Warner~~	~~.88~~	~~1.01~~	~~.93~~	~~.98~~	~~.05~~	-	p	-
202. Standard & Edinger	.80	.95	.89	.98	.09	.03	-	c
IRVINE								
81. Red Hill & Main ²	.70	.99	.76	1.15	.06	.16	-	p
89. Von Karman & Michelson ²	.68	1.07	.85	1.14	.17	.07	-	c
106. Jamboree & Alton ²	.94	1.01	.91	1.06	-	.05	-	p
118. Harvard & Alton	.85	.89	.94	.88	.09	-	p	-
128. Culver & Warner	.79	.79	.83	.99	.04	.20	-	p
IRVINE/SANTA ANA								
79. Red Hill & Alton ²	.68	1.01	.72	1.03	.04	.02	-	*

p - project causes deficiency

c - project contributes to deficiency

* Location identified in City of Irvine as an ATMS intersection which discounts the AM and PM peak hour ICUs by .05; therefore there is no project impact at this location.

** Currently unidentified future improvements beyond those presented for 2005 will be made to this intersection to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Therefore, impacts of the reuse plan are difficult to quantify at this time and could be less at this location because of unknown improvements.

¹ SATTSIP intersection² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs

³ 2020 baseline represents cumulative future development in year 2020 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Table 4-6

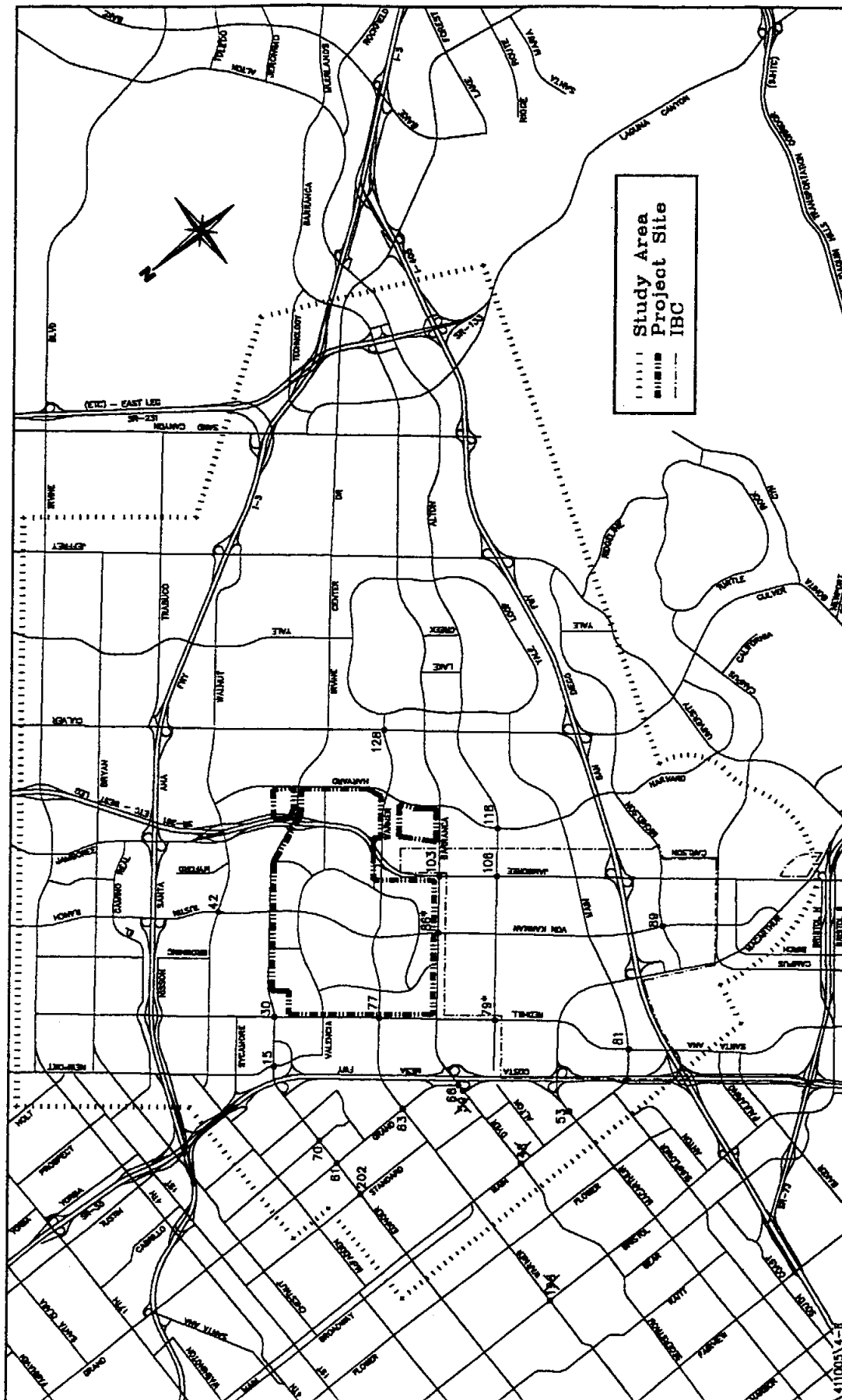
FREEWAY RAMP INTERSECTION IMPACT SUMMARY
(2020 Reuse Alternative 1)

LOCATION	2020 BASELINE		2020 REUSE ALT 1		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
SANTA ANA								
59. Hotel Terrace/SR 55 & Dyer ⁺	.68	.87	.74	.94	.06	.07	-	P

P = project causes deficiency

⁺ SATTSIP intersection

[No freeway ramp intersection impacted]



* Location Identified in City of Irvine as an ATMS intersection which discounts the AM and PM peak hour ICUs by .05; therefore there is no project impact at this location.

NOTE: Due to the corrected committed roadway network, intersections 48, 59 & 198 are no longer impacted locations.

Figure 4-6

2020 IMPACTED INTERSECTIONS
- REUSE ALTERNATIVE 1

Benefitting the reuse area as well as the surrounding area, is a proposed commuter rail station planned to be located in the City of Tustin on the northwest corner of Jamboree Road and Edinger Avenue near the SCRRA/OCTA Railroad.

4.4.A.5 Pedestrian and Bicycle Impacts (Reuse Alternative 1)

Future residential development on the base would add to the usage of the Countywide bike trail system. At the same time, development of new roadways across the Base would add to the system of bike trails, providing additional segments and greater connectivity. No specific bicycle impacts of Reuse Alternative 1 are identified, and the added bike trails would provide an overall benefit to the County bike trail system.

No pedestrian impacts of this alternative are identified.

4.4.A.6 Construction Impacts (Reuse Alternative 1)

Traffic impacts due to construction would occur as a result of development of the site. The primary activities generating construction traffic are:

1. Roadway construction
2. Site development
3. Other infrastructure development (water, sewer, etc.)

The magnitude of the impacts would depend on the type and location of such activities, and would be monitored by City of Tustin administrative procedures for such activities. ~~Such procedures include designated routes for heavy trucks (i.e., major roadways only and avoiding peak hours).~~

- Insert (see page 4-17a) -

4.4.B MITIGATION MEASURES (Reuse Alternative 1)

Mitigation measures for project impacts would be in the form of lane changes or intersection operating efficiency. The former adds or changes lanes by restriping or construction to increase capacity, and the latter implements ATMS improvements *and other traffic signal phasing modifications*

Insert page 4-17 to last sentence of last paragraph under Section 4.4.A.6

Possible significant impacts could include lane closures with short-term disruption to the public. Measures to minimize conflicts could include designated routes and times for heavy trucks (i.e., major roadways only and avoiding peak hours). The procedures should be coordinated with neighboring jurisdictions that would be affected.

In conjunction with the approval of a site development permit, the City of Tustin and the City of Irvine, as applicable (for that portion of the reuse plan within Irvine), shall require each developer to provide traffic operations and control plans that would minimize the traffic impacts of proposed construction activity. The plans shall address roadway and lane closures, truck hours and routes, and notification procedures for planned short-term or interim changes in traffic patterns. The City of Tustin and the City of Irvine, as applicable, shall ensure that the plan would minimize anticipated delays at major intersections. Prior to approval, the City of Tustin or Irvine, as applicable, shall review the proposed traffic control and operations plans with an affected jurisdiction.

to increase operating efficiency. The identified mitigation measures may be either or both of these improvements. An ICU reduction of .05 is taken for ATMS. - *Insert 1 (see page 4-18a)*

~~No specific mitigation measures are identified for the project stand-alone analysis because of the hypothetical nature of that evaluation (full project buildout with no change of external conditions). In the sections which follow, mitigation measures for Reuse Alternative 1 for year 2005 and year 2020 are presented.~~

4.4.B.1 Year 2005 Mitigation Measures (Reuse Alternative 1)

A set of mitigation measures are presented here for the intersections identified as being impacted by Reuse Alternative 1 for 2005. These are summarized in Table 4-7 in the form of lane changes (additions or restriping) at individual intersections. For the impact to #103 (Jamboree Road and Barranca Parkway), the proposed mitigation measure is to ~~provide an additional~~ *redirect project traffic away from this intersection by providing a project* access on Warner Avenue near Jamboree Road *(in addition to the the Barranca Parkway access east of Von Karman Avenue)* to serve the proposed project uses on the northeast corner of Von Karman Avenue and Barranca Parkway. It should be noted that mitigation for the intersection of #86 (Von Karman Avenue and Barranca Parkway) is an interim improvement only *(until such time the extension of Tustin Ranch Road to Barranca Parkway is built)* and is not necessary for 2020.

- *Insert 2 (see page 4-18a)* -

4.4.B.2 Year 2020 Mitigation Measures (Reuse Alternative 1)

Mitigation measures for the intersections that would be impacted by Reuse Alternative 1 are summarized in Table 4-89 in the form of lane changes or ATMS funding contributions.

The mitigation measures listed here are generally designed to mitigate the project impacts. In cases where a deficiency is caused by the project, then such improvements are then the full responsibility of the project. Where the project is a contributor to an already deficient condition under 2020 baseline, then a fair share participation in future improvements would generally be more appropriate. For example, the mitigation measures shown here would generally more than mitigate the project impacts thereby providing capacity for non-project traffic.

- *Insert 3 (see page 4-18b)* -

Insert 1 page 4-18 at end of partial paragraph on top of page

Alternative improvements that provide an equivalent level of mitigation in 2005 or 2020 to what are presented in the following sections may be identified in consultation between the City of Tustin and the City of Irvine, as applicable, and the impacted jurisdiction.

Insert 2 page 4-18 at end of Section 4.4.B.1 paragraph

One interchange ramp intersection would be impacted by the project. The project would contribute to the identified deficiency at this location. The mitigation measure for this location is summarized in Table 4-8.

<u>Table 4-8</u> <u>FREEWAY RAMP INTERSECTION MITIGATION SUMMARY</u> <u>(2005 Reuse Alternative 1)</u>													
<u>LOCATION</u>	<u>— SB —</u>			<u>— WB —</u>			<u>— NB —</u>			<u>— EB —</u>			
	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	
<u>SANTA ANA</u>													
<u>75. SR-55 SB Ramps & Edinger</u>	<u>Base</u>	<u>1</u>	<u>1</u>	<u>:</u>	<u>1</u>	<u>2</u>	<u>:</u>	<u>1.5</u>	<u>.5</u>	<u>f</u>	<u>1</u>	<u>2</u>	<u>f</u>
	<u>Mit.</u>	<u>1</u>	<u>1</u>	<u>:</u>	<u>1</u>	<u>2</u>	<u>:</u>	<u>1.5</u>	<u>.5</u>	<u>f</u>	<u>1</u>	<u>3</u>	<u>f</u>
<u>Base</u>	<u>- Intersection lanes without mitigation</u>												
<u>f</u>	<u>- free right-turn</u>												
<u>L, T, R</u>	<u>- left, through, right</u>												
<u>SB, WB, NB, EB</u>	<u>- southbound, westbound, northbound, eastbound</u>												
<u>Enlarged/Bold - notation indicates lane changes</u>													
<u>A .5 or 1.5 lane designation represents lane sharing between different movements</u>													

Insert 3 page 4-18 after second paragraph of Section 4.4.B.2

As noted previously, currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). The MOA defined interim improvements, which in this traffic report are assumed completely constructed by year 2005, and established a funding agreement with a maximum dollar amount for future improvements to maintain an acceptable level of service at this location. Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

Table 4-7

MITIGATION LANES FOR 2005 REUSE ALTERNATIVE 1 IMPACTED INTERSECTIONS

LOCATION		—SB—			—WB—			—NB—			—EB—			COMMENTS ¹
		L	T	R	L	T	R	L	T	R	L	T	R	
TUSTIN/IRVINE														
86. Von Karman & Barranca	Base	-	-	-	2	3	-	2	-	1	-	3	d	Interim improvement only <u>(until such time the extension of Tustin Ranch Road to Barranca Parkway is built)</u> , not necessary for 2020
	Mit.	-	-	-	2	3	-	2	-	2	-	3	d	
103. Jamboree & Barranca ²	Base	2	4	f	2	3	f	2	4	f	2.5	2.5	1	Additional <u>project</u> access on Warner Ave near Jamboree Rd <u>to redirect project traffic away from this intersection</u>
	Mit.	2	4	f	2	3	f	2	4	f	2.5	2.5	1	
SANTA ANA														
47. <u>Main & Warner</u>	<u>Base</u>	<u>2</u>	<u>3</u>	-	<u>1</u>	<u>2</u>	-	<u>2</u>	<u>3</u>	-	<u>1</u>	<u>2</u>	<u>1</u>	
	<u>Mit.</u>	<u>2</u>	<u>3</u>	-	<u>1</u>	<u>3</u>	-	<u>2</u>	<u>3</u>	-	<u>1</u>	<u>2</u>	<u>1</u>	
48. <u>Main & Dyer</u>	<u>Base</u>	<u>1</u>	<u>3</u>	-	<u>1</u>	<u>2</u>	-	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	
	<u>Mit.</u>	<u>2</u>	<u>3</u>	-	<u>2</u>	<u>2</u>	-	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	
61. Grand & Edinger	Base	1	3	-	1	3	-	1	3	-	1	3	-	
	Mit.	1	3	-	1	3	-	2	3	1	1	3	-	
72. <u>Ritchey & Edinger</u>	<u>Base</u>	<u>1</u>	<u>2</u>	-	<u>1</u>	<u>3</u>	-	<u>1</u>	<u>1</u>	-	<u>1</u>	<u>3</u>	-	
	<u>Mit.</u>	<u>1</u>	<u>2</u>	-	<u>1</u>	<u>3</u>	-	<u>1</u>	<u>2</u>	-	<u>1</u>	<u>3</u>	-	

Base - Intersection lanes without mitigation
d - de facto right-turn
f - free right-turn
L, T, R - left, through, right
SB, WB, NB, EB - southbound, westbound, northbound, eastbound
Enlarged/Bold - notation indicates lane changes
A .5 or 1.5 lane designation represents lane sharing between different movements

¹ Clarification of the intersection improvements being presented or other mitigation if intersection improvements are not identified.

² Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible.

Table 4-9

MITIGATION LANES FOR 2020 REUSE ALTERNATIVE 1 IMPACTED INTERSECTIONS

LOCATION		—SB—			—WB—			—NB—			—EB—			COMMENTS ¹
		L	T	R	L	T	R	L	T	R	L	T	R	
TUSTIN														
15. Newport & Edinger	Base	2	2.5	1.5	1	3	f	2	3	d	2	3	1	No lane changes (ATMS)
	Mit.	2	2.5	1.5	1	3	f	2	3	d	2	3	1	
30. Red Hill & Edinger	Base	2	3	1	2	3	1	2	3	1	2	3	1	No lane changes (ATMS)
	Mit.	2	3	1	2	3	1	2	3	1	2	3	1	
42. Tustin Ranch & Walnut	Base	2	3	d	1	2	1	2	3	d	1	2	1	Lane changes and ATMS
	Mit.	2	3	d	2	2	1	2	3	d	2	2	1	
TUSTIN/SANTA ANA														
77. Red Hill & Warner	Base	2	4	1	2	3	1	2	4	1	2	3	1	
	Mit.	2	4	1	2	3	2	2	4	1	2	3	1	
TUSTIN/IRVINE														
103. Jamboree & Barranca ²	Base	2	4	f	2	3	f	2	4	f	2.5	2.5	1	No identifiable mitigation
	Mit.	2	4	f	2	3	f	2	4	f	2.5	2.5	1	
SANTA ANA														
48. Main & Dyer	Base	2	3	-	1	3	-	2	3	-	1	3	+	
	Mit.	2	3	-	2	3	-	2	3	-	1	3	+	
53. Hutton Centre & MacArthur	Base	2	1	2	2	3	1	1	.5	1.5	2	3	1	
	Mit.	2	1	2	2	4	+-	1	.5	1.5	2	3	1	
61. Grand & Edinger	Base	2	3	<u>1</u>	<u>±2</u>	3	<u>1</u>	<u>±2</u>	3	1	<u>±2</u>	3	<u>1</u>	
	Mit.	2	3	<u>1</u>	<u>22</u>	<u>34</u>	<u>1-</u>	<u>22</u>	<u>34</u>	<u>+-</u>	<u>±2</u>	3	<u>1</u>	
63. Grand & Warner	Base	2	3	<u>1</u>	2	<u>±3</u>	1	<u>±2</u>	3	<u>1</u>	2	3	1	Lane changes and WB right-turn overlap
	Mit.	2	3	<u>±1</u>	2	<u>33</u>	<u>21</u>	<u>22</u>	<u>34</u>	-	2	3	1	
66. Grand & Dyer	Base	2	-	1	-	<u>±3</u>	1	-	-	-	<u>±2</u>	3	-	
	Mit.	1.5	-	1.5	-	<u>±3</u>	1	-	-	-	<u>±2</u>	3	-	
70. Lyon & Edinger	Base	1	1	1	1	3	1	1	1	2	1	3	-	Lane changes and N/S split phasing
	Mit.	2	<u>1.5</u>	<u>±.5</u>	1	1	3	1	1	1	2	1	3	

(Continued)

Table 4-9 (cont)

MITIGATION LANES FOR 2020 REUSE ALTERNATIVE 1 IMPACTED INTERSECTIONS

LOCATION		—SB—			—WB—			—NB—			—EB—			COMMENTS ¹
		L	T	R	L	T	R	L	T	R	L	T	R	
SANTA ANA (cont)														
198. Bristol & Warner	Base	1	3		1	3		1	3		1	3		
	Mit.	2	3		1	3		1	3		1	3		
202. Standard & Edinger	Base	1	2	-	1	3	-	1	2	-	1	3	-	
	Mit.	1	2	-	1	3	1	1	2	-	1	3	-	
IRVINE														
81. Red Hill & Main	Base	1	3	d	2	3	d	2	3	f	1	3	d	
	Mit.	1	3	f	2	3	d	2	3	f	1	3	d	
89. Von Karman & Michelson	Base	1	2	d	1	2	f	1	2	1	1	2	d	
	Mit.	1	2	d	1	2	f	1	2	1	2	2	d	
106. Jamboree & Alton	Base	2	4	d	2	3	d	2	4	1	2	3	d	
	Mit.	2	4	d	2	3	d	2	5	1	2	3	d	
118. Harvard & Alton	Base	1	2	1	2	3	d	1	2	d	2	3	1	
	Mit.	1	2	1	2	3	d	2	2	d	2	3	1	
128. Culver & Warner	Base	1	3	d	1	2	d	1	3	1	1	2	d	
	Mit.	1	3	d	1	2	d	1	3	1	2	2	d	

Base - Intersection lanes without mitigation

ATMS - Advanced Transportation Management System

d - de facto right-turn

f - free right-turn

L, T, R - left, through, right

SB, WB, NB, EB - southbound, westbound, northbound, eastbound

Enlarged/Bold - notation indicates lane changes

A .5 or 1.5 lane designation represents lane sharing between different movements

¹ Clarification of the intersection improvements being presented or other mitigation if intersection improvements are not identified.

² Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

One No interchange ramp intersections would be impacted by the project. The identified deficiency at this location would be caused by the project. The mitigation measure for this location is summarized in Table 4-9.

Table 4-9

FREEWAY RAMP INTERSECTION MITIGATION SUMMARY
(2020 Reuse Alternative 1)

	SB			WB			NB			EB		
LOCATION	L	T	R	L	T	R	L	T	R	L	T	R
SANTA ANA												
59. Hotel Terrace, SR-55 & Dyer												
Base	5	1.5	1	2	3	1	1.5	5	2	1	3	
Mit	5	1.5	1	2	3	1	1.5	5	2	1	3	1

Base — Intersection lanes without mitigation
L, T, R — left, through, right
SB, WB, NB, EB — southbound, westbound, northbound, eastbound
Enlarged/Bold — notation indicates lane changes
A 5 or 1.5 lane designation represents lane sharing between different movements

The exact nature of the improvement in each case would be the subject of special design studies in association with Caltrans:

- Insert 1 (see pages 4-22a through 4-22c) -

4.4.C LEVEL OF SIGNIFICANCE AFTER MITIGATION (Reuse Alternative 1)

The ICU values, *cumulative ADT thresholds and project shares* for the impacted locations with and without mitigation are summarized in Tables 4-10 and 4-11 (year 2005 and year 2020, respectively). All locations would be mitigated to a level of insignificance under this alternative with the exception of intersection #42 (Tustin Ranch Road and Walnut Avenue) and intersection #103 (Jamboree Road and Barranca Parkway) for year 2020.

- Insert 2 (see pages 4-22d and 4-22e) -

4.5 IMPACT ANALYSIS - REUSE ALTERNATIVE 2

This alternative features new arterial roadway connections through the base, and hence the project not only adds traffic to the study area circulation system, but also changes the traffic patterns

4.4.B.3 Additional Mitigation Measures (Reuse Alternative 1)

1. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area within Irvine, shall ensure that the arterial intersection improvements required in 2005 and 2020 are implemented for their respective jurisdictions according to the cumulative ADT threshold and the share noted in Tables 4-10 and 4-11. If subsequent studies demonstrate that the trips would not be generated, or impacts would be different than those projected in this report, the mitigation measures may be modified, subject to the approval of the City of Tustin and any other affected jurisdictions, provided that the mitigation to the same levels of service would be provided.*
2. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area within Irvine, shall contribute, on a fair share basis, to improvements to freeway ramp intersections as listed in Table 4-8. The method of implementing improvements, e.g., restriping or ramp widening, shall be based on special design studies, in association with Caltrans.*
3. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area within Irvine, shall ensure that all on-site circulation system improvements for the reuse plan area assumed in the 2005 and 2020 traffic analysis are implemented according to the cumulative ADT thresholds identified in Table 4-11a.*
4. *Prior to approval of a site development permit or vesting tract, except for financing or conveyance purposes, for all land use designation areas in Reuse Alternative 1 with the exception of the Learning Village, Community Park, and Regional Park, a project developer shall enter into an agreement with the City of Tustin and City of Irvine, as applicable for that portion of the reuse plan area within Irvine, which assigns improvements required to the development site and which requires participation in a fair share mechanism to design and construct required on-site and arterial improvements.*

5. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area in Irvine, will monitor new development within the reuse plan area, accounting for the cumulative ADT generated by development projects within the reuse plan area. As each cumulative ADT threshold is reached, the roadway improvements listed shall be constructed before any additional projects within the reuse plan area are approved.*
6. *As part of any implementing rezoning action for the reuse plan area, the City of Tustin shall adopt a trip budget for individual portions of the reuse plan area to assist in the monitoring of cumulative ADT and the amount and intensity of permitted non-residential uses as evaluated in the EIS/EIR.*

Table 4-11a

ON-SITE ADT DEVELOPMENT THRESHOLDS
(Reuse Alternative 1)

<u>PHASE</u>	<u>ADT (CUMULATIVE)</u>		<u>ROADS ADDED*</u>
<u>I</u>	<u>27,000</u>	<u>Q27,000</u>	<u>Edinger Avenue - along project frontage between Red Hill Ave and Jamboree Rd**</u> <u>Landsdowne Road</u> <u>North Loop Road - Red Hill Avenue to West Connector Road (Build 3 lanes only)***</u> <u>West Connector Road</u>
<u>II</u>	<u>82,800</u>	<u>Q109,800</u>	<u>East Connector Road</u> <u>Marble Mountain Road</u> <u>Moffett Drive</u> <u>North Loop Road - Red Hill Avenue to West Connector Road (Final Buildout)</u> <u>North Loop Road - East Connector Road to Moffett Drive (Build 3 lanes only)***</u> <u>Red Hill Avenue/Carnegie Avenue Intersection (East Leg)</u> <u>Red Hill Avenue/Warner Avenue Intersection (East Leg)</u> <u>Severns Road</u>
<u>III</u>	<u>26,900</u>	<u>Q136,700</u>	<u>Armstrong Avenue - North Loop Road to Barranca Parkway</u> <u>North Loop Road - West Connector Road to East Connector Road</u> <u>North Loop Road - East Connector to Moffett Drive (Final Buildout)</u> <u>North Loop Road - Moffett Drive to Warner Avenue</u> <u>South Loop Road - Warner Avenue to Tustin Ranch Road</u> <u>Tustin Ranch Road - Edinger Avenue to North Loop Road (6 lanes)</u> <u>Tustin Ranch Road - Warner Avenue to Barranca Parkway (Build 4 lanes only)***</u> <u>Warner Avenue - Red Hill Avenue to Jamboree Road (Build 4 lanes only)***</u>
<u>IV</u>	<u>39,500</u>	<u>Q176,200</u>	<u>South Loop Road - Armstrong Avenue to Tustin Ranch Road</u> <u>Tustin Ranch Road - North Loop Road to South Loop Road (Build 4 lanes only)***</u>
<u>V</u>	<u>40,200</u>	<u>Q216,400</u>	<u>Widen Tustin Ranch Road to 6 lanes (Final Buildout)</u> <u>Widen Warner Avenue to 6 lanes (Final Buildout)</u>

* Roadways shall be constructed prior to the issuance of building permits or certificates of occupancy

** Right-of-way for roadway improvements (being done by others) to be dedicated at this time

*** Full right-of-way to be dedicated at this time

Insert 2 page 4-22 at end of Section 4.4.C

In the case of Intersection #103, currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

4.4.C.1 ADT Threshold Methodology

The ADT thresholds for each of the off-site improvements are based on an analysis of the 2005 and 2020 levels of service and the degree to which the reuse plan impacts each location. The level of development at which a location would become deficient was derived by interpolation from the with and without reuse plan (baseline) ICU values at each location. The following example at Von Karman Avenue and Barranca Parkway illustrates this interpolation process. This location is deficient in 2005 for the PM peak hour with the reuse plan. Two steps are carried out to estimate how much reuse plan development occurs before the location becomes deficient:

Step 1 - Percentage of reuse plan causing the impact threshold to be exceeded

Here the increase in ICU needed to cause an impact is equated to the amount of reuse plan development that can occur before this impact threshold is reached. This is then divided by the difference between the with reuse plan ICU and the baseline ICU. The calculation is as follows:

$$\frac{\text{ICU increment for impact threshold}}{\text{with reuse plan ICU} - \text{baseline ICU}} = \frac{1.06 - .95}{1.07 - .95} = \frac{.11}{.12} = .92$$

In this case, an ICU of 1.05 is acceptable (this includes an ATMS credit of .05 over and above the 1.00 LOS "E" standard for this location). Thus an impact occurs when the reuse plan causes the ICU to reach 1.06. The difference from the baseline is .11 which compares to .12 for the difference between the full 2005 reuse plan and the baseline. Hence 92 percent of the 2005 reuse plan will cause the intersection to be impacted.

Step 2 - Reuse plan trip generation at which deficiency occurs

This 92 percent is then applied to the year 2005 trip generation. To make this calculation the baseline trip generation for the reuse plan area is first deducted and then added back to show the actual amount of development on the site. The calculation is as follows:

$$\begin{aligned} &\text{year 2005 reuse plan trip generation - baseline trip generation} \\ &= 109,800 - 12,400 = 97,400 \\ &.92 \times 97,400 = 89,610 + 12,400 = 102,010 \approx 102,000 \end{aligned}$$

The last calculation adds back the baseline trip generation for the reuse plan area to show the total trip generation on the reuse plan site that will trigger the impact.

4.4.C.2 Reuse Plan (Project) Share Methodology

The reuse plan share is based on the proportion of the future ICU value due to reuse plan traffic:

$$\text{Reuse Plan Share Percentage} = \frac{\text{Future ICU with Reuse Plan} - \text{Future ICU without Reuse Plan}}{\text{Future ICU with Reuse Plan} - \text{Existing ICU}}$$

The existing ICU above reflects the existing traffic volumes presented in Chapter 3.0 and any future lanes assumed for the particular time frame analyzed.

Table 4-10

SUMMARY OF INTERSECTION MITIGATION RESULTS
(2005 Reuse Alternative 1)

LOCATION	2005 BASELINE ²		2005 REUSE ALT 1		W/MITIGATION		RESULT		PROJECT SHARE	ADT THRESH-
	AM	PM	AM	PM	AM	PM	AM	PM	(%)	HOLD
TUSTIN/IRVINE										
86. Von Karman & Barranca ¹	.63	.95	.62	1.07	.62	.72	-	ma	100	102,000
103. Jamboree & Barranca ^{1,2}	.76	.97	.82	1.08	.82	1.05	-	ma	-	-
SANTA ANA										
47. Main & Warner	.74	1.05	.79	1.08	.79	.93	-	mp	15	78,000
48. Main & Dyer	.79	1.03	.79	1.06	.69	.98	-	mp	17	78,000
61. Grand & Edinger ²	.82	.90	.85	.95	.84	.90	-	ma	100	32,000
72. Ritchey & Edinger ²	.52	.87	.52	.92	.52	.71	-	ma	100	70,000
75. SR-55 SB Ramps & Edinger ^{2,3}	.88	1.19	.90	1.27	.83	1.07	-	mp	28	37,000

ma - mitigated to adequate level of service

mp - project impact mitigated

¹ IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs

² SATTIP intersection

³ CMP & freeway ramp intersection

⁴ 2005 baseline represents cumulative future development in year 2005 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

* Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Table 4-11

SUMMARY OF INTERSECTION MITIGATION RESULTS
(2020 Reuse Alternative 1)

LOCATION	2020 BASELINE ²		2020 REUSE ALT 1		W/MITIGATION		RESULT		PROJECT SHARE	ADT THRESH-
	AM	PM	AM	PM	AM	PM	AM	PM	(%)	HOLD
TUSTIN										
15. Newport & Edinger ¹	.85	.87	.90	.91	.85	.86	-	ma	100	*
30. Red Hill & Edinger ¹	.75	.88	.83	.93	.78	.88	-	ma	100	174,000
42. Tustin Ranch & Walnut	.84	.89	1.11	1.07	.91	.94	nm	nm	100	122,000
TUSTIN/SANTA ANA										
77. Red Hill & Warner ¹	.50	.46	.90	.96	.90	.87	-	ma	100	206,000
TUSTIN/IRVINE										
103. Jamboree & Barranca ^{1,2}	.83	1.15	1.01	1.22	1.01	1.22	-	nm	**	**
SANTA ANA										
~~48. Main & Dyer~~	~~.84~~	~~1.10~~	~~.80~~	~~1.15~~	~~.68~~	~~.98~~	-	mp		
53. Hutton Centre & MacArthur	.73	.91	.72	.93	.72	.88	-	ma	20	*
~~59. Hotel Terrace/SR-55 & Dyer²~~	~~.68~~	~~.87~~	~~.74~~	~~.94~~	~~.69~~	~~.88~~	-	ma		
61. Grand & Edinger ¹	~~.98~~ .75	~~1.05~~ .84	~~1.03~~ .80	~~1.15~~ .96	~~.90~~ .80	~~1.02~~ .89	ma	mp	ma	100 172,000
63. Grand & Warner ¹	~~.64~~ .57	~~.90~~ .71	~~.85~~ .80	~~1.02~~ .96	~~.85~~ .79	~~.75~~ .89	-	ma	100	195,000
66. Grand & Dyer ¹	~~.73~~ .66	~~.97~~ .94	~~.72~~ .72	~~1.09~~ 1.04	~~.72~~ .72	~~.92~~ .79	-	mp	ma	29 131,000
70. Lyon & Edinger ¹	.86	.97	.90	1.02	~~.90~~ .88	~~.93~~ .95	-	mp	13	152,000
~~198. Bristol & Warner~~	~~.88~~	~~1.01~~	~~.93~~	~~.98~~	~~.90~~	~~.98~~	ma	-		
202. Standard & Edinger	.80	.95	.89	.98	.89	.90	-	ma	9	181,000
IRVINE										
81. Red Hill & Main ²	.70	.99	.76	1.15	.76	.91	-	ma	100	157,000
89. Von Karman & Michelson ²	.68	1.07	.85	1.14	.72	1.00	-	ma	22	141,000
106. Jamboree & Alton ²	.94	1.01	.91	1.06	.91	.96	-	ma	100	*
118. Harvard & Alton	.85	.89	.94	.88	.78	.88	ma	-	100	181,000
128. Culver & Warner	.79	.79	.83	.99	.74	.87	-	ma	100	174,000

ma - mitigated to adequate level of service

nm - project impact not mitigated

mp - project impact mitigated

¹ SATTSIP intersection² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs³ 2020 baseline represents cumulative future development in year 2020 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

* Full buildout of Reuse Alternative 1

** Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

of non-project traffic in the area. The traffic volumes presented in this section reflect both these effects.

The traffic impact analysis information presented in this section compares traffic conditions under the reuse alternative with a corresponding "baseline" condition for each time frame which was presented in Chapter 3.0. The baseline condition assumes the level of activity on the site in 1993 (refer to Chapter 3.0 for further discussion on this condition). The following sections address the impacts and associated mitigation measures for this reuse alternative. Public transit, pedestrian and bicycle, and construction impacts are addressed following the operational roadway analyses.

4.5.A IMPACTS (Reuse Alternative 2)

4.5.A.1 Project Stand-Alone Roadway Impacts (Reuse Alternative 2)

This part of the analysis examines buildout of the full project in the existing transportation setting (1997) which is representative of a 1997 baseline. For this analysis, no modifications or additions were assumed to the existing circulation system outside the reuse area. The roadway system within the reuse area is that shown in Figure 2-4.

Figure 4-7 shows the ADT volumes for existing plus Reuse Alternative 2 conditions. These can be compared with existing baseline volumes presented in Figure 3-2. The volumes in Figure 4-7 reflect the theoretical trip redistribution effects that would be inherent when reuse land uses attract trips to and from surrounding land uses.

