ADDENDUM NO. 8

Orange County Great Park Master Plan

Minor Modification to the Master Plan and Park Design Review for the Western Sector Park Development Plan

SCH #2002101020

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ADDENDUM NO. 8

ORANGE COUNTY GREAT PARK MASTER PLAN

MINOR MODIFICATION TO THE MASTER PLAN AND PARK DESIGN REVIEW FOR THE WESTERN SECTOR PARK DEVELOPMENT PLAN

SCH #2002101020

OCTOBER 2011

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1. EIR Addendum Summary

1.1 PURPOSE AND SCOPE

This Initial Study/Addendum provides the basis for augmenting the previously certified Final Environmental Impact Report (State Clearinghouse Number 2002101020) for the Orange County Great Park (OCGP) and serves as the California Environmental Quality Act (CEQA) documentation for the:

- Park Design Review and Approval of the "Western Sector Park Development Plan" (00522145-PPD)
- Minor Modification to OCGP Master Plan (00524784-PMP)
- Adoption of this Addendum No. 8

The requested modification and park design review does not propose any changes to approved and environmentally-reviewed development intensities within the OCGP Master Plan area. This Addendum has been prepared pursuant to the provisions of CEQA (Public Resources Code Sections 21000 et seq.), the State CEQA Guidelines, and the City of Irvine Local Guidelines for Implementing CEQA (Local CEQA Guidelines).

1.2 ENVIRONMENTAL PROCEDURES

Pursuant to CEQA, the State CEQA Guidelines, and the Local CEQA Guidelines, this Initial Study/Addendum focuses on the proposed minor modification to the OCGP Master Plan, and on the Park Design Review for the "Western Sector Park Development Plan" (Project) to determine if the Project would cause a change in the environmental impact conclusions of the Orange County Great Park Final Environmental Impact Report (OCGP FEIR), and if any change in circumstances or new information that would substantially change the conclusions of the OCGP FEIR.

Pursuant to Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for the project unless the lead agency determines, on the basis of substantial evidence, that one or more of the following conditions are met:

> *(1) Substantial changes are proposed in the project that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
>
> *(2) Substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or*

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, suggests any of the following:

a) The project would have one or more significant effects not discussed in the previous EIR or negative declaration.

b) Significant effects previously examined would be substantially more severe than identified in the previous EIR.

c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.

d) Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Section 15164 of the State CEQA Guidelines states that an Addendum to an EIR shall be prepared "if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR has occurred." This Initial Study/Addendum reviews the changes proposed by the Project and any changes to the existing conditions that have occurred since the OCGP FEIR was last augmented by the Heritage Fields SEIR. It also reviews any new information of substantial importance that was not known and could not have been known with exercise of reasonable diligence at the time that the OCGP FEIR was certified. It further examines whether, as a result of any changes or any new information, a subsequent or supplemental EIR may be required. This examination includes an analysis of the provisions of Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines and their applicability to the proposed Project. This Initial Study/Addendum relies on the attached Environmental Analysis, which addresses environmental checklist issues on a section-by-section basis.

The City of Irvine Environmental Checklist Form has been completed by the City and included in Section 3, *Environmental Checklist*. The Environmental Checklist Form is marked with the findings of the Community Development Director as to the environmental effects of the proposed Project in comparison with the findings of the OCGP FEIR. The checklist has been prepared pursuant to Section 15168(c)(4) of CEQA, which states that "where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR."

Using that approach, the City of Irvine, the Lead Agency, determined that an Addendum to the previously approved OCGP FEIR is the appropriate environmental clearance for the Project.

1.3 PREVIOUS ENVIRONMENTAL DOCUMENTATION

The OCGP FEIR was certified by the City of Irvine in May 2003. The project analyzed in the OCGP Program EIR consisted of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning

(prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (Irvine Ranch Water District Parcel); 3) General Plan Amendment and Zone Change for Planning Area 30; and 4) Approval of the form of a Development Agreement vesting approval of overlay uses and intensities in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funding for specific park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property.

The OCGP FEIR mitigation measures are provided in the adopted Mitigation Monitoring and Reporting Program included in Appendix A. The table includes:

- Mitigation Measure number and a description of the action;
- Timing for implementation;
- Approving authority and reviewing agency(s), if any; and
- Method of compliance

Addendum No. 1, approved by the City on May 18, 2006, augmented the OCGP FEIR to address the potential for environmental issues associated with the implementation of the OCGP Redevelopment Project Area Plan.

Addendum No. 2 was approved by the City Council on October 24, 2006. It analyzed the potential for environmental issues associated with adjustments to the boundary between the public and private areas of the OCGP; revisions to Zoning Code text and figures related to Planning Areas 30 and 51; the creation of a mixed-use zoning category called the Lifelong Learning District (LLD) within Planning Area 51; and technical changes to the General Plan, as described in Section 2.3 of the Addendum No. 2.

Addendum No. 3, approved by the City Planning Commission on May 17, 2007, addressed the potential for environmental issues associated with a proposal for approval of Vesting Tentative Tract Map No. 17008 (Master Subdivision Map).

Addendum No. 4 was approved by the City Planning Commission on August 2, 2007. It analyzed the development of the Orange County Great Park (Great Park Master Plan), which provides a conceptual design for the future buildout of the 1,145-acre park with passive and active features.

Addendum No. 5, approved by City Council on July 22, 2008, analyzed changes to figures in the General Plan to reflect the Bake Parkway/Marine Way intersection relocation and the Rockfield Boulevard reconfiguration in the southern portion of Planning Area 30; and amendments to the Orange County Transportation Authority's Master Plan of Arterial Highways; the City-Heritage Fields Development Agreement; and related changes to the City's General Plan and Zoning Ordinance.

Addendum No. 6 was approved by the Planning Commission on October 16, 2008 and analyzed the potential for environmental issues associated with requested entitlements: amended Vesting Tentative Tract Map No. 17008, Vesting Tentative Tract Map No. 17283, Modification to OCGP Streetscape Design

Guidelines, Master Landscape and Trails Plan, and Master Plan for Non-Residential Development within the Lifelong Learning District.

Addendum No. 7 to the 2003 OCGP EIR, approved by the City of Irvine on June 29, 2010, was prepared in connection with revisions to the North Irvine Transportation Mitigation ("NITM") Program. The update removed planned traffic improvements at seven intersections from the list of traffic mitigation measures in the OCGP FEIR.

The OCGP FEIR, as augmented by Addenda 1 through 7 (collectively, Addenda) and all of the associated technical documents, reports and analyses are on file and can be reviewed at the City of Irvine, Community Development Department, at One Civic Center Plaza, Irvine, California 92623.

1.4 ENVIRONMENTAL SETTING

The Orange County Great Park (which is found within City of Irvine Planning Areas 30 and 51) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The project area is generally bounded by the Woodbury residential development to the west, future Portola Springs residential development to the north (under construction), Irvine Spectrum to the south, and the City of Lake Forest to the east. Other nearby local jurisdictions include the Cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin.

The Irvine Station, a major multimodal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the Southern California Regional Rail Authority (SCRRA) Metrolink tracks, which bisect the project area and separate Planning Areas 30 and 51. The existing facilities and uses within the project site include recreational vehicle storage and agricultural and nursery operations. The OCGP FEIR also describes interim activities that might occur on the site, including short-term use of the land or existing buildings on-site. Currently, there are offices on site occupied by the Great Park Corporation (GPC). Other tenants include Second Harvest Food Bank, Families Forward, Legacy, Orange County Great Park Balloon Preview Park, and Tierra Verde Industries.

2. Project Description

2.1 PROJECT LOCATION

The Orange County Great Park (OCGP), located within City of Irvine Planning Areas 30 and 51, is northeast of the freeway junction at Interstate 5 (I-5) and Interstate 405 (I-405), within the City of Irvine. The proposed minor modification to the OCGP Master Plan and Park Design Review actions (Project) are focused on the Western Sector Park Development Plan area, which is located at the southwestern corner of the OCGP, bordered on the north by the property owned by Heritage Fields El Toro, LLC; on the south by Marine Way; and to the west by "O" Street. Figure 2-1 depicts the Project location in a regional context and Figure 2-2 shows its local context.

Major roadways bordering the Project are Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the southeast. An aerial photograph of the Project site and surrounding area is shown on Figure 2-3. The Irvine Station is adjacent to the SCRRA Metrolink tracks, which traverse the site and separate Planning Areas 30 and 51. Surrounding the site are residential and nonresidential uses under construction to the north and west, open space to the northeast, and nonresidential and mixed land uses to the east and southeast within the City of Lake Forest and City of Irvine.

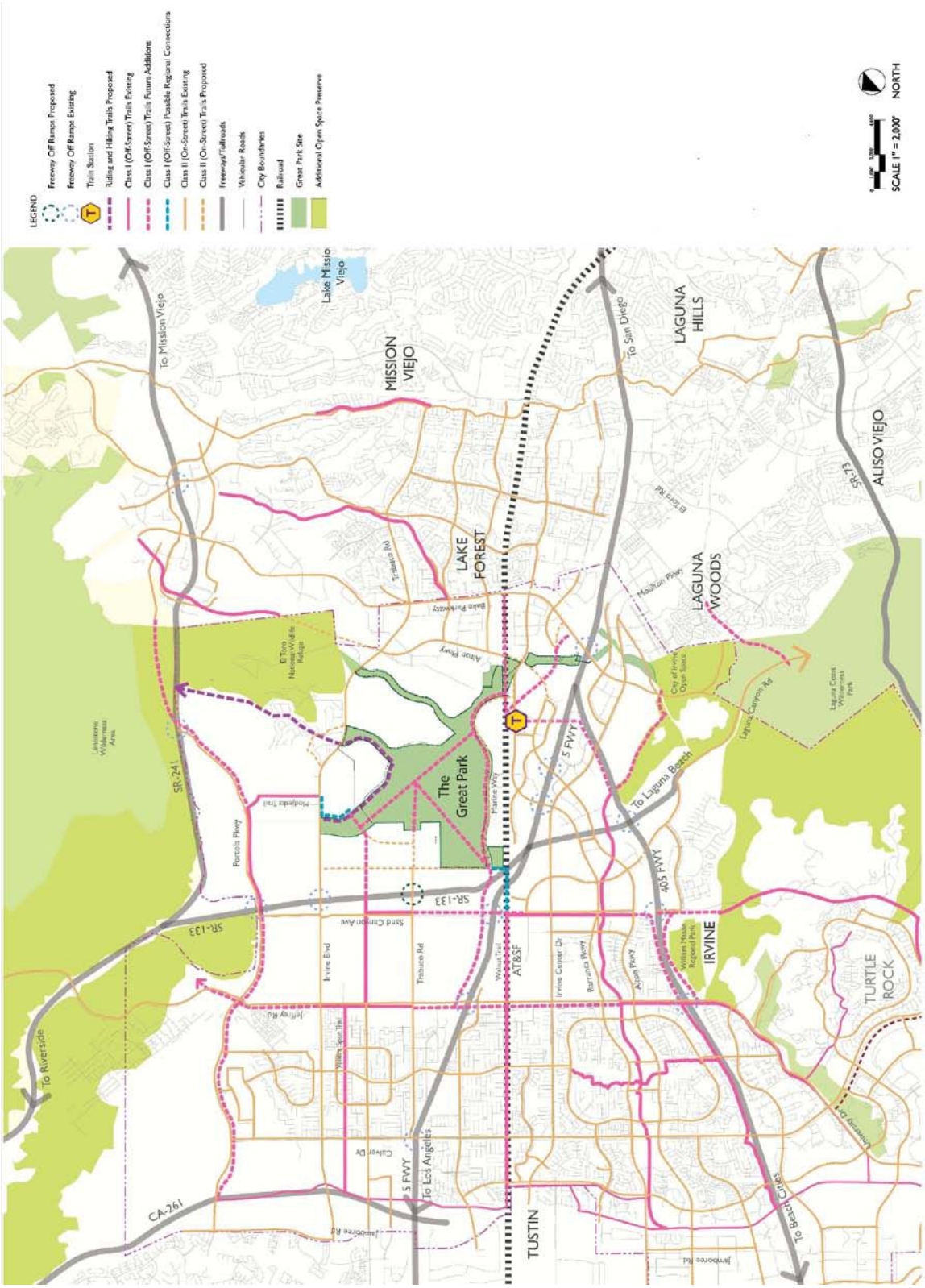
2.2 PROJECT CHARACTERISTICS

2.2.1 Project Background

On May 27, 2003, the City Council certified a Final Environmental Impact Report (OCGP FEIR) and adopted a general plan amendment (GPA) and zone change (ZC) to implement the development of the OCGP. To develop at the maximum intensities allowed in the Overlay Plan shown in the General Plan and Zoning Code, the land use entitlements required that the property owner enter into a development agreement with the City, which required, among other things, the dedication of land and the development or funding of certain infrastructure improvements.

In July 2005, Heritage Fields LLC, the predecessor of Heritage Fields, purchased all four bid parcels through a US Department of Navy/General Services Agency online auction process. Subsequent to the land purchase, the Orange County Great Park Corporation (GPC) and Heritage Fields initiated their respective master design and development processes. To facilitate additional design options, both the GPC and Heritage Fields requested and the City initiated an amendment to the General Plan and the Zoning Code to reconfigure the property boundaries between the two entities. Heritage Fields requested the creation of a new mixed-use zoning district called the 8.1/8.1A Lifelong Learning District. Heritage Fields also proposed clarifications to the zoning text within Planning Areas 30 and 51. These revisions were analyzed in Addendum No. 2 dated September 2006, and were approved as the "Revised Overlay Plan" (Overlay Plan) by the City Council on October 24, 2006.

Figure 2-1
Regional Location



Source: WRNSSTUDIO

Figure 2-2
Local Vicinity Map

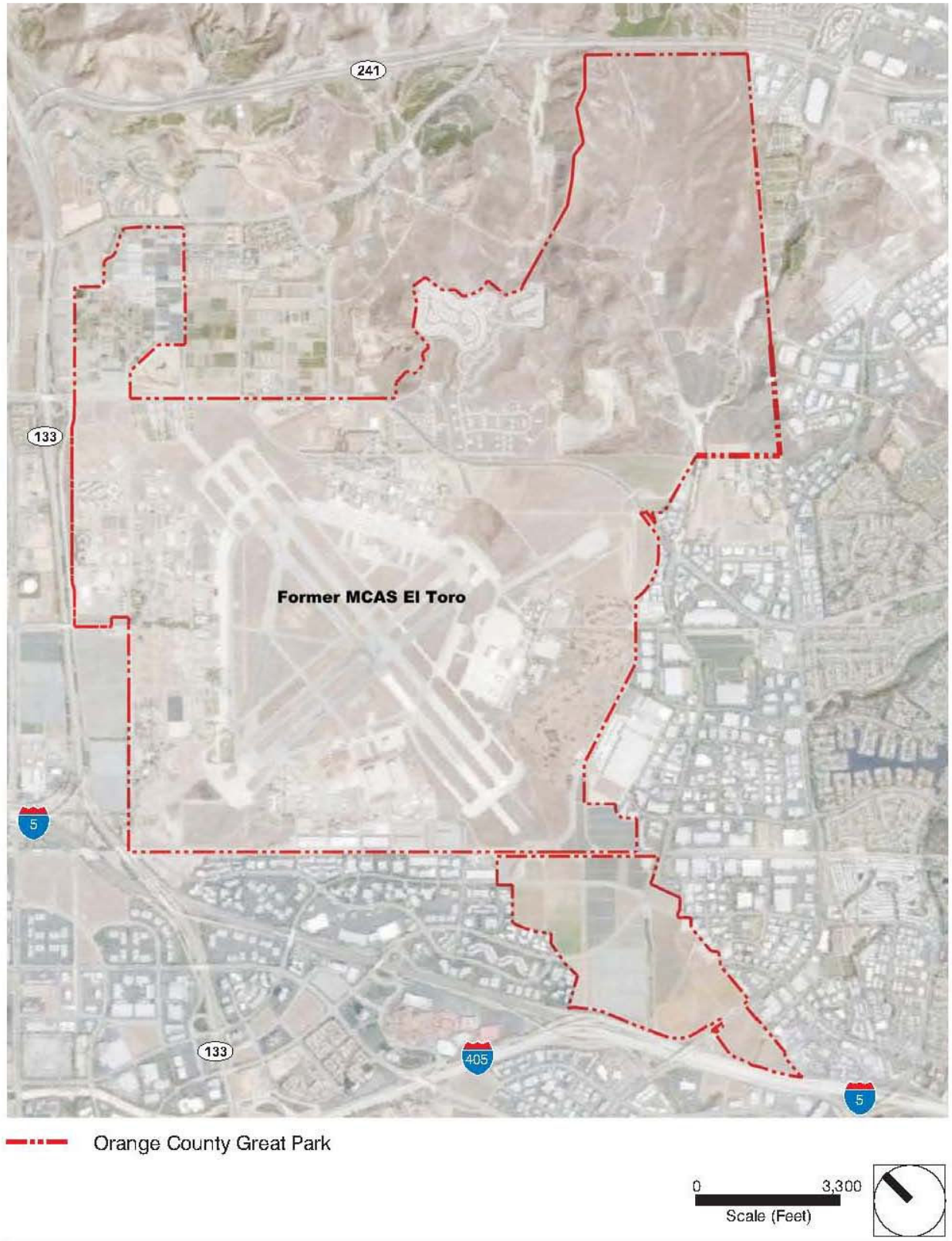


Figure 2-3
Aerial Photograph

On June 28, 2006 Heritage Fields filed an application for approval of Vesting Tentative Tract Map No. 17008 (Master Subdivision Map). The Master Subdivision Map was approved by the Planning Commission on May 17, 2007. CEQA compliance for the Master Subdivision Map was accomplished via Addendum No. 3 approved on May 17, 2007.

In 2007, the GPC sought approval of a conceptual master plan for the development of the Orange County Great Park (Great Park Master Plan). The Great Park Master Plan was approved by the Planning Commission on August 2, 2007. The CEQA compliance for the Great Park Master Plan was established via Addendum No. 4 dated July 2007 and approved on August 2, 2007.

During preliminary consideration of the conceptual design of Marine Way, the California Department of Transportation (Caltrans) expressed concerns regarding the location of Marine Way and its relationship to the Bake Parkway freeway on-ramp. It was recognized that the revised alignment required an amendment to the General Plan, the zoning code, and the Orange County Transportation Authority's Master Plan of Arterial Highways. Addendum No. 5 provided that CEQA review and compliance for those entitlement actions. Addendum No. 5 also examined the amendments to the City-Heritage Fields Development Agreement and related changes to the City's General Plan and Zoning Ordinance. Addendum No. 5 was approved on July 22, 2008.

In 2008, Addendum No. 6 was prepared analyzing the potential environmental issues associated with the following requested entitlements: amended Vesting Tentative Tract Map (VTTM) No. 17008; VTTM No. 17283; Modification to OCGP Streetscape Design Guidelines; Master Landscape and Trails Plan (MLTP); and Master Plan for Non-Residential Development within the Lifelong Learning District. Addendum No. 6 was approved on October 16, 2008 by the Planning Commission.

In 2010, Addendum No. 7 was prepared in connection with revisions to the North Irvine Transportation Mitigation (NITM) Program, which removed planned traffic improvements at seven intersections from the list of traffic mitigation measures in the OCGP FEIR. Addendum No. 7 also removed the finding of a significant impact (and associated mitigation obligations) at one ramp (SR-241 at Lake Forest Drive). Addendum No. 7 was approved on June 29, 2010.

In 2011, Heritage Fields sought from the City a series of general plan amendments, zone changes, subdivision map approvals, and other entitlements associated with the private development of a portion of the Heritage Fields-owned property within Planning Areas 30 and 51("Modified Project"). A Supplement to the OCGP FEIR (SEIR) was prepared in connection with those entitlement applications. The SEIR was approved and certified by the Irvine City Council on August 30, 2011. The cumulative development assumptions utilized in the SEIR include the Project under analysis in this Addendum.

2.2.2 Project Components

This Addendum (Addendum No. 8) addresses the potential for environmental impacts associated with the requested Orange County Great Park Master Plan Minor Modification and the Park Design Review associated with the implementation of the "Western Sector Park Development Plan". The project components include the following requested actions:

Minor Modification to OCGP Master Plan

The OCGP Master Plan covers approximately 1,145.3 acres at the former El Toro Marine Corps Air Station. The minor modification portion of the Project consists mainly of changes to the proposed buildings within the Western Sector Park Development Plan site. Buildings that are no longer part of the OCGP Master Plan include the previously proposed Air Museum and the Concessions / Retail at the Sports Park. Those buildings have been replaced by the proposed Artist in Residency Facility, the proposed Community Ice Facility, and the proposed Nature Education Garden. In addition, Hangar 244 replaces the existing Air Museum Hangar. The overall square footage of the buildings within the OCGP Master Plan remains the same since the size of the three Civic / Museums within the OCGP Master Plan have been reduced to accommodate the additional square footages of the new buildings within the Western Sector Park Development Plan (see Table 2-1 and Figure 2-4).

Table 2-1. Proposed Building Area Modifications

Buildings	Approved Master Plan – 2007 (SF)	Master Plan MINOR Modification – 2011 (SF)
Field House	26,000	26,000
Main Maintenance	37,500	37,500
Botanic Garden Maintenance	7,200	7,200
Upper Canyon Maintenance	7,200	7,200
Pump House	4,400	4,400
Library	39,000	39,000
Botanic Garden Building	13,900	13,900
Tea House	800	800
Air Museum (Proposed)	60,000	0
Concessions / Retail at Sports Park (Existing)	13,060	0
Civic / Museum 1	81,000	60,000
Civic / Museum 2	108,400	82,000
Civic / Museum 3	85,000	52,695
Artist in Residence Facility*	0	12,800
Hangar 244 (Replaces Existing Air Museum Hangar)*	10,540	10,370
Community Ice Facility*	0	117,635
Nature Education Center (Existing)*	0	22,500
TOTAL	**494,000**	**494,000**
* Occurs within the Western Sector Park Development Plan Area		

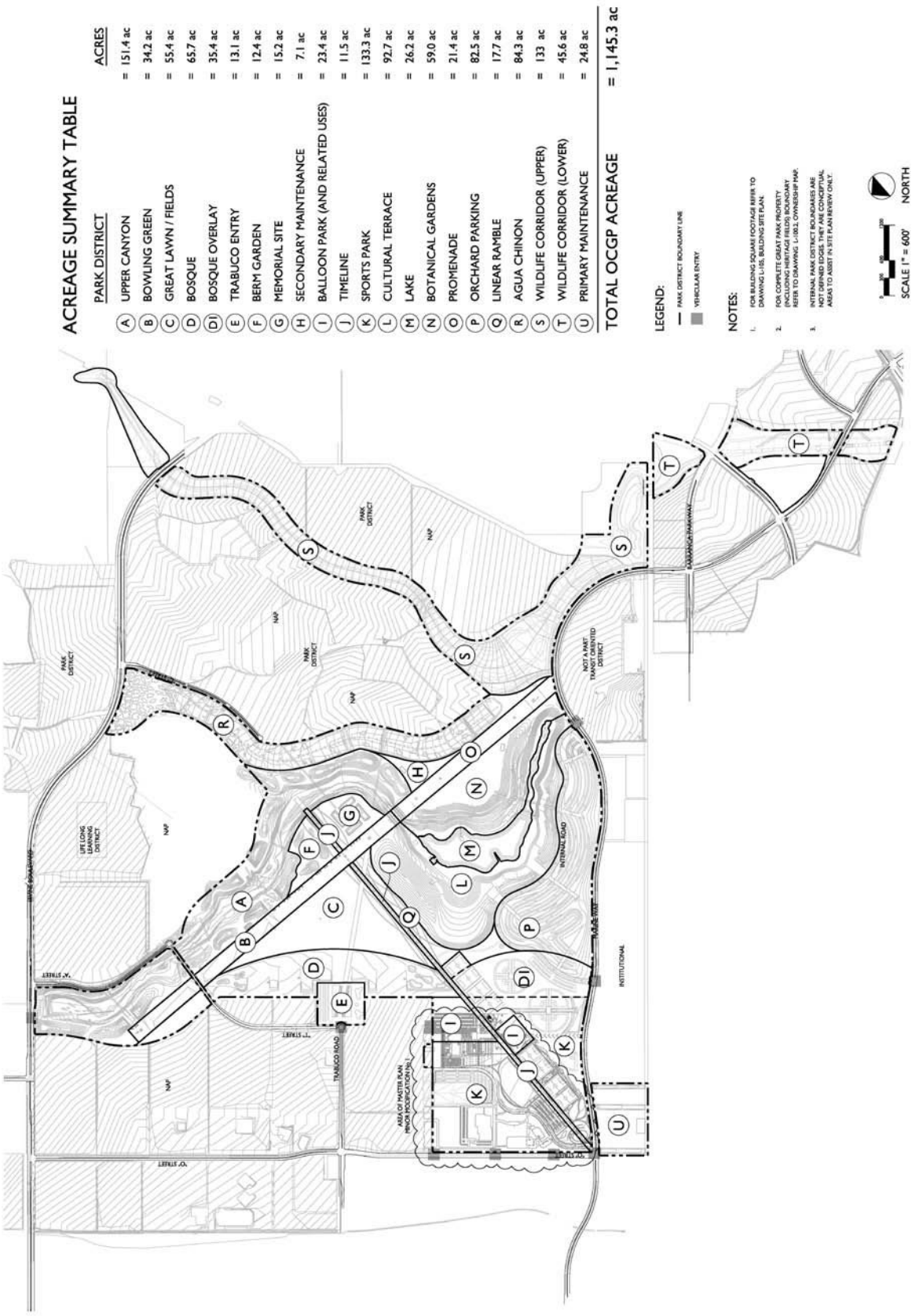


Figure 2-4
Great Park Master Plan Minor Modification

Park Design Review for the "Western Sector Park Development Plan"

The Park Design for the Western Sector Park Development Plan area consists of approximately 245 acres and is located in the southwestern portion of the OCGP Master Plan. The Western Sector Park Development Plan site is bordered on the north by property owned by Heritage Fields El Toro, LLC; on the south by Marine Way; and to the west by future "O" Street. Similar to the approved OCGP Master Plan from 2007, the Park Design for the Western Sector Park Development Plan contains a Sports Park, a Balloon Park (and related uses) and a portion of the Timeline circulation corridor. These uses, in addition to others, are depicted on Figure 2-5.

The majority of the Western Sector Park Development Plan site is devoted to the Sports Park, which will also include the North and South Lawns. The program of the Sports Park consists of 12 soccer fields with an outdoor stadium; 4 little league baseball fields; 5 softball fields; 4 acres of multi-use fields; 12 tennis courts; 2 handball courts; 15 basketball courts; a public skate park; outdoor eating area; palm parade outdoor area; passive recreational area; picnic groves with tables; youth and children's play areas; outdoor chess; rock climbing; and a community garden. Buildings within the Sports Park include a 26,000 square feet Field House that may include a gymnasium, sports park office, equipment storage, and similar recreation-related uses; an "Artist in Residence" facility; a Community Ice facility with ice rinks; and an existing Nature Education Center. Restrooms, parking, and bicycle/pedestrian trails would also be provided for community use.

A Balloon Park, which features a tethered helium balloon which ascends passengers up to a height of 500 feet, a carousel, a visitor center, shade structures, display space, and other landscape terraforms is located southeast of the timeline. In addition, the existing Hangar 244 will continue to function as a multi-purpose space.

The Timeline Central and Timeline West is a circulation corridor that traverses the site in a southwest-northeast direction. It connects the Balloon Park to the rest of the improved areas and includes bicycle and pedestrian trails.

Other Project components include a special event site that can host festivals as well as corporate events; a community garden / farm and food lab for gardeners to grow produce as well as educate people on food and health; and a promenade for park visitors.

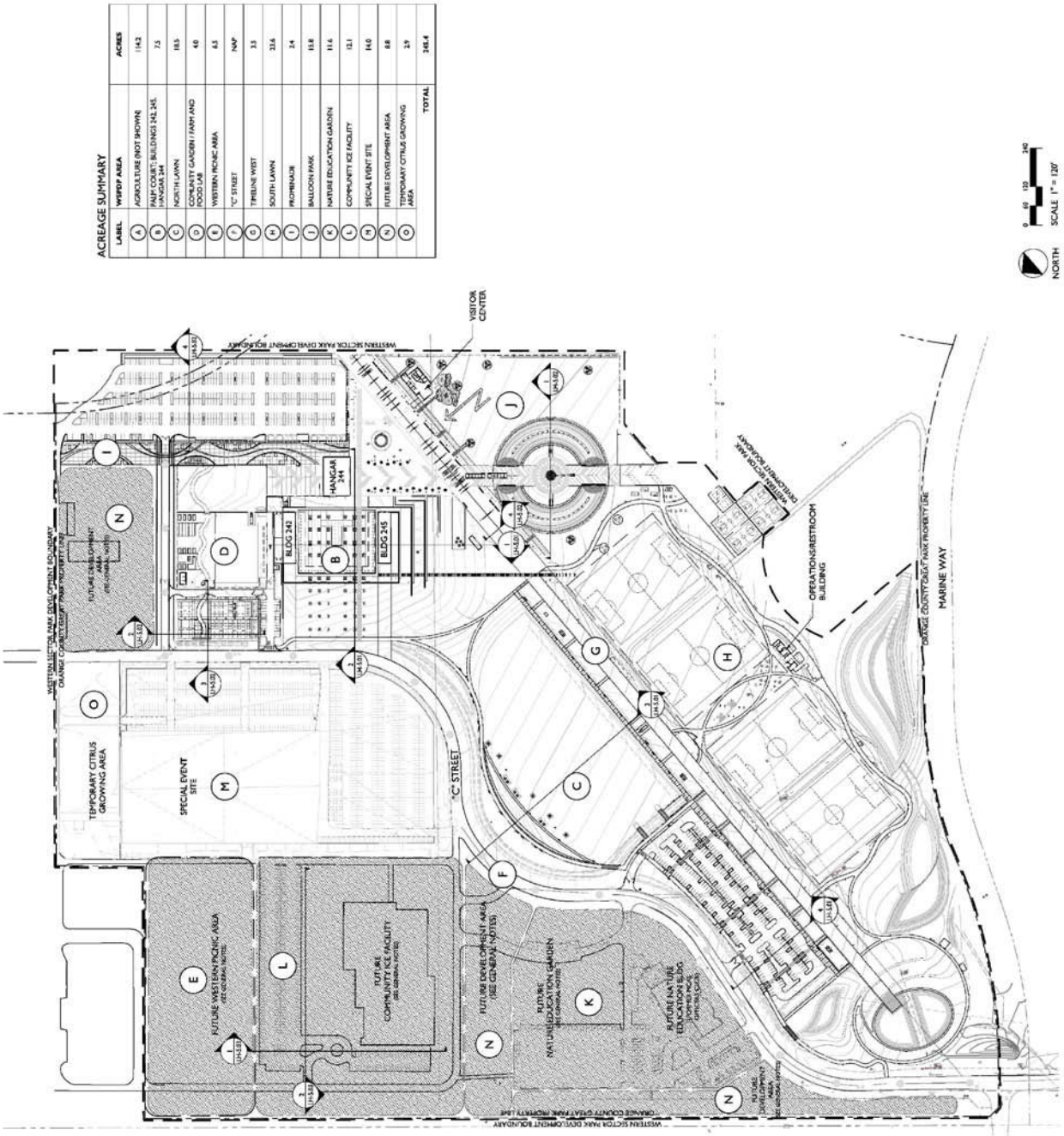


Figure 2-5
Park Design for the Western Sector Park Development Plan

2.3 DISCRETIONARY APPROVALS

Implementation of the Project includes the following discretionary actions to be undertaken by the City:

- Park Design Review and Approval of the "Western Sector Park Development Plan" (00522145-PPD)
- Approval of Minor Modification to OCGP Master Plan (00524784-PMP)
- Adoption of this Addendum No. 8

The OCGP FEIR lists additional discretionary actions to be taken by the City and other public agencies at or as part of the completion of the project (OCGP FEIR pages 3-29 and 3-30). The actions and responsible public agencies include, but are not necessarily limited to, these approvals:

- Master plans and subdivisions for development (City)
- Community facilities districts or other assessment districts (City)
- Actions to improve interim use activities (City and DoN)
- Transfer of parcels within Planning Area 51 (DoN)
- Clean Water Act section 404 permits (U.S. Army Corps of Engineers)
- Endangered Species Act compliance (U.S. Fish and Wildlife Service)
- Clean Water Act section 401 and National Pollutant Discharge Elimination System (NPDES) permits (Regional Water Quality Control Board)
- California Fish and Game Code 1602 permits (California Department of Fish and Game)
- Revisions to the Orange County Master Plan of Arterial Highways (Orange County Transportation Authority)

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the proposed changes to the project in comparison with the findings of the certified OCGP FEIR.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of the California Environmental Quality Act (CEQA), to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form in Section 3 is explained in Section 4 of the Addendum.

