L.A. CEQA THRESHOLDS GUIDE

Your Resource for Preparing
CEQA Analyses in Los Angeles

City of Los Angeles
2006

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As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.

This Thresholds Guide is intended to provide general information about CEQA. It should not be used as a substitute for professional or legal advice. The reader should refer to the CEQA Statutes and Guidelines and consult with the appropriate City departments, as necessary.

TABLE OF CONTENTS

Executive Summary i

Introduction 1

Cross-Referencing Index 13

List of Abbreviations/Acronyms 32

Glossary 37

A. Aesthetics and Visual Resources
   Introduction A-1
   1. Aesthetics A.1-1
   2. Obstruction of Views A.2-1
   3. Shading A.3-1
   4. Nighttime Illumination A.4-1

B. Air Quality
   Introduction B-1
   1. Construction Emissions B.1-1
   2. Operational Emissions B.2-1
   3. Toxic Air Contaminants B.3-1

C. Biological Resources C-1

D. Cultural Resources
   1. Paleontological Resources D.1-1
   2. Archaeological Resources D.2-1
   3. Historical Resources D.3-1

E. Geology
   1. Geologic Hazards E.1-1
   2. Sedimentation and Erosion E.2-1
   3. Landform Alteration E.3-1
   4. Mineral Resources E.4-1

F. Hazards
   1. Risk of Upset/Emergency Preparedness F.1-1
   2. Human Health Hazards F.2-1

G. Water Resources
   1. Surface Water Hydrology G.1-1
   2. Surface Water Quality G.2-1
   3. Groundwater Level G.3-1
   4. Groundwater Quality G.4-1

TABLE OF CONTENTS, continued

H. Land Use
1. Land Use Consistency H.1-1
2. Land Use Compatibility H.2-1

I. Noise
1. Construction Noise I.1-1
2. Operational Noise I.2-1
3. Railroad Noise I.3-1
4. Airport Noise I.4-1

J. Population and Housing
1. Population and Housing Growth J.1-1
2. Population and Housing Displacement J.2-1

K. Public Services
1. Police Protection K.1-1
2. Fire Protection & Emergency Medical Services K.2-1
3. Public Schools K.3-1
4. Recreation and Parks K.4-1
5. Libraries K.5-1

L. Transportation
Introduction L-1
1. Intersection Capacity L.1-1
2. Street Segment Capacity L.2-1
3. Freeway Capacity L.3-1
4. Neighborhood Intrusion Impacts L.4-1
5. Project Access L.5-1
6. Transit System Capacity L.6-1
7. Parking L.7-1
8. In-Street Construction Impacts L.8-1

M. Public Utilities
1. Water M.1-1
2. Wastewater M.2-1
3. Solid Waste M.3-1
4. Energy M.4-1

LIST OF EXHIBITS

Introduction

Exhibit 1. Case Study: Operational Noise 6
Exhibit 2. Initial Study Checklist Process 7
Exhibit 3. Initial Study Determination.....8
Exhibit 4. Impact Evaluation and Mitigation Process 9

A. Visual Resources

1. Aesthetics

Exhibit A.1-1. Selected Aesthetic-Related Regulations in the Los Angeles Municipal Code A.1-7

2. Obstruction of Views

Exhibit A.2-1. View Analysis Methodology.....A.2-7
Exhibit A.2-2. View Lines A.2-8
Exhibit A.2-3. View Sections.....A.2-9
Exhibit A.2-4. Field of View.....A.2-10

3. Shading

Exhibit A.3-1. Shadow Length Multipliers and Bearings for 34° Latitude-Los Angeles A.3-5
Exhibit A.3-2. Maximum Shadow Length Generated for Given Source Heights during Winter Solstice A.3-6
Exhibit A.3-3. Maximum Shadow Length Generated for Given Source Heights during Summer Solstice A.3-7
Exhibit A.3-4. Shadow Plotting Methodology.....A.3-8
Exhibit A.3-5. Shadow Projection.....A.3-9
Exhibit A.3-6. Shadow Coverage.....A.3-10

4. Nighttime Illumination

Exhibit A.4-1. Selected City Municipal Code Lighting Regulations A.4-5

B. Air Quality

1. Construction Emissions

Exhibit B.1-1. Reprint of SCAQMD Rule 403, page 14 .....B.1-7
Exhibit B.1-2. Reprint of SCAQMD Rule 403, Pages 15 and 16.....B.1-8

2. Operational Emissions

Exhibit B.2-1. Reprint of SCAQMD CEQA Air Quality Handbook, pages 6-10 to 6-12.....B.2-11

C. Biological Resources

Exhibit C-1. Habitat-Oriented Biological Assessment Planning Zones.....C-10
Exhibit C-2. Biological Resource Areas (Metro Geographical Area).....C-11

LIST OF EXHIBITS, continued

Exhibit C-3. Biological Resource Areas (Central Geographical Area) C-12
Exhibit C-4. Biological Resource Areas (Coastal and Southern Geographical Area) C-13
Exhibit C-5. Biological Resource Areas (Valley Geographical Area) C-14
Exhibit C-6. Natural Habitats and SEAs within the City of Los Angeles C-15
Exhibit C-7. Sensitive Species Compendium – City of Los Angeles C-28
Exhibit C-8. General References C-38

D. Cultural Resources

1. Paleontological Resources
Exhibit D.1-1. Paleontological Potential by Rock Unit/Geologic Formation .. D.1-9

3. Historic Resources
Exhibit D.3-1. National Criteria and Standards D.3-9
Exhibit D.3-2. California Register Criteria and Evaluation System D.3-11
Exhibit D.3-3. City of Los Angeles Criteria D.3-12
Exhibit D.3-4. State Office of Historic Preservation List of Non-Adverse Repairs and Improvements D.3-13
Exhibit D.3-5. Architectural Styles and Periods D.3-15

E. Geology

4. Mineral Resources
Exhibit E.4-1. State Mining and Geology Board Mineral Resource Zone Classifications E.4-5

G. Water Resources

1. Surface Water Hydrology
Exhibit G.1-1. Development Classifications (Typical Percentage of Imperviousness, by Zone) G.1-7

3. Groundwater Level
Exhibit G.3-1. Los Angels Coastal Groundwater Basins G.3-8
Exhibit G.3-2. San Fernando Valley Groundwater Basins G.3-9

I. Noise

1. Construction Noise
Exhibit I.1-1. Noise Level Ranges of Typical Construction Equipment I.1-8
Exhibit I.1-2. Outdoor Construction Noise Levels I.1-9
Exhibit I.1-3. Presumed Ambient Noise Levels I.1-9

3. Railroad Noise
Exhibit I.3-1. Diesel Locomotives Noise I.3-10
Exhibit I.3-2. Electric Rapid Transit Noise I.3-11
Exhibit I.3-3. Average Locomotive, Railcar, and Rapid Transit Noise Levels I.3-12
Exhibit I.3-4. Variables Affecting Railcar Wheel/Rail Noise Emission I.3-12
Exhibit I.3-5. Average Rail Yard Noise Levels I.3-13

J. Population and Housing

2. Population and Housing Displacement

LIST OF EXHIBITS, continued

Exhibit J.2-1. Maximum Affordable Rent for Very Low- and Low-Income Households in the City of Los Angeles, FY 2003 ..... J.2-7

K. Public Services

1. Police Protection

Exhibit K.1-1. Location of LAPD Bureaus and Areas K.1-5
Exhibit K.1-2. Reporting District Map of Central Area K.1-8
Exhibit K.1-3. Reporting District Map of Rampart Area K.1-9
Exhibit K.1-4. Reporting District Map of Hollenbeck Area K.1-10
Exhibit K.1-5. Reporting District Map of Northeast Area K.1-11
Exhibit K.1-6. Reporting District Map of Newton Street Area K.1-12
Exhibit K.1-7. Reporting District Map of Hollywood Area K.1-13
Exhibit K.1-8. Reporting District Map of Wilshire Area K.1-14
Exhibit K.1-9. Reporting District Map of West Los Angeles Area K.1-15
Exhibit K.1-10. Reporting District Map of Pacific Area K.1-16
Exhibit K.1-11. Reporting District Map of Van Nuys Area K.1-17
Exhibit K.1-12. Reporting District Map of West Valley Area K.1-18
Exhibit K.1-13. Reporting District Map of North Hollywood Area K.1-19
Exhibit K.1-14. Reporting District Map of Mission Area K.1-20
Exhibit K.1-15. Reporting District Map of Foothill Area K.1-21
Exhibit K.1-16. Reporting District Map of Devonshire Area K.1-22
Exhibit K.1-17. Reporting District Map of Southwest Area K.1-23
Exhibit K.1-18. Reporting District Map of Harbor Area K.1-24
Exhibit K.1-19. Reporting District Map of 77th Street Area K.1-25
Exhibit K.1-20. Reporting District Map of Southeast Area K.1-26

2. Fire Protection & Emergency Medical Services

Exhibit K.2-1. Los Angeles Fire Department Station Locations K.2-7

3. Public Schools

Exhibit K.3-1 Board of Education District 1 ..... K.3-5
Exhibit K.3-2. Board of Education District 2 ..... K.3-6
Exhibit K.3-3. Board of Education District 3 ..... K.3-7
Exhibit K.3-4. Board of Education District 4 ..... K.3-8
Exhibit K.3-5. Board of Education District 5 ..... K.3-9
Exhibit K.3-6. Board of Education District 6 ..... K.3-10
Exhibit K.3-7. Board of Education District 7 ..... K.3-11
Exhibit K.3-8. LAUSD School Addresses & Capacities With New and Continuing Multitrack Year-Round Schools K.3-12
Exhibit K.3-9. Reproduction of LAUSD Student Generation Factors K.3-34

5. Libraries

Exhibit K.5-1. Los Angeles Public Library Branch Facilities Site Selection Criteria K.5-5
Exhibit K.5-2. Los Angeles Public Library Branch Facilities K.5-6

L. Transportation

Introduction

Exhibit L-1. Relationship of Project Type, Analysis Type and Transportation Impact Categories to Be Screened L-4

LIST OF EXHIBITS, continued

Exhibit L-2. Scoping for Traffic Study.....L-5
Exhibit L-3. City of Los Angeles CMP Monitoring Locations L-6

1. Intersection Capacity

Exhibit L.1-1. Level of Service Definitions for Signalized Intersections L.1-13
Exhibit L.1-2. Level of Service Definitions for Two-Way and All-Way Stop-Controlled Intersections L.1-14
Exhibit L.1-3. Pass-By Trip Discount Rates.....L.1-15

2. Street Segment Capacity

Exhibit L.2-1. Level of Service Definitions for Arterial Street Segments L.2-7

3. Freeway Capacity

Exhibit L.3-1. Level of Service Definitions for Freeway Segments L.3-5

M. Public Utilities

2. Wastewater

Exhibit M.2-1. City of Los Angeles Wastewater Treatment System.....M.2-11
Exhibit M.2-2. Sewer Capacity Threshold Study Areas M.2-12
Exhibit M.2-3. Sewer Capacity Threshold Study Areas: Subregion A.....M.2-13
Exhibit M.2-4. Sewer Capacity Threshold Study Areas: Subregion B.....M.2-14
Exhibit M.2-5. Sewer Capacity Threshold Study Areas: Subregion C.....M.2-15
Exhibit M.2-6. Sewer Capacity Threshold Study Areas: Subregion D.....M.2-16
Exhibit M.2-7. Sewer Capacity Threshold Study Areas: Subregion E.....M.2-17
Exhibit M.2-8. Sewer Capacity Threshold Study Areas: Subregion F M.2-18
Exhibit M.2-9. Sewer Capacity Threshold Study Areas: Subregion G.....M.2-19
Exhibit M.2-10. Sewer Capacity Threshold Study Areas: Subregion H.....M.2-20
Exhibit M.2-11. Sewer Capacity Threshold Study Areas: Subregion I M.2-21
Exhibit M.2-12. Sewage Generation Factors M.2-22

EXECUTIVE SUMMARY

Purpose

The *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles* (*Thresholds Guide*) is a guidance document that draws together practical information useful to City staff, project proponents, and the public involved in the environmental review of projects in the City of Los Angeles subject to the California Environmental Quality Act (CEQA). The CEQA process, established by state law, requires the review of proposed projects in order to identify and address potential environmental effects.

This is the City's initial effort to develop citywide guidance for CEQA impact analyses. The applicability and use of the *Thresholds Guide* may be re-evaluated after a period of use. The *Thresholds Guide* is intended to be available as a voluntary tool. It supports the City's development reform efforts to streamline and enhance the City's permit and development processes. The *Thresholds Guide* is a consensus document that represents the technical input from a citywide working group, comprised of representatives from 18 City departments and bureaus, including the Environmental Affairs Department (EAD).

Content

The *Thresholds Guide* includes two sets of criteria to evaluate project impacts: screening and significance criteria. The **screening criteria** provide assistance in responding to the questions in the State's Initial Study Checklist and, thus, determining the appropriate environmental document to prepare (e.g., negative declaration, mitigated negative declaration, or environmental impact report). The **significance thresholds** assist in determining whether a project's impacts would be presumed significant under normal circumstances and, therefore, require mitigation to be identified.

The *Thresholds Guide* contains three types of significance thresholds - **quantitative, qualitative, and case-by-case**. Quantitative thresholds provide a measurable criterion with which to compare one or more characteristics of the proposed project, such as "the vehicle-to-capacity ratio increase at a study intersection is greater than 0.020." A qualitative threshold requires comparison to non-numerical criteria, such as "interference with a wildlife movement corridor." The case-by-case thresholds were developed for issue areas where a definitive threshold could not be established, either because impacts are site- or project-specific or because there is no consistent technical guidance available. The existence of screening criteria and significance thresholds may also encourage project proponents to incorporate impact-reducing measures into project designs, prior to submitting project applications to the City, to reduce potential impacts below the significance level.

The screening criteria and significance thresholds are based on a variety of factors, including existing local, state, and federal regulations, administrative practices of other public agencies, and commonly accepted professional standards. Each threshold has been reviewed with respect to meeting the following goals: objectivity and applicability, defensibility, practicality, nexus between impacts and mitigation, and legal liability.

The *Thresholds Guide* provides assistance in evaluating 46 of the most common environmental issues in the City of Los Angeles, grouped into the following categories:

- Air Quality
- Population and Housing

- Biological Resources
- Cultural Resources
- Geology
- Hazards
- Land Use
- Noise
- Public Services
- Public Utilities
- Transportation
- Visual Resources
- Water Resources

The information is organized generally in the same order in which the issues appear in the State's Initial Study Checklist, although the *Thresholds Guide* does not identify thresholds for all issues found in the Checklist.

Within each issue area, the *Thresholds Guide* includes three parts: **1. Initial Study Screening Process** (Initial Study Checklist Question, Introduction, Screening Criteria, and Evaluation of Screening Criteria); **2. Determination of Significance** (Significance Threshold, Environmental Setting, Project Impacts, Cumulative Impacts, and Sample Mitigation Measures); and **3. Data, Resources, and References** (Resources, Background Information, Selected Legislation, and Exhibits).

How the *Thresholds Guide* works

The *Thresholds Guide* provides technical assistance in evaluating the potential significance of a project's environmental impacts by putting in one place existing information and practices from a variety of sources which are useful for impact analyses. The *Thresholds Guide* applies to non-exempt, discretionary projects (including public and private projects and plans) in the City of Los Angeles under "normal" conditions. It recognizes that the impacts resulting from a particular action depend on the project setting, design, and operational components and that the determination of significance and the appropriate criteria for evaluation are the responsibility of the lead agency.

The *Thresholds Guide* does not change the authority of decision-makers or the lead agency or affect the City's CEQA Guidelines (including the list of categorical exemptions). The *Thresholds Guide* does not change existing department procedures for processing CEQA documents or introduce new evaluation methods.

The purpose and applicability of the *Thresholds Guide* are fully described in the Preface and Content and Use Sections of the Introduction. The *Thresholds Guide* provides some general information about CEQA requirements, but should not be used as a substitute for professional or legal advice. For more information, the reader should refer to the CEQA Statutes and State and City Guidelines; current case law, regulations, and scientific methods; and consult with the appropriate City departments, as necessary.