A complete summary of ICU values for existing (1997) baseline and with-project conditions can be found in Appendix D with actual ICU calculations in Appendix E. The project stand-alone (existing) analysis also includes an evaluation of the study area freeway interchange ramp intersections. Tables 4-12 and 4-13 list those arterial locations and ramp intersections that would have a significant impact due to the project, and these locations are illustrated in Figure 4-8. One location in the City of Irvine (#151, Jeffrey Road and I-405 northbound ramps) would be improved from an

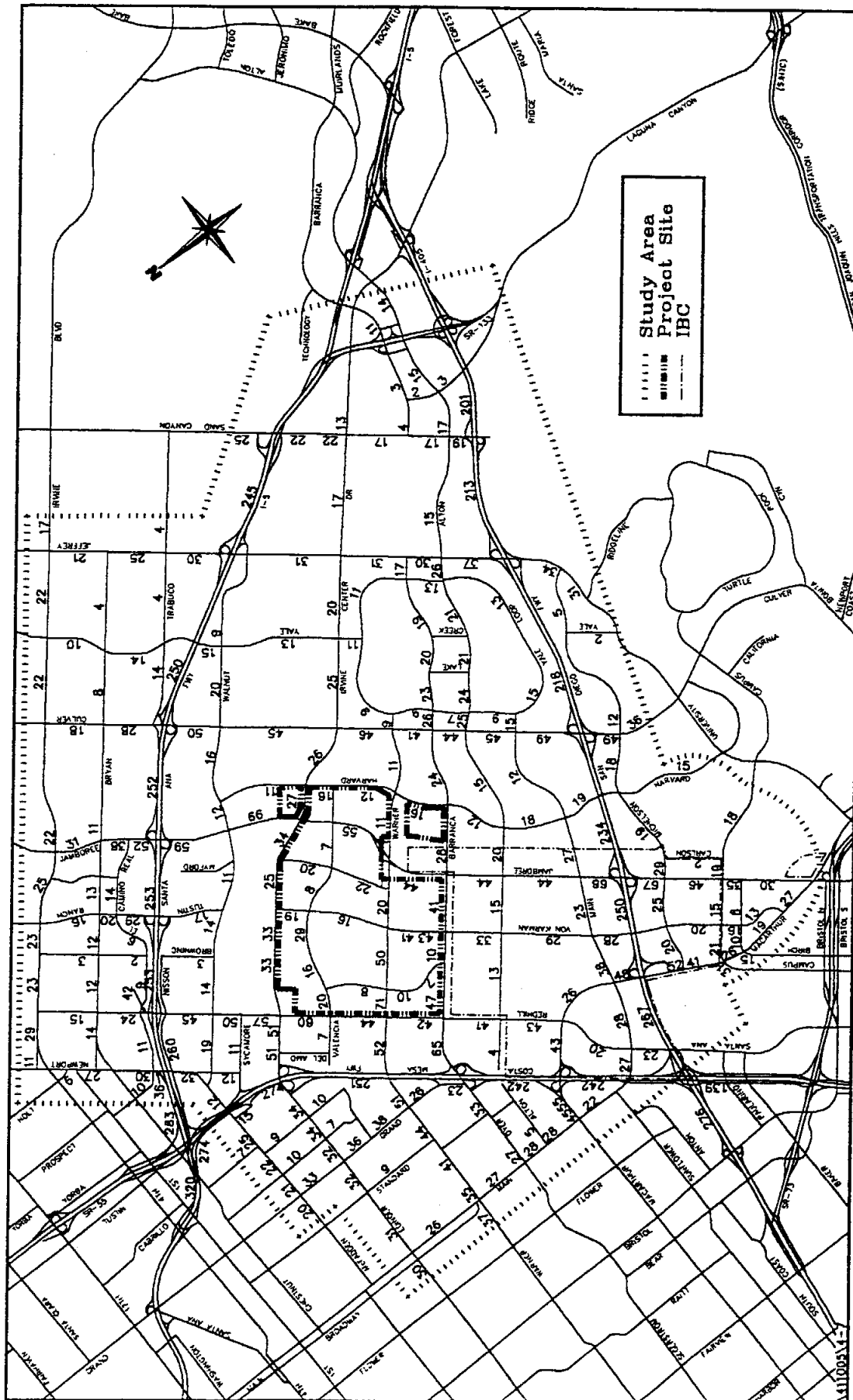


Figure 4-7
EXISTING PLUS
REUSE ALTERNATIVE 2
ADT VOLUMES (000s)

Table 4-12

SUMMARY OF IMPACTED INTERSECTIONS
(Existing Plus Reuse Alternative 2)

LOCATION	EXISTING BASELINE 1997		EXISTING REUSE ALT 2		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN								
28. Red Hill & Walnut ¹	.97	.89	1.27	1.14	.30	.25	c	p
29. Red Hill & Sycamore ¹	.94	.80	1.40	1.06	.46	.26	c	p
30. Red Hill & Edinger ¹	.83	1.00	1.19	1.70	.36	.70	p	c
31. Red Hill & Valencia ¹	.71	.68	1.13	1.37	.42	.69	p	p
100. Jamboree & Edinger ¹	.79	.82	.86	1.20	.07	.38	-	p
TUSTIN/SANTA ANA								
77. Red Hill & Warner ¹	.63	.59	1.32	2.05	.69	1.46	p	p
TUSTIN/IRVINE								
86. Von Karman & Barranca ²	.57	.79	1.26	1.08	.69	.29	p	p
103. Jamboree & Barranca ^{1,2}	.78	.84	.94	1.04	.16	.20	p	p
TUSTIN/IRVINE/SANTA ANA								
78. Red Hill & Dyer/Barranca ^{1,2}	.83	.75	1.14	1.02	.31	.27	p	p
SANTA ANA								
47. Main & Warner	.76	.88	.88	1.02	.12	.14	-	p
51. Main & MacArthur	.66	.90	.66	.93	.00	.03	-	p
61. Grand & Edinger ¹	.71	.88	.75	.98	.04	.10	-	p
63. Grand & Warner ¹	.54	.75	.93	1.18	.39	.43	p	p
66. Grand & Dyer ¹	.62	.82	.79	.97	.17	.15	-	p
68. Pullman & Dyer ¹	.48	.73	.77	1.04	.29	.31	-	p
198. Bristol & Warner	.85	.91	.92	.92	.07	.01	p	-
IRVINE								
80. Red Hill & MacArthur ²	.78	1.01	.98	1.19	.20	.18	-	c
98. Jamboree (SB) & Walnut	.93	.60	1.17	.78	.24	.18	c	-
99. Jamboree (NB) & Walnut	.37	.80	.41	1.00	.04	.20	-	p
128. Culver & Warner	.74	.67	.75	.94	.01	.27	-	p
IRVINE/SANTA ANA								
79. Red Hill & Alton ²	.47	.84	.49	.92	.02	.08	-	p

c - project contributes to deficiency
p - project causes deficiency

¹ SATTSIP intersection

² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs

* Location identified in City of Irvine as an ATMS intersection which discounts the AM and PM peak hour ICUs by .05; therefore there is no project impact at this location. Also, currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements.

Level of service ranges: A=.00-.60 B=.61-.70 C=.71-.80 D=.81-.90 E=.91-1.00 F=Above 1.00

Table 4-13

FREEWAY RAMP INTERSECTION IMPACT SUMMARY
(Existing Plus Reuse Alternative 2)

LOCATION	EXISTING BASELINE 1997		EXISTING REUSE ALT 2		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN								
10. Newport & I-5 SB/Nisson ¹	.76	.78	1.01	.83	.25	.05	p	-
16. SR-55 NB Ramps & Edinger ^{1,2}	.66	.68	1.04	1.39	.38	.71	p	p
24. Red Hill & I-5 NB Ramps ¹	.74	.83	.77	1.00	.03	.17	-	p
SANTA ANA								
67. SR-55 NB Ramps & Dyer ¹	.70	.83	.95	1.46	.25	.63	p	p
75. SR-55 SB Ramps & Edinger ^{1,2}	.77	.98	.77	1.05	.00	.07	-	c
IRVINE								
95. Jamboree & I-5 SB Ramps ²	.93	.71	1.14	.83	.21	.12	c	-
108. Jamboree & I-405 NB Ramps ^{2,3}	1.21	1.06	1.32	1.12	.11	.06	c	c

p - project causes deficiency

c - project contributes to deficiency

¹ SATTSIP intersection² CMP monitored intersection³ IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

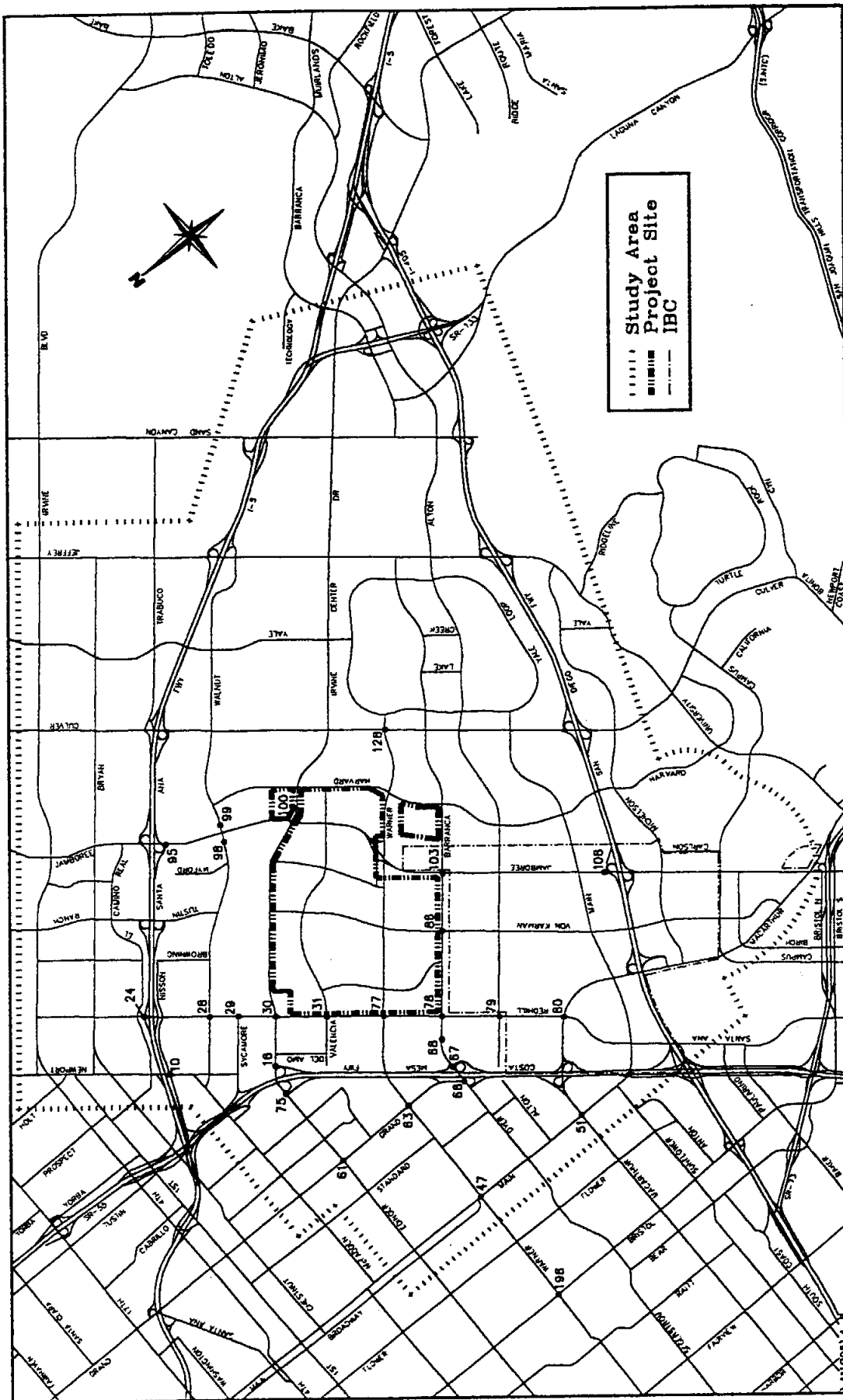


Figure 4--8
EXISTING PLUS
REUSE ALTERNATIVE 2
IMPACTED INTERSECTIONS

unacceptable level during existing AM peak hour baseline conditions to an acceptable level (ICU .90 or below) with the project.

4.5.A.2 Year 2005 Roadway Impacts (Reuse Alternative 2)

Year 2005 ADT traffic forecasts on the year 2005 committed network for this alternative are illustrated in Figure 4-9. A listing of 2005 link volume data (the ADTs shown in Figure 4-9 and corresponding peak hour volumes) can be found in Appendix B. While this information is not used directly in the determination of project impacts, it is used to supplement the peak hour intersection data used in the actual impact analysis by checking the adequacy of the midblock lanes on the study area arterial network during peak hour with-project conditions. No roadway links would be inadequate in the year 2005 for this alternative.

A complete listing of the year 2005 baseline and with-project ICUs can be found in Appendix D with actual ICU calculations in Appendix E. The year 2005 analysis also includes an evaluation of the study area freeway interchange ramp intersections. Those arterial locations and ramp intersections that would have a significant project impact are listed in Tables 4-14 and 4-15 and shown in Figure 4-10. One location in the City of Irvine (#120, Harvard Avenue and Michelson Drive) would be improved from an unacceptable level during 2005 AM peak hour baseline conditions to an acceptable level (ICU .90 or below) with the project.

- Insert (see page 4-30a) -

4.5.A.3 Year 2020 Roadway Impacts (Reuse Alternative 2)

Year 2020 ADT traffic forecasts on the committed network for Reuse Alternative 2 are illustrated in Figure 4-11. A listing of 2020 link volume data (the ADTs shown in Figure 4-11 and corresponding peak hour volumes) can be found in Appendix B. No roadway links would be inadequate for this alternative.

A complete listing of the year 2020 ICUs can be found in Appendix D with actual ICU calculations in Appendix E. The year 2020 analysis also includes an evaluation of the study area freeway interchange ramp intersections. Those arterial locations and ramp intersections that would have a significant project impact are listed in Tables 4-16 and 4-17 and shown in Figure 4-12.

Insert page 4-30 as last paragraph under Section 4.5.A.2

It should be noted that currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the TCA, Cities of Tustin and Irvine 1998 MOA. The MOA defined interim improvements, which in this traffic report are assumed completely constructed by year 2005, and established a funding agreement with a maximum dollar amount for future improvements to maintain an acceptable level of service at this location. Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible.

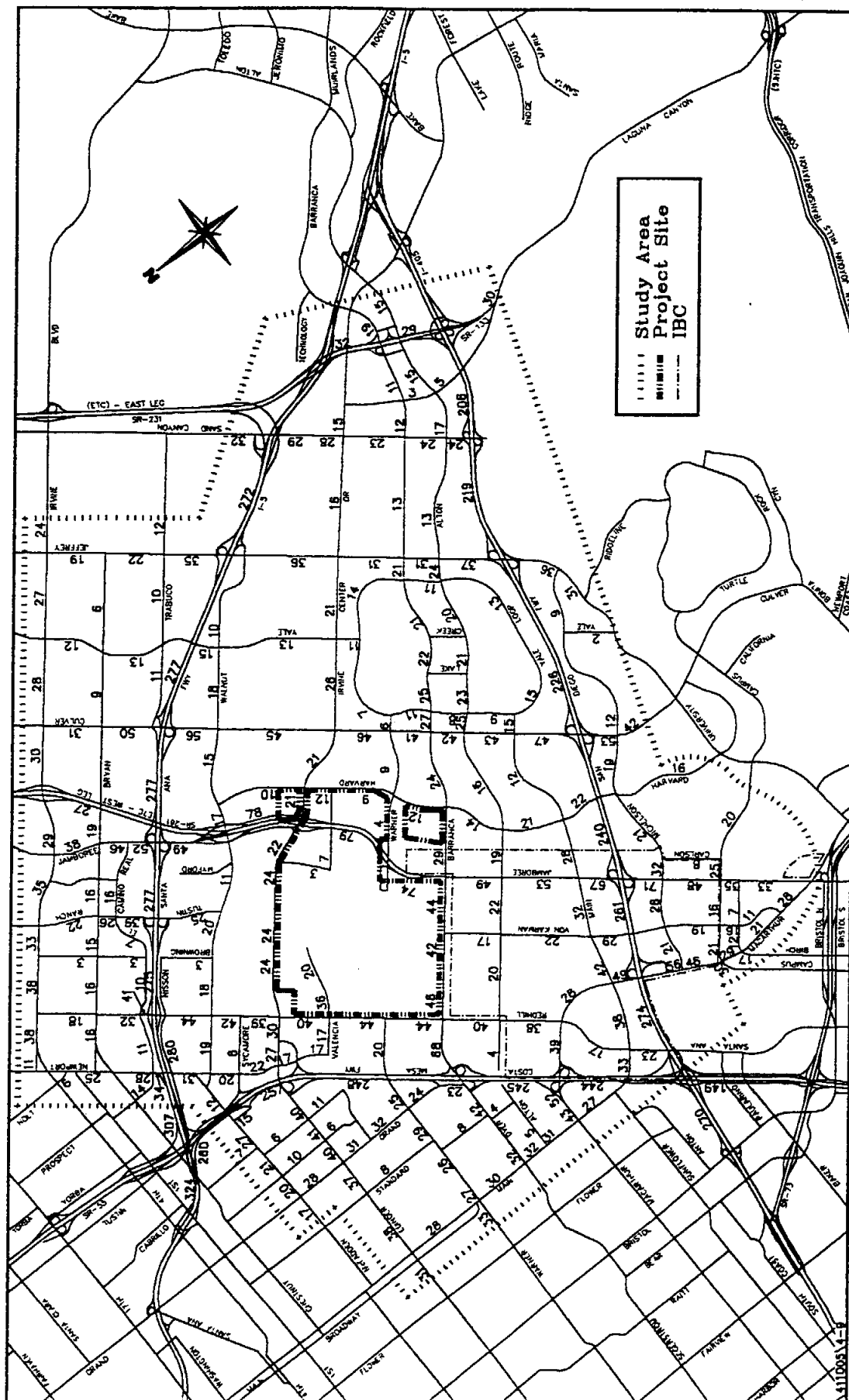


Figure 4-9

2005 ADT VOLUMES (000s)
- REUSE ALTERNATIVE 2

Table 4-14

SUMMARY OF IMPACTED INTERSECTIONS
(2005 Reuse Alternative 2)

LOCATION	2005 BASELINE ²		2005 REUSE ALT 2		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN								
30. Red Hill & Edinger ¹	.68	.67	.93	.98	.25	.31	p	p
31. Red Hill & Valencia ¹	.47	.57	1.09	1.22	.62	.65	p	p
42. Tustin Ranch & Walnut	.82	1.14	.81	1.19	-	.05	-	c
TUSTIN/SANTA ANA								
77. Red Hill & Warner ¹	.60	.51	1.19	1.06	.59	.55	p	p
TUSTIN/IRVINE								
86. Von Karman & Barranca ²	.63	.95	.63	1.13	.00	.18	-	c
103. Jamboree & Barranca ^{1,2}	.76	.97	.86	1.11	.10	.14	-	p*
SANTA ANA								
47. Main & Warner	.74	1.05	.81	1.10	.07	.05	-	c
48. Main & Dyer	.79	1.03	.78	1.07	-	.04	-	c
61. Grand & Edinger ¹	.82	.90	.90	.95	.08	.05	-	p
72. Ritchey & Edinger ¹	.52	.87	.57	.94	.05	.07	-	p

p - project causes deficiency

c - project contributes to deficiency

¹ SATTSIP intersection² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs³ 2005 baseline represents cumulative future development in year 2005 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

- Insert (see page 4-32a) -

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Table 4-15

FREEWAY RAMP INTERSECTION IMPACT SUMMARY
(2005 Reuse Alternative 2)

LOCATION	2005 BASELINE ²		2005 REUSE ALT 2		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
{No freeway-ramp intersection impacted}								
SANTA ANA								
75. SR-55 SB Ramps & Edinger ¹	.88	1.19	.90	1.29	.02	.10	-	c

c - project contributes to deficiency

¹ SATTSIP & CMP intersection² 2005 baseline represents cumulative future development in year 2005 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Insert page 4-32 (Table 4-14) as footnote

* Currently unidentified future improvements beyond those presented for 2005 will be made to this intersection to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Therefore, impacts of the reuse plan are difficult to quantify at this time and could be less at this location because of unknown improvements.

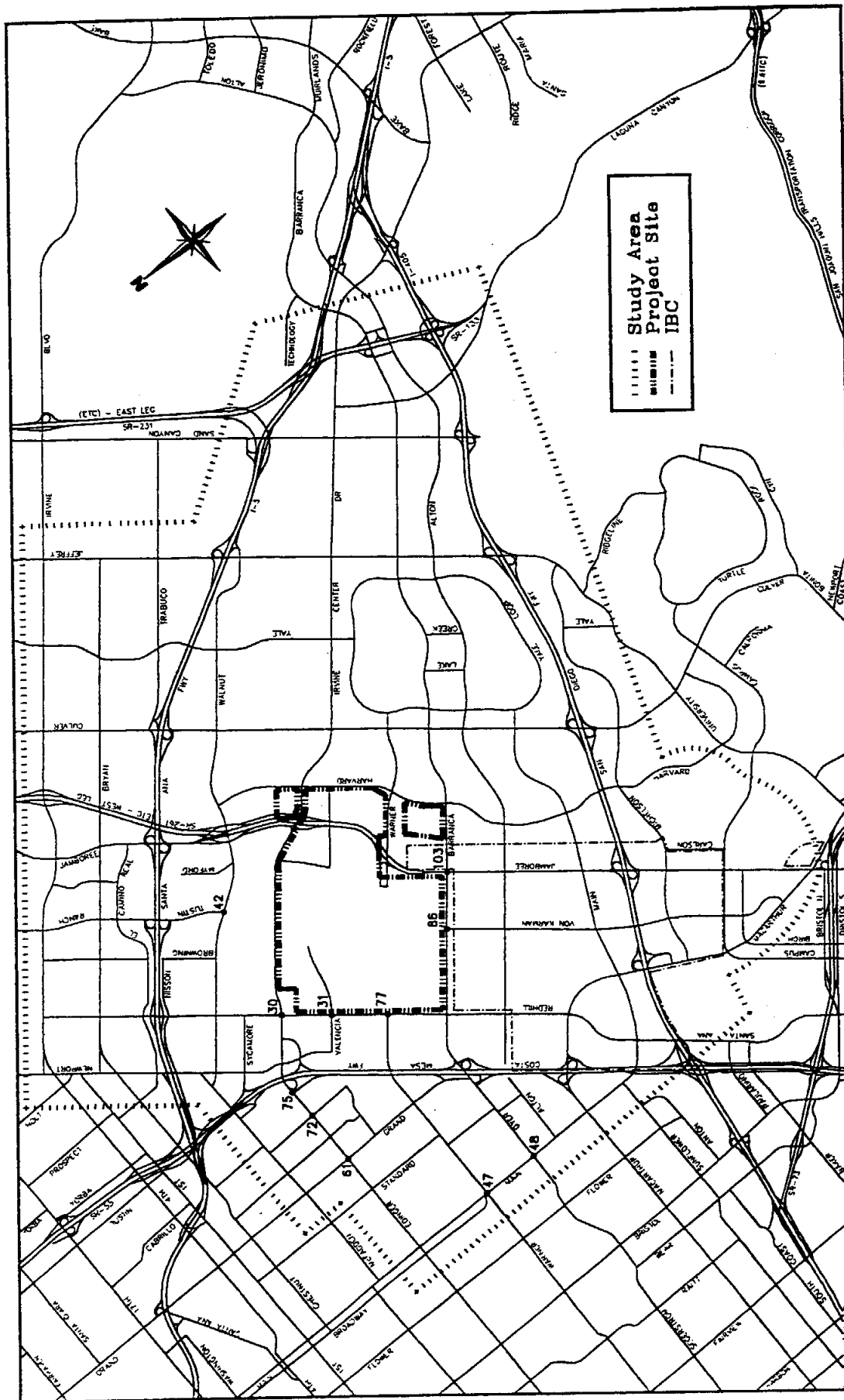


Figure 4-10

2005 IMPACTED INTERSECTIONS
- REUSE ALTERNATIVE 2

NOTE: Due to the corrected committed roadway network, intersections 47, 48, 72 & 75 are additional impacted locations.

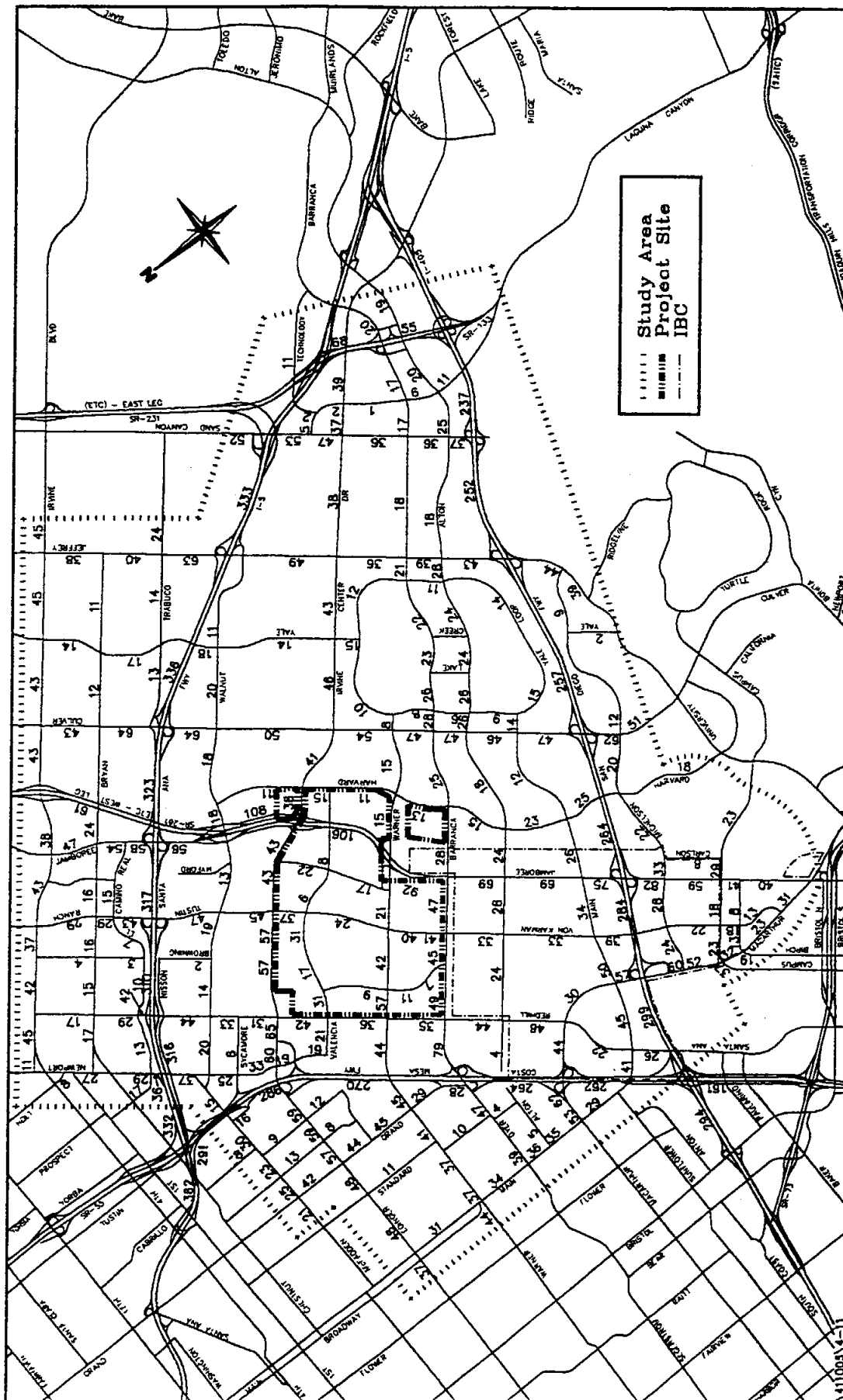


Figure 4-11
2020 ADT VOLUMES (000s)
- REUSE ALTERNATIVE 2

Table 4-16

SUMMARY OF IMPACTED INTERSECTIONS
(2020 Reuse Alternative 2)

LOCATION	2020 BASELINE ¹		2020 REUSE ALT 2		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN								
15. Newport & Edinger ¹	.85	.87	.90	.96	.05	.09	-	p
30. Red Hill & Edinger ¹	.75	.88	.84	.92	.09	.04	-	p
42. Tustin Ranch & Walnut	.84	.89	1.15	1.08	.31	.19	p	p
TUSTIN/IRVINE								
86. Von Karman & Barranca ²	.61	.77	.91	1.07	.30	.30	-	p
103. Jamboree & Barranca ^{1,2}	.83	1.15	1.00	1.26	.17	.11	-	e**
SANTA ANA								
48. Main & Dyer	.84	1.10	.76	1.15	-	.05	-	e
61. Grand & Edinger ¹	.98 .75	1.05 .84	1.02 .80	1.18 .98	.04 .05	.15 .14	e-	e2
63. Grand & Warner ¹	.61 .57	.90 .71	.82 .78	1.09 1.00	.21	.19 .29	-	p
66. Grand & Dyer ¹	.73 .66	.97 .94	.73 .72	1.10 1.04	.06 .06	.13 .10	-	c
70. Lyon & Edinger ¹	.86	.97	.88	1.08	.02	.11	-	c
198. Bristol & Warner	.88	1.01	.92	1.01	.04	.00	p	-
202. Standard & Edinger	.80	.95	.89	1.01	.09	.06	-	c
IRVINE								
81. Red Hill & Main ²	.70	.99	.74	1.17	.04	.18	-	p
89. Von Karman & Michelson ²	.68	1.07	.89	1.16	.21	.09	-	c
106. Jamboree & Alton ²	.94	1.01	.92	1.07	-	.06	-	p
118. Harvard & Alton	.85	.89	.93	.85	.08	-	p	-
127. Culver & Irvine Center	.90	.88	.86	.92	-	.04	-	*
128. Culver & Warner	.79	.79	.83	.95	.04	.16	-	p
IRVINE/SANTA ANA								
79. Red Hill & Alton ²	.68	1.01	.70	1.08	.02	.07	-	p

p - project causes deficiency

c - project contributes to deficiency

* Location identified in City of Irvine as an ATMS intersection which discounts the AM and PM peak hour ICUs by .05; therefore there is no project impact at this location.

** Currently unidentified future improvements beyond those presented for 2005 will be made to this intersection to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Therefore, impacts of the reuse plan are difficult to quantify at this time and could be less at this location because of unknown improvements.

¹ SATTSP intersection² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs³ 2020 baseline represents cumulative future development in year 2020 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Table 4-17

FREEWAY RAMP INTERSECTION IMPACT SUMMARY
(2020 Reuse Alternative 2)

LOCATION	2020 BASELINE ²		2020 REUSE ALT 2		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
SANTA ANA								
~~59. Hotel Terrace/SR-55 & Dyer²~~	~~.68~~	~~.87~~	~~.76~~	~~.96~~	~~.08~~	~~.09~~	-	p
67. SR-55 NB Ramps & Dyer ¹	<u>.76 .68</u>	<u>.69 .61</u>	.81	.92	<u>.05 .13</u>	<u>.23 .31</u>	-	p

p - project causes deficiency

¹ SATTSIP intersection

² 2020 baseline represents cumulative future development in year 2020 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

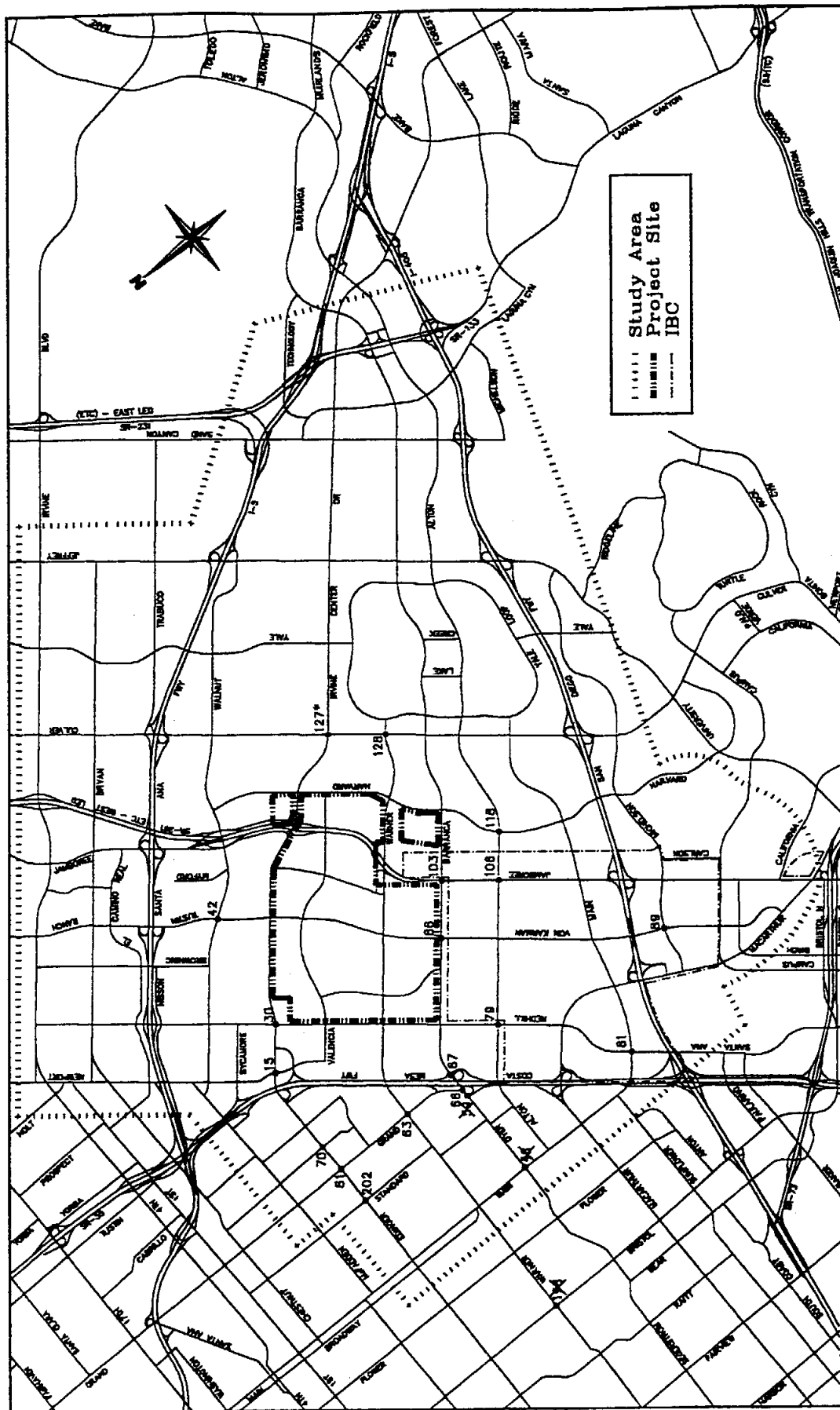


Figure 4-12

2020 IMPACTED INTERSECTIONS
- REUSE ALTERNATIVE 2

* Location identified in City of Irvine as an ATMS intersection which discounts the AM and PM peak hour ICUs by .05; therefore there is no project impact at this location.

NOTE: Due to the corrected committed roadway network, intersections 48, 59 & 198 are no longer impacted locations.

- Insert (see page 4-38a) -

Mitigation measures for these locations are discussed later in Section 4.5.B. Two locations in the study area would be improved from an unacceptable level during 2020 baseline conditions to an acceptable level (ICU .90 or below) with the project; #22, Red Hill Avenue at Bryan Avenue, in the AM peak hour and #91, Jamboree Road at Irvine Boulevard, in the AM and PM peak hours. These locations would meet the desired performance standard under this alternative.

4.5.A.4 Public Transit Impacts (Reuse Alternative 2)

The land uses in Reuse Alternative 2 would impact public transit in Orange County by creating additional demand for transit service. At the same time, the new arterial roadways across the Base would provide opportunities for future bus routing, serving both future land uses on the base and also public transit riders that might benefit from the new bus routing opportunities. OCTA carries out regular updates of the Countywide transit system. Each phase of development on the Base should be included as part of that update program so that these impacts and opportunities related to development of the base can be addressed with each system update.

Benefitting the reuse area as well as the surrounding area, is a proposed commuter rail station planned to be located in the City of Tustin on the northwest corner of Jamboree Road and Edinger Avenue near the SCRRA/OCTA Railroad.

4.5.A.5 Pedestrian and Bicycle Impacts (Reuse Alternative 2)

Future residential development on the base would add to the usage of the Countywide bike trail system. At the same time, development of new roadways across the Base would add to the system of bike trails, providing additional segments and greater connectivity. No specific bicycle impacts of the Reuse Alternative 2 are identified, and the added bike trails would provide an overall benefit to the County bike trail system.

No pedestrian impacts of this alternative are identified.

Insert as first paragraph of page 4-38

It should be noted that currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the TCA, Cities of Tustin and Irvine 1998 MOA. The MOA defined interim improvements, which in this traffic report are assumed completely constructed by year 2005, and established a funding agreement with a maximum dollar amount for future improvements to maintain an acceptable level of service at this location. Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible.

4.5.A.6 Construction Impacts (Reuse Alternative 2)

Traffic impacts due to construction would occur as a result of development of the site. The primary activities generating construction traffic are:

1. Roadway construction
2. Site development
3. Other infrastructure development (water, sewer, etc.)

The magnitude of the impacts would depend on the type and location of such activities, and would be monitored by City of Tustin administrative procedures for such activities. ~~Such procedures include designated routes for heavy trucks (i.e., major roadways only and avoiding peak hours).~~

- Insert 1 (see page 4-39a) -

4.5.B MITIGATION MEASURES (Reuse Alternative 2)

Mitigation measures for project impacts would be in the form of lane changes or intersection operating efficiency. The former adds or changes lanes by restriping or construction to increase capacity, and the latter implements ATMS improvements *and other traffic signal phasing modifications* to increase operating efficiency. The identified mitigation measures may be either or both of these improvements. An ICU reduction of .05 is taken for ATMS.

- Insert 2 (see page 4-39a) -

~~No specific mitigation measures are identified for the project stand-alone analysis because of the hypothetical nature of that evaluation (full project buildout with no change to external conditions). In the sections which follow, mitigation measures for Reuse Alternative 2 for year 2005 and year 2020 are presented.~~

4.5.B.1 Year 2005 Mitigation Measures (Reuse Alternative 2)

A set of mitigation measures are presented here for the intersections identified as being impacted by the project for 2005. These are summarized in Table 4-18 in the form of lane changes (additions or restriping) at individual intersections or as ATMS contributions to increase intersection

Insert 1 page 4-39 to last sentence of last paragraph under Section 4.5.A.6

Possible significant impacts could include lane closures with short-term disruption to the public. Measures to minimize conflicts could include designated routes and times for heavy trucks (i.e., major roadways only and avoiding peak hours). The procedures should be coordinated with neighboring jurisdictions that would be affected.

In conjunction with the approval of a site development permit, the City of Tustin and the City of Irvine, as applicable (for that portion of the reuse plan within Irvine), shall require each developer to provide traffic operations and control plans that would minimize the traffic impacts of proposed construction activity. The plans shall address roadway and lane closures, truck hours and routes, and notification procedures for planned short-term or interim changes in traffic patterns. The City of Tustin and the City of Irvine, as applicable, shall ensure that the plan would minimize anticipated delays at major intersections. Prior to approval, the City of Tustin or Irvine, as applicable, shall review the proposed traffic control and operations plans with an affected jurisdiction.

Insert 2 page 4-39 to end of first paragraph under Section 4.5.B

Alternative improvements that provide an equivalent level of mitigation in 2005 or 2020 to what are presented in the following sections may be identified in consultation between the City of Tustin and the City of Irvine, as applicable, and the impacted jurisdiction.