3. Environmental Checklist

3.1 CITY OF IRVINE INITIAL STUDY AND ENVIRONMENTAL EVALUATION

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the proposed OCGP Master Plan Minor Modification in comparison with the findings of the certified OCGP FEIR and Addenda.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of CEQA, to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances under which the project is undertaken, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form is explained in Section 4 of the Addendum.

1. Project Title:

Orange County Great Park Master Plan Minor Modification

2. Lead Agency Name and Address:

City of Irvine Community Development Department One Civic Center Plaza Irvine, California 92623

3. Contact Person and Phone Number:

David R. Law, Senior Planner (949) 724-6314

4. Project Location:

The project area is bordered on the north by the Heritage Fields, LLC property; on the south by Marine Way and to the west by future "O" Street.

5. Project Sponsor's Name and Address:

City of Irvine Community Development One Civic Center Plaza Irvine, California 92623

6. General Plan Designation:

Orange County Great Park (OCGP)

7. Zoning:

1.9 Orange County Great Park

8. Description of Project

See Section 1.6.2, *Project Components*

9. Surrounding Land Uses and Setting (Briefly describe the project's surroundings):

The proposed Project area (which consists of City of Irvine Planning Area 51) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The project area is generally bounded by Irvine Spectrum to the south, the City of Lake Forest to the east, the Woodbury residential community to the west, and the future Portola Springs residential development to the north.

The Project area is bordered on the north by the Heritage Fields, LLC property; on the south by Marine Way and to the west by future "O" Street.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement):

N/A

3.2 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☐ Utilities/Service Systems	☐ Mandatory Findings of Significance

3.3 Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☒ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further beyond an Addendum to the earlier EIR is required.

David R. Law, Senior Planner

10/11/11

Date

3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an affect has been adequately analyzed in an earlier EIR or negative declaration. Section 1 5063(c) (3) (D). In this case, a brief discussion should identify the following:

    a) **Earlier Analysis Used.** Identify and state where they are available for review.

    b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c) **Mitigation Measures.** For effects that are "Less Than Significant With Mitigation Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significant.

	Subsequent or Supplemental EIR				Addendum to EIR	
ENVIRONMENTAL ISSUES	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
I. AESTHETICS: Would the project:						
a) Have a substantial adverse effect on a scenic vista?					X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway or local scenic expressway, scenic highway, or eligible scenic highway?					X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?					X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?					X	
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Mode (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:						
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the					X	

	Subsequent or Supplemental EIR				Addendum to EIR	
ENVIRONMENTAL ISSUES	**Substantial Change in Project Requiring Major EIR Revisions**	**Substantial Change in Circumstances Requiring Major EIR Revisions**	**New Information Showing Greater Significant Effects than Previous EIR**	**New Information Showing Ability to Reduce Significant Effects in Previous EIR**	**Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR**	**No Impact**
Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?						
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?						X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?						X
d) Result in the loss of forest land or conversion of forest land to non-forest use?						X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?					X	
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:						
a) Conflict with or obstruct implementation of the applicable air quality plan?						X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?					X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?					X	

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d) Expose sensitive receptors to substantial pollutant concentrations?					X	
e) Create objectionable odors affecting a substantial number of people?						X
IV. BIOLOGICAL RESOURCES: Would the project:						
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?					X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?					X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?					X	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?					X	
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?					X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan,						X

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Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?						
V. CULTURAL RESOURCES: Would the project:						
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the CEQA Guidelines?						X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?					X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?					X	
d) Disturb any human remains, including those interred outside of formal cemeteries?					X	
VI. GEOLOGY AND SOILS: Would the project:						
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.						X
ii) Strong seismic ground shaking?					X	
iii) Seismic-related ground failure, including liquefaction?						X
iv) Landslides?					X	
b) Result in substantial soil erosion or the loss of topsoil?					X	
c) Be located on a geologic unit or soil that is unstable, or that would become						X

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unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?						
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?					X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?						X
VII. GREENHOUSE GAS EMISSIONS: Would the project:						
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?						*
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?						*
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?					X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?						X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?						X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to					X	

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Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?						
e) For a project located within an airport land use plan, would the project result in a safety hazard for people residing or working in the project area?						X
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?						X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?						X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?					X	
IX. HYDROLOGY AND WATER QUALITY: Would the project:						
a) Violate any water quality standards or waste discharge requirements?					X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?						X
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in					X	

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substantial erosion or siltation on-site or off-site?						
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?					X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?					X	
f) Otherwise substantially degrade water quality?					X	
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?					X	
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?					X	
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?						X
j) Inundation by seiche or mudflow?						X
X. LAND USE AND PLANNING: Would the project						
a) Physically divide an established community?						X
b) Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding					X	

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or mitigating an environmental effect?						
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?						X
XI. MINERAL RESOURCES: Would the project:						
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?						X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use?						X
XII. NOISE: Would the project result in:						
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?					X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?					X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
e) For a project located within an airport land use plan, would the project expose people residing or working in the project area to excessive noise levels?						X
f) For a project within the vicinity of a private airstrip, heliport or helistop, would the project expose people residing or working in the project area						X

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to excessive noise levels?						
XIII. POPULATION AND HOUSING: Would the project:						
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?					X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?						X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?						X
XIV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
a) Fire protection?					X	
b) Police protection?					X	
c) Schools?					X	
d) Parks?					X	
e) Other public facilities?					X	
XV. RECREATION: Would the project:						
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?					X	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?					X	
XVI. TRANSPORTATION/TRAFFIC: Would the project:						
a) Conflict with an applicable plan,					X	

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ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?						
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?					X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or change in location that results in substantial safety risks?						X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?						X
e) Result in inadequate emergency access?					X	
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus stops/routes, bicycle lanes, sidewalks, etc.)?						X
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:						
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?					X	
b) Require or result in the construction of new water or					X	

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wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?						
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?					X	
d) Have sufficient water supplies available to serve the project (including large scale developments as defined by Public Resources Code Section 21151.9 and described in Question No. 20 of the Environmental Checklist) from existing entitlements and resources, or are new or expanded entitlements needed?					X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?					X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?					X	
g) Comply with Federal, State, and local statutes and regulations related to solid waste?					X	
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE						
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or					X	

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eliminate important examples of the major periods of California history or prehistory?						
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)					X	
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?					X	

* The Environmental Checklist questions above related to greenhouse gas emissions are not answered because GHG emissions was not an issue identified and analyzed in the May 2003 certified Final Environmental Impact Report (FEIR) for a general plan amendment (GPA) and zone change (ZC) to implement the development of the Orange County Great Park. At the time of the FEIR certification, GHG emissions has been recognized as an environmental issue since the 1970s when the United States Congress enacted the National Climate Program Act (92 Stat.601, 1978) which required the President to establish a program to assist in understanding and responding to natural and human-induced climate processes, and since the 1980s when the Intergovernmental Panel on Climate Change (IPCC) was formed to assess scientific information related to climate change. Thus, issues related to climate change were known, or could have been known, at the time of the certification of the FEIR.

When an EIR has been certified for a project, no subsequent environmental document needs to be prepared by the lead agency (City of Irvine) unless there is a substantial evidence that one or more of the following has occurred:

1. Substantial changes are proposed in the project involving new significant environmental effects or a substantial increase in the severity of previously significant effects;

2. Substantial changes occur with response to the project due to involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. New information of substantial importance, which was unknown or could not have been known with the exercise of reasonable diligence at the time the previous EIR was adopted shows any of the following:

    a. The project will have one or more significant effects not discussed in the previous EIR;
    b. Significant effects previously examined will be substantially more severe than shown in the previous EIR.
    c. Mitigation measures or alternatives previously found to be infeasible would be feasible, and would substantially reduce one or more significance effects of the project, but the project proponents declined to adopt the mitigation measure or alternative; or
    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents declined to adopt the mitigation measure or alternative.

In this case, the proposed project does not meet the Section 15162 criteria for preparing a subsequent environmental document and no analysis of GHG emissions is required based on the following supporting information:

1. As documented throughout this Initial Study, the OCGP Master Plan Minor Modification and the Park Design does not include substantial changes proposed in or with respect to the proposed project that involve new significant environmental impacts or a substantial increase in the severity of previously identified significant effects. As for GHG emissions, the issue was not considered potentially significant in 2003 and the GHG emissions associated with the OCGP Master Plan Minor Modification and the Park Design have not increased beyond those expected with the 2003 approved project, because the development allowed by the OCGP Master Plan Minor Modification and the Park Design has not increased over that allowed by the 2003 approved project.

2. GHG emissions has been recognized as an environmental issue for at least three decades and the approved project contribution to GHG emissions is not new information that was unknown or could not have been known with the exercise of reasonable diligence at the time the EIR was certified in 2003.

3. A GHG analysis that analyzed the projected emissions for both the public and private development in Planning Areas 30 and 51 was prepared in connection with the Supplement to the OCGP FEIR (SEIR) that was circulated for public review on June 2, 2011. That analysis concludes that the emissions per service population falls below the 4.8 Mtons per service population threshold proposed by South Coast Air Quality Management District and utilized as a threshold of significance by the City in the SEIR.

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4. Discussion of Checklist and Mitigation Measures

This section is intended to provide evidence to substantiate the conclusions set forth in the Environmental Checklist. The section will briefly summarize the conclusions of the Orange County Great Park FEIR, as updated by the prior Addenda and the SEIR (collectively, "OCGP FEIR"), and then discuss whether the proposed Project is consistent with the findings contained in the OCGP FEIR.

4.1 AESTHETICS

4.1.1 Environmental Setting

The OCGP FEIR addressed in detail the potential visual impacts associated with the development of the former MCAS El Toro. The OCGP FEIR discussed the project's visual setting associated with its location adjacent to various arterial and state and federal highways. None of these roadways is designated County or State scenic highways; however, Sand Canyon Avenue is designated as a highway with rural/natural character. The City's General Plan also designates I-5 as an urban character Scenic Highway.

Generally, views of the former military base are from the surrounding highways. From these highways, a variety of land uses, structures, and facilities of differing ages, sizes, and architectural styles can be viewed. Although agricultural areas are adjacent to and within the base, the predominant views are associated with the military use of the base, including runways, aprons, hangars, warehouses, barracks housing, recreational facilities, single-family housing, offices, and commercial structures.

The proposed Project site is developed with aircraft hangar (Hangar 244), Kids Rock interpretive playground, Great Park Carousel, Great Park Balloon, Visitors Center, warehouse buildings, storage areas, and paved areas for parking and circulation. The majority of the site has little topographic relief, with a slight slope (1.5 to 2.5 percent) to the west and southwest.

4.1.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR discussed the potential aesthetic effects associated with development of the site under the adopted Overlay Plan and found that future development of Planning Areas 51 and 30 would introduce new sources of light within the project area. These sources include street lighting along planned roadways and various forms of exterior lighting, including security lighting, parking lots, educational facilities, institutional and commercial developments, and lighting associated with athletic fields. The OCGP FEIR concluded that significant light impacts would occur if proposed light sources were directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours, but that, with the mitigation ultimately adopted by the City, these potential impacts would be less than significant. The OCGP FEIR and addenda further concluded that the proposed mitigation measures for the project would reduce potentially significant light impacts to less than significant levels.

No other significant or potentially significant aesthetic impacts were identified in the OCGP FEIR. Those other thresholds primarily concern visual aesthetic impacts and include such evaluated factors as view-shed obstruction or impairment, landform alteration, and the degradation of valued or unique scenic resources or features.

4.1.3 Impacts Associated with the OCGP Master Plan Minor Modification and the Park Design Review

Similar to the approved OCGP Master Plan from 2007, the Project contains a Sports Park, an Aircraft Museum and portion of the Timeline Central and Timeline West circulation corridor; however, the components within the Project site have been modified for the Project. Modification of the OCGP Master Plan consists mainly of changes to the buildings proposed within the Project site. The previously proposed Air Museum, the Air Museum Hangar, and the Concessions/Retail at the Sports Park are now replaced with Hangar 244 and proposed uses such as an Artist in Residency Facility, a Community Ice Facility, and a Nature Education Garden. However, the overall square footage (494,000 square feet) of the buildings would remain the same as the size of the three Civic/Museums within the OCGP Master Plan would be reduced to accommodate the additional square footages of the new buildings.

There are no scenic routes, scenic resources, or unique geologic or topographic features within the Project site.

The Project would not introduce additional new light sources or highly reflective building materials that would result in new sources of potential glare beyond those already considered by the OCGP FEIR, because it includes the same land uses and intensity and physical area for future development as the adopted Overlay Plan. No other significant or potentially significant aesthetic impacts besides new sources of lighting are anticipated.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major changes to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the project will have one more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the approved OCGP FEIR.

4.1.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified mitigation measures A1 and A2, which, if implemented, would reduce the effects of development under the adopted Overlay Plan to a less than significant level. Those mitigation measures were modified in the SEIR, to make them consistent with the adopted conditions of approval. The proposed revisions do not result in any new significant impacts.

A1 Prior to issuance of building permits, lighting plans and signage plans for residential or non-residential new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.

A2 Prior to the issuance of building permits for residential and non-residential development, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

4.2 AGRICULTURE AND FORESTRY RESOURCES

4.2.1 Environmental Setting

The OCGP FEIR identified approximately 659 acres of designated Prime Farmland, 70 acres of designated Unique Farmland, and 99 acres of designated Farmland of Statewide Importance (as defined below). The Orange County Board of Supervisors has not designated any farmland as being of Local Importance. The northwestern portion of the Project is designated as Prime Farmland; however no portion is currently within agricultural production. No agricultural land within the Project area is currently covered by Williamson Act contracts.

The OCGP FEIR described the Farmland Mapping and Monitoring Program (FMMP Program) of the California Department of Conservation Division of Land Resources Protection classifications of agricultural lands present within the project area as follows:

- **Prime Farmland:** Land which has the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the previous two map updates.

- **Farmland of Statewide Importance:** Similar to Prime Farmland, except this land has minor shortcomings such as greater slopes or less ability to store soil moisture than Prime Farmland. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the previous two map updates.

- **Unique Farmland:** Lesser quality soils used for the production of the state's leading crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climate zones in California. This land is used for the production of specific high economic value crops such as oranges, olives, avocados, rice, grapes, or cut flowers. Land must have been cropped at some time during the two previous maps updates.

- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

City of Irvine Policies and Programs

The Project site was designated for a variety of urban uses in the City of Irvine General Plan. The Project encourages agriculture as an interim land use prior to development of the land. The City of Irvine General Plan Objective L-10, as amended in 2002 and presented in the OCGP FEIR, includes the following policies to "encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development".

4.2.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR determined the Overlay Plan would preserve in perpetuity 303 acres[1] of land for agricultural use, of which 251 acres are classified as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. The locations of the 303 acres of permanent agricultural land are listed below, and the Farmlands Map is shown below (Figure 4.2-1) and can be found in the OCGP FEIR as Figure 5.8-1.

- **PA 30:** 13 acres within Planning Area Zone (PAZ) 26; and
- **PA 51**: 90 acres within PAZ 4; 200 acres within PAZ 1.

The Overlay Plan also resulted in the permanent loss of 802 acres of designated farmland comprised of 651 acres of Prime Farmland, 63 acres of Unique Farmland, and 88 acres of Farmland of Statewide Importance. This impact was considered significant and unavoidable in the OCGP FEIR.

[1] There is a typographical error within the OCGP FEIR: Table 1-2 on page 1-8 and Table 3-4 on pages 3-12 and 3-13 identify the total agricultural land as 303 acres; however on page 5.8-10 the agricultural use acreage is noted as 307.

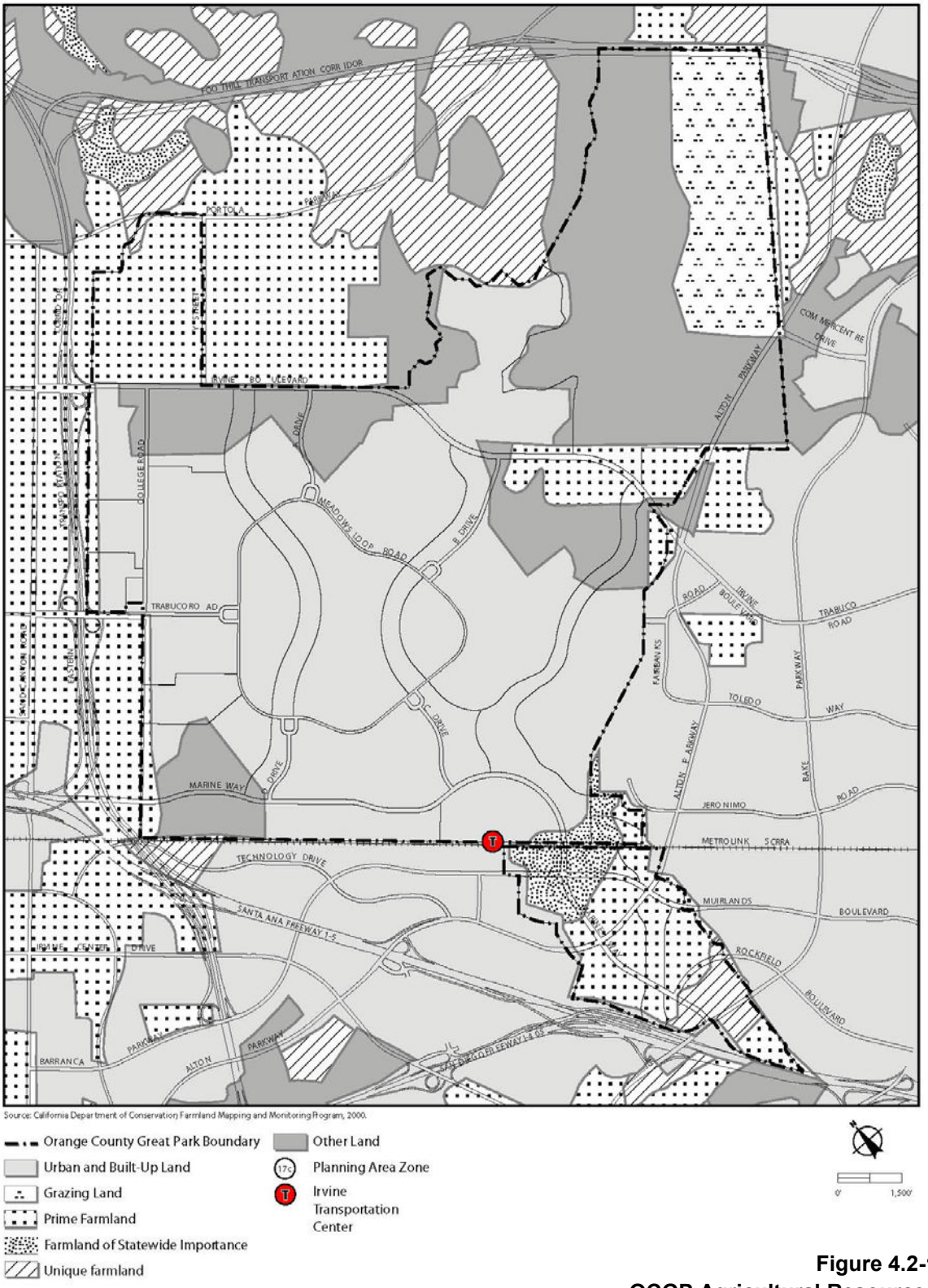

Figure 4.2-1
OCGP Agricultural Resources
(Figure 5.8-1 in OCGP FEIR)

It was determined the Overlay Plan resulted in a significant impact associated with the conversion of agricultural land to nonagricultural use. The OCGP FEIR noted the context of agricultural production in Orange County, including development pressures that have contributed to the decrease in agricultural production in the County over time, which suggested that conversion of agricultural land to urban uses would occur with or without the development of the OCGP.

Addendum No. 5 determined that the removal of 173 acres in PAZ 1 would not result in new significant impacts to agricultural resources (Section 4.2.3 of Addendum No. 5). Despite the Prime Farmland designation, none of the soils in PAZ 1 are currently used for agricultural production. In addition, existing regulatory programs, namely the City of Irvine General Plan Objective L-10 and establishment of the Irvine Agricultural Legacy Program, address and mitigate the loss of agricultural land. Since certification of the OCGP FEIR, an additional 508 acres within PAZ 1 has been designated "Exclusive Agriculture" and added to the Agricultural Legacy Program. As a result, overall acreage enrolled within the Agricultural Legacy Program is greater than that assumed in the certified OCGP FEIR.

4.2.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project consists mainly of changes to the proposed buildings within the Project site. The Project will affect the same proportion of the designated farmland as articulated in the OCGP FEIR and Addenda. Consequently, it has no additional impact, beyond that previously studied and disclosed, on agricultural resources. Since the overall square footage of the buildings within the OCGP Master Plan remains the same, the Project and the associated actions would not increase allowable intensities or areas planned for development. It would not result in conflicts with agricultural zoning, convert farmland to non-farmland uses, result in a loss of forest land, or create any new impacts to agriculture and forest resources beyond those evaluated in the OCGP FEIR and Addenda.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the Project or additional mitigation measures that would substantially reduce one or more of the significant effects on agriculture and forest resources identified in and considered by the approved OCGP FEIR.

4.2.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

Mitigation Measures AG1 through AG3 will be implemented in conjunction with master plan review and subsequent development permits.

AG1 In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operators, City of Irvine Standard Discretionary Case Condition B.4 and City of Irvine Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

- Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

AG2 Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

AG3 Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

4.3 AIR QUALITY

4.3.1 Environmental Setting

The OCGP FEIR describes the air quality conditions regarding the following regulated pollutants: ozone (O_3), carbon monoxide (CO), suspended particulate matter (PM_{10}), nitrogen oxides (NO_X), sulfur dioxide (SO_2), lead, and reactive organic gases (ROG).

The proposed Project site is located in the Orange County portion of the South Coast Air Basin. Table 4.3-1 shows the pollutants and associated attainment status for the South Coast Air Basin. Orange County is designated as a federal and state non-attainment area for O_3, PM_{10}, and $PM_{2.5}$, maintenance for CO, and an attainment area for SO_2, NO_2, and lead.

Table 4.3-1. Attainment Status for the Orange County Portion of the South Coast Air Basin

Pollutant	Attainment Status	
	Federal	State
O_3 – 1-Hour	--	Non-attainment
O_3 – 8-hour	Nonattainment (Extreme)	Non-attainment
PM_{10}	Nonattainment (Serious)	Non-attainment
$PM_{2.5}$	Nonattainment	Non-attainment
CO	Attainment/Maintenance	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment

Sources: EPA 2010; ARB 2010.

4.3.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR identifies significant air quality impacts associated with construction and operation of the Overlay Plan. The OCGP FEIR describes the construction air impacts after mitigation as significant and unavoidable. Addenda No. 3 and 4 included an analysis to determine the projected emissions associated with more recent, precise and refined information regarding the Overlay Plan and OCGP Conceptual Master Plan. The Addenda determined that earthmoving activities would be consistent with the emissions inventory assumed in the certified OCGP FEIR and within the scope of the original air quality analysis.

The analysis was conducted using URBEMIS 2007 Version 9.2, which was in accordance with SCAQMD's recommendations for preparation of air quality analyses at the time the document was developed. The emission estimates from Addendum No. 4 are provided in Table 4.3-2.

Table 4.3-2. Comparison of Daily Construction Emissions for OCGP Construction Activities

Emission Totals, lbs./day [tons per day]					
Emissions Inventory	**CO**	**NOx**	**PM_{10}**	**VOC**	**SOx**
OCGP FEIR	280	840	1440	4660c	40
OCGP Site Grading	174	343	663	37	<1
SCAQMD Significance Threshold	550	100	150	75	150
Over (Under)	(376)	243	513	(38)	(149)
Significant for OCGP FEIR?	No	Yes	Yes	Yes	No
Significant for OCGP Equipment Mix?	No	Yes	Yes	No	No
Source: PCR Services Corporation 2007.					

As shown in Table 4.3-2 above and as Addendum No. 4 concluded, no new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of implementation of the OCGP.

The site grading and demolition would most likely occur in a phased approach, over the course of numerous years. A technical consultant (PCR) also conducted an analysis for Addendum No. 4 to determine whether the construction emissions inventory for a maximum worst case day (consisting of concurrent grading of the OCGP Master Plan along with site grading activities for Heritage Fields, the Agua Chinon, and the wildlife corridor and runway demolition activities) is consistent with the emissions inventory presented in the OCGP FEIR and is within the scope of the original air quality impact assessment.

The emissions from the concurrent construction activities are presented in Table 4.3-3. Concurrent grading and demolition activities estimated for Addendum No. 4 resulted in a slight decrease in equipment exhaust emissions and fugitive dust PM_{10} emissions, as compared to those levels estimated for the OCGP FEIR.

Table 4.3-3. Comparison of Daily Construction Emissions for Concurrent OCGP Construction Activities

Emission Totals, lbs./day [tons per day]					
Emissions Inventory	**CO**	**NOx**	**PM10**	**VOC**	**SOx**
Certified EIR	280	840	1440	4660c	40
OCGP Site Grading	174	343	663	37	<1
Heritage Fields Site Grading	171	332	663	37	<1
Runway Demolition	66	165	76	17	<1
Total	411	839	1402	91	<1
SCAQMD Significance Threshold	550	100	150	75	150
Over (Under)	(139)	739	1252	16	(149)

Emission Totals, lbs./day [tons per day]					
Emissions Inventory	**CO**	**NOx**	**PM10**	**VOC**	**SOx**
Significant for OCGP	No	Yes	Yes	Yes	No
Significant for concurrent activities?	No	Yes	Yes	Yes	No
Source: PCR Services Corporation 2007.					

Among the various sources of a project's operational emissions, those attributable to mobile sources (i.e. vehicular traffic) comprise the largest proportion of emissions. Mobile source emissions are a function of both the number and trip length characteristics of vehicle trips directly and indirectly associated with the project under consideration. Operational emissions for project area and mobile sources were estimated at above the significance thresholds for ROG, NOX, CO, and PM10, and are described in the OCGP FEIR and Addenda as significant and unavoidable after mitigation. In addition, the OCGP FEIR included the results of the CO "hotspots" analysis, in which no intersections in the traffic study area were expected to result in one-hour or eight-hour CO concentrations above the state standard of 20 parts per million (ppm) for one-hour concentrations and 9 ppm for eight-hour concentrations.

No other construction- and operations-related significant air quality impacts were identified in the OCGP FEIR. As part of the certification of the OCGP FEIR, Findings of Fact and a Statement of Overriding Considerations were adopted for environmental effects, including air quality that could not be mitigated below the thresholds of significance.

4.3.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

Regional Construction Impacts

The OCGP Master Plan is comprised of approximately 1,145.3 acres, of which approximately 245.4 acres are the "Western Sector Park Development Plan" and is located in the southwestern portion of the OCGP Master Plan. The Project components within the site have been modified for the OCGP Master Plan. However, the overall square footage of the buildings within the OCGP Master Plan remains the same since the size of the three Civic/Museums within the OCGP Master Plan have been reduced to accommodate the additional square footages of the new buildings within the Western Sector Park Development Plan.

Construction activities associated with the proposed Project would have a short-term impact on air quality. The analytical assumptions concerning construction, development phasing, and operations of the adopted OCGP Master Plan remain consistent with all prior assumptions, since there is no change in overall square footage or development within the Project area.

Consequently, the Project would not increase the maximum daily air pollutant emissions generated during construction and demolition activities. The OCGP FEIR concluded that air pollutant emissions associated with construction and demolition activities of the Overlay Plan were considered a significant and unavoidable impact. The construction air emissions associated with the Project are anticipated to be similar to those addressed in the OCGP FEIR, and therefore would not result in any new significant impacts.

Regional Operation Impacts

Operation of the Project would result in long-term regional emissions of ROG, NO_X, and PM_{10} associated with area sources, such as natural gas emissions, landscaping, applications of architectural coatings, in addition to operational vehicle-exhaust emissions. Regional area- and mobile-source emissions of ROG, NO_X, and PM_{10} were modeled using the URBEMIS 2007 Version 9.2.4 computer program. URBEMIS accounts for area-source emissions from the use of natural gas, wood stoves, fireplaces, landscape maintenance equipment, and consumer products. The model also considers mobile source emissions associated with vehicle trip generation.

Regional area- and mobile-source emissions were modeled based on proposed land use types and sizes as indicated in the Project Description and the change in trip generation from the Orange County Great Park Trip Generation and Parking Demand Analysis (LSA, August 2011). According to the traffic data used to prepare this Addendum, full build-out of the Great Park Master Plan would result in a total of 13,537 vehicle trips on a typical weekday and 19,083 vehicle trips on the weekend. The reason that weekend conditions are not considered in the environmental analysis is that weekday capacities are based on a.m. and p.m. peak hour factors. These weekday a.m. and p.m. peak period factors are the result of a high percent of work trips that occur during these peak hours, coupled with low vehicle occupancy. This condition would be characteristic of the Great Park study area, where a significant number of weekday work trips travel to and from the various commercial office and industrial uses within the study area. The pronounced a.m. and p.m. peak hour conditions used to derive weekday daily capacities do not occur during the weekend.