Background and Process

Numerous public and private projects and plans are undertaken each year within the City of Los Angeles. Each of these must comply with all applicable laws, regulations, and policies, including CEQA. For those projects needing discretionary approval from the City of Los Angeles, the department granting the approval generally acts as the lead agency on behalf of the City and ensures that all CEQA requirements are fulfilled. The *Thresholds Guide* can simplify the CEQA process by offering a consistent set of evaluation criteria applicable to most discretionary projects in the City.

The *Thresholds Guide* was presented and discussed at a public workshop hosted by the Environmental Affairs Commission (EAC). The EAC sent recommendations on the *Thresholds Guide* to the Environmental Quality and Waste Management Committee of the City Council, and the full Council authorized departments to use the *Thresholds Guide* in CEQA analyses in August 2001 (see Council File 98-2064).

For information, and to view or download a copy of the *Thresholds Guide*, please point your browser to EAD's Home Page at http://www.lacity.org/EAD, and click on CEQA/.

INTRODUCTION

PREFACE

The *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles (Thresholds Guide)* is a guidance document that draws together practical information useful to City staff, project proponents, and the public involved in the environmental review of projects subject to the California Environmental Quality Act (CEQA). The *Thresholds Guide* is a resource available to provide information to those interested in the CEQA process.

The *Thresholds Guide* provides assistance in evaluating the significance of project impacts on 46 of the most common environmental issues in the City of Los Angeles. This guidance is supplemented by an introduction to each issue area, a recommended analysis method for project impacts, guidance for environmental setting and cumulative impact sections, sample mitigation measures, and references. The *Thresholds Guide* is geared toward readers familiar with the CEQA process. For additional information on the terminology and requirements of CEQA, please refer to the Glossary to the *Thresholds Guide*, The Los Angeles City CEQA Guidelines (City CEQA Guidelines), the State Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines) or the City's Guide to Understanding CEQA in the City of Los Angeles.

The preparation of the *Thresholds Guide* was initiated as part of the City's Development Reform efforts to streamline the City's permit and development processes. It is a tool that compiles information that is useful in the preparation of environmental documents. This information can be used to improve the level of consistency, predictability, and objectivity of the City's environmental documents, while reducing costs and time delays in the environmental review process.

CEQA requires the analysis of discretionary projects to disclose their potential effects on the environment and to allow public participation in the environmental review process. Central to the implementation of CEQA is the identification of "significant" or "potentially significant" impacts that would occur as a result of a proposed project, as this determines the level of review required and the need for mitigation measures to reduce or eliminate project impacts. For projects needing discretionary approval from the City of Los Angeles, the department granting the approval generally acts as the lead agency on behalf of the City and is known as the lead City agency.

The *Thresholds Guide* applies only to those non-exempt projects subject to CEQA that require an Initial Study, negative declaration, mitigated negative declaration, or EIR. It applies both to public and private projects, including residential, commercial, institutional, industrial, and infrastructure projects. Most screening criteria and significance thresholds also apply to Master planned developments, specific plans, zone changes, and other "plan" level proposals.

The *Thresholds Guide* does not impact the existing discretionary authority of decision-makers, although the guidance contained in it could provide more complete information to these decision-makers. The *Thresholds Guide* does not replace or invalidate the City's CEQA Guidelines, as it addresses the content of environmental documents as opposed to procedural requirements. It has no effect on the City's list of projects exempt from the CEQA process (see Article X of the City CEQA Guidelines, which lists project types eligible for categorical exemptions). The *Thresholds Guide* can be used as a complement to existing department procedures for processing CEQA documents, by building on the information in the CEQA Guidelines and providing technical assistance for the environmental analysis and determination of significance. The *Thresholds Guide* does not change the authority of the lead agency, as identified in the State CEQA Guidelines, to determine significance thresholds on a case-by-case basis dependent upon unique environments, evolving regulatory requirements, and the nature of projects encountered by each lead agency.

The guidance in the *Thresholds Guide* does not substitute for the use of independent judgment to determine significance or the evaluation of the evidence in the record, but is intended to provide sufficient flexibility to use the most appropriate criteria for a particular project. CEQA includes additional topics and requirements that are not addressed in the *Thresholds Guide*. The project evaluator and lead agency are still responsible for all CEQA requirements, whether or not they are discussed in the *Thresholds Guide*. The City CEQA Guidelines, the State CEQA Guidelines, and other references describe all of the requirements of the CEQA process and should be consulted if additional assistance is required.

As noted above, the fundamental purpose of CEQA is to publicly disclose and evaluate potential environmental impacts associated with proposed projects. As such, CEQA contains specific public notification and participation requirements. In addition, City policy in the General Plan Framework Element and a similar policy in the Transportation Element is to "assure that (sic) fair treatment of people of all races, cultures, incomes and education levels with respect to the development, implementation and enforcement of environmental laws, regulations, and policies, including affirmative efforts to inform and involve environmental groups, especially environmental justice groups, in early planning stages through notification

and two-way communication.[1]" This assurance may involve efforts to identify and reach affected populations, including low-income communities and communities of color.

CONTENT AND USE

The *Thresholds Guide* presents two sets of criteria to evaluate project impacts: the screening and significance criteria. The screening criteria provide assistance in responding to Initial Study Checklist questions, and can help determine when further study is needed to decide whether a significant impact could potentially occur. Additional study (either in the context of an expanded Initial Study, negative declaration, or EIR) will assist project evaluators in determining whether the project impact falls above or below the significance threshold. The significance threshold identifies the level of impact over which mitigation (or a Statement of Overriding Considerations, if mitigation is not feasible) is required.

By defining screening criteria and significance thresholds, the *Thresholds Guide* provides guidance in determining the appropriate environmental document required for a project within the City of Los Angeles – negative declaration, mitigated negative declaration, or environmental impact report (EIR) – and whether a project's impacts would be presumed significant under normal circumstances, and therefore, require mitigation. The existence of screening criteria and significance thresholds may also encourage project proponents to incorporate impact-reducing measures into project designs, prior to submitting project applications to the City, to reduce potential impacts below the significance level.

The screening criteria and significance thresholds presented in the *Thresholds Guide* are based on a variety of factors, including existing local, state, and federal regulations, administrative practices of other public agencies, and commonly accepted professional standards (common practice). Each threshold was then reviewed with respect to meeting the following goals: objectivity and applicability, defensibility, practicality, nexus between impacts and mitigation, and legal liability. This document, therefore, represents a compilation of existing information and practices and does not introduce new evaluation methods, nor does it diminish the value of independent judgment on the part of the project evaluator. However, the guidance provided in the *Thresholds Guide* can simplify the CEQA process by providing a consistent set of criteria applicable to most discretionary projects in the City. Because evaluation practices continue to evolve due to changing regulations, scientific methods, and court decisions, the project evaluator and lead City agency should always use the best information and evaluation methods available, including those from sources other than the *Thresholds Guide*.

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1 *City of Los Angeles, General Plan Framework Element, Policy 3.1.9, page 3-8.*

There are three types of significance thresholds identified in the *Thresholds Guide*: quantitative, qualitative, and case-by-case (also called factors for consideration). Quantitative thresholds provide a measurable criterion with which to compare one or more characteristics of the proposed project, such as "the vehicle-to-capacity ratio increase at a study intersection is greater than 0.020." A qualitative threshold requires comparison to non-numerical criteria, such as "interference with a wildlife movement corridor." For some issue areas, a definitive threshold could not be established, either because the significance of impacts is specific to site conditions or project operations, or because there is no consistent technical guidance available. For these issues, the case-by-case thresholds provide factors for the project evaluator to consider, in light of specific project circumstances, in the determination of significance.

The *Thresholds Guide* does not identify thresholds for all issues found in the State's Initial Study Checklist, but focuses on those that are most commonly of concern throughout the City. In addition, the *Thresholds Guide* provides information on the topic of Shading, which is not listed in the Initial Study Checklist. It also provides expanded information on transportation issues, consistent with the City Department of Transportation's traffic study policies and procedures.

The impact resulting from a particular action depends on the project setting, design, and operational components. Therefore, the use of the *Thresholds Guide* may be appropriate for projects located within City boundaries under "normal" conditions, but there may be circumstances in which another set of criteria better applies to the proposed action or setting, and should be used for the determination of significance. For City-sponsored projects located outside City boundaries, City departments conducting CEQA review must consider the local environmental setting, as well as applicable regulations and policies, and determine if another set of criteria applies or is more appropriate.

Since conditions may vary depending upon the type of project and/or approval that is required, the lead City agency responsible for the implementation of CEQA for a particular project may develop internal departmental direction (e.g., thresholds), not inconsistent with the guidance in the *Thresholds Guide,* to address issues that commonly arise within the jurisdiction of that department. Project applicants should consult with the lead City department regarding any additional or further defined screening criteria or significance thresholds that may apply.

The case study and flowcharts in Exhibits 1-4 illustrate the process of using the screening criteria and significance thresholds, and how their use relates to the Initial Study Checklist and the impact evaluation process. The exhibits all assume that a project is not exempt from CEQA

requirements. The case study (Exhibit 1) assesses operational noise impacts for four project types by posing a series of questions about each "project." This exercise concludes with an Initial Study evaluation and a determination of the type of CEQA document appropriate for that project. The flowcharts (Exhibits 2-4) describe the steps in conceptual terms, focusing on three phases of the CEQA process: 1) the Initial Study Checklist Process (using the screening and significance criteria to determine which boxes to check on the Checklist); 2) the Initial Study Determination (what type of CEQA document to prepare); and 3) the Impact Evaluation and Mitigation Process. The impact from a particular project may fall (a) below the screening criteria, (b) between the screening criteria and the significance threshold, or (c) above the significance threshold.

Exhibit 1
CASE STUDY: OPERATIONAL NOISE

Initial Study Checklist Questions

X.a): Would the proposal result in increases in existing noise levels?
X.b): Would the proposal result in exposure of people to severe noise levels?

Initial Study Screening Criteria

- Would the proposed project introduce a stationary noise source that is likely to be audible beyond the property line of the project site?
- Would the project include 75 or more dwelling units or 100,000 square feet (sf) or greater of nonresidential development, or have the potential to generate 1,000 or more average daily vehicle trips (ADT)?

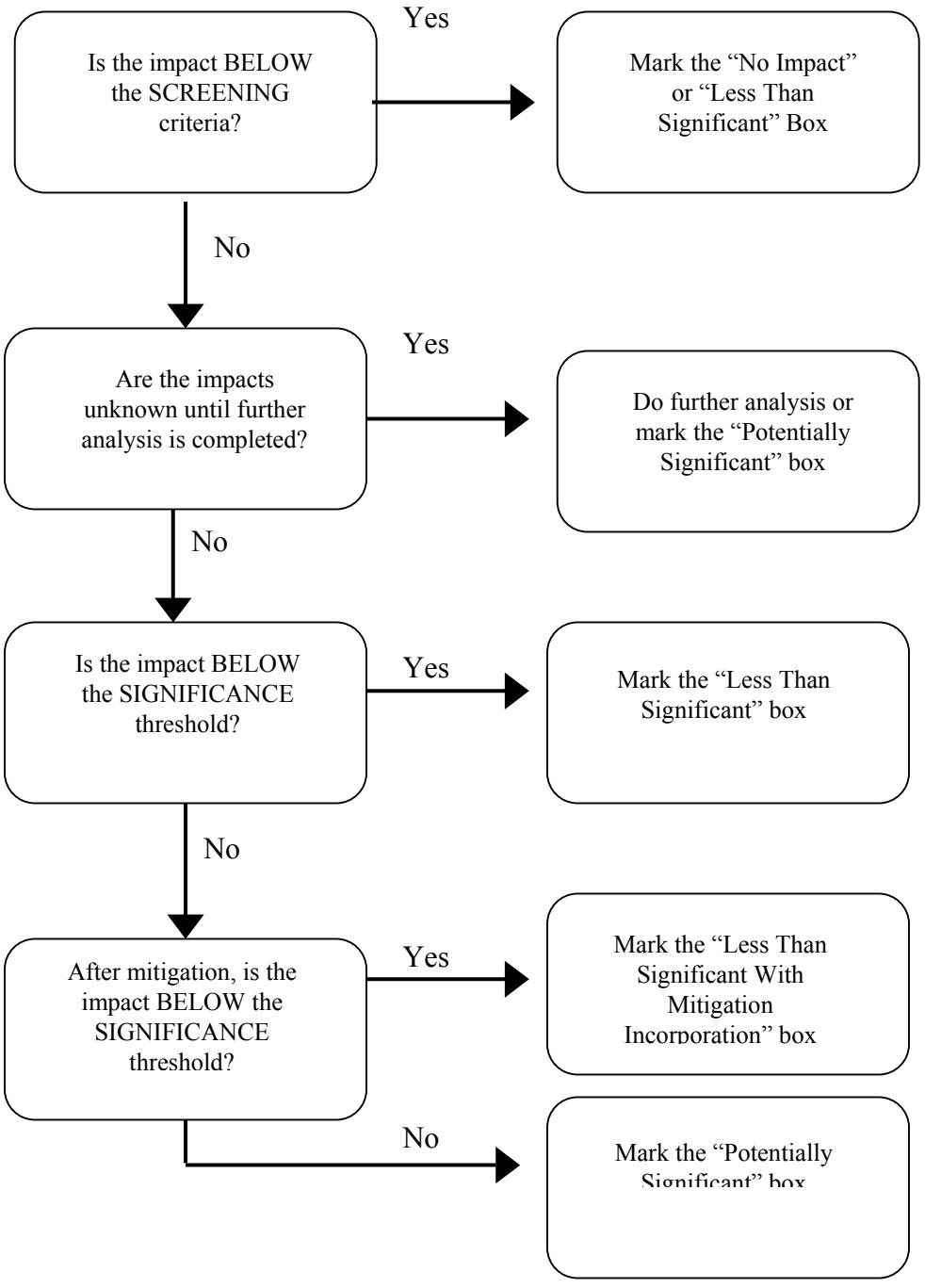
Significance Threshold

A project would normally have a significant impact on noise levels from project operation if the project causes the ambient noise level measured at the property line of an affected use to increase by 3 decibels (dBA) or more in community noise equivalency level (CNEL) to or within the "normally unacceptable" or "clearly unacceptable" category of the noise exposure chart prepared by the California Department of Health Services (DHS), or any 5 dBA or greater noise increase.

Case	Introduce Stationary Source with Noise Emissions Audible Beyond Property Line?	Include more than 75 du, 100,000 sf nonresidential, or 1,000 ADT?	Increase in Ambient Level?	Increase Remaining After Mitigation	Initial Study Evaluation	Results/ Document Prepared
1	No	No	-	-	No Impact	Neg Dec
2	No	Yes	2 dBA	-	Less Than Significant Impact	Neg Dec
3	Yes	No	5 dBA	2.5 dBA	Potentially Significant Unless Mitigation Incorporated	Mitigated Neg Dec
4	Yes	Yes	7 dBA	5 dBA	Potentially Significant Impact	EIR

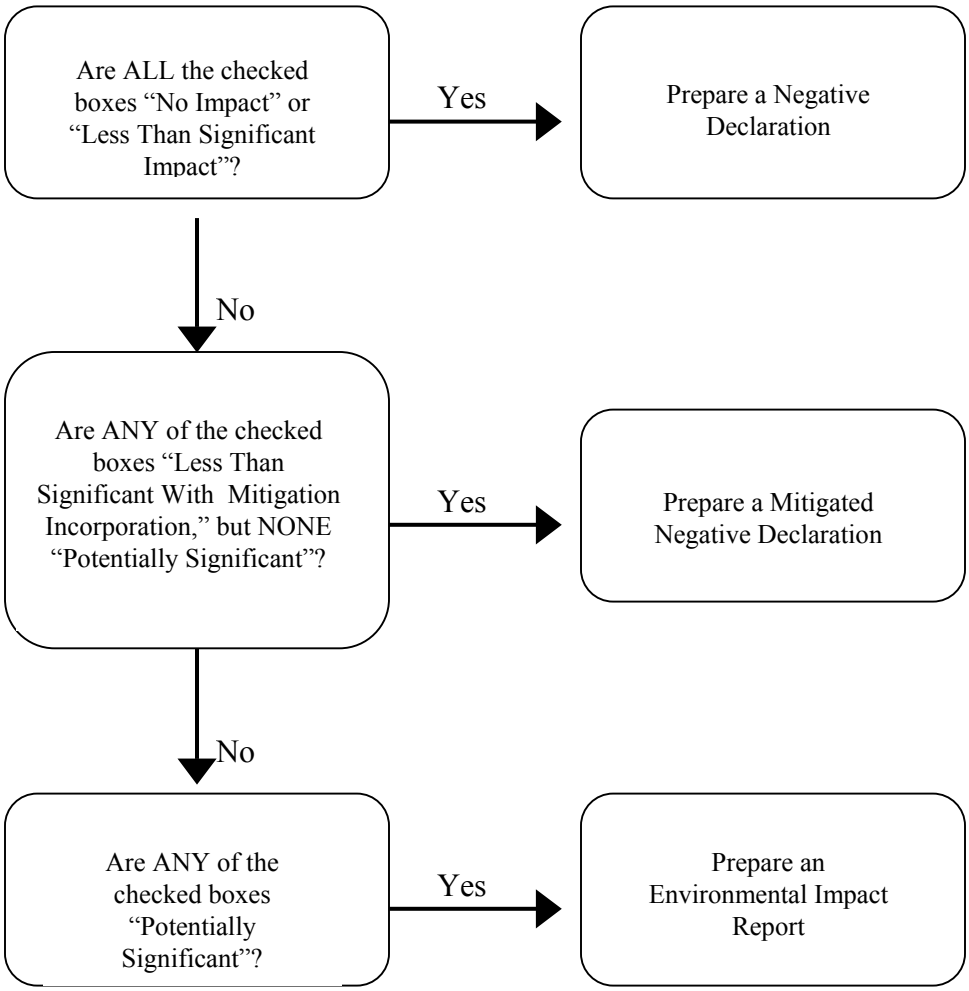
Notes: Assumes project is not exempt under CEQA.
The noise exposure chart prepared by the DHS is reproduced in the *Thresholds Guide.*
If the noise level before and/or after mitigation is not known or cannot be determined, additional analysis could be undertaken prior to completing the Initial Study Evaluation or within an EIR.