Table 4-18

MITIGATION LANES FOR 2005 REUSE ALTERNATIVE 2 IMPACTED INTERSECTIONS

LOCATION		—SB—			—WB—			—NB—			—EB—			COMMENTS ¹
		L	T	R	L	T	R	L	T	R	L	T	R	
TUSTIN														
30. Red Hill & Edinger	Base	2	3	1	2	3	1	2	3	1	2	3	1	Additional access on Edinger Ave
	Mit.	2	3	1	2	3	1	2	3	1	2	3	1	
31. Red Hill & Valencia	Base	2	3	1	1	2	1	2	3	1	1	2	1	Additional access on Edinger Ave and
	Mit.	2	3	1	2	2	1	2	3	1	1	2	1	
ATMS														
42. Tustin Ranch & Walnut	Base	1.5	-	1.5	-	2	d	-	-	-	1	2	-	
	Mit.	1.5	-	1.5	-	2	d	-	-	-	2	2	-	
TUSTIN/SANTA ANA														
77. Red Hill & Warner	Base	1	3	-	1	1	1	2	3	1	2	1	1	
	Mit.	2	3	-	1	1	2	2	3	1	2	2	1	
TUSTIN/IRVINE														
86. Von Karman & Barranca	Base	-	-	-	2	3	-	2	-	1	-	3	d	Interim improvement only (<u>until such time the extension of Tustin Ranch Road to Barranca Parkway is built</u>), not necessary for 2020
	Mit.	-	-	-	2	3	-	2	-	2	-	3	d	
103. Jamboree & Barranca ²	Base	2	4	f	2	3	f	2	4	f	2.5	2.5	1	Additional <u>project</u> access on Warner Ave near Jamboree Rd to <u>redirect project traffic away from this intersection</u>
	Mit.	2	4	f	2	3	f	2	4	f	2.5	2.5	1	
SANTA ANA														
47. <u>Main & Warner</u>	<u>Base</u>	<u>2</u>	<u>3</u>	-	<u>1</u>	<u>2</u>	-	<u>2</u>	<u>3</u>	-	<u>1</u>	<u>2</u>	<u>1</u>	
	<u>Mit.</u>	<u>2</u>	<u>3</u>	-	<u>1</u>	<u>3</u>	-	<u>2</u>	<u>3</u>	-	<u>1</u>	<u>2</u>	<u>1</u>	
48. <u>Main & Dyer</u>	<u>Base</u>	<u>1</u>	<u>3</u>	-	<u>1</u>	<u>2</u>	-	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	
	<u>Mit.</u>	<u>2</u>	<u>3</u>	-	<u>1</u>	<u>2</u>	-	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	
61. Grand & Edinger	Base	1	3	-	1	3	-	1	3	-	1	3	-	
	Mit.	1	3	-	1	3	-	2	3	1	2	1	3	
72. <u>Ritchey & Edinger</u>	<u>Base</u>	<u>1</u>	<u>2</u>	-	<u>1</u>	<u>3</u>	-	<u>1</u>	<u>1</u>	-	<u>1</u>	<u>3</u>	-	
	<u>Mit.</u>	<u>1</u>	<u>2</u>	-	<u>1</u>	<u>3</u>	-	<u>1</u>	<u>2</u>	-	<u>1</u>	<u>3</u>	-	

Base - Intersection lanes without mitigation

d - de facto right-turn

L, T, R - left, through, right

Enlarged/Bold - notation indicates lane changes

A .5 or 1.5 lane designation represents lane sharing between different movements

¹ Clarification of the intersection improvements being presented or other mitigation if intersection improvements are not identified.² Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible.

efficiency. For the impact to intersection locations #31 (Red Hill Avenue and Valencia Avenue) and #30 (Red Hill Avenue and Edinger Avenue) the proposed mitigation measure is to provide an additional access into the site from Edinger Avenue (the proposed lane changes and proposed ATMS at Red Hill Avenue and Valencia Avenue do not fully mitigate the impacts of the project). For the impact to #103 (Jamboree Road and Barranca Parkway), the proposed mitigation measure is to ~~provide an additional~~ *redirect project traffic away from this intersection by providing a project* access on Warner Avenue near Jamboree Road ~~(in addition to the the Barranca Parkway access east of Von Karman Avenue)~~ to serve the proposed project uses on the northeast corner of Von Karman Avenue and Barranca Parkway. It should be noted that mitigation for the intersection of #86 (Von Karman Avenue and Barranca Parkway) is an interim improvement only *(until such time the extension of Tustin Ranch Road to Barranca Parkway is built)* and is not necessary for 2020.

- Insert 1 (see page 4-41a) -

4.5.B.2 Year 2020 Mitigation Measures (Reuse Alternative 2)

Mitigation measures for the intersections shown as being impacted by Reuse Alternative 2 are summarized in Table 4-19 in the form of lane changes or ATMS funding contributions.

The mitigation measures listed here are generally designed to mitigate the project impacts. In cases where a deficiency is caused by the project, then such improvements are then the full responsibility of the project. Where the project is a contributor to an already deficient condition under 2020 baseline, then a fair share participation in future improvements would generally be more appropriate. For example, the mitigation measures shown here would generally more than mitigate the project impacts thereby providing capacity for non-project traffic.

- Insert 2 (see page 4-41a) -

~~Two~~ *One* interchange ramp intersections would be impacted by the project; ~~both of which t.~~ *The* identified deficiency ~~at this location~~ would be caused by the project. Mitigation measures for these ~~this~~ locations are summarized in Table 4-20.

~~The exact nature of the improvement in each case would be the subject of special design studies in association with Caltrans.~~

Insert page 4-41 at end of first paragraph on top of page

One interchange ramp intersection would be impacted by the project. The project would contribute to the identified deficiency at this location. The mitigation measure for this location is summarized in Table 4-18a.

<u>Table 4-18a</u>													
<u>FREEWAY RAMP INTERSECTION MITIGATION SUMMARY</u>													
<u>(2005 Reuse Alternative 2)</u>													
<u>LOCATION</u>	<u>— SB —</u>			<u>— WB —</u>			<u>— NB —</u>			<u>— EB —</u>			
	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	
<u>SANTA ANA</u>													
<u>75. SR-55 SB Ramps & Edinger</u>	<u>Base</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>1.5</u>	<u>.5</u>	<u>f</u>	<u>1</u>	<u>2</u>	<u>f</u>
	<u>Mit.</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>1.5</u>	<u>.5</u>	<u>f</u>	<u>1</u>	<u>3</u>	<u>f</u>
<u>Base</u> - <u>Intersection lanes without mitigation</u>													
<u>f</u> - <u>free right-turn</u>													
<u>L, T, R</u> - <u>left, through, right</u>													
<u>SB, WB, NB, EB</u> - <u>southbound, westbound, northbound, eastbound</u>													
<u>Enlarged/Bold</u> - <u>notation indicates lane changes</u>													
<u>.5 or 1.5 lane designation represents lane sharing between different movements</u>													

Insert 2 page 4-41 after second paragraph of Section 4.5.B.2

As noted previously, currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). The MOA defined interim improvements, which in this traffic report are assumed completely constructed by year 2005, and established a funding agreement with a maximum dollar amount for future improvements to maintain an acceptable level of service at this location. Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

Table 4-19

MITIGATION LANES FOR 2020 REUSE ALTERNATIVE 2 IMPACTED INTERSECTIONS

LOCATION		—SB—			—WB—			—NB—			—EB—			COMMENTS ¹
		L	T	R	L	T	R	L	T	R	L	T	R	
TUSTIN														
15. Newport & Edinger	Base	2	2.5	1.5	1	3	f	2	3	d	2	3	1	Lane changes and ATMS
	Mit.	2	2.5	1.5	2	3	f	2	3	d	2	3	1	
30. Red Hill & Edinger	Base	2	3	1	2	3	1	2	3	1	2	3	1	No lane changes (ATMS)
	Mit.	2	3	1	2	3	1	2	3	1	2	3	1	
42. Tustin Ranch & Walnut	Base	2	3	d	1	2	1	2	3	d	1	2	1	Lane changes and ATMS
	Mit.	2	3	d	2	2	1	2	3	d	2	2	1	
TUSTIN/IRVINE														
86. Von Karman & Barranca	Base	2	3	2	2	4	1	2	3	1	2	4	1	No identifiable mitigation
	Mit.	2	3	2	2	4	1	2	3	1	2	4	1	
103. Jamboree & Barranca ²	Base	2	4	f	2	3	f	2	4	f	2.5	2.5	1	No identifiable mitigation
	Mit.	2	4	f	2	3	f	2	4	f	2.5	2.5	1	
SANTA ANA														
48. Main & Dyer	Base	2	3		1	3		2	3		1	3	1	
	Mit.	2	3		2	3		2	3		1	3	1	
61. Grand & Edinger	Base	2	3	1	+2	3	1	+2	3	1	+2	3	1	
	Mit.	2	3	1	2	3	1	2	3	1	2	3	1	
63. Grand & Warner	Base	2	3	1	2	3	1	+2	3	1	2	3	1	Lane changes and WB right-turn overlap
	Mit.	2	3	1	2	3	1	2	3	-	2	3	1	
66. Grand & Dyer	Base	2	-	1	-	3	1	-	-	-	+2	3	-	
	Mit.	1.5	-	1.5	-	3	1	-	-	-	+2	3	-	
70. Lyon & Edinger	Base	1	1	1	1	3	1	1	1	2	1	3	-	Lane changes and N/S split phasing
	Mit.	2	1.5	1.5	1	3	1	1	1.5	1.5	2	3	1	
198. Bristol & Warner	Base	1	3		1	3		1	3		1	3		
	Mit.	2	3		1	3		2	3		1	3		
202. Standard & Edinger	Base	1	2	-	1	3	-	1	2	-	1	3	-	
	Mit.	1	2	-	1	3	1	1	2	-	1	3	-	
IRVINE														
81. Red Hill & Main	Base	1	3	d	2	3	d	2	3	f	1	3	d	
	Mit.	1	3	f	2	3	d	2	3	f	1	3	d	

(Continued)

Table 4-19 (cont)
MITIGATION LANES FOR 2020 REUSE ALTERNATIVE 2 IMPACTED INTERSECTIONS

LOCATION		—SB—			—WB—			—NB—			—EB—			COMMENTS ¹
		L	T	R	L	T	R	L	T	R	L	T	R	
IRVINE (cont)														
89. Von Karman & Michelson	Base	1	2	d	1	2	f	1	2	1	1	2	d	
	Mit.	1	2	d	1	2	f	1	2	1	2	2	d	
106. Jamboree & Alton	Base	2	4	d	2	3	d	2	4	1	2	3	d	
	Mit.	2	4	d	2	3	d	2	5	1	2	3	d	
118. Harvard & Alton	Base	1	2	1	2	3	d	1	2	d	2	3	1	
	Mit.	1	2	1	2	3	d	2	2	d	2	3	1	
128. Culver & Warner	Base	1	3	d	1	2	d	1	3	1	1	2	d	
	Mit.	1	3	d	1	2	d	1	3	1	2	2	d	
IRVINE/SANTA ANA														
79. Red Hill & Alton	Base	1	3	d	2	1	1	1	3	d	1	2	1	
	Mit.	2	3	d	2	1	1	1	3	d	1	2	1	

Base - Intersection lanes without mitigation
 ATMS - Advanced Transportation Management System
 d - de facto right-turn
 f - free right-turn
 L, T, R - left, through, right
 SB, WB, NB, EB - southbound, westbound, northbound, eastbound
 Enlarged/Bold - notation indicates lane changes
 A .5 or 1.5 lane designation represents lane sharing between different movements

¹ Clarification of the intersection improvements being presented or other mitigation if intersection improvements are not identified.

² Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

Table 4-20

FREEWAY RAMP INTERSECTION MITIGATION SUMMARY
(2020 Reuse Alternative 2)

LOCATION	—SB—			—WB—			—NB—			—EB—		
	L	T	R	L	T	R	L	T	R	L	T	R
SANTA ANA												
59. Hotel Terrace/SR-55 & Dyer	Base	5	1.5	1	2	3	1	1.5	5	2	1	3
	Mit.	5	1.5	1	2	3	1	1.5	5	2	1	3
67. SR-55 NB Ramps & Dyer	Base	-	-	-	-	3	4	-	1.5	-	3	f
	Mit.	-	-	-	-	3	2.5	1.5	1.5	-	3	f

Base - Intersection lanes without mitigation
 f - free right-turn
 L, T, R - left, through, right
 SB, WB, NB, EB - southbound, westbound, northbound, eastbound
 Enlarged/Bold - notation indicates lane changes
 A .5 or 1.5 lane designation represents lane sharing between different movements

- Insert 1 (see pages 4-45a through 4-55c) -

4.5.C LEVEL OF SIGNIFICANCE AFTER MITIGATION (Reuse Alternative 2)

The ICU values, *cumulative ADT thresholds and project shares* for the impacted locations with and without mitigation are summarized in Tables 4-21 and 4-22 (year 2005 and year 2020, respectively). ~~Three~~ *Five* intersections in 2020 would not be mitigated under this alternative.

- Insert (see pages 4-45d and 4-45e) -

4.6 IMPACT ANALYSIS - REUSE ALTERNATIVE 3

This alternative features new arterial roadway connections through the base, and hence the project not only adds traffic to the study area circulation system, but also changes the traffic patterns of non-project traffic in the area. The traffic volumes presented in this section reflect both these effects.

The traffic impact analysis information presented in this section compares traffic conditions under the reuse alternative with a corresponding "baseline" for each time frame condition which was presented in Chapter 3.0. The baseline condition assumes the level of activity on the site in 1993 (refer to Chapter 3.0 for further discussion on this condition). The following sections address the impacts and associated mitigation measures for this reuse alternative. Public transit, pedestrian and bicycle, and construction impacts are addressed following the operational roadway analyses.

4.6.A IMPACTS (Reuse Alternative 3)

4.6.A.1 Project Stand-Alone Roadway Impacts (Reuse Alternative 3)

This part of the analysis examines buildout of the full project in the existing transportation setting (1997) which is representative of a 1997 baseline. For this analysis, no modifications or additions were assumed to the existing circulation system outside the reuse area. The roadway system within the reuse area is that shown in Figure 2-6.

Figure 4-13 shows the ADT volumes for existing plus Reuse Alternative 3 conditions. These can be compared with existing baseline volumes presented in Figure 3-2. The volumes in Figure 4-13

4.5.B.3 Additional Mitigation Measures (Reuse Alternative 2)

1. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area within Irvine, shall ensure that the arterial intersection improvements required in 2005 and 2020 are implemented for their respective jurisdictions according to the cumulative ADT threshold and the share noted in Tables 4-21 and 4-22. If subsequent studies demonstrate that the trips would not be generated, or impacts would be different than those projected in this report, the mitigation measures may be modified, subject to the approval of the City of Tustin and any other affected jurisdictions, provided that the mitigation to the same levels of service would be provided.*
2. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area within Irvine, shall contribute, on a fair share basis, to improvements to freeway ramp intersections as listed in Table 4-18a and 4-20. The method of implementing improvements, e.g., restriping or ramp widening, shall be based on special design studies, in association with Caltrans.*
3. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area within Irvine, shall ensure that all on-site circulation system improvements for the reuse plan area assumed in the 2005 and 2020 traffic analysis are implemented according to the cumulative ADT thresholds identified in Table 4-22a.*
4. *Prior to approval of a site development permit or vesting tract, except for financing or conveyance purposes, for all land use designation areas in Reuse Alternative 2 with the exception of the Community Park, a project developer shall enter into an agreement with the City of Tustin and City of Irvine, as applicable for that portion of the reuse plan area within Irvine, which assigns improvements required to the development site and which requires participation in a fair share mechanism to design and construct required on-site and arterial improvements.*

5. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area in Irvine, will monitor new development within the reuse plan area, accounting for the cumulative ADT generated by development projects within the reuse plan area. As each cumulative ADT threshold is reached, the roadway improvements listed shall be constructed before any additional projects within the reuse plan area are approved.*
6. *As part of any implementing rezoning action for the reuse plan area, the City of Tustin shall adopt a trip budget for individual portions of the reuse plan area to assist in the monitoring of cumulative ADT and the amount and intensity of permitted non-residential uses as evaluated in the EIS/EIR.*

Table 4-22a

ON-SITE ADT DEVELOPMENT THRESHOLDS
(Reuse Alternative 2)

<u>PHASE</u>	<u>ADT (CUMULATIVE)</u>		<u>ROADS ADDED*</u>
<u>I</u>	<u>27,000</u>	<u>27,000</u>	<u>Edinger Avenue - along project frontage between Red Hill Ave and Jamboree Rd**</u> <u>Landsdowne Road</u> <u>North Loop Road - Red Hill Avenue to just east of Severns Road (Build 3 lanes only)***</u>
<u>II</u>	<u>81,200</u>	<u>(108,200)</u>	<u>East Connector Road</u> <u>Marble Mountain Road</u> <u>Moffett Drive</u> <u>North Loop Road - Red Hill Avenue to just east of Severns Road (Final Buildout)</u> <u>North Loop Road - East Connector Road to Moffett Drive (Build 3 lanes only)***</u> <u>Red Hill Avenue/Carnegie Avenue Intersection (East Leg)</u> <u>Red Hill Avenue/Warner Avenue Intersection (East Leg)</u> <u>Severns Road</u>
<u>III</u>	<u>26,500</u>	<u>(134,700)</u>	<u>Armstrong Avenue - North Loop Road to Barranca Parkway</u> <u>North Loop Road - just east of Severns Road to East Connector Road</u> <u>North Loop Road - East Connector to Moffett Drive (Final Buildout)</u> <u>East Connector Road - Moffett Drive to Warner Avenue</u> <u>Tustin Ranch Road - Edinger Avenue to North Loop Road (6 lanes)</u> <u>Tustin Ranch Road - Warner Avenue to Barranca Parkway (Build 4 lanes only)***</u> <u>Warner Avenue - Red Hill Avenue to Jamboree Road (Build 4 lanes only)***</u>
<u>IV</u>	<u>38,900</u>	<u>(173,600)</u>	<u>Tustin Ranch Road - North Loop Road to Warner Avenue (Build 4 lanes only)***</u>
<u>V</u>	<u>94,500</u>	<u>(268,100)</u>	<u>Widen Tustin Ranch Road to 6 lanes (Final Buildout)</u> <u>Widen Warner Avenue to 6 lanes (Final Buildout)</u>

* Roadways shall be constructed prior to the issuance of building permits or certificates of occupancy

** Right-of-way for roadway improvements (being done by others) to be dedicated at this time

*** Full right-of-way to be dedicated at this time

Insert 2 page 4-45 at end of Section 4.5.C

In the case of Intersection #103, currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

See Sections 4.4.C.1 and 4.4.C.2 on pages 4-22d and 4-22e for the cumulative ADT threshold and project share methodologies.

Table 4-21

SUMMARY OF INTERSECTION MITIGATION RESULTS
(2005 Reuse Alternative 2)

LOCATION	2005 BASELINE ⁴		2005 REUSE ALT 2		W/MITIGATION		RESULT		PROJECT SHARE (%)	ADT THRESH- HOLD
	AM	PM	AM	PM	AM	PM	AM	PM		
TUSTIN										
30. Red Hill & Edinger ¹	.68	.67	.93	.98	.76	.87	ma	ma	<u>100</u>	<u>86,000</u>
31. Red Hill & Valencia ¹	.47	.57	1.09	1.22	.88	.83	ma	ma	<u>100</u>	<u>62,000</u>
42. Tustin Ranch & Walnut	.82	1.14	.81	1.19	.67	1.06	-	mp	<u>11</u>	<u>51,000</u>
TUSTIN/SANTA ANA										
77. Red Hill & Warner ¹	.60	.51	1.19	1.06	.79	.90	ma	ma	<u>100</u>	<u>63,000</u>
TUSTIN/IRVINE										
86. Von Karman & Barranca ²	.63	.95	.63	1.13	.63	.76	-	ma	<u>100</u>	<u>71,000</u>
103. Jamboree & Barranca ^{1,2}	.76	.97	.86	1.11	.86	1.05	-	ma	-	-
SANTA ANA										
47. Main & Warner	.74	1.05	.81	1.10	.81	.95	-	mp	23	51,000
48. Main & Dyer	.79	1.03	.78	1.07	.78	.99	-	mp	21	60,000
61. Grand & Edinger ¹	.82	.90	.90	.95	.89	.85	-	ma	100	32,000
72. Ritchey & Edinger ²	.52	.87	.57	.94	.56	.70	-	ma	100	67,000
75. SR-55 SB Ramps & Edinger ^{1,3}	.88	1.19	.90	1.29	.82	1.09	-	mp	32	32,000

ma - mitigated to adequate level of service
mp - project impact mitigated

¹ SATTISIP intersection

² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs

³ CMP & freeway ramp intersection

⁴ 2005 baseline represents cumulative future development in year 2005 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

* Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Table 4-22

SUMMARY OF INTERSECTION MITIGATION RESULTS
(2020 Reuse Alternative 2)

LOCATION	2020 BASELINE ²		2020 REUSE ALT 2		W/MITIGATION		RESULT		PROJECT SHARE	ADT THRESH- HOLD	
	AM	PM	AM	PM	AM	PM	AM	PM	(%)		
TUSTIN											
15. Newport & Edinger ¹	.85	.87	.90	.96	.86	.89	-	ma	100	179,000	
30. Red Hill & Edinger ¹	.75	.88	.84	.92	.79	.87	-	ma	100	228,000	
42. Tustin Ranch & Walnut	.84	.89	1.15	1.08	.94	.94	nm	nm	100	126,000	
TUSTIN/IRVINE											
86. Von Karman & Barranca ²	.61	.77	.91	1.07	.91	1.07	-	nm	100	263,000	
103. Jamboree & Barranca ^{1,2}	.83	1.15	1.00	1.26	1.00	1.26	-	nm	-	-	
SANTA ANA											
48. Main & Dyer	.81	1.10	.76	1.15	.66	.95	-	mp			
59. Hotel Terrace/SR-55 & Dyer ³	.68	.87	.76	.96	.70	.89	-	ma			
61. Grand & Edinger ¹	.98	.75	1.05	.84	1.02	.80	1.18	.98	ma	100	188,000
63. Grand & Warner ¹	.61	.57	.90	.71	.82	.77	1.09	1.00	ma	100	219,000
66. Grand & Dyer ¹	.73	.66	.97	.94	.73	.72	1.10	1.04	mp	29	140,000
67. SR-55 NB Ramps & Dyer ¹	.76	.68	.69	.61	.81	.92	.81	.75	ma	100	263,000
70. Lyon & Edinger ¹	.86	.97	.88	1.08	.88	.85	.97	.90	mp	24	137,000
198. Bristol & Warner	.88	1.01	.92	1.01	.88	.94	-	ma			
202. Standard & Edinger	.80	.95	.89	1.01	.89	.92	-	mp	17	161,000	
IRVINE											
81. Red Hill & Main ²	.70	.99	.74	1.17	.74	.90	-	ma	100	171,000	
89. Von Karman & Michelson ²	.68	1.07	.89	1.16	.75	.99	-	ma	27	143,000	
106. Jamboree & Alton ²	.94	1.01	.92	1.07	.92	.97	-	ma	100	241,000	
118. Harvard & Alton	.85	.89	.93	.85	.78	.85	ma	-	100	228,000	
128. Culver & Warner	.79	.79	.83	.95	.74	.85	-	ma	100	228,000	
IRVINE/SANTA ANA											
79. Red Hill & Alton ²	.68	1.01	.70	1.08	.64	.97	-	ma	100	222,000	

ma - mitigated to adequate level of service

nm - project impact not mitigated

mp - project impact mitigated

¹ SATTSIP intersection² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs³ 2020 baseline represents cumulative future development in year 2020 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

* Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

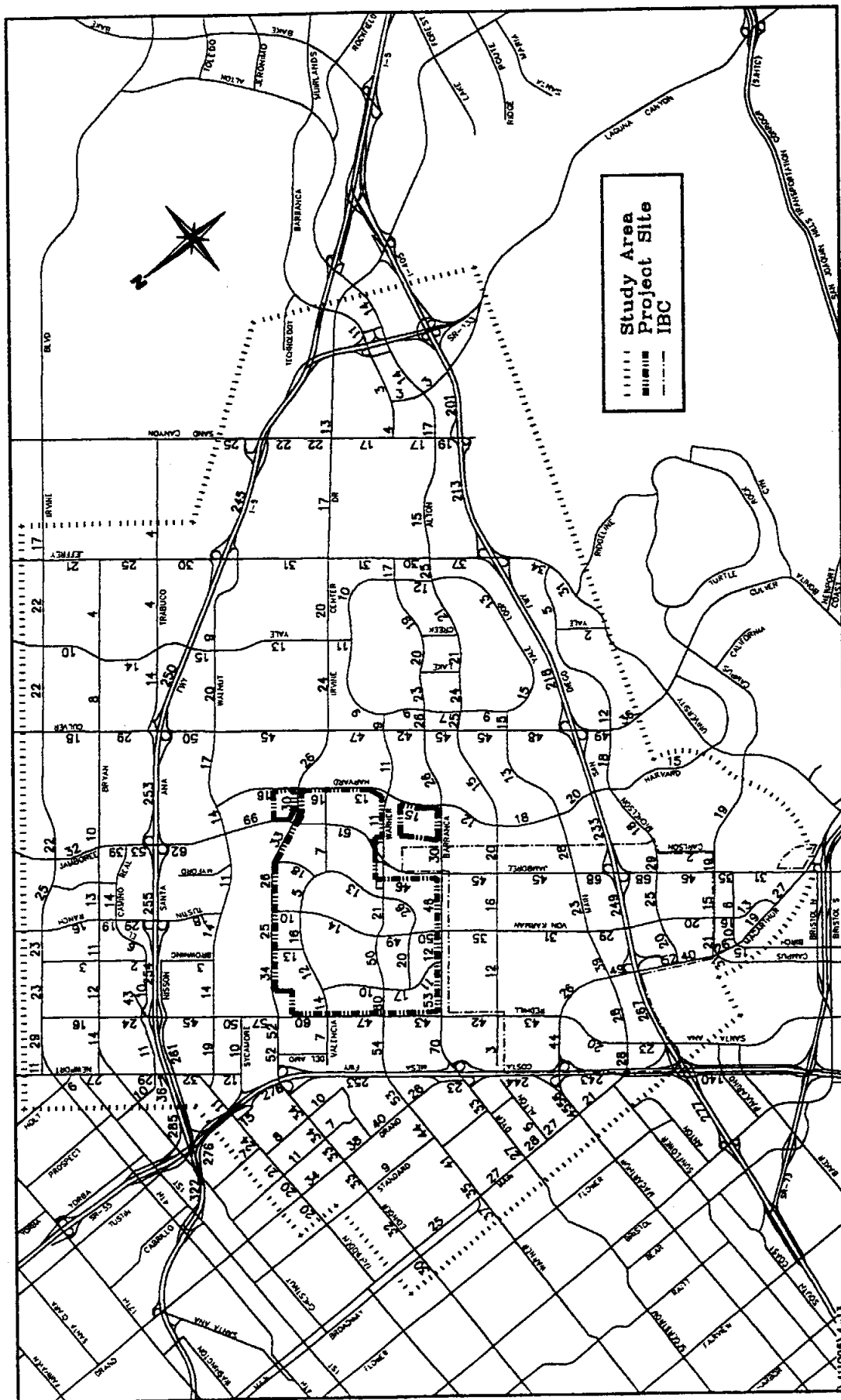


Figure 4-13
EXISTING PLUS
REUSE ALTERNATIVE 3
ADT VOLUMES (000s)

reflect the theoretical trip redistribution effects that would be inherent when reuse land uses attract trips to and from surrounding land uses.

A complete summary of ICU values for existing (1997) baseline and with-project conditions can be found in Appendix D with actual ICU calculations in Appendix E. The project stand-alone (existing) analysis also includes an evaluation of the study area freeway interchange ramp intersections. Tables 4-23 and 4-24 list those arterial locations and ramp intersections that would have a significant impact due to the project, and these locations are illustrated in Figure 4-14. One location in the City of Irvine (#151, Jeffrey Road and I-405 northbound ramps) would be improved from an unacceptable level during existing AM peak hour baseline conditions to an acceptable level (ICU .90 or below) with the project.

4.6.A.2 Year 2005 Roadway Impacts (Reuse Alternative 3)

Year 2005 ADT traffic forecasts on the year 2005 committed network for Reuse Alternative 3 are illustrated in Figure 4-15. A listing of 2005 link volume data (the ADTs shown in Figure 4-15 and corresponding peak hour volumes) can be found in Appendix B. While this information is not used directly in the determination of project impacts, it is used to supplement the peak hour intersection data used in the actual impact analysis by checking the adequacy of the midblock lanes on the study area arterial network during peak hour with-project conditions. No roadway links would be inadequate in year 2005 for this alternative.

A complete listing of the year 2005 baseline and with-project ICUs can be found in Appendix D with actual ICU calculations in Appendix E. The year 2005 analysis also includes an evaluation of the study area freeway interchange ramp intersections. Those arterial locations and ramp intersections that would have a significant project impact are listed in Tables 4-25 and 4-26 and shown in Figure 4-16.

- Insert (see page 4-49a) -

Insert page 4-49 as last paragraph under Section 4.6.A.2

It should be noted that currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the TCA, Cities of Tustin and Irvine 1998 MOA. The MOA defined interim improvements, which in this traffic report are assumed completely constructed by year 2005, and established a funding agreement with a maximum dollar amount for future improvements to maintain an acceptable level of service at this location. Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible.

Table 4-23

SUMMARY OF IMPACTED INTERSECTIONS
(Existing Plus Reuse Alternative 3)

LOCATION	EXISTING BASELINE 1997		EXISTING REUSE ALT 3		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN								
28. Red Hill & Walnut ¹	.97	.89	1.26	1.14	.29	.25	c	p
29. Red Hill & Sycamore ¹	.94	.80	1.36	1.08	.42	.28	c	p
30. Red Hill & Edinger ¹	.83	1.00	1.15	1.68	.32	.68	p	c
31. Red Hill & Valencia ¹	.71	.68	1.03	1.20	.32	.52	p	p
100. Jamboree & Edinger ¹	.79	.82	.84	1.15	.05	.33	-	p
TUSTIN/SANTA ANA								
77. Red Hill & Warner ¹	.63	.59	1.34	2.27	.71	1.68	p	p
TUSTIN/IRVINE								
86. Von Karman & Barranca ²	.57	.79	1.17	1.17	.60	.38	p	p
103. Jamboree & Barranca ^{1,2}	.78	.84	.91	1.09	.13	.25	-	p*
TUSTIN/IRVINE/SANTA ANA								
78. Red Hill & Dyer/Barranca ^{1,2}	.83	.75	1.09	1.04	.26	.29	p	p
SANTA ANA								
47. Main & Warner	.76	.88	.87	1.02	.11	.14	-	p
48. Main & Dyer	.64	.88	.67	.91	.03	.03	-	p
51. Main & MacArthur	.66	.90	.65	.94	-	.04	-	p
61. Grand & Edinger ¹	.71	.88	.76	.98	.05	.10	-	p
63. Grand & Warner ¹	.54	.75	.91	1.17	.37	.42	p	p
66. Grand & Dyer ¹	.62	.82	.75	1.01	.13	.19	-	p
68. Pullman & Dyer ¹	.48	.73	.73	1.11	.25	.38	-	p
198. Bristol & Warner	.85	.91	.92	.91	.07	.00	p	-
IRVINE								
80. Red Hill & MacArthur ²	.78	1.01	.96	1.25	.18	.24	-	c
98. Jamboree (SB) & Walnut	.93	.60	1.14	.83	.21	.23	c	-
99. Jamboree (NB) & Walnut	.37	.80	.42	1.05	.05	.25	-	p
128. Culver & Warner	.74	.67	.76	.94	.02	.27	-	p
IRVINE/SANTA ANA								
79. Red Hill & Alton ²	.47	.84	.48	.95	.01	.11	-	p

c - project contributes to deficiency

p - project causes deficiency

¹ SATTSIP intersection² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs

* Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements.