Table 4.3-4. Summary of Modeled Long-Term Operational Emissions

Source	Emissions (lb/day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Approved Master Plan	151.10	72.62	664.39	225.89	43.87
Master Plan Minor Modifications	149.54	70.72	654.66	221.18	42.97
Net Change	(1.56)	(1.90)	(9.73)	(4.71)	(0.90)
Source: AECOM 2011					

As shown in Table 4.3-4, the modifications to the Master Plan would decrease the maximum daily air pollutant emissions generated during operational activities compared to the approved Master Plan. The OCGP FEIR concluded that air pollutant emissions associated with operational activities of the Overlay Plan were considered a significant and unavoidable impact. The operational air emissions associated with the Project are anticipated to be less than those addressed in the OCGP FEIR, and therefore would not adversely contribute to the impacts otherwise caused by the project analyzed in the OCGP FEIR.

Consistency Determination with the Air Quality Management Plan

The OCGP FEIR included a consistency evaluation with the SCAQMD's Air Quality Management Plan (AQMP). The consistency evaluation concluded development of the adopted Overlay Plan would have a negligible impact on the overall air quality within the South Coast Air Basin. The Project would not result in new activities or new land uses that would change the consistency evaluation in the OCGP FEIR.

Localized Construction Impacts

As stated previously, the Project would not increase the maximum daily air pollutant emissions generated during construction activities. However, the OCGP FEIR identified significant localized air quality impacts based on the extent and schedule of construction activities, primarily from particulate matter (PM_{10} and $PM_{2.5}$) emissions associated with fugitive dust. The OCGP FEIR concluded that air pollutant emissions were considered a significant unavoidable adverse impact. The construction air emissions associated with the Project are anticipated to be less than those addressed in the OCGP FEIR, and therefore would not adversely contribute to the impacts otherwise caused by the project analyzed in the OCGP FEIR.

Localized Operational Impacts

The OCGP FEIR did not identify significant localized air quality impacts for either mobile sources or stationary sources. Because the Project would not result in an increase of the number of units or permitted square footage of buildings on-site, the Project would not increase the concentrations of stationary-source air pollutant emissions generated during operational activities.

Odors

The OCGP FEIR identified that development of Planning Areas 30 and 51 would not handle large amounts of solid waste, chemicals associated with heavy industry, or other uses that would generate objectionable odors and that no significant odor impacts would occur. The Project would not result in new activities or new land uses that would change the odor evaluation in the OCGP FEIR and Addenda.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was approved, augmented, and/or updated, indicating that the Project would have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, that was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that; 1) mitigation measures or alternatives previously found not to be feasible would

in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the Project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the Project or additional mitigation measures that would substantially reduce one or more of the significant air quality effects identified in and considered by the certified OCGP FEIR.

4.3.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified mitigation measures AQ1 through AQ5, which reduce the air quality effects of construction and operations of development under the adopted Plan. However, as noted above, the OCGP FEIR found that short-term and long-term air quality impacts would remain significant and unavoidable. The measures are applicable to future development under the Project. However, the mitigation measures were modified in the SEIR to to account for the latest improvements in emission control technologies and updated SCAQMD recommendations for reducing air pollutant emissions.

AQ1 Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.

AQ2 Prior to the commencement of construction activities required to demolish and/or remove existing DON structure, including, runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize off-road construction equipment that conforms to Tier 3 of the United States Environmental Protection Agency, or higher emissions standards for construction equipment over 50 horsepower that are commercially available. The construction contractor shall be made aware of this requirement prior to the start of construction activities. Use of commercially available Tier 3 or higher off-road equipment, which is:
    - Year 2006 or newer construction equipment for engines rated equal to 175 horsepower (hp and greater;
    - Year 2007 and newer construction equipment for engines rated equal to 100 hp but less than 175 hp; and
    - Year 2008 and newer construction equipment for engines rated equal to or greater than 50 hp but less than 100 hp.

The use of such equipment shall be stated on all grading plans. The construction contractor shall maintain a list of all operating equipment in use on the project site. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site.

- Water exposed soils at least three times daily and maintain equipment and vehicle engines in good condition and in proper tune.
- Wash off trucks leaving the site.
- Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
- Reduce speeds on unpaved roads to less than 15 miles per hour.
- Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Prohibit nonessential idling of construction equipment to five minutes or less in compliance with California Air Resources Board's Rule 2449.
- Sweep streets with SCAQMD Rule 1186 compliant PM_{10}-efficient vacuum units at the end of the day if substantial visible soil material is carried over to the adjacent streets.
- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Use of low-VOC asphalt.
- Maintain a minimum 24-inch freeboard on trucks hauling dirt, sand, soil, or other loose materials and tarp materials with a fabric cover or other suitable means. Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.
- Use coatings and solvents with a volatile organic compound (VOC) content lower than required under SCAQMD Rule 1113 (i.e., Super Compliant Paints). All architectural coatings shall be applied either by (1) using a high-volume, low-pressure spray method operated at an air pressure between 0.1 and 10 pounds per square inch gauge to achieve a 65 percent application efficiency; or (2) manual application using a paintbrush, hand-roller, trowel, spatula, dauber, rag, or sponge, to achieve a 100 percent applicant efficiency. The construction contractor shall also use precoated/natural colored building, where feasible. Use of low-VOC paints and spray method shall be included as a note on architectural building plans.

AQ3 Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.
- Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.
- Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
- Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.
- Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
- Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
- Centralize space heating and cooling for multiple-family dwelling units and commercial space.
- Orient buildings north/south for reducing energy-related combustion emissions.
- Use solar energy, when feasible.
- Use high rating insulation in walls and ceilings.

AQ4 Prior to the issuance of building permits, future sales information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.

AQ5 Prior to the issuance of building permits, the applicant shall demonstrate to the satisfaction of the Director of Community Development that future employment generating non-residential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.

4.4 BIOLOGICAL RESOURCES

4.4.1 Environmental Setting

The OCGP FEIR describes the biological resources within Planning Areas 30 and 51, including a 995-acre parcel of land in the easternmost portion of Planning Area 51 retained in federal ownership and designated as both "habitat reserve" and a part of the Orange County Central-Coastal Sub-region Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). The areas outside the habitat reserve were described as: 1) providing minimal native or undisturbed habitat, and, 2) consisting of agricultural, ornamental, and domestic landscapes.

The OCGP FEIR identifies nine vegetative communities within the project site, including Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and predominately disturbed or developed areas. Several sensitive plant species and a large number of mature trees also were identified as potentially occurring within the project site. The sensitive plant species potentially occurring in Planning Areas 30 and 51 include the southern tarplant, Palmer's grappling hook, many-stemmed dudleya, Coulter's Matilija poppy, Catalina mariposa lily, and intermediate

mariposa lily. The OCGP FEIR also notes the Coulter's saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis's evening-primrose as having a moderate potential for occurrence. Species with a low potential for occurrence include the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leafed pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress, and salt spring checkerbloom.

The OCGP FEIR documents an observation made of one sensitive wildlife species, a burrowing owl. This individual, observed during the protocol focus studies for a nearby development proposal, was outside the habitat reserve at the southwest end of Planning Areas 30 and 51 along Serrano Creek. Forty other sensitive wildlife species or species of local concern were identified as having a potential to occur on the site.

The OCGP FEIR also describes the Wildlife Corridor Concept Plan that would be incorporated into the eastern portion of the project site (Refer to pp. 5.9-9 through 5.9-14 of the OCGP FEIR) and explains the guidelines pursuant to which the ultimate corridor will be designed and constructed. The subject guidelines are primarily concerned with the creation and re-vegetation of wildlife habitats that would flourish in the proposed areas and serve as protective cover for target wildlife species that will presumably utilize the proposed corridor. A preliminary design concept for the creation and/or re-vegetation of the proposed route has also been prepared which is consistent with the guidelines described below (Draft Irvine Wildlife Corridor Master Plan, November 2002).The draft recommends a series of actions to improve the environmental quality for wildlife:

- Creation (establishes historical ecosystems on lands that did not previously support that ecosystem or on severely altered sites)
- Revegetation
- Reduce the amount of noise pollution and urban influence.
- Remove and restore the unnecessary developed (paved) areas within the corridor right-of-way.
- Create a protective habitat along the entire length of the corridor.
- Apply minimum height/width requirements based on the specific wildlife species.

OCGP FEIR Mitigation Measure BIO3, which continues to apply to this Addendum, ensures that the City of Irvine will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the project area. The City has already engaged in this process as is demonstrated through the preparation of the Irvine Wildlife Corridor Master Plan, which is independent of this project.

4.4.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR concludes that implementation of the overall project could result in the occurrence of the following potentially significant effects:

- The southern tarplant, a federal species of concern, might be adversely affected by the overall OCGP Master Plan project development.

- Although very limited in aerial extent and highly disturbed, isolated riparian habitat remnants that could be adversely impacted by the OCGP Master Plan project implementation.

The Project site contains a large number of trees, many of them mature, representing a wide range of species. The OCGP project implementation may result in damage and destruction to the trees. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance could occur.

4.4.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project encompasses the same land area proposed for park development as depicted in the OCGP FEIR. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its current minor modification and the Park Design Review associated with the "Western Sector Park Development Plan", the subject of this Addendum, on biological resources.

OCGP FEIR Mitigation Measure (MM) BIO1 stated that prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. MM BIO1 also stated that prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement or, if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). Mitigation Measure BIO1 would continue to apply to this proposed Project (see Mitigation Measure BIO1, below).

The OCGP FEIR also stated that prior to approval of a subdivision map for each project area, a jurisdictional wetland delineation shall be performed for all areas within the Master Plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a Wetland Mitigation Plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). For wetlands impacted on-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation is deemed acceptable by the appropriate jurisdictional agencies. Accordingly, Mitigation Measure BIO2 below would also continue to apply to the proposed Project.

The OCGP FEIR required that several focus surveys be conducted on Planning Areas 30 and 51 for sensitive plant and wildlife species prior to development. PCR Services prepared a *Biological Resources Assessment for Lennar Heritage Fields, Orange County, California* in November of 2005 and an updated assessment was prepared in June of 2006. [2] This biological resources assessment complies with mitigation measures BIO1, requiring a focus survey for the southern tarplant, mountain plover, and burrowing owl, and BIO2 requiring a wetlands delineation to be prepared for all areas within the Master Plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The subject study

[2] This report is available for review at the City of Irvine.

and each of its constituent focused technical studies cover a land area of approximately 3,700 acres and includes the OCGP Master Plan.

Jurisdictional Wetlands and "Waters of the U.S."

A Jurisdictional Delineation for the site has been performed (*Investigation of Jurisdictional Wetlands and Waters of the U.S. Lennar Heritage Fields.* June 2006 PCR). The property supports six intermittent drainage systems and a variety of associated ephemeral tributaries. Five of the drainages have their headwaters in undeveloped areas of the Lomas de Santiago Foothills to the north. San Diego Creek originates in an eastern portion of the watershed that is occupied by substantial residential and commercial development. Disturbances such as channelization of large stretches of the drainages and dumping of debris and trash into portions of drainages have significantly altered several waterways and obscured many drainage features. Other disturbances on site include vegetation clearing to create roads and structures, agricultural runoff, and invasion by exotic species. Current and historic land uses associated with the establishment of MCAS El Toro (military structures, roads, agriculture, and residential development) have significantly changed the overall drainage patterns within the San Diego watershed. The cumulative impact to each wash or creek has resulted in habitat and water quality impairment within the San Diego Creek watershed.

These impacts include increased sediment and debris transport due to concrete-lined stream channels, increased flow velocities and scouring, increased bank erosion, increases in the presence of non-native plant species, and an overall reduction in the amount and the quality of the riparian habitat within the watershed. Alternatively, the disturbances have increased the amount of jurisdictional areas due to the creation of freshwater marsh habitat resulting from impoundment of storm water runoff within and adjacent to drainages. In total, the site contains 31,102.11 linear feet of jurisdictional streambed that includes 22.02 acres of U.S. Army Corps of Engineers (USACE) jurisdictional "Waters of the U.S.," and, of which, 1.66-acres meet the three parameter definition of a jurisdictional wetland. CDFG jurisdictional streambed and associated riparian habitat total 38.61 acres.

Sensitive Biological Resources

There are numerous plant and wildlife species present, or potentially present within the study area that have received special recognition by federal, State, or local resource conservation agencies and organizations. Their status is principally due to the species decline or limited population size, usually resulting from habitat loss. Protected sensitive species are those species identified by either State or federal resource management agencies, or both, as threatened or endangered under provisions of the California and Federal Endangered Species Acts, respectively.

Sensitive species that occur or could potentially occur within the study area are based on one or more of the following:

- The direct observation of the species within the study area during one of the biological surveys.
- A record reported in the California Natural Diversity Database (CNDDB).
- The study area is within a known distribution of a species and contains appropriate habitat.

Sensitive Plant Communities

The study area is dominated by highly disturbed habitat types and only small areas of native vegetation exist. A total of 9.7 acres of southern willow scrub occurs in scattered patches throughout the study area. Southern willow scrub is a high priority inventory community in the CNDDB. This community is considered sensitive because it has experienced a sharp decline in California and because it has the ability to support a number of sensitive bird species such as least Bell's vireo and southwestern willow flycatcher.

Sensitive Plant Species

Sensitive plants include those that are either candidates or are currently listed by the CDFG and USFWS and those that are considered sensitive by the California Native Plant Society (CNPS). Several sensitive plant species were reported in the CNDDB from the surrounding region. In accordance with the mitigation measures of the OCGP FEIR, focused surveys for southern tarplant were conducted on June 3 and June 8, 2005. No species were found. The highly disturbed character of the site and reduced presence of habitat capable of supporting sensitive plant species make it highly unlikely that any listed plant species will occur on the site.

Sensitive Wildlife Species

Forty-nine sensitive wildlife species were reported in the CNDDB as occurring with the USGS 7.5-minute El Toro quadrangle map and the eight surrounding maps. Habitat suitability assessments for these species were conducted concurrently with the site investigation throughout the 2005 fieldwork. The intent of the habitat assessment was to evaluate habitat for its ability to support sensitive species and ascertain which sensitive species are likely to be present within the study area based on expected habitat use, geographic range, and information collected in the vicinity of the study area.

The OCGP Master Plan is not within a proposed or listed critical habitat area. Six sensitive wildlife species were observed within the study area during initial field investigations: northern harrier (*Circus cyaneus*), merlin (*Falco columbarius*), Cooper's hawk (*Accipiter cooperii*), California horned lark (*Eremophilia alpertris actia*), cactus wren (*Campylorhynchus brunneicapillus*), and loggerhead shrike (*Lanius ludovicianus*). Three of these species (northern harrier, merlin, and Cooper's hawk) were also observed during wintering bird surveys. In addition, the golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), and ferruginous hawk (*Buteo regalis*) were observed utilizing the site during these subsequent wintering bird surveys. Surveys for mountain plover (*Charadrius montanus*), in accordance with the OCGP FEIR mitigation measures, were conducted during the wintering bird surveys as a part of Addendum No. 3. No they were observed on site during those field investigations.

In a follow-up report [3]on wintering birds dated October 30, 2006 with surveys conducted between October 2005 and March 2006, PCR Services searched the site for activity. No burrowing owls were observed until February 2006. Although the project site is open, its vegetation becomes dense and over two feet tall in most areas. A single owl occupied a burrow during the late winter but abandoned the area as the vegetation surrounding the burrow became three feet high and very dense. There was no indication that

[3] This report is available for review at the City of Irvine.

breeding activity had been initiated. Because the habitat became unsuitable as a natural result of not being mowed, PCR Services determined that no mitigation would be required.

Summary of the Biological Status of the Site

The OCGP FEIR required that focus surveys be conducted on the project site for several sensitive plant and wildlife species prior to development. The required surveys were carried out during 2005 and 2006. No species of endangered plants or wildlife were recorded on site during these investigations, conducted by PCR Services. The sensitive plant community of willow scrub extant on site is heavily disturbed and fragmented. As such, PCR Services did not recommend attempting to preserve any of the remnant stands or streambeds as they currently exist. It was also determined that the presence of several sensitive species would be addressed through mitigation designed to avoid disturbance of nesting avian species. PCR Services' findings did not indicate a need to consult formally with the USFWS.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OGCP FEIR was approved, augmented, and/or updated, indicating that the Project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the certified OCGP FEIR.

4.4.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

Mitigation measures BIO1 through BIO4 will be implemented in conjunction with master plan review and subsequent development permits.

BIO1 Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).

BIO2 Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation as deemed acceptable by the appropriate jurisdictional agencies.

BIO3 The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g., hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the Final FEIR.

BIO4 Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Sections 5-7-401 et al.) and the UFO shall apply to all trees included in this inventory.

4.5 CULTURAL RESOURCES

4.5.1 Environmental Setting

Archaeological and Historical Resources

This discussion of cultural resources includes archaeological and historical resources. The OCGP FEIR presented information pertaining to the regional setting of former MCAS El Toro from both a prehistoric and historic perspective. The OCGP FEIR reported the presence of ten prehistoric archaeological sites and eight isolated prehistoric artifacts that have been recorded in the northeastern habitat preserve portions of PA 51. These sites are generally on the ridges between Borrego Canyon Wash and the Agua Chinon Wash.

The former MCAS El Toro was surveyed to determine whether any of the structures would be eligible for the National Register. Generally, a structure that has achieved significance in the past 50 years is not considered eligible for the National Register unless it is of exceptional importance. The evaluation was expanded to include eligibility under the Legacy Cold War Project (Public Law No.1 01-511, Section 8120). Portions of Pas 30 and 51 (the former MCAS El Toro) were established during WWII, and no structure earlier than this period is at the former MCAS El Toro. Therefore, the historical significance of any structures at the former military base would be as part of the Cold War Legacy. Surveys conducted by the US Army Corps of Engineers and the Department of the Navy in conjunction with the base's closure concluded there were no structures eligible for designation as Cold War Legacy or for inclusion in the National Register of Historic Places.

Paleontological Resources

The OCGP FEIR reported that a majority of Planning Areas 30 and 51 is on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs immediately underlies the majority of the project area, including the part occupying the coastal plain and washes in the eastern portion of PA 51. The Pleistocene Alluvium formation is widespread and believed to extend to depths of 1,000 feet in PA 30. A significant deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin four miles from PA 30; thus, it is possible that similar beds underlie PA 30 (OCGP FEIR 5.10-2).

The eastern portion of PA 51 is in the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of PA 51 are composed of older, underlying marine and non marine rock units of early Oligocene to late Pleistocene (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Non marine Terrace Deposits. Non marine Terrace Deposits also underlie the terraces at the south corner of PA 51.

The northwestern corner of PA 51 contains a small portion of the Santa Ana Mountains foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous (135 million years ago) Marine Williams Formation. The rock units underlying portions of PA 51 have previously yielded important fossil remains at recorded fossil sites on and near the site. There

are three recorded fossil sites in PA 51. These sites occur in undifferentiated Sespe and Vaqueros Formations and in the Topanga Formation. Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals. The three recorded fossil sites lie within the proposed habitat preserve portion of PA 51.

4.5.2 Impacts Identified in the OCGP FEIR and Addenda

Archaeological and Historical Resources

The OCGP FEIR determined that development according to the adopted Overlay Plan would not cause a substantial adverse change in the significance of any historical structure. The consequence of grading activities associated with future development, however, could potentially result in a substantial adverse change in the significance of an archaeological resource. The OCGP FEIR also stated that grading activities could uncover previously unknown human remains, including those interred outside formal cemeteries.

Although the entire project area was the subject of previous cultural resources investigations as part of the Base Realignment and Closure process, it was later determined that an updated survey and report was necessary to supplement the previous work. PCR Services performed an additional Phase I and II cultural resources investigation, the results of which can be found in the *Cultural Resources Update and Review, Heritage Fields/The Great Park, City of Irvine, Orange County, California* report dated September 2006.

Paleontological Resources

The OCGP FEIR stated that earthmoving operations associated with grading and trenching have the greatest potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeastern, northwestern, and southern portions of Planning Area 51. The OCGP FEIR considered the potential impact associated with earthmoving operations as a significant impact for which mitigation was necessary.

4.5.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project encompasses the same land area proposed for park development as depicted in the OCGP FEIR. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its current minor modification and the Park Design Review associated with the “Western Sector Park Development Plan”, the subject of this Addendum, on cultural resources.

Archaeological and Historical Resources

The OCGP Master Plan and the proposed minor modification and the Park Design Review associated with the “Western Sector Park Development Plan” reflect a development program that is consistent with the General Plan Land Use and Zoning designations for Planning Area 51. Further, the extent of earth movement activities required to facilitate development of the Great Park, as depicted in the OCGP Master Plan, is projected to be essentially the same as that assessed and presented in the OCGP FEIR. Given

the foregoing, the discussion of impacts on archaeological and historical resources attributable to the Great Park portion of the overall OCGP project disclosed in the OCGP FEIR remains valid.

As with the project's component of the Revised Overlay Plan in the OCGP FEIR, the OCGP Master Plan as currently proposed would still not cause a substantial adverse change in the significance of any historical structure, but grading associated with future development could still potentially result in a substantial adverse change in the significance of an archaeological resource, or uncover previously unknown human remains. As such, the cultural resources mitigation measures developed for the OCGP FEIR remains applicable to, and sufficient to mitigate impacts of, future development pursuant to the OCGP Master Plan.

Paleontological Resources

The OCGP Master Plan and the proposed minor modification and the Park Design Review associated with the "Western Sector Park Development Plan" reflect a development program that is consistent with the General Plan Land Use and Zoning designations for Planning Area 51. Further, the extent of earth movement activities required to facilitate development of the Great Park, as depicted in the OCGP Master Plan is projected to be essentially the same as that assessed and presented in the OCGP FEIR. Given the foregoing, the discussion of potential impacts on paleontological resources attributable to the Great Park portion of the overall OCGP Project disclosed in the OCGP FEIR remains valid. As such, the paleontological mitigation measure developed for the OCGP FEIR remains applicable to, and sufficient to mitigate impacts of, future development pursuant to the OCGP Master Plan.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan , will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OGCP FEIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved,

augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the certified OCGP FEIR.

4.5.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

Cultural Resources

The OCGP FEIR identified mitigation measures CULT1 through CULT4 which, if fulfilled, would reduce the effects of development under the adopted Plan to a level less than significant.

CULT1 Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

CULT2 Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure CULT1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.

CULT3 Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.

CULT4 Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery of recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner must be contacted to determine that no investigation of the cause of death is required, and

If the coroner determines the remains to be Native American:

- The coroner shall contact the Native American Heritage Commission within 24 hours.
- The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
- The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for the means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
- Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

    - The Native American heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
    - The descendant identified fails to make a recommendation; or
    - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage commission fails to provide measures acceptable to the landowner.

Compliance with this measure shall be verified by the Community Development Department.

Paleontological Resources

The OCGP FEIR identified mitigation measure P1, which, if fulfilled, would reduce the effects of development under the adopted Overlay Plan to a level less than significant.

P1 Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval.

These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screening-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

4.6 GEOLOGY AND SOILS

4.6.1 Environmental Setting

The OCGP FEIR describes the topography of the OCGP as nearly flat and gently sloping down to the west to southwest with elevations ranging from 450 feet above mean sea level (msl) to 200 feet above msl. The Project is located in Planning Area 51 (PA 51), which includes some slopes of the Santa Ana foothills which reach elevations of 750 feet above msl. Alluvial soils of six major soil associations consisting predominantly of varying sands, silts, and clayey silty sands are present within PA 51. The foothill portions of the Project area are underlain by sedimentary bedrock units, mantled by only a thin soil cover.

The OCGP FEIR identified the primary potential seismic hazard in the area as ground motion. Seismic Response Area (SRA) designations are used by the City to assess the geologic and seismic risk associated with potential development. A majority of PA 51 is within SRA-2 (denser soils/deeper groundwater) and is considered suitable for development.

No known active faults crossing or projecting into the Project area were identified; however, the Project site is within the seismically active southern California region and two active faults, Whittier-Elsinore Fault and Newport-Inglewood Fault, are located within 14 miles of the site.

4.6.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR disclosed the potential for future development of the OCGP area to result in the exposure of people or structures to strong ground shaking in the event of a major earthquake along anyone of the active faults in the region. The OCGP FEIR noted that new construction would be required to adhere to current seismic safety building codes which address seismic concerns. Existing buildings within current PA 51 do not meet current seismic codes; therefore, the temporary or permanent reuse of the existing buildings and the associated exposure of people or structures to potential substantial adverse effects due to strong seismic-related ground shaking were considered significant impacts.

Because of the documented landslides in the northeastern Santa Ana foothills area of the Site, the OCGP FEIR analysis concluded that the OCGP project would result in a significant impact associated with landslides in the affected area of Planning Area 51 east of Irvine Boulevard, where future development of habitable structures could occur under the adopted Overlay Plan. The OCGP FEIR also concluded future development has the potential to result in soil erosion or the loss of topsoils and risk to life and property with the presence of expansive soils, and that these impacts are considered significant.

4.6.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project includes the same land uses and development areas as the adopted Overlay Plan and does not provide additional development intensity. Impacts related to seismic hazards, landslides, expansive soils, and loss of topsoil or soil erosion are not intensified by the Project; therefore the conclusions drawn in the OCGP FEIR adequately describe the environmental effects of the Project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the Project or additional mitigation measures that would substantially reduce one or more of the significant geological effects identified in and considered by the approved OCGP FEIR.

4.6.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified four mitigation measures (GS1 through GS4) to reduce the effects of the adopted Overlay Plan on soils, geologic hazards and seismic safety.

GS1 Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.

GS2 Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.

1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:

    a. Further evaluate the subsurface conditions in the area of the proposed structures.
    b. Provide specific data on potential geologic and geotechnical hazards.
    c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

    From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural section, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

    - Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
    - Erosion or Loss of Topsoil - Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.
    - Where Expansive Soils Exist - Measures for the design of foundation, slabs, flatwork and other improvements subject to drainage from expansive soils.

    Compliance with this measure shall be verified by the Community Development Department.

GS3 Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic

evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.

GS4 Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

4.7 GREENHOUSE GAS EMISSIONS

Please see Section 3.4 for an explanation of GHG topic.

4.8 HAZARDS AND HAZARDOUS MATERIALS

4.8.1 Environmental Setting

Hazardous Materials and Hazardous Wastes

The OCGP FEIR discussed an environmental baseline survey (EBS) that was conducted for the project area. Information was used from the Base Realignment and Closure Business Plan for Marine Corps Air Station (MCAS) El Toro dated May 2002; the EBS dated 1995; and an update to the EBS-April 2003 Draft Final EBS. The 2003 EBS identified "76 potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required" (Refer to OCGP FEIR p.5.5-5).

Regarding the Installation Restoration Program (IRP), the OCGP FEIR summarized the status of each IRP site based on the information available at the time the EIR was prepared. Ten IRP sites were identified as requiring "No Further Action," including sites 4, 6, 7, 9, 10, 13, 14, 15, 19, 20, 21, 22 and 25. The IRP sites identified as "Action Required" included sites 1, 2, 3, anomaly 3, 5, 8, 11, 12, 16, 17, 18 (plume), and 24 (Refer to OCGP FEIR pp. 5.5-6 through 5.5-9).

Of the 404 underground storage tanks (USTs) identified, 357 had been remediated and received findings of "no further action" at the time the OCGP FEIR was prepared. Of the 39 aboveground storage tanks (ASTs) on the property, 36 had been remediated and received findings of "no further action".

Evaluation and remediation of previously identified IRP sites within the project site continues with the resulting changes in the condition of the property largely anticipated in the OCGP FEIR. Subsequent to certification of the OCGP FEIR, the DON completed environmental related findings that support the suitability to transfer (FOST) real property made available through the Base Realignment and Closure

process and to support of the lease of areas not yet suitable for transfer.[4] Please see Figure 4.8-1 for Installation Restoration Program (IRP) Locations.

The areas suitable for lease encompass locations of concern identified in the 1995 and 2003 EBS, and in the OCGP FEIR, where future evaluation and/or actions are ongoing or required. These areas were identified as "carve-outs" in the DON documentation.[5]

Progress relative to conveyance of the carve-outs includes DON transfer of approximately eight acres of the project site to Heritage Fields and the Great Park Corporation on March 22, 2006. At the time of the initial land sale, these properties (carve-outs) were retained by the DON in order to complete environmental cleanup, and have since been approved by the regulatory agencies for transfer (FOST #2). The following sites were included in this transfer:

- **Carve-out parcel III-J** consists of approximately 0.2 acre in the central portion of former MCAS El Toro. It contains one building-Building No. 860-and 1 location of concern.
- **Carve-out parcel III-Q (portion)** consists of approximately 5 acres in the eastern portion of the former MCAS El Toro. It is an abandoned jet fuel (JP-5) pipeline.
- **Carve-out parcel III-S** consists of approximately 1 .3 acres in the southeastern portion of former MCAS El Toro. It contains 6 buildings (347, 377, 447, 448, 566, and 726) and 13 locations of concern.
- **Carve-out parcel III-T** consists of approximately 0.5 acre in the southeastern portion of former MCAS El Toro. It contains 1 building-Building No. 761-and 4 locations of concern. The facility was a former aircraft wash rack.
- **Carve-out parcel III-C** consists of approximately 1 acre in the western portion of the former MCAS El Toro. It contains 1 building-Building No. 240-and 7 locations of concern. This site was a former ordnance storage facility.

Emergency Plans

The OCGP FEIR described the former MCAS El Toro site (Planning Areas 30 and 51) as a potential emergency response staging area because of its capacity for processing and storing large quantities of cargo. The Orange County Emergency Plan, which incorporates the statewide standardized emergency management system (SEMS), guides multijurisdictional response to emergency conditions. No substantial change to the description of the setting regarding emergency plans has occurred that would alter the analysis and conclusions of the OCGP FEIR on emergency plans and response.

[4] U.S. Department of the Navy, 2004. *Final Finding of Suitability to Transfer, Parcel IV and Portions of Parcels I, II, and III, Former Marine Corps Air Station, El Taro, California, July 2004; Final Finding of Suitability to Lease for Carve-outs Within Parcels I, II, and III, Former Marine Corps Air Station, El Taro, California,* July 2004.

[5] U.S. Department of the Navy, *2004a. Final Finding of Suitability to Lease for Carve-outs within Parcels I, II, and III, Former Marine Corps Air Station, El Taro, California,* July 2004.