Exhibit 2
INITIAL STUDY CHECKLIST PROCESS*



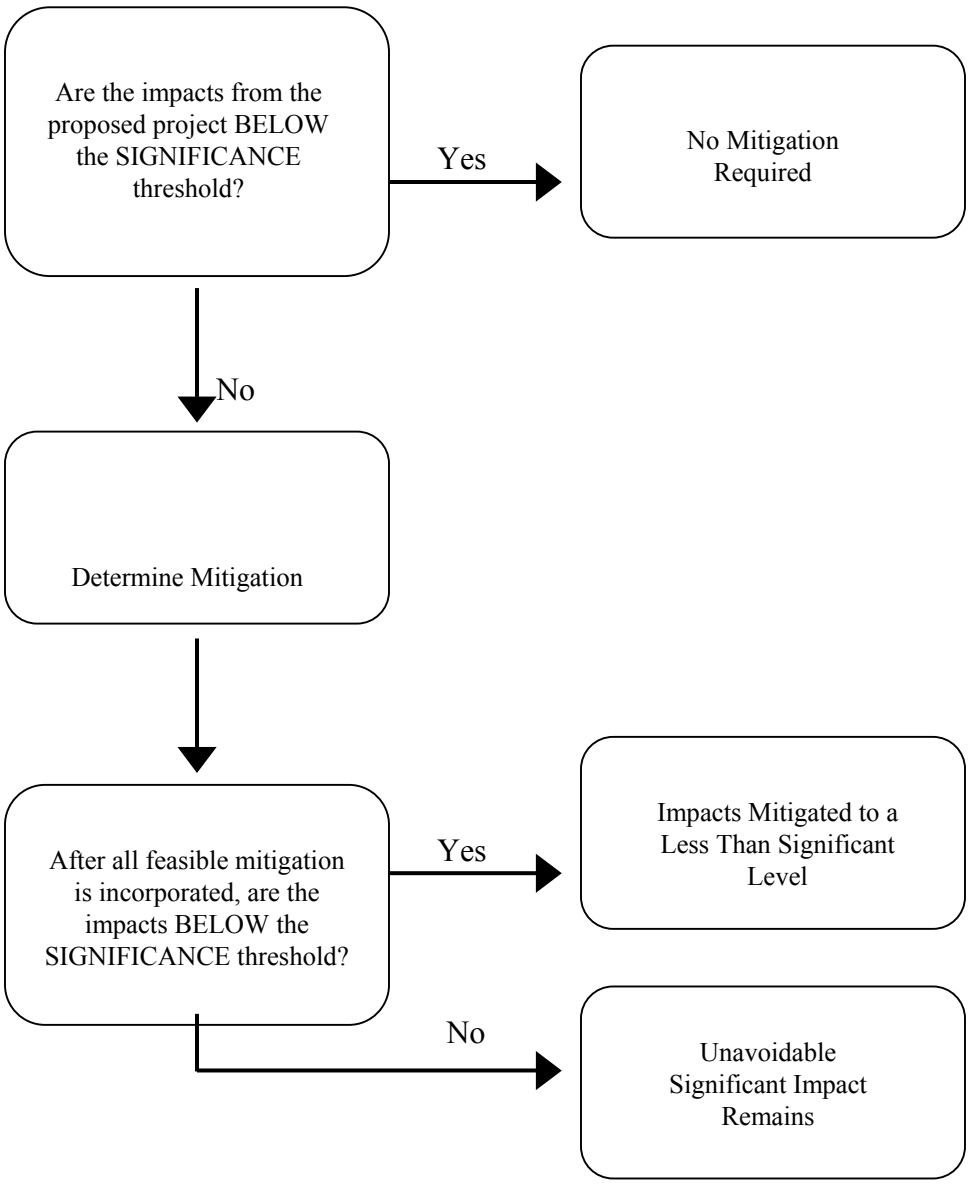
* *Assumes the project has had no previous review and is not exempt under CEQA.*

Exhibit 3
INITIAL STUDY DETERMINATION*



* *Assumes the project is not exempt under CEQA.*

Exhibit 4
IMPACT EVALUATION AND MITIGATION PROCESS



Note: If a project would result in one or more significant impacts, the lead agency, prior to project approval, must adopt certain findings as stated in CEQA Section 21081. Additional requirements related to mitigation measures are described in Section 21081.6.

DOCUMENT STRUCTURE

The *Los Angeles CEQA Thresholds Guide* is arranged by issue area, generally in the same order in which the issues appear in the State's Initial Study Checklist. The major environmental categories covered in the document are as follows:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology
- Hazards
- Land Use
- Noise
- Population and Housing
- Public Services
- Public Utilities
- Transportation
- Visual Resources
- Water Resources

For each environmental issue area, the following information is provided:

1. Initial Study Screening Process

Initial Study Checklist Question: This lists the question(s) from the State's Initial Study Checklist addressed within this issue area.

Introduction: The introduction provides a brief description of the issue area, including what types of project activities could be expected to have an impact, how the resource/issue would be affected, and important regulatory agencies and/or regulations.

Screening Criteria: The screening criteria assist in deciding when further study (additional review) is needed to determine whether a project impact could be significant. It assumes that the project is not exempt from CEQA requirements. Criteria are phrased as yes/no questions. For many issue areas, further study is recommended when one or more questions are answered with a "yes." A "no" response to all questions indicates that further study is not required, and there would normally be no significant impact from the proposed project on the subject issue.

Evaluation of Screening Criteria: This section contains any additional information needed to apply the screening criteria and identifies references that may be used in the evaluation.

2. Determination of Significance

Significance Threshold: The significance threshold provides guidance in determining whether or not a project impact would be significant. The threshold assumes that a project

exceeds the screening criteria. The quantitative and qualitative thresholds are phrased in the positive, so that if the project meets one or more of the criteria listed (a "yes" response), it would normally be considered to have a significant impact on the environment. Where a definitive threshold is not available, the *Thresholds Guide* provides case-by-case thresholds which consist of a list of conditions or criteria to be considered for an individual determination of significance.

Environmental Setting: This section identifies the type of information that is appropriate for a project setting or background section.

Project Impacts: This section provides a recommended methodology with which to analyze the proposed project, including the identification and evaluation of direct and indirect impacts, as appropriate, that may occur during construction or operation. It also identifies sources of relevant information and technical resources, and provides the basic steps to follow in the analysis. Impact methodologies are assumed to apply to both project level and plan level analyses unless otherwise specified. Other analysis methods may be appropriate, depending on project circumstances.

Cumulative Impacts: This section presents a method to evaluate cumulative impacts, based on either a related projects list or a planned development approach (the amount of overall growth expected for the project area, according to planning documents or forecasts, by the time of project completion). The methodology describes only the type of analysis that is appropriate and does not address the size or location of related projects to consider in the analysis. In cases where the methodology is the same as that for project impacts, the project impact section is referenced rather than repeating the information.

Sample Mitigation Measures: This section provides a sample list of measures that may be used to reduce project impacts. It does not address specific mitigation measures for certain project types, nor does it recommend or prioritize mitigation measures. Consideration of alternative projects (e.g., smaller scale, different uses) to reduce impacts is assumed to be part of the project alternatives analysis required in an EIR and is not included in the sample mitigation measures listed in the *Thresholds Guide*.

3. Data, Resources, and References

This section provides additional information related to the environmental issue. It may contain references to agencies or others with expertise in the subject area, reference documents, and selected legislation. For references that do not identify an agency or author, the entry refers to the City of Los Angeles. Several sections also provide exhibits and/or supplemental background information that illustrates or further explains concepts addressed in the section.

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Harbor Department
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INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE

INITIAL STUDY CHECKLIST QUESTION	THRESHOLDS GUIDE SECTION
I. AESTHETICS: *Would the project:*	
a) Have a substantial adverse effect on a scenic vista?	A.1 Aesthetics A.2 Obstruction of Views
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	A.1 Aesthetics E.3 Landform Alterations
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	A.1 Aesthetics A.3 Shading
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	(Glare Not Addressed) A.4 Nighttime Illumination

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

INITIAL STUDY CHECKLIST QUESTION	THRESHOLDS GUIDE SECTION
II. AGRICULTURE 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 Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and famland. Would the project:*	(Agriculture Not Addressed)
III. AIR QUALITY: *Where available, the significance criteria established by the applicable air quality management 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?	B.1 Construction Emissions B.2 Operational Emissions B.3 Toxic Air Contaminants
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	B.1 Construction Emissions B.2 Operational Emissions B.3 Toxic Air Contaminants

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

INITIAL STUDY CHECKLIST QUESTION	THRESHOLDS GUIDE SECTION
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	B.1 Construction Emissions B.2 Operational Emissions
d) Expose sensitive receptors to substantial pollutant concentrations?	B.1 Construction Emissions B.2 Operational Emissions B.3 Toxic Air Contaminants
e) Create objectionable odors affecting a substantial number of people?	B.2 Operational Emissions
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 California Department of Fish and Game or U.S. Fish and Wildlife Service?	C. Biological Resources

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

INITIAL STUDY CHECKLIST QUESTION	THRESHOLDS GUIDE SECTION
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	C. Biological Resources
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	C. Biological Resources
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?	C. Biological Resources
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	C. Biological Resources
f) Conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan?	C. Biological Resources

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

V. CULTURAL RESOURCES: *Would the project:*		
a) Cause a substantial adverse change in the significance of a historical resource as defined in'15064.5?	D.3	Historical Resources
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	D.2	Archaeological Resources
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	D.1	Paleontological Resources
	E.3	Landform Alterations
d) Disturb any human remains, including those interred outside of formal cemeteries?	D.2	Archaeological Resources

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

VI.	**GEOLOGIC PROBLEMS:** *Would the project:*		
a)	Expose people 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 Publications 42.	E.1	Geologic Hazards
ii)	Strong seismic ground shaking?	E.1	Geologic Hazards
iii)	Seismic-related ground failure, including liquefaction?	E.1	Geologic Hazards
iv)	Landslides?	E.1	Geologic Hazards
b)	Result in substantial soil erosion or the loss of topsoil?	E.2	Sedimentation and Erosion
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	E.1	Geologic Hazards

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks of life or property?	Not Addressed
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?	E.3 Landform Alteration
VII. 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?	F.1 Risk of Upset/Emergency Preparedness F.2 Human Health Hazards
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?	F.1 Risk of Upset/Emergency Preparedness F.2 Human Health Hazards
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	F.2 Human Health Hazards

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and as a result, would it create a significant hazard to the public or the environment?	F.2	Human Health Hazards
e)	For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	F.1 K.2	Risk of Upset/Emergency Preparedness Fire Protection & Emergency Medical Services
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working within the project area?	F.1 K.2	Risk of Upset/Emergency Preparedness Fire Protection & Emergency Medical Services
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	F.1 K.2	Risk of Upset/Emergency Preparedness Fire Protection & Emergency Medical Services
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?	K.2	Fire Protection & Emergency Medical Services

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

VIII. HYDROLOGY AND WATER QUALITY: *Would the project:*			
a)	Violate any water quality standards or waste discharge requirements?	G.2	Surface Water Quality
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)?	G.2 G.3	Surface Water Quality Groundwater Level
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	G.1 G.2	Surface Water Hydrology Surface Water Quality
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- or off-site?	G.1	Surface Water Hydrology

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	G.1	Surface Water Hydrology
f)	Otherwise substantially degrade water quality?	G.3	Groundwater Level
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?	G.1 G.2 G.3 G.4	Surface Water Hydrology Surface Water Quality Groundwater Level Groundwater Quality
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	G.4	Groundwater Quality
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?	G.1 G.3	Surface Water Hydrology Groundwater Level
j)	Inundation by seiche, tsunami, or mudflow?	E.1 G.3	Geologic Hazards Groundwater Level

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

IX.	**LAND USE AND PLANNING:** *Would the project:*		
a)	Physically divide an established community?	H.2	Land Use Compatibility
b)	Conflict with any applicable land use plan, policy, or regulation of an 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 mitigating an environmental effect?	H.1 H.2	Land Use Consistency Land Use Compatibility
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	H.1 H.2	Land Use Consistency Land Use Compatibility
X.	**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?	E.4	Mineral Resources
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, general plan, or other land use plan?	E.4	Mineral Resources

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

XI. 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?	I.1 Construction Noise I.2 Operational Noise I.3 Railroad Noise I.4 Airport Noise
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	I.1 Construction Noise I.2 Operational Noise I.3 Railroad Noise I.4 Airport Noise
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	I.2 Operational Noise I.3 Railroad Noise I.4 Airport Noise
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above the existing without the project?	I.1 Construction Noise I.2 Operational Noise I.3 Railroad Noise I.4 Airport Noise

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	I.1 I.2 I.4	Construction Noise Operational Noise Airport Noise
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	I.1 I.2 I.4	Construction Noise Operational Noise Airport Noise
XII.	**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 extension of roads or other infrastructure)?	J.1	Population and Housing Growth
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	J.1 J.2	Population and Housing Growth Population and Housing Displacement
c)	Displace substantial numbers of existing people, necessitating the construction of replacement housing elsewhere	J.2	Population and Housing Displacement

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

XIII. PUBLIC SERVICES: *Would the project:*			
a)	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 above public services:	K.1	Police Protection
i)	Fire protection?	K.2	Fire Protection & Emergency Medical Services
ii)	Police protection	K.1	Police Protection
iii)	Schools?	K.3	Public Schools
iv)	Parks?	K.4	Recreation and Parks
v)	Other public facilities?	K.5	Libraries

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

XIV. RECREATION:			
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the family would occur or be accelerated?	K.4	Recreation and Parks
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	K.4	Recreation and Parks
XV. TRANSPORTATION/TRAFFIC: *Would the project:*			
a)	Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections?	L.1 L.2 L.3 L.4 L.8	Intersection Capacity Street Segment Capacity Freeway Capacity Neighborhood Intrusion Impacts In-Street Construction Impacts
b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	L.1 L.2 L.3	Intersection Capacity Street Segment Capacity Freeway Capacity

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	Not Addressed	
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Not Addressed	
e)	Result in inadequate emergency access?	L.5	Project Access
f)	Result in inadequate parking capacity?	L.7	Parking
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	L.6	Transit System Capacity
XVI. UTILITIES AND SERVICE SYSTEMS: *Would the project:*			
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	M.2	Wastewater
b)	Require or result in the construction of new water or wastewater treatment facilities, the construction of which could cause significant environmental effects?	G.1 M.1 M.2	Surface Water Hydrology Water Wastewater