Level of service ranges: A=.00-.60 B=.61-.70 C=.71-.80 D=.81-.90 E=.91-1.00 F=Above 1.00

Table 4-24

FREEWAY RAMP INTERSECTION IMPACT SUMMARY
(Existing Plus Reuse Alternative 3)

LOCATION	EXISTING BASELINE 1997		EXISTING REUSE ALT 3		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN								
10. Newport & I-5 SB/Nisson ¹	.76	.78	1.01	.83	.25	.05	p	-
16. SR-55 NB Ramps & Edinger ^{1,2}	.66	.68	1.01	1.39	.35	.71	p	p
24. Red Hill & I-5 NB Ramps ¹	.74	.83	.79	.97	.05	.14	-	p
SANTA ANA								
67. SR-55 NB Ramps & Dyer ¹	.70	.83	.92	1.52	.22	.69	-	p
75. SR-55 SB Ramps & Edinger ^{1,2}	.77	.98	.77	1.08	.00	.10	-	c
IRVINE								
95. Jamboree & I-5 SB Ramps ²	.93	.71	1.15	.85	.22	.14	c	-
108. Jamboree & I-405 NB Ramps ^{2,3}	1.21	1.06	1.30	1.14	.09	.08	c	c

p - project causes deficiency

c - project contributes to deficiency

¹ SATTSIP intersection² CMP monitored intersection³ IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

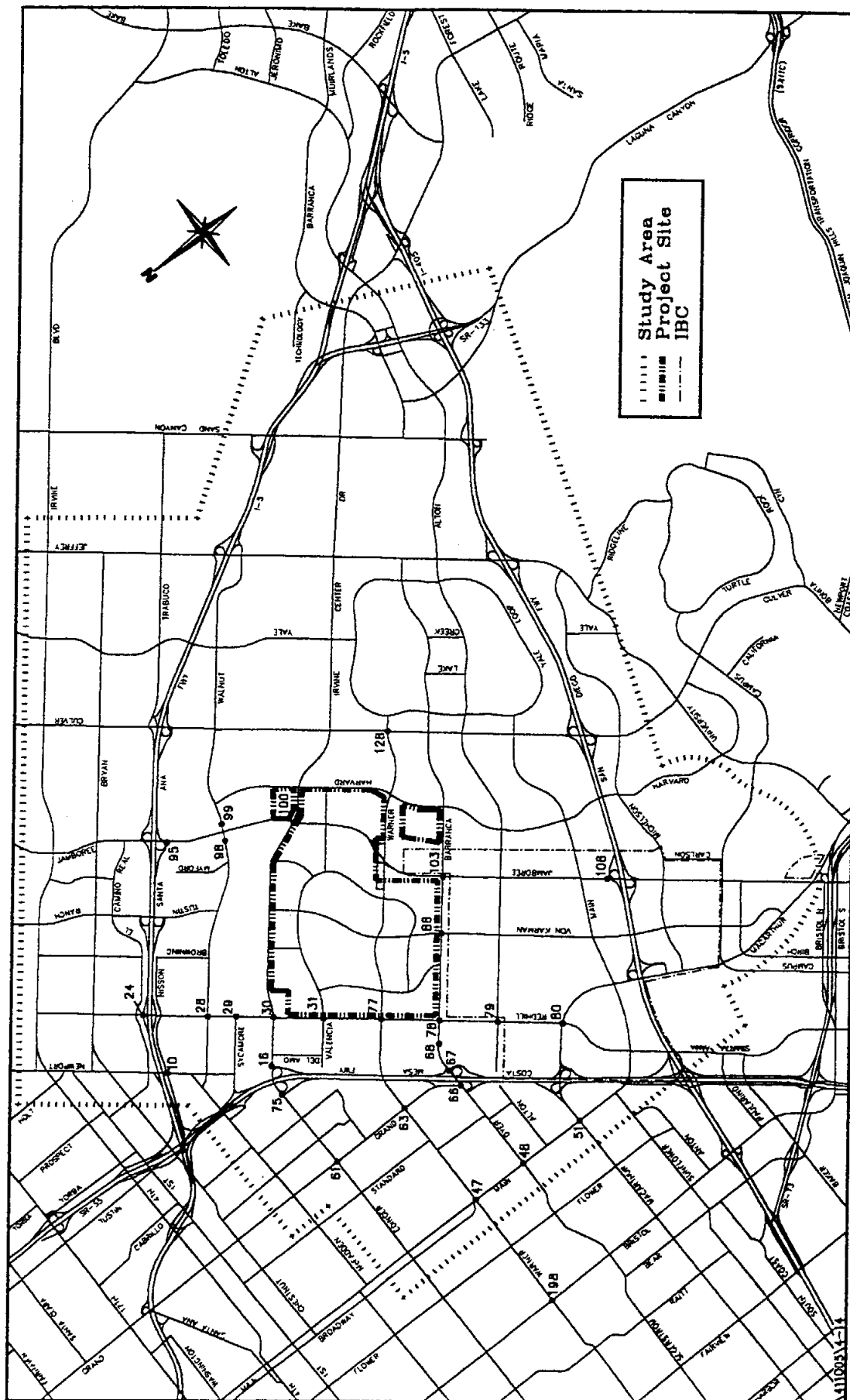


Figure 4-14
EXISTING PLUS
REUSE ALTERNATIVE 3
IMPACTED INTERSECTIONS

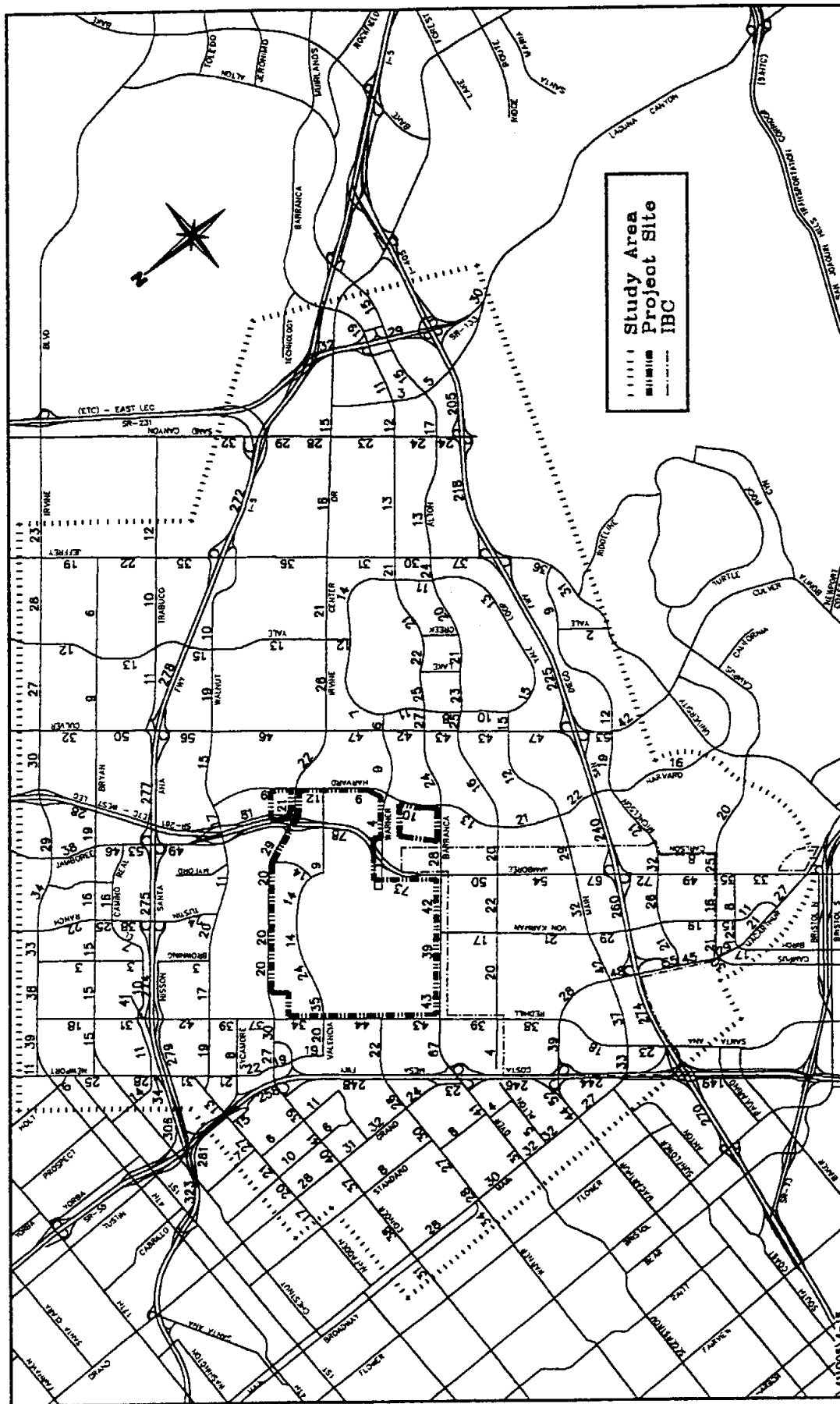


Figure 4-15

2005 ADT VOLUMES (000s)
- REUSE ALTERNATIVE 3

Table 4-25

SUMMARY OF IMPACTED INTERSECTIONS
(2005 Reuse Alternative 3)

LOCATION	2005 BASELINE ³		2005 REUSE ALT 3		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN								
31. Red Hill & Valencia ¹	.47	.57	.90	1.10	.43	.53	p	p
42. Tustin Ranch & Walnut	.82	1.14	.78	1.17	-	.03	-	c
TUSTIN/SANTA ANA								
77. Red Hill & Warner ¹	.60	.51	.78	.99	.18	.48	-	p
TUSTIN/IRVINE								
86. Von Karman & Barranca ²	.63	.95	.60	1.07	-	.12	-	c
103. Jamboree & Barranca ^{1,2}	.76	.97	.85	1.06	.09	.09	-	p*
SANTA ANA								
47. Main & Warner	.74	1.05	.79	1.10	.05	.05	-	c
57. Standard & Warner	.62	.74	.71	.94	.09	.20	-	p
61. Grand & Edinger ¹	.82	.90	.87	.96	.05	.06	-	p
63. Grand & Warner ¹	.60	.77	.72	.92	.12	.15	-	p
72. Ritchey & Edinger ²	.52	.87	.54	.94	.02	.07	-	p
108. Bristol & Warner	.94	1.08	.96	1.12	.02	.04	c	c

p - project causes deficiency

c - project contributes to deficiency

¹ SATTSIP intersection² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs³ 2005 baseline represents cumulative future development in year 2005 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

- Insert (see page 4-54a) -

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Table 4-26

FREEWAY RAMP INTERSECTION IMPACT SUMMARY
(2005 Reuse Alternative 3)

LOCATION	2005 BASELINE ²		2005 REUSE ALT 3		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
[No freeway ramp intersection impacted]								
<u>SANTA ANA</u>								
75. SR-55 SB Ramps & Edinger ¹	.88	1.19	.90	1.25	.02	.06	-	c

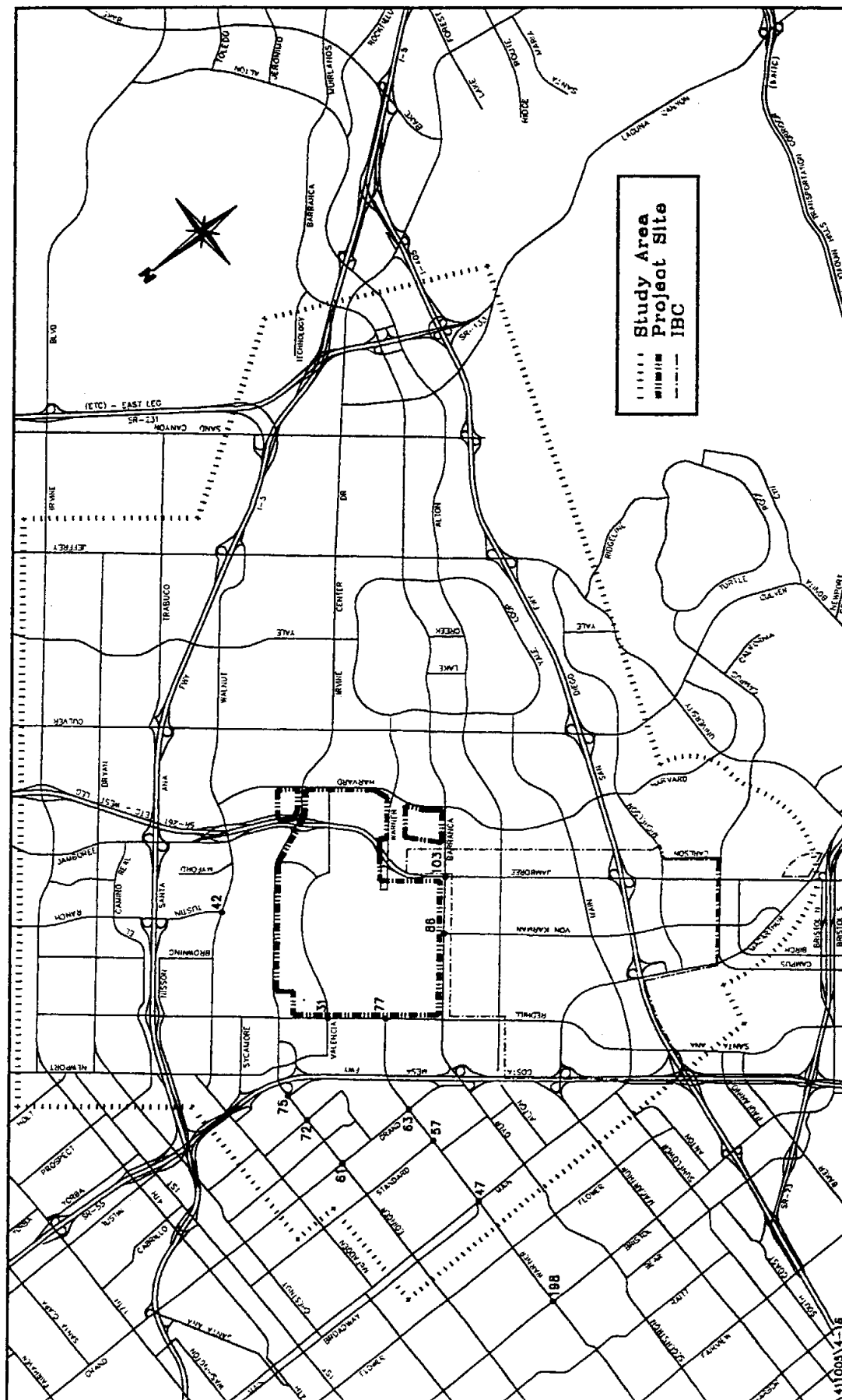
c - project contributes to deficiency

¹ SATTSIP & CMP intersection² 2005 baseline represents cumulative future development in year 2005 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Insert page 4-54 (Table 4-25) as footnote

* Currently unidentified future improvements beyond those presented for 2005 will be made to this intersection to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Therefore, impacts of the reuse plan are difficult to quantify at this time and could be less at this location because of unknown improvements.



L
L
L
L
L
L
L
L
L
L
L
L
L
L

4.6.A.3 Year 2020 Roadway Impacts (Reuse Alternative 3)

Year 2020 ADT traffic forecasts on the committed network for this alternative are illustrated in Figure 4-17. A listing of 2020 link volume data (the ADTs shown in Figure 4-17 and corresponding peak hour volumes) can be found in Appendix B. No roadway links would be inadequate for this alternative.

A complete listing of the year 2020 ICUs can be found in Appendix D with actual ICU calculations in Appendix E. The year 2020 analysis also includes an evaluation of the study area freeway interchange ramp intersections. Those arterial locations and ramp intersections that would have a significant project impact are listed in Tables 4-27 and 4-28 and shown in Figure 4-18. Three locations in the study area would be improved from an unacceptable level during 2020 baseline conditions to an acceptable level (ICU .90 or below) with the project; #22 Red Hill Avenue at Bryan Avenue, in the AM peak hour, #91, Jamboree Road at Irvine Boulevard, in the AM and PM peak hours, and #134, Culver Drive at Michelson Drive in the PM peak hour. These locations would meet the desired performance standard under this alternative.

- Insert (see page 4-56a) -

4.6.A.4 Public Transit Impacts (Reuse Alternative 3)

The land uses in Reuse Alternative 3 would impact public transit in Orange County by creating additional demand for transit service. At the same time, the new arterial roadways across the Base would provide opportunities for future bus routing, serving both future land uses on the base and also public transit riders that might benefit from the new bus routing opportunities. OCTA carries out regular updates of the Countywide transit system. Each phase of development on the Base should be included as part of that update program that these impacts and opportunities can be addressed with each system update.

Benefitting the reuse area as well as the surrounding area, is a proposed commuter rail station planned to be located in the City of Tustin on the northwest corner of Jamboree Road and Edinger Avenue near the SCRRRA/OCTA Railroad.

Insert page 4-56 after second paragraph of Section 4.6.A.3

It should be noted that currently unidentified future improvements will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the TCA, Cities of Tustin and Irvine 1998 MOA. The MOA defined interim improvements, which in this traffic report are assumed completely constructed by year 2005, and established a funding agreement with a maximum dollar amount for future improvements to maintain an acceptable level of service at this location. Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible.

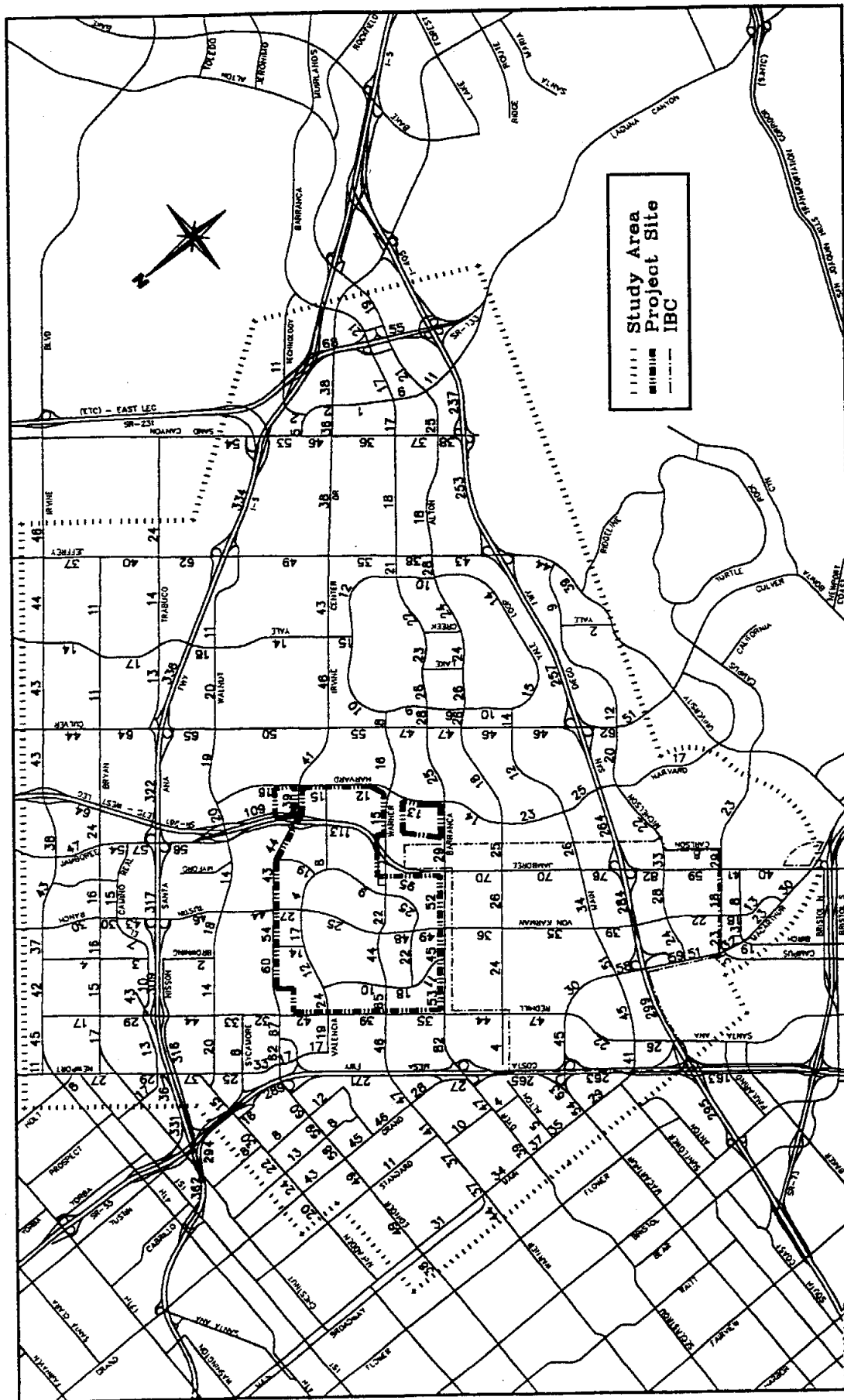


Figure 4-17

2020 ADT VOLUMES (000s)
- REUSE ALTERNATIVE 3

Table 4-27

SUMMARY OF IMPACTED INTERSECTIONS
(2020 Reuse Alternative 3)

LOCATION	2020 BASELINE ³		2020 REUSE ALT 3		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
TUSTIN								
15. Newport & Edinger ¹	.85	.87	.90	.94	.05	.07	-	p
30. Red Hill & Edinger ¹	.75	.88	.83	.95	.08	.07	-	p
42. Tustin Ranch & Walnut	.84	.89	1.16	1.06	.32	.17	p	p
TUSTIN/SANTA ANA								
77. Red Hill & Warner ¹	.50	.46	.83	.95	.33	.49	-	p
TUSTIN/IRVINE								
86. Von Karman & Barranca ²	.61	.77	.85	1.10	.24	.33	-	p
103. Jamboree & Barranca ^{1,2}	.83	1.15	1.02	1.27	.19	.12	*	e**
SANTA ANA								
48. Main & Dyer	~~.81~~ .65	~~1.10~~ .85	~~.80~~ .65	~~1.18~~ .91	.00	~~.08~~ .06	-	e p
51. Main & MacArthur	.71	.98	.70	1.00	-	.02	-	c
53. Hutton Centre & MacArthur	.73	.91	.73	.93	.00	.02	-	c
61. Grand & Edinger ¹	~~.98~~ .75	~~1.05~~ .84	~~1.02~~ .82	~~1.18~~ .96	~~.04~~ .07	~~.13~~ .12	e-	e p
63. Grand & Warner ¹	~~.61~~ .57	~~.90~~ .71	~~.78~~ .73	~~1.07~~ 1.03	~~.17~~ .16	~~.17~~ .32	-	p
66. Grand & Dyer ¹	~~.73~~ .66	~~.97~~ .94	~~.72~~ .70	~~1.11~~ 1.03	.04	~~.14~~ .09	-	c
70. Lyon & Edinger ¹	.86	.97	.90	1.03	.04	.06	-	c
~~198. Bristol & Warner~~	~~.88~~	~~1.01~~	~~.91~~	~~1.03~~	~~.03~~	~~.02~~	p	e
202. Standard & Edinger	.80	.95	.90	1.01	.10	.06	-	c
IRVINE								
81. Red Hill & Main ²	.70	.99	.75	1.18	.05	.19	-	p
89. Von Karman & Michelson ²	.68	1.07	.86	1.18	.18	.11	-	c
106. Jamboree & Alton ²	.94	1.01	.94	1.09	.00	.08	-	p
118. Harvard & Alton	.85	.89	.94	.88	.09	-	p	-
127. Culver & Irvine Center	.90	.88	.89	.92	-	.04	-	*
128. Culver & Warner	.79	.79	.84	.99	.05	.20	-	p
IRVINE/SANTA ANA								
79. Red Hill & Alton ²	.68	1.01	.70	1.14	.02	.13	-	p

p - project causes deficiency

c - project contributes to deficiency

* Location identified in City of Irvine as an ATMS intersection which discounts the AM and PM peak hour ICUs by .05; therefore there is no project impact at this location.

** Currently unidentified future improvements beyond those presented for 2005 will be made to this intersection to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Therefore, impacts of the reuse plan are difficult to quantify at this time and could be less at this location because of unknown improvements.

¹ SATTSIP intersection² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs³ 2020 baseline represents cumulative future development in year 2020 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Table 4-28

FREEWAY RAMP INTERSECTION IMPACT SUMMARY
(2020 Reuse Alternative 3)

LOCATION	2020 BASELINE ²		2020 REUSE ALT 3		DIFFERENCE		IMPACT	
	AM	PM	AM	PM	AM	PM	AM	PM
SANTA ANA								
59. Hotel Terrace/SR-55 & Dyer ²	.68	.87	.75	.96	.07	.09	-	P
67. SR-55 NB Ramps & Dyer ¹	.76 <u>.68</u>	.69 <u>.61</u>	.81	.94	.05 <u>.13</u>	.25 <u>.33</u>	-	P

p - project causes deficiency

¹ SATTSIP intersection

² 2020 baseline represents cumulative future development in year 2020 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

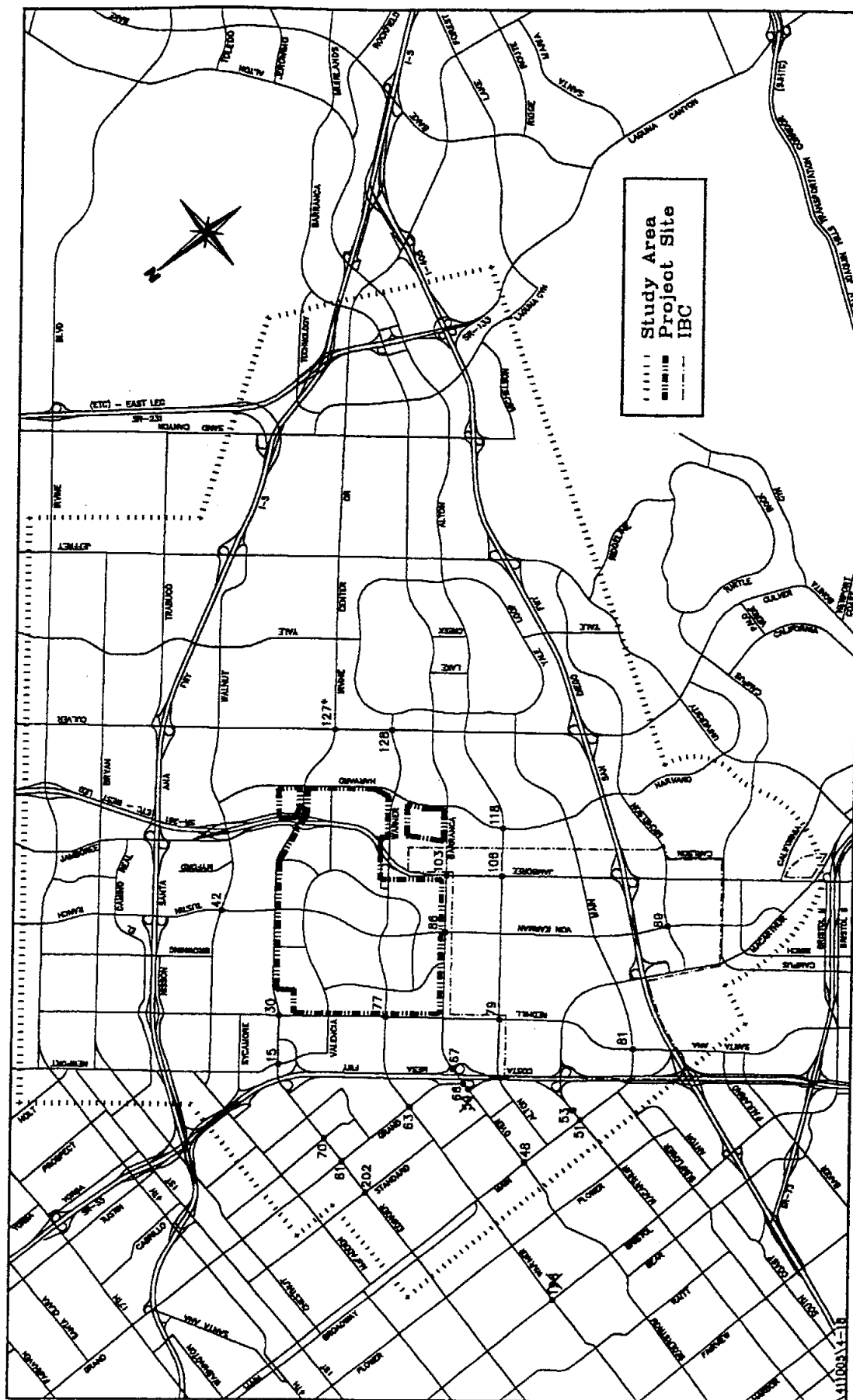


Figure 4-18

2020 IMPACTED INTERSECTIONS - REUSE ALTERNATIVE 3

* Location identified in City of Irvine as an ATMS intersection which discounts the AM and PM peak hour ICUs by .05; therefore there is no project impact at this location.

NOTE: Due to the corrected committed roadway network, intersections 59 & 198 are no longer impacted locations.

4.6.A.5 Pedestrian and Bicycle Impacts (Reuse Alternative 3)

Future residential development on the base would add to the usage of the Countywide bike trail system. At the same time, development of new roadways across the Base would add to the system of bike trails, providing additional segments and greater connectivity. No specific bicycle impacts of Reuse Alternative 3 are identified, and the added bike trails would provide an overall benefit to the County bike trail system.

No pedestrian impacts of this alternative are identified.

4.6.A.6 Construction Impacts (Reuse Alternative 3)

Traffic impacts due to construction would occur as a result of development of the site. The primary activities generating construction traffic are:

1. Roadway construction
2. Site development
3. Other infrastructure development (water, sewer, etc.)

The magnitude of the impacts would depend on the type and location of such activities, and would be monitored by City of Tustin administrative procedures for such activities. ~~Such procedures include designated routes for heavy trucks (i.e., major roadways only and avoiding peak hours).~~

- Insert 1 (see page 4-61a) -

4.6.B MITIGATION MEASURES (Reuse Alternative 3)

Mitigation measures for project impacts would be in the form of lane changes or intersection operating efficiency. The former adds or changes lanes by restriping or construction to increase capacity, and the latter implements ATMS improvements *and other traffic signal phasing modifications* to increase operating efficiency. The identified mitigation measures may be either or both of these improvements. An ICU reduction of .05 is taken for ATMS.

- Insert 2 (see page 4-61a) -

Insert 1 page 4-61 to last sentence of last paragraph under Section 4.6.A.6

Possible significant impacts could include lane closures with short-term disruption to the public. Measures to minimize conflicts could include designated routes and times for heavy trucks (i.e., major roadways only and avoiding peak hours). The procedures should be coordinated with neighboring jurisdictions that would be affected.

In conjunction with the approval of a site development permit, the City of Tustin and the City of Irvine, as applicable (for that portion of the reuse plan within Irvine), shall require each developer to provide traffic operations and control plans that would minimize the traffic impacts of proposed construction activity. The plans shall address roadway and lane closures, truck hours and routes, and notification procedures for planned short-term or interim changes in traffic patterns. The City of Tustin and the City of Irvine, as applicable, shall ensure that the plan would minimize anticipated delays at major intersections. Prior to approval, the City of Tustin or Irvine, as applicable, shall review the proposed traffic control and operations plans with an affected jurisdiction.

Insert 2 page 4-61 to end of first paragraph under Section 4.6.B

Alternative improvements that provide an equivalent level of mitigation in 2005 or 2020 to what are presented in the following sections may be identified in consultation between the City of Tustin and the City of Irvine, as applicable, and the impacted jurisdiction.

No specific mitigation measures are identified for the project stand-alone analysis because of the hypothetical nature of that evaluation (full project buildout with no change of external conditions). In the sections which follow, mitigation measures for Reuse Alternative 3 for year 2005 and year 2020 are presented.

4.6.B.1 Year 2005 Mitigation Measures (Reuse Alternative 3)

A set of mitigation measures are presented here for the intersections identified as being impacted by Reuse Alternative 3 for 2005. These are summarized in Table 4-29 in the form of lane changes (additions or restriping) at individual intersections or as ATMS contributions to increase intersection efficiency. For the impact to #103 (Jamboree Road and Barranca Parkway), the proposed mitigation measure is to ~~provide an additional~~ *redirect project traffic away from this intersection by providing a project access on Warner Avenue near Jamboree Road (in addition to the the Barranca Parkway access east of Von Karman Avenue)* to serve the proposed project uses on the northeast corner of Von Karman Avenue and Barranca Parkway. It should be noted that mitigation for the intersection of #86 (Von Karman Avenue and Barranca Parkway) is an interim improvement only (*until such time the extension of Tustin Ranch Road to Barranca Parkway is built*) and is not necessary for 2020.

- Insert 1 (see page 4-62a) -

4.6.B.2 Year 2020 Mitigation Measures (Reuse Alternative 3)

Mitigation measures for the intersections shown as being impacted by Reuse Alternative 3 are summarized in Table 4-30 in the form of lane changes or ATMS funding contributions.

The mitigation measures listed here are generally designed to mitigate the project impacts. In cases where a deficiency is caused by the project, then such improvements are then the full responsibility of the project. Where the project is a contributor to an already deficient condition under 2020 baseline, then a fair share participation in future improvements would generally be more appropriate. For example, the mitigation measures shown here would generally more than mitigate the project impacts thereby providing capacity for non-project traffic.

- Insert 2 (see page 4-62a) -

Insert 1 page 4-62 at end of Section 4.6.B.1 paragraph

One interchange ramp intersection would be impacted by the project. The project would contribute to the identified deficiency at this location. The mitigation measure for this location is summarized in Table 4-29a.

<u>Table 4-29a</u>													
<u>FREEWAY RAMP INTERSECTION MITIGATION SUMMARY</u>													
<u>(2005 Reuse Alternative 3)</u>													
<u>LOCATION</u>	<u>—SB—</u>			<u>—WB—</u>			<u>—NB—</u>			<u>—EB—</u>			
	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	
<u>SANTA ANA</u>													
<u>75. SR-55 SB Ramps & Edinger</u>	<u>Base</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>1.5</u>	<u>.5</u>	<u>f</u>	<u>1</u>	<u>2</u>	<u>f</u>
	<u>Mit.</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>1.5</u>	<u>.5</u>	<u>f</u>	<u>1</u>	<u>3</u>	<u>f</u>
<u>Base - Intersection lanes without mitigation</u>													
<u>f - free right-turn</u>													
<u>L, T, R - left, through, right</u>													
<u>SB, WB, NB, EB - southbound, westbound, northbound, eastbound</u>													
<u>Enlarged/Bold - notation indicates lane changes</u>													
<u>A .5 or 1.5 lane designation represents lane sharing between different movements</u>													

Insert 2 page 4-62 after second paragraph of Section 4.6.B.2

As noted previously, currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). The MOA defined interim improvements, which in this traffic report are assumed completely constructed by year 2005, and established a funding agreement with a maximum dollar amount for future improvements to maintain an acceptable level of service at this location. Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

Table 4-29

MITIGATION LANES FOR 2005 REUSE ALTERNATIVE 3 IMPACTED INTERSECTIONS

LOCATION		—SB—			—WB—			—NB—			—EB—			COMMENTS ¹
		L	T	R	L	T	R	L	T	R	L	T	R	
TUSTIN														
31. Red Hill & Valencia	Base	2	3	1	1	2	1	2	3	1	1	2	1	
	Mit.	2	3	1	2	2	1	2	3	1	1	2	1	
42. Tustin Ranch & Walnut	Base	1.5	-	1.5	-	2	d	-	-	-	1	2	-	
	Mit.	1.5	-	1.5	-	2	d	-	-	-	2	2	-	
TUSTIN/SANTA ANA														
77. Red Hill & Warner	Base	1	3	-	1	1	1	2	3	1	2	1	1	
	Mit.	2	3	-	1	1	2	2	3	1	2	1	1	
TUSTIN/IRVINE														
86. Von Karman & Barranca	Base	-	-	-	2	3	-	2	-	1	-	3	d	Interim improvement only (until such time the extension of Tustin Ranch Road to Barranca Parkway is built), not necessary for 2020
	Mit.	-	-	-	2	3	-	2	-	2	-	3	d	
103. Jamboree & Barranca ²	Base	2	4	f	2	3	f	2	4	f	2.5	2.5	1	Additional project access on Warner Ave near Jamboree Rd to redirect project traffic away from this intersection
	Mit.	2	4	f	2	3	f	2	4	f	2.5	2.5	1	
SANTA ANA														
47. Main & Warner	Base	2	3	-	1	2	-	2	3	-	1	2	1	
	Mit.	2	3	-	1	3	-	2	3	-	1	2	1	
57. Standard & Warner	Base	1	-	1	-	2	1	1	1	-	1	2	-	
	Mit.	1	-	1	-	2	1	1	2	-	1	2	-	
61. Grand & Edinger	Base	1	3	-	1	3	-	1	3	-	1	3	-	
	Mit.	1	3	-	1	3	-	2	3	-	2	1	3	-
63. Grand & Warner	Base	1	3	-	2	2	1	1	3	-	2	3	1	
	Mit.	1	3	1	2	3	1	1	3	-	2	3	1	
72. Ritchey & Edinger	Base	1	2	-	1	3	-	1	1	-	1	3	-	
	Mit.	1	2	-	1	3	-	1	2	-	1	3	-	
198. Bristol & Warner	Base	1	3	-	1	2	-	1	2	1	1	2	1	
	Mit.	1	3	-	1	3	-	1	3	-	1	2	1	

Base - Intersection lanes without mitigation

d - de facto right-turn

L, T, R - left, through, right

Enlarged/Bold - notation indicates lane changes

A 5 or 1.5 lane designation represents lane sharing between different movements

¹ Clarification of the intersection improvements being presented or other mitigation if intersection improvements are not identified.² Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible.

ATMS - Advanced Transportation Management System

f - free right-turn

SB, WB, NB, EB - southbound, westbound, northbound, eastbound

Table 4-30

MITIGATION LANES FOR 2020 REUSE ALTERNATIVE 3 IMPACTED INTERSECTIONS

LOCATION		—SB—			—WB—			—NB—			—EB—			COMMENTS ¹
		L	T	R	L	T	R	L	T	R	L	T	R	
TUSTIN														
15. Newport & Edinger	Base	2	2.5	1.5	1	3	f	2	3	d	2	3	1	No lane changes (ATMS)
	Mit.	2	2.5	1.5	1	3	f	2	3	d	2	3	1	
30. Red Hill & Edinger	Base	2	3	1	2	3	1	2	3	1	2	3	1	No lane changes (ATMS)
	Mit.	2	3	1	2	3	1	2	3	1	2	3	1	
42. Tustin Ranch & Walnut	Base	2	3	d	1	2	1	2	3	d	1	2	1	Lane changes and ATMS
	Mit.	2	3	d	2	2	1	2	3	d	2	2	1	
TUSTIN/SANTA ANA														
77. Red Hill & Warner	Base	2	4	1	2	3	1	2	4	1	2	3	1	ATMS
	Mit.	2	4	1	2	3	1	2	4	1	2	3	1	
TUSTIN/IRVINE														
86. Von Karman & Barranca	Base	2	3	2	2	4	1	2	3	1	2	4	1	No identifiable mitigation
	Mit.	2	3	2	2	4	1	2	3	1	2	4	1	
103. Jamboree & Barranca ²	Base	2	4	f	2	3	f	2	4	f	2.5	2.5	1	No identifiable mitigation
	Mit.	2	4	f	2	3	f	2	4	f	2.5	2.5	1	
SANTA ANA														
48. Main & Dyer	Base	2	3	<u>1</u>	<u>±2</u>	3	<u>1</u>	2	3	<u>1</u>	<u>2</u>	3	1	
	Mit.	2	3	<u>1</u>	<u>22</u>	3	<u>1</u>	2	<u>34</u>	<u>±</u>	<u>±2</u>	3	1	
51. Main & MacArthur	Base	2	3	1	2	3	1	2	3	1	2	3	1	
	Mit.	2	3	1	2	3	1	2	<u>34</u>	<u>±</u>	2	3	1	
53. Hutton Centre & MacArthur	Base	2	1	2	2	3	1	1	5	1.5	2	3	1	
	Mit.	2	1	2	2	4	<u>±</u>	1	5	1.5	2	3	1	
61. Grand & Edinger	Base	2	3	<u>1</u>	<u>±2</u>	3	<u>1</u>	<u>±2</u>	3	1	<u>±2</u>	3	<u>1</u>	
	Mit.	2	3	<u>1</u>	<u>22</u>	<u>34</u>	<u>±</u>	<u>22</u>	<u>34</u>	<u>±</u>	<u>±2</u>	3	<u>1</u>	
63. Grand & Warner	Base	2	3	<u>1</u>	2	<u>33</u>	1	<u>±2</u>	3	<u>1</u>	2	3	1	Lane changes and WB right-turn overlap
	Mit.	2	3	<u>1</u>	2	<u>33</u>	<u>21</u>	<u>22</u>	<u>34</u>	<u>-</u>	2	3	1	
66. Grand & Dyer	Base	2	-	1	-	<u>33</u>	1	-	-	-	<u>±2</u>	3	-	
	Mit.	1.5	-	1.5	-	<u>33</u>	1	-	-	-	<u>±2</u>	3	-	
70. Lyon & Edinger	Base	1	1	1	1	3	1	1	1	2	1	3	-	Lane changes and N/S split phasing
	Mit.	<u>2</u>	<u>1.5</u>	<u>±.5</u>	1	1	3	1	<u>±.5</u>	<u>1.5</u>	2	1	3	
198. Bristol & Warner	Base	~~1~~	~~3~~	~~-~~	~~1~~	~~3~~	~~-~~	~~1~~	~~3~~	~~-~~	~~1~~	~~3~~	~~-~~	
	Mit.	~~2~~	~~3~~	~~-~~	~~1~~	~~3~~	~~-~~	~~2~~	~~3~~	~~-~~	~~1~~	~~3~~	~~-~~	
202. Standard & Edinger	Base	1	2	-	1	3	-	1	2	-	1	3	-	
	Mit.	1	2	-	1	3	<u>1</u>	1	2	-	1	3	-	

(Continued)

Table 4-30 (cont)

MITIGATION LANES FOR 2020 REUSE ALTERNATIVE 3 IMPACTED INTERSECTIONS

LOCATION		—SB—			—WB—			—NB—			—EB—			COMMENTS ¹
		L	T	R	L	T	R	L	T	R	L	T	R	
IRVINE														
81. Red Hill & Main	Base	1	3	d	2	3	d	2	3	f	1	3	d	
	Mit.	1	3	f	2	3	d	2	3	f	1	3	d	
89. Von Karman & Michelson	Base	1	2	d	1	2	f	1	2	1	1	2	d	
	Mit.	1	2	d	1	2	f	1	2	1	2	2	d	
106. Jamboree & Alton	Base	2	4	d	2	3	d	2	4	1	2	3	d	
	Mit.	2	4	d	2	3	d	2	5	1	2	3	d	
118. Harvard & Alton	Base	1	2	1	2	3	d	1	2	d	2	3	1	
	Mit.	1	2	1	2	3	d	2	2	d	2	3	1	
128. Culver & Warner	Base	1	3	d	1	2	d	1	3	1	1	2	d	
	Mit.	1	3	d	1	2	d	1	3	1	2	2	d	
IRVINE/SANTA ANA														
79. Red Hill & Alton	Base	1	3	d	2	1	1	1	3	d	1	2	1	
	Mit.	2	3	d	2	1	1	1	3	d	1	2	1	

Base - Intersection lanes without mitigation
 ATMS - Advanced Transportation Management System
 d - de facto right-turn
 f - free right-turn
 L, T, R - left, through, right
 SB, WB, NB, EB - southbound, westbound, northbound, eastbound
 Enlarged/Bold - notation indicates lane changes
 A .5 or 1.5 lane designation represents lane sharing between different movements

¹ Clarification of the intersection improvements being presented or other mitigation if intersection improvements are not identified.

² Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

~~Two~~ *One* interchange ramp intersections would be impacted by the project; ~~both of which t.~~
The identified deficiency *at this location* would be caused by the project. Mitigation measures for *these*
this locations are summarized in Table 4-31. ~~The exact nature of the improvement in each case would~~
~~be the subject of special design studies in association with Caltrans.~~

- *Insert (see pages 4-66a through 4-66c) -*

4.6.C LEVEL OF SIGNIFICANCE AFTER MITIGATION (Reuse Alternative 3)

The ICU values, *cumulative ADT thresholds and project shares* for the impacted locations with
and without mitigation are summarized in Tables 4-32 and 4-33 (year 2005 and year 2020,
respectively). ~~Three~~ *Four* intersections in 2020 would not be mitigated under this alternative.

- *Insert (see pages 4-66d and 4-66e) -*

4.7 NO ACTION ALTERNATIVE

This alternative assumes nominal traffic generation on the project site (see description in
Chapter 2.0) and thereby represents a reduction in traffic compared to the baseline conditions for
each time frame (see Chapter 3.0). While the reduction would be small relative to volumes on the
surrounding roadway system, it would result in a reduction in capacity utilization at several
intersections in the immediate proximity to the project site. The impacts to those locations are
presented below.

4.7.A PROJECT STAND-ALONE TRAFFIC IMPACTS (No Action Alternative)

Project stand-alone (existing) ADT volumes for the No Action Alternative can be found in
Figure 4-19 and the ICU values can be found in Table 4-34 which summarizes the stand-alone
(existing) baseline and No Action Alternative for those locations that would be affected by this
alternative (see Appendix E for actual ICU computations). Three intersections within Tustin which
are forecast as unacceptable in the existing baseline condition would operate at an acceptable level
(ICU .90 or below) with the No Action Alternative. The PM peak hour ICU at intersection #30, Red
Hill Avenue and Edinger Avenue, would be improved from 1.00 to .95 with implementation of the No
Action Alternative; both values exceed the desired performance standard.

4.5.B.3 Additional Mitigation Measures (Reuse Alternative 3)

1. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area within Irvine, shall ensure that the arterial intersection improvements required in 2005 and 2020 are implemented for their respective jurisdictions according to the cumulative ADT threshold and the share noted in Tables 4-32 and 4-33. If subsequent studies demonstrate that the trips would not be generated, or impacts would be different than those projected in this report, the mitigation measures may be modified, subject to the approval of the City of Tustin and any other affected jurisdictions, provided that the mitigation to the same levels of service would be provided.*
2. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area within Irvine, shall contribute, on a fair share basis, to improvements to freeway ramp intersections as listed in Table 4-29a and 4-31. The method of implementing improvements, e.g., restriping or ramp widening, shall be based on special design studies, in association with Caltrans.*
3. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area within Irvine, shall ensure that all on-site circulation system improvements for the reuse plan area assumed in the 2005 and 2020 traffic analysis are implemented according to the cumulative ADT thresholds identified in Table 4-33a.*
4. *Prior to approval of a site development permit or vesting tract, except for financing or conveyance purposes, for all land use designation areas in Reuse Alternative 3 with the exception of the Community Park, a project developer shall enter into an agreement with the City of Tustin and City of Irvine, as applicable for that portion of the reuse plan area within Irvine, which assigns improvements required to the development site and which requires participation in a fair share mechanism to design and construct required on-site and arterial improvements.*

5. *The City of Tustin and the City of Irvine, as applicable for that portion of the reuse plan area in Irvine, will monitor new development within the reuse plan area, accounting for the cumulative ADT generated by development projects within the reuse plan area. As each cumulative ADT threshold is reached, the roadway improvements listed shall be constructed before any additional projects within the reuse plan area are approved.*
6. *As part of any implementing rezoning action for the reuse plan area, the City of Tustin shall adopt a trip budget for individual portions of the reuse plan area to assist in the monitoring of cumulative ADT and the amount and intensity of permitted non-residential uses as evaluated in the EIS/EIR.*

Table 4-33a

ON-SITE ADT DEVELOPMENT THRESHOLDS
(Reuse Alternative 3)

PHASE	ADT (CUMULATIVE)		ROADS ADDED*
<u>I</u>	<u>27,000</u>	<u>(27,000)</u>	<u>Edinger Avenue - along project frontage between Red Hill Ave and Jamboree Rd**</u> <u>Landsdowne Road</u> <u>North Loop Road - Red Hill Avenue to West Connector Road (Build 3 lanes only)***</u> <u>West Connector Road</u>
<u>II</u>	<u>87,500</u>	<u>(114,500)</u>	<u>East Connector Road</u> <u>Marble Mountain Road</u> <u>Moffett Drive</u> <u>North Loop Road - Red Hill Avenue to Moffett Drive Connector Road (Final Buildout)</u> <u>Red Hill Avenue/Carnegie Avenue Intersection (East Leg)</u> <u>Red Hill Avenue/Warner Avenue Intersection (East Leg)</u> <u>Severyns Road</u>
<u>III</u>	<u>28,000</u>	<u>(142,500)</u>	<u>Armstrong Avenue - North Loop Road to Barranca Parkway</u> <u>North Loop Road - Moffett Drive to Warner Avenue</u> <u>South Loop Road - Warner Avenue to Tustin Ranch Road</u> <u>Tustin Ranch Road - Edinger Avenue to North Loop Road (6 lanes)</u> <u>Tustin Ranch Road - Warner Avenue to Barranca Parkway (Build 4 lanes only)***</u> <u>Warner Avenue - Red Hill Avenue to Jamboree Road (Build 4 lanes only)***</u>
<u>IV</u>	<u>41,200</u>	<u>(183,700)</u>	<u>South Loop Road - Armstrong Avenue to Tustin Ranch Road</u> <u>Tustin Ranch Road - North Loop Road to South Loop Road (Build 4 lanes only)***</u>
<u>V</u>	<u>111,200</u>	<u>(294,900)</u>	<u>Widen Tustin Ranch Road to 6 lanes (Final Buildout)</u> <u>Widen Warner Avenue to 6 lanes (Final Buildout)</u>

* Roadways shall be constructed prior to the issuance of building permits or certificates of occupancy

** Right-of-way for roadway improvements (being done by others) to be dedicated at this time

*** Full right-of-way to be dedicated at this time

Insert 2 page 4-66 at end of Section 4.6.C

In the case of Intersection #103, currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

See Sections 4.4.C.1 and 4.4.C.2 on pages 4-22d and 4-22e for the cumulative ADT threshold and project share methodologies.

Table 4-31

FREEWAY RAMP INTERSECTION MITIGATION SUMMARY
(2020 Reuse Alternative 3)

LOCATION	— SB —			— WB —			— NB —			— EB —		
	L	T	R	L	T	R	L	T	R	L	T	R
SANTA ANA												
59. Hotel Terrace/SR-55 & Dyer	Base			5	1.5	1	2	3	1	1.5	5	2
	Mit.			5	1.5	1	2	3	1	1.5	5	2
67. SR-55 NB Ramps & Dyer	Base			-	-	-	-	<u>3.4</u>	-	1.5	-	1.5
	Mit.			-	-	-	-	<u>32.5</u>	<u>f1.5</u>	1.5	-	1.5

Base - Intersection lanes without mitigation
 f - free right-turn
 L, T, R - left, through, right
 SB, WB, NB, EB - southbound, westbound, northbound, eastbound
 Enlarged/Bold - notation indicates lane changes
 A .5 or 1.5 lane designation represents lane sharing between different movements

Table 4-32

SUMMARY OF INTERSECTION MITIGATION RESULTS
(2005 Reuse Alternative 3)

LOCATION	2005 BASELINE ²		2005 REUSE ALT 3		W/MITIGATION		RESULT		PROJECT SHARE	ADT THRESH-
	AM	PM	AM	PM	AM	PM	AM	PM	(%)	HOLD
TUSTIN										
31. Red Hill & Valencia ¹	.47	.57	.90	1.10	.87	.88	ma	ma	100	78,000
42. Tustin Ranch & Walnut	.82	1.14	.78	1.17	.67	1.05	-	mp	7	81,000
TUSTIN/SANTA ANA										
77. Red Hill & Warner ¹	.60	.51	.78	.99	.68	.85	-	ma	100	97,000
TUSTIN/IRVINE										
86. Von Karman & Barranca ²	.63	.95	.60	1.07	.60	.71	-	ma	100	106,000
103. Jamboree & Barranca ^{1,2}	.76	.97	.85	1.06	.85	1.03	-	ma	*	*
SANTA ANA										
47. Main & Warner	.74	1.05	.79	1.10	.79	.94	-	mp	23	53,000
57. Standard & Warner	.62	.74	.71	.94	.68	.84	-	ma	100	99,000
61. Grand & Edinger ¹	.82	.90	.87	.96	.86	.90	-	ma	100	30,000
63. Grand & Warner ¹	.60	.77	.72	.92	.72	.73	-	ma	100	107,000
72. Ritchey & Edinger ²	.52	.87	.54	.94	.54	.69	-	ma	100	71,000
75. SR-55 SB Ramps & Edinger ^{1,3}	.88	1.19	.90	1.25	.78	1.05	-	mp	22	46,000
198. Bristol & Warner	.94	1.08	.96	1.12	.91	.89	mp	ma	19	63,000

ma - mitigated to adequate level of service

mp - project impact mitigated

¹ SATTSIP intersection² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs³ 2005 baseline represents cumulative future development in year 2005 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

* Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible.

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

Table 4-33

SUMMARY OF INTERSECTION MITIGATION RESULTS
(2020 Reuse Alternative 3)

LOCATION	2020 BASELINE ³		2020 REUSE ALT 3		W/MITIGATION		RESULT		PROJECT SHARE (%)	ADT THRESH- HOLD
	AM	PM	AM	PM	AM	PM	AM	PM		
TUSTIN										
15. Newport & Edinger ¹	.85	.87	.90	.94	.85	.89	-	ma	100	217,000
30. Red Hill & Edinger ¹	.75	.88	.83	.95	.78	.90	-	ma	100	192,000
42. Tustin Ranch & Walnut	.84	.89	1.16	1.06	.93	.93	nm	nm	100	136,000
TUSTIN/SANTA ANA										
77. Red Hill & Warner ¹	.50	.46	.83	.95	.78	.90	-	ma	100	280,000
TUSTIN/IRVINE										
86. Von Karman & Barranca ²	.61	.77	.85	1.10	.85	1.10	-	nm	100	273,000
103. Jamboree & Barranca ^{1,2}	.83	1.15	1.02	1.27	1.02	1.27	-	nm	-	-
SANTA ANA										
48. Main & Dyer	~~.81~~ <u>.65</u>	~~1.10~~ <u>.85</u>	~~.80~~ <u>.65</u>	~~1.18~~ <u>.91</u>	~~.68~~ <u>.65</u>	~~.97~~ <u>.87</u>	-	mp <u>ma</u>	<u>17</u>	<u>**</u>
51. Main & MacArthur	.71	.98	.70	1.00	~~.65~~ <u>.70</u>	~~.95~~ <u>.93</u>	-	mp	<u>8</u>	<u>**</u>
53. Hutton Centre & MacArthur	.73	.91	.73	.93	.73	.87	-	ma	<u>20</u>	<u>**</u>
59. Hotel Terrace/SR-55 & Dyer ³	~~.68~~	~~.87~~	~~.75~~	~~.96~~	~~.69~~	~~.89~~	-	ma		
61. Grand & Edinger ¹	~~.98~~ <u>.75</u>	~~1.05~~ <u>.84</u>	~~1.02~~ <u>.82</u>	~~1.18~~ <u>.96</u>	~~.90~~ <u>.82</u>	~~1.01~~ <u>.89</u>	ma	mp <u>ma</u>	<u>100</u>	<u>219,000</u>
63. Grand & Warner ¹	~~.61~~ <u>.57</u>	~~.90~~ <u>.71</u>	~~.78~~ <u>.73</u>	~~1.07~~ <u>1.03</u>	~~.78~~ <u>.72</u>	~~.80~~ <u>.96</u>	-	ma <u>nm</u>	<u>100</u>	<u>228,000</u>
66. Grand & Dyer ¹	~~.73~~ <u>.66</u>	~~.97~~ <u>.94</u>	~~.72~~ <u>.70</u>	~~1.11~~ <u>1.03</u>	~~.71~~ <u>.70</u>	~~.95~~ <u>.79</u>	-	mp <u>ma</u>	<u>27</u>	<u>154,000</u>
67. SR-55 NB Ramps & Dyer ¹	~~.76~~ <u>.68</u>	~~.69~~ <u>.61</u>	.81	.94	.81	~~.76~~ <u>.80</u>	-	ma	<u>100</u>	<u>279,000</u>
70. Lyon & Edinger ¹	.86	.97	.90	1.03	~~.90~~ <u>.88</u>	~~.93~~ <u>.87</u>	-	mp <u>ma</u>	<u>15</u>	<u>174,000</u>
~~198. Bristol & Warner~~	~~.88~~	~~1.01~~	~~.91~~	~~1.03~~	~~.88~~	~~.88~~	ma	ma		
202. Standard & Edinger	.80	.95	.90	1.01	.90	.92	-	mp	<u>17</u>	<u>174,000</u>
IRVINE										
81. Red Hill & Main ²	.70	.99	.75	1.18	.75	.90	-	ma	100	181,000
89. Von Karman & Michelson ²	.68	1.07	.86	1.18	.72	1.02	-	ma	<u>31</u>	<u>147,000</u>
106. Jamboree & Alton ²	.94	1.01	.94	1.09	.94	.99	-	ma	100	228,000
118. Harvard & Alton	.85	.89	.94	.88	.78	.88	ma	-	100	235,000
128. Culver & Warner	.79	.79	.84	.99	.75	.86	-	ma	100	223,000

ma - mitigated to adequate level of service

nm - project impact not mitigated

mp - project impact mitigated

¹ SATTSIP intersection² IBC intersection - credit of .05 for ATMS included in the analysis but not reflected in the ICUs³ 2020 baseline represents cumulative future development in year 2020 plus 12,400 ADT generated at the Air Station in baseline year 1993 and no traffic from reuse.

* Currently unidentified future improvements beyond those presented for 2005 will be made to the intersection of Jamboree Road and Barranca Parkway to maintain an acceptable level of service as agreed to by the City of Tustin and City of Irvine for baseline conditions pursuant to the Transportation Corridor Agencies (TCA), Cities of Tustin and Irvine 1998 Memorandum of Agreement (MOA). Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report. Therefore, the impacts of the reuse plan may be overstated and difficult to quantify at this time and could be less because of unknown improvements. The MOA also clarified that a grade-separated interchange at this location was financially infeasible. No feasible mitigation can be identified for this location at this time.

** Full buildout of Reuse Alternative 3

Level of service ranges: A=.00 - .60 B=.61 - .70 C=.71 - .80 D=.81 - .90 E=.91 - 1.00 F=Above 1.00

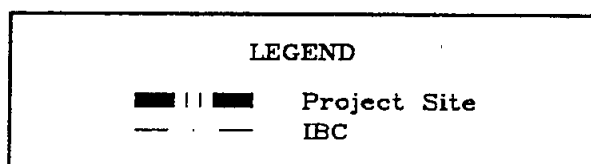
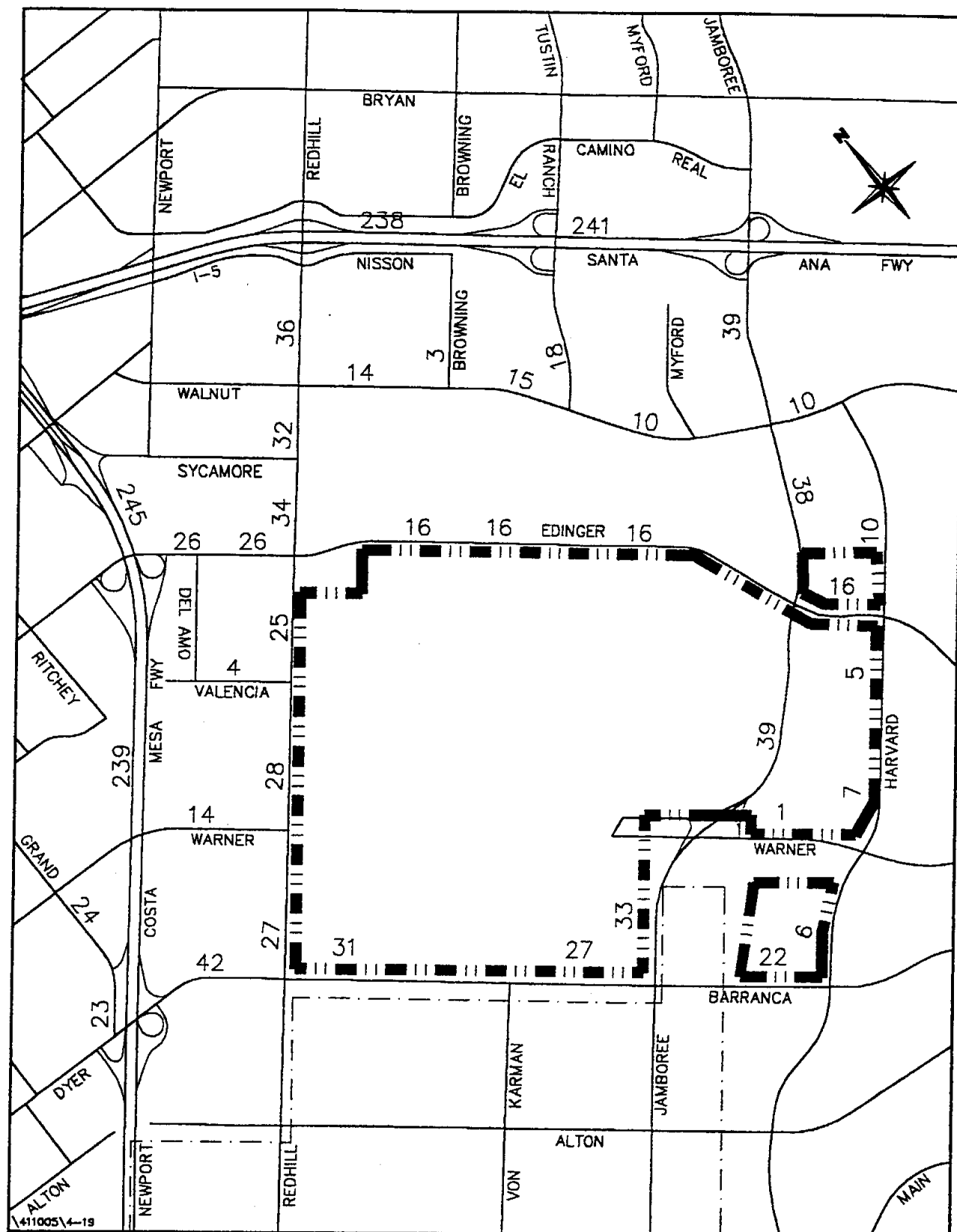


Figure 4-19

EXISTING ADT VOLUMES (000s)

— NO ACTION ALTERNATIVE

Table 4-34

ICU SUMMARY
(Existing No Action Alternative)

LOCATION	— AM PEAK HOUR —			— PM PEAK HOUR —		
	EXISTING BASELINE	NO ACTION	DIFF	EXISTING BASELINE	NO ACTION	DIFF
16. SR-55 NB Ramps & Edinger ^{1,2}	.66	.59	-.07	.68	.60	-.08
24. Red Hill & I-5 NB Ramps ¹	.74	.69	-.05	.83	.83	.00
25. Red Hill & I-5 SB Ramps ¹	.65	.61	-.04	.80	.78	-.02
28. Red Hill & Walnut ¹	.97*	.89	-.08	.89	.84	-.05
29. Red Hill & Sycamore ¹	.94*	.86	-.08	.80	.75	-.05
30. Red Hill & Edinger ¹	.83	.76	-.07	1.00*	.95*	-.05
31. Red Hill & Valencia ¹	.71	.60	-.11	.68	.51	-.17
34. Browning & El Camino Real	.30	.30	.00	.31	.29	-.02
36. Browning & Walnut	.44	.43	-.01	.51	.49	-.02
40. Tustin Ranch & I-5 NB Ramps	.45	.45	.00	.47	.47	.00
41. Tustin Ranch & I-5 SB Ramps	.55	.55	.00	.51	.51	.00
42. Tustin Ranch & Walnut	.75	.75	.00	.74	.74	.00
59. Hotel Terrace/SR-55 & Dyer ¹	.63	.62	-.01	.80	.79	-.01
65. Grand & SR-55 SB Off-Ramp	.52	.52	.00	.39	.39	.00
66. Grand & Dyer ¹	.62	.61	-.01	.82	.80	-.02
67. SR-55 NB Ramps & Dyer ¹	.70	.69	-.01	.83	.83	.00
68. Pullman & Dyer ¹	.48	.46	-.02	.73	.72	-.01
75. SR-55 SB Ramps & Edinger ^{1,2}	.77	.75	-.02	.98	.96	-.02
77. Red Hill & Warner ¹	.63	.61	-.02	.59	.52	-.07
78. Red Hill & Dyer/Barranca ^{1,3}	.83	.83	.00	.75	.70	-.05
86. Von Karman & Barranca ³	.57	.57	.00	.79	.76	-.03
94. Jamboree & I-5 NB Ramps ²	.57	.56	-.01	.75	.74	-.01
95. Jamboree & I-5 SB Ramps ²	.93	.91	-.02	.71	.69	-.02
98. Jamboree (SB) & Walnut	.93*	.90	-.03	.60	.55	-.05
99. Jamboree (NB) & Walnut	.37	.35	-.02	.80	.78	-.02
100. Jamboree & Edinger ^{1,2}	.79	.76	-.03	.82	.77	-.05
102. Jamboree NB Ramps & Warner	.14	.14	.00	.15	.14	-.01
103. Jamboree & Barranca ^{1,3}	.78	.74	-.04	.84	.82	-.02
114. Harvard & Walnut	.36	.36	.00	.37	.37	.00
115. Harvard & Edinger/ICD ¹	.57	.51	-.06	.49	.45	-.04
116. Harvard & Warner	.32	.27	-.05	.43	.38	-.05
117. Harvard & Barranca	.57	.53	-.04	.64	.59	-.05
167. Harvard & Moffett ¹	.48	.24	-.24	.40	.17	-.23

DIFF - Difference between existing baseline and No Action Alternative

* Exceeds level of service "D" (or "E" for IBC and CMP intersections)

¹ SATTSIP intersection

² CMP monitored intersection

³ IBC intersection

4.7.B YEAR 2005 TRAFFIC IMPACTS (No Action Alternative)

Year 2005 ADT volumes for the No Action Alternative can be found in Figure 4-20 and the ICU values can be found in Table 4-35 which summarizes the 2005 baseline and No Action Alternative for those locations that would be affected by this alternative (see Appendix E for actual ICU computations).

4.7.C YEAR 2020 TRAFFIC IMPACTS (No Action Alternative)

~~Project stand-alone (existing)~~ Year 2020 ADT volumes for the No Action Alternative can be found in Figure 4-21 and the ICU values can be found in Table 4-36 which summarizes the 2020 baseline and No Action Alternative for those locations that would be affected by this alternative (see Appendix E for actual ICU computations). Intersection #24, Red Hill Avenue and I-5 northbound ramps, is forecast as unacceptable in the 2020 AM peak hour baseline condition but would operate at an acceptable level (ICU .90 or below) with the No Action Alternative. However, the intersection would remain unacceptable in the PM peak hour. The PM peak hour ICU at intersection #103, Jamboree Road and Barranca Parkway, would be improved from 1.15 to 1.13 with implementation of the No Action Alternative; both values exceed the desired performance standard.

Table 4-35

ICU SUMMARY
(2005 No Action Alternative)

LOCATION	AM PEAK HOUR			PM PEAK HOUR		
	2005 BASELINE	NO ACTION	DIFF	2005 BASELINE	NO ACTION	DIFF
15. Newport & Edinger ¹	.67	.67	.00	.72	.72	.00
16. Newport & SR-55 NB Ramps ^{1,2}	.43	.39	-.04	.53	.49	-.04
20. Newport & Valencia	.36	.36	.00	.44	.44	.00
24. Red Hill & I-5 NB Ramps ¹	.67	.62	-.05	.79	.78	-.01
25. Red Hill & I-5 SB Ramps ¹	.55	.54	-.01	.70	.68	-.02
28. Red Hill & Walnut ¹	.65	.62	-.03	.77	.74	-.03
29. Red Hill & Sycamore ¹	.57	.52	-.05	.65	.62	-.03
30. Red Hill & Edinger ¹	.68	.65	-.03	.67	.62	-.05
31. Red Hill & Valencia ¹	.47	.38	-.09	.57	.36	-.21
34. Browning & El Camino Real	.39	.39	.00	.36	.34	-.02
36. Browning & Walnut	.47	.46	-.01	.54	.54	.00
40. Tustin Ranch & I-5 NB Ramps	.59	.59	.00	.62	.62	.00
41. Tustin Ranch & I-5 SB Ramps	.65	.64	-.01	.74	.73	-.01
42. Tustin Ranch & Walnut	.82	.81	-.01	1.14*	1.14*	.00
59. Hotel Terrace/SR-55 & Dyer ¹	.61	.61	.00	.74	.73	-.01
65. Grand & SR-55 SB Off-Ramp	.59	.59	.00	.41	.41	.00
66. Grand & Dyer ¹	.74	.74	.00	.84	.84	.00
67. SR-55 NB Ramps & Dyer ¹	.68	~~.68~~ .65	~~-.00~~ -.03	~~.69~~ .61	~~.69~~ .60	~~-.00~~ -.01
68. Pullman & Dyer ¹	.54	.53	-.01	.63	.62	-.01
75. SR-55 SB Ramps & Edinger ^{1,2}	~~.64~~ .88	~~.62~~ .86	-.02	~~.86~~ 1.19*	~~.84~~ 1.18*	~~-.02~~ -.01
77. Red Hill & Warner ¹	.60	.59	-.01	.51	.42	-.09
78. Red Hill & Dyer/Barranca ^{1,3}	.86	.83	-.03	.57	.54	-.03
86. Von Karman & Barranca ³	.63	.62	-.01	.95	.93	-.02
94. Jamboree & I-5 NB Ramps ²	.61	.60	-.01	.76	.76	.00
95. Jamboree & I-5 SB Ramps ²	.75	.74	-.01	.70	.67	-.03
98. Jamboree (SB) & Walnut	.66	.64	-.02	.33	.27	-.06
99. Jamboree (NB) & Walnut	~~.20~~ .23	~~.18~~ .20	~~-.02~~ -.03	~~.51~~ .58	~~.48~~ .55	-.03
100. Jamboree & Edinger ^{1,2}	.50	.46	-.04	.39	.38	-.01
102. Jamboree NB Ramps & Warner	.22	.22	.00	.25	.24	-.01
103. Jamboree & Barranca ^{1,3}	.76	.74	-.02	.97	.95	-.02
114. Harvard & Walnut	~~.34~~ .35	~~.34~~ .35	.00	.30	.30	.00
115. Harvard & Edinger/ICD ¹	.46	.39	-.07	.40	.38	-.02
116. Harvard & Warner	.41	.35	-.06	.43	.39	-.04
117. Harvard & Barranca	.61	.57	-.04	.69	.64	-.05
167. Harvard & Moffett ¹	.26	.23	-.03	.47	.45	-.02

DIFF - Difference between 2005 baseline and No Action Alternative

* Exceeds level of service "D" (or "E" for IBC and CMP intersections)

¹ SATTSIP intersection

² CMP monitored intersection

³ IBC intersection

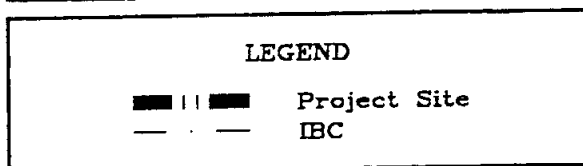
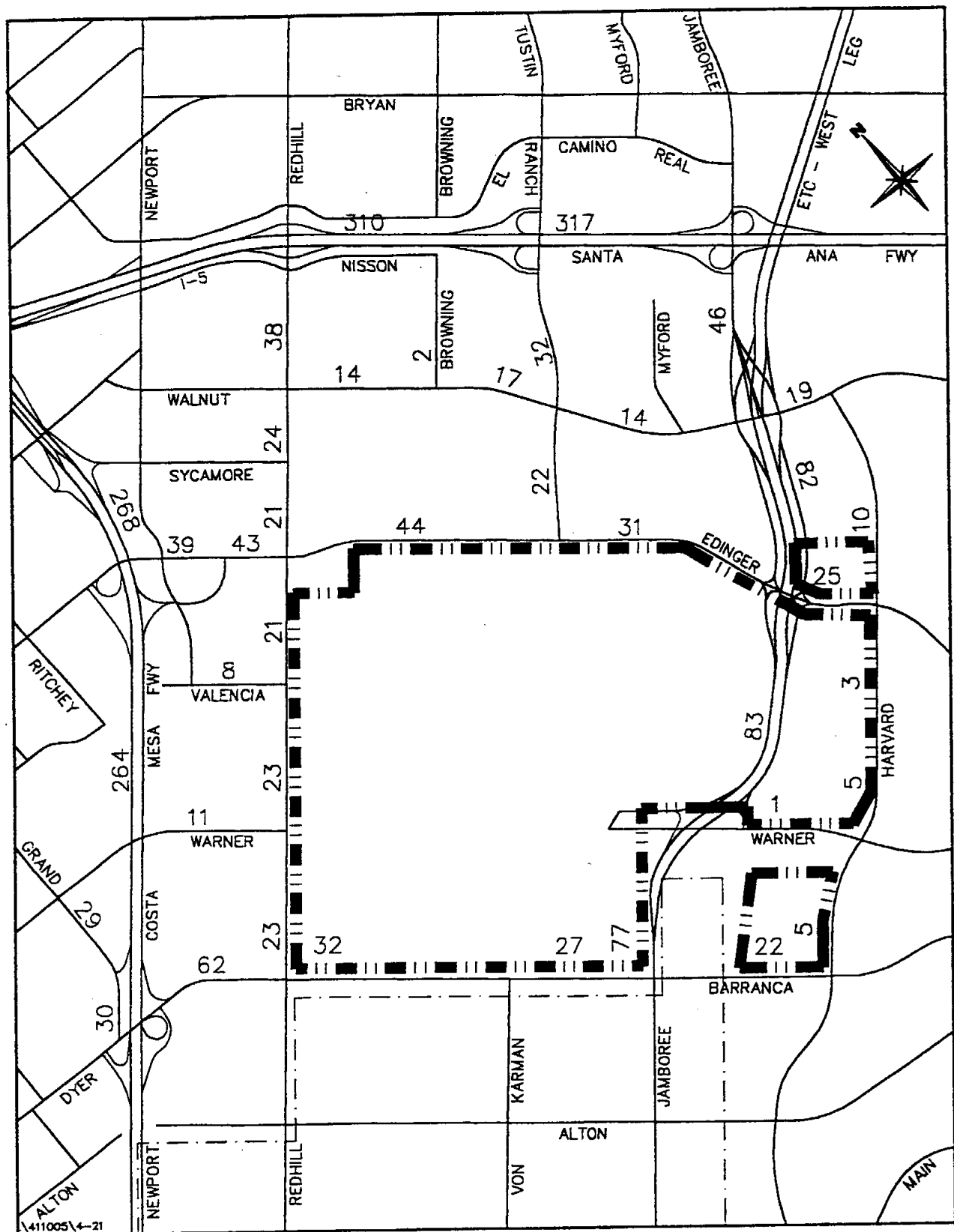


Figure 4-21

2020 ADT VOLUMES (000s)

- NO ACTION ALTERNATIVE

Table 4-36

ICU SUMMARY
(2020 No Action Alternative)

LOCATION	AM PEAK HOUR			PM PEAK HOUR		
	2020 BASELINE	NO ACTION	DIFF	2020 BASELINE	NO ACTION	DIFF
15. Newport & Edinger ¹	.85	.85	.00	.87	.87	.00
16. Newport & SR-55 NB Ramps ^{1,2}	.39	.36	-.03	.67	.63	-.04
20. Newport & Valencia	.46	.46	.00	.42	.42	.00
24. Red Hill & I-5 NB Ramps ¹	.93*	.88	-.05	1.00*	.99*	-.01
25. Red Hill & I-5 SB Ramps ¹	.71	.68	-.03	.82	.81	-.01
28. Red Hill & Walnut ¹	.76	.73	-.03	.84	.82	-.02
29. Red Hill & Sycamore ¹	.63	.59	-.04	.67	.64	-.03
30. Red Hill & Edinger ¹	.75	.65	-.10	.88	.78	-.10
31. Red Hill & Valencia ¹	.52	.41	-.11	.65	.44	-.21
34. Browning & El Camino Real	.30	.30	.00	.35	.35	.00
36. Browning & Walnut	.47	.46	-.01	.54	.53	-.01
40. Tustin Ranch & I-5 NB Ramps	.54	.54	.00	.57	.56	-.01
41. Tustin Ranch & I-5 SB Ramps	.65	.65	.00	.65	.64	-.01
42. Tustin Ranch & Walnut	.84	.83	-.01	.89	.88	-.01
59. Hotel Terrace/SR-55 & Dyer ¹	~~.68~~ .62	~~.67~~ .57	~~-.01~~ -.05	~~.87~~ .79	~~.85~~ .78	~~-.02~~ -.01
65. Grand & SR-55 SB Off-Ramp	.77	.50	.00	.77	.50	.00
66. Grand & Dyer ¹	~~.73~~ .66	~~.72~~ .66	~~-.01~~ .00	~~.97*~~ .94*	~~.97*~~ .94*	.00
67. SR-55 NB Ramps & Dyer ¹	~~.76~~ .68	~~.76~~ .68	.00	~~.69~~ .61	~~.69~~ .60	~~-.00~~ -.01
68. Pullman & Dyer ¹	.55	.54	-.01	.67	.66	-.01
75. SR-55 SB Ramps & Edinger ^{1,2}	.86	.85	-.01	1.19*	1.18*	-.01
77. Red Hill & Warner ¹	.50	.49	-.01	.46	.42	-.04
78. Red Hill & Dyer/Barranca ^{1,3}	.75	.75	.00	.78	.75	-.03
86. Von Karman & Barranca ³	.61	.61	.00	.77	.75	-.02
94. Jamboree & I-5 NB Ramps ²	.67	.66	-.01	.91	.90	-.01
95. Jamboree & I-5 SB Ramps ²	.73	.71	-.02	.88	.86	-.02
98. Jamboree (SB) & Walnut	.70	.67	-.03	.44	.40	-.04
99. Jamboree (NB) & Walnut	.23	.20	-.03	.77	.73	-.04
100. Jamboree & Edinger ^{1,2}	.56	.53	-.03	.59	.56	-.03
102. Jamboree NB Ramps & Warner	.12	.12	.00	.14	.13	-.01
103. Jamboree & Barranca ^{1,3}	.83	.80	-.03	1.15*	1.13*	-.02
114. Harvard & Walnut	.41	.41	.00	.35	.35	.00
115. Harvard & Edinger/ICD ¹	.62	.55	-.07	.70	.65	-.05
116. Harvard & Warner	.42	.36	-.06	.51	.47	-.04
117. Harvard & Barranca	.56	.53	-.03	.67	.64	-.03
167. Harvard & Moffett ¹	.33	.31	-.02	.61	.61	.00

DIFF - Difference between 2020 baseline and No Action Alternative

* Exceeds level of service "D" (or "E" for IBC and CMP intersections)

¹ SATTSIP intersection

² CMP monitored intersection

³ IBC intersection

Chapter 5.0

POST-2020 ANALYSIS

This chapter presents traffic forecast data for a Post-2020 time frame. It indicates likely future conditions for complete buildout of the project. It includes the cumulative impacts of full buildout of the General Plan land uses of the cities in the study area, the Orange County MPAH, and the General Plan Circulation Elements of the cities in the study area.