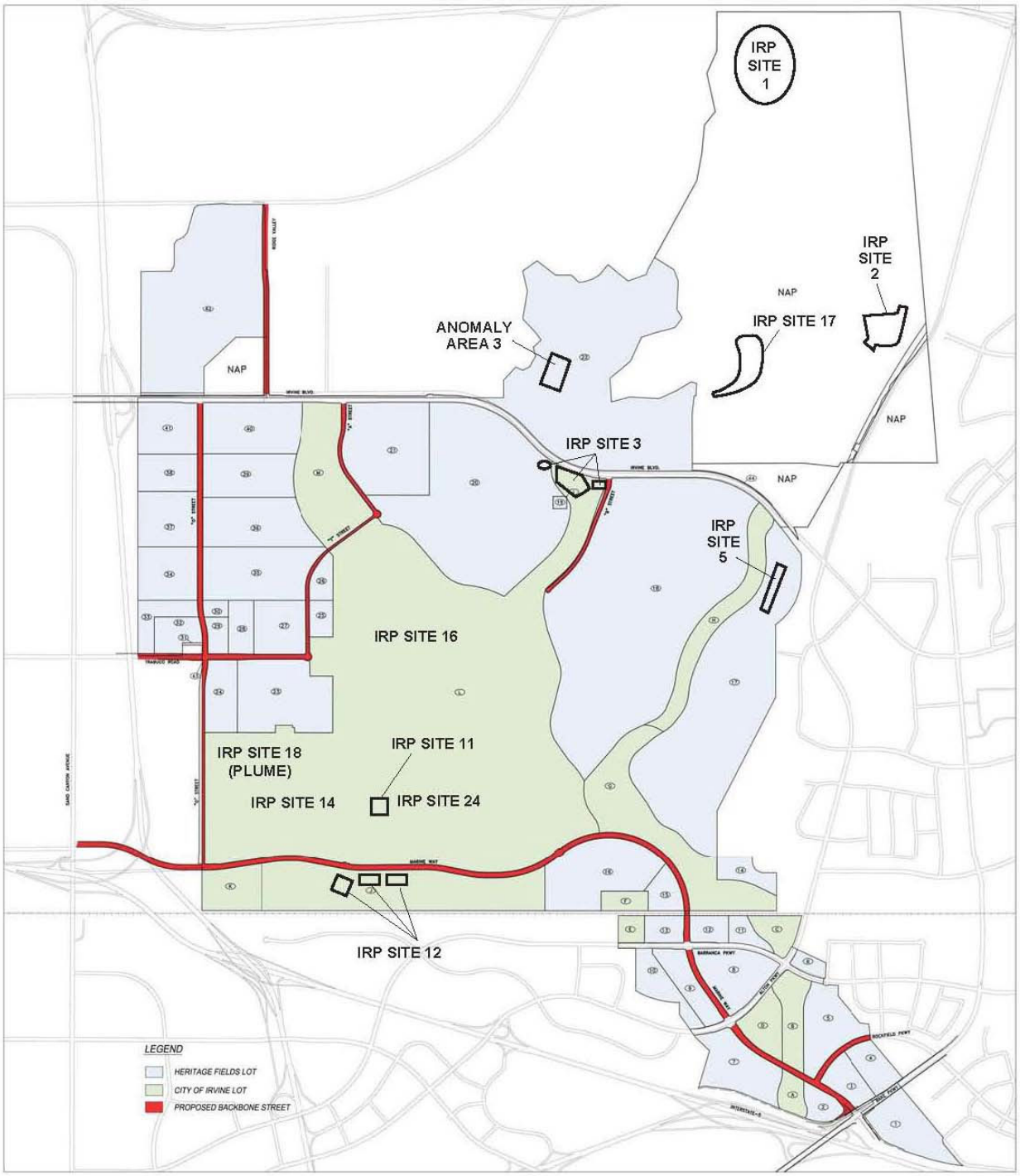

Figure 4.8-1
Installation Restoration Program (IRP) Locations
(Figure 4-2 in OCGP FEIR, Addendum No.4)

Wild Land Fires

The OCGP FEIR identified high fire hazard areas within open space, undeveloped land northeast of and adjacent to Planning Area 51. The City has no construction records of existing buildings and structures on the property. No substantial change to the description of the setting relative to wild land fires has occurred that would alter the analysis and conclusions of the OCGP FEIR regarding wild land fires.

4.8.2 Impacts Identified in the OCGP FEIR and Addenda

Hazardous Materials and Wastes

The OCGP FEIR identified no significant impacts associated with the No Further Action IRP sites, which are listed in Table 4.8-1. Table 4.8-2 identifies each Action Required IRP site and its location relative to the adopted Overlay Plan. The OCGP FEIR disclosed the following environmental consequences of the adopted Overlay Plan as significant impacts:

- Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing asbestos-containing building materials (ACM) and lead-based paint.
- IRP site 24 is located in the 6.1 Institutional and 1.9 Orange County Great Park zoning districts. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.
- Future uses of IRP site 3 may be potentially constrained by the implementation of institutional controls.
- IRP site 16 (Crash Crew Pit No.2) is located in the 1.9 Orange County Great Park zoning district. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses.

Table 4.8-1. No Further Action IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
4	Ferrocene Spill Area	8.1 Trails and Transit Oriented District
6	Drop Tank Drainage Area No. 1	8.1 Trails and Transit Oriented District
9	Crash Crew Pit No. 1	1.9 Orange County Great Park
10	Petroleum Disposal Area	1.9 Orange County Great Park
13	Oil Change Area	1.9 Orange County Great Park
15	Suspended Fuel Tanks	1.9 Orange County Great Park
19	Air Craft Expeditionary Refueling	8.1 Trails and Transit Oriented District
20	Hobby Shop	8.1 Trails and Transit Oriented District
21	Materials Management Group	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.9 Orange County Great Park

Source: OCGP FEIR, Table 5.5-3, p. 5.5-21; SEMA Associates (June 7, 2006) (rev June 2008).

Table 4.8-2. Action Required IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
1	EOD Range	1.4 Preservation
2	Magazine Road Landfill	1.4 Preservation
3	Original Landfill	8.1 Trails and Transit Oriented District
5	Perimeter Road Landfill	1.9 Orange County Great Park
7	Drop Tank Drainage Area No. 2	1.9 Orange County Great Park
8	DRMO Storage Yard	6.1 Institutional/ 3.2 Transit Oriented Development
11	Transformer Storage Area	1.9 Orange County Great Park
12	Sludge Drying Beds	6.1 Institutional
14	Battery Acid Disposal Area	1.9 Orange County Great Park
16	Crash Crew Pit No. 2	1.9 Orange County Great Park
17	Communications Station Landfill	1.4 Preservation
24	VOC Source Area	6.1 Institutional/ 1.9 Orange County Great Park/ 3.2 Transit Oriented Development

Source: OCGP FEIR, Table 5.5-4, p. 5.5-22; SEMA Associates (June 7, 2006) (rev June 2008).

Emergency Plans

The OCGP FEIR determined the Overlay Plan would not be expected to interfere with emergency response and evacuation plans on the basis that other sites within Orange County are already designated as emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the OCGP FEIR concluded that the adopted Overlay Plan would not result in a significant impact related to emergency response and evacuation plans.

Wild Land Fires

The OCGP FEIR concluded that the Habitat Reserve, Wildlife Corridor, and Recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildland fires under the adopted Overlay Plan, and that reuse of existing buildings require inspection for conformance to fire life safety code requirements. The OCGP FEIR identified the wild land fire impacts as potentially significant.

4.8.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project encompasses the same land area proposed for park development as depicted in the OCGP FEIR. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its current minor modification and the Park Design Review associated with the “Western Sector Park Development Plan”, the subject of this Addendum, on hazardous materials and wastes.

Hazardous Materials and Wastes

In July 2004, two reports were completed under the auspices of the DON for the property. The Finding of Suitability to Transfer (FOST) documented the environmental condition of the property and the appropriateness of its conveyance. The FOST concluded that 2,798 acres are suitable for transfer by deed for residential purposes and that the parcels can be used with acceptable risk to human health and the environment, and without interference with the environmental restoration process. The companion report, the Finding of Suitability for Lease (FOSL) documents the suitability for lease of 41 carve-out areas totaling approximately 921 acres (refer to the FOSL p. 2-2). The carve-outs are locations within the Property where the potential or known release or disposal of hazardous substances or petroleum products has occurred. Based on the information provided in the FOSL, carve-outs have been deemed suitable for lease subject to specified conditions, notifications, and restrictions set forth in the FOSL and the terms of the leases. Use of these sites has been determined by the DON to be appropriate, subject to use restrictions in the leases, with acceptable risk to human health and the environment and without interference with the environmental restoration process. Overall, the proposed Master Plan Minor Modification and the Park Design Review would not change the OCGP FEIR conclusions; with mitigation measures HH1, HH2, HH5, and HH6, the Project would result in less than significant impacts related to hazardous materials and wastes. No new or modified mitigations measures are required.

Emergency Plans

Like the Overlay Plan, the proposed implementation of the OCGP Master Plan would not be expected to interfere with emergency response and evacuation plans on the base since other sites within Orange County are already designated emergency staging areas and portions of the OCGP would remain available to emergency response equipment. Accordingly, the proposed OCGP Master Plan Minor Modification and the Park Design Review would not change the OCGP FEIR conclusions; the Project would not result in a significant impact related to emergency response and evacuation plans.

Wild Land Fires

Under the OCGP Master Plan the Habitat Reserve, Wildlife Corridor, and recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildland fires and would require inspection for conformance to fire life safety code requirements.

As the potential significant wildland fire impacts of the OCGP Master Plan are similar to those disclosed in the OCGP FEIR, the OCGP Master Plan Minor Modification and the Park Design Review would not substantially change the findings and conclusions of the OCGP FEIR regarding wild land fires.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan , will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OGCP FEIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the certified OCGP FEIR.

4.8.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified six mitigation measures to reduce the effects of the adopted Overlay Plan on public health and safety-specifically, environmental effects associated with hazardous materials and waste, emergency response, and wild land fires-to a level less than significant. However, the mitigation measures were modified and new measures were adopted in the SEIR. An explanation for the new mitigation measures is set forth below.

The certified OCGP FEIR's Mitigation Measure HH1 was updated because much of the abatement it required has been completed. In addition, many of its requirements are triggered upon the transfer of the property from the Navy to the City of Irvine, and that transfer has already occurred for a substantial portion of the property associated with the Modified Project. The new Mitigation Measure HH1 is provided below:

HH1 For any remaining structures known to contain asbestos-containing materials ("ACMs") that will be renovated and/or demolished, Heritage Fields shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.

Prior to occupancy, renovation or demolition of any remaining structures constructed before October 1988, and in which the presence of ACMs is unknown, an asbestos survey shall be

conducted by Heritage Fields. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building materials, and to the best of their knowledge, no ACMs were used as a building materials, if the asbestos survey identifies ACMs, the applicant shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.

Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.

Any renovation and/or lead-based paint ("LBP") abatement activities on residential units at former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements.

The certified OCGP FEIR's Mitigation Measure HH2 required updating because its requirements were triggered upon the transfer of the property from the Navy to the City of Irvine, and that transfer has already occurred for a substantial portion of the property associated with the Modified Project. In addition, since the certified OCGP FEIR was prepared, FOSTs 4, 5 and 6 have been issued and each of them specifies in detail the nature of the restrictions and institutional controls that must be implemented. The new Mitigation Measure HH2 is provided below:

HH2 The portions of the Proposed Project Site located on the active Installation Restoration Program ("IRP") Sites listed in Table 4.8-2, *Action Required IRP Sites and Zoning – Modified Project*, of the DSEIR for the Modified Project shall be used only in accordance with the requirements of the applicable Final Finding of Suitability for Transfer or Finding of Suitability to Lease, including in strict compliance with all lease restrictions (such as restrictions against soil or groundwater disturbance without approval from the Department of the Navy and regulators) and all institutional controls (such as restrictions against disturbing the integrity of physical remedial components like caps or groundwater treatment systems and other restrictions imposed by the Department of the Navy).

HH3 The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wild land fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.

HH4 Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required

for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.

HH5 Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event that unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the Department of Navy ("DON") shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner. Additionally, said Protocol Plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.

HH6 The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells on the former MCAS El Toro in a geographic information systems database ("GIS"). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.

4.9 HYDROLOGY AND WATER QUALITY

4.9.1 Environmental Setting

The OCGP FEIR describes the project site as within the San Diego Creek watershed, which includes the San Diego Creek, Peters Canyon Channel, and the tributaries to these water courses. The major drainage channels that traverse the site (PA 51) are the Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and Borrego Canyon Channel. Serrano Creek and Upper San Diego Creek Channel traverse PA 30 in the southern tip of the project site, south of the existing SCRRA Metrolink railroad tracks.

San Diego Creek and Upper Newport Bay are listed as impaired water bodies under Section 303(d) of the Clean Water Act. Accordingly, Total Maximum Daily Load (TMDL) for pollutants that have impaired these water bodies has been established and was included in the OCGP FEIR (OCGP FEIR Table 5.7-2). The OCGP FEIR also noted that the County of Orange and the City of Irvine hold a Nationwide Pollution Discharge Elimination System (NPDES) permit for the storm drain systems, and that the State has issued a NPDES general permit relating to construction activities on sites over five acres in the area. Lastly, the flood control improvements associated with the SR-133 toll road were noted in the OCGP FEIR as having reduced the 1OO-year flood zone north and west of the property.

4.9.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR identified several significant impacts on hydrology and water quality associated with future development under the adopted Overlay Plan before mitigation. First, grading and excavation activities required for future development could result in the exposure of bare soils to both wind- and water-related erosion and associated significant water quality impacts (specifically, a violation of water quality standards or waste discharge requirements). Compliance with City grading and water quality regulations-including the NPDES discharge permitting requirements and preparation of a Storm Water Pollution Prevention Plan (SWPPP) and a Water Quality Management Plan (WQMP)-are the primary means of controlling the potential impacts of grading and excavation activities. These City requirements, which are described in mitigation measures H/WQ1 and H/WQ2, will reduce the impact to a less-than significant level.

According to the OCGP FEIR, the existing drainage patterns and stream courses would not be substantially altered by future development under the adopted Overlay Plan. In addition, the potential for inundation is reduced by improvements to upstream flood-control facilities. Without project-related flood-control facilities, the rate or amount of surface runoff due to new development would result in flooding on- and off-site, depending on the nature of the specific development. Although this impact was identified as significant, the effect of increased runoff would be reduced to a less-than-significant level through preparation and implementation of hydraulic studies and recommendations for the specific development and the construction of flood-control improvements commensurate with the specific development (Mitigation Measure H/WQ3).

The impact analysis for the Overlay Plan assumed development of the land use patterns created by the zoning designations for the Overlay Plan area and a backbone storm drain system. The storm drain system took into consideration and included improvements identified in the San Diego Creek Flood Control Master Plan. The drainage plan for the Overlay Plan area included improvements to the major drainages, including Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and the Borrego Channel, Wildlife Corridor and Serrano Creek, and San Diego Creek, as described in the OCGP FEIR and addenda.

While conceptually defined in the OCGP FEIR, the foregoing area-wide drainage and flood control facility system has since been undergoing increasingly more definitive design engineering refinement. The latest formal expression of these system enhancements is memorialized in the following documents: Master Plan of Drainage, Fuscoe Engineering February 23, 2007,[6] Orange County Great Park - Hydrology/Hydraulic Report, Fuscoe Engineering June 12, 2007 (collectively, Fuscoe Reports); Planning Area 51 and Planning Area 30 Bee Canyon, Agua Chinon, Borrego, Serrano and Upper San Diego Creek Update, RBF Consulting February 27, 2008, and Planning Area 51 Marshburn Watershed Update, RBF Consulting March 14, 2008 (collectively, RBF Reports). These reports merely refine the drainage control system components described in the OCGP FEIR. The on-site channels will continue to drain the project site under existing conditions. Additional backbone storm drain facilities will be designed to accommodate the changes in the land use surface runoff within the Great Park Neighborhoods development. The post development hydrology was analyzed per the Orange County Hydrology Manual for a 1OO-year peak storm design event.

[6] This report was submitted to the City of Irvine as a part of the Master Subdivision Map application.

OCGP FEIR Mitigation Measure H/WQ3 states that prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analyses shall be prepared in accordance with Orange County Flood Control District (OCFCD) methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. In compliance with the mitigation measure, the Fuscoe Reports, and RBF Reports were prepared. The primary focus of these reports was to evaluate the proposed drainage concept for the Great Park Neighborhoods development with respect to surface water hydrology.

4.9.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The OCGP Master Plan Minor Modification and the Park Design Review encompass the same land area proposed for park development as depicted in the OCGP FEIR. The total square footage of buildings has not been increased with this minor modification. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its current minor modification, the subject of this Addendum, on hydrology and water quality.

However, just as the area-wide and off-site drainage and flood control system facility components have undergone continued design engineering refinement, so has the concurrent refinement of on-site drainage and flood control systems.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan , will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OGCP FEIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not

to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects on hydrology and/or water quality identified in and considered by the certified OCGP FEIR.

4.9.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified four mitigation measures to reduce the effects of the project on hydrology and water quality. All of the mitigation measures are applicable to implementation of the Project and would be carried forward to future development of the project site. Implementation of measures H/WQ 1 through H/WQ 4 (listed below) would reduce project impacts to a less than significant level. However, the mitigation measures were modified in the SEIR to read as follows.

H/WQ1 Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area ... and residential construction sites that result in the disturbance of five acres or more ... shall be required to develop and implement BMPs ... to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.

The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, lessee, etc.), and shall reference the location(s) of structural BMPs.

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOI) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development of any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

H/WQ2 Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.

H/WQ3 Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

H/WQ4 Prior to issuance of a building permit for any unit within the 100-year floodplain, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.

After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.

4.10 LAND USE AND PLANNING

4.10.1 Environmental Setting

The OCGP FEIR described the existing and former land uses in Planning Areas 30 and 51, and other areas adjoining and surrounding these planning areas. Subsequent to the City's approval of the General Plan Amendment and Zone Change for the Overlay Plan, DON initiated an auction process for the sale of the former MCAS El Toro property. To facilitate the transfer, the property was divided and presented to prospective buyers as four distinct parcels. Interested parties were invited to bid on one or more of the parcels. In 2005, Heritage Fields, El Toro, LLC successfully purchased all four parcels from the DON (3,671 acres), and entered into a Development Agreement with the City of Irvine on July 12, 2005. The Development Agreement sets forth the terms and conditions of subsequent development and implementation of the Great Park, including dedication in fee of 1,096 acres of the property for development of the Great Park Master Plan.

Consistent with a provision in the Zoning Code, there are interim uses that reuse existing buildings on-site in Planning Area 51. These uses include offices occupied by the Great Park Corporation (GPC). Other tenants include Second Harvest Food Bank and Families Forward. A few parcels, such as Tierra Verde Industries, have been leased and are operating on an interim basis.

4.10.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR identified no significant impact to established communities. There were no residents living within the Planning Areas 30 and 51 at the time the OCGP FEIR was prepared and there has been no change in this regard; there are no residents living within the OCGP project site. The OCGP FEIR analyzed certain amendments to the City's General Plan that were adopted on May 27, 2003, as part of the City's adoption of the Overlay Plan. The adopted Overlay Plan was determined to be consistent with each element of the General Plan, as summarized below.

Land Use Element: The goal of the Land Use Element is to "promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine." The "OCGP, Orange County Great Park" land use category was created to reflect the types, intensity, and density of uses and activities contemplated in the OCGP and was determined to be consistent with the goal of the Land Use Element.

Circulation Element: The Circulation Element's goal is to "provide a balanced transportation system." Adoption of the Overlay Plan included the following modifications to the General Plan Circulation Element:

- Policy B-1 (c) was changed to include the following provision:
  "In conjunction with individual subdivision map level traffic studies for development proposed in the Overlay Plan area, a LOS [level of service] 'E' would be considered acceptable for application to intersections impacted in Planning Areas 13, 30, 31, 32, 34, 35, and 39."
- Figure B-1 (Master Plan of Arterial Highways) and Figure B-2 (Operational Characteristics) were amended to reflect the alignment of roadways within the OCGP, including:

  - Marine Way is aligned to join the Bake Parkway northbound exit ramp from Interstate 5 and terminate at Sand Canyon Avenue at Interstate 5.
  - Trabuco Road terminates at proposed Meadows Loop Road.
  - Rockfield Boulevard is realigned to terminate at Marine Way.
  - On-site circulation includes a new commuter highway/collector (Y Street [Ridge Valley]).
  - Research Parkway is renamed College Road and modified to extend from Irvine Boulevard to Marine Way.
- Figure B-3 (Public Transit) was amended to reflect the alignment of roadways within the OCGP.
- Figure B-4 (Trails Network) was amended to reflect the alignment of roadways within the OCGP.

Housing Element: The goal of the Housing Element is to "provide for safe and decent housing for all economic segments of the community." The adopted Overlay Plan would add up to 3,625 new dwelling units and carry forward all adopted policies and objectives of the Housing Element; specifically, the residential development component would explore opportunities for maintenance of the housing stock and help the City meet its Regional Housing Needs Assessment through year 2025.

Conservation and Open Space Element: The goal of this element is to "maintain and preserve the environmental systems as a major feature in the City." This goal would be achieved through the implementation of Objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages "the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development." The adopted Overlay Plan includes 1,096 acres of Great Park recreational land, 290 acres of permanent agricultural land, and 974 acres of Habitat Preserve.

Cultural Resources: The goal of the Cultural Resources Element is to "ensure the proper disposition of historical, archaeological, and paleontological resources to minimize adverse impacts, and to develop an increased understanding and appreciation for the community's historic and prehistoric heritage, and that of the region." The OCGP FEIR identified the flatland area of the property as a low paleontological sensitivity zone and the hillside areas north of Irvine Boulevard as a high paleontological sensitivity zone. No objective of this element was amended by the adopted Overlay Plan and all of the objectives and implementing policies were to be implemented as part of the adopted Overlay Plan.

Noise Element: The Noise Element's goal is to "contribute to a healthy and safe environment by minimizing noise impacts." The adopted Overlay Plan would not affect the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the Noise Element.

Public Facilities and Services Element: The goal of this element is to "provide a full range of necessary public facilities and services that are convenient to users, economical, reinforce City and community identity, and reflect the participation of citizens." The facilities and services described in the Urban Service Plan for the adopted Overlay Plan were formulated through a public participatory process and found to implement the goal and adopted objectives and related policies of this element.

Integrated Waste Management Element: This element seeks to "encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment." The OCGP FEIR disclosed that the Overlay Plan would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting

requirements; rather, it would provide the opportunity to better respond to the City's solid waste reduction requirements and other provisions of the element by broadening the range of design options.

Growth Management Element: The goal of the Growth Management Element is to "ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine's ability to provide an adequate circulation system and public facilities." When the OCGP FEIR was certified, it was disclosed that though the project made changes to the *Master Plan of Arterial Highways,* the project would not change any of the objectives or implementing policies of the Growth Management Element.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to "provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner." The OCGP FEIR reported that there would be no change to the objectives or implementing policies of this element.

Seismic Element: The goal of the Seismic Element is to "minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake." Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and to provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2 and that no objectives or implementing policies would be changed as a result of the project.

Safety Element: The goal of the Safety Element is to "minimize the danger to life and property from manmade and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards and air hazards." The OCGP FEIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the adopted Overlay Plan, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan.

4.10.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project is consistent with the land uses approved in concert with the certification and updates to the OCGP FEIR. The Project would implement approved development, and therefore would not affect the goals, objectives or policies, or the facilities and services described in any of the General Plan Elements. No changes or new impacts would occur. In addition, the Project does not contain elements that would alter the findings, conclusions and mitigation measures since all Project development remains within the previously established project boundaries. The following analysis discussed the Project in consideration of each General Plan Element:

Circulation Element: The goal of the Circulation Element is “to provide a balanced transportation system.” The Project would not alter the planned network of arterials and connections to roadways in the surrounding area; nor would they materially change the riding and hiking trails and trail linkages; pedestrian and bicycle circulation; and transit, air transportation, and telecommunication opportunities.

Housing Element: The goal of the Housing Element is to “provide for safe and decent housing for all economic segments of the community.” The Project would not permit new residential units or increase allowable development intensity.

Cultural Resources: The Project would not affect the adopted goals, objectives, and policies of this element. Development would be required to comply with this element's requirements and to implement mitigation measures found in the OCGP FEIR. With implementation of OCGP FEIR measures P1 and CULT1 through CULT4, the impacts of new development on paleontological and cultural resources would be less than significant. Furthermore, the proper disposition of such resources, if any are encountered prior to or during construction would be ensured; and through the information recovered, the community's understanding and appreciation for its historic and prehistoric heritage would have been enhanced.

Noise Element: The Project would not affect the goal of this element – "to contribute to a healthy and safe environment by minimizing noise impacts" – or the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the element.

Public Facilities and Services Element: The Project would not affect facilities or services described in the Urban Service Plan for the adopted Overlay Plan. As no substantive change in the Urban Service Plan is necessary, and that plan was a principle means of demonstrating consistency with the Public Facilities and Services Element, the Project also is consistent with this element of the General Plan. Additionally, development would be required to implement the element's objectives and policies to ensure that a full range of necessary public facilities and services that are convenient to users are provided.

Integrated Waste Management Element: This element seeks to "encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment." The Project would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements.

Growth Management Element: The goal of the Growth Management Element is to "ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine's ability to provide an adequate circulation system and public facilities." When the OCGP FEIR was certified, it disclosed that though it included changes to the Master Plan of Arterial Highways, the OCGP project would not change any of the objectives or implementing policies of the Growth Management Element. The Project likewise would not alter any of the objectives or implementing policies because it would remain consistent with the development phasing already a part of the overall development plan.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to "provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner." The OCGP FEIR reported there would be no changes to the objectives or implementing policies of the Element. Furthermore, through the Great Park Development Agreement, Heritage Fields has dedicated 1,096 acres: 367 acres for the park, 165 acres for the sports park, 229 acres for the drainage corridor, 179 acres for the wildlife corridor, and 156 acres for the exposition center south.

Conservation and Open Space Element: The goal of this element is to "maintain and preserve the environmental systems as a major feature in the City." This goal would continue to be achieved through the implementation of objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages "the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development." The Project would not alter any of the objectives or implementing policies.

Seismic Element: The goal of the Seismic Element is to "minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake." Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2. The OCGP FEIR reported that no objectives or implementing policies would be changed as a result of the OCGP project. Likewise, the Project would not alter that finding/conclusion because all Project development remains within the previously established boundaries.

Safety Element: The goal of the Safety Element is to "minimize the danger to life and property from manmade and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards, and air hazards." The OCGP FEIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the project, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan. Likewise, the Project would not alter any of the objectives or implementing policies.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. Since the OCGP FEIR did not identify any significant land use impacts, there is no need for further alternatives to the project or the imposition of mitigation measure requirements.

4.10.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified no significant land use impacts; therefore no mitigation measures were proposed.

4.11 NOISE

4.11.1 Environmental Setting

The OCGP FEIR described mobile noise sources from nearby freeways, roadways, rail facilities, and vehicle use at adjacent commercial businesses, light industrial facilities, and agricultural lands as the dominate noise source in the project area. Stationary sources of noise included temporary and intermittent noise from construction activities and agricultural operations, noise associated with the industrial/business parks to the east and the business park and entertainment uses to the south.

The OCGP FEIR presented the results of a noise survey, in which noise measurements were conducted at nine locations. Ambient noise levels at the four surveyed representative residential locations ranged from 58 dBA to 65 dBA CNEL (Refer to OCGP FEIR p. 5.4-18, Figure 5.4-6, and Table 5.4-7). The audible noise sources included local traffic, distant traffic, birds, aircraft, and human voices, all of which were characterized as typical of suburban areas.

4.11.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR concluded that development of the Overlay Plan would not result in any significant noise effects. The noise assessment considered a worst-case condition of simultaneous demolition and construction activities with the combined sound level of 20 pieces of large mobile equipment operating at a distance of 5,000 feet; 5 concrete breakers operating at a distance of 6,000 feet; and 2 crusher plants operating at a distance of 10,000 feet from the nearest off-project area residential location. The distances represented the closest possible location of the construction equipment to the nearest off-project area residences during a heavy construction period. The nearest off-site residential uses (sensitive noise source) were located approximately 4,000 feet from the property boundary. Under this scenario, the analysis estimated sound levels of approximately 56 dBA at the nearest off-site residential location. (Refer to OCGP FEIR, p. 5.4-24 and Table 5.4-8.)

As buildout of the project site was assumed to occur over time (years 2007–2025), construction-related noise impacts on residential areas within the project site were also estimated. Using the same construction equipment assumptions and a distance of 600 feet from the nearest residential area, the combined effect of the equipment was estimated at a sound level of 70 dBA at the nearest on-site residential locations during a heavy construction period. While the City of Irvine Noise Ordinance does not specify a limit on construction noise levels, it stipulates the days and hours during which construction activities may occur and when construction would not be allowed unless a temporary waiver is requested and granted; specifically, construction is allowed Monday through Friday between 7:00 a.m. and 7:00 p.m., and on Saturdays between 9:00 a.m. and 6:00 p.m.; no construction is allowed outside those hours, on Sundays, or on federal holidays. (Refer to OCGP FEIR, p. 5.4-31.)

4.11.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR noise assessment considered a worst-case condition of simultaneous demolition and construction activities. The worst-case assumptions described for the adopted Overlay Plan remain reasonable assumptions for the Project; no new information about future demolition and construction has become available that would increase the number of pieces of equipment to be operated simultaneously.

Construction Noise

Construction activities associated with the proposed Project would have a short-term impact on ambient noise levels in the Project vicinity. The OCGP Master Plan Minor Modification and the Park Design Review would not allow any additional development intensity (i.e., building square footage) beyond what is allowed by the adopted Overlay Plan, and therefore would not result in an increase in construction noise levels. In addition, the analytical assumptions concerning construction, development phasing, and operations of the adopted Overlay Plan remain appropriate for the Project. Consequently, the Project would not increase the noise levels generated during construction activities. Therefore, the construction noise levels associated with this component of the Project are anticipated to be similar to those addressed in the OCGP FEIR and Addenda and would not result in any new significant impacts.

Construction Vibration

The OCGP FEIR identified that nuisance vibration from construction activities associated with the adopted Overlay Plan would result in noticeable vibration levels. However, because vibration from construction activities would be temporary, nuisance vibration would be less than significant. The Project would not generate significantly higher levels of vibration. Therefore, the construction vibration levels associated with the Project are anticipated to be similar to those addressed in the OCGP FEIR and Addenda and would not result in any new significant impacts.

Operation

Current information regarding the noise impacts within the Project site were previously evaluated in the OCGP FEIR. The OCGP FEIR concluded that noise associated with land uses would not be significant with use of acoustical design features (e.g., sound insulating construction, perimeter barrier walls, acoustical equipment enclosures, and operational restrictions) incorporated to comply with the local regulations. The OCGP Master Plan Minor Modification and the Park Design Review would not result in land use changes that would increase project-related stationary or mobile source noise generated by the project. Therefore, noise levels associated with the Project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any new significant impacts.

Traffic Noise

The Environmental Noise Assessment prepared for the OCGP FEIR identified a traffic noise screening analysis threshold of 1.5 dBA for all project-related traffic noise level increases where the resulting noise levels would be in excess of 65 dBA, and required further analysis where that screening threshold was met within residential and other sensitive areas. Although changes in noise levels of 3 dBA are considered "barely perceptible," and changes of 5 dBA are considered "clearly noticeable," the OCGP

FEIR used this 1.5 dBA noise level screening threshold to be conservative. The OCGP FEIR concluded that the development within Planning Areas 30 and 51 would cause no significant impact on account of traffic noise.