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

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?	G.1 M.2	Surface Water Hydrology Wastewater
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	M.1	Water
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?	K.2	Wastewater
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	K.3	Solid Waste
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	M.3	Solid Waste

INITIAL STUDY CHECKLIST QUESTIONS AND RELATED SECTIONS IN L.A. CEQA THRESHOLDS GUIDE, continued

XVII. MANDATORY FINDINGS OF SIGNIFICANCE: *Does the project:*	
a) 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 eliminate important examples of the major periods of California history or prehistory?	All sections, particularly: C. Biological Resources D.1 Paleontological Resources D.2 Archaeological Resources D.3 Historical Resources
b) 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)?	All Sections
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Not addressed specifically, each section addresses indirectly

LIST OF ABBREVIATIONS/ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ACEC	Areas of Critical Concern
ACM	asbestos-containing material
ACOE	United States Army Corps of Engineers
ADT	average daily traffic
AEM	Area Equivalent Method
AEP	Association of Environmental Professionals
AF	acre feet
AQMP	Air Quality Management Plan
AQ-TAN	Air Quality Technical Analysis Note
ARMR	Archaeological Resource Management Reports
ASTM	American Society of Testing Methods
ATSAC	Automated Traffic Surveillance and Control
AVORS	Additional Valley Outfall Relief Sewer
AVR	average vehicle ridership
BACM	Best Available Control Measures
BACT	Best Available Control Technologies
Basin	South Coast Air Basin
BLM	Bureau of Land Management
BMP	best management practices
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAC	California Administrative Code
CAL3QHC	air quality model
California Register	California Register of Historical Resources
CALINE/4	air quality model
CalOSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAP	Clean Air Program
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBD	Central Business District
CCAA	California Clean Air Act
CCR	California Code of Regulations
CCSCE	Center for the Continuing Study of the California Economy
CDD	Community Development Department
CDFG	California Department of Fish and Game
CDMG	California Division of Mines and Geology
CEQ	Council of Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGC	California Government Code
CHAS	Comprehensive Housing Affordability Study
CHC	Cultural Heritage Commission
CIP	Capital Improvement Program
CIS	Coastal Interceptor Sewer

List of Abbreviations/Acronyms, continued

CiSWMPP	City Solid Waste Management Policy Plan
CIWMB	California Integrated Waste Management Board
CMA	Critical Movement Analysis
CMP	Congestion Management Program
CNDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
COS	Central Outfall Sewer
CRA	Community Redevelopment Agency
CRV	California Redemption Value
cu.yd.	cubic yards
CWA	Clean Water Act
CWC	California Water Code
D/C	demand to capacity
dB	decibel
dBA	A-weighted decibel scale
DFO	Designated Federal Official
DHS	Department of Health Services
DMV	California Department of Motor Vehicles
DOF	Department of Finance
DOT	United States Department of Transportation
DWP	Department of Water and Power
DWR	Department of Water Resources
EAD	Environmental Affairs Department
EDI	City of Los Angeles Environmental Data Index
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC	emission factors
EPA	U.S. Environmental Protection Agency
ERCs	Emission Reduction Credits
EVIS	East Valley Interceptor Sewer
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FLMPA	Federal Land Management and Policy Act of 1976
gpcd	gallons per capita per day
gpd	gallons per day
gpm	gallons per minute
Gr.sq.ft.	gross square feet
gsf	gross square feet
HABS	Historic American Building Survey
HAPs	Hazardous Air Pollutants
HI	hazard index

List of Abbreviations/Acronyms, continued

HNM	Helicopter Noise Model
HOV	high occupancy vehicles
HPOZ	Historic Preservation Overlay Zone
HRA	health risk assessment
HSC	Health and Safety Code
HTP	Hyperion Treatment Plant
HUD	Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
ICO	interim control ordinance
INM	Integrated Noise Model
ISWM	Integrated Solid Waste Management
ISWMO	Integrated Solid Waste Management Office
ITE	Institute of Transportation Engineers
IWG	Interagency Working Group
L.A.	Los Angeles
LACMTA	Los Angeles County Metropolitan Transportation Authority
LADOT	Los Angeles Department of Transportation
LAFD	Los Angeles Fire Department
LAGWRP	Los Angeles-Glendale Water Reclamation Plant
LAMC	Los Angeles Municipal Code
LAPD	Los Angeles Police Department
LAPL	Los Angeles Public Library
LARWQCB	Los Angeles Regional Water Quality Control Board
LAUSD	Los Angeles Unified School District
LAX	Los Angeles International Airport
Ldn	Day-Night Sound Level
LEQV2	noise model
LGC	Local Government Commission
LOS	level of service
LUPAMS	Land Use Planning and Mapping System
LUST	leaking underground storage tank
MAAQI	Mobile Assessment for Air Quality Impacts
MACT	Maximum Achievable Control Technology
MFI	Median Family Income
mgd	million gallons per day
MOU	Memorandum of Understanding
mph	miles per hour
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MUTCD	Manual on Uniform Traffic Control Devices
MWD	Metropolitan Water District of Southern California
NAAQS	National Ambient Air Quality Standard
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
National Register	National Register of Historic Places
NCHRP	National Cooperative Highway Research Program
NCOS-NOS	North Central Outfall Sewer-North Outfall Sewer

List of Abbreviations/Acronyms, continued

NEJAC	National Environmental Justice Advisory Council
NEPA	National Environmental Policy Act
NESHAPs	National Emissions Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NORS	North Outfall Replacement Sewer
NOS	North Outfall Sewer
NOS-LCSFVRS	North Outfall Sewer-La Cienega, San Fernando Valley Relief Sewer
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NSPS	New Source Performance Standard
NSR	New Source Review
OEJ	Office of Environmental Justice
OHP	California Office of Historic Preservation
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
Pb	lead
PM	particulate matter
PM_{10}	coarse particulates
$PM_{2.5}$	fine particulates
POD	Pedestrian Oriented District
PRC	Public Resources Code
RACM	Reasonably Available Control Measures
RCP&G	Regional Comprehensive Plan and Guide
RD	Reporting District
RECLAIM	Regional Clean Air Incentives Market
ROG	Reactive Organic Gas
ROW	right-of-way
RTCs	RECLAIM Trading Credits
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SEA	Significant Ecological Area
sf	square feet
SIP	State Implementation Plan
SMGB	State Mining and Geology Board
SO_2	sulfur dioxide
SOCAB	South Coast Air Basin
SOUND32	noise model
SOV	single occupant vehicle
SO_x	sulfur oxides
sq.ft.	square feet

List of Abbreviations/Acronyms, continued

SRRE	Source Reduction and Recycling Element
TDM	Transportation Demand Management
The Gas Company	Southern California Gas Company
TIA	Transportation Impact Assessment
TITP	Terminal Island Treatment Plant
TOD	Transit Oriented District
TRB	Transportation Research Board
TSM	Transportation System Management
TSP	Transportation Specific Plan
TWRP	Donald C. Tillman Water Reclamation Plant
U.S.	United States
UCLA	University of California at Los Angeles
ULARA	Upper Los Angeles River Area
ULI	Urban Land Institute
USAF	United States Air Force
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
V/C	Volume to Capacity
VOC	Volatile Organic Compound
WDR	Waste Discharge Requirements
ZI	Zoning Information

GLOSSARY

Alternatives - A range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the project's objectives but would avoid or substantially lessen any of the significant effects of the project. The comparative merits of the alternatives are evaluated in an EIR or EIS.

Applicant - A legal entity or person who proposes to carry out a project and needs a lease, permit, license, certificate, or other entitlement for use, or who is requesting financial assistance from one or more public agencies to carry out a project.

Approval - The action by a decision-making body, which commits the City to a definite course of action with regard to a project, intended to be carried out by any person.

California Environmental Quality Act (CEQA) - Statute enacted by the California legislature contained in the California Public Resources Code, Section 21000 et seq. The *Thresholds Guide* provides guidance on the determination of significant impacts, one provision of CEQA.

California Law – California Law consists of 29 codes, covering various subject areas, the State Constitution and Statutes. Codes included the following: Business and Professions Code, Civil Code, Code of Civil Procedure, Commercial Code, Corporations Code, Education code, Election Code, Evidence Code, Family Code, Financial Code, Fish and Game Code, Food and Agricultural Code, Government Code, Harbors and Navigation Code, Health and Safety Code, Insurance Code, Labor Code, Military and Veterans Code, Penal Code, Probate Code, Public Contract Code, Public Resources Code, Public Utilities Code, Revenue and Taxation Code, Streets and Highways Code, Unemployment Insurance Code, Vehicle Code, Water Code, and Welfare and Institutions Code.

Categorical Exemption - An exemption from the requirements of CEQA based on a finding by the Secretary For Resources and the Los Angeles City Council that certain types of projects do not have a significant effect on the environment.

CEQA Guidelines - The CEQA Guidelines provide agencies with criteria and procedures for the evaluation of projects and the preparation of environmental documents. The State CEQA Guidelines are contained in Title 14, Division 6 of the California Administrative Code. The Los Angeles City CEQA Guidelines are adopted by ordinance of the City Council.

Code of Federal Regulations (CFR) - is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. The CFR is divided into 50 titles, which represent broad areas subject to Federal regulation. Each title is divided into chapters, which usually bear the name of the issuing agency. Each chapter is further subdivided into parts covering specific regulatory areas. Large parts may be subdivided into subparts.

Community Plan – A portion of the General Plan that focuses on the setting and

needs of a particular area. It supports the policies of the General Plan. Los Angeles has 35 Community Planning Areas. The 35 Community Plans make up the City's Land Use Element.

Decision-Making Body - A group or individual having project approval authority.

Discretionary Project - An activity defined as a project which requires the exercise of judgment, deliberation, or a decision on the part of the public agency or body in the process of approving or disapproving a particular activity, as distinguished from activities where the public agency or body merely has to determine whether there has been compliance with applicable statutes, ordinances, or regulations.

Entitlement - Used to describe discretionary land use approval granted by the Planning Department. Includes Zone Variances, Zone Changes, Conditional Use Permits, General Plan Amendments, Specific Plan Exceptions, Subdivisions, Parcel Maps, and Site Plan Review.

Environment - Environment, for the purposes of implementing CEQA, is the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

Environmental and Public Facilities Maps - Show the location of and describe various environmental features and public facilities. The City Planning Department Citywide Division prepared the 42 maps in 1996.

Environmental Assessment Form (EAF) - An environmental form submitted to the Environmental Review Section of the City Planning Department which provides the necessary information to determine the recommended environmental clearance for projects requiring any discretionary action.

Environmental Data Index (EDI) – The EDI is a citywide tabular report describing the geographical distribution of a wide array of environmental characteristics on a census tract basis. Data for 30 environmental elements are included. The City Planning Department prepared the EDI in 1978.

Environmental Documents- Environmental documents, according to CEQA, include Initial Study, Negative Declaration, draft and final EIR, Joint EIR/EIS, Notice of Preparation and General Exemption, Notice of Completion, Notice of Determination, and Notice of Exemption.

Environmental Impact Report (EIR) - An Environmental Impact Report is a concise statement setting forth the environmental effects and considerations pertaining to a project as specified in Section 21100 of CEQA.

Environmental Impact Statement (EIS) - An Environmental Impact Statement may be required pursuant to the National Environmental Policy Act (NEPA) if a federal agency or funding is involved. Like an EIR, an EIS describes the environmental impacts of a proposed project and its alternatives.

Feasible - Feasible means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

Federal Register – The Federal Register is the official daily publication for Rules, Proposed rules, and Notices of Federal agencies and organizations, as well as Executive Orders and other Presidential Documents.

Framework Element – This strategy for long-term growth sets a citywide context to guide the update of the Community Plans and citywide elements of the General Plan. The Framework Element refines adopted City policy and updates and supersedes Concept Los Angeles, a strategy to preserve residential neighborhoods by focusing growth into centers. Approved by City Council in December 1996.

General Exemption - An exemption from the requirements of CEQA is granted if it can be seen with reasonable certainty that the project in question could not possibly have a significant effect on the environment.

General Plan – A "blueprint" for future development with a long-term outlook. Required by State law to be prepared by each county and city and include seven elements: land use, circulation, housing, conservation, open space, noise, and safety. May also include optional elements. Includes policies, goals, objectives, and programs. Development must not only meet specific zoning requirements, but also the broader policies, goals and objectives set forth in the General Plan. The City's General Plan is organized into the following Elements: Framework; Land Use; Air Quality; Transportation; Housing; Infrastructure Systems; Open Space and Conservation; Noise; Public Facilities and Services; Historic Preservation and Cultural Resources; Safety; and Urban Form and Neighborhood Design.

Initial Study - A comprehensive analysis of those aspects of the environment, which could potentially affect a project or be affected by a project conducted to determine whether a project may have a significant effect on the environment.

Lead Agency - The public agency which has the principal responsibility for carrying out or approving a project. The Lead Agency will prepare the environmental documents for the project either directly or by contract.

Lead City Agency - A Lead City Agency is the City department, bureau, division, section, office, or agency which has the principal responsibility of carrying out a project which is subject to the provisions of CEQA, or has the principal responsibility for processing the application for a lease, permit, license, or other entitlement for use for a project which is subject to the provisions of CEQA. If more than one City Agency meets the Lead City Agency criteria, the Lead City Agency shall be the City Agency that normally acts first on such projects.

Ministerial Project - Activities undertaken by public agencies pursuant to a statute, ordinance, or regulation that sets forth the conditions upon which the undertaking must or must not be granted. A ministerial decision involves only the use of fixed standards or objective measurements without professional judgment.

Mitigated Negative Declaration (MND) - When significant impacts may occur as a result of the implementation of a project, but mitigation and/or project modification reduce impacts to a less than significant level, then a Mitigated Negative Declaration

is issued with discussion and conditions attached.

Mitigation - Mitigation includes avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or compensating for the impact by replacing or providing substitute resources or environments.

National Environmental Policy Act (NEPA) - The National Environmental Policy Act is the federal law requiring an environmental assessment for federal actions that involve impacts on the environment. NEPA is set forth in 42 U.S.C.A. 4321 et seq.

Negative Declaration (ND) - A statement by the Lead Agency briefly setting forth the reasons why the project, although not otherwise exempt, will not have a significant effect on the environment and therefore does not require the preparation of an EIR.

Notice of Completion (NOC) - A brief notice filed with the State Clearinghouse in the Governor's Office of Planning and Research by a Lead Agency as soon as it has completed a draft EIR and is prepared to send out copies for review.

Notice of Determination (NOD) - A public notice filed with the City and County Clerk by the Lead City Agency after a project subject to the provisions of CEQA and involving a Negative Declaration, Mitigated Negative Declaration or an EIR has been approved.

Notice of Exemption (NOE) - A public notice which may be filed with the City and County Clerk by a Lead City Agency after the decision-making body has approved a project and has determined that it is a ministerial, categorically exempt, or emergency project, or is otherwise exempted pursuant to the provisions of Section 21080 (b) of the California Public Resources Code.

Notice of Preparation (NOP) - A brief notice sent by a Lead City Agency to notify Responsible Agencies and interested parties that the Lead City Agency plans to prepare an EIR for a proposed project.

Office of Planning and Research (OPR) - Assists in the understanding and implementation of CEQA by (1) preparing and updating the State CEQA Guidelines; (2) evaluating Categorical Exemptions; (3) distributing documents to state agencies through the State Clearinghouse; (4) coordinating between other public agencies; and (5) preparing and distributing publications related to the understanding and use of CEQA.

Participating City Agency - A City department, bureau, division, section, office, officer, or agency, which is required by Charter or action of the City Council to review a particular class of projects and make comments or recommendations to the Lead City Agency.

Responsible Agency - A public agency, such as a city or county, which proposes to carry out or has approval power over a project, but is not the Lead Agency for the project.

Significant Effect - A substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the proposed activity including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. This *Thresholds Guide* is intended to assist in the determination of significant effects.

Specific Plan – describes the allowable land uses, identifies open space, and details infrastructure availability and financing for a portion of a community. Specific plans implement, but are not technically a part of the General Plan. Los Angeles has various specific plans throughout the City, such as West Los Angeles, Warner Center, etc.