5.1 DEMOGRAPHIC DATA

The database used to prepare traffic forecasts assumes buildout of the General Plans of four cities in the study area (Irvine, Tustin, Santa Ana and Newport Beach). The OCP-96 Modified demographic data used for the 2020 analysis was changed to reflect this buildout condition and then used in the traffic model to prepare Post-2020 traffic forecasts.

5.2 PLANNED CIRCULATION IMPROVEMENTS

The Post-2020 analysis includes the committed roadway network plus roadway improvements that are in approved plans. The primary basis for the Post-2020 roadway network is the County of Orange Master Plan of Arterial Highways (MPAH), together with the Cities of Tustin, Irvine, Santa Ana and Newport Beach General Plan Circulation Elements. The General Plan Circulation Elements for the cities differ slightly from the MPAH (see Figure 5-1), and these differences are summarized in Table 5-1.

- Insert (see page 5-1a) -

Figure 5-2 shows the roadway improvements in the Post-2020 network in and around the study area, and a detailed listing is given in Table 5-2. The majority of the improvements listed here are associated with the circulation system master plan for the area (i.e., MPAH and city Circulation Elements). For this Post-2020 analysis, the Orange County Transportation Corridors - Eastern, Foothill and San Joaquin Hills (referred to as the "Toll Roads" through year 2020) are assumed to

Insert page 5-1 at end of Section 5.2 first paragraph

The roadways included in the Post-2020 analysis are those designated on the MPAH. Not included in the analysis are non-MPAH roadways except in special circumstances such as a roadway providing direct access to the reuse area. As was seen in Table 5-1, Myford Road between Irvine Boulevard and Walnut Avenue is the only roadway on the City of Tustin's General Plan Circulation Element not in the MPAH. This roadway has been included in the traffic analysis with the exception of the I-5 overcrossing between El Camino Real and Michelle Drive. Future forecasts have indicated that the north-south traffic demand in this area can be adequately carried by Jamboree Road, Tustin Ranch Road and the west leg of the Eastern Transportation Corridor (ETC). In addition, forecasts which include the Myford Road/I-5 overcrossing have shown that this facility would serve local traffic from the commercial/industrial area south of the I-5 Freeway to the East Tustin area and would have low traffic demand. Because this roadway does not provide a continuous north-south access to the reuse site, there would be no or little impact on this roadway by the reuse area.

It should also be noted that the Post-2020 conditions for the intersection of Jamboree Road and Barranca Parkway do not include any provision for a grade-separated interchange pursuant to a 1998 Memorandum of Agreement (MOA) between the Transportation Corridor Agencies (TCA) and the Cities of Tustin and Irvine. This MOA determined that a future grade-separated interchange at this location would be financially infeasible. The MOA also defined interim improvements, which in this traffic report are assumed completely constructed by year 2005, and established a funding agreement with a maximum dollar amount for future improvements to maintain an acceptable level of service at this location. Those future improvements are currently being negotiated between the Cities of Irvine and Tustin, and are not reflected in the traffic report.

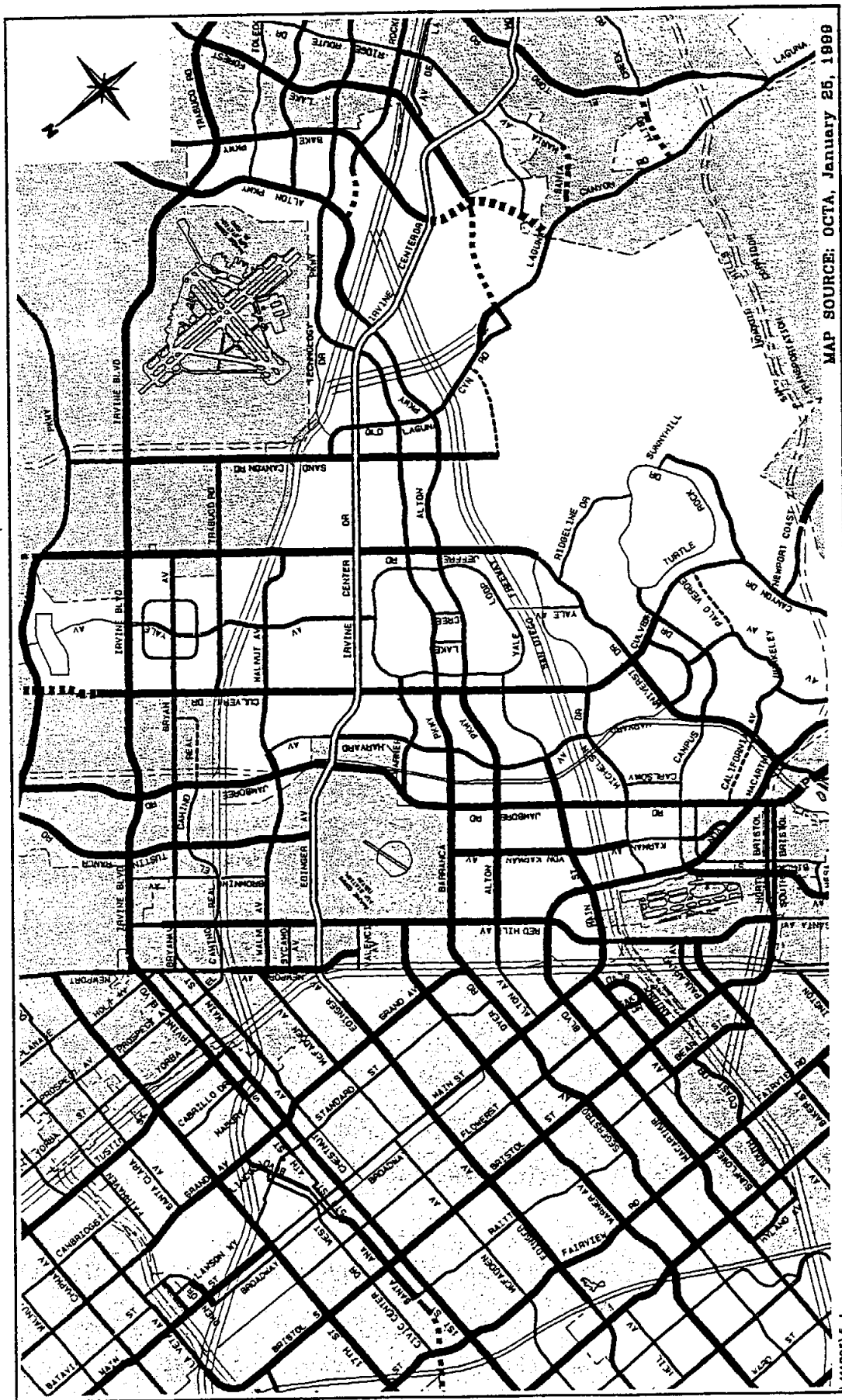


Figure 5-1
MASTER PLAN OF ARTERIAL HIGHWAYS
(MPAH)

LEGEND

- Smart Street (6 lanes)
 - Principal (8 lanes)
 - Major (6 lanes)
 - Primary (4 lanes)
 - Secondary (4 or 2 lanes)
 - Commuter (2 lanes)
- NOTE: Shaded areas depict various city and county boundaries.

Table S-1

ROADWAY SYSTEM DIFFERENCES

ROADWAY SECTION	MPAH*	CITY GENERAL PLAN
TUSTIN		
Edinger Avenue		
SR-55 to Del Amo	Smart Street	Augmented Major
Del Amo to Eastern City Limits at Harvard Ave	Smart Street	Major
El Camino Real		
Myford Rd to Jamboree Rd	Secondary	Primary
Irvine Blvd		
Newport Ave to Browning Ave	Major	Augmented Modified Major
Browning Ave to Tustin Ranch Road	Major	Augmented Major
Myford Road		
Irvine Blvd to Walnut Ave	None	Secondary**
Newport Avenue		
Northern City Limits just north of Irvine Blvd to I-5 Fwy	Primary	Augmented Primary
I-5 Fwy to Sycamore Ave	Major	Modified Major
Valencia Avenue		
Newport Ave to Red Hill Ave	Secondary	Augmented Primary
Walnut Avenue		
Tustin Ranch Rd to Jamboree Rd/ETC	Primary	Augmented Primary
Newport Ave to Browning Ave	Primary	Modified Primary
SANTA ANA		
Dyer Road		
SR-55 Fwy to Red Hill Ave	Major	Principal
IRVINE		
Alton Parkway		
just east of Jeffrey Rd	Primary	Augmented Primary
just west of Sand Cyn Ave	Primary	Augmented Primary
just east of Sand Cyn Ave	Primary	Augmented Primary
Culver Drive		
Main St to Michelson Dr	Major	Augmented Major
Main Street		
Harvard Ave to East Yale Loop	Secondary	Primary
Red Hill Avenue		
I-405 overcrossing	Primary	Major
Sand Canyon Avenue		
Alton Pkwy to I-405 NB ramps	Major	Augmented Major

* Master Plan of Arterial Highways (OCTA, January 25, 1999)

** This roadway has been included in the traffic analysis with the exception of the I-5 overcrossing between El Camino Real and Michelle Drive.

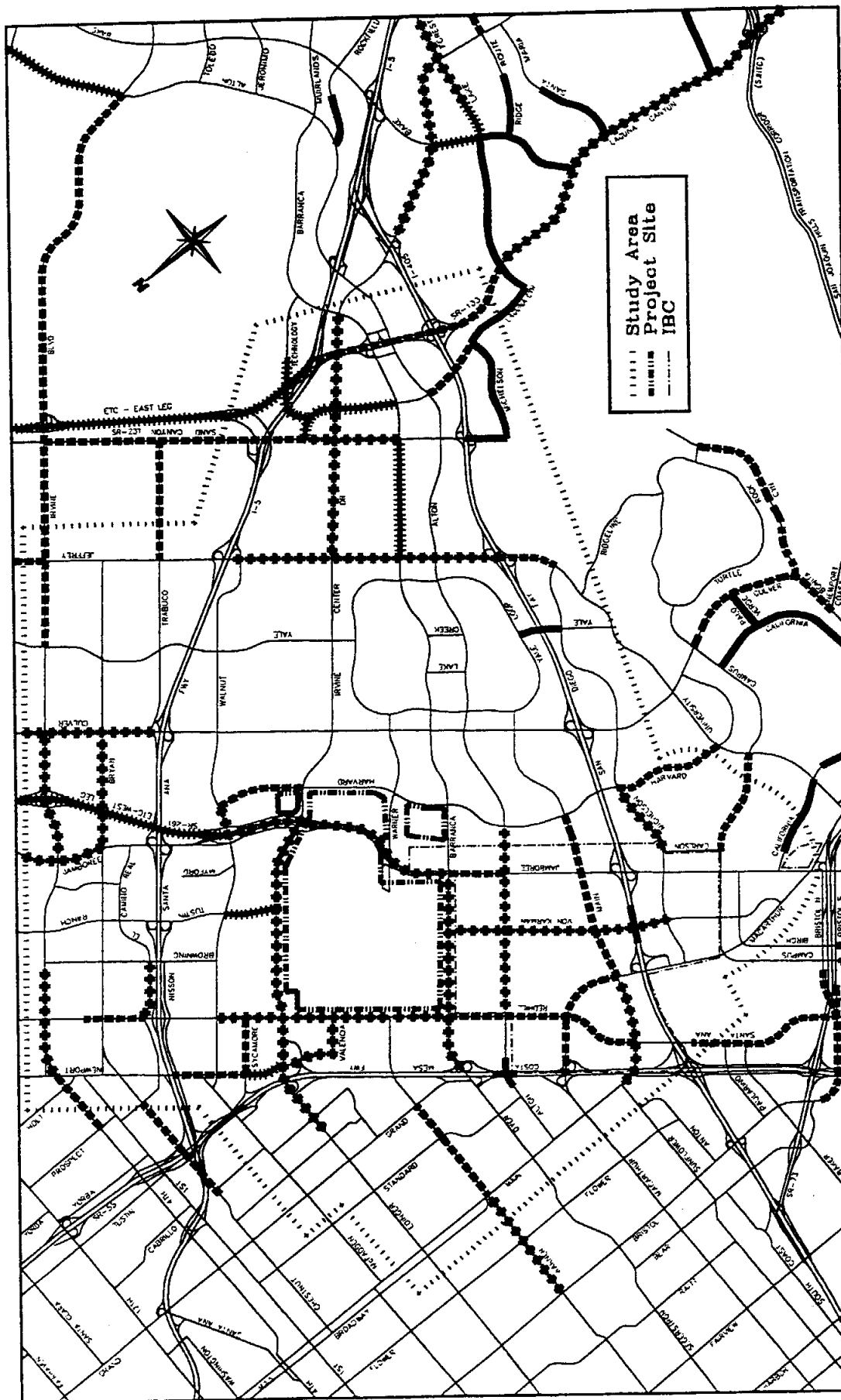


Figure 5--2

POST-2020 CIRCULATION
SYSTEM IMPROVEMENTS
CONSISTENT W/MPAH

LEGEND

- Improved Roadway (Committed)
- New Roadway (Committed)
- Improved Roadway (MPAH)
- New Roadway (MPAH)

Table 5-2

POST-2020 ROADWAY CIRCULATION SYSTEM IMPROVEMENTS

FACILITY	LIMITS	JURISDICTION	IMPROVEMENT
FREEWAY/TRANSPORTATION CORRIDOR IMPROVEMENTS			
Eastern Transportation Corridor (ETC) East Leg	SR-91 Fwy to ETC West Leg	Anaheim/TCA	Improve the tollway to provide two carpool lanes
ETC East Leg	ETC West Leg to I-5	TCA	Improve the tollway to provide two carpool lanes and with interchanges at Culver Dr and Jeffrey Rd
ETC West Leg	ETC East Leg to Walnut Ave	Irvine/TCA	Improve the tollway to provide two carpool lanes
Foothill Transportation Corridor (FTC)	Portola Pkwy to ETC East Leg	TCA	Improve the tollway to provide two carpool lanes
FTC	Antonio Pkwy to Oso Pkwy	TCA	Improve the tollway to provide two carpool lanes
FTC South	Oso Pkwy to I-5 Fwy	TCA	Improve the tollway to provide two carpool lanes
I-405	at Von Karman Ave	Irvine	Construct high occupancy vehicle (HOV) ramps
SR-55	at Alton Parkway	Irvine/Santa Ana	Construct HOV ramps
SR-133	I-5 to Lake Forest Dr	Irvine	Improve to six lanes
ARTERIAL IMPROVEMENTS			
Aliso Creek Rd	Laguna Cyn Rd to El Toro Rd	Orange County	Construct as four-lane secondary arterial
Alton Pkwy	at SR-55	Irvine/Santa Ana	Construct four lane overcrossing
Bake Pkwy	Lake Forest Dr to Laguna Cyn Rd	Irvine	Construct as six lane major arterial
Barranca Pkwy	Red Hill Ave to Jamboree Rd	Irvine/Tustin	Improve to eight lanes including associated improvements at the Red Hill Ave and Von Karman Ave intersections ¹
Bonita Cyn Dr	Newport Coast Dr to east of Culver Dr	Irvine	Improve to four lanes
Bristol St	Bear St to east of Red Hill Ave	Costa Mesa	Improve to six lanes
Browning Ave	El Camino Real to Nissan Rd	Tustin	Construct as four lane secondary arterial
California Ave	Jamboree Rd to University Dr	Irvine	Construct as four lane secondary arterial
California Ave	University Dr to Campus Dr	Irvine	Construct as continuous four lane primary arterial
Campus Dr	Carlson Ave to University Dr	Irvine	Improve to four lanes including associated improvements at the Carlson Ave and University Dr intersections
Culver Dr	Portola Pkwy to ETC	Orange County	Construct as six lane major arterial
Culver Dr	Campus Dr to Bonita Cyn Dr	Irvine	Improve to four lanes
Del Mar Ave	SR-55 to Irvine Ave	Costa Mesa/Orange County	Improve to four lanes including associated improvements at the Santa Ana Ave intersection

(Continued)

Table 5-2 (cont)
POST-2020 ROADWAY CIRCULATION SYSTEM IMPROVEMENTS

FACILITY	LIMITS	JURISDICTION	IMPROVEMENT
ARTERIAL IMPROVEMENTS (cont)			
Dyer Rd	SR-55 to Red Hill Ave	Irvine/Santa Ana	Improve to eight lanes including associated improvements at the Red Hill Ave intersection ¹
El Camino Real	Red Hill Ave to Browning Ave	Tustin	Improve to four lanes including associated improvements at the Red Hill Ave and Browning Ave intersections
Harvard Ave	Walnut Ave to Irvine Center Dr	Irvine/Tustin	Improve to four lanes
Harvard Ave	Michelson Dr to University Dr	Irvine	Improve to four lanes
Irvine Blvd	Prospect Ave to Newport Ave	Tustin	Improve to six lanes including associated improvements at the Holt Ave intersection
Irvine Blvd	Yale Ave to Jeffrey Rd	Irvine/Orange County	Improve to six lanes including associated improvements at the Jeffrey Rd intersection
Irvine Blvd	Jeffrey Rd to Alton Pkwy	Orange County	Improve to six lanes including associated improvements at the Jeffrey Rd and Sand Cyn Ave intersections
Jamboree Rd	Tustin Ranch Rd to Chapman Ave	Orange/Tustin	Improve to six lanes
Jamboree Rd	Barranca Pkwy to Alton Pkwy	Irvine	Improve to 10 lanes including associated improvements at the Alton Pkwy intersection and with grade separation at Barranca Pkwy ²
Jeffrey Rd	Portola Pkwy to Irvine Blvd	Orange County	Improve to six lanes
Jeffrey Rd	Portola Pkwy to ETC	Orange County	Construct as four lane primary arterial
Jeffrey Rd	ETC to Santiago Cyn Rd	Orange County	Construct as four lane primary arterial
Laguna Cyn Rd	Alton Pkwy to SR-133	Irvine	Improve to four lanes and realign to Lake Forest Dr
Laguna Cyn Rd	south of El Toro Rd	Orange County/Laguna Beach	Improve to four lanes
Lake Forest Dr	Bake Pkwy to realigned Laguna Cyn Rd	Irvine	Construct as four lane primary arterial
MacArthur Blvd	SR-55 to Main St	Irvine	Improve to eight lanes including associated improvements at the Red Hill Ave intersection ¹
Main St	SR-55 to El Camino Real	Tustin	Improve to four lanes including associated improvements at the El Camino Real intersection
Main St	Red Hill Ave to Harvard Ave	Irvine	Improve to eight lanes including associated improvements at the Von Karman Ave and Jamboree Rd intersections ¹
Mesa Dr/Birch St	Irvine Ave to Bristol St	Newport Beach/Orange County	Improve to four lanes
Michelson Dr	Sand Cyn Ave to Laguna Cyn Rd	Irvine	Construct as four lane secondary arterial
Newport Ave	I-5 to Sycamore Ave	Tustin	Improve to six lanes including associated improvements at the I-5 ramp, Walnut Avenue and Sycamore Ave intersections
Newport Coast Dr	SIHTC to San Joaquin Hills Rd	Orange County	Improve to eight lanes

(Continued)

Table 5-2 (cont)
POST-2020 ROADWAY CIRCULATION SYSTEM IMPROVEMENTS

FACILITY	LIMITS	JURISDICTION	IMPROVEMENT
ARTERIAL IMPROVEMENTS (cont)			
Palo Verde Rd	California Ave to Culver Dr	Irvine	Construct as four lane secondary arterial
Portola Pkwy	ETC to Culver Dr	Irvine/Orange County	Improve to six lanes including associated improvements at the Culver Dr intersection
Portola Pkwy	Culver Dr to Jeffrey Rd	Irvine/Orange County	Improve to six lanes including associated improvements at the Culver Dr and Jeffrey Rd intersections
Portola Pkwy	FTC (west) to Alton Pkwy	Orange County	Construct as four lane primary arterial
Portola Pkwy	FTC (east) to El Toro Rd	Lake Forest/Orange County	Improve to eight lanes
Red Hill Ave	north of Bryan Ave to El Camino Real	Tustin	Improve to six lanes including associated improvements at the Bryan Ave intersection
Red Hill Ave	Dyer Rd/Barranca Pkwy to Main St	Tustin/Irvine/Santa Ana	Improve to eight lanes including associated improvements at the Barranca Pkwy, Alton Pkwy, MacArthur Blvd and Main St intersections
Red Hill Ave	I-405 to Bristol St	Costa Mesa	Improve to six lanes including associated improvements at the Paulmarino Ave, Baker St and Bristol St intersections
Ridge Route Dr	at I-5	Laguna Hills/Lake Forest	Construct four lane overcrossing
Ridge Route Dr	Moulton Pkwy to Avd de la Carlota	Laguna Hills/Orange County	Improve to four lanes including associated improvements at the Moulton Pkwy intersection
Ridge Route Dr	west of Moulton Pkwy to Bake Pkwy	Irvine/Laguna Hills	Construct as four lane secondary arterial
Rockfield Blvd	Alton Pkwy to Bake Pkwy	Irvine/Orange County	Construct as four lane primary arterial
Sand Cyn Ave	Irvine Blvd to I-5	Irvine/Orange County	Improve to six lanes including associated improvements at the Irvine Blvd, Trabuco Rd and I-5 ramp intersections
Sand Cyn Ave	I-5 to Oak Cyn Rd	Irvine	Improve to six lanes including associated improvements at the I-5 ramp intersection
Sand Cyn Ave	I-405 to Michelson Dr	Irvine	Construct as six lane major arterial
Santa Maria Ave	west of Moulton Pkwy to Laguna Cyn Rd	Orange County	Construct as four lane secondary arterial
Seventeenth St	Prospect Ave to Newport Ave	County	Improve to six lanes including associated improvements at the Holt Ave intersection
Standard Ave/Halladay St	Warner Ave to Dyer Rd	Santa Ana	Realign to form a continuous roadway
Sycamore Ave	Newport Ave to Red Hill Ave	Tustin	Improve to four lanes including associated improvements at the Newport Ave and Red Hill Ave intersections

(Continued)

Table 5-2 (cont)
POST-2020 ROADWAY CIRCULATION SYSTEM IMPROVEMENTS

FACILITY	LIMITS	JURISDICTION	IMPROVEMENT
ARTERIAL IMPROVEMENTS (cont)			
Trabuco Rd	Jeffrey Rd to Sand Cyn Ave	Orange County	Improve to four lanes including associated improvements at the Jeffrey Rd intersection
University Dr	Michelson Dr to I-405	Irvine	Improve to six lanes including associated improvements at the I-405 ramp intersections
Warner Ave	Main St to Grand Ave	Santa Ana	Improve to six lanes including associated improvements at the Grand Ave intersection
Yale Ave	at I-405	Irvine	Construct two lane overcrossing
INTERSECTION IMPROVEMENTS			
Bake Pkwy	at Irvine Blvd/Trabuco Rd	Irvine/Lake Forest	Add third northbound through lane
Culver Dr	at Michelson Dr	Irvine	Add second northbound left-turn lane ¹
Grand Ave	at Dyer Rd	Santa Ana	Add third westbound through lane
Harvard Ave	at Barranca Pkwy	Irvine/Tustin	Add second southbound left-turn lane and second northbound left-turn lane ¹
Harvard Ave	at Main St	Irvine	Convert southbound right-turn lane to free right-turn lane ¹
Harvard Ave	at Michelson Dr	Irvine	Convert southbound right-turn lane to free right-turn lane ¹
Jamboree Rd	at Michelson Dr	Irvine	Add fourth southbound through lane, third westbound and eastbound through lanes, and free northbound right-turn lane ¹
MacArthur Blvd	at Jamboree Rd	Irvine/Newport Beach	Add second northbound left-turn lane and a northbound right-turn lane ¹
Prospect Ave	at First St	Tustin	Add second southbound left-turn lane ²
Prospect Ave	at Irvine Blvd	Tustin	Add second southbound left-turn lane ²
Tustin Ranch Rd	at Irvine Blvd	Tustin	Add third westbound through lane

¹ Included in the Irvine Business Complex (IBC) Rezoning Mitigation Program

² Included in the Santa Ana/Tustin Transportation System Improvement Program (SATTSIP)

³ The intersection of Jamboree Road and Barranca Parkway does not include any provision for a grade-separated interchange at this location would be financially infeasible.

Note: Refer to Appendix D for associated intersection improvements

TCA - Transportation Corridor Agencies

be operating as free facilities. While only the southernmost end of the Eastern Transportation Corridor West Leg is in the study area, regional travel patterns are influenced by the corridors, which in turn influence traffic patterns in the study area.

5.3 POST-2020 TRAFFIC FORECASTS

Post-2020 ADT forecasts for each of the project alternatives can be found in Figures 5-3 through 5-5. The corresponding ICU values are listed in Appendix D, with individual intersection calculations contained in Appendix E. Not every intersection meets the desired performance standard on the basis of the Post-2020 modeled volumes.

5.4 PROJECT INVOLVEMENT IN POST-2020 IMPROVEMENTS

This Post-2020 analysis has assumed transportation improvements beyond those in the committed network. The intent here is not to devise a complete study area transportation plan for this Post-2020 time frame but rather to provide information on land use and transportation plans that are beyond the year 2020 framework used in the impact analysis. Mechanisms such as the Growth Management Plan and land use entitlement procedures will evaluate roadway needs and improvements over time, responding to future conditions as they evolve and thereby maintaining desired performance standards.

No mitigation for each of the project alternatives at Post-2020 have been identified. It is assumed that the project alternative would be completed by 2020, and required mitigation for off-site traffic and circulation impacts would be completed. The forecast impacts and mitigation prior to 2020 are described in Chapter 4 of this analysis, and specific implementation of the mitigation is described in Chapter 6.0.

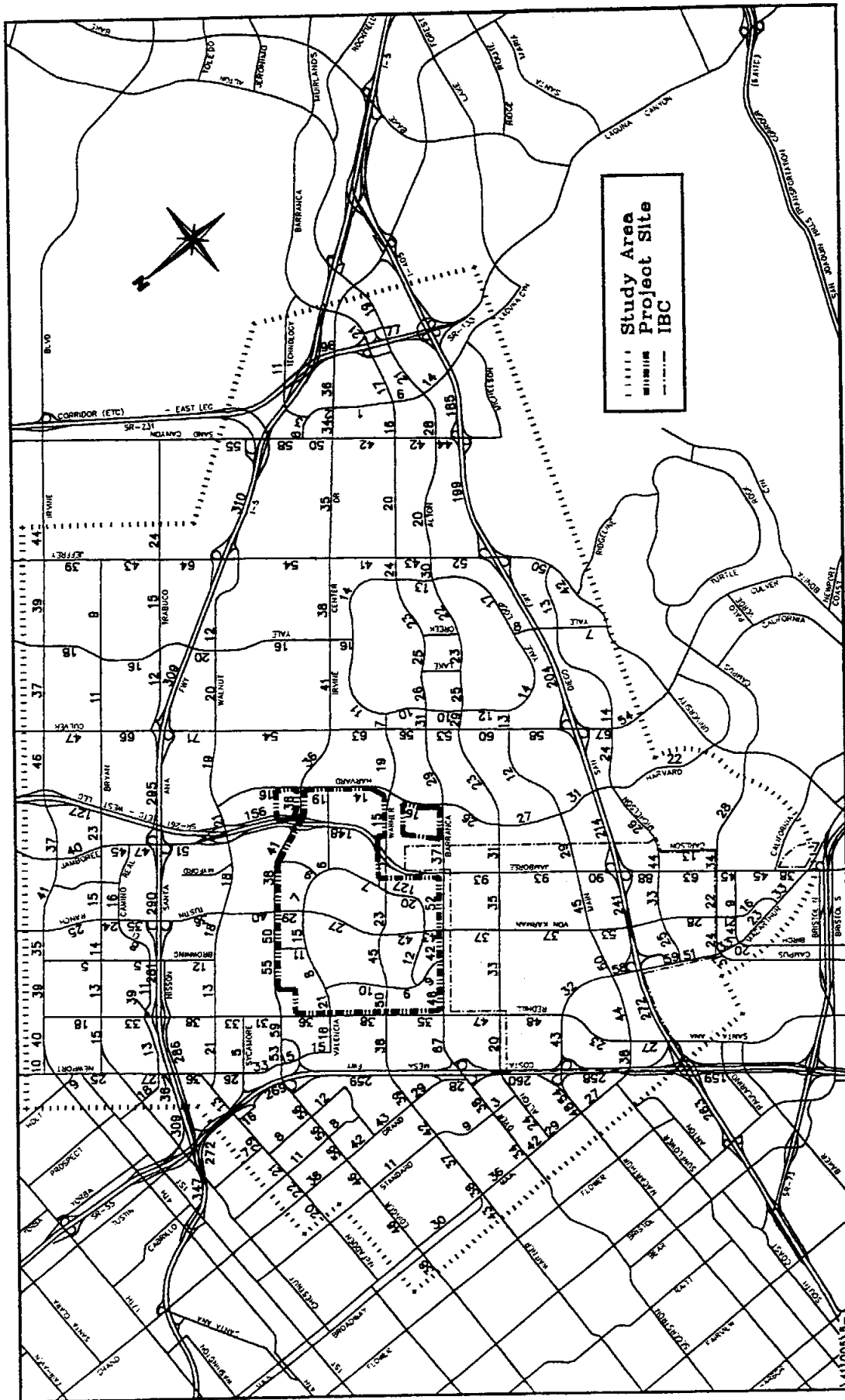


Figure 5-3

POST-2020 ADT VOLUMES (000s)
- REUSE ALTERNATIVE 1

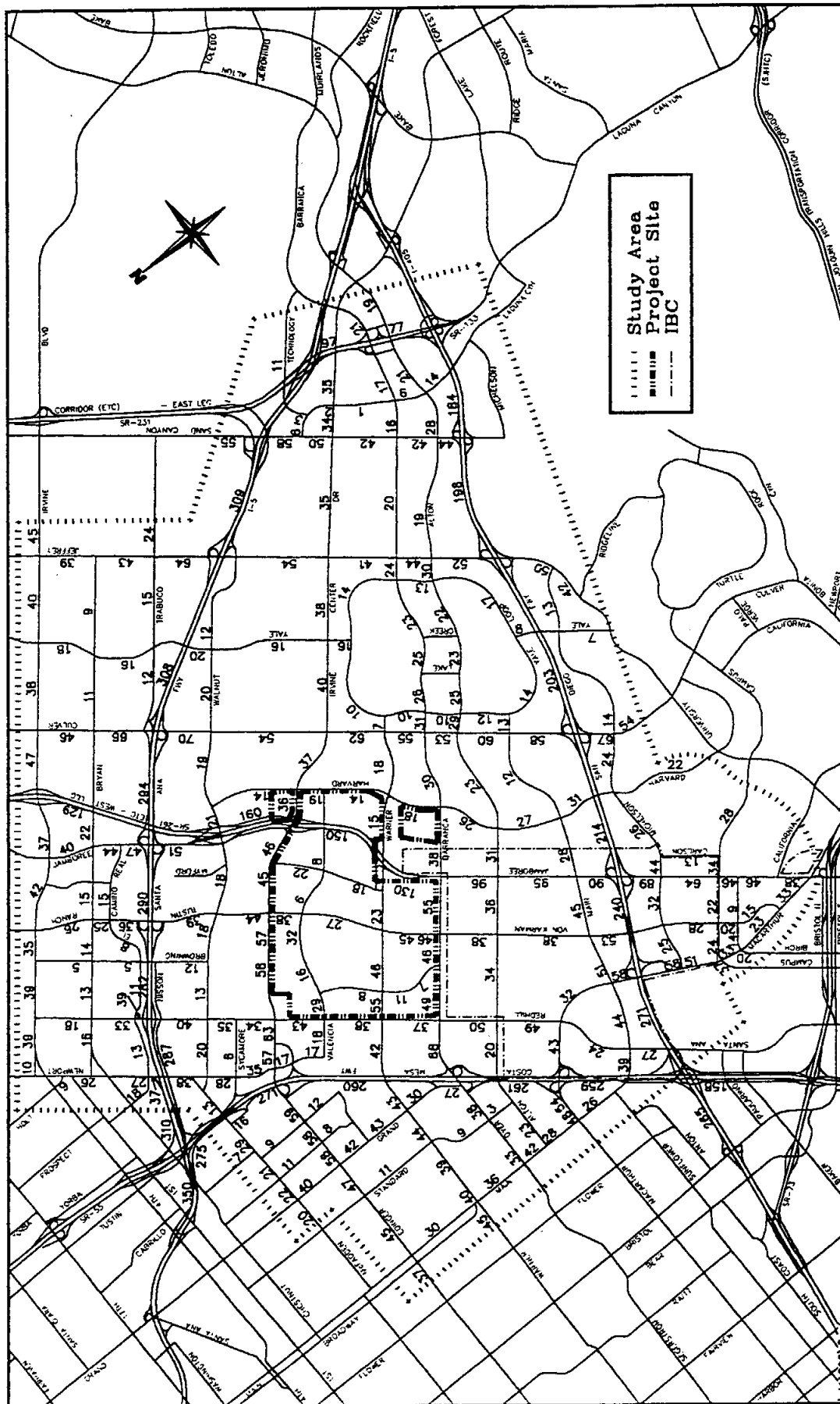


Figure 5-4

POST-2020 ADT VOLUMES (000s)
-- REUSE ALTERNATIVE 2

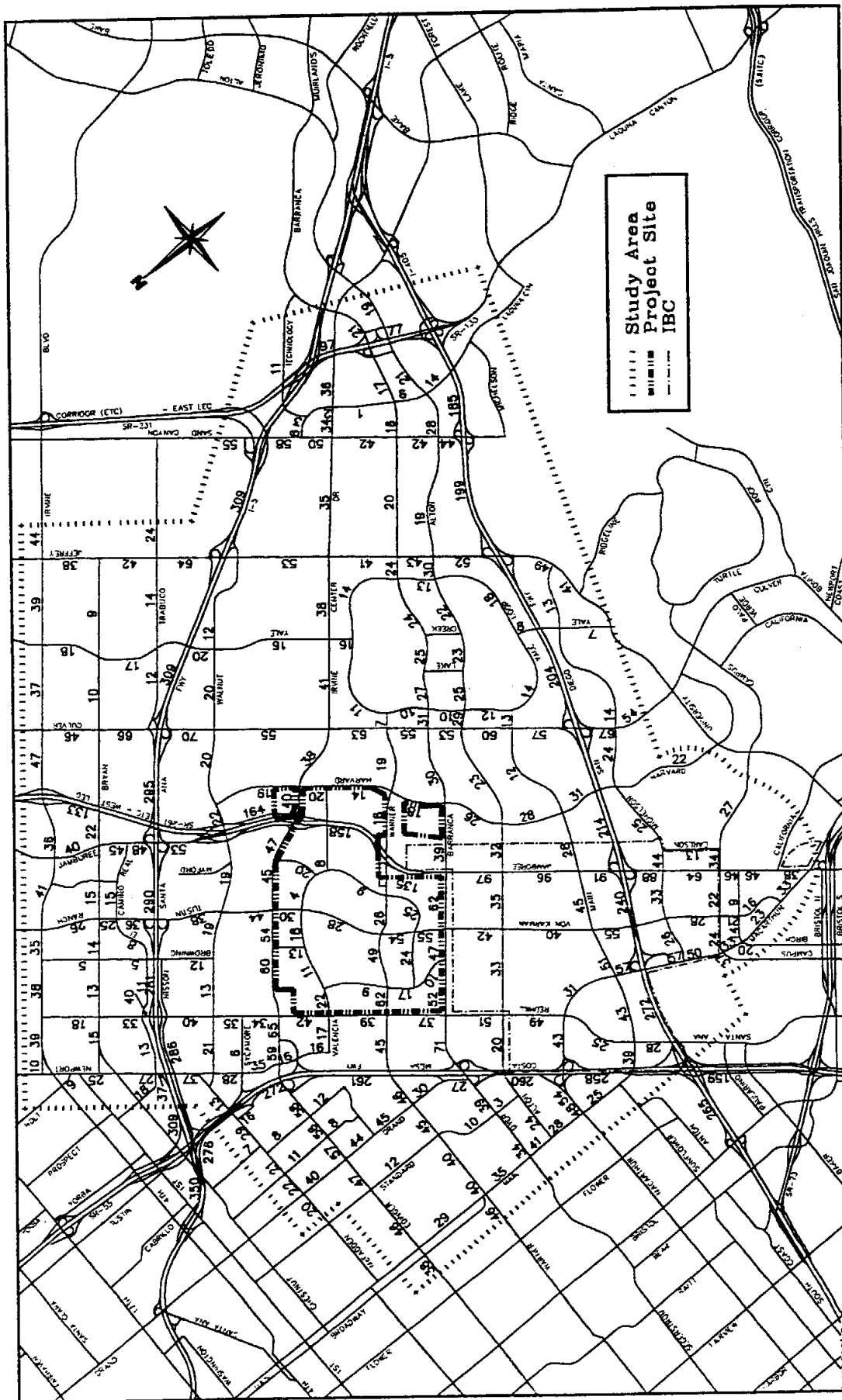


Figure 5-6

POST-2020 ADT VOLUMES (000s)
- REUSE ALTERNATIVE 3

Chapter 6.0

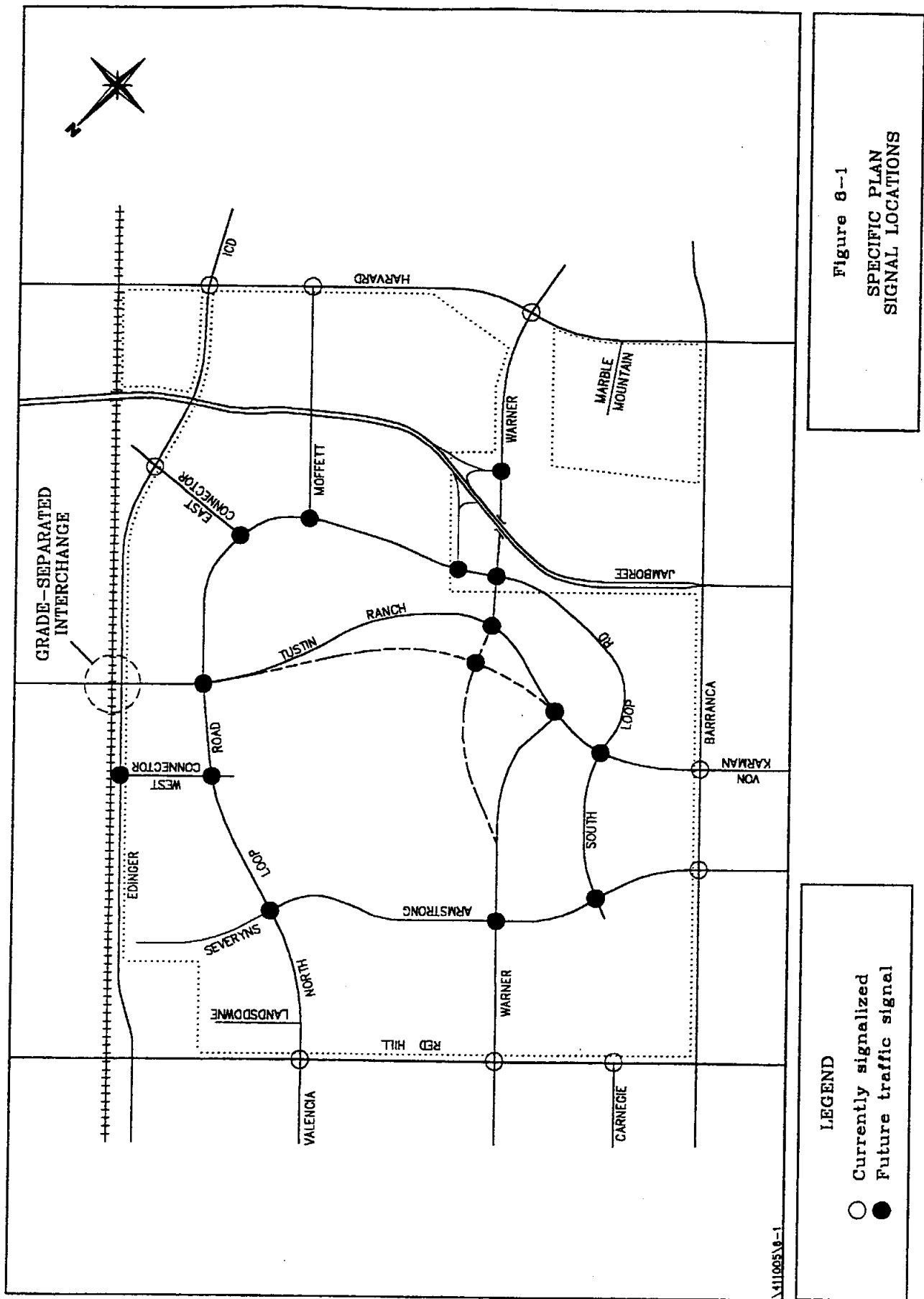
IMPLEMENTING ACTIONS

Implementation of the LRA Reuse Alternative would be carried out using a Specific Plan as the basis for project development. This chapter addresses the transportation related Implementing Actions for the Specific Plan. The information contained in this chapter updates the previously completed Specific Plan for the project site (1996) according to the currently proposed LRA Reuse Plan and associated mitigation presented in the traffic study.