Traffic volumes have been predicted for on-site roadways within the Western Sector Park Development based on the minor modification to the Great Park Master Plan consisting mainly of changes to the proposed buildings. Two traffic analyses were conducted by a technical consultant (LSA Associates) for the minor modifications to the Master Plan and the Western Sector Park Development Plan-Phase 1 (LSA, August 2011). The August 2011 traffic analysis concluded that minor modification to the Great Park Master Plan would generate an additional 600 daily trips on a typical weekend day on all roadways in the study area. Project-generated, operation-related noise from roadway traffic on roadways was modeled. Inputs and assumptions applied to traffic noise predictions are shown in Appendix C.

Based on the traffic noise modeling, traffic noise level increases for on-site Project roadways would range from 0 dBA to 6 dBA. The OCGP Master Plan Minor Modification and the Park Design Review would not, however, result in traffic noise level changes that would increase project-related traffic noise generated by the Project or result in traffic noise levels that exceed 65 dBA at noise sensitive receptors. The land uses along these specific roadway segments are not considered noise sensitive. Therefore, noise levels associated with the Project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any new significant impacts.

Airport Noise

The former MCAS El Toro operations have ceased and no public airport, public use airport, or airport land use plan exists in the Project vicinity.

Land Use Compatibility

The minor modification would consist of changes to proposed buildings within the project. Buildings that would be no longer part of the OCGP Master Plan Minor Modification and the Park Design Review include the Air Museum, Air Museum Hangar, and Concessions / Retail at the Sports Park. These buildings would be replaced by an Artist in Residency Facility, Hangar 244, Community Ice Facility, and Nature Education Garden. The overall square footage of the buildings within the OCGP Master Plan Minor Modification and the Park Design Review would remain the same because the size of the three Civic / Museums within the OCGP Master Plan would also be reduced to accommodate the additional square footages of the new buildings. Specific to the Artist in Residency Facility, these studios would be used as work-places for artists but would not be used as residences. In addition, normal activities would occur during business hours. For these reasons, studios at the Artist in Residency Facility are not considered noise-sensitive receptors.

Although the Project would result in changes to buildings in the Master Plan Development, overall land use types and activities would remain substantially similar to the adopted Overlay Plan. Because the OCGP FEIR and Addenda did not identify any significant impacts related to land use compatibility, the proposed Project is also compatible with the Irvine General Plan and zoning code for noise and vibration compatibility.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include an major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant noise effects identified in and considered by the certified OCGP FEIR.

4.11.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified no significant noise impacts; therefore no mitigation measures were proposed and none is required for the proposed project.

4.12 POPULATION AND HOUSING

4.12.1 Environmental Setting

The OCGP FEIR discussed the caretaker status of the MCAS El Toro base following its closure. At the time the OCGP FEIR was prepared, there was a limited number of military and civilian staff working on the base; however, currently, there are no residents living on the former base. Consequently, there were 4,380 vacant group quarters units and 1,209 residential dwelling units. The OCGP FEIR examined

demographics in the context of the existing and projected population of the Orange County region and the City of Irvine. Population and housing information was developed based on the 2000 United States Bureau of Census population, household, and employment census information. The most recent Census was conducted in 2010 ("2010 Census") and this data is used, when available, for analysis in this section. The areas surrounding the former base and the Orange County subregion are considered jobs-rich and housing-poor. The Southern California Association of Governments (SCAG) seeks to encourage housing growth over job growth in the Orange County subregion. At the same time, Southern California has been profoundly impacted by the current recession and housing crises, indicative of a higher unemployment rate and a distressed housing market. Despite the recent fluctuations in the job and housing markets, SCAG continues its efforts to improve the jobs-to-housing ratio in Orange County.

The OCGP FEIR reported that the ratio of jobs to housing in the area has environmental implications related to transportation and air quality. Thus, a major focus of the regional planning efforts has been to improve the ratio of jobs to housing in all affected subregions in order to reduce the vehicular trips, costly infrastructure improvements, and resultant air emissions.

4.12.2 Impacts Identified in the OCGP FEIR and Addenda

As noted above, the area surrounding the former MCAS EI Toro and the Orange County subregion are considered jobs-rich and housing-poor. SCAG seeks to improve the jobs-to-housing ratio in the Orange County subregion. The OCGP FEIR reported that regional projections are dynamic and, as a compilation of local land use projections, reflect changing community views on the location and the types of growth desired. The Orange County Council of Governments (OCCOG) adopted the Orange County Projections 2010 report (OCP-2010), which provides projections of anticipated growth for Orange County in terms of population, housing and employment based on detailed information about growth trends, development and local land use provided by Orange County jurisdictions and public agencies; infrastructure, utility and service providers; and the private sector. OCP-2010 accounts for projects in progress, including the 1,269 density bonus units. According to the OCP-2010, forecast growth rates for population, dwelling units, and employment in Irvine over the 2008-2035 period are all higher than the corresponding rates for the entire Orange County area, as shown in Table 4.12-1.

Table 4.12-1. OCP-2010 Projections for Orange County and the City of Irvine, 2008-2035

	2008	2010	2020	2035	Change, 2010-2035	
					Total	Percent
Orange County						
Population	3,123,058	3,182,061	3,430,505	3,582,266	400,205	12.6%
Dwelling Units	1,035,005	1,045,959	1,100,260	1,174,912	128,953	12.3%
Employment	1,624,061	1,510,928	1,646,437	1,799,477	288,549	19.1%
City of Irvine						
Population	210,761	223,024	271,340	309,977	86,953	39.0%
Dwelling Units	78,955	83,103	100,572	117,427	34,324	41.3%
Employment	223,480	203,831	236,641	286,492	82,661	40.6%

Source: OCGP DSEIR, Table 5.8-3, p. 5.8-3; Center for Demographic Research, Cal State Fullerton. "2010 Orange County Projections", released January 27, 2011.

According to OCP-2000, as of June 2000, Orange County had approximately 1.5 million jobs. According to OCP-2010, that number was projected to increase to approximately 1.51 million by 2010. OCP-2010 projects that jobs in Orange County will grow by 288,549 between 2010 and 2035, which amounts to an average of 11,542 jobs per year (a 19.1 percent increase in jobs over the 25-year period).

Although implementation of the Overlay Plan would not have exceeded the OCP-2010 employment projections, its impact on employment was considered significant because the Orange County subregion is anticipated to become increasingly jobs-rich over the next 20 years and the Overlay Plan-related employment would exacerbate the subregional jobs/housing imbalance. As discussed in the OCGP FEIR, the Overlay Plan is expected to result in:

- An increase of up to 9,000 residents
- A provision of 3,625 dwelling units
- An approximate increase of 16,510 jobs
- An on-site jobs-housing ratio of 4.55

The increase in population would not substantially exceed projections contained for the site in OCP-2010. The increase in jobs, however, would contribute to worsening Orange County's jobs/housing ratio imbalance and is therefore considered a significant impact. The OCGP FEIR identified less than significant impacts for population and housing, and a significant and unavoidable impact for employment.

In 2008, the City granted 1,269 density bonus residential units to Heritage Fields pursuant to state law. Consequently, the Overlay Plan now includes a total of 4,894 residential units, and a total of 12,462 residents, based on estimates of persons per household in the City's General Plan. The Overlay Plan, including the 1,269 density bonus units, was included in the City's data for OCP-2010, which will in turn be used by SCAG to establish regional growth forecasts. Therefore, the population, housing and employment growth created by the Overlay Plan is consistent with OCP-2010 regional planning projections, and will be consistent with anticipated forecasts forthcoming from SCAG. OCP-2010 estimates a jobs-housing balance of 2.45 in Irvine in 2010 and 2.44 in 2035, as shown in Table 4.12-2. The Overlay Plan would contribute to making the community more jobs-housing balanced over time.

Table 4.12-2. OCP-2010 Jobs to Housing Ratio for Orange County and the City of Irvine, 2008-2035

	2008	2010	2020	2035
Orange County				
Dwelling Units	1,035,005	1,045,959	1,100,260	1,174,912
Employment	1,624,061	1,510,928	1,646,437	1,799,477
Jobs-Housing Ratio	*1.57*	*1.44*	*1.50*	*1.53*
City of Irvine				
Dwelling Units	78,955	83,103	100,572	117,427
Employment	223,480	203,831	236,641	286,492
Jobs-Housing Ratio	*2.83*	*2.45*	*2.35*	*2.44*

Source: OCGP DSEIR, Table 5.8-7, p. 5.8-8; Center for Demographic Research, Cal State Fullerton. "2010 Orange County Projections", released January 27, 2011.

The 16,510 new jobs contemplated in the Certified EIR will still be generated under the Overlay Plan. Therefore, the Overlay Plan, which includes 4,894 residential units, would have an on-site jobs-housing ratio of 3.37, which is substantially improved from the 4.55 ratio associated with the 3,625 units analyzed in the Certified EIR. However, since the 3.37 jobs-housing ratio is still greater than Irvine's existing jobs-housing ratio of 2.45, the Overlay Plan's significant impact to the jobs-housing balance remains.

4.12.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project would not alter the population, housing, and employment information contained in the OCGP FEIR. The Project would not introduce new levels of development that would improve the ratio of jobs to housing beyond that already analyzed in the OCGP FEIR. The Project's impacts would be the same as those identified in the OCGP FEIR, less than significant for population and housing, and significant and unavoidable for employment.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the Project or additional mitigation measures that would substantially reduce one or more of the significant effects on population and housing identified in and considered by the approved OCGP FEIR.

4.12.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified a significant impact associated with the jobs/housing ratio. The OCGP FEIR also stated that no mitigation is available to rectify conflicts between the numerical objectives of regional planning documents including the jobs/housing ratio. This finding remains applicable to the OCGP Master Plan Minor Modification including the park design review.

4.13 PUBLIC SERVICES

4.13.1 Environmental Setting

Law Enforcement

At the time of the certification of the OCGP FEIR, law enforcement was provided by the Orange County Sheriff through a contract with the Department of the Navy (DON) in Planning Area 51. Subsequent to the annexation of the property not within the City limits, the City of Irvine Police Department has assumed law enforcement responsibility within Planning Area 51. The Irvine Police Department is headquartered at the Irvine Civic Center Complex and also has a satellite facility in the Irvine Spectrum Entertainment Complex. The OCGP FEIR concluded that the police facilities were adequate to handle the personnel and equipment that were employed and utilized by the department. The OCGP FEIR also stated that the Irvine Police Department was researching the expansion of their facilities, although the specific details of constructing a substation were not known.

Fire and Emergency Medical Services

At the time of the certification of the OCGP FEIR, primary fire protection to Planning Area 51 was provided by Orange County Fire Authority (OCFA) under contract to the County of Orange on an interim basis. Subsequent to the annexation of the property, OCFA has continued to provide fire protection service to the project area. The OCGP FEIR stated that OCFA was planning two additional fire stations in the general vicinity to serve Planning Area 51. OCFA also has in place an agreement with the Irvine Company as part of the Northern Sphere Area that should provide adequate service to all areas surrounding the project.

Parks and Recreation

A portion of the OCGP is currently operating on an interim basis with recreation facilities that are open to the public. The proposed park design plans will formalize these interim uses as well as conceptually approve others. In addition, many public facilities are located within five miles of the OCGP including neighborhood and community parks, recreational trails, and open space.

There are approximately 506 acres of neighborhood and community parks and recreational trails in the City of Irvine's public park system, including one aquatic complex containing three competition size pools. William R. Mason Regional Park, a County of Orange facility, and numerous private parks and recreation facilities are also available throughout Irvine that provide additional recreational opportunities for the City's residents.

The City of Irvine, through its Conservation and Open Space Element has established an open space program comprehensively aggregating open space, adjoining other regional open space, and promoting conservation and passive recreational opportunities (e.g. Bommer Canyon, Shady Canyon and Limestone Canyon).

At the time of the certification of the OCGP FEIR, Department of the Navy (DON), acting in a caretaker's role, offered public access to a variety of existing recreational facilities including the existing Marine Memorial Golf Course and equestrian stables. Currently, these facilities remain closed and are under demolition and preparation for future development.

School Services

Planning Area 51 is within the school service boundaries of the Irvine Unified School District (IUSD) and the Saddleback Valley Unified School District (SVUSD). Prior to the closure of the base, an IUSD elementary school with a 600-student capacity was operating on the former base property.

4.13.2 Impacts Identified in the OCGP FEIR and Addenda

Law Enforcement

The OCGP FEIR discussed the law enforcement needs of Planning Area 51 and stated that following annexation, the Irvine Police Department would provide law enforcement for the entire project area. The OCGP FEIR also analyzed the number of police officers, police supervisors and support staff, as well as the number of vehicles, equipment, and services. The OCGP FEIR stated that police protection for the park area would be funded through the use of a special park assessment. As stated in the OCGP FEIR, the general impacts associated with construction and operation of public facilities were analyzed in the OCGP FEIR as part of the planned land uses which also included the construction of a new Police substation.

Fire and Emergency Medical Services

Subsequent to annexation of the property, Planning Area 51 would continue to be served by OCFA. The OCGP FEIR stated that it was likely that additional fire services infrastructure would be required to support the proposed project. OCFA had not provided the detailed calculations of the extent of new services. The OCGP FEIR stated that the final determination of fire station needs and locations would be made at a future date when more information is known about risk, layout, and types of occupancy. The specific environmental impact of constructing the new fire facilities to serve the project could not be determined at the General Plan level of analysis as specific site plans and locations had not been prepared. However, the general impacts associated with the construction and operation of public facilities were addressed within the OCGP FEIR. A temporary fire station is currently located a short distance from the main entrance to the OCGP.

Parks and Recreation

As discussed in detail in OCGP FEIR, the parkland acreage under the project would greatly exceed the existing City of Irvine's standards, and would provide a regional open space amenity for the benefit of

Orange County. The OCGP FEIR calculated a total of 45.1 acres of parkland required for the proposed development. A portion of that acreage would be in neighborhood parks.

The community park requirement for the future Great Park Neighborhoods development has been addressed through the Development Agreement between the City and Heritage Fields (Recorded on July 12, 2005) and reflected in the amended and Restated Development Agreement (December 2010). Conveyance of the OCGP to the City satisfied any requirement imposed on the developer for the dedication or development of community parks as required by the City's General Plan and Municipal Ordinance. The neighborhood park requirements for the future Great Park Neighborhoods development would be met within the Great Park Neighborhoods development, outside the OCGP. Details of specific park locations, ownership, sizes, and improvements would be presented to the Community Services Commission as a part of the Park Plan for the new residential developments. Since the OCGP Master Plan does not create a demand for parks and recreation but is itself a park and recreation amenity, no new impacts on parks and recreation are anticipated. This is consistent with the findings of the OCGP FEIR.

School Services

The OCGP FEIR discussed in detail the proposed project, the related student generation, and the required school facilities. Based on an initial analysis, the IUSD estimated the need for one 13-acre K-8 site as well as funding for expansion and modernization of existing middle and high school facilities by project buildout.

4.13.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

Law Enforcement

The Project does not change the intensity or type of the land uses and therefore, the demand on law enforcement is within the envelope of analysis presented in the OCGP FEIR.

Fire and Emergency Medical Services

Since the Project does not change the intensity or type of land uses, the demand on fire protection is consistent with the analysis presented in the OCGP FEIR.

Parks and Recreation

The Project does not propose changes to the land use intensity and type. Therefore, the demand and potential impact on parks and recreation remains consistent with the analysis contained in the OCGP FEIR.

School Services

The Project does not propose changes to the land use intensity and type. Therefore, the demand and potential impact on school services remains consistent with the analysis contained in the OCGP FEIR.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously indentified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant public services-related effects identified in and considered by the certified OCGP FEIR.

4.13.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (Sections 5.1-5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for police, fire protection, park and recreation, and education services.

4.14 RECREATION

Issues related to Recreation are discussed above under Section 4.13, *Public Services*.

4.15 TRANSPORTATION/TRAFFIC

4.15.1 Environmental Setting

The OCGP FEIR describes the traffic and circulation conditions of a study area that encompassed 145 existing intersection analysis sites (2007) and an additional 11 future sites (Post 2025) in the City of Irvine, and portions of 7 adjacent jurisdictions including the Cities of Lake Forest, Mission Viejo, Laguna Hills, Laguna Woods, Aliso Viejo, Laguna Beach, and unincorporated areas of Orange County. Figure 4-4, OCGP FEIR – Traffic Impact Study Area depicts the study area covered by the traffic study contained in the OCGP FEIR.

The OCGP FEIR used the City of Irvine Traffic Performance Criteria, which establishes level of service (LOS) "A" to "D" as the peak-hour minimum acceptable service level. In its adoption of the Overlay Plan, the City General Plan Policy B-1(C), which identified LOS E as acceptable for application to intersections in Planning Areas 13, 31, 32, 34, 35 and 39, was changed to include the effects of future development in Planning Areas 30 and 51 on the intersections in those Planning Areas.

The City's performance criteria also includes a standard of 0.02—roadway volume to capacity (V/C) ratio or the intersection capacity utilization (ICU)—to identify significant project impacts and associated need for improvements at both roadways and intersections.

4.15.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR concluded that the adopted Overlay Plan would cause an increase in traffic which would be substantial in relation to the existing traffic load and capacity of the street system—that is, a substantial increase in either the number of vehicle trips, the V/C on roadways, or congestion at intersections—in the year 2007, year 2025, and post-2025 scenarios (OCGP FEIR page 5.2-66):

Year 2007

- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

Year 2025

- University Drive from the I-405 Freeway to Michelson Drive (A.M.)
- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (P.M.)

- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)
- SR-241 Tollway at Lake Forest Drive—southbound off-ramp (A.M.)
- SR-133 Freeway at Barranca Parkway—northbound direct on-ramp (P.M.)

Post-2025

- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Jeffrey Road—northbound off-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at El Toro Road—southbound off-ramp (P.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (A.M. /P.M.)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

Intersections

For the list of impacted intersections by analysis year, please refer to the following OCGP FEIR tables:

- Table 5.2-12 for year 2007
- Table 5.2-13 for year 2025
- Table 5.2-15 for post 2025

Freeway/Tollway Locations

The OCGP FEIR concluded that the adopted Overlay Plan would exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2007 and 2025 scenarios. The Overlay Plan will impact the following:

Year 2025

- I-5 from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
- I-5 from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
- I-405 from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

Intersections

Year 2007

- El Toro Road/Avenida de la Carlota

Year 2025

- El Toro Road/Avenida de la Carlota

4.15.3 Impacts Analyzed in the OCGP FEIR and Addenda

The OCGP FEIR utilized trip thresholds (also known as "trip caps") for each of the planning areas within the Great Park area. The trip cap is based on socioeconomic data average daily trip generation for the approved Orange County Great Park plan (the Overlay Plan area), which includes the Heritage Fields development. The traffic impacts of the 2006 GPA/ZC project were analyzed in Addendum No. 2 by distributing project-related traffic over existing and future traffic conditions. The three future conditions (year 2010, year 2025 and post-2025) are based on the existing circulation system plus fully funded intersection improvements that were planned to be in place in each future time frame and the land use and development growth that is projected in each future time frame. In each case, project impacts were identified by comparing traffic conditions with and without the 2006 GPA/ZC project.

The circulation system performance criteria applied in the analysis were the criteria approved in the 2003 North Irvine Transportation Model (NITM) Program Nexus Study. The performance criteria were also consistent with the criteria adopted by the jurisdictions that are within the project study area. The criteria include components for arterial roadways, intersections, freeway/tollway ramps, and freeway/tollway mainline segments.

The results of the year 2010, year 2025 and post-2025 analysis indicated that the proposed 2006 GPA/ZC project was not forecast to significantly impact any roadway segment based on the second level of analysis (the City's peak hour link capacity analysis methodology), intersection, freeway/tollway ramp, or any freeway/tollway mainline segment.

Subsequently, as addressed in Addendum No. 3, a Traffic Study (Appendix C of Addendum No. 3) for the Master Subdivision Map was prepared by Austin-Foust Associates, Inc. to address the transportation impacts for the "project," i.e. backbone infrastructure with no new land use development in an interim year timeframe consistent with the TTM scope of work of the North Irvine Transportation Mitigation (NITM) Program Ordinance. The Traffic Study analyzed the impacts of the Master Subdivision Map (MSM) application based on Year 2010 traffic conditions in the traffic analysis study area.

That project was presented in Figure 4-2 to Addendum No. 3, and included Marine Way from Sand Canyon Avenue to Bake Parkway, Trabuco Road from the SR-133 to "O" Street, and the extension of Rockfield Boulevard to Marine Way as four-lane primary arterials, Ridge Valley (formerly "Y" Street) from Portola Parkway to Irvine Boulevard and "O" Street (formerly College Road) as four-lane secondary arterials between Irvine Boulevard and Trabuco Road, Trabuco Road east of "O" Street, "A" Street, "B"

Street, “C” Street and “D” Street as two-lane local road ways. The mid-block lanes were shown in Figure 4-3 to Addendum No. 3. It should be noted that the project included the construction of two lanes on “O” Street between Trabuco Road and Marine Way. Two additional lanes would be built by the owner of the adjacent property (west side of “O” Street) when that property is developed.

An Internal Circulation Analysis (Appendix D to Addendum No. 3) for the Master Subdivision Map in the Overlay Plan area was prepared by Austin-Foust Associates, Inc. to analyze the access and internal circulation for the Heritage Fields project. The project traffic loaded directly onto the surrounding arterial system at several locations. These include access to Irvine Boulevard via Ridge Valley; “O” Street (formerly College Road), “A” Street and “B” Street to Sand Canyon Avenue via Trabuco Road and Marine Way (and indirectly via Irvine Boulevard); and to Alton Parkway, Barranca Parkway, and Bake Parkway via Marine Way. Project access to the SR-133 is provided directly via a planned interchange at Trabuco Road and indirectly via “O” Street to the Irvine Boulevard interchange.

The intersections shown in Figure 4-5 in Addendum No. 3 were analyzed using intersection capacity utilization (ICU) values to determine level of service (LOS). The results of this analysis showed that all intersections operate at an acceptable level of service under Post-2025 buildout conditions. The intersections were then analyzed for signalization needs. Traffic signal warrants based on peak hour volumes (as adopted by the Federal Highway Administration and Caltrans) were used to determine the need for signalization. The results of this analysis were illustrated in the Figure 4-4 in Addendum No. 3. Based on the application of the warrants, it was determined that traffic signals should be installed at all of the analyzed intersections except for the intersections of “C” Street and “D” Street at Marine Way.

Recommended on-site traffic-control measures included one-way stop signs, signals, and roundabouts. Left-turn pocket lengths for project access intersections with exclusive left-turn lanes were estimated using the County of Orange Environmental Management Agency (EMA) Highway Design Manual. The estimated left-turn storage length requirements for the analyzed intersections were based on peak hour volumes.

Right-turn lanes were proposed to be provided for select project access locations on site where additional intersection capacity is needed. The length of the right-turn lane is a function of the adjacent through-traffic queue and LOS at the intersection. A minimum length of 250 feet plus a 120-foot transition would be provided at these locations. Right-turn deceleration lanes are provided along the periphery of the project site and along major roadways within the project site where higher speeds prevail (i.e., Irvine Boulevard, Trabuco Road, and on Marine Way with the exception of locations within the TOD District). The right-turn deceleration lane would be a minimum of 150 feet with a 120-foot transition, in order to provide a safe transition from the through lane to the right-turn lane.

Addendum No. 4 analyzed the impacts of the proposed OCGP Master Plan. Since the proposed land uses within the OCGP Master Plan were consistent with those analyzed in the OCGP FEIR and the updated traffic study for the Revised Overlay Plan, no additional traffic analysis was found to be necessary(for Addendum 4) and no new significant impacts related to traffic were anticipated.

Addendum No. 5 analyzed the impacts associated with realignment of the Marine Way/Bake Parkway intersection and concluded that the project would not produce or substantially worsen significant impacts identified in the OCGP FEIR. Consistent with the conclusions in the OCGP FEIR, traffic and circulation

impacts associated with the project would be less than significant, as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation. However, the following project design features would need to be implemented as part of the project:

Bake Parkway/I-5 Northbound Ramp

The General Plan approved Bake Parkway at Marine Way intersection provides direct access from the Bake Parkway at the I-5 northbound ramps intersection onto Marine Way. The proposed Bake Parkway at Marine Way intersection is relocated north (east) of the General Plan approved Bake Parkway at Marine Way intersection on Bake Parkway. The relocation of the Bake Parkway at Marine Way intersection includes project design features along Bake Parkway. Specifically, Bake Parkway is proposed to be widened north (east) of the existing I-5 bridge to provide four through lanes to Rockfield Boulevard while southbound (westbound) Bake Parkway from Rockfield Boulevard would be widened to provide four through lanes which reduces to three through lanes at the I-5 NB on-ramp. In addition, the proposed Bake Parkway at Marine Way relocation is also accompanied by improvements at the I-5 northbound off-ramp. The I-5 northbound off-ramp at Bake Parkway would be widened to provide one left-turn lane and three right-turn lanes. The project design features at this location needed for Year 2030 and Post-2030 operations, tied to the construction of the Bake Parkway and Marine Way intersection would provide acceptable levels of service at this intersection.

Sand Canyon/I-5 Northbound Ramp

The proposed relocation of the Bake Parkway/Marine Way intersection resulted in the need for restriping at the eastbound approach or the southbound approach of the Sand Canyon/I-5 Northbound Ramp intersection under Post-2030 conditions. As part of the project design features, the southbound approach at this intersection would be restriped to provide two left-turn lanes, four through lanes, and one right-turn lane. The restriping improvement provides an improved operational condition.

Addendum No. 6 analyzed the potential impacts of Vesting Tentative Tract Map 17283 (VTTM 17283) for a portion of the Lifelong Learning District (LLD) of the Heritage Fields site located in Planning Area (PA) 51 in the City of Irvine. The purpose of the study was to provide traffic analysis data for the VTTM 17283 application for this development for the year 2012 horizon. The study presented data that was the basis of design for key on-site project roadways in support of the VTTM 17283 application. The study also identified the location, timing and prioritization of NITM improvements related to potential impacts caused by traffic from the project.

The results of the year 2012 analysis indicated that the project is forecast to result in the need for improvements at two freeway ramps within the NITM study area based on peak hour intersection and ramp performance criteria. The ramp locations requiring improvements are:

- I-405 at Sand Canyon - NB Direct On-Ramp (Convert the HOV lane to a second metered mixed flow lane)
- I-405 at Sand Canyon - SB Off-Ramp (Add a second drop lane from I-405 to the off ramp)

The proposed improvements would bring the ramp locations to an acceptable level of service. These improvements have been previously identified as mitigation requirements in the underlying EIR and are included in the NITM Program. The development of VTTM 17283 requires the advancement of these NITM improvements from 2025 to 2012 in the NITM Program. The NITM Program allocates a fair share portion of the improvement costs at these freeway ramp locations to this development. Therefore the projects participation in the NITM Program fulfills the project's mitigation requirement at these ramp locations.

Addendum No. 7 analyzed potential impacts associated with the removal of certain NITM Improvements from the OCGP FEIR that were determined to no longer be necessary. Based on the findings of the NITM Five-Year Review Traffic Study and subsequent analysis utilizing ITAM 8.4-10, it was determined that previously proposed traffic mitigation strategies were not required for seven intersections and one ramp since they operate at an acceptable LOS under all interim year and build-out conditions. In addition, improvements above and beyond the baseline conditions for these locations were not warranted based on forecast future traffic activity. These intersections include: Alton Parkway & Barranca Parkway; Ridge Route Drive & Moulton Parkway; Santa Maria Drive & Moulton Parkway; Los Alisos Boulevard & Trabuco Road; Moulton Parkway & Glenwood Drive/Indian Creek Lane; Moulton Parkway & Laguna Hills Drive; Lake Forest & Irvine Center Drive; and SR-241 Southbound Off-ramp at Lake Forest Drive.

The SEIR analyzed the potential impacts of the 2nd Amended VTTM 17008, Amended TTM 17283, TTM 17202, TTM 17364, TTM 17366 and TTM 17368 within the Heritage Fields site located in Planning Areas (PA) 51 and 30 in the City of Irvine. The purpose of the comprehensive and tract map-level NITM traffic studies was to identify the location, timing and prioritization of applicable NITM improvements and any necessary project-related improvements that address potential impacts caused by project traffic.

The results of the analyses indicated the need for the following NITM improvements:

- Alton & Technology (2030): Westbound Technology restripe to include 2.5 left turn lanes, 1.5 through lanes, and a defacto right turn lane.
- El Toro & Jeronimo (2030): Add second southbound El Toro left turn lane.
- Alicia & Muirlands (2015): Add second southbound Alicia left turn lane.
- I-5 Southbound off-ramp to Sand Canyon (Post-2030): Add a second drop lane from the I-5 to the off-ramp.
- I-5 Southbound off-ramp to Alton (Post-2030): Add a second auxiliary lane from the I-5 to the off-ramp.
- I-5 Southbound off-ramp to El Toro (2030): Add a second drop lane from the I-5 to the off-ramp.

Additional improvements needed to address traffic impacts caused by the project include:

- Jeffrey & Roosevelt (2030): Restripe eastbound Roosevelt approach to provide a shared through/right turn lane.
- Bake & Portola (Post-2030): Restripe the northbound Bake approach to provide a shared through/left lane (which currently exists as a through lane) and modify the traffic signal for a north/south split phase signal operation. Alternatively, restripe the northbound approach to provide dual left turn lanes in combination with a single through lane and single right turn lane, and modify signal operation to include northbound right turn overlap.

- Lake Forest & Portola (2030, fair-share): Conversion of the northbound Lake Forest approach from de-facto right-turn to dedicated right-turn, and modification of the traffic signal to include right turn overlap phase.

Mitigation measures approved as part of the SEIR include:

TRAN1 Prior to the approval of any final map (other than a financing and conveyance map) allocating building intensity within Planning Areas 30 and 51, and prior to issuances of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall either (i) apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs, to reduce traffic, air quality and noise impacts or (ii) develop and implement a similar transportation management plan containing the elements and meeting the criteria described below as approved by the Director of Public Works:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for Planning Areas 30 and 51. This document summarizes the key elements of the TMP.

A. Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Planning Areas 30 and 51 ("Great Park TMP"). This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

The applicant may elect to annex Planning Area 51 and a portion of Planning Area 30 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that the applicant elects not to annex into Spectrumotion, a TMP similar to that provided by Spectrumotion will be developed and implemented. This document sets forth the components of the TMP should it be necessary.

B. Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.
Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services (i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

C. Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Planning Areas 30 and 51. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

TRAN2 Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall request a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from the SR-133 toll way to “O” Street (formerly College Road), and Ridge Valley (formerly Y Street) should be included on the MPAH.

TRAN3 Prior to issuance of the first building permit for dwelling units or non-residential square footage, a Fee Reallocation Study shall be completed to recalculate the NITM Fees, reflecting any fair share allocation modifications. The landowner or subsequent property owner shall submit the Fee Reallocation Study under a separate cover to be approved by the Director of Public Works in consultation with the NITM Advisory Committee.