State Clearinghouse - In the Governor's Office of Planning and Research. Responsible for distributing environmental documents to state agencies, departments, boards, and commissions for review and comment. Coordinates the responses to ensure accurate and consistent responses from the state.

Statement of Overriding Considerations - A statement with findings identifying public objectives that, in the opinion of the decision-making body, warrant approval of a project notwithstanding its significant adverse impact(s) on the environment.

Statutory Exemption - Exemption from the requirements of CEQA based on the determination by the California Legislature that a specific type of project should be exempt from CEQA.

Zoning – The purpose of zoning regulations is to implement the policies of the General Plan. Zoning lists the kinds of uses allowed on a parcel and sets standards such as minimum lot size, maximum building height, and minimum front yard depth. Zoning must comply with the general plan, is adopted by ordinance, and carries the weight of local law. The City's Zoning is found in Chapter 1 of the Los Angeles Municipal Code (LAMC).

A. AESTHETICS AND VISUAL RESOURCES

A. AESTHETICS AND VISUAL RESOURCES

INTRODUCTION

Aesthetics, views, shading, and nighttime illumination issues are related elements in the visual environment. Aesthetics generally refer to the identification of visual resources and the quality of what can be seen, or overall visual perception of the environment. Views refer to visual access and obstruction, or whether it is possible to see a focal point or panoramic view from an area. Shading issues are concerned with effects of shadows cast by existing or proposed structures on adjacent land uses. Nighttime illumination addresses the effects of a proposed project's exterior lighting upon adjoining uses.

A.1. AESTHETICS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

I.a): Would the project have a substantial adverse effect on a scenic vista?
I.b): Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
I.c): Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

B. Introduction

Aesthetic impact assessment generally deals with the issue of contrast, or the degree to which elements of the environment differ visually.[1] Aesthetic features occur in a diverse array of environments, ranging in character from urban centers to rural regions and wildlands. Adverse visual effects can include the loss of natural features or areas, the removal of urban features with aesthetic value, or the introduction of contrasting urban features into natural areas or urban settings.[2]

Natural features may include, but are not limited to: open space; native or ornamental vegetation/landscaping; topographic or geologic features; and natural water sources. The loss of natural aesthetic features or the introduction of contrasting urban features may have a local impact, or, if part of a larger landscape, may contribute to a cumulative decline in overall visual character.

Urban features that may contribute to a valued aesthetic character or image include: structures of architectural or historic significance or visual prominence; public plazas, art or gardens; heritage oaks or other trees or plants protected by the City; consistent design elements (such as setbacks, massing, height, and signage) along a street or district; pedestrian amenities; landscaped medians or

[1] *Visual contrast has four components: form, line, color and texture. Differences in these elements generate visual contrast. The Bureau of Land Management (BLM) (Contrast Rating System), Soil Conservation Service (Visual Absorption Capability), and Federal Highway Administration (FHWA) (Visual Absorption Capacity) all utilize established qualitative and quantitative methods to measure potential visual impacts and the ability of natural areas to absorb visual impacts.*

park areas; etc. Aesthetic character may be purposely generated, nurtured or preserved, as is the case with City-designated scenic corridors and historical districts, or may exist without such cause or purpose, such as may be the case with certain retail districts or residential neighborhoods.

The introduction of contrasting features or development into aesthetically valued urban areas can overpower familiar features, eliminate context or associations with history, or create visual discord where there have been apparent efforts to maintain or promote a thematic or consistent character.

There is an extraordinary range of aesthetic characteristics and contrasts within the City of Los Angeles, including suburban neighborhoods, dense urban areas, the Port, airports, and hillside residential areas. Given the size and diversity of the City, there are no aesthetic standards that apply to all areas. However, the Community Plan and any applicable specific plan, local coastal plan, or redevelopment plan may contain specific guidelines and requirements related to aesthetics. General aesthetic requirements that apply to individual zoning districts or to types of land uses are provided in the Los Angeles Municipal Code (LAMC). Selected requirements, including the Landscape Ordinance, are included in Exhibit A.1-1. While certain screening and significance thresholds can be identified for this issue, a degree of discretionary judgment may be required to determine the "value" of the aesthetic resource and potential project impacts.

C. Screening Criteria

- Does the project include a proposed zone change or variance that would increase density, height, and bulk in areas where there is a consistent theme, style, or building height and setbacks?

- Does the project include a proposal to develop or allow development in an existing natural open space area (not including previously developed or infill lots)?

- Would the project result in the removal of one or more features that contribute to the valued aesthetic character or image of the neighborhood, community, or localized area?

- Would the project introduce features that would detract from the existing valued aesthetic quality of a neighborhood, community, or localized area by conflicting with important aesthetic elements or the quality of the area (such as theme, style, setbacks, density, massing, etc.) or by being inconsistent with applicable design guidelines?

[2] *See C. BIOLOGICAL RESOURCES, as appropriate.*

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Aesthetics, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Aesthetics from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, including drawings or renderings. Features that contribute to a valued aesthetic image may include, but are not limited to: structures of architectural or historical significance or visual prominence; public plazas, art, or gardens; heritage oaks or other trees protected by the City; or other features of recognized value to the aesthetic or visual character of an area. Projects that detract from the existing aesthetic quality of an area may include, but are not limited to, major contrasts in building height and bulk (e.g., buildings "too big" for a street), excessive vegetation loss or grading of slopes in natural areas, introduction of high rise structures in low density areas, etc. Compare the project features with the existing characteristics of the project site and the surrounding area. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, which would be removed, altered, or demolished;

- The amount of natural open space to be graded or developed;

- The degree to which proposed structures in natural open space areas would be effectively integrated into the aesthetics of the site, through appropriate design, etc;

- The degree of contrast between proposed features and existing features that represent the area's valued aesthetic image;

- The degree to which a proposed zone change would result in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements;

- The degree to which the project would contribute to the area's aesthetic value; and

- Applicable guidelines and regulations.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Identification and description of the natural or built feature(s) that gives the existing neighborhood/local area its valued aesthetic character or image;

- Summary of adopted plans or policies that relate to the aesthetics of the project area, such as those found in a specific plan, Redevelopment Plan, local coastal plan, the Community Plan, or the Planning and Zoning Code, including the Landscape Ordinance; and

- Description of any feature on the project site or in the surrounding area that is listed, designated or otherwise recognized by the City (e.g., a scenic corridor, historic district, heritage oak trees).

Project Impacts

Based on the project description, and a review of the project site and surrounding area, identify the degree to which the proposed project would result in the loss, removal, alteration, or destruction of any existing natural or urban aesthetic feature(s) that contributes to the valued aesthetic character of the area. In addition, identify the major features of the proposed project that would be added to the site, including building heights, bulk, setbacks, architectural style, or any proposed zone changes or variances. Evaluate the degree to which the introduction of new features or the loss of existing aesthetic elements would alter, degrade, or contrast with the existing valued aesthetic character of the area.

Examples of contrast in areas where there is a consistent architectural theme, style or other aesthetic character could include, but are not limited to, the following:

- The project's architectural style, building materials, massing, or size would contrast with adjacent development, such that the value or quality of the area is diminished;

- The project would cause or contribute to a change in the overall character of the area (e.g., from residential to commercial, single-family to multi-family, etc.) and/or new development would contrast with existing architectural styles or themes; and

- The project would grade or remove open space or natural lands and introduce contrasting built features.

Cumulative Impacts

Review the list of related projects and identify those projects that would result in the removal, alteration, or destruction of similar aesthetic features as the proposed project, and/or would add structural or other features that would contrast conspicuously with the valued aesthetic character of the same area as the project. Consider both natural and built features that give the area its image or character. Determine whether the impact of the related projects, in combination with the proposed project, would result in a significant aesthetic impact, using the methodology described above.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Replace existing natural aesthetic features proposed for removal;

- Minimize grading of natural and semi-natural open space;

- Modify structure design to eliminate or screen contrasting/detracting features;

- Consider adaptive reuse of important existing structures;
- Place new utilities underground, where appropriate;

- Incorporate policies and/or design which effectively integrates natural aesthetics into the project (i.e., cluster development, greenbelts, landscaping, etc.);

- Utilize architectural styles, materials, scale, massing, setbacks, signage, circulation patterns, pedestrian orientation, streetscape amenities, and landscaping common to and/or consistent with the character of existing surrounding uses;

- Continue the existing aesthetic treatments along the frontage of new structures (such as street furniture, landscaping, street trees, parks, or pedestrian-oriented walks);

- Screen roof and mechanical equipment, garbage dumpsters, and equipment from public view; and

- Use building styles and finishes that integrate effectively with the natural terrain.

See also the Landscape Ordinance for additional suggestions.

3. DATA, RESOURCES, AND REFERENCES

City of Los Angeles General Plan, including Framework Element, Draft Open Space and Conservation Element, Scenic Highways Plan of the Circulation Element, District Plans, Community Plans, and Local Coastal Program. Plans are available from the City Planning Department's Central Maps and Publications office at 200 N. Spring St., 5th Floor, Los Angeles, California 90012; Telephone: (213) 978-1255.

LAMC, Chapter 1, Planning and Zoning Code. Available from the Central Maps and Publications Office (see above), on http://www.lacity.org/PLN/

Landscape Ordinance, No. 170,978 as amended, and Guidelines to Implement the Landscape Ordinance. Available from the Central Maps and Publications Office (see above).

See also C. BIOLOGICAL RESOURCES; and D.3. HISTORICAL RESOURCES

Exhibit A.1-1

SELECTED AESTHETIC-RELATED REGULATIONS IN THE LOS ANGELES MUNICIPAL CODE

Chapter 1, Article 2, Sec. 12.21.1. Building heights and setbacks shall not exceed the maximum heights identified per zoning district in this section.

Chapter 4, Article 6. Oak trees meeting certain requirements shall be relocated or replaced. Oak tree reports shall be prepared for tentative map approval.

Chapter 1, Article 7, Sec. 17.05 S, and T. The Mulholland Scenic Parkway and Valley Circle Boulevard - Plummer Street Scenic Corridor shall have trails along the roadways, which meander within a landscaped parkway. Signs and road related fixtures in the corridor areas to be of a design to blend with the scenic environment. Attractive masonry walls or landscaping shall provide screening of adjacent developments.

Chapter 1, Article 7, Sec. 17.08 F. Subdividers shall either plant street trees or make cash payments for such plantings.

Chapter 1, Article 2, Sec. 12.22 A 23. Mini-shopping centers shall construct a six-foot masonry wall along residential zones and trash storage areas. Three-foot high decorative screening walls or hedges shall be constructed between parking areas and sidewalks/parkways. All center street frontages will include a landscaped setback. At least 5 percent of surface parking areas shall be landscaped. Street frontages and parking areas shall be planted with shade trees. Off-site commercial signs, flashing signs, pole signs or roof signs are prohibited.

Chapter 1, Article 2, Sec. 12.21 A 6(d) and (e), and (i). Public and private parking areas shall be enclosed by a wall, except in the "M2" and "M3" Zones, along an alley, public parking area, or a "P", PB", "C" or "M" Zone. Unimproved or non-parking portions of parking lots shall be landscaped.

Chapter 1, Article 2, Sec. 12.21.1 A 3 (See also Division 62). Restrictions on the number, size and location of parking area signs within "P" and "CR" Zones. Sign plans shall be submitted with applications for signs. Prohibited signs shall include posters, pennants, or banners, flashing signs or signs.

Chapter 1, Article 2, Sec. 12.14 A, and Sec. 12.17 A 3(b), and Sec. 12.17.1 A 2(b)(4). The display/storage of merchandise within the "C2", "C5" and "CM" Zones shall be confined to the rear of the lot as measured from street frontages.
Chapter 1, Article 2, Sec. 12.13.5 A 3, and Sec. 12.14 A, and 12.14A, and Sec. 12.18 B 5(b) and (d). All activities, including storage, in the "C1.5" Zone, and certain activities in the "C2" Zone, shall be conducted wholly within an enclosed building. Auto stations in the "C2" Zone shall have a six-foot

high wall along lot lines, which abut "A" or "R" Zones. Open storage areas in the "MR2" Zone shall be enclosed on all sides with a solid wall not less than eight feet in height sufficient to screen the use from public view.

Chapter 1, Article 2, Sec. 12.19 A 1(4)(2), and 12.20 A 1(e). Automobile dismantling yards, junkyards and certain types of storage in the "M2" or "M3" Zones shall be enclosed within a building or an eight-foot solid masonry wall.

City of Los Angeles Landscape Ordinance, No. 170,978, as amended, and Guidelines. Updates the City's requirements for landscaping at new buildings, based on a point system.

A.2. OBSTRUCTION OF VIEWS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

I.a): Would the project have a substantial adverse effect on a scenic vista?

B. Introduction

The term "views" generally refers to visual access to, or the visibility of, a particular sight from a given vantage point or corridor. "Focal views" focus on a particular object, scene, setting, or feature of visual interest; "panoramic views" or vistas provide visual access to a large geographic area, for which the field of view can be wide and extend into the distance. Examples of focal views include natural landforms, public art/signs, individual buildings, and specific, important trees. Panoramic views are usually associated with vantage points looking out over a section of urban or natural areas that provide a geographic orientation not commonly available. Examples of panoramic views might include an urban skyline, valley, mountain range, the ocean, or other water bodies.

The State of California and the City of Los Angeles have recognized the value of access to visual resources through planning and zoning regulations, which designate, preserve, and enhance public views.[1] Through the General Plan, Community Plans, and the designation of scenic resources, the City specifies development standards, which help prevent the obstruction of views. These standards include the regulation of building height, mass, and floor to area ratio, as well as landscaping and grading, which are the principal issues in view obstruction. Individual specific or master plans may include additional standards such as view-sensitive site planning, structure design and grading requirements, transfer of development rights to avoid development in sensitive viewsheds, and preservation of mountain ridges and other visual resources to minimize obstruction of views.

Structures and other elements (e.g., towers, buildings, walls, signs, manufactured slopes, and landscaping) constructed or added as part of a project may obstruct focal or panoramic views. (To

[1] *See California Government Code Section (CGC) 65302, which permits the Land Use Element of a General Plan to make provision for protection of aesthetic resources and views; Nollan v. California Coastal Commission, 483 U.S. 825 (1987) where view protection was identified as a legitimate government interest; and the 1979 Scenic Highway Plan where views of aesthetic resources are identified as meriting protection and enhancement.*

evaluate the aesthetic impact of a particular element, see A.1. AESTHETICS.)

C. Screening Criteria

- Would the project occur within or adjacent to a valued focal or panoramic vista or within view of any designated scenic highway, corridor, or parkway?

- Would the project obstruct, interrupt, or diminish a valued focal and/or panoramic view?

- Does the project propose standards for height and bulk of structures and other elements that inadequately protect existing visual resources and/or views?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Thresholds for Obstruction of Views, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the above questions indicates that there would normally be no significant impact on Views from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, project site, and surrounding area. Review the Scenic Highways Plan, the applicable Community Plan, and the Los Angeles Municipal Code (LAMC), if necessary, to determine whether the project site is located in or near a designated scenic area or contains any identified scenic vistas. Also, review applicable zoning ordinances, interim control ordinances (ICOs), specific plans, or other plans applicable to the project site to determine potential viewsheds or vistas, specific criteria concerning viewshed impact mitigation, as well as height and bulk requirements. Assess whether existing views would be obstructed, interrupted, or diminished by structures or other vertical elements constructed as part of the proposed project. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The nature and quality of recognized or valued views (such as natural topography, settings, man-

made or natural features of visual interest, and resources such as mountains or the ocean);

- Whether the project affects views from a designated scenic highway, corridor, or parkway;
- The extent of obstruction (e.g., total blockage, partial interruption, or minor diminishment); and
- The extent to which the project affects recognized views available from a length of a public roadway, bike path, or trail, as opposed to a single, fixed vantage point.

B. Methodology to Determine Significance

Environmental Setting

Characterize the existing view environment of the project site and surrounding vicinity (e.g., cityscape or open space, undeveloped or urbanized, existence of any water elements, etc.). Describe the site and surrounding area with respect to existing land uses, topography, landforms, location within or proximity to scenic highways or corridors and natural or built areas of scenic value. Identify and characterize existing views of the project site and valued views from the site. Note whether views are limited or unique, and identify the visual elements associated with the view. Use photographs and/or drawings, as appropriate (see Exhibits A.2-1 and A.2-2).