6.1 INTERNAL ROADWAY SYSTEM

The Specific Plan circulation system features a northeast-southwest link (Tustin Ranch Road-Von Karman Avenue) and an southeast-northwest link (Warner Avenue) with a unifying internal loop and several local streets and collectors. The overall system and the individual Master Plan of Arterial Highways (MPAH) roadway classifications for each proposed roadway were shown in Chapter 2.0. Figure 6-1 illustrates the intersections that would be signalized as part of the internal circulation network. All roadways connecting to the surrounding network, with the exception of Marble Mountain Road, would connect at currently signalized intersections, and the only new intersection in that regard is the West Connector and Edinger Avenue. The intersection of Edinger Avenue and Tustin Ranch Road would be a grade separated configuration.

Year 2020 AM and PM peak hour traffic volumes for key local circulation system intersections in the project vicinity are illustrated in Figures 6-2 and 6-3, respectively. Proposed lane configurations for these intersections are illustrated in Figure 6-4. The intersection capacity utilization (ICU) values for these intersections are summarized in Table 6-1 for locations not previously presented in this report. As shown, all intersections within the Specific Plan are forecast to operate at acceptable levels of service.



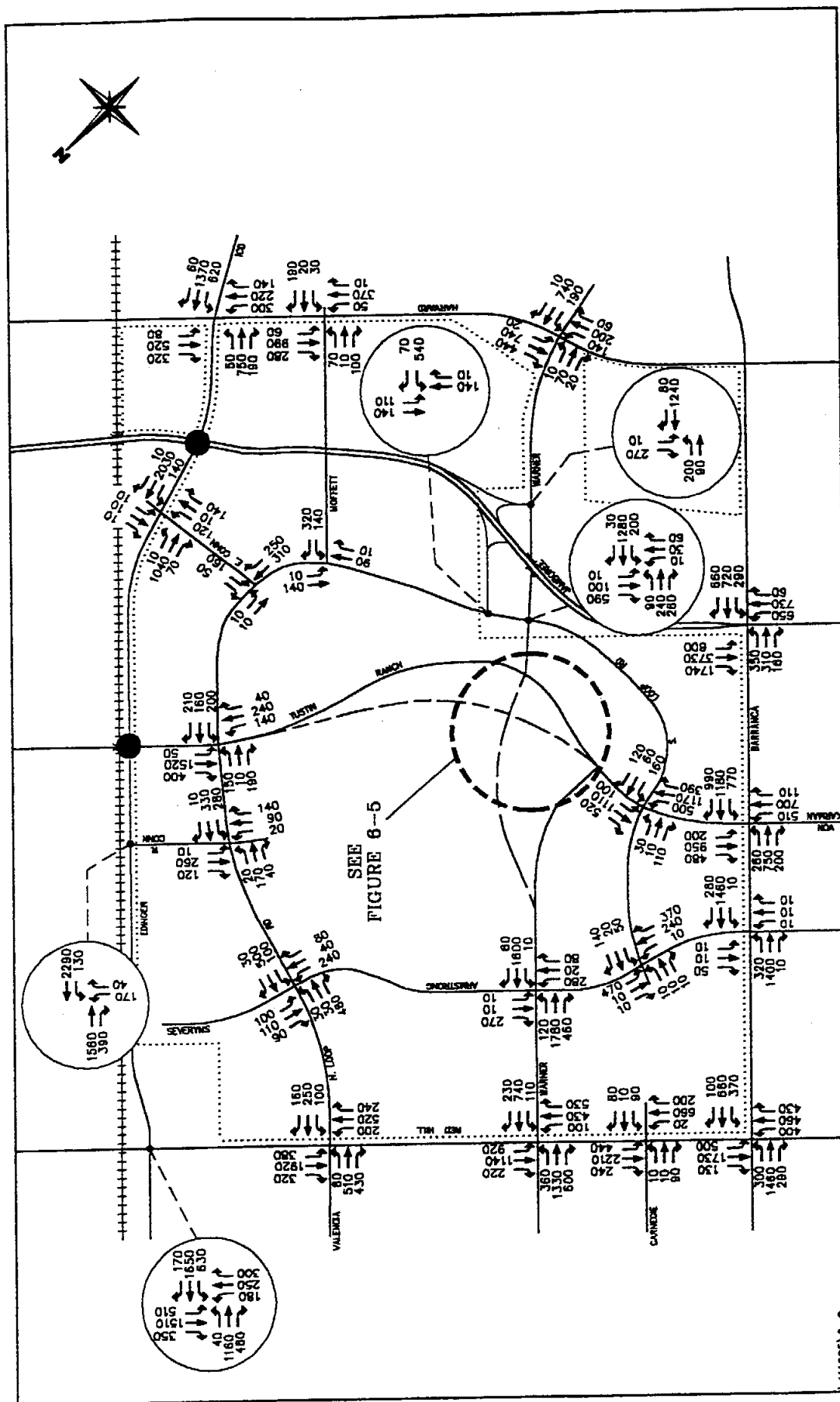


Figure 6--2
SPECIFIC PLAN
2020 AM PEAK HOUR VOLUMES
-- PROJECT VICINITY

LEGEND
Interchange

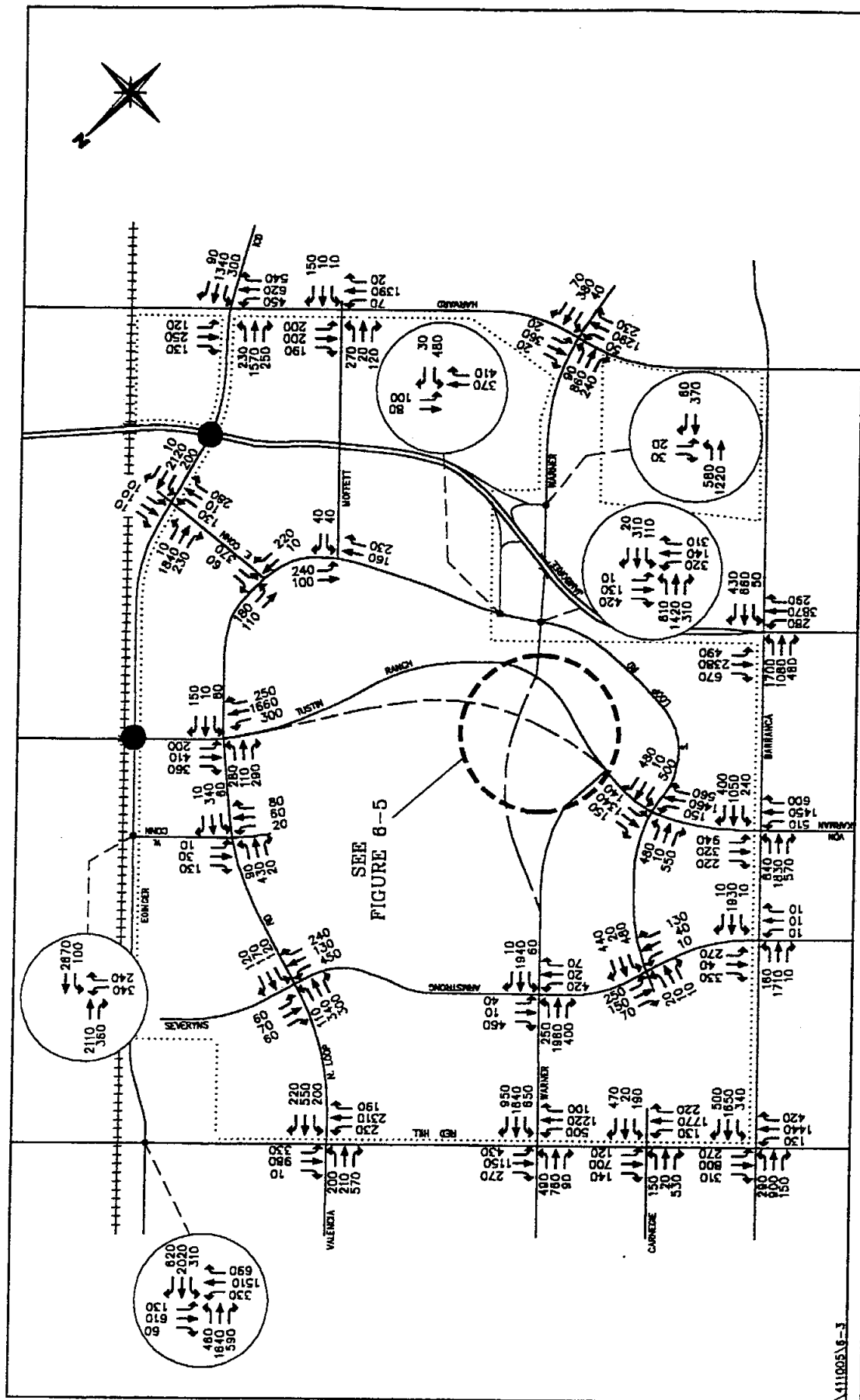


Figure 6-3
SPECIFIC PLAN
2020 PM PEAK HOUR VOLUMES
- PROJECT VICINITY

LEGEND
● Interchange

Table 6-1

2020 SPECIFIC PLAN ICU SUMMARY
(Reuse Alternative 1)

<u>INTERSECTION</u>	<u>AM</u>	<u>PM</u>
155. Armstrong & Loop Road N	.55	.56
156. Armstrong & Warner	.62	.86
157. Armstrong & Loop Road S	.57	.51
160. Tustin Ranch & Loop Road N	.59	.65
162. Tustin Ranch & Loop Road S	.55	.67
163. East Connector & Loop Road	.24	.38
164. Loop Road E & Moffett	.27	.27
165. Loop Road E & Warner	.50	.73
168. Loop Road & Jamboree SB	.31	.39
169. West Connector & Loop Road	.39	.27

Level of service ranges: .00 - .60 A

.61 - .70 B

.71 - .80 C

.81 - .90 D

.91 - 1.00 E

Above 1.00 F

6.2 TUSTIN RANCH ROAD/WARNER AVENUE CONNECTION

The circulation concept plan for the Specific Plan shows two potential alignment alternatives for the central portions of Tustin Ranch Road and Warner Avenue. The reason for this is the current location of one of the blimp hangars. Removing or retaining this blimp hangar has not been determined at this time.

While the proposed roadway plan seeks to provide these links as direct routes with a single intersection, a design for the potential discontinuity on Warner Avenue provides a means of assuring adequate circulation in the event that physical constraints dictate this indirect alignment. Augmented roadway design and special operational features can ensure that travel across the Air Station would suffer minimal inconvenience if the indirect alignment were necessary.

Figures 6-5 and 6-6 show peak hour volumes and the proposed lane configurations for the two Tustin Ranch Road/Warner Avenue alignments. The indirect connection would require special intersection treatment to accommodate the high left-turn movements created by the separation (eastbound left at the southern intersection and westbound left at the northern intersection). Figure 6-7 shows a conceptual layout for the southern intersection. Under this concept, the eastbound left would occur by means of a "turning roadway" which gives a sense of the left-turn being a thru-route rather than a triple left-turn. The northern intersection would be a mirror image of this, with the westbound left-turn from Warner Avenue being designed as a turning roadway. Based on the lane configurations and volumes, long-range ICUs for the intersections depicting these two alignments are presented in Table 6-2.

Table 6-2 ICU SUMMARY (Tustin Ranch Road/Warner Avenue Connection)		
INTERSECTION	AM	PM
ALIGNMENT 1 (Direct)		
Tustin Ranch Road & Warner	.89	.76
ALIGNMENT 2 (Indirect)		
Tustin Ranch Road & Warner S	.81	.86
Tustin Ranch Road & Warner N	.74	.86

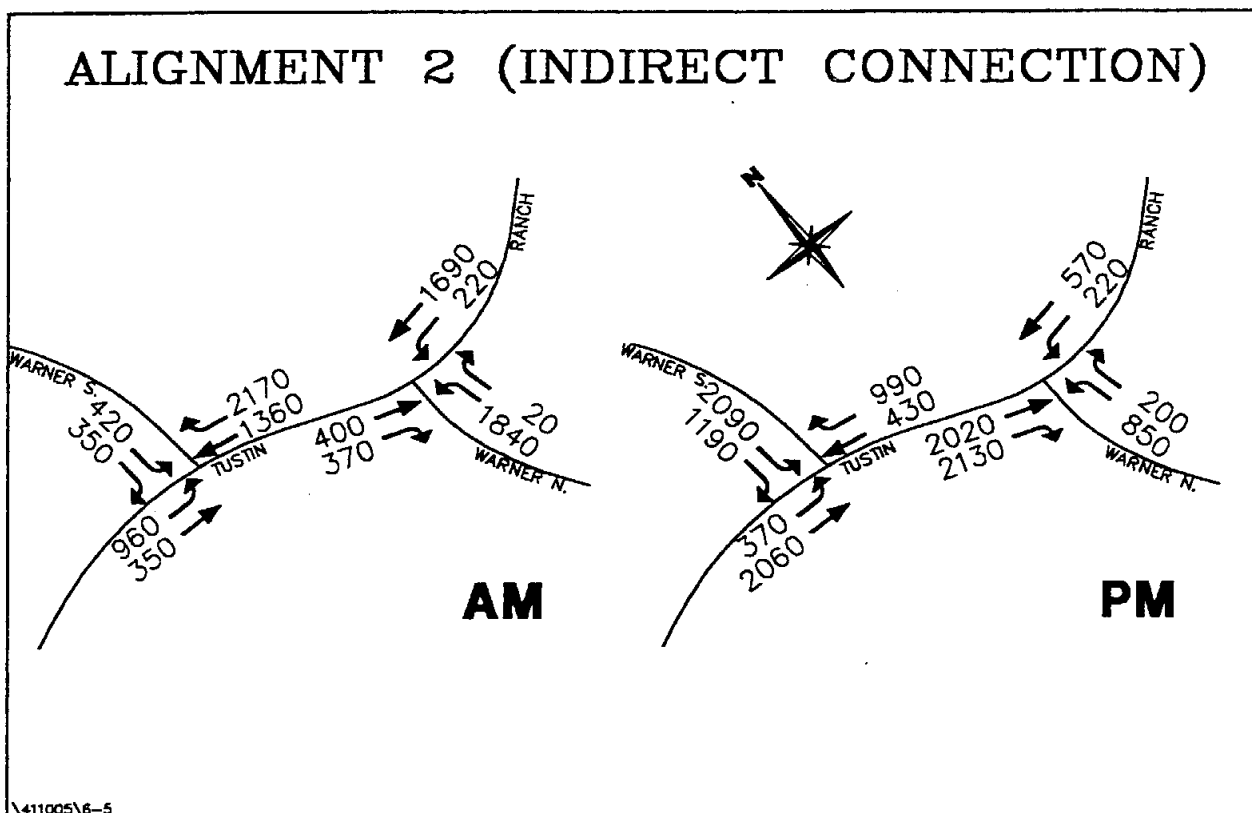
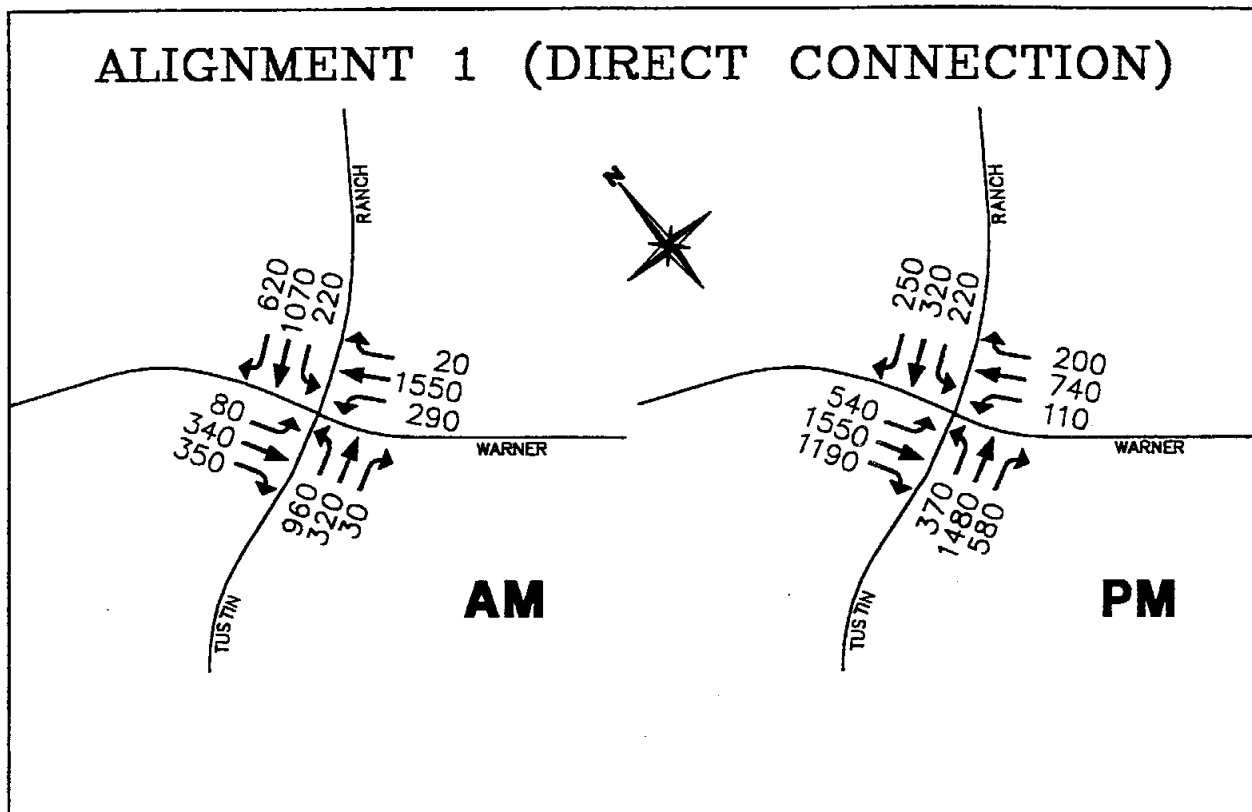
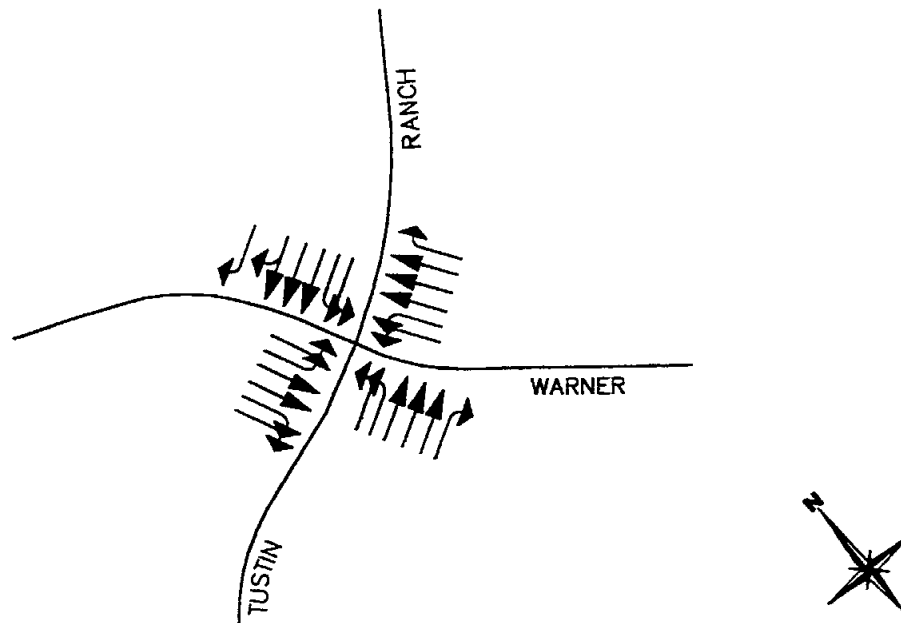
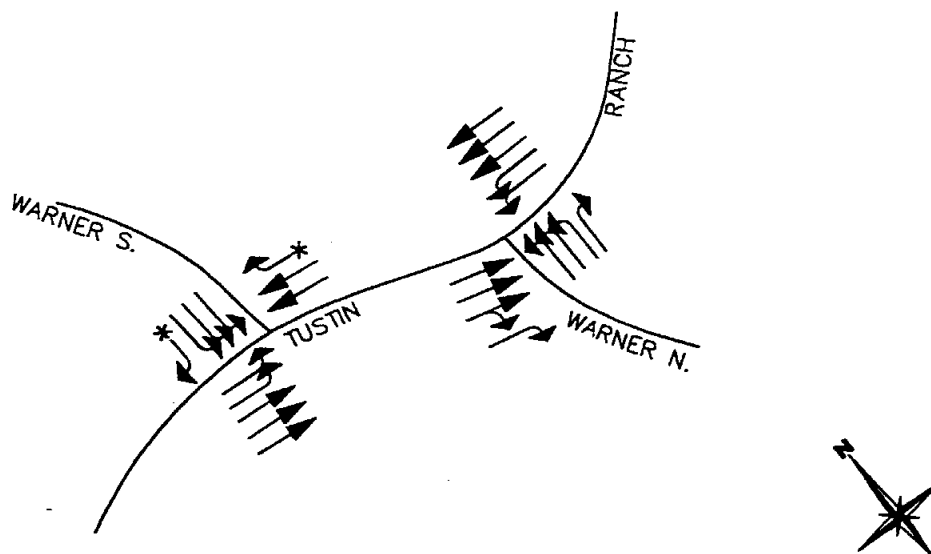


Figure 6-5
 SPECIFIC PLAN PEAK HOUR VOLUMES
 - TUSTIN RANCH RD/WARNER AVE
 ALIGNMENT ALTERNATIVES

ALIGNMENT 1 (DIRECT CONNECTION)



ALIGNMENT 2 (INDIRECT CONNECTION)



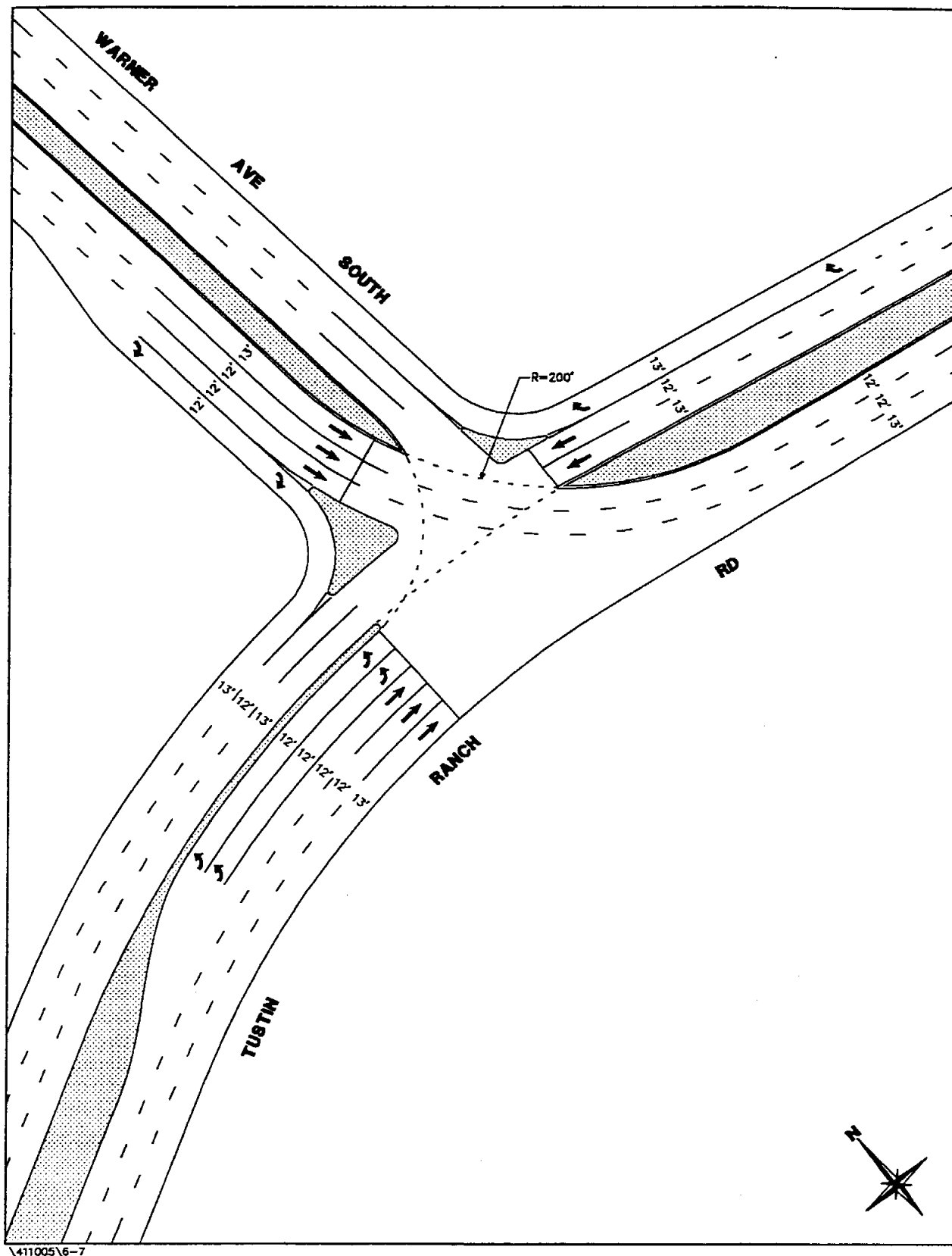
411005\6-6

LEGEND

* → Free Right-Turn Lane

Figure 6-6

SPECIFIC PLAN LANE CONFIGURATIONS
- TUSTIN RANCH RD/WARNER AVE
ALIGNMENT ALTERNATIVES



411005\6-7

Figure 6-7
TUSTIN RANCH RD/WARNER AVE SOUTH
INTERSECTION CONCEPT

6.3 ROADWAY IMPLEMENTING ACTIONS AND PHASING PLAN

Phasing of the on-site roadways and the off-site improvements would occur throughout the development of the Specific Plan. The exact sequence would depend on the timing of land use development in different areas. The following sections discuss the Implementing Actions and the Phasing Plan needed to ensure the phased construction of necessary improvements.

6.3.A PHASING PLAN FOR ON-SITE IMPROVEMENTS

All of the internal circulation improvements within the Specific Plan area would be constructed in accordance with a Phasing Plan as described below. Typical subdivision requirements would determine the exact sequencing of roadway construction. Because the geographic order of development within the Specific Plan is uncertain, it may be necessary to review the Phasing Plan annually and ensure that the current pattern of development and any changing conditions within the Specific Plan area are incorporated into the sequencing of on-site improvements.

Table 6-3 presents the Phasing Plan for the on-site circulation system. The on-site Phasing Plan is based on development trends in the area including future job and housing demands, and also reflects the properties that would be available as a result of clean-up of hazardous materials on-site. The Phase 1 threshold takes into account the 12,400 ADT in the MCAS Tustin baseline. Buildout of Phase II in the Phasing Plan corresponds to the 2005 level of development used in the impact analysis for that forecast year. Under this Phasing Plan, the City of Tustin would monitor all new development within the Specific Plan, accounting for the cumulative ADT generated by development projects. As each ADT threshold is reached, the roadway improvements listed in Table 6-3 would be constructed before any additional projects within the Specific Plan would be approved. This process would ensure the availability of required internal transportation improvements concurrent with need. This table lists improvements that are the full responsibility of the project. It should be noted that a portion of reuse property has been reserved for the construction of Tustin Ranch Road/Edinger Avenue interchange, which is assumed completed using other funding sources by the time Phase II of the Specific Plan is implemented.

Table 6-3

PHASING PLAN - ON-SITE ADT DEVELOPMENT THRESHOLDS

PHASE	ADT (CUMULATIVE)		ROADS ADDED*
I	27,000	(27,000)	Edinger Avenue - along project frontage between Red Hill Ave and Jamboree Rd** Landsdowne Road North Loop Road - Red Hill Avenue to West Connector Road (Build 3 lanes only)*** West Connector Road
II	~~81,450~~ <u>82,800</u>	~~(108,450)~~ <u>(109,800)</u>	East Connector Road Marble Mountain Road Moffett Drive North Loop Road - Red Hill Avenue to West Connector Road (Final Buildout) North Loop Road - East Connector Road to Moffett Drive (Build 3 lanes only)*** Red Hill Avenue/Carnegie Avenue Intersection (East Leg) Red Hill Avenue/Warner Avenue Intersection (East Leg) Severyns Road
III	~~26,550~~ <u>26,900</u>	~~(135,000)~~ <u>(136,700)</u>	Armstrong Avenue - North Loop Road to Barranca Parkway North Loop Road - West Connector Road to East Connector Road North Loop Road - East Connector to Moffett Drive (Final Buildout) North Loop Road - Moffett Drive to Warner Avenue South Loop Road - Warner Avenue to Tustin Ranch Road Tustin Ranch Road - Edinger Avenue to North Loop Road (6 lanes) Tustin Ranch Road - Warner Avenue to Barranca Parkway (Build 4 lanes only)*** Warner Avenue - Red Hill Avenue to Jamboree Road (Build 4 lanes only)***
IV	~~39,000~~ <u>39,500</u>	~~(174,000)~~ <u>(176,200)</u>	South Loop Road - Armstrong Avenue to Tustin Ranch Road Tustin Ranch Road - North Loop Road to South Loop Road (Build 4 lanes only)***
V	~~41,100~~ <u>40,200</u>	~~(215,100)~~ <u>(216,400)</u>	Widen Tustin Ranch Road to 6 lanes (Final Buildout) Widen Warner Avenue to 6 lanes (Final Buildout)

* Roadways shall be constructed prior to the issuance of building permits or certificates of occupancy

** Right-of-way for roadway improvements (being done by others) to be dedicated at this time

*** Full right-of-way to be dedicated at this time

Note: A portion of reuse property has been reserved for the construction of Tustin Ranch Road/Edinger Avenue interchange, which is assumed completed using other funding sources by the time Phase II of the Specific Plan is implemented.

Prior to the approval of 1) a Planning Area Concept Plan pursuant to Section 4.2 of the Specific Plan, 2) a site development permit, or 3) a vesting tentative map for new square footage (not for financing or conveyance purposes), a project developer would be required to provide traffic information consistent with the provisions of the Specific Plan, the EIS/EIR and the requirements of the City of Tustin Traffic Engineer. The traffic information would: (a) identify and assign traffic circulation mitigation measures required in the EIS/EIR pursuant to the Phasing Plan described in Table 6-3; (b) evaluate the effects of either the delay of any previously committed circulation improvements or the construction of currently unanticipated circulation improvements; and (c) utilize the circulation system and capacity assumptions within the EIS/EIR and any additional circulation improvements completed by affected jurisdictions for the applicable time frame of analysis.

Prior to the issuance of building permits for new development within planning areas requiring a concept plan, a project developer would be required to enter into an agreement with the City of Tustin to: (a) design and construct roadway improvements consistent with the ADT generation Phasing Plan described in Table 6-3; and (b) address the impact of and specify the responsibility for any previously committed circulation improvements assumed in the EIS/EIR which have not been constructed.

If a subsequent traffic Phasing Plan demonstrates that certain circulation improvements should be included in a different phase of Specific Plan development (accelerated or delayed) or that a circulation improvement can be substituted, the mitigation Phasing Plan in Table 6-3 may be amended, subject to approval of the City of Tustin and any other affected jurisdictions, provided that the same level of traffic mitigation and traffic capacity would be provided.

There are certain planning areas in Phase I that could be developed without the need to initiate any significant on-site or off-site Specific Plan infrastructure improvements. However, these areas would still bear a proportionate share of roadway infrastructure costs, both within the Specific Plan and off-site. These planning areas include:

- The proposed Medium-High Density Residential (MHDR) land use area located at the northeast corner of Jamboree Road and Edinger Avenue.

- The existing residential area located between Peters Canyon Channel and Harvard Avenue north of Moffett Drive.
- The proposed Elementary School (ES-8) and the Neighborhood Park (NP) sites located at the northwest corner of Harvard Avenue and Barranca Parkway.
- The existing residential areas located between Peters Canyon Channel and Harvard Avenue south of Moffett Drive.

These planning areas consist of either existing housing or proposed housing that can be supported by existing roadway infrastructure.

6.3.B PHASING PLAN FOR OFF-SITE IMPROVEMENTS

The EIS/EIR identifies ~~three~~ *seven* off-site traffic mitigation measures necessary for implementation of the short-range (2005) level of development (~~108,450~~ *109,800* ADT) in the MCAS Tustin Specific Plan. This section addresses the Phasing Plan for implementation of these off-site mitigation measures. The intent is to ensure the availability of the off-site transportation improvements when needed.