TRAN4 Prior to approval of the last final map for the Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the landowner or subsequent property owner shall pay the costs of the following mitigation in an amount to be mutually agreed upon between the landowner or subsequent property owner and the City and reflective of the costs of the mitigation at the time of payment:

- 286 Jeffrey Road & Roosevelt: Restripe the eastbound approach to provide a shared through/right turn lane.
- 361 Bake Parkway & Portola Parkway: Restripe the northbound approach to provide a share through/left lane (which currently exists as a through lane) and modify the traffic signal for a north/south split phase signal operation. Alternatively, restripe the northbound approach to provide dual left-turn lanes in combination with a single through lane and single right-turn lane, and modify signal operation to include northbound right-turn overlap phase.
- 374 Lake Forest & Portola Parkway (Pending Projects analysis impact): Convert the existing northbound approach from de-facto right-turn to a dedicated right-turn, and modify the existing traffic signal operation to include right-turn overlap phase.

4.15.4 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

Two traffic studies were completed by LSA in August 2011. The studies analyzed the proposed OCGP Western Sector Development Plan located in Planning Area 51 in the City of Irvine. The Master Plan Minor Modification and Park Design Review fall within the scope of the Western Sector Park Development Plan.

Master Plan Modification Parking Demand and Trip Generation

The Master Plan Modification Parking Demand and Trip Generation analysis, dated August 2011, is an update to the June 2007 report also prepared by LSA. The report provides a summary of trip and parking generation estimated from the revised Great Park Master Plan conceptual design (Minor Modification). The report includes a summary trip and parking generation for build-out of the park, for both weekday and weekend days, as well as an estimation of parking demand by time of day. The tables and assumptions used therein are described in detail within Appendix D of this Addendum.

The results of the August 2011 parking and traffic generation analysis indicate that 2,804 parking spaces would be necessary to accommodate the park visitors on a weekday and 3,842 spaces would be required on a weekend. The conceptual Great Park design includes regular day-to-day parking for 5,505 vehicles. This supply of parking will be more than sufficient to accommodate the parking demand for the entire park at any given time on a typical weekday or weekend.

The August 2011 analysis also found that the maximum daily trip generation of the park modification would be 13,537 trips on a typical weekday. This is below the 19,083 weekday trips calculated in the OCGP FEIR, and therefore no changes to the impact analysis occur.

According to the traffic data used to prepare this Addendum, full build-out of the Great Park Master Plan would result in a total of 19,030, which is below the EIR maximum; however, the EIR traffic analysis is not based on weekend conditions. The weekend trip analysis was conducted for the parking demand calculations and was not included in the original OCGP Final EIR. Weekend conditions are not considered in the environmental analysis because weekday capacities are based on a.m. and p.m. peak hour factors. These weekday a.m. and p.m. peak period factors are the result of a high percent of work trips that occur during these peak hours, coupled with low vehicle occupancy. This condition would be characteristic of the Great Park study area on a typical weekday where a significant number of weekday work trips travel to and from the various commercial office and industrial uses within the study; however, the pronounced a.m. and p.m. peak hour conditions used to derive weekday daily capacities do not occur during the weekend. Please refer to the Land Use Section 4.10 of this document for a description of various OCGP land uses.

Western Sector Development Plan

The Western Sector Development Plan analysis, dated August 2011, identifies potential impacts of the Western Sector Development Plan Project in the study area based on Existing (2008) and Future Year (2015) traffic conditions using the Irvine Transportation Analysis Model (ITAM 8.4).

The Great Park Western Sector Park Development Plan Trip Generation is presented in Table 4.15-1. As presented in the table, the majority of the trip generation rates were based on the Trip Generation Rates developed in the Orange County Great Park Trip Generation and Parking Demand Analysis prepared by LSA Associates, Inc., dated June 18, 2007 and updated in August 2011. The trip generation is also consistent with the previously prepared Great Park Interim Use Permit Traffic Studies including the Preview Park Update for Hangar 244 Traffic and Parking Study (October 21, 2009), the Agricultural IUP Traffic Study (March 27, 2010) and the Western Sector Park Development Plan IUP Traffic and Parking Analysis (April 12, 2010). The trip generation assumptions for the Ice Rink are from the Rinks in Westminster (Appendix L of the Traffic Report).

As presented in the August 2011 traffic study, the proposed Western Sector Development Plan Project would generate approximately 4,635 daily trips, which is significantly below the 19,083 daily trips approved as part of the Great Park EIR. The AM peak hour is forecast at 184 and the PM peak hour at 659.

Table 4.15-1. Great Park Western Sector Development Plan Trip Generation

Traffic Analysis Zone	Use	Size	Units	Trips Generation	
				Daily Auto Trip Generation Rate per Units	Average Daily Trips
931	A. Agriculture	114.0	acres	2.00	228
933	E. Western Picnic Area	6.8	acres	13.71	93
	K. NEG Building *(0.5 acres)*	22,500	sf	18.90	425
	L. Ice Rink – Sheets of Ice	3	sheets	240.00	720
	Total TAZ 993				1,238
991	C. North Lawn *(Passive Recreation)*	18.5	acre	13.71	254
	G. Timeline Central & Timeline West	5.1	acres	4.57	23
	H. South Lawn (Soccer Fields)	4.0	fields	140	560
	Total TAZ 991				837
992	B. Palm Court Open Space	5.8	acres	4.57	27
	Palm Court Hardscape (1.2 Acres)	52,300	sf	18.90	988
	Hangar 244	10,370	sf	18.90	196
	Buildings 242 Exhibition Space	6,400	sf	18.90	121
	Buildings 245-Artists	6,400	sf	18.90	121
	B. Total Palm Court, Hangar 244 and Buildings 242 and 245 [B]				1,453
	D. Farm and Food Lab *(2.7 acres)*	75	persons	0.80	60
	Community Gardens *(1.3 acres)*	99	plots	1	99
	D. Total Farm and Food Lab / Community Gardens [D]				159
	I. Promenade	2.4	acres	4.57	11
	J. Existing Balloon, Tent and Misc. Uses.				660
	Total TAZ 992				**2,283**
Total Great Park Western Sector Park Development Plan					***4,586***

AM/PM Peak Period/Hour		Peak Period		Peak Hour	
		Number	% of ADT	Number	% of ADT
AM Peak Period/Hour	AM Inbound	259	5.6%	158	3.4%
	AM Outbound	60	1.3%	26	0.6%
	AM Total	319	6.9%	184	4.0%
	PM Inbound	844	18.4%	253	5.5%
	PM Outbound	1,044	22.8%	377	8.2%
	PM Total	1,888	41.2%	630	13.7%

Notes:

A. Based on Agricultural use per ITAM which is 2.0 trips per acre.

B. The Palm Court Open Space, Hardscape and Buildings 242 and 245 were based on proposed Great Park Program, Western Sector Park Development Plan Phase I IUP Traffic and Parking Analysis, April 12, 2010. The Hangar 244 trip generation from the Preview Park Update for Hangar 244 Traffic and Parking Study, October 21, 2009.

C. Based on Western Sector Park Development Plan Phase 1 IUP Traffic and Parking Analysis dated April 12, 2010.

D. The Farm and Food Lab/Community Gardens trip generation from the Western Sector Park Development Plan Phase 1 IUP Traffic and Parking Analysis, April 12, 2010.

E. Based on Western Sector Park Development Plan Phase 1 IUP Traffic and Parking Analysis dated April 12, 2010.

F. C Street: Not a Trip Generator

G. Great Park Trip Generation and Parking Analysis, August 2007. This trip generation based on ITE rate for Regional Park rate of 4.57 trips per acre per net acre.

H. Great Park Trip Generation and Parking Analysis, August 2007. Area contains three soccer fields and four basketball courts. Trip generation rate based on 35 vehicles per game, 2 games per weekday.
I. Great Park Trip Generation and Parking Analysis, August 2007. This trip generation based on ITE rate for Regional Park rate of 4.57 trips per acre per net acre.
J. The daily trip generation for the balloon ride and support uses is based on the highest count day over three weekdays along C Street, north of Marine Way.
K. The Nature Education Gardens building and maintenance/nursery area are based on the Exhibition Space from the Great Park Trip Generation and Parking Analysis, August 2007.
L. Irvine Ice Rink daily and peak hour generation based on traffic count and study of the Rinks in Westminster.

The following summarizes the alternatives that were evaluated and included in the August 2011 traffic study. Please note, the August 2011 Traffic Study was initiated prior to submittal of the recently approved Five Point Great Park Neighborhood (GPN) project and SEIR. Alternatives 3A and 4A are not listed below due to the fact that they were associated with the prior Lifelong Learning District and are no longer relevant to the analysis contained in this document.

Alternative 1 Existing Conditions
Alternative 2 Existing plus Western Sector Park Development Plan
Alternative 3B 2015 with Existing Roadway Network and Land Use
Alternative 4B 2015 with Existing Roadway Network and Land Use plus Western Sector Park Development Plan
Alternative 4C 2015 With Existing Roadway Network and Land Use plus Western Sector Park Development Plan plus TVI at 3000 tons per day
Alternative 5A 2015 With Existing Roadway Network and Land Use plus Western Sector Park Development Plan with additional access via Trabuco Road and "C" Street

Alternative 1: Existing Daily Traffic Volumes and Levels of Service

The Existing AM and PM peak hour intersection ICU level of service analysis without the Project is presented in Table 4.15-2. This ICU analysis is based on recent peak hour intersection turn movement counts collected within the past year. These counts and ICU calculation sheets are presented in Appendix B of the Traffic Report (Appendix D of this document). It should also be noted that intersections within the study area but in the City of Lake Forest utilized traffic data from LFTAM.

Based on the Existing Conditions ICU level of service analysis, there are no intersections that exceed the acceptable level of service threshold during the AM or PM peak hour. The addition of the proposed Project does not result in any intersections failing the City's level of service standards. The unsignalized intersection of Marine Way and "C" Street resulted in levels of service within the acceptable thresholds established by the City of Irvine.

Alternative 2: Existing Plus Western Sector Park Development Plan

The second alternative adds the proposed Great Park Western Sector Park Development Plan development traffic to the existing daily and peak hour traffic counts. The forecast additional traffic from the Project is based on the ITAM 8.4 Base Year traffic model. The model changes included the traffic analysis zone splits and network adjustments described in Section IV, plus the addition of Great Park Development Plan daily trips. With a total project increase of 4,586 trips, no significant impacts are anticipated.

The forecast Western Sector Park Development Plan Trip Distribution percentages with the existing network is presented in Figure VI-1 of the August 2011 LSA Traffic Report (Appendix D of this Addendum). The forecast existing plus Western Sector Park Development Plan daily traffic volumes and the resulting daily volume to capacity rations are presented in Figure VI-2 and Figure VI-3 of the August 2011 LSA Traffic Report respectively. When comparing these forecasts with the Existing daily traffic volumes and volume to capacity ratios presented above, the differences are negligible. The ten links identified to exceed the acceptable level of service (LOS) threshold in the Existing condition also exceed acceptable LOS in the Existing Plus Project condition.

The peak hour link volume to capacity ratio analysis for these ten deficient links is presented in Table VI-1 of the August 2011 LSA Traffic Report. All links which exceed the daily volume to capacity thresholds resulted in acceptable peak hour volume to capacity ratios.

Figure VI-4 of the August 2011 LSA Traffic Report presents the Alternative 2 peak hour intersection turn movements for key intersections within close proximity to the Project. The peak hour intersection level of service analysis is presented in Table 4.15-3. This table represents the Existing and the Existing plus Western Sector Park Development Plan ICUs and LOS for comparison. As can be seen, the differences are negligible and the addition of the Project does not create any impacts.

Table 4.15-2. Existing Peak Hour Intersection Levels of Service

ID	Intersection	Max LOS	ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.32	(0.34)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.42	(0.69)	A	(B)
284	Jeffrey Rd. & Bryan Av.	D	0.39	(0.34)	A	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.38	(0.47)	A	(A)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.37	(0.59)	A	(A)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.58	(0.56)	A	(A)
289	Jeffrey Rd. & ICD	D	0.46	(0.65)	A	(B)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.64	(0.61)	B	(B)
291	Jeffrey Rd. & Alton Pkwy.	D	0.79	(0.78)	C	(C)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.68	(0.73)	B	(C)
294	University Dr. & I-405 SB Ramps	D	0.54	(0.52)	A	(A)
300	Sand Canyon Av. & Portola Pkwy.	D	0.20	(0.25)	A	(A)
301	Sand Canyon Av. & Irvine Bl.	D	0.44	(0.36)	A	(A)
302	Sand Canyon Av. & Trabuco Pkwy.	D	0.35	(0.37)	A	(A)
303	Sand Canyon Av. & I-5 NB Ramps	E	0.70	(0.56)	B	(A)
304	Sand Canyon Av. & Marine Wy.	D	0.53	(0.60)	A	(A)
305	Sand Canyon Av. & I-5 SB Ramps	E	0.67	(0.62)	B	(B)
306	Sand Canyon Av. & Oak Cyn./Laguna Cyn. Rd.	D	0.55	(0.54)	A	(A)
307	Sand Canyon Av. & ICD	D	0.38	(0.39)	A	(A)
309	Sand Canyon Av. & Barranca Pkwy.	D	0.40	(0.38)	A	(A)
310	Sand Canyon Av. & Alton Pkwy.	D	0.58	(0.59)	A	(A)
311	Sand Canyon Av. & I-405 NB Ramps	D	0.51	(0.39)	A	(A)
312	Sand Canyon Av. & I-405 SB Ramps	D	0.68	(0.49)	B	(A)
313	Laguna Canyon Rd. & ICD	E	0.19	(0.24)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.26	(0.25)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.40	(0.36)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.37	(0.42)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.43	(0.43)	A	(A)

ID	Intersection	Max LOS	ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)
318	Banting & Barranca Pkwy.	E	0.49	(0.47)	A	(A)
319	Banting & Alton Pkwy.	E	0.48	(0.40)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.80	(0.84)	C	(D)
327	Barranca Pkwy. & Technology	E	0.45	(0.59)	A	(A)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.45	(0.41)	A	(A)
329	Barranca Pkwy. & ICD	E	0.48	(0.49)	A	(A)
330	Barranca Pkwy. & Pacifica	E	0.48	(0.64)	A	(B)
338	Alton Pkwy. & Irvine Bl.	E	0.38	(0.41)	A	(A)
339	Alton Pkwy. & Toledo Wy.	D	0.36	(0.32)	A	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.38	(0.34)	A	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.44	(0.45)	A	(A)
343	Alton Pkwy. & Ada	E	0.41	(0.40)	A	(A)
344	Alton Pkwy. & Technology Dr. W.	E	0.42	(0.56)	A	(A)
345	Alton Pkwy. & I-5 NB Ramps	E	0.64	(0.38)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.58	(0.52)	A	(A)
348	Alton Pkwy. & ICD	D	0.56	(0.51)	A	(A)
350	Alton Pkwy. & Pacifica	D	0.43	(0.31)	A	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.37	(0.65)	A	(B)
358	ICD & Enterprise Dr.	E	0.55	(0.48)	A	(A)
359	ICD & I-405 SB Ramps	E	0.50	(0.51)	A	(A)
362	Bake Pkwy. & Irvine Bl.	E	0.75	(0.75)	C	(C)
363	Bake Pkwy. & Toledo Wy.	D	0.77	(0.63)	C	(B)
364	Bake Pkwy. & Jeronimo Rd.	D	0.85	(0.71)	D	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.59	(0.66)	A	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.55	(0.73)	A	(C)
367	Bake Pkwy. & I-5 NB Ramps	E	0.86	(0.60)	D	(A)
368	Bake Pkwy. & I-5 SB Ramps	E	0.63	(0.74)	B	(C)
372	Bake Pkwy. & ICD	E	0.32	(0.39)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.57	(0.69)	A	(B)
444	Sand Canyon Av. & Burt Rd.	D	0.70	(0.67)	B	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.68	(0.67)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.25	(0.16)	A	(A)
560	C St. & Marine Wy. (3-Way Stop)	D	7.20	(7.50)	A	(A)
572	Modjeska & Irvine Bl.	D	0.30	(0.40)	A	(A)

Table 4.15-3. Alternative 2 – Existing Plus Project Peak Hour Intersection Level of Service Analysis

ID	Intersection	Max LOS	Alternative 1				Alternative 2			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.32	(0.34)	A	(A)	0.32	(0.34)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.42	(0.69)	A	(B)	0.42	(0.69)	A	(B)
284	Jeffrey Rd. & Bryan Av.	D	0.39	(0.34)	A	(A)	0.39	(0.40)	A	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.38	(0.47)	A	(A)	0.38	(0.47)	A	(A)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.37	(0.59)	A	(A)	0.37	(0.59)	A	(A)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.58	(0.56)	A	(A)	0.58	(0.70)	A	(B)
289	Jeffrey Rd. & ICD	D	0.46	(0.65)	A	(B)	0.46	(0.65)	A	(B)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.64	(0.61)	B	(B)	0.65	(0.61)	B	(B)
291	Jeffrey Rd. & Alton Pkwy.	D	0.79	(0.78)	C	(C)	0.80	(0.78)	C	(C)

ID	Intersection	Max LOS	Alternative 1				Alternative 2			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.68	(0.73)	B	(C)	0.68	(0.73)	B	(C)
294	University Dr. & I-405 SB Ramps	D	0.54	(0.52)	A	(A)	0.54	(0.52)	A	(A)
300	Sand Canyon. Av. & Portola Pkwy.	D	0.20	(0.25)	A	(A)	0.23	(0.28)	A	(A)
301	Sand Canyon. Av. & Irvine Bl.	D	0.44	(0.36)	A	(A)	0.44	(0.37)	A	(A)
302	Sand Canyon. Av. & Trabuco Pkwy.	D	0.35	(0.37)	A	(A)	0.36	(0.39)	A	(A)
303	Sand Canyon. Av. & I-5 NB Ramps	E	0.70	(0.56)	B	(A)	0.74	(0.59)	C	(A)
304	Sand Canyon. Av. & Marine Wy.	D	0.53	(0.60)	A	(A)	0.53	(0.76)	A	(C)
305	Sand Canyon. Av. & I-5 SB Ramps	E	0.67	(0.62)	B	(B)	0.67	(0.66)	B	(B)
306	Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.	D	0.55	(0.54)	A	(A)	0.56	(0.54)	A	(A)
307	Sand Canyon. Av. & ICD	D	0.38	(0.39)	A	(A)	0.39	(0.41)	A	(A)
309	Sand Canyon. Av. & Barranca Pkwy.	D	0.40	(0.38)	A	(A)	0.40	(0.38)	A	(A)
310	Sand Canyon. Av. & Alton Pkwy.	D	0.58	(0.59)	A	(A)	0.58	(0.59)	A	(A)
311	Sand Canyon. Av. & I-405 NB Ramps	D	0.51	(0.39)	A	(A)	0.51	(0.39)	A	(A)
312	Sand Canyon. Av. & I-405 SB Ramps	D	0.68	(0.49)	B	(A)	0.69	(0.53)	B	(A)
313	Laguna Canyon Rd. & ICD	E	0.19	(0.24)	A	(A)	0.19	(0.24)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.26	(0.25)	A	(A)	0.26	(0.25)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.40	(0.36)	A	(A)	0.41	(0.36)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.37	(0.42)	A	(A)	0.37	(0.42)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.43	(0.43)	A	(A)	0.43	(0.43)	A	(A)
318	Banting & Barranca Pkwy.	E	0.49	(0.47)	A	(A)	0.51	(0.47)	A	(A)
319	Banting & Alton Pkwy.	E	0.48	(0.40)	A	(A)	0.48	(0.40)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.80	(0.84)	C	(D)	0.80	(0.84)	C	(D)
327	Barranca Pkwy. & Technology	E	0.45	(0.59)	A	(A)	0.45	(0.59)	A	(A)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.45	(0.41)	A	(A)	0.45	(0.42)	A	(A)
329	Barranca Pkwy. & ICD	E	0.48	(0.49)	A	(A)	0.48	(0.49)	A	(A)
330	Barranca Pkwy. & Pacifica	E	0.48	(0.64)	A	(B)	0.48	(0.64)	A	(B)
338	Alton Pkwy. & Irvine Bl.	E	0.38	(0.41)	A	(A)	0.39	(0.42)	A	(A)
339	Alton Pkwy. & Toledo Wy.	D	0.36	(0.32)	A	(A)	0.36	(0.32)	A	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.38	(0.34)	A	(A)	0.38	(0.34)	A	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.44	(0.45)	A	(A)	0.44	(0.45)	A	(A)
343	Alton Pkwy. & Ada	E	0.41	(0.40)	A	(A)	0.41	(0.41)	A	(A)
344	Alton Pkwy. & Technology	E	0.42	(0.56)	A	(A)	0.42	(0.57)	A	(A)

ID	Intersection	Max LOS	Alternative 1				Alternative 2			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
	Dr. W.									
345	Alton Pkwy. & I-5 NB Ramps	E	0.64	(0.38)	B	(A)	0.64	(0.38)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.58	(0.52)	A	(A)	0.58	(0.52)	A	(A)
348	Alton Pkwy. & ICD	D	0.56	(0.51)	A	(A)	0.56	(0.51)	A	(A)
350	Alton Pkwy. & Pacifica	D	0.43	(0.31)	A	(A)	0.43	(0.31)	A	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.37	(0.65)	A	(B)	0.37	(0.65)	A	(B)
358	ICD & Enterprise Dr.	E	0.55	(0.48)	A	(A)	0.56	(0.48)	A	(A)
359	ICD & I-405 SB Ramps	E	0.50	(0.51)	A	(A)	0.50	(0.51)	A	(A)
362	Bake Pkwy. & Irvine Bl.	E	0.75	(0.75)	C	(C)	0.75	(0.76)	C	(C)
363	Bake Pkwy. & Toledo Wy.	D	0.77	(0.63)	C	(B)	0.77	(0.63)	C	(B)
364	Bake Pkwy. & Jeronimo Rd.	D	0.85	(0.71)	D	(C)	0.86	(0.73)	D	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.59	(0.66)	A	(B)	0.59	(0.66)	A	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.55	(0.73)	A	(C)	0.55	(0.73)	A	(C)
367	Bake Pkwy. & I-5 NB Ramps	E	0.86	(0.60)	D	(A)	0.86	(0.60)	D	(A)
368	Bake Pkwy. & I-5 SB Ramps	E	0.63	(0.74)	B	(C)	0.63	(0.76)	B	(C)
372	Bake Pkwy. & ICD	E	0.32	(0.39)	A	(A)	0.32	(0.39)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.57	(0.69)	A	(B)	0.57	(0.69)	A	(B)
444	Sand Canyon Av. & Burt Rd.	D	0.70	(0.67)	B	(B)	0.70	(0.69)	B	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.68	(0.67)	B	(B)	0.68	(0.67)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.25	(0.16)	A	(A)	0.25	(0.17)	A	(A)
560	C St. & Marine Wy. (3-Way Stop)	D	7.20	(7.50)	A	(A)	8.20	(16.00)	A	(B)
572	Modjeska & Irvine Bl.	D	0.30	(0.40)	A	(A)	0.41	(0.40)	A	(A)

Note:
[1] ICU is reported for signalized intersection. Delay is reported for unsignalized intersections.

Alternative 3B: 2015 with Existing Roadway Network and Land Use

This alternative is the ITAM 8.4 2015 baseline land use and roadway alternative assuming existing land uses and roadway network within the Great Park Neighborhoods Lifelong Learning District and assuming the land uses within the Great Park Western Sector Park Development area is limited to existing uses and does not include the proposed development.

This alternative does not include "O" Street between Irvine Boulevard and Marine Way and other Great Park Neighborhoods Lifelong Learning District roadway improvements. Therefore, all traffic from the Great Park Western Sector Park Development Plan area must traverse through the existing intersection of Marine Way and "C" Street/Perimeter Road. This is consistent with the existing roadway network.

The forecast Alternative 3B daily traffic volumes and the resulting daily volume to capacity ratios are presented in Figure VI-12 and Figure VI-13 of the August 2011 LSA Traffic Report respectively.

There are 41 links in which daily volumes exceed the acceptable daily volume to capacity level of service threshold.

The peak hour link volume to capacity ratio analysis is presented in Table VI-7 of the August 2011 LSA Traffic Report. All links which exceed the daily volume to capacity thresholds resulted in acceptable peak hour volume to capacity ratios; therefore no link impacts were identified.

Figure VI-14 of the August 2011 LSA Traffic Report presents the Alternative 3B peak hour intersection turn movements for key intersections within close proximity to the Project. The peak hour intersection level of service analysis is presented in Table 4.15-4. All intersections result in acceptable AM and PM peak hour intersection level of service for all intersections.

Table 4.15-4. Alternative 3B - 2015 Baseline
Peak Hour Intersection Level of Service Analysis

ID	Intersection	Max LOS	ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.50	(0.50)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.66	(0.86)	B	(D)
284	Jeffrey Rd. & Bryan Av.	D	0.65	(0.56)	B	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.66	(0.71)	B	(C)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.56	(0.78)	A	(C)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.71	(0.67)	C	(B)
289	Jeffrey Rd. & ICD	D	0.59	(0.79)	A	(C)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.82	(0.72)	D	(C)
291	Jeffrey Rd. & Alton Pkwy.	D	0.86	(0.82)	D	(D)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.77	(0.83)	C	(D)
294	University Dr. & I-405 SB Ramps	D	0.63	(0.61)	B	(B)
300	Sand Canyon. Av. & Portola Pkwy.	D	0.38	(0.47)	A	(A)
301	Sand Canyon. Av. & Irvine Bl.	D	0.68	(0.56)	B	(A)
302	Sand Canyon. Av. & Trabuco Pkwy.	D	0.60	(0.58)	A	(A)
303	Sand Canyon. Av. & I-5 NB Ramps	E	0.60	(0.70)	A	(B)
304	Sand Canyon. Av. & Marine Wy.	D	0.51	(0.72)	A	(C)
305	Sand Canyon. Av. & I-5 SB Ramps	E	0.72	(0.61)	C	(B)
306	Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.	D	0.62	(0.82)	B	(D)
307	Sand Canyon. Av. & ICD	D	0.55	(0.58)	A	(A)
309	Sand Canyon. Av. & Barranca Pkwy.	D	0.57	(0.52)	A	(A)
310	Sand Canyon. Av. & Alton Pkwy.	D	0.75	(0.71)	C	(C)
311	Sand Canyon. Av. & I-405 NB Ramps	D	0.65	(0.48)	B	(A)
312	Sand Canyon. Av. & I-405 SB Ramps	D	0.85	(0.63)	D	(B)
313	Laguna Canyon Rd. & ICD	E	0.27	(0.34)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.36	(0.34)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.55	(0.49)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.47	(0.52)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.49	(0.53)	A	(A)
318	Banting & Barranca Pkwy.	E	0.66	(0.59)	B	(A)
319	Banting & Alton Pkwy.	E	0.59	(0.52)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.65	(0.66)	B	(B)
327	Barranca Pkwy. & Technology	E	0.50	(0.60)	A	(A)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.48	(0.43)	A	(A)
329	Barranca Pkwy. & ICD	E	0.57	(0.58)	A	(A)

ID	Intersection	Max LOS	ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)
330	Barranca Pkwy. & Pacifica	E	0.49	(0.71)	A	(C)
338	Alton Pkwy. & Irvine Bl.	E	0.85	(0.81)	D	(D)
339	Alton Pkwy. & Toledo Wy.	D	0.63	(0.54)	B	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.61	(0.53)	B	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.57	(0.68)	A	(B)
343	Alton Pkwy. & Ada	E	0.45	(0.43)	A	(A)
344	Alton Pkwy. & Technology Dr. W.	E	0.45	(0.63)	A	(B)
345	Alton Pkwy. & I-5 NB Ramps	E	0.69	(0.46)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.60	(0.67)	A	(B)
348	Alton Pkwy. & ICD	D	0.58	(0.64)	A	(B)
350	Alton Pkwy. & Pacifica	D	0.67	(0.52)	B	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.45	(0.73)	A	(C)
358	ICD & Enterprise Dr.	E	0.72	(0.66)	C	(B)
359	ICD & I-405 SB Ramps	E	0.67	(0.74)	B	(C)
362	Bake Pkwy. & Irvine Bl.	E	0.73	(0.80)	C	(C)
363	Bake Pkwy. & Toledo Wy.	D	0.84	(0.65)	D	(B)
364	Bake Pkwy. & Jeronimo Rd.	D	0.77	(0.74)	C	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.64	(0.69)	B	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.59	(0.84)	A	(D)
367	Bake Pkwy. & I-5 NB Ramps	E	0.89	(0.66)	D	(B)
368	Bake Pkwy. & I-5 SB Ramps	E	0.70	(0.85)	B	(D)
372	Bake Pkwy. & ICD	E	0.38	(0.48)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.61	(0.72)	B	(C)
444	Sand Canyon Av. & Burt Rd.	D	0.76	(0.58)	C	(A)
481	Laguna Canyon Rd. & Technology Dr.	E	0.39	(0.33)	A	(A)
514	Alton Pkwy. & Rancho Pkwy.	D	0.71	(0.58)	C	(A)
518	Alton Pkwy. & Commercentre	D	0.51	(0.64)	A	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.64	(0.68)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.70	(0.44)	B	(A)
560	C St. & Marine Way (3-way stop)	D	8.20	(9.20)	A	(A)
567	Marine Wy. & Alton Pkwy.	E	0.41	(0.40)	A	(A)
572	Modjeska & Irvine Bl.	D	0.47	(0.58)	A	(A)

Note:
[1] ICU is reported for signalized intersection. Delay is reported for unsignalized intersections.

Alternative 4B: 2015 with Existing Roadway Network and Land Use plus Western Sector Park Development Plan

This alternative is the ITAM 8.4 2015 baseline land use and roadway alternative assuming existing land uses and roadway network within the Great Park Neighborhoods Lifelong Learning District with the addition of the Great Park Western Sector Park Development Plan proposed land uses.

Consistent with Alternative 3B, this alternative does not include "O" Street between Irvine Boulevard and Marine Way. Therefore all traffic from the Great Park Western Sector Park Development Plan must traverse through the existing intersection of Marine Way and "C" Street/Perimeter Road and the existing on-site roadway network.

The Project trip distribution is presented in Figure VI-15 of the August 2011 LSA Traffic Report. The forecast Alternative 4B daily traffic volumes and the resulting daily volume to capacity rations are

presented in Figure VI-16 and Figure VI-17 of the August 2011 LSA Traffic Report respectively. When comparing these forecasts with Alternative 3B: 2015 With Existing Roadway Network and Land Use, the same 41 links that exceed the daily volume to capacity ratio result.

The peak hour link volume to capacity ratio analysis is presented in Table VI-9 of the August 2011 LSA Traffic Report. All links which exceed the daily volume to capacity thresholds resulted in acceptable peak hour volume to capacity ratios; therefore no link impacts were identified.

Figure VI-18 of the August 2011 LSA Traffic Report presents the Alternative 4B peak hour intersection turn movements for key intersections within close proximity to the Project. The peak hour intersection level of service analysis is presented in Table 4.15-5. This table presents both Alternative 3B, the 2015 Baseline with Existing Roadway Network and Land Use and Alternative 4B which adds the Great Park Western Sector Park Development Plan. All intersections would result in acceptable levels of service for the AM and PM peak hours. The Project does not add any additional impact at this intersection.