Project Impacts

Using the information from the Evaluation of Screening Criteria and Environmental Setting, determine the nature and quality of any key visual components identified. Identify project elements that would obstruct or interrupt existing views and the probable extent to which views would be impacted. Obstructing or interrupting views from a designated scenic highway, corridor, or parkway would likely be viewed as an adverse impact.

To determine the extent to which a project would affect views available from along a public roadway, bike path, trail, or other view corridor, and from single, fixed vantage points, identify the areas from which the project is visible. Consider whether and to what degree the project could impact views from these locations.

View obstruction may be determined with view sections, field of view analysis, line-of-sight analysis, or other appropriate method (see Exhibits A.2-3 and A.2-4, and 3. Data, Resources, and References).

For long-range programs or projects that propose policy changes, where specific structure

designs (i.e., elevations and/or building footprints) have not been identified, use the maximum development envelope (i.e., maximum heights, minimum setbacks, maximum lot coverage, and maximum contiguous floorplate) permitted according to the applicable zoning.

Cumulative Impacts

Review the list of related projects and identify those that would affect the same view opportunities as the project. Using the same methodology as described above for Project Impacts, discuss the combined visual impact of the project plus related projects on the identified view opportunities.

Sample Mitigation Measures

Projects are required to comply with the view preservation requirements (i.e., limits on structure location, height and massing, controls on landscaping and grading) of the Scenic Highway Plan. Compliance with the siting and development standards of the General Plan, Community Plans, specific plans, other applicable plans, zoning ordinances and ICOs is also required. Potential mitigation measures include the following:

- Design structures to conform to the existing natural terrain (e.g. multi-level structures on hillsides which are "stepped" in line with the slopes);

- Reduce the width and/or height of new structures to reduce the extent of obstruction;

- Design street networks to minimize view obstruction and/or enhance existing views;

- Locate new structures on portions of the site that do not interfere with existing views;

- Use open space areas to minimize view obstruction and/or enhance existing views; and

- Transfer buildable floor area from a view impacted area to a non-view impacted area on the same or different site. Requires preparation and City approval of a transfer of floor area plan in accordance with Ordinance 163,617; or apply for density transfer to floor area averaging in accordance with City procedures.

3. DATA, RESOURCES, AND REFERENCES

City Planning Department, 201 North Figueroa Street, 3rd Floor, Los Angeles, California 90012; Telephone: (213) 977-6083. Plan check services are available at the Construction Services Center, at 201 North Figueroa Street, 3rd Floor, Los Angeles, CA. 90012. Start at Building and Safety Department Counter and staff will refer visitors to the Planning Dept. as appropriate. Additional information is available from the City Planning Department, Community Planning Bureau, 200 N. Spring, 6th Floor, Los Angeles, California 90012; Telephone: Eastside (213) 978-1183, Metro/Central (213) 978-1179, South LA (213) 978-1168, West/Coastal (213-978-1177 and Valley 6262 Van Nuys Blvd., Van Nuys, CA 91401, (818) 374-5050.

Scenic Highways Plan, 1979.

See also A.1. AESTHETICS.

Line of Sight/View Analysis

Potential view obstruction may be determined through the following analysis:

After the scenic features or view opportunities have been identified, identify the locations (view points) from which these scenic features are visible. Graphics should be prepared that clearly convey the view line (line-of-sight from the view point to the scenic view - either to a focal point or several representative lines-of-sight along a panoramic view), as shown in Exhibits A.2-1 and A.2-2.

Next, for each view line, a view section (cross-section) may also be prepared. View sections, (see Exhibit A.2-3), depict locations and elevations of the view point, view resources and project elements. These sections should identify the extent to which the view is clear or obstructed by existing and proposed structures.

Where a view line is obstructed by a proposed structure or vertical element, prepare a field of view graphic, as shown in Exhibit A.2-4, to portray the extent of the obstruction. The field of view graphic should show where the view is interrupted, and allow for the measurement of potential obstruction by project elements, through representation of the intersection of view lines and proposed structures. This methodology may be adapted to different circumstances, including where the scenic view is either panoramic or a focal point and where the view location is either a single point or a segment.

Sample of Policies in the Scenic Highway Plan

- Policies. Scenic resources, including natural and man-made features, should be identified, preserved, and enhanced.
- Scenic Highway Selection Criteria. Scenic highways should include either a public right-of-way (ROW) which traverses an undeveloped area of scenic quality or which traverses an urban area which contains cultural, historical, or aesthetic values.
- Corridor Development Criteria. Grading should be minimized. Landscaping should be utilized to preserve and enhance the natural setting. Existing vegetation and views should be preserved.
- Programs. Corridor plans shall be developed for each scenic highway. Federal and State funds should be sought for acquisition, access, development, preservation and enhancement of scenic corridors. Scenic corridor projects should be included in the Capital Improvement Program (CIP). Property and scenic easements should be acquired.
- Policies. Corridor Plans for each scenic highway should include development controls for landscaping, contour grading, screening, hiking, biking and equestrian trails, view protection, provisions for scenic turnouts, vista points, rest stops, and other complementary facilities.
- Corridor Development Criteria. Development should be controlled adjacent to scenic highways and land adjacent to the ROW required to insure perpetuation of the corridor's scenic qualities. The scenic highway should be developed with construction materials compatible with the setting. Existing vegetation and views should be preserved. Only traffic, identification and informational signs should be permitted. Building height, setbacks, spacing, location and design should be regulated. In urban scenic corridors, screening/buffering, sign control, street lighting, landscaping, mini-parks, green median strips, street furniture, walkway design, murals, and fountains should be utilized.