The ADT thresholds for each of the off-site improvements *were presented in Chapter 4.0 and for convenience* are provided below. ~~and~~ *The thresholds* are based on an analysis of the 2005 levels of service and the degree to which the project impacts each location. The level of development at which a location would become deficient was derived by interpolation from the with and without project ICU values at each location. The following example at ~~Jamboree Road~~ *Von Karman Avenue* and Barranca Parkway illustrates this interpolation process. This location is deficient in 2005 for the PM peak hour with the reuse project. Two steps are carried out to estimate how much project development occurs before the location becomes deficient:

Step 1 - Percentage of project causing the impact threshold to be exceeded

Here the increase in ICU needed to cause an impact is equated to the amount of project development that can occur before this impact threshold is reached. This is then divided by the difference between the with-project ICU and the baseline ICU. The calculation is as follows:

$$\frac{\text{ICU increment for impact threshold}}{\text{with-project ICU} - \text{baseline ICU}} = \frac{1.06 - .97 .95}{1.08 - .97 1.07 - .95} = \frac{.09 .11}{.11 .12} = .82 .92$$

In this case, an ICU of 1.05 is acceptable (this includes an ATMS credit of .05 over and above the 1.00 LOS "E" standard for this location). Thus an impact occurs when the project causes the ICU to reach 1.06. The difference from the baseline is .09 .11 which compares to .11 .12 for the difference between the full 2005 project and the baseline. Hence 82 92 percent of the 2005 project will cause the intersection to be impacted.

Step 2 - Project trip generation at which deficiency occurs

This 82 92 percent is then applied to the year 2005 trip generation. To make this calculation the baseline trip generation for the project area is first deducted and then added back to show the actual amount of development on the site. The calculation is as follows:

$$\begin{aligned} &\text{year 2005 project trip generation} - \text{baseline trip generation} \\ &= 108,450 109,800 - 12,400 = 96,050 97,400 \\ &.82 .92 \times 96,050 97,400 = 78,760 89,610 + 12,400 = 91,160 102,010 \approx 91,000 102,000 \end{aligned}$$

The last calculation adds back the baseline trip generation for the project area to show the total trip generation on the project site that will trigger the impact.

1. **Grand Avenue and Edinger Avenue** - Mitigation of project effects would require construction of ~~a northbound right-turn lane~~ and an additional northbound left-turn lane on Grand Avenue. The City of Tustin *as the LRA* would contribute ~~its fair share~~ **100 percent of the** costs for construction of the required additional turn lanes to the City of Santa Ana. It is assumed that the City of Santa Ana would enter into a construction contract for the intersection improvements when needed, based on their traffic counts and travel forecasts. The estimated threshold for implementing this improvement would be 32,000 ADT generated by internal Specific Plan development. The City of Tustin would ensure that its fair share obligation to intersection improvements in the City of Santa Ana is satisfied by entering into an improvement program agreement described in Section 6.3.C below.

2. *SR-55 southbound ramps & Edinger Avenue - The mitigation for this ramp intersection would be to add a third eastbound through lane on Edinger Avenue. The City of Tustin would contribute its fair share costs for construction of the required additional through lane to the City of Santa Ana. The estimated threshold for implementing this improvement would be 37,000 ADT generated by internal Specific Plan development.*
3. *Main Street and Warner Avenue - The mitigation for this location would be to add a third westbound through lane on Warner Avenue. The City of Tustin would contribute its fair share costs for construction of the required additional through lane to the City of Santa Ana. The estimated threshold for implementing this improvement would be 78,000 ADT generated by internal Specific Plan development.*
4. *Main Street and Dyer Road - The mitigation for this location would be to add second southbound and westbound left-turn lanes. The City of Tustin would contribute its fair share costs for construction of the required additional turn lanes to the City of Santa Ana. The estimated threshold for implementing this improvement would be 78,000 ADT generated by internal Specific Plan development.*
5. *Ritchey Street & Edinger Avenue - The mitigation for this location would be to add a second northbound through lane on Ritchey Street. The City of Tustin as the LRA would contribute 100 percent of the costs for construction of the required additional through lane to the City of Santa Ana. The estimated threshold for implementing this improvement would be 90,000 ADT generated by internal Specific Plan development.*
2. 6. *Jamboree Road and Barranca Parkway - The proposed mitigation measure is to provide an additional access on Warner Avenue near Jamboree Road to serve the proposed project uses on the northeast corner of Von Karman Avenue and Barranca Parkway. In order to mitigate the additional impacts of the Specific Plan at this intersection, improvements should occur when ~~91,000~~ 92,000 ADT are generated by internal Specific Plan development. The City of Tustin as the LRA would contribute 100 percent of the costs for construction of this mitigation.*

3. 7. **Von Karman Avenue and Barranca Parkway** - To mitigate the impacts of the Specific Plan, an additional northbound right-turn lane would be added on Von Karman Avenue. This is an interim improvement and is not necessary for 2020. The threshold for implementing this improvement would be ~~101,000~~ **102,000** ADT generated by internal development. *The City of Tustin as the LRA would contribute 100 percent of the costs for construction of the required additional turn lane.*

These ~~three~~ **seven** off-site improvements may be needed and constructed prior to 2005, depending upon the timing of proposed development within the Specific Plan area. As later phases of development occur within the Specific Plan area between 2006 and 2020, additional off-site improvements would be required, as identified in Chapter 4.0 of this report. The specific timing and phasing of these later improvements ~~would be determined by the City of Tustin, in cooperation with Caltrans and the cities of Santa Ana and Irvine, as appropriate, once the five improvements discussed above have been constructed~~ **are indicated by the ADT threshold values in Tables 4-11 and 6-4 of this report.** The intent would be to ensure the continued availability of transportation improvements at the time of need.

6.3.C OFF-SITE IMPROVEMENT RESPONSIBILITIES

The long-range (2020) analysis in Chapter 4.0 shows ~~18~~ **16** deficient intersections ~~and one freeway interchange ramp intersection~~ that are impacted by the proposed project. In many cases these locations are deficient both under baseline and with-project conditions. Necessary improvements for the deficient locations can be categorized as outlined below:

- **Project Responsibility** - Locations that become deficient due to the proposed project under the performance criteria guidelines. The project would have full responsibility (100 percent) for the necessary corrective measures.
- **Fair Share Improvements** - Off-site locations where it is proposed that the project participate in the funding of long-range improvements on a fair share basis. Future traffic at these locations includes traffic increases from other future developments in the vicinity, and specific improvements would be implemented with contributions from the various areas of development contributing to the need. *Costs for improvements will be collected by the City of Tustin from developers as specific projects within the reuse plan are entitled. Fair share improvements resulting from reuse plan impacts would not be funded by TSLA (SATTsip) funds.*

The second category recognizes that effective transportation improvements will typically reduce a V/C or an ICU by more than the project contribution, thereby benefitting other future development. Participation on a fair share basis means that the project would in fact mitigate the amount of increase caused by the project, thereby satisfying the performance criteria discussed in Chapter 1.0. Locations in this second category are typically those that show deficiencies under baseline and with reuse plan conditions.

Table 6-4 summarizes the 18 16 deficient intersection locations ~~and one freeway-ramp intersection~~ along with the project share responsibility. *Costs for improvements (based on percentage share) will be collected by the City of Tustin from developers as specific projects within the reuse plan area are entitled. Fair share improvements resulting from reuse plan impacts would not be funded by TSIA (SATTsip) funds.* As identified in Chapter 4.0, it should be noted that the intersection of Tustin Ranch Road and ~~Warner~~ Walnut Avenue is not fully mitigated. This impacted location is planned to be built to maximum feasible intersection geometrics with the mitigation measures identified in Chapter 4.0. No other feasible physical improvements can be identified at this time. *Intersection #103 (Jamboree Road and Barranca Parkway) would also not be mitigated. Pursuant to a 1998 Memorandum of Agreement (MOA) between the Transportation Corridor Agencies (TCA) and the Cities of Tustin and Irvine, it was determined that a future grade-separated interchange at this location would be financially infeasible.*

The project share previously presented in Table 6-4 and also in Chapter 4.0 is based on the proportion of the future ICU value due to project traffic:

$$\text{Project Share Percentage} = \frac{\text{Future ICU with Project} - \text{Future ICU without Project}}{\text{Future ICU with Project} - \text{Existing ICU}}$$

The existing ICU above reflects the existing traffic volumes presented in Chapter 3.0 and any future lanes assumed for the particular time frame analyzed.

6.3.D GENERAL CIRCULATION IMPROVEMENTS

Two Implementing Actions would be undertaken to ensure that circulation improvements are implemented when needed as the Specific Plan area is developed.

Table 6-4

INTERSECTION MITIGATION SHARES SUMMARY
(2020 Reuse Alternative 1)

<u>LOCATION</u>	<u>PROJECT SHARE (%)</u>	<u>ADT THRESHOLD</u>
TUSTIN		
15. Newport & Edinger ^s	100	*
30. Red Hill & Edinger ^s	100	<u>174,000</u>
42. Tustin Ranch & Walnut	100	<u>122,000</u>
TUSTIN/SANTA ANA		
77. Red Hill & Warner ^s	100	<u>206,000</u>
TUSTIN/IRVINE		
103. Jamboree & Barranca ^{1s}	~~NA~~ 15	<u>141,000</u>
SANTA ANA		
~~48. Main & Dyer~~	~~29~~	
53. Hutton Centre & MacArthur	~~40~~ 20	*
~~59. Hotel Terrace/SR-55 & Dyer^s~~	~~100~~	
61. Grand & Edinger ^s	~~77~~ 100	<u>172,000</u>
63. Grand & Warner ^s	100	<u>195,000</u>
66. Grand & Dyer ^s	~~71~~ 29	<u>131,000</u>
70. Lyon & Edinger ^s	~~56~~ 13	<u>152,000</u>
~~198. Bristol & Warner~~	~~100~~	
202. Standard & Edinger	38 9	<u>181,000</u>
IRVINE		
81. Red Hill & Main ¹	100	<u>157,000</u>
89. Von Karman & Michelson ¹	~~50~~ 22	<u>141,000</u>
106. Jamboree & Alton ¹	100	*
118. Harvard & Alton	100	<u>181,000</u>
128. Culver & Warner	100	<u>174,000</u>

¹ IBC intersection^s SATTSIP intersection

NA—not applicable (no identifiable mitigation)

* Full buildout of the Specific Plan

1. The City of Tustin will enter into agreements with Caltrans and the cities of Santa Ana and Irvine to ensure that the off-site roadway improvements needed to mitigate the effects of the Specific Plan are constructed pursuant to improvement programs established by the respective jurisdiction.

In order to properly coordinate the timing and funding of fair share obligation of Specific Plan improvements in the adjacent jurisdictions, the City of Tustin shall hold a scoping-like meeting with the respective jurisdictions. The purpose of said scoping-like meeting shall be to identify the concerns of the respective jurisdictions prior to the initiation of the fair share study. The purpose of the study would be to fully identify, with each jurisdiction, the scope and costs of feasible improvements ~~(as determined by the respective jurisdiction)~~. The improvements would be acceptable to each jurisdiction toward fulfilling the timing and cost of the transportation improvement obligations of the Specific Plan as required to mitigate transportation impacts in each jurisdiction, as listed above. The funding for the improvements to be incorporated into the agreement would be utilized by the respective agency to improve the capacity of the impacted intersections/links or be used for substituted improvements, as determined by mutual agreement. Prior to execution of the agreement, each jurisdiction would be allowed ten working days to review the technical report prior to being provided with a copy of the proposed agreement. Each jurisdiction would then have ten working days to review and comment as to its concurrence with the improvement programs contained in the agreement. The comments of each jurisdiction would be considered to ensure that the City of Tustin's responsibility for fair share funding of the improvements in each jurisdiction as stated above is fully addressed.

2. Each Specific Plan project would contain, to the satisfaction of the City of Tustin and/or City of Irvine, as applicable, a pedestrian circulation component showing pedestrian access to regional hiking trails, parks, schools, shopping areas, bus stops, and/or other public facilities.

6.4 CONCLUSION

The Phasing Plan and thresholds discussed in Section 6.3 would ensure the availability of on-site and off-site circulation improvements concurrent with need as the Specific Plan is built out over time. The components of the Phasing Plan will be made conditions of approval of the Specific Plan and other Implementing Actions, ensuring their applicability and enforcement.

**ERRATA SHEETS
SUPPLEMENTARY TECHNICAL APPENDICES
TO SUPPORT THE TRAFFIC REPORT**

FINAL

**MARINE CORPS AIR STATION (MCAS) TUSTIN
DISPOSAL AND REUSE TRAFFIC STUDY**

Appendices

Prepared by:

**Austin-Foust Associates, Inc.
2020 North Tustin Avenue
Santa Ana, California 92705-7827
(714) 667-0496**

June 25, 1999 November 8, 1999

LINK VOLUME SUMMARY FOR 2005 (cont)

LINK LOCATION	NO. OF LANES	ADT CAP.	PK HR CAP.	---BASELINE---				---REUSE ALT 1---				---REUSE ALT 2---				---REUSE ALT 3---			
				---ADT---		PEAK HOUR		---ADT---		PEAK HOUR		---ADT---		PEAK HOUR		---ADT---		PEAK HOUR	
				Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C
SANTA ANA (cont)																			
510. Main s/o Dyer	6	56	4800	32	.57	1920	.40	32	.57	1920	.40	32	.57	1920	.40	32	.57	1920	.40
513. Main n/o MacArthur	6	56	4800	32	.57	1920	.40	32	.57	1920	.40	31	.55	1860	.39	32	.57	1920	.40
117. Main n/o Sunflower	6	56	4800	27	.48	1620	.34	27	.48	1620	.34	27	.48	1620	.34	27	.48	1620	.34
482. McFadden e/o Standard	4	25	3200	17	.68	1020	.32	17	.68	1020	.32	17	.68	1020	.32	17	.68	1020	.32
483. McFadden e/o Grand	4	38	3200	20	.53	1200	.38	20	.53	1200	.38	20	.53	1200	.38	20	.53	1200	.38
484. McFadden w/o Williams	4	38	3200	21	.55	1260	.39	20	.53	1200	.38	21	.55	1260	.39	21	.55	1260	.39
488. Ritchey n/o Edinger	4	25	3200	6	.24	360	.11	6	.24	360	.11	6	.24	360	.11	6	.24	360	.11
499. Ritchey s/o Edinger	4	25	3200	11	.44	660	.21	11	.44	660	.21	11	.44	660	.21	11	.44	660	.21
496. Standard n/o Warner	4	25	3200	8	.32	480	.15	8	.32	480	.15	8	.32	480	.15	8	.32	480	.15
507. Standard Halladay s/o Warner	4	25	3200	8	.32	480	.15	8	.32	480	.15	8	.32	480	.15	8	.32	480	.15
511. Standard Halladay s/o Dyer	4	25	3200	4	.16	240	.08	4	.16	240	.08	4	.16	240	.08	4	.16	240	.08
489. Village Way s/o McFadden	4	25	3200	16	.64	960	.30	15	.60	900	.28	15	.60	900	.28	15	.60	900	.28
501. Warner w/o Main	~~6~~ 4	~~56~~ 38	~~4800~~ 3200	31	.55	1860	.39	33	.59	1980	.41	33	.59	1980	.41	34	.61	2040	.43
					.83		.58		.88		.62		.88		.62		.91		.64
502. Warner e/o Main	6	56	4800	25	.45	1500	.31	27	.48	1620	.34	27	.48	1620	.34	28	.50	1680	.35
503. Warner w/o Standard	6	56	4800	22	.39	1320	.28	26	.46	1560	.33	26	.46	1560	.33	27	.48	1620	.34
504. Warner w/o Grand	6	56	4800	24	.43	1440	.30	29	.52	1740	.36	29	.52	1740	.36	30	.54	1800	.38
505. Warner e/o Grand	6	56	4800	17	.30	1020	.21	24	.43	1440	.30	25	.45	1500	.31	26	.46	1560	.33
IRVINE/SANTA ANA																			
99. Alton w/o Red Hill	4	38	3200	4	.11	240	.08	4	.11	240	.08	4	.11	240	.08	4	.11	240	.08
181. Red Hill s/o Dyer/Barranca	6	56	4800	32	.57	1920	.40	38	.68	2280	.48	40	.71	2400	.50	39	.70	2340	.49
IRVINE																			
100. Alton e/o Red Hill	4	38	3200	19	.50	1140	.36	19	.50	1140	.36	20	.53	1200	.38	20	.53	1200	.38
101. Alton w/o Jamboree	4	38	3200	21	.55	1260	.39	22	.58	1320	.41	22	.58	1320	.41	22	.58	1320	.41
102. Alton e/o Jamboree	4	38	3200	18	.47	1080	.34	20	.53	1200	.38	19	.50	1140	.36	20	.53	1200	.38
103. Alton w/o Culver	6	56	4800	16	.29	960	.20	16	.29	960	.20	16	.29	960	.20	16	.29	960	.20
104. Alton e/o Culver	4	38	3200	24	.63	1440	.45	25	.66	1500	.47	25	.66	1500	.47	25	.66	1500	.47
105. Alton e/o West Yale Loop	4	38	3200	23	.61	1380	.43	23	.61	1380	.43	23	.61	1380	.43	23	.61	1380	.43
106. Alton e/o Lake	4	38	3200	21	.55	1260	.39	21	.55	1260	.39	21	.55	1260	.39	21	.55	1260	.39
107. Alton w/o East Yale Loop	4	38	3200	20	.53	1200	.38	20	.53	1200	.38	20	.53	1200	.38	20	.53	1200	.38
108. Alton w/o Jeffrey	4	38	3200	24	.63	1440	.45	24	.63	1440	.45	24	.63	1440	.45	24	.63	1440	.45
109. Alton w/o Sand Canyon	4	38	3200	13	.34	780	.24	13	.34	780	.24	13	.34	780	.24	13	.34	780	.24
110. Alton e/o Sand Canyon	4	38	3200	17	.45	1020	.32	17	.45	1020	.32	17	.45	1020	.32	17	.45	1020	.32
111. Alton e/o Laguna Canyon	4	38	3200	15	.39	900	.28	15	.39	900	.28	15	.39	900	.28	15	.39	900	.28
112. Alton w/o Irvine Center	6	56	4800	15	.27	900	.19	15	.27	900	.19	15	.27	900	.19	15	.27	900	.19
85. Barranca e/o Jamboree	6	56	4800	24	.43	1440	.30	28	.50	1680	.35	29	.52	1740	.36	28	.50	1680	.35
86. Barranca w/o Culver	6	56	4800	21	.38	1260	.26	23	.41	1380	.29	24	.43	1440	.30	24	.43	1440	.30
87. Barranca e/o Culver	4	38	3200	26	.68	1560	.49	27	.71	1620	.51	27	.71	1620	.51	27	.71	1620	.51
88. Barranca e/o West Yale Loop	4	38	3200	24	.63	1440	.45	25	.66	1500	.47	25	.66	1500	.47	25	.66	1500	.47
89. Barranca e/o Lake	4	38	3200	21	.55	1260	.39	21	.55	1260	.39	22	.58	1320	.41	22	.58	1320	.41
90. Barranca w/o East Yale Loop	4	38	3200	20	.53	1200	.38	21	.55	1260	.39	21	.55	1260	.39	21	.55	1260	.39
91. Barranca w/o Jeffrey	4	38	3200	21	.55	1260	.39	20	.53	1200	.38	21	.55	1260	.39	21	.55	1260	.39
92. Barranca w/o Sand Canyon	4	38	3200	13	.34	780	.24	13	.34	780	.24	13	.34	780	.24	13	.34	780	.24
93. Barranca e/o Sand Canyon	4	38	3200	12	.32	720	.23	12	.32	720	.23	12	.32	720	.23	12	.32	720	.23
94. Barranca e/o Laguna Canyon	4	38	3200	11	.29	660	.21	11	.29	660	.21	11	.29	660	.21	11	.29	660	.21
95. Barranca w/o Irvine Center	4	38	3200	19	.50	1140	.36	19	.50	1140	.36	19	.50	1140	.36	19	.50	1140	.36

LINK VOLUME SUMMARY FOR 2020 (cont)

LINK LOCATION	NO. OF LANES	ADT	PK CAP.	HR CAP.	----BASELINE----				---REUSE ALT 1---				---REUSE ALT 2---				---REUSE ALT 3---			
					---ADT---		PEAK HOUR		---ADT---		PEAK HOUR		---ADT---		PEAK HOUR		---ADT---		PEAK HOUR	
					Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C	Vol.	V/C
SANTA ANA (cont)																				
506. Main s/o Warner	6	56	4800	36	.64	2160	.45	35	.63	2100	.44	34	.61	2040	.43	34	.61	2040	.43	
510. Main s/o Dyer	6	56	4800	38	.68	2280	.48	37	.66	2220	.46	36	.64	2160	.45	37	.66	2220	.46	
513. Main n/o MacArthur	6	56	4800	37	.66	2220	.46	36	.64	2160	.45	35	.63	2100	.44	35	.63	2100	.44	
117. Main n/o Sunflower	6	56	4800	31	.55	1860	.39	30	.54	1800	.38	29	.52	1740	.36	29	.52	1740	.36	
482. McFadden e/o Standard	4	25	3200	20	.80	1200	.38	20	.80	1200	.38	21	.84	1260	.39	20	.80	1200	.38	
483. McFadden e/o Grand	4	38	3200	25	.66	1500	.47	24	.63	1440	.45	25	.66	1500	.47	24	.63	1440	.45	
484. McFadden w/o Williams	4	38	3200	23	.61	1380	.43	23	.61	1380	.43	23	.61	1380	.43	22	.58	1320	.41	
488. Ritchey n/o Edinger	4	25	3200	8	.32	480	.15	8	.32	480	.15	9	.36	540	.17	8	.32	480	.15	
499. Ritchey s/o Edinger	4	25	3200	13	.52	780	.24	12	.48	720	.23	12	.48	720	.23	12	.48	720	.23	
496. Standard n/o Warner	4	25	3200	10	.40	600	.19	11	.44	660	.21	11	.44	660	.21	11	.44	660	.21	
507. Standard Halladay s/o Warner	4	25	3200	10	.40	600	.19	10	.40	600	.19	10	.40	600	.19	10	.40	600	.19	
511. Standard Halladay s/o Dyer	4	25	3200	4	.16	240	.08	4	.16	240	.08	4	.16	240	.08	4	.16	240	.08	
489. Village Way s/o McFadden	4	25	3200	16	.64	960	.30	16	.64	960	.30	16	.64	960	.30	16	.64	960	.30	
501. Warner w/o Main	6	56	4800	37	.66	2220	.46	43	.77	2580	.54	44	.79	2640	.55	44	.79	2640	.55	
502. Warner e/o Main	6	56	4800	28	.50	1680	.35	35	.63	2100	.44	37	.66	2220	.46	37	.66	2220	.46	
503. Warner w/o Standard	6	56	4800	24	.43	1440	.30	34	.61	2040	.43	37	.66	2220	.46	37	.66	2220	.46	
504. Warner w/o Grand	6	56	4800	26	.46	1560	.33	38	.68	2280	.48	41	.73	2460	.51	41	.73	2460	.51	
505. Warner e/o Grand	6	56	4800	18	.32	1080	.23	40	.71	2400	.50	45	.80	2700	.56	47	.84	2820	.59	
IRVINE/SANTA ANA																				
99. Alton w/o Red Hill	4	38	3200	5	.13	300	.09	4	.11	240	.08	4	.11	240	.08	4	.11	240	.08	
181. Red Hill s/o Dyer/Barranca	6	56	4800	35	.63	2100	.44	42	.75	2520	.53	44	.79	2640	.55	44	.79	2640	.55	
IRVINE																				
100. Alton e/o Red Hill	6	56	4800	25	.45	1500	.31	24	.43	1440	.30	24	.43	1440	.30	24	.43	1440	.30	
101. Alton w/o Jamboree	6	56	4800	28	.50	1680	.35	26	.46	1560	.33	26	.46	1560	.33	26	.46	1560	.33	
102. Alton e/o Jamboree	6	56	4800	22	.39	1320	.28	24	.43	1440	.30	24	.43	1440	.30	25	.45	1500	.31	
103. Alton w/o Culver	6	56	4800	18	.32	1080	.23	18	.32	1080	.23	18	.32	1080	.23	18	.32	1080	.23	
104. Alton e/o Culver	4	38	3200	26	.68	1560	.49	27	.71	1620	.51	26	.68	1560	.49	26	.68	1560	.49	
105. Alton e/o West Yale Loop	4	38	3200	26	.68	1560	.49	26	.68	1560	.49	26	.68	1560	.49	26	.68	1560	.49	
106. Alton e/o Lake	4	38	3200	24	.63	1440	.45	24	.63	1440	.45	24	.63	1440	.45	24	.63	1440	.45	
107. Alton w/o East Yale Loop	4	38	3200	23	.61	1380	.43	24	.63	1440	.45	24	.63	1440	.45	24	.63	1440	.45	
108. Alton w/o Jeffrey	4	38	3200	29	.76	1740	.54	28	.74	1680	.53	28	.74	1680	.53	28	.74	1680	.53	
109. Alton w/o Sand Canyon	4	38	3200	18	.47	1080	.34	18	.47	1080	.34	18	.47	1080	.34	18	.47	1080	.34	
110. Alton e/o Sand Canyon	4	38	3200	25	.66	1500	.47	25	.66	1500	.47	25	.66	1500	.47	25	.66	1500	.47	
111. Alton e/o Laguna Canyon	4	38	3200	21	.55	1260	.39	21	.55	1260	.39	20	.53	1200	.38	21	.55	1260	.39	
112. Alton w/o Irvine Center	6	56	4800	19	.34	1140	.24	19	.34	1140	.24	19	.34	1140	.24	19	.34	1140	.24	
85. Barranca e/o Jamboree	6	56	4800	24	.43	1440	.30	27	.48	1620	.34	28	.50	1680	.35	29	.52	1740	.36	
86. Barranca w/o Culver	6	56	4800	21	.38	1260	.26	24	.43	1440	.30	25	.45	1500	.31	25	.45	1500	.31	
87. Barranca e/o Culver	4	38	3200	26	.68	1560	.49	27	.71	1620	.51	28	.74	1680	.53	28	.74	1680	.53	
88. Barranca e/o West Yale Loop	4	38	3200	24	.63	1440	.45	26	.68	1560	.49	26	.68	1560	.49	26	.68	1560	.49	
89. Barranca e/o Lake	4	38	3200	21	.55	1260	.39	23	.61	1380	.43	23	.61	1380	.43	23	.61	1380	.43	
90. Barranca w/o East Yale Loop	4	38	3200	20	.53	1200	.38	22	.58	1320	.41	22	.58	1320	.41	22	.58	1320	.41	
91. Barranca w/o Jeffrey	4	38	3200	20	.53	1200	.38	22	.58	1320	.41	21	.55	1260	.39	21	.55	1260	.39	
92. Barranca w/o Sand Canyon	4	38	3200	17	.45	1020	.32	19	.50	1140	.36	18	.47	1080	.34	18	.47	1080	.34	
93. Barranca e/o Sand Canyon	4	38	3200	16	.42	960	.30	17	.45	1020	.32	17	.45	1020	.32	17	.45	1020	.32	
94. Barranca e/o Laguna Canyon	4	38	3200	16	.42	960	.30	17	.45	1020	.32	17	.45	1020	.32	17	.45	1020	.32	

ICU SUMMARY FOR 2020 (cont)

LOCATION	BASELINE		REUSE ALT 1		REUSE ALT 2		REUSE ALT 3	
	AM	PM	AM	PM	AM	PM	AM	PM
SANTA ANA								
75. SR-55 SB Ramps & Edinger	.86	1.19	.88	1.19	.88	1.19	.92	1.19
196. Bristol & MacArthur	~~.91~~	~~1.14~~	~~.87~~	~~1.13~~	~~.86~~	~~1.11~~	~~.85~~	~~1.13~~
	.81	1.05	.77	1.04	.76	1.01	.74	1.04
197. Bristol & Segerstrom/Dyer	~~.86~~	~~1.09~~	~~.86~~	~~1.08~~	~~.84~~	~~1.05~~	~~.85~~	~~1.09~~
	.60	.69	.59	.70	.61	.65	.61	.68
198. Bristol & Warner	~~.88~~	~~1.01~~	~~.93~~	~~.98~~	~~.92~~	~~1.01~~	~~.91~~	~~1.03~~
	.71	.79	.74	.77	.76	.79	.73	.81
199. Bristol & Edinger	~~1.24~~	~~1.31~~	~~1.24~~	~~1.26~~	~~1.23~~	~~1.25~~	~~1.24~~	~~1.31~~
	.86	.94	.85	.93	.84	.92	.85	.93
200. Broadway & Edinger	.57	.65	.57	.66	.57	.65	.58	.68
201. Main & Edinger	~~.83~~	~~1.04~~	~~.87~~	~~1.05~~	~~.84~~	~~1.05~~	~~.89~~	~~1.03~~
	.63	.83	.63	.85	.65	.83	.64	.82
202. Standard & Edinger	.80	.95	.89	.98	.89	1.01	.90	1.01
IRVINE								
76. SR-55 NB Ramps & MacArthur	~~.63~~	.65	~~.64~~	.72	~~.61~~	.70	~~.62~~	.73
	.76		.78		.75		.76	
80. Red Hill & MacArthur	~~.61~~	~~.79~~	~~.73~~	~~.80~~	~~.71~~	~~.81~~	~~.72~~	~~.82~~
	.71	.94	.86	.96	.84	.96	.85	.97
81. Red Hill & Main	.70	.99	.76	1.15	.74	1.17	.75	1.18
82. MacArthur & Main	.83	1.18	.84	1.18	.78	1.15	.78	1.17
83. MacArthur & I-405 NB Ramps	.68	.65	.69	.73	.70	.71	.69	.75
84. MacArthur & I-405 SB Ramps	.76	.82	.71	.83	.72	.80	.72	.81
85. MacArthur & Michelson	.69	~~1.00~~	.72	~~1.00~~	.74	~~1.00~~	.73	~~.98~~
		1.02		1.02		1.02		1.00
87. Von Karman & Alton	.69	.79	.88	.86	.88	.88	.89	.89
88. Von Karman & Main	.93	.82	.97	.92	.98	.90	.95	.95
89. Von Karman & Michelson	.68	1.07	.85	1.14	.89	1.16	.86	1.18
94. Jamboree & I-5 NB Ramps	.67	.91	.73	.86	.73	.92	.73	.89
95. Jamboree & I-5 SB Ramps	.73	.88	.79	.81	.80	.88	.80	.83
98. Jamboree (SB) & Walnut	.70	.44	.71	.46	.73	.50	.74	.46
99. Jamboree (NB) & Walnut	.23	.77	.24	.81	.25	.84	.25	.87
102. Jamboree NB Ramps & Warner	.12	.14	.60	.51	.58	.55	.56	.56
106. Jamboree & Alton	.94	1.01	.91	1.06	.92	1.07	.94	1.09
107. Jamboree & Main	.84	1.01	~~.81~~	.97	.84	1.01	.85	1.01
			.82					
108. Jamboree & I-405 NB Ramps	.87	.83	.88	.81	.89	.83	.88	.81
109. Jamboree & I-405 SB Ramps	.84	.76	.83	.75	.84	.76	.83	.76
110. Jamboree & Michelson	~~.77~~	~~.90~~	~~.77~~	~~.91~~	~~.76~~	~~.90~~	~~.77~~	~~.91~~
	.87	.98	.87	.99	.87	.98	.87	.98
111. Carlson & Michelson	~~.56~~	~~.65~~	~~.57~~	~~.61~~	~~.55~~	~~.62~~	~~.53~~	~~.63~~
	.67	.73	.68	.70	.66	.71	.64	.71
112. ETC West Leg SB & Irvine	.56	.62	.57	.60	.56	.60	.56	.60
113. ETC West Leg NB & Irvine	.48	.61	.47	.62	.47	.64	.47	.65
114. Harvard & Walnut	.41	.35	.42	.38	.42	.36	.46	.46
116. Harvard & Warner	.42	.51	.61	.71	.67	.74	.60	.77
117. Harvard & Barranca	.56	.67	.63	.78	.62	.77	.61	.76
118. Harvard & Alton	.85	.89	.94	.88	.93	.85	.94	.88
119. Harvard & Main	.59	.75	.59	.74	.58	.74	.58	.72

111. Carlson & Michelson

2020 Baseline

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	10	.01	10	.01
NBT	1	1700	140	.08*	40	.02*
NBR	d	1700	60	.04	370	.22
SBL	1	1700	10	.01*	220	.13*
SBT	2	3400	40	.01	140	.04
SBR	1	1700	100	.06	470	.28
EBL	2	3400	610	.18*	500	.15*
EBT	3	5100	550	.11	950	.19
EBR	f		100		10	
WBL	2	3400	280	.08	80	.02
WBT	3	5100	1200	.24*	780	.15*
WBR	f		70		120	

Right Turn Adjustment
Clearance Interval

Multi .15*
.05*

TOTAL CAPACITY UTILIZATION .56 .65

2020 Reuse Alternative 1

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	20	.01	10	.01
NBT	1	1700	150	.09*	40	.02*
NBR	d	1700	60	.04	340	.20
SBL	1	1700	10	.01*	210	.12*
SBT	2	3400	30	.01	150	.04
SBR	1	1700	120	.07	460	.27
EBL	2	3400	600	.18*	490	.14*
EBT	3	5100	550	.11	950	.19
EBR	f		110		20	
WBL	2	3400	270	.08	80	.02
WBT	3	5100	1200	.24*	790	.15*
WBR	f		60		110	

Right Turn Adjustment
Clearance Interval

Multi .13*
.05*

TOTAL CAPACITY UTILIZATION .57 .61

2020 Reuse Alternative 2

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	20	.01	10	.01
NBT	1	1700	120	.07*	30	.02*
NBR	d	1700	60	.04	330	.19
SBL	1	1700	10	.01*	220	.13*
SBT	2	3400	30	.01	150	.04
SBR	1	1700	130	.08	490	.29
EBL	2	3400	640	.19*	540	.16*
EBT	3	5100	550	.11	950	.19
EBR	f		110		20	
WBL	2	3400	270	.08	70	.02
WBT	3	5100	1170	.23*	770	.15*
WBR	f		60		120	

Right Turn Adjustment
Clearance Interval

Multi .11*
.05*

TOTAL CAPACITY UTILIZATION .55 .62

2020 Reuse Alternative 3

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	20	.01	10	.01
NBT	1	1700	120	.07*	30	.02*
NBR	d	1700	60	.04	350	.21
SBL	1	1700	10	.01*	220	.13*
SBT	2	3400	30	.01	150	.04
SBR	1	1700	110	.06	470	.28
EBL	2	3400	630	.19*	510	.15*
EBT	3	5100	560	.11	900	.18
EBR	f		100		20	
WBL	2	3400	250	.07	90	.03
WBT	3	5100	1090	.21*	770	.15*
WBR	f		60		120	

Right Turn Adjustment
Clearance Interval

Multi .13*
.05*

TOTAL CAPACITY UTILIZATION .53 .63

111. Carlson & Michelson

2020 Baseline

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	10	.01	10	.01
NBT	1	1700	140	.08*	40	.02*
NBR	d	1700	60	.04	370	.22
SBL	1	1700	10	.01*	220	.13*
SBT	2	3400	40	.01	140	.04
SBR	1	1700	100	.06	470	.28
EBL	2	3400	610	.18*	500	.15*
EBT	2	3400	550	.16	950	.28
EBR	d	1700	100	.06	10	.01
WBL	1	1700	280	.16	80	.05
WBT	2	3400	1200	.35*	780	.23*
WBR	1	1700	70	.04	120	.07

Right Turn Adjustment
Clearance Interval

Multi
.15*
.05*

TOTAL CAPACITY UTILIZATION .67 .73

2020 Reuse Alternative 1

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	20	.01	10	.01
NBT	1	1700	150	.09*	40	.02*
NBR	d	1700	60	.04	340	.20
SBL	1	1700	10	.01*	210	.12*
SBT	2	3400	30	.01	150	.04
SBR	1	1700	120	.07	460	.27
EBL	2	3400	600	.18*	490	.14*
EBT	2	3400	550	.16	950	.28
EBR	d	1700	110	.06	20	.01
WBL	1	1700	270	.16	80	.05
WBT	2	3400	1200	.35*	790	.23*
WBR	1	1700	60	.04	110	.06

Right Turn Adjustment
Clearance Interval

Multi
.14*
.05*

TOTAL CAPACITY UTILIZATION .68 .70

2020 Reuse Alternative 2

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	20	.01	10	.01
NBT	1	1700	120	.07*	30	.02*
NBR	d	1700	60	.04	330	.19
SBL	1	1700	10	.01*	220	.13*
SBT	2	3400	30	.01	150	.04
SBR	1	1700	130	.08	490	.29
EBL	2	3400	640	.19*	540	.16*
EBT	2	3400	550	.16	950	.28
EBR	d	1700	110	.06	20	.01
WBL	1	1700	270	.16	70	.04
WBT	2	3400	1170	.34*	770	.23*
WBR	1	1700	60	.04	120	.07

Right Turn Adjustment
Clearance Interval

Multi
.12*
.05*

TOTAL CAPACITY UTILIZATION .66 .71

2020 Reuse Alternative 3

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	20	.01	10	.01
NBT	1	1700	120	.07*	30	.02*
NBR	d	1700	60	.04	350	.21
SBL	1	1700	10	.01*	220	.13*
SBT	2	3400	30	.01	150	.04
SBR	1	1700	110	.06	470	.28
EBL	2	3400	630	.19*	510	.15*
EBT	2	3400	560	.16	900	.26
EBR	d	1700	100	.06	20	.01
WBL	1	1700	250	.15	90	.05
WBT	2	3400	1090	.32*	770	.23*
WBR	1	1700	60	.04	120	.07

Right Turn Adjustment
Clearance Interval

Multi
.13*
.05*

TOTAL CAPACITY UTILIZATION .64 .71