Table 4.15-5. Alternative 4B - 2015 Baseline Plus Project
Peak Hour Intersection Level of Service Analysis

ID	Intersection	Max LOS	Alternative 3B				Alternative 4B			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.50	(0.50)	A	(A)	0.50	(0.50)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.66	(0.86)	B	(D)	0.65	(0.87)	B	(D)
284	Jeffrey Rd. & Bryan Av.	D	0.65	(0.56)	B	(A)	0.65	(0.55)	B	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.66	(0.71)	B	(C)	0.65	(0.70)	B	(B)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.56	(0.78)	A	(C)	0.56	(0.78)	A	(C)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.71	(0.67)	C	(B)	0.71	(0.67)	C	(B)
289	Jeffrey Rd. & ICD	D	0.59	(0.79)	A	(C)	0.59	(0.79)	A	(C)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.82	(0.72)	D	(C)	0.82	(0.73)	D	(C)
291	Jeffrey Rd. & Alton Pkwy.	D	0.86	(0.82)	D	(D)	0.86	(0.83)	D	(D)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.77	(0.83)	C	(D)	0.78	(0.83)	C	(D)
294	University Dr. & I-405 SB Ramps	D	0.63	(0.61)	B	(B)	0.63	(0.61)	B	(B)
300	Sand Canyon. Av. & Portola Pkwy.	D	0.38	(0.47)	A	(A)	0.37	(0.46)	A	(A)
301	Sand Canyon. Av. & Irvine Bl.	D	0.68	(0.56)	B	(A)	0.68	(0.55)	B	(A)
302	Sand Canyon. Av. & Trabuco Pkwy.	D	0.60	(0.58)	A	(A)	0.60	(0.59)	A	(A)
303	Sand Canyon. Av. & I-5 NB Ramps	E	0.60	(0.70)	A	(B)	0.62	(0.72)	B	(C)
304	Sand Canyon. Av. & Marine Wy.	D	0.51	(0.72)	A	(C)	0.50	(0.82)	A	(D)
305	Sand Canyon. Av. & I-5 SB Ramps	E	0.72	(0.61)	C	(B)	0.72	(0.63)	C	(B)
306	Sand Canyon. Av. &	D	0.62	(0.82)	B	(D)	0.62	(0.82)	B	(D)

ID	Intersection	Max LOS	Alternative 3B				Alternative 4B			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
	Oak Cyn./Laguna Cyn. Rd.									
307	Sand Canyon. Av. & ICD	D	0.55	(0.58)	A	(A)	0.55	(0.59)	A	(A)
309	Sand Canyon. Av. & Barranca Pkwy.	D	0.57	(0.52)	A	(A)	0.57	(0.52)	A	(A)
310	Sand Canyon. Av. & Alton Pkwy.	D	0.75	(0.71)	C	(C)	0.75	(0.71)	C	(C)
311	Sand Canyon. Av. & I-405 NB Ramps	D	0.65	(0.48)	B	(A)	0.65	(0.48)	B	(A)
312	Sand Canyon. Av. & I-405 SB Ramps	D	0.85	(0.63)	D	(B)	0.85	(0.63)	D	(B)
313	Laguna Canyon Rd. & ICD	E	0.27	(0.34)	A	(A)	0.26	(0.35)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.36	(0.34)	A	(A)	0.36	(0.34)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.55	(0.49)	A	(A)	0.55	(0.49)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.47	(0.52)	A	(A)	0.47	(0.52)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.49	(0.53)	A	(A)	0.49	(0.53)	A	(A)
318	Banting & Barranca Pkwy.	E	0.66	(0.59)	B	(A)	0.66	(0.61)	B	(A)
319	Banting & Alton Pkwy.	E	0.59	(0.52)	A	(A)	0.59	(0.52)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.65	(0.66)	B	(B)	0.65	(0.66)	B	(B)
327	Barranca Pkwy. & Technology	E	0.50	(0.60)	A	(A)	0.49	(0.61)	A	(B)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.48	(0.43)	A	(A)	0.48	(0.43)	A	(A)
329	Barranca Pkwy. & ICD	E	0.57	(0.58)	A	(A)	0.56	(0.58)	A	(A)
330	Barranca Pkwy. & Pacifica	E	0.49	(0.71)	A	(C)	0.49	(0.72)	A	(C)
338	Alton Pkwy. & Irvine Bl.	E	0.85	(0.81)	D	(D)	0.85	(0.82)	D	(D)
339	Alton Pkwy. & Toledo Wy.	D	0.63	(0.54)	B	(A)	0.63	(0.55)	B	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.61	(0.53)	B	(A)	0.61	(0.53)	B	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.57	(0.68)	A	(B)	0.56	(0.68)	A	(B)
343	Alton Pkwy. & Ada	E	0.45	(0.43)	A	(A)	0.45	(0.43)	A	(A)
344	Alton Pkwy. & Technology Dr. W.	E	0.45	(0.63)	A	(B)	0.45	(0.64)	A	(B)
345	Alton Pkwy. & I-5 NB Ramps	E	0.69	(0.46)	B	(A)	0.69	(0.46)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.60	(0.67)	A	(B)	0.61	(0.67)	B	(B)
348	Alton Pkwy. & ICD	D	0.58	(0.64)	A	(B)	0.58	(0.64)	A	(B)
350	Alton Pkwy. & Pacifica	D	0.67	(0.52)	B	(A)	0.67	(0.52)	B	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.45	(0.73)	A	(C)	0.45	(0.73)	A	(C)
358	ICD & Enterprise Dr.	E	0.72	(0.66)	C	(B)	0.72	(0.66)	C	(B)
359	ICD & I-405 SB Ramps	E	0.67	(0.74)	B	(C)	0.66	(0.75)	B	(C)
362	Bake Pkwy. & Irvine Bl.	E	0.73	(0.80)	C	(C)	0.74	(0.79)	C	(C)
363	Bake Pkwy. & Toledo	D	0.84	(0.65)	D	(B)	0.84	(0.64)	D	(B)

ID	Intersection	Max LOS	Alternative 3B				Alternative 4B			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
	Wy.									
364	Bake Pkwy. & Jeronimo Rd.	D	0.77	(0.74)	C	(C)	0.76	(0.74)	C	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.64	(0.69)	B	(B)	0.63	(0.69)	B	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.59	(0.84)	A	(D)	0.58	(0.84)	A	(D)
367	Bake Pkwy. & I-5 NB Ramps	E	0.89	(0.66)	D	(B)	0.89	(0.67)	D	(B)
368	Bake Pkwy. & I-5 SB Ramps	E	0.70	(0.85)	B	(D)	0.70	(0.85)	B	(D)
372	Bake Pkwy. & ICD	E	0.38	(0.48)	A	(A)	0.38	(0.48)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.61	(0.72)	B	(C)	0.61	(0.72)	B	(C)
444	Sand Canyon Av. & Burt Rd.	D	0.76	(0.58)	C	(A)	0.76	(0.58)	C	(A)
481	Laguna Canyon Rd. & Technology Dr.	E	0.39	(0.33)	A	(A)	0.38	(0.34)	A	(A)
514	Alton Pkwy. & Rancho Pkwy.	D	0.71	(0.58)	C	(A)	0.71	(0.59)	C	(A)
518	Alton Pkwy. & Commercentre	D	0.51	(0.64)	A	(B)	0.51	(0.64)	A	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.64	(0.68)	B	(B)	0.64	(0.68)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.70	(0.44)	B	(A)	0.70	(0.45)	B	(A)
560	C St. & Marine Way (3-way stop)	D	8.20	(9.20)	A	(A)	8.70	(17.70)	A	(C)
567	Marine Wy. & Alton Pkwy.	E	0.41	(0.40)	A	(A)	0.41	(0.41)	A	(A)
572	Modjeska & Irvine Bl.	D	0.47	(0.58)	A	(A)	0.47	(0.58)	A	(A)

Note:
[1] ICU is reported for signalized intersection. Delay is reported for unsignalized intersections.

Alternative 4C: 2015 With Existing Roadway Network and Land Use plus Western Sector Park Development Plan Plus TVI at 3,000 Tons Per Day

Tierra Verde Industries (TVI), a composting and materials recovery facility located along Marine Way, south and east of the Marine Way and "C" Street/Perimeter Road intersection is proposing to expand its existing facility. Their request for increase is to 3,000 tons per day.

Based on current daily traffic counts, TVI generates 1,556 daily trips. The expansion to 3,000 tons per day would equate to 3,423 total trips or an increase of 1,867 daily trips. The TVI expansion would also generate 138 AM and 152 PM peak hour trips.

These additional 1,867 daily trips were added to the 2015 With Existing Roadway Network and Land Use plus the Western Sector Park Development Plan.

The forecast Alternative 4C daily traffic volumes and the resulting daily volume to capacity ratios are presented in Figure VI-19 and Figure VI-20 of the August 2011 LSA Traffic Report respectively. When

comparing these forecasts with Alternative 4B: 2015 Existing Roadway Network and Land Use plus the Great Park Western Sector Park Development Plan, the addition of the TVI development adds two additional links along Irvine Boulevard (43 instead of 41) to those links that exceed the daily volume to capacity ratio.

The peak hour link volume to capacity ratio analysis is presented in Table VI-11 of the August 2011 LSA Traffic Report. All 43 links which exceed the daily volume to capacity thresholds resulted in acceptable peak hour volume to capacity ratios.

The peak hour intersection turn movements for key intersections within proximity of the Project are presented in Figure VI-21. The peak hour intersection level of service analysis is presented in Table 4.15-6. This table presents both Alternative 4B, the 2015 With Existing Roadway Network and Land Use with the Great Park Western Sector Park Development Plan and Alternative 4C which adds the future traffic from the proposed TVI development. There were no intersections that resulted in unacceptable levels of service for Alternative 4B without the expanded TVI. However with the addition of TVI the intersection of Marine Way and "C" Street/Perimeter Road was found to have peak hour intersection delay during the PM peak hour. With signalization, this intersection would operate at acceptable levels of service with the additional TVI traffic.

Table 4.15-6. Alternative 4C - 2015 Baseline Plus Project and TVI Intersection Level of Service Analysis

ID	Intersection	Max LOS	Alternative 3B				Alternative 4B				Alternative 4C			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.50	(0.50)	A	(A)	0.50	(0.50)	A	(A)	0.50	(0.49)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.66	(0.86)	B	(D)	0.65	(0.87)	B	(D)	0.66	(0.86)	B	(D)
284	Jeffrey Rd. & Bryan Av.	D	0.65	(0.56)	B	(A)	0.65	(0.55)	B	(A)	0.64	(0.55)	B	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.66	(0.71)	B	(C)	0.65	(0.70)	B	(B)	0.65	(0.70)	B	(B)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.56	(0.78)	A	(C)	0.56	(0.78)	A	(C)	0.56	(0.78)	A	(C)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.71	(0.67)	C	(B)	0.71	(0.67)	C	(B)	0.71	(0.66)	C	(B)
289	Jeffrey Rd. & ICD	D	0.59	(0.79)	A	(C)	0.59	(0.79)	A	(C)	0.59	(0.79)	A	(C)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.82	(0.72)	D	(C)	0.82	(0.73)	D	(C)	0.82	(0.72)	D	(C)
291	Jeffrey Rd. & Alton Pkwy.	D	0.86	(0.82)	D	(D)	0.86	(0.83)	D	(D)	0.86	(0.82)	D	(D)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.77	(0.83)	C	(D)	0.78	(0.83)	C	(D)	0.77	(0.83)	C	(D)
294	University Dr. & I-405 SB Ramps	D	0.63	(0.61)	B	(B)	0.63	(0.61)	B	(B)	0.63	(0.61)	B	(B)
300	Sand Canyon. Av. & Portola Pkwy.	D	0.38	(0.47)	A	(A)	0.37	(0.46)	A	(A)	0.37	(0.47)	A	(A)
301	Sand Canyon. Av. & Irvine Bl.	D	0.68	(0.56)	B	(A)	0.68	(0.55)	B	(A)	0.69	(0.55)	B	(A)
302	Sand Canyon. Av. & Trabuco Pkwy.	D	0.60	(0.58)	A	(A)	0.60	(0.59)	A	(A)	0.61	(0.59)	B	(A)
303	Sand Canyon. Av. & I-5 NB Ramps	E	0.60	(0.70)	A	(B)	0.62	(0.72)	B	(C)	0.63	(0.72)	B	(C)
304	Sand Canyon. Av. & Marine Wy.	D	0.51	(0.72)	A	(C)	0.50	(0.82)	A	(D)	0.51	(0.86)	A	(D)
305	Sand Canyon. Av. & I-5 SB Ramps	E	0.72	(0.61)	C	(B)	0.72	(0.63)	C	(B)	0.72	(0.64)	C	(B)
306	Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.	D	0.62	(0.82)	B	(D)	0.62	(0.82)	B	(D)	0.62	(0.82)	B	(D)
307	Sand Canyon. Av. & ICD	D	0.55	(0.58)	A	(A)	0.55	(0.59)	A	(A)	0.55	(0.60)	A	(A)
309	Sand Canyon. Av. &	D	0.57	(0.52)	A	(A)	0.57	(0.52)	A	(A)	0.56	(0.52)	A	(A)

ID	Intersection	Max LOS	Alternative 3B				Alternative 4B				Alternative 4C			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
	Barranca Pkwy.													
310	Sand Canyon. Av. & Alton Pkwy.	D	0.75	(0.71)	C	(C)	0.75	(0.71)	C	(C)	0.74	(0.71)	C	(C)
311	Sand Canyon. Av. & I-405 NB Ramps	D	0.65	(0.48)	B	(A)	0.65	(0.48)	B	(A)	0.65	(0.49)	B	(A)
312	Sand Canyon. Av. & I-405 SB Ramps	D	0.85	(0.63)	D	(B)	0.85	(0.63)	D	(B)	0.85	(0.64)	D	(B)
313	Laguna Canyon Rd. & ICD	E	0.27	(0.34)	A	(A)	0.26	(0.35)	A	(A)	0.27	(0.35)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.36	(0.34)	A	(A)	0.36	(0.34)	A	(A)	0.35	(0.34)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.55	(0.49)	A	(A)	0.55	(0.49)	A	(A)	0.55	(0.49)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.47	(0.52)	A	(A)	0.47	(0.52)	A	(A)	0.47	(0.52)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.49	(0.53)	A	(A)	0.49	(0.53)	A	(A)	0.49	(0.53)	A	(A)
318	Banting & Barranca Pkwy.	E	0.66	(0.59)	B	(A)	0.66	(0.61)	B	(A)	0.66	(0.61)	B	(B)
319	Banting & Alton Pkwy.	E	0.59	(0.52)	A	(A)	0.59	(0.52)	A	(A)	0.58	(0.52)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.65	(0.66)	B	(B)	0.65	(0.66)	B	(B)	0.65	(0.66)	B	(B)
327	Barranca Pkwy. & Technology	E	0.50	(0.60)	A	(A)	0.49	(0.61)	A	(B)	0.49	(0.61)	A	(B)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.48	(0.43)	A	(A)	0.48	(0.43)	A	(A)	0.48	(0.44)	A	(A)
329	Barranca Pkwy. & ICD	E	0.57	(0.58)	A	(A)	0.56	(0.58)	A	(A)	0.56	(0.58)	A	(A)
330	Barranca Pkwy. & Pacifica	E	0.49	(0.71)	A	(C)	0.49	(0.72)	A	(C)	0.49	(0.72)	A	(C)
338	Alton Pkwy. & Irvine Bl.	E	0.85	(0.81)	D	(D)	0.85	(0.82)	D	(D)	0.86	(0.82)	D	(D)
339	Alton Pkwy. & Toledo Wy.	D	0.63	(0.54)	B	(A)	0.63	(0.55)	B	(A)	0.64	(0.55)	B	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.61	(0.53)	B	(A)	0.61	(0.53)	B	(A)	0.61	(0.53)	B	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.57	(0.68)	A	(B)	0.56	(0.68)	A	(B)	0.56	(0.68)	A	(B)
343	Alton Pkwy. & Ada	E	0.45	(0.43)	A	(A)	0.45	(0.43)	A	(A)	0.46	(0.43)	A	(A)
344	Alton Pkwy. &	E	0.45	(0.63)	A	(B)	0.45	(0.64)	A	(B)	0.46	(0.63)	A	(B)

ID	Intersection	Max LOS	Alternative 3B				Alternative 4B				Alternative 4C			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
	Technology Dr. W.													
345	Alton Pkwy. & I-5 NB Ramps	E	0.69	(0.46)	B	(A)	0.69	(0.46)	B	(A)	0.69	(0.46)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.60	(0.67)	A	(B)	0.61	(0.67)	B	(B)	0.60	(0.67)	A	(B)
348	Alton Pkwy. & ICD	D	0.58	(0.64)	A	(B)	0.58	(0.64)	A	(B)	0.58	(0.64)	A	(B)
350	Alton Pkwy. & Pacifica	D	0.67	(0.52)	B	(A)	0.67	(0.52)	B	(A)	0.67	(0.52)	B	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.45	(0.73)	A	(C)	0.45	(0.73)	A	(C)	0.45	(0.73)	A	(C)
358	ICD & Enterprise Dr.	E	0.72	(0.66)	C	(B)	0.72	(0.66)	C	(B)	0.72	(0.66)	C	(B)
359	ICD & I-405 SB Ramps	E	0.67	(0.74)	B	(C)	0.66	(0.75)	B	(C)	0.67	(0.74)	B	(C)
362	Bake Pkwy. & Irvine Bl.	E	0.73	(0.80)	C	(C)	0.74	(0.79)	C	(C)	0.73	(0.80)	C	(C)
363	Bake Pkwy. & Toledo Wy.	D	0.84	(0.65)	D	(B)	0.84	(0.64)	D	(B)	0.84	(0.64)	D	(B)
364	Bake Pkwy. & Jeronimo Rd.	D	0.77	(0.74)	C	(C)	0.76	(0.74)	C	(C)	0.76	(0.73)	C	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.64	(0.69)	B	(B)	0.63	(0.69)	B	(B)	0.64	(0.69)	B	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.59	(0.84)	A	(D)	0.58	(0.84)	A	(D)	0.58	(0.83)	A	(D)
367	Bake Pkwy. & I-5 NB Ramps	E	0.89	(0.66)	D	(B)	0.89	(0.67)	D	(B)	0.89	(0.67)	D	(B)
368	Bake Pkwy. & I-5 SB Ramps	E	0.70	(0.85)	B	(D)	0.70	(0.85)	B	(D)	0.70	(0.85)	B	(D)
372	Bake Pkwy. & ICD	E	0.38	(0.48)	A	(A)	0.38	(0.48)	A	(A)	0.37	(0.48)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.61	(0.72)	B	(C)	0.61	(0.72)	B	(C)	0.61	(0.72)	B	(C)
444	Sand Canyon Av. & Burt Rd.	D	0.76	(0.58)	C	(A)	0.76	(0.58)	C	(A)	0.76	(0.58)	C	(A)
481	Laguna Canyon Rd. & Technology Dr.	E	0.39	(0.33)	A	(A)	0.38	(0.34)	A	(A)	0.39	(0.34)	A	(A)
514	Alton Pkwy. & Rancho Pkwy.	D	0.71	(0.58)	C	(A)	0.71	(0.59)	C	(A)	0.71	(0.59)	C	(A)
518	Alton Pkwy. & Commercentre	D	0.51	(0.64)	A	(B)	0.51	(0.64)	A	(B)	0.51	(0.64)	A	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.64	(0.68)	B	(B)	0.64	(0.68)	B	(B)	0.64	(0.68)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.70	(0.44)	B	(A)	0.70	(0.45)	B	(A)	0.70	(0.45)	B	(A)

ID	Intersection	Max LOS	Alternative 3B				Alternative 4B				Alternative 4C			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
560	C St. & Marine Way (3-way stop)	D	8.20	(9.20)	A	(A)	8.70	(17.70)	A	(C)	10.00	(25.90)	A	(D)
560	C St. & Marine Way (Signalized)	D	n/a								0.28	(0.55)	A	(A)
567	Marine Wy. & Alton Pkwy.	E	0.41	(0.40)	A	(A)	0.41	(0.41)	A	(A)	0.41	(0.41)	A	(A)
572	Modjeska & Irvine Bl.	D	0.47	(0.58)	A	(A)	0.47	(0.58)	A	(A)	0.46	(0.58)	A	(A)

Note:
[1] ICU is reported for signalized intersection. Delay is reported for unsignalized intersections.

Alternative 5A: 2015 With Existing Roadway Network and Land Use Plus Western Sector Park Development Plan With Additional Access Via Trabuco Road and "C" Street

All 2015 Baseline alternatives identified in this addendum require all Western Sector Park Development Plan traffic to travel through the Marine Way and "C" Street/Perimeter Road intersection. In this alternative, "C" Street continues north of the Western Sector Park Development Plan property line and continues until it intersects with Trabuco Road thereby allowing utilization of Trabuco Road as an access point for traffic to and from the Western Sector Park Development.

The Project trip distribution is presented in Figure VI-22. Based on the ITAM Traffic Model, 30 percent of the Great Park Western Sector Park Development Plan traffic would divert north to the new Trabuco connection, depending on AM or PM peak hour and inbound versus outbound.

The forecast Alternative 5A daily traffic volumes and the resulting daily volume to capacity ratios are presented in Figure VI-23 and Figure VI-24 of the August 2011 LSA Traffic Report respectively. When comparing these forecasts with Alternative 4B: 2015 Baseline With Existing Network and Land Use Plus the Great Park Western Sector Park Development Plan without the northerly connection, there are no changes to the number of links where the daily volume to capacity ratio exceeds the daily level of service threshold.

The peak hour link volume to capacity ratio analysis is presented in Table VI-13 of the August 2011 LSA Traffic Report. All links which exceed the daily volume to capacity thresholds resulted in acceptable peak hour volume to capacity ratios.

Figure VI-25 of the August 2011 LSA Traffic Report presents the Alternative 5A peak hour turn movements at intersections adjacent to the project. The peak hour intersection level of service analysis is presented in Table 4.15-7. This table presents both Alternative 4B, the 2015 With Existing Roadway Network and Land Use Plus Western Sector Park Development Plan without a connection to the north and 5A, with a connection to the north. As can be seen, the differences are negligible and connection to the north does not provide a major impact or benefit based on the ITAM travel model methodology. It should be noted, however, that the Great Park Western Sector Park Development Plan does have events where the peak is quite pronounced at times other than the traditional AM or PM peak hour. Under those conditions, a second access to the north would provide for improved traffic flow and better ingress and egress. It should be noted that future authorization from Heritage Fields would be required for access to Trabuco Road.

Table 4.15-7. Alternative 5A - 2015 Baseline Plus Project With Trabuco Road Access Intersection Level of Service Analysis

ID	Intersection	Max LOS	Alternative 4B				Alternative 5A			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.50	(0.50)	A	(A)	0.50	(0.50)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.65	(0.87)	B	(D)	0.66	(0.87)	B	(D)
284	Jeffrey Rd. & Bryan Av.	D	0.65	(0.55)	B	(A)	0.65	(0.56)	B	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.65	(0.70)	B	(B)	0.66	(0.71)	B	(C)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.56	(0.78)	A	(C)	0.56	(0.77)	A	(C)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.71	(0.67)	C	(B)	0.71	(0.67)	C	(B)
289	Jeffrey Rd. & ICD	D	0.59	(0.79)	A	(C)	0.59	(0.79)	A	(C)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.82	(0.73)	D	(C)	0.82	(0.72)	D	(C)
291	Jeffrey Rd. & Alton Pkwy.	D	0.86	(0.83)	D	(D)	0.86	(0.82)	D	(D)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.78	(0.83)	C	(D)	0.77	(0.84)	C	(D)
294	University Dr. & I-405 SB Ramps	D	0.63	(0.61)	B	(B)	0.63	(0.62)	B	(B)
300	Sand Canyon. Av. & Portola Pkwy.	D	0.37	(0.46)	A	(A)	0.37	(0.46)	A	(A)
301	Sand Canyon. Av. & Irvine Bl.	D	0.68	(0.55)	B	(A)	0.68	(0.55)	B	(A)
302	Sand Canyon. Av. & Trabuco Pkwy.	D	0.60	(0.59)	A	(A)	0.59	(0.62)	A	(B)
303	Sand Canyon. Av. & I-5 NB Ramps	E	0.62	(0.72)	B	(C)	0.61	(0.70)	B	(B)
304	Sand Canyon. Av. & Marine Wy.	D	0.50	(0.82)	A	(D)	0.51	(0.79)	A	(C)
305	Sand Canyon. Av. & I-5 SB Ramps	E	0.72	(0.63)	C	(B)	0.73	(0.64)	C	(B)
306	Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.	D	0.62	(0.82)	B	(D)	0.62	(0.83)	B	(D)
307	Sand Canyon. Av. & ICD	D	0.55	(0.59)	A	(A)	0.55	(0.60)	A	(A)
309	Sand Canyon. Av. & Barranca Pkwy.	D	0.57	(0.52)	A	(A)	0.56	(0.52)	A	(A)
310	Sand Canyon. Av. & Alton Pkwy.	D	0.75	(0.71)	C	(C)	0. 74	(0.71)	C	(C)
311	Sand Canyon. Av. & I-405 NB Ramps	D	0.65	(0.48)	B	(A)	0.65	(0.49)	B	(A)
312	Sand Canyon. Av. & I-405 SB Ramps	D	0.85	(0.63)	D	(B)	0.85	(0.63)	D	(B)
313	Laguna Canyon Rd. & ICD	E	0.26	(0.35)	A	(A)	0.27	(0.35)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.36	(0.34)	A	(A)	0.36	(0.34)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.55	(0.49)	A	(A)	0.55	(0.49)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.47	(0.52)	A	(A)	0.47	(0.52)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.49	(0.53)	A	(A)	0.49	(0.53)	A	(A)
318	Banting & Barranca Pkwy.	E	0.66	(0.61)	B	(A)	0.66	(0.61)	B	(B)
319	Banting & Alton Pkwy.	E	0.59	(0.52)	A	(A)	0.59	(0.52)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.65	(0.66)	B	(B)	0.65	(0.66)	B	(B)

ID	Intersection	Max LOS	Alternative 4B				Alternative 5A			
			ICU/Delay[1]		LOS		ICU/Delay[1]		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
327	Barranca Pkwy. & Technology	E	0.49	(0.61)	A	(B)	0.50	(0.61)	A	(B)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.48	(0.43)	A	(A)	0.48	(0.43)	A	(A)
329	Barranca Pkwy. & ICD	E	0.56	(0.58)	A	(A)	0.56	(0.58)	A	(A)
330	Barranca Pkwy. & Pacifica	E	0.49	(0.72)	A	(C)	0.49	(0.72)	A	(C)
338	Alton Pkwy. & Irvine Bl.	E	0.85	(0.82)	D	(D)	0.85	(0.83)	D	(D)
339	Alton Pkwy. & Toledo Wy.	D	0.63	(0.55)	B	(A)	0.64	(0.55)	B	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.61	(0.53)	B	(A)	0.61	(0.53)	B	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.56	(0.68)	A	(B)	0.56	(0.68)	A	(B)
343	Alton Pkwy. & Ada	E	0.45	(0.43)	A	(A)	0.45	(0.43)	A	(A)
344	Alton Pkwy. & Technology Dr. W.	E	0.45	(0.64)	A	(B)	0.45	(0.63)	A	(B)
345	Alton Pkwy. & I-5 NB Ramps	E	0.69	(0.46)	B	(A)	0.69	(0.46)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.61	(0.67)	B	(B)	0.61	(0.67)	B	(B)
348	Alton Pkwy. & ICD	D	0.58	(0.64)	A	(B)	0.58	(0.64)	A	(B)
350	Alton Pkwy. & Pacifica	D	0.67	(0.52)	B	(A)	0.66	(0.52)	B	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.45	(0.73)	A	(C)	0.45	(0.73)	A	(C)
358	ICD & Enterprise Dr.	E	0.72	(0.66)	C	(B)	0.72	(0.66)	C	(B)
359	ICD & I-405 SB Ramps	E	0.66	(0.75)	B	(C)	0.66	(0.74)	B	(C)
362	Bake Pkwy. & Irvine Bl.	E	0.74	(0.79)	C	(C)	0.73	(0.80)	C	(C)
363	Bake Pkwy. & Toledo Wy.	D	0.84	(0.64)	D	(B)	0.83	(0.64)	D	(B)
364	Bake Pkwy. & Jeronimo Rd.	D	0.76	(0.74)	C	(C)	0.76	(0.74)	C	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.63	(0.69)	B	(B)	0.64	(0.69)	B	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.58	(0.84)	A	(D)	0.58	(0.83)	A	(D)
367	Bake Pkwy. & I-5 NB Ramps	E	0.89	(0.67)	D	(B)	0.89	(0.67)	D	(B)
368	Bake Pkwy. & I-5 SB Ramps	E	0.70	(0.85)	B	(D)	0.70	(0.85)	B	(D)
372	Bake Pkwy. & ICD	E	0.38	(0.48)	A	(A)	0.37	(0.48)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.61	(0.72)	B	(C)	0.61	(0.72)	B	(C)
444	Sand Canyon Av. & Burt Rd.	D	0.76	(0.58)	C	(A)	0.76	(0.58)	C	(A)
481	Laguna Canyon Rd. & Technology Dr.	E	0.38	(0.34)	A	(A)	0.38	(0.34)	A	(A)
514	Alton Pkwy. & Rancho Pkwy.	D	0.71	(0.59)	C	(A)	0.71	(0.58)	C	(A)
518	Alton Pkwy. & Commercentre	D	0.51	(0.64)	A	(B)	0.51	(0.64)	A	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.64	(0.68)	B	(B)	0.64	(0.68)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.70	(0.45)	B	(A)	0.70	(0.45)	B	(A)
560	C St. & Marine Way (3-way stop)	D	8.70	(17.70)	A	(C)	8.40	(11.80)	A	(B)
567	Marine Wy. & Alton Pkwy.	E	0.41	(0.41)	A	(A)	0.41	(0.41)	A	(A)
572	Modjeska & Irvine Bl.	D	0.47	(0.58)	A	(A)	0.46	(0.57)	A	(A)
580	C St. & Trabuco Rd. (2-way stop)	D	Doesn't Exist				9.60	(9.90)	A	(A)

Note:
[1] ICU is reported for signalized intersection. Delay is reported for unsignalized intersections.

SENSITIVITY ANALYSIS – BASKETBALL AND HANDBALL COURTS

In addition to the land uses proposed for the Western Sector Park Development Plan, four basketball courts and two handball courts are being proposed. A sensitivity analysis was conducted, which concluded a finding of no significant impact. Therefore, these amenities would not require any new mitigation.

SPECIAL EVENTS

- OCGP would need to acquire a Special Event Permit from the City for all special events, which would include proposed conditions that would be implemented to control excess event traffic.