Exhibit A.2-1
VIEW ANALYSIS METHODOLOGY

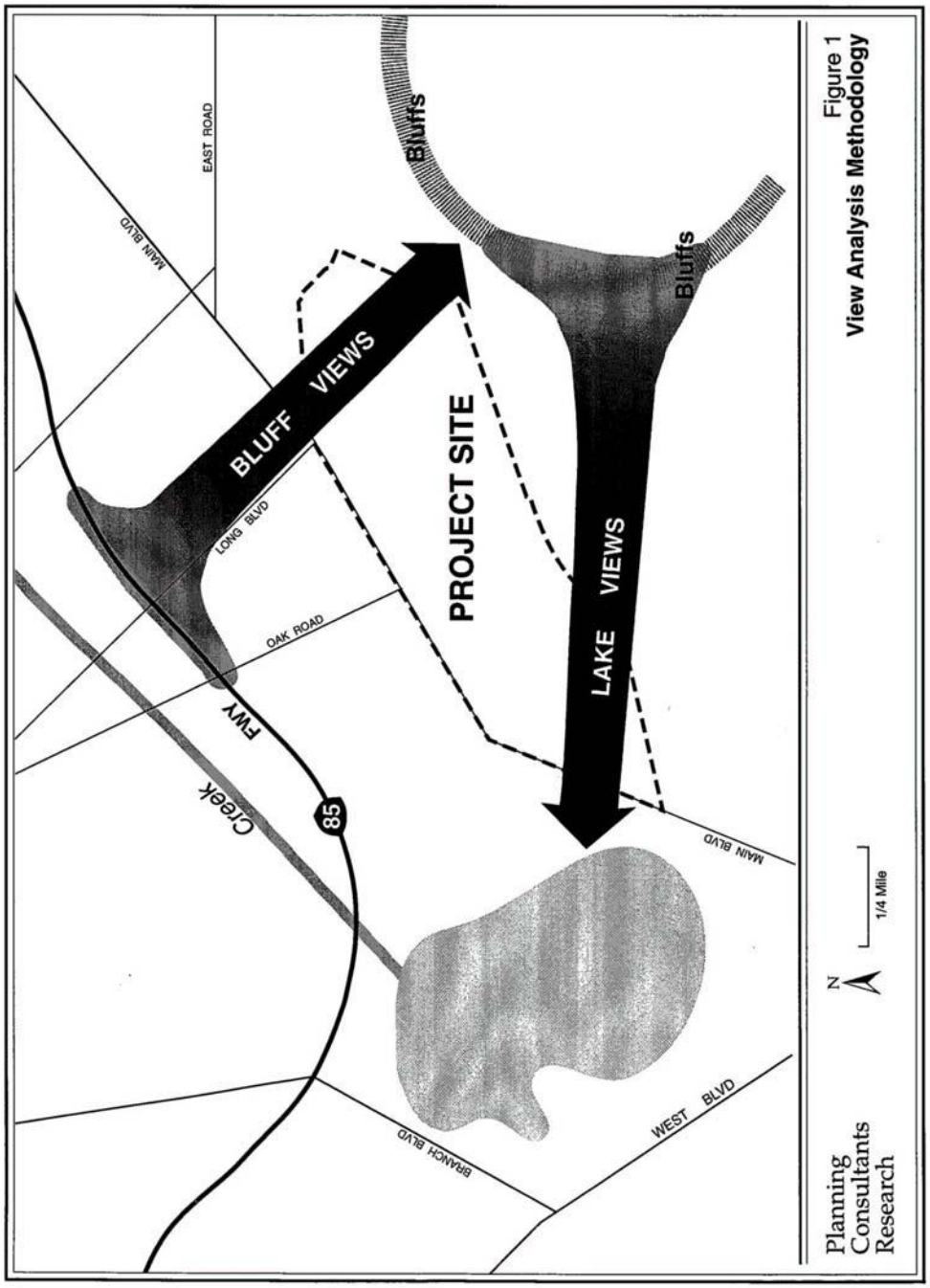


Exhibit A.2-2
VIEW LINES

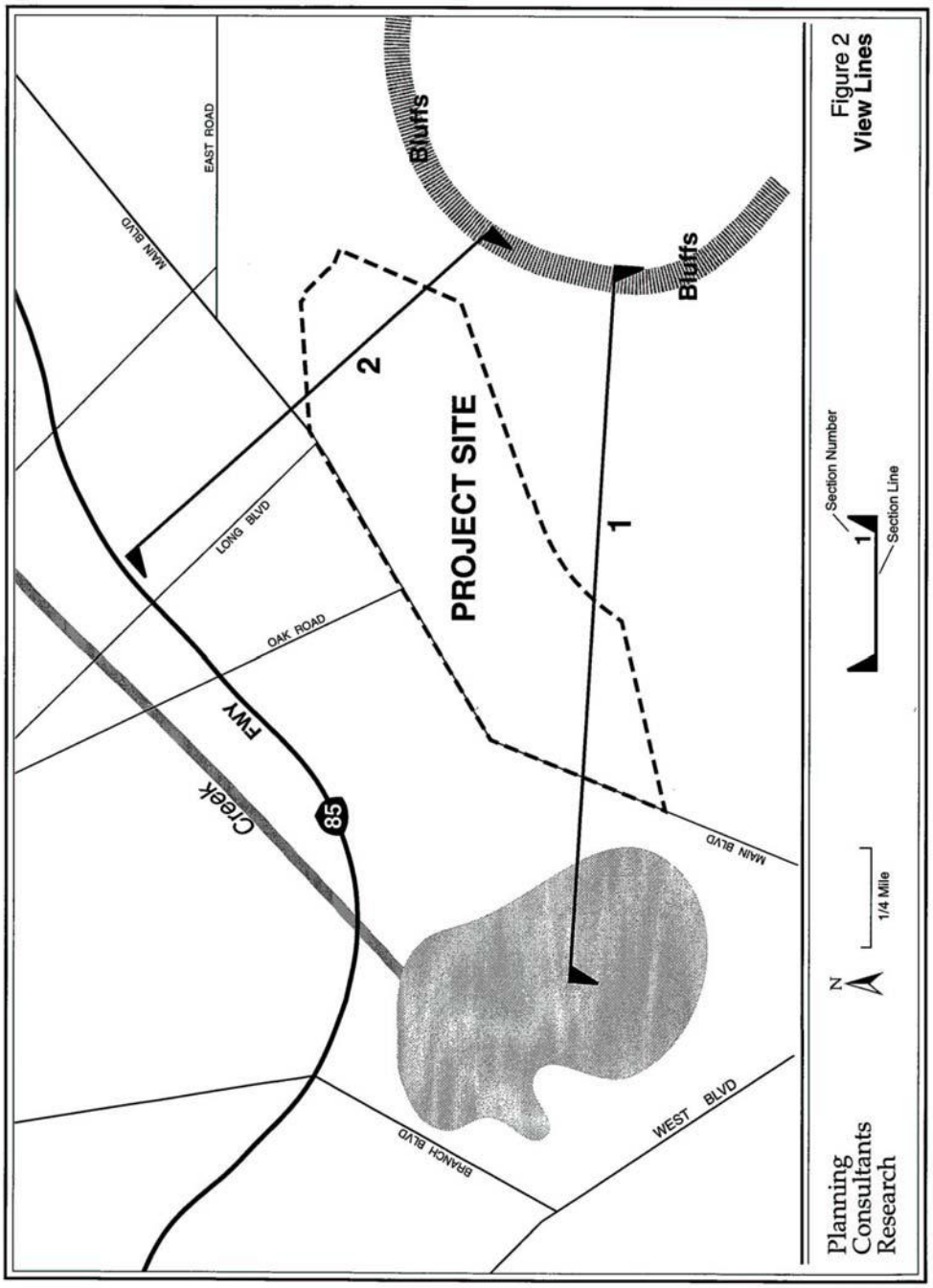


Exhibit A.2-3
VIEW SECTIONS

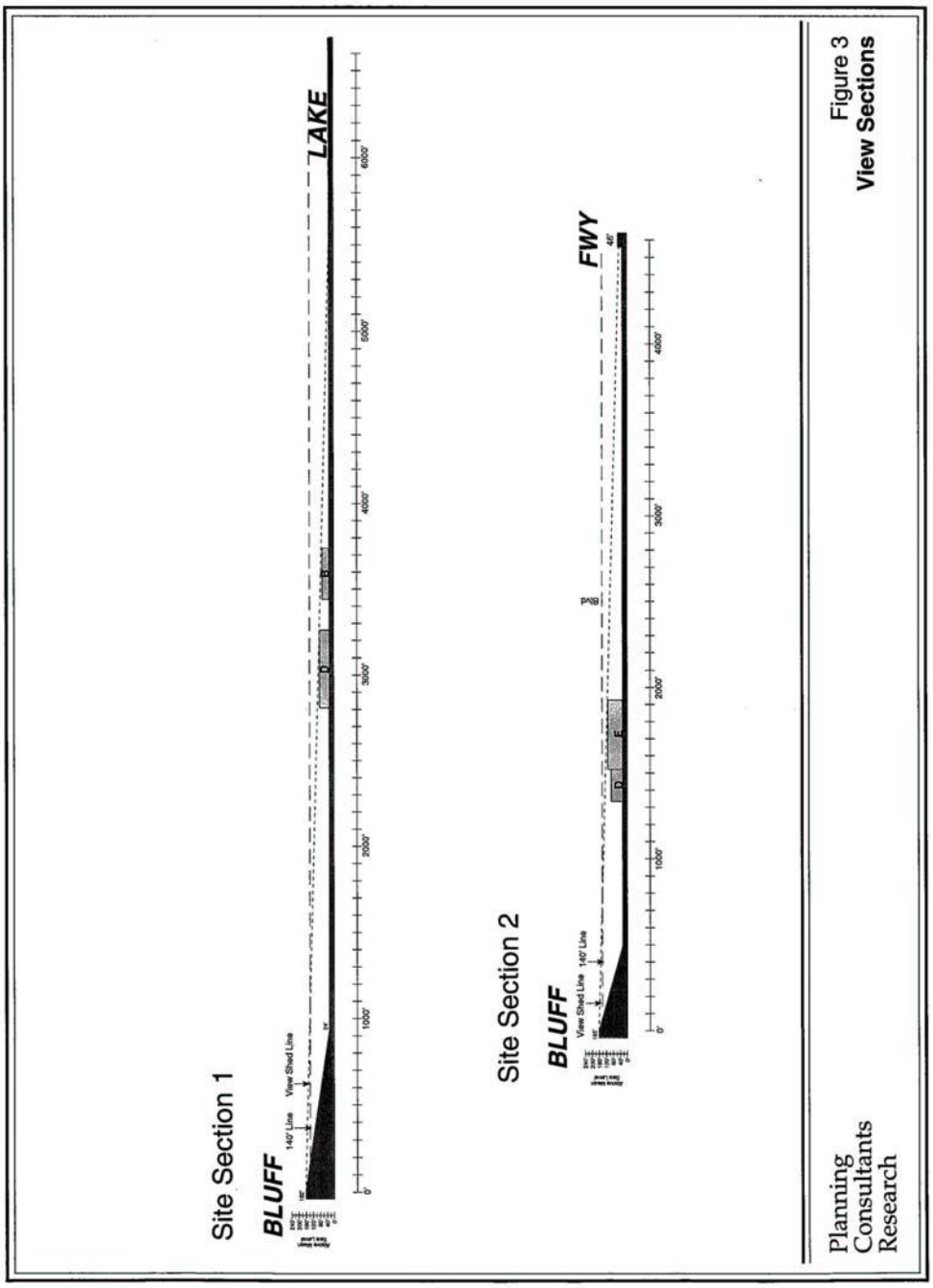
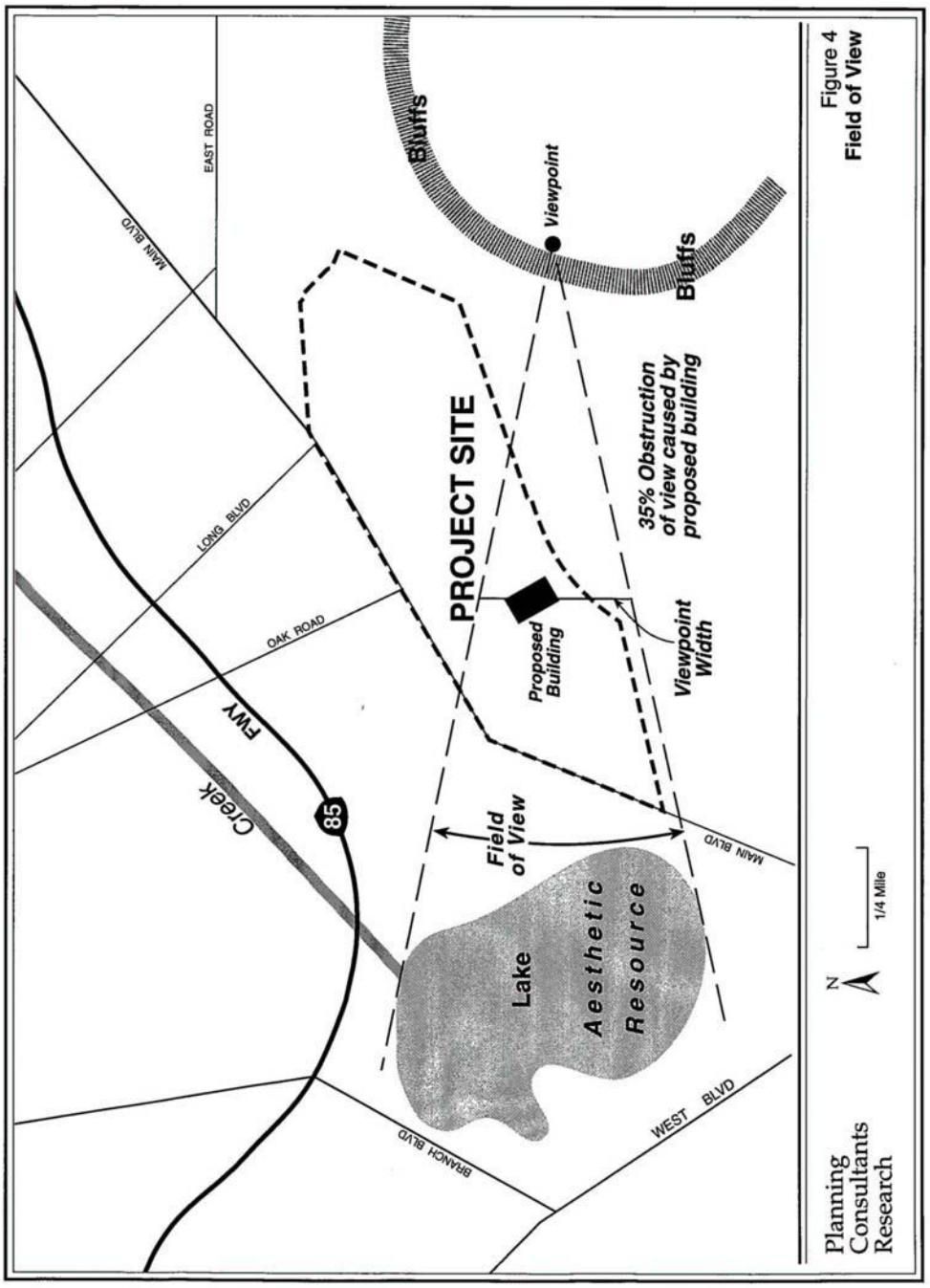


Exhibit A.2-4
FIELD OF VIEW



A.3. SHADING

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

I.c): Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

B. Introduction

Shading refers to the effect of shadows cast upon adjacent areas by proposed structures. Consequences of shadows upon land uses may be positive, including cooling effects during warm weather, or negative, such as the loss of natural light necessary for solar energy purposes or the loss of warming influences during cool weather. Shadow effects are dependent upon several factors, including the local topography, the height and bulk of the project's structural elements, sensitivity of adjacent land uses, season, and duration of shadow projection. Facilities and operations sensitive to the effects of shading include: routinely useable outdoor spaces associated with residential, recreational, or institutional (e.g., schools, convalescent homes) land uses; commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas; nurseries; and existing solar collectors. These uses are considered sensitive because sunlight is important to function, physical comfort, or commerce.

Shading of existing sensitive uses can occur with the development of new structures located to the south of these uses. The relative effects of shading from structures are site-specific.

C. Screening Criteria

- Would the project include light-blocking structures in excess of 60 feet in height above the ground elevation that would be located within a distance of three times the height of the proposed structure to a shadow-sensitive use on the north, northwest or northeast[1]?

[1] *Depending upon the position of the sun relative to the earth's rotation, shadows cast by a structure are projected east or west of true north according to the time of day and the season. For an explanation of the variation in shadow bearings specific to the latitude of Los Angeles, see Project Impacts.*

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Shading, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Shading from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, project site and surrounding area. Locate shadow-sensitive uses in the area, including, but not limited to residential, commercial, institutional or other land use types where sunlight is important to function, physical comfort, or commerce. First, calculate the distance and direction between the project and each shadow-sensitive use and determine whether the project would include light-blocking structures in excess of 60 feet in height or the equivalent. For example, structures or structural elements in excess of 30 feet in height, and located at an elevation 30 feet higher than surrounding land uses, would be equivalent to a structure in excess of 60 feet at the same elevation as the surrounding land uses. Next, determine whether shade-sensitive uses exist to the north, northeast, or northwest within a distance of three times the height of the proposed structure(s). For example, identify shade-sensitive uses located within 270 feet and north of a proposed 90-foot tall structure. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project impact would normally be considered significant if shadow-sensitive uses would be shaded by project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between late October and early April), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October).

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include a description of shade-sensitive uses in the surrounding area located to the north of the project site. Identify the distance from the project to each use and describe any elevation differences between the sensitive use(s) and the project site.

Facilities and operations that are sensitive to the effects of shading generally include, but are not limited to, routinely useable outdoor spaces associated with residential, recreational or institutional land uses; commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas; nurseries; and existing solar collectors.

Project Impacts

Review the project description and identify any proposed light-blocking structures or structural elements that would exceed 60 feet in height relative to nearby shade-sensitive uses. Determine the number of hours shadow-sensitive uses would be shaded by project-related structures.

As appropriate, diagram the footprint of the proposed structure(s) and nearby shade sensitive uses. Calculate and diagram the length of shadows that would be cast by proposed buildings during extreme conditions, as represented by the Winter Solstice (December 22) and Summer Solstice (June 21). The Spring and Fall Equinox represent intermediate conditions.

Exhibit A.3-1 identifies shadow length values and shadow bearings in the Los Angeles area for the solstices and equinox for morning, noon, and afternoon hours. The shadow length multiplier values represent the length of a shadow proportional to the height of a given building, at specific times of day. Hence, a building of 100 feet in height would cast a shadow 303 feet long at 9:00 a.m. during the Winter Solstice.

Exhibit A.3-2 provides morning and afternoon maximum shadow lengths generated for given structure heights during the Winter Solstice. Exhibit A.3-3 provides the same information calculated for the Summer Solstice. Use these tables, together with the shadow bearings provided in Exhibit A.3-1, to determine shadow patterns from the proposed project.

Exhibit A.3-4 shows how to plot shadows generated by individual buildings for a specific season and time of day. For buildings located on topography elevated above surrounding

shadow-sensitive uses, the differences in ground elevation between the building and a shadow-sensitive use is added to the shadow length to account for the elevation difference.

Based on the shadow patterns, determine the number of hours a project structure would shade an adjacent sensitive use. For programs or long range projects where specific structure design (i.e., building footprints and/or dimensions) have not been determined, use the maximum development envelope (i.e., maximum heights, minimum setbacks, and maximum lot coverage permitted according to the zoning) and determine shadow patterns as described above.

Cumulative Impacts

Review the list of related projects and identify those, which would affect the same shadow-sensitive uses as the proposed project. Calculate the project shadows of the related projects and determine the combined effect of these shadows, along with those of the proposed project, using the methodology described above.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Limit the width/size of structural elements above 60 feet in height; and

- Move proposed structures further from shadow-sensitive uses.

3. DATA, RESOURCES, AND REFERENCES

City of Los Angeles specific plans, particularly West Los Angeles and Warner Center. Available from the City Planning Department's Central Maps and Publications Office at 200 N. Spring Street, 5th Floor, Los Angeles, California 90012; Telephone: (213) 978-1255 or http://www.lacity.org/PLN/.

Exhibit A.3-1
SHADOW LENGTH MULTIPLIERS AND BEARINGS FOR 34° LATITUDE - LOS ANGELES

Time		Shadow Length Multiplier[a]		Shadow Bearing[b,c]
Winter Solstice (December 22)				
9 a.m.		3.03		45/West
NOON		1.60		0/North
3 p.m.		3.03		45/East
Spring/Fall Equinox (March 22/September 22)				
8 a.m.		2.18		73/West
NOON		0.72		0/North
4 p.m.		2.18		73/East
Summer Solstice (June 22)				
9 a.m.		2.18		85/West
1 p.m. (solar noon)		0.16		0/North
5 p.m.		2.18		85/East

[a] Shadow length is identified per unit of height; the height of the structure is multiplied by the shadow length multiplier. Therefore, a 100-foot building would cast a shadow 303 feet long during the Winter Solstice at 9 a.m. (e.g., 100 x 3.03).

[b] Shadow bearing is identified in degrees from north. 45/West means 45 degrees west of north; 73/East means 73 degrees east of north, etc.

[c] Shadow sensitive uses located greater than 45° west or east of due north would not be affected by winter shadows, regardless of the distance between the proposed building and the shadow-sensitive use. Similarly, shadow sensitive uses located greater than 85° west or east of due north would not be affected by summer shadows.

Source: Planning Consultants Research, 1995.

Exhibit A.3-2
MAXIMUM SHADOW LENGTH GENERATED FOR GIVEN SOURCE HEIGHTS DURING WINTER SOLSTICE

Source Height (in feet)[a]	Maximum Shadow Length (in feet)[b]		Source Height (in feet)[a]	Maximum Shadow Length (in feet)[b]
60	182		310	939
70	212		320	970
80	242		330	1,000
90	273		340	1,030
100	300		350	1,061
110	333		360	1,091
120	364		370	1,121
130	394		380	1,151
140	424		390	1,182
150	455		400	1,212
160	485		410	1,242
170	515		420	1,273
180	545		430	1,303
190	576		440	1,333
200	606		450	1,364
210	636		460	1,394
220	667		470	1,424
230	697		480	1,454
240	727		490	1,485
250	758		500	1,515

---

[a] Height increments could include either of the following: (1) the height of a proposed building; or (2) in cases of varying topography, the height of a proposed building together with the differential in finished ground elevations between the proposed building and an adjacent shadow-sensitive use.

[b] Shadow length at 9:00 a.m. or 3:00 p.m. during the Winter Solstice.

Source: Planning Consultants Research, 1995.

Exhibit A.3-3
MAXIMUM SHADOW LENGTH GENERATED FOR GIVEN SOURCE HEIGHTS DURING SUMMER SOLSTICE

Source Height (in feet)[a]	**Maximum Shadow Length** (in feet)[b]		**Source Height** (in feet)[a]	**Maximum Shadow Length** (in feet)[b]
60	80		310	412
70	93		320	426
80	106		330	439
90	120		340	452
100	133		350	466
110	146		360	479
120	160		370	492
130	173		380	505
140	186		390	519
150	200		400	532
160	213		410	545
170	226		420	559
180	239		430	572
190	253		440	585
200	266		450	599
210	279		460	612
220	293		470	625
230	306		480	638
240	319		490	652
250	333		500	665

[a] Height increments could include either of the following: (1) the height of a proposed building; or (2) in cases of varying topography, the height of a proposed building together with the differential in finished ground elevations between the proposed building and an adjacent shadow-sensitive use.

[b] Shadow length at 9:00 a.m. or 5:00 p.m. during the Summer Solstice (June 22).

Source: Planning Consultants Research, 1995.

Exhibit A.3-4
SHADOW PLOTTING METHODOLOGY

To plot potential shadows, use the following steps:

- Draw the building footprint. Measure the shadow lengths for the structure along the shadow bearings identified for the Winter Solstice in Exhibit A.3-1. Project the shadows the distance indicated in Exhibit A.3-2, from each corner of the structure. Connect the end points of the shadows cast, at the times of day for which shadow projections were made, by drawing an arc which incorporates the end points of the morning, noon and afternoon shadows, as projected from a single corner of the structure (see Exhibit A.3-5). This represents the coverage of the shadow cast by the structure throughout the day.

- Undertake the above on a separate footprint for each season identified in Exhibit A.3-1.

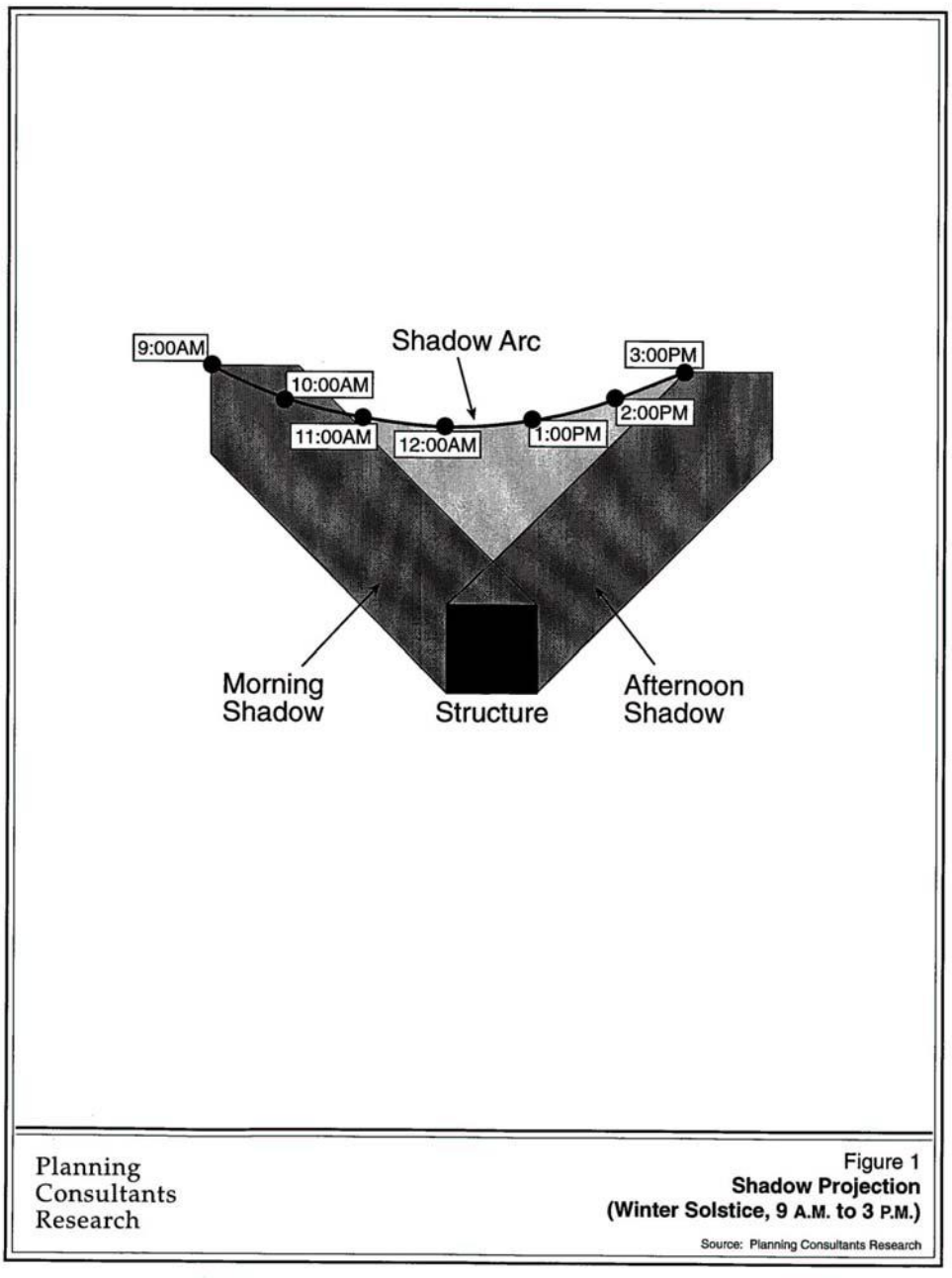
- At 9:00 a.m. on the Winter Solstice, shadows project at 45° west of true north. As time approaches noon, shadows both move closer to true north (at a rate of 15° per hour) and also shorten in length. After the noon hour, shadows begin to move east and elongate until 3:00 p.m., at which time they project at 45° east of true north. Summer shadows move, shorten and then lengthen in the same way throughout the day, except that they project further southward (i.e., 85° from true north during the Summer Solstice and progressing at a rate of 21.25° per hour) and reach maximum lengths shorter than those of winter shadows.

- Subdivide the shadow into equal sections which represent where the end point of the shadow will be located during each hour of the day (i.e., six equal sections to represent the six hours between 9:00 a.m. and 3:00 p.m. during the winter and eight equal sections to represent the eight hours between 9:00 a.m. and 5:00 p.m. during the summer).

- Place the sun shadow layout generated above onto a base map, which shows adjacent lot lines and the approximate location of shadow-sensitive uses (see Exhibit A.3-6).

- Determine the length of time during the day that a land use receives a shadow cast by the structure. The shadow projected by a structure, moves at a constant rate from west to east, corresponding to the movement of the sun throughout the day, and thus allowing a general determination of shadow movement, onto and away from a shade-sensitive use.

Exhibit A.3-5
Shadow Projection

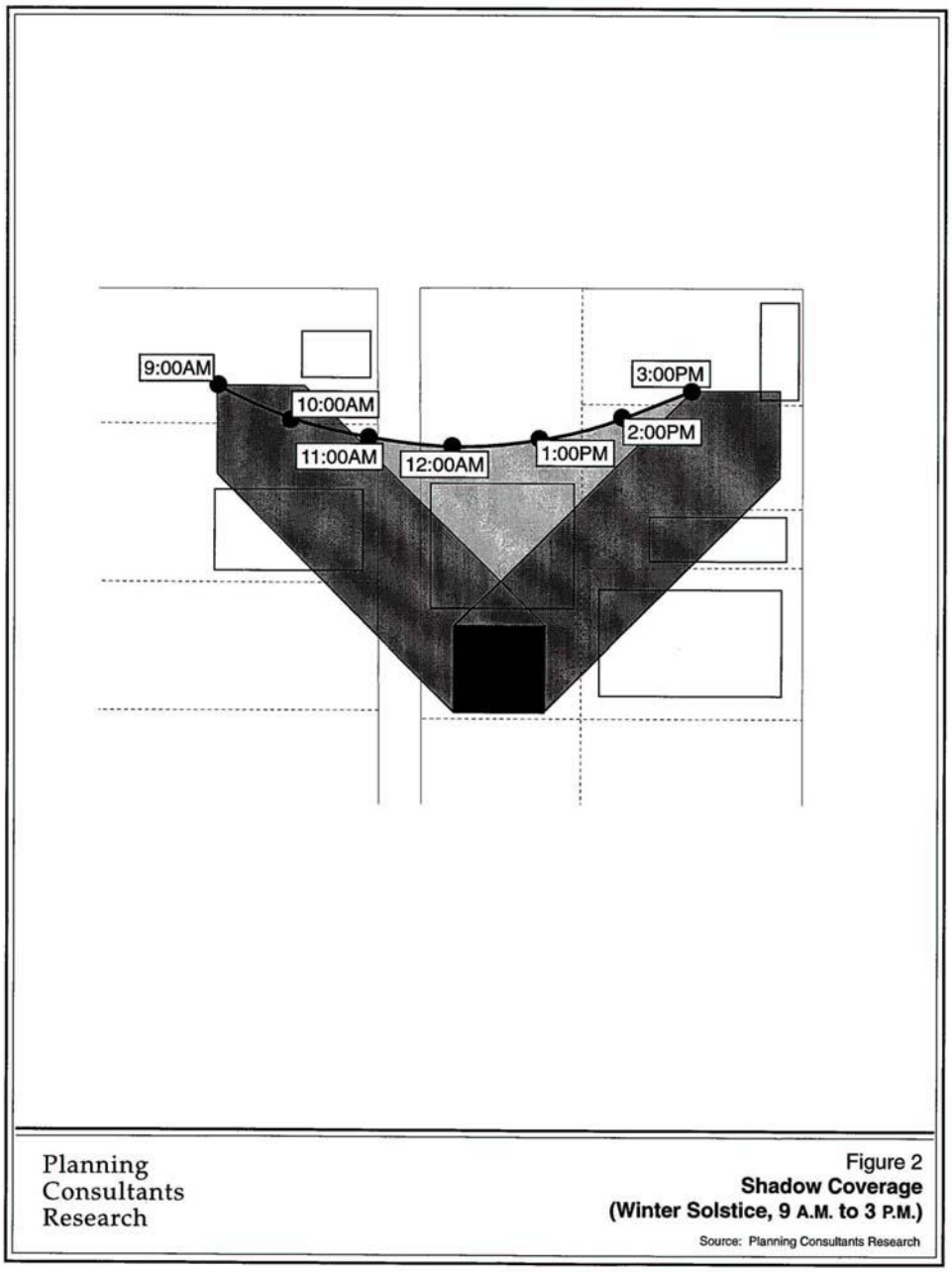


Planning
Consultants
Research

Figure 1
Shadow Projection
(Winter Solstice, 9 A.M. to 3 P.M.)

Source: Planning Consultants Research

Exhibit A.3-6
Shadow Coverage



A.4. NIGHTTIME ILLUMINATION

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

I.d): Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

B. Introduction

This section involves the extent to which a proposed project's artificial lighting affects the visual environment. Nighttime illumination of varying intensities is characteristic of most urban and suburban land uses including those in the City of Los Angeles. Artificial lighting has become more widely utilized in recent years to address security concerns and aesthetics.

New light sources introduced by a project may increase ambient nighttime illumination levels. Additionally, nighttime spillover of light onto adjacent properties has the potential to interfere with certain functions, including vision, sleep, privacy, and general enjoyment of the natural nighttime condition. The significance of the impact depends on the type of use affected, proximity to the affected use, the intensity of the light source, and the existing ambient light environment. Uses considered sensitive to nighttime light include, but are not limited to, residential, some commercial and institutional uses, and natural areas.[1] The City regulates a number of light sources (see Exhibit A.4-1).

C Screening Criteria

- Would the proposed project introduce light likely to increase ambient nighttime illumination levels beyond the property line of the project site?

- Does the project include lighting that would routinely spillover onto a light-sensitive land use?

A "yes" response to both of the preceding questions indicates further study in an expanded

[1] *The effect of artificial lighting on biological resources is addressed in C. BIOLOGICAL RESOURCES.*

Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Nighttime Illumination, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to either of the preceding questions indicates that there would be no significant Nighttime Illumination impact from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project for the types of lighting included. Review surrounding land use information to determine the location of light-sensitive land uses. Light-sensitive land uses may include, but are not limited to, residences, including board and care facilities; commercial or institutional uses that require minimal nighttime illumination for proper function, physical comfort, or commerce; and natural areas. Determine the potential for routine spillover of light or an increase in ambient light levels by considering the project's proximity to light-sensitive uses, the intensity of project light sources, and the existing ambient light environment.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The change in ambient illumination levels as a result of project sources; and
- The extent to which project lighting would spill off the project site and effect adjacent light-sensitive areas.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description of existing ambient light conditions on-site and in the surrounding vicinity, including background lighting conditions, and existing light spill-over from the project site; and

- Identification and description of the light-sensitive land uses in the area.

Project Impacts

Using the information from the Evaluation of Screening Criteria and Environmental Setting, determine the change in illumination resulting from project light sources. Describe the proposed light sources, including a locational graphic, as appropriate. Note whether existing light sources on site will remain or be removed. Assess the extent to which project lighting (including illuminated signage) would spill off the project site onto adjacent light-sensitive areas, considering the direction in which the light would be focused, whether shielding techniques would be used, and the extent to which project lighting would illuminate such sensitive land uses.

For projects involving a change in policies or long-range programs where proposed land uses are known, but specific structure designs (i.e., building or use footprints) have not been determined, identify general locations where high-intensity lighting or signage would likely occur, and evaluate the potential impacts on light-sensitive uses.

Cumulative Impacts

Review the list of related projects and identify any projects that may cause routine spill-over of light onto the same light-sensitive land uses as the project. Evaluate the impact from these projects, combined with the impact of the proposed project, using the methodology described above.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Use high pressure sodium and/or cut-off fixtures instead of typical mercury-vapor fixtures for outdoor lighting;

- Prohibit or limit signs with flashing, mechanical, strobe, or blinking lights; moving parts; or lighted monument signs;

- Provide structural and/or vegetative screening from sensitive uses;

- Design exterior lighting to confine illumination to the project site, and/or to areas which do not include light-sensitive uses; and

- Restrict the operation of outdoor lighting for recreational activities to the hours of 7:00 a.m. to 10:00 p.m.

3. DATA, RESOURCES, AND REFERENCES

Los Angeles Municipal Code (LAMC), available from the City Clerk or http://lacity.org/lacity102.htm.

Illumination Engineering Society of North America. American National Standard Practice for Roadway Lighting.

Illumination Engineering Society of North America. Lighting Handbook, Reference and Application.

Exhibit A.4-1
SELECTED CITY MUNICIPAL CODE LIGHTING REGULATIONS

Chapter 1, Article 2, Sec. 12.21 A 5(k). All lights used to illuminate a parking area shall be designed, located and arranged so as to reflect the light away from any streets and adjacent premises.

Chapter 1, Article 2, Sec. 12.12.1 A 3(b). All signs permitted in the "P" Zone may be illuminated, but shall comply with the requirements set forth in Section 62.200 of this Code, and shall not contain any flashing, moving or animated parts or features.

Chapter 1, Article 2, Sec. 12.12.1.5 A 2(a). Parking buildings in the "PB" Zone shall be constructed with a continuous, enclosing wall at least three and one-half feet in height at each floor level. Said wall need not be solid but shall be constructed of materials so as to block light emitted from the building.

Chapter 1, Article 2, Sec. 12.14 A (6g). Lights used to illuminate service stations shall be arranged so as to reflect the light away from the adjacent premises in an "A" or "R" Zone, and the light standard for such lights shall not exceed 20 feet in height.

Chapter 1, Article 2, Sec. 12.22 A 23(b)(1). Mini-Shopping Centers shall have low-level security type lighting. All exterior lighting shall be directed onto the mini-shopping center site, and all flood lighting shall be designed to eliminate glare to adjoining properties.

Chapter 1, Article 2, Sec. 12.50 E. No illuminated or flashing signs shall be installed or maintained within an Airport Hazard Area which would either make it difficult for flyers to distinguish between said lights and aeronautical lights, or which would result in glare in the eyes of flyers.

Chapter 1, Article 7, Sec. 17.08 C. Plans for street lighting shall be submitted to and approved by the Bureau of Street Lighting for subdivision maps.

Division 62, Sec. 91.6205 M. No sign shall be illuminated in such a manner as to produce a light intensity of greater than three foot-candles above ambient lighting, as measured at the property line of the nearest residentially zoned property.

Chapter 9, Article 3, Section 93.0117. No exterior light source may cause more than two foot-candles of lighting intensity or generate direct glare onto exterior glazed windows or glass doors; elevated habitable porch, deck, or balcony; or any ground surface intended for uses such as recreation, barbecue or lawn areas or any other property containing a residential unit or units.

Note: A project may be subject to additional requirements of a specific plan, if it is located within a specific plan area.

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B. AIR QUALITY

B. AIR QUALITY

INTRODUCTION

This section addresses the air quality impacts of projects. Air quality impacts may occur during the construction or operation phase of a project, and may come from stationary, mobile, or area sources. The topic of air quality has been divided into the following sections:

- Construction emissions
- Operational emissions
- Toxic air contaminants

The California Health and Safety Code (HSC) defines air pollution as any discharge, release, or other propagation into the atmosphere, and includes, but is not limited to, smoke, charred paper, dust, soot, grime, carbon, fumes, gases, odors, particulate matter, acids, or any combination thereof. Sources of air pollution can be classified as either stationary sources (e.g., industrial processes, generators), mobile sources (e.g., automobiles, trucks), or area sources (e.g., residential water heaters).

As described below, the South Coast Air Quality Management District (SCAQMD) is the main regulatory authority in the region (the South Coast Air Basin (Basin), which includes the City of Los Angeles) with regard to air quality issues. In April 1993, the SCAQMD adopted a CEQA Air Quality Handbook that provides guidance for the CEQA analysis of potential air quality impacts of new projects. The CEQA Air Quality Handbook addresses screening criteria for stationary and mobile source emissions; the effects of certain pollutants (e.g., toxics, carbon monoxide) on sensitive receptors; and area sources (e.g., landfills, construction sites, etc.). It also provides recommended thresholds to assist in determining the significance of potential project impacts from these sources. The SCAQMD is the responsible agency for air quality permits. Compliance with SCAQMD rules and permit conditions is a component of the region's efforts to achieve and maintain air quality standards.

The City of Los Angeles has not adopted specific Citywide significance thresholds for air quality impacts. However, because of the SCAQMD's regulatory role in the air basin, this *Thresholds Guide* references the screening criteria, significance thresholds and analysis methodologies in the CEQA Air Quality Handbook to assist in evaluating projects proposed within the City. Because the CEQA Air Quality Handbook may not be appropriate for every project, it is the responsibility of the lead City department to determine the appropriate standards for a particular

project.

Regulatory Framework

The Federal and California Clean Air Acts require that federal, state, and local authorities adopt air pollution reduction measures to meet health-based air quality standards (ambient air quality standards) for six specific (known as "criteria") pollutants within certain timelines. The state standards are stricter than the federal standards. The current air quality planning efforts, and the responsibilities of agencies involved in these efforts, are described below.

Federal Clean Air Act (CAA)

Title I of the CAA identifies attainment, nonattainment, and unclassifiable areas with regard to the criteria pollutants, and sets deadlines for all areas to reach attainment for the following criteria pollutants: ozone; nitrogen dioxide (NO_2); sulfur dioxide (SO_2); particulates (PM10); carbon monoxide (CO); and lead (Pb). The CAA required each state with one or more non-attainment areas to prepare a State Implementation Plan (SIP) to describe how and when each area of the state will meet attainment for all criteria pollutants. The South Coast Air Basin was identified as the only "extreme" nonattainment area for ozone and a "serious" nonattainment area for PM10 and CO. Compliance with these standards must be demonstrated in the Basin as follows: ozone by the year 2010; PM10 by the year 2006; and CO by the year 2000.

Title II of the CAA contains a number of provisions with regard to mobile sources, including requirements for reformulated gasoline, new tailpipe emission standards for cars and trucks, nitrogen oxides (NOx) standards for heavy-