Conclusion

The Project would not produce new or substantially increase the severity of significant impacts previously identified in the OCGP FEIR. Consistent with the conclusions in the OCGP FEIR, traffic and circulation impacts associated with the Project would be less than significant as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation.

The OCGP FEIR also disclosed the traffic analysis assumption that the cumulative impact of the adopted Overlay Plan traffic along with other regional growth at the identified ramp and freeway locations would be mitigated through a combination of regional programs that are the responsibility of other agencies, and if said programs are not implemented the cumulative freeway/toll-way ramp impacts would remain significant and unavoidable (OCGP FEIR page 7-19). The proposed Project would not alter this conclusion.

The Western Sector Park Development Plan (WSPDP) Phase 1 Traffic Study was initiated and a scope of work was approved prior to submittal of the recently approved Five Point Great Park Neighborhood (GPN) project and SEIR. Therefore, the WSPDP traffic study assumed, as background traffic for 2015 conditions, the previously approved Lifelong Learning District land uses. The conclusions of the WSPDP 2015 traffic study are that there are no significant environmental impacts.

In addition, the results of the OCGP Traffic Generation and Parking Demand analysis demonstrated that the modified Master Plan generated less traffic than analyzed in the original EIR and concluded that no new impacts were identified.

The SEIR for GPN assumed the WSPDP Phase I project although at a lower PM peak hour trip generation. This occurred due to additional uses added to the WSPDP after the SEIR analysis was initiated. The additional PM peak hour trips that would be added to the adjacent circulation system have been analyzed.

A review of the GPN traffic report, Chapter 5, indicates that there are no intersections within the immediate vicinity that are near the thresholds of exceeding capacities such that the additional trips would result in a significant impact. The highest ICU levels are Sand Canyon/Oak at 0.84, Irvine Boulevard/O Street at 0.85, and Irvine Boulevard/LQ Street at 0.82. Nominal levels of park traffic would impact these

three locations. All other intersections are at Level of Service C (ICU 0.79) or better. The additional 350 PM peak hour trips added to the SEIR analyses would not change the conclusions.

In conclusion, it has been technically demonstrated through traffic studies for the WSPDP project as well as the GPN SEIR that the WSPDP project will not cause any significant environmental traffic impacts.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project would have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the Project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the Project or additional mitigation measures that would substantially reduce one or more of the significant transportation/circulation-related effects identified in and considered by the certified OCGP FEIR.

4.15.5 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified mitigation measures TRAN1 through TRAN8 which, if fulfilled prior to specified development approvals, would eliminate or substantially reduce the traffic and circulation effects of development under the adopted Master Plan. The SEIR proposed that several mitigation measures from the certified OCGP FEIR be deleted (because they have been completed or they are no longer necessary in light of the NITM Program and new mitigation measures being proposed for Modified Project-specific impacts identified in the Traffic Study for the Modified Project). Mitigation Measure TRAN 1 would be carried forward for this project.

TRAN1 Prior to the approval of any final map (other than a financing and conveyance map) allocating building intensity within Planning Areas 30 and 51, and prior to issuances of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall either (i) apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs, to reduce traffic, air quality and noise impacts or (ii) develop and implement a similar transportation management plan containing the elements and meeting the criteria described below as approved by the Director of Public Works:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for Planning Areas 30 and 51. This document summarizes the key elements of the TMP.

A. Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Planning Areas 30 and 51 ("Great Park TMP"). This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

The applicant may elect to annex Planning Area 51 and a portion of Planning Area 30 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that the applicant elects not to annex into Spectrumotion, a TMP similar to that provided by Spectrumotion will be developed and implemented. This document sets forth the components of the TMP should it be necessary.

B. Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services (i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

C. Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Planning Areas 30 and 51. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

4.16 UTILITIES AND SERVICE SYSTEMS

4.16.1 Environmental Setting

Potable Water

The OCGP FEIR described the potable water system for the project. The IRWD is the jurisdictional agency responsible for plan approval and water service to the project area. Planning Area 51 is within Zone 3 North and Zone 4 of the IRWD water system. The existing on-site distribution system includes a network of distribution system pipelines, six reservoirs, and two pump stations.

Recycled Water

As stated in the OCGP FEIR, IRWD is the jurisdictional agency responsible for plan approval and water service for the project area. Recycled water is currently supplied to Planning Area 51 via a 12-inch IRWD Zone B pipeline and connecting to an 8-inch former military base pipeline in the southwest corner of the property.

Sewer

As stated in the OCGP FEIR, IRWD is the jurisdictional agency responsible for plan approval and sewer service for the project area. Planning Area 51 is served by a two-branched system with flow, mainly by gravity, from the northeast to the southwest. The system includes a series of pipes ranging from 6 to 15 inches in diameter.

Solid Waste

The OCGP FEIR discussed in detail the environmental setting for solid waste for the project. Solid waste at the project site is collected by Waste Management, Inc., and is disposed of at the Frank R. Bowerman Landfill owned by the County of Orange Integrated Waste Management Department (IWMD).

The IWMD's Countywide Integrated Waste Management Plan (CIWMP) was approved in 1996 pursuant to California Integrated Waste Management Board requirement. The CIWMP shows that there is sufficient solid waste disposal capacity in the County for the next 27 years.

Energy and Communications

Southern California Edison (SCE) serves the project via two primary substations and the Southern California Gas Company serves Planning Area 51. AT&T is the communications provider. Detailed information regarding the environmental setting of dry utilities was included in the OCGP FEIR.

4.16.2 Impacts Identified in the OCGP FEIR and Addenda

Potable Water

The OCGP FEIR projected the potable water demand to be less than 1.75 million gallons per day (MGD) calculated for the land uses proposed within the project. Since the OCGP Master Plan Minor Modification and the Park Design Review does not include any additional intensity or change in the mix of land uses, the demand projection is consistent with the OCGP FEIR and addenda. As stated in the OCGP FEIR, selected portions of the existing potable water facilities are assumed to remain in place and operational through project buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and thus provide a backbone service to all users on the project site. The OCGP FEIR assumed a potable water system that would follow the routing of existing and proposed roadways. The approved Master Subdivision Map includes the alignment for water lines throughout Great Park Neighborhoods, which was an additional project design detail and not a change in the project description.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. According to the findings of the assessment, the IRWD has determined that a sufficient non-potable water supply is available to serve the project. Since the OCGP Master Plan Minor Modification and the Park Design Review does not increase the intensity or change the mix of land uses, the total non-potable water supplies will meet the project demand.

The OCGP FEIR stated that the implementation of the project would require the expansion of the recycled water transmission lines to serve the project. It was assumed that selected on-site facilities would remain in place and operational through buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and provide a backbone service to all users in the project site. The OCGP FEIR assumed a non-potable system that would follow the routing of existing and proposed roadways within the project. The approved Master Subdivision Map included the alignment for the recycled water lines throughout Great Park Neighborhoods, which was an additional project design detail and is not a change in the project description.

Sewer

The OCGP FEIR stated that the IRWD will continue to provide sewer service to the project. The IRWD has indicated that it would have sufficient capacity to meet the future demand; however, additional wastewater treatment capacity may need to be purchased by project proponents as specific development projects come forward. The OCGP FEIR indicated that projected buildout demand for sewer services based on the land uses in the project were 0.89 MGD and that the project would require an increase of sewer transmission capacity to serve the project. The proposed sewer system would preserve selected, existing on-site facilities in place, remain operational through buildout and expand the system through extension of existing sewer lines. The OCGP FEIR stated that additional IRWD maintenance and equipment could be required to operate and maintain the proposed system.

The adopted Master Subdivision Map ensured that any projected use of the existing sewer system would be in conformance with all applicable regional and state requirements and the mitigation requirements of the OCGP FEIR and addenda. It included the alignment for the sewer lines throughout the project, which was an additional project design detail and did not change the project description.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within Planning Area 51 will generate debris materials that would have to be disposed of at local landfills. Green waste would also be generated as a result of ongoing park and landscaping maintenance. In addition to the City requirement for recycling of construction and demolition material to reduce waste, solid waste reduction would also be achieved through compliance with AB 939, which requires that a minimum of 50 percent of the solid waste generated in cities in California be diverted from landfills. Further, SB 1374 requires that all cities implement measures that would divert 75 percent of all construction and demolition waste from landfills. While the OCGP FEIR identified a potential impact related to solid waste, it concluded that, with the recommended, City-adopted mitigation measures, the impact would be less than significant.

Energy and Communications

The Overlay Plan has proposed to install the new systems generally along a route that coincides with the existing and proposed roadway within the project. A portion of the routing, (specifically the portion along the "loop road") is not included in the project and would require an adjustment to the routing system for the expansion of the dry utilities system. However, the expansion of the system would generally coincide with the existing and proposed roadways consistent with the OCGP FEIR. The OCGP FEIR further stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the transmission system, were addressed in the OCGP FEIR.

4.16.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

Potable Water

The OCGP Master Plan Minor Modification and the Park Design Review does not propose additional development intensity. Therefore, the demand projection for potable water is consistent with the OCGP FEIR and Addenda. No additional mitigation measures or change in any mitigation measure is required. The OCGP FEIR further stated that specific environmental impacts of the proposed Project on the existing and planned MWD facilities, as well as specific impacts of constructing new potable water facilities could not be determined at the program level analysis and project-level environmental review at the time that specific development plans have been prepared would be required. The general significant impacts associated with the project's construction and operation of public facilities has been addressed in the OCGP FEIR.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. The OCGP Master Plan Minor Modification and the Park Design Review does not propose any additional development intensity, and the total non-potable water supplies would meet the project demand, as analyzed in the OCGP FEIR and Addenda. The OCGP FEIR further stated that the specific environmental impacts of constructing the new recycled water facilities could not be determined at the General Plan level analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the project's construction and operation of public facilities has been addressed in the OCGP FEIR.

Sewer

The OCGP Master Plan Minor Modification and the Park Design Review does not propose any additional development intensity. Therefore, demand projections and proposed system expansion would remain the same. The OCGP FEIR further stated that the specific environmental impact of constructing new sewer facilities to serve the project cannot be determined at the program level analysis, as site-specific plans for the installation of the sewer backbone system had not been prepared. However, the general significant

impacts associated with the construction and operation of public facilities, including the project's construction and operation of the sewer system, has been addressed in the OCGP FEIR.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within Planning Area 51 would generate debris materials that would have to be disposed of at local landfills. Green waste would also be generated as a result of ongoing park and landscape maintenance. The Project would not change the land uses or intensity of the uses; therefore, no change in impact to solid waste is anticipated. No additional mitigation measures or changes in any mitigation measure are required.

Energy and Communications

The analysis and conclusions in the OCGP FEIR do not change since the intensity and types of land uses in the modified plan have not changed from those previously analyzed in the OCGP FEIR. The OCGP FEIR stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the transmission system, were addressed in the OCGP FEIR.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to the park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2)

mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects identified in and considered by the certified OCGP FEIR.

4.16.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (5.1-5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for the following types of utilities to serve the project area:

- potable water
- recycled water
- wastewater
- energy and communication transmission facilities

Mitigation Measures SW1 through SW5 apply to future demolition and new construction, and would be carried forward through permit approvals for subsequent development projects. The proposed Project would neither change these mitigation measures nor their application to future development projects.

SW1 It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at MCAS El Toro is contaminated with lead-based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

If it is determined by the technical evaluation that material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as "waste-to-energy" (WTE) plants.

SW2 For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.

SW3 For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180 ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201).

SW4 To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.

To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.

SW5 For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

4.17 DETERMINATION

Based on the information and analysis in this Initial Study/Addendum, and pursuant to Section 15162 of the State CEQA Guidelines, the City has determined that:

1. There are no substantial changes to the project that will require major revisions to the OCGP FEIR due to new, significant environmental effects or a substantial increase in the severity of impacts identified in the OCGP FEIR;

2. Substantial changes have not occurred in the circumstances under which the project is being undertaken that will require major revisions of the OCGP FEIR to disclose new, significant environmental effects or a substantial increase in the severity of the impacts identified in the OCGP FEIR; and

3. There is no new information of substantial importance not known at the time the OCGP FEIR was approved, augmented, and/or updated that shows any of the following:
   a) The project will have any new significant effects not discussed in the OCGP FEIR;

b) There are impacts that were determined to be significant in the OCGP FEIR that will be substantially increased;

c) There are additional mitigation measures or alternatives to the project that would substantially reduce one or more of the significant effects identified in the OCGP FEIR; or

d) There are additional mitigation measures or alternatives that were rejected by the project proponent that are considerably different from those analyzed in the OCGP FEIR that would substantially reduce any significant impact identified in that EIR.

5. Organizations and Persons Consulted

5.1 PREPARERS

CITY OF IRVINE (LEAD AGENCY)

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6. Bibliography

City of Irvine Police Department. http://www.cityofirvine.org/ipd. Last accessed on December 7, 2006.

Governors' Office of Planning and Research. 2008 (January 1). *2008 California Environmental Quality Act: Statutes and Guidelines*. Association of Environmental Professionals.

Heritage Fields El Toro, LLC. 2006c (October 9). *Vesting Tentative Tract Map No. 17008.* Prepared by Fuscoe Engineering, Inc. Irvine, City of. 2008 *Addendum No. 5 to the Orange County Great Park EIR.* Prepared by The Planning Center.

Irvine, City of. 2010. *Addendum No. 7 to the Orange County Great Park EIR.* Prepared by Parsons Brinckerhoff.

Irvine, City of. 2008. *Addendum No. 6 to the Orange County Great Park EIR.* Prepared by City Irvine Community Development Department.

Irvine, City of. 2008. *Addendum No. 5 to the Orange County Great Park EIR.* Prepared by City of Irvine Community Development Department.

Irvine, City of. 2007. *Addendum No. 4 to the Orange County Great Park EIR*. Prepared by Chambers Group Inc.

Irvine, City of. 2007. *Addendum No. 3 to the Orange County Great Park EIR.* Prepared by The Planning Center

Irvine, City of. 2006 (October 24). *Addendum No. 2 to the Orange County Great Park EIR*. Prepared by The Planning Center.

Irvine, City of. 2006. *Addendum No. 1 to the Orange County Great Park EIR*. Prepared by P&D Consultants (Formerly Cotton Bridges).

Irvine, City of. 2005a (as amended). *City of Irvine General Plan*.

Irvine, City of. 2005b (February, as amended). *Noise Ordinance*.

Irvine, City of. 2004 (September, as amended). *Zoning Ordinance*.

Irvine, City of. 1996 (May). *Subdivision Ordinance*. As amended through City Council Ordinance No.96-07.

Irvine, City of. 1986 (April). *Master Environmental Assessment*.

Irvine, City of. 2003 (May). *Orange County Great Park OCGP FEIR*.

Iteris. 2008 (October). *Traffic Impact Analysis Vesting Tentative Tract Map 17283.*

Leighton & Associates, Inc. 2008 (April). *Preliminary Geotechnical Investigation for Proposed Lifelong Learning District Development, Tentative Tract Map No. 17283.*

LSA Associates. 2011a (August). *Orange County Great Park Western Sector Park Development Plan Phase I Traffic Study*.

LSA Associates. 2011b (August). *Orange County Great Park Trip Generation and Parking Demand Analysis (Update #1).*

PCR Services Corporation. 2006a (June, as updated), *Biological Resources Assessment, Lennar Heritage Fields, Orange County, California.* PCR Services Corporation. Irvine, CA

PCR Services Corporation. 2006b (September). *Cultural Resources Update and Review, Heritage Fields/The Great Park*, City of Irvine, Orange County, California. PCR Services Corporation. Irvine, CA.

PCR Services Corporation, 2006c (October 13), *Use of Heritage Fields Property by Wintering Birds*, PCR Services Corporation, Irvine, CA.

U.S. Department of the Navy, 2004, Final Finding of Suitability to Transfer, Parcel IV and Portions of Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California, July 2004.
U.S. Department of the Navy, 2004 and 2004a, Final Finding of Suitability to Lease Carve-outs Within Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California, July 2004.

Wieland Acoustics, Inc., 2008 (October), *Preliminary Acoustical Evaluation for the Lifelong Learning District (VTTM 17283).*

Appendix A.
OCGP FEIR Mitigation Monitoring and Reporting Program

(*Available at the City of Irvine, Community Development Department*)

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Appendix B.
Air Quality Emissions Reports by AECOM dated June 2011

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\paukovitsj\My Documents\Great Park Modification\Great Park Modification - Approved - 6-14-11.urb924

Project Name: Great Park Modification

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	94.59	4.04	11.04	0.00	0.04	0.04	4,742.08

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	56.51	68.58	653.35	1.37	225.85	43.83	135,229.47

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	151.10	72.62	664.39	1.37	225.89	43.87	139,971.55

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.29	3.94	3.31	0.00	0.01	0.01	4,728.04
Hearth - No Summer Emissions							
Landscape	0.61	0.10	7.73	0.00	0.03	0.03	14.04
Consumer Products	0.00						
Architectural Coatings	93.69						
TOTALS (lbs/day, unmitigated)	94.59	4.04	11.04	0.00	0.04	0.04	4,742.08

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Library	2.84	3.60	34.35	0.07	11.86	2.30	7,103.86
Racquetball/health	3.11	3.43	32.68	0.07	11.29	2.19	6,759.81
Strip mall	2.00	2.64	25.10	0.05	8.69	1.69	5,199.73
Government (civic center)	10.10	11.39	109.14	0.23	37.57	7.29	22,514.20
Lawns and Promenade	38.46	47.52	452.08	0.95	156.44	30.36	93,651.87
TOTALS (lbs/day, unmitigated)	56.51	68.58	653.35	1.37	225.85	43.83	135,229.47

Operational Settings:

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Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Library		19.40	1000 sq ft	39.00	756.60	6,871.82
Racquetball/health		6.12	1000 sq ft	117.64	719.96	6,539.01
Strip mall		42.94	1000 sq ft	13.06	560.80	5,032.03
Government (civic center)		6.81	1000 sq ft	344.94	2,349.04	21,763.87
Lawns and Promenade		14.20	acres	711.30	10,100.46	90,631.42
					14,486.86	130,838.15

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.6	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	41.4	58.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Library				5.0	2.5	92.5
Racquetball/health				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Government (civic center)				10.0	5.0	85.0
Lawns and Promenade				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\paukovitsj\My Documents\Great Park Modification\Great Park Modification 6-14-11.urb924

Project Name: Great Park Modification

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	94.47	3.56	15.21	0.00	0.05	0.05	4,088.05

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	55.07	67.16	639.45	1.35	221.13	42.92	132,391.96

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	149.54	70.72	654.66	1.35	221.18	42.97	136,480.01

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.25	3.39	2.85	0.00	0.01	0.01	4,065.58
Hearth - No Summer Emissions							
Landscape	0.98	0.17	12.36	0.00	0.04	0.04	22.47
Consumer Products	0.00						
Architectural Coatings	93.24						
TOTALS (lbs/day, unmitigated)	94.47	3.56	15.21	0.00	0.05	0.05	4,088.05

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Library	2.84	3.60	34.35	0.07	11.86	2.30	7,103.86
Racquetball/health	3.11	3.43	32.68	0.07	11.29	2.19	6,759.81
Government (civic center)	5.70	6.43	61.60	0.13	21.21	4.12	12,708.05
Field/Tea House	2.72	3.43	32.61	0.07	11.28	2.19	6,754.96
Nature Education Center	1.58	2.00	19.03	0.04	6.59	1.28	3,942.93
Hangar 244	0.30	0.34	3.20	0.01	1.11	0.22	663.44
Artist in Residence Facility	0.36	0.41	3.90	0.01	1.35	0.26	807.04
Lawns and Promenade	38.46	47.52	452.08	0.95	156.44	30.36	93,651.87
TOTALS (lbs/day, unmitigated)	55.07	67.16	639.45	1.35	221.13	42.92	132,391.96

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Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Library		19.40	1000 sq ft	39.00	756.60	6,871.82
Racquetball/health		6.12	1000 sq ft	117.64	719.96	6,539.01
Government (civic center)		6.81	1000 sq ft	194.70	1,325.91	12,284.53
Field/Tea House		17.90	1000 sq ft	40.70	728.53	6,537.10
Nature Education Center		18.90	1000 sq ft	22.50	425.25	3,815.77
Hangar 244		6.90	1000 sq ft	10.37	71.55	642.05
Artist in Residence Facility		6.80	1000 sq ft	12.80	87.04	781.01
Lawns and Promenade		14.20	acres	711.30	10,100.46	90,631.42
					14,215.30	128,102.71

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.6	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.0	0.0	100.0	0.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	41.4	58.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Library				5.0	2.5	92.5
Racquetball/health				5.0	2.5	92.5
Government (civic center)				10.0	5.0	85.0

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Field/Tea House				2.0	1.0	97.0
Nature Education Center				2.0	1.0	97.0
Hangar 244				2.0	1.0	97.0
Artist in Residence Facility				2.0	1.0	97.0
Lawns and Promenade				2.0	1.0	97.0

Appendix C.
Traffic Noise Prediction Model by AECOM dated June 2011

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Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 1: Existing
Ground Type : Soft
K Factor :
Metric (L_{eq}, L_{dn}, CNEL) : Ldn
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	C Street	Marine Way	5th Street	2,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	4,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	2,000	30	100	97.5	1.5	1	87		13	
4	Trabuco Road	Perimiter Road	To the East	3,000	30	100	97.5	1.5	1	87		13	

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 1: Existing
Metric (Leq, Ldn, CNEL) : Ldn

		Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	49.1	41.5	46.9	51.6	6	13	28	59	128
2	Marine Way	Sand Canyon Ave	C Street	52.1	44.6	49.9	54.6	9	20	44	94	203
3	Marine Way	C Street	To the East	49.1	41.5	46.9	51.6	6	13	28	59	128
4	Trabuco Road	Perimiter Road	To the East	50.9	43.3	48.7	53.4	8	17	36	78	167

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 2: Existing Plus Western Sector Park Development Plan Phase 1
Ground Type : Soft **K Factor :**
Metric (L_{eq}, L_{dn}, CNEL) : Ldn **Traffic Desc. (Peak or ADT) :** ADT

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	C Street	Marine Way	5th Street	4,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	6,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	2,000	30	100	97.5	1.5	1	87		13	
4	Trabuco Road	Perimiter Road	To the East	3,000	30	100	97.5	1.5	1	87		13	

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 2: Existing Plus Western Sector Park Development Plan Phase 1
Metric (Leq, Ldn, CNEL) : Ldn

		Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	52.1	44.6	49.9	54.6	9	20	44	94	203
2	Marine Way	Sand Canyon Ave	C Street	53.9	46.3	51.7	56.4	12	27	57	123	266
3	Marine Way	C Street	To the East	49.1	41.5	46.9	51.6	6	13	28	59	128
4	Trabuco Road	Perimiter Road	To the East	50.9	43.3	48.7	53.4	8	17	36	78	167

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 3A: 2015 Baseline with LLD
Ground Type : Soft **K Factor :**
Metric (L_{eq}, L_{dn}, CNEL) : Ldn **Traffic Desc. (Peak or ADT) :** ADT

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	C Street	Marine Way	5th Street	2,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	6,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	4,000	30	100	97.5	1.5	1	87		13	
4	O Street	Marine Way	C Street	2,000	30	100	97.5	1.5	1	87		13	
5	O Street	C Street	Trabuco Road	2,000	30	100	97.5	1.5	1	87		13	
6	Trabuco Road	O Street	X Streeet	13,000	30	100	97.5	1.5	1	87		13	
7	X Street	LV Street	Trabuco Road	2,000	30	100	97.5	1.5	1	87		13	

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 3A: 2015 Baseline with LLD
Metric (Leq, Ldn, CNEL) : Ldn

		Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	49.1	41.5	46.9	51.6	6	13	28	59	128
2	Marine Way	Sand Canyon Ave	C Street	53.9	46.3	51.7	56.4	12	27	57	123	266
3	Marine Way	C Street	To the East	52.1	44.6	49.9	54.6	9	20	44	94	203
4	O Street	Marine Way	C Street	49.1	41.5	46.9	51.6	6	13	28	59	128
5	O Street	C Street	Trabuco Road	49.1	41.5	46.9	51.6	6	13	28	59	128
6	Trabuco Road	O Street	X Streeet	57.2	49.7	55.0	59.7	21	45	96	207	445
7	X Street	LV Street	Trabuco Road	49.1	41.5	46.9	51.6	6	13	28	59	128

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4A: 2015 Baseline with Great Park Neighborhoods LLD & Improvements Plus Western Sector Park Development Plan Phase 1
Ground Type : Soft **K Factor :**
Metric (L_{eq}, L_{dn}, CNEL) : Ldn **Traffic Desc. (Peak or ADT) :** ADT

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	C Street	O Street Access	2nd Access	3,000	30	100	97.5	1.5	1	87		13	
2	C Street	2nd Access	LV Street	3,000	30	100	97.5	1.5	1	87		13	
3	O Street	Marine Way	C Street	6,000	30	100	97.5	1.5	1	87		13	
4	O Street	C Street	2nd Access	2,000	30	100	97.5	1.5	1	87		13	
5	O Street	2nd Access	LV Street	1,000	30	100	97.5	1.5	1	87		13	
6	LV Street	O Street	X Street	1,000	30	100	97.5	1.5	1	87		13	
7	X Street	LV Street	Trabuco Road	3,000	30	100	97.5	1.5	1	87		13	
8	Marine Way	Sand Canyon Ave	C Street	8,000	30	100	97.5	1.5	1	87		13	
9	Marine Way	C Street	To the East	4,000	30	100	97.5	1.5	1	87		13	

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4A: 2015 Baseline with Great Park Neighborhoods LLD & Improvements Plus Western Sector Park Development Plan Phase 1
Metric (Leq, Ldn, CNEL) : Ldn

		Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	O Street Access	2nd Access	50.9	43.3	48.7	53.4	8	17	36	78	167
2	C Street	2nd Access	LV Street	50.9	43.3	48.7	53.4	8	17	36	78	167
3	O Street	Marine Way	C Street	53.9	46.3	51.7	56.4	12	27	57	123	266
4	O Street	C Street	2nd Access	49.1	41.5	46.9	51.6	6	13	28	59	128
5	O Street	2nd Access	LV Street	46.1	38.5	43.9	48.6	4	8	17	37	81
6	LV Street	O Street	X Street	46.1	38.5	43.9	48.6	4	8	17	37	81
7	X Street	LV Street	Trabuco Road	50.9	43.3	48.7	53.4	8	17	36	78	167
8	Marine Way	Sand Canyon Ave	C Street	55.1	47.6	52.9	57.6	15	32	69	149	322
9	Marine Way	C Street	To the East	52.1	44.6	49.9	54.6	9	20	44	94	203

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

AECOM

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 3B: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use
Ground Type : Soft **K Factor :**
Metric (L_{eq}, L_{dn}, CNEL) : **Traffic Desc. (Peak or ADT) :** ADT

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	C Street	Marine Way	5th Street	1,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	5,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	4,000	30	100	97.5	1.5	1	87		13	
4	Trabuco Road	SR 133	To the East	5,000	30	100	97.5	1.5	1	87		13	

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 3B: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use
Metric (Leq, Ldn, CNEL) :

		Segment		Noise Levels, dB				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	46.1	38.5	43.9	48.6	4	8	17	37	81
2	Marine Way	Sand Canyon Ave	C Street	53.1	45.5	50.9	55.6	11	24	51	109	235
3	Marine Way	C Street	To the East	52.1	44.6	49.9	54.6	9	20	44	94	203
4	Trabuco Road	SR 133	To the East	53.1	45.5	50.9	55.6	11	24	51	109	235

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4B: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1
Ground Type : Soft **K Factor :**
Metric (L_{eq}, L_{dn}, CNEL) : **Traffic Desc. (Peak or ADT) :** ADT

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	C Street	Marine Way	5th Street	4,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	8,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	4,000	30	100	97.5	1.5	1	87		13	
4	Trabuco Road	SR 133	To the East	5,000	30	100	97.5	1.5	1	87		13	

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4B: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1
Metric (Leq, Ldn, CNEL) :

		Segment		Noise Levels, dB				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	52.1	44.6	49.9	54.6	9	20	44	94	203
2	Marine Way	Sand Canyon Ave	C Street	55.1	47.6	52.9	57.6	15	32	69	149	322
3	Marine Way	C Street	To the East	52.1	44.6	49.9	54.6	9	20	44	94	203
4	Trabuco Road	SR 133	To the East	53.1	45.5	50.9	55.6	11	24	51	109	235

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

AECOM

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4C: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1 Plus TVI at 3,000 Tons Per Day
Ground Type : Soft **K Factor :**
Metric (L_{eq}, L_{dn}, CNEL) : **Traffic Desc. (Peak or ADT) :** ADT

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	C Street	Marine Way	5th Street	4,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	10,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	6,000	30	100	97.5	1.5	1	87		13	
4	Trabuco Road	SR 133	To the East	5,000	30	100	97.5	1.5	1	87		13	

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4C: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1 Plus TVI at 3,000 Tons Per Day
Metric (Leq, Ldn, CNEL) :

		Segment		Noise Levels, dB				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	52.1	44.6	49.9	54.6	9	20	44	94	203
2	Marine Way	Sand Canyon Ave	C Street	56.1	48.5	53.9	58.6	17	37	81	173	374
3	Marine Way	C Street	To the East	53.9	46.3	51.7	56.4	12	27	57	123	266
4	Trabuco Road	SR 133	To the East	53.1	45.5	50.9	55.6	11	24	51	109	235

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : OCGP Master Plan Minor Modification

Project Number : 60213368

Modeling Condition : Alt 5A: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1 with Additional Access Via Trabuco Road and C Street

Ground Type : Soft **K Factor :**

Metric (L_{eq}, L_{dn}, CNEL) : **Traffic Desc. (Peak or ADT) :** ADT

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	C Street	Marine Way	5th Street	3,000	30	100	97.5	1.5	1	87		13	
2	C Street	5th Street	Trabuco Road	1,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	Sand Canyon Ave	C Street	7,000	30	100	97.5	1.5	1	87		13	
4	Marine Way	C Street	To the East	4,000	45	100	97.5	1.5	1	87		13	
5	Trabuco Road	SR 133	C Street	6,000	30	100	97.5	1.5	1	87		13	

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 5A: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1 with Additional Access Via Trabuco Road and C Street
Metric (Leq, Ldn, CNEL) :

		Segment		Noise Levels, dB				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	50.9	43.3	48.7	53.4	8	17	36	78	167
2	C Street	5th Street	Trabuco Road	46.1	38.5	43.9	48.6	4	8	17	37	81
3	Marine Way	Sand Canyon Ave	C Street	54.5	47.0	52.3	57.0	14	29	63	137	295
4	Marine Way	C Street	To the East	57.2	47.3	50.0	58.3	17	36	77	166	358
5	Trabuco Road	SR 133	C Street	53.9	46.3	51.7	56.4	12	27	57	123	266

Appendix D.

D-1 OCGP Western Sector Park Development Plan Phase I Traffic Study by LSA Associates, Inc. dated August 2011

&

D-2 Orange County Great Park Trip Generation and Parking Demand Analysis (Update #1) by LSA Associates, Inc., dated August 2011

(*Available at the City of Irvine, Community Development Department*)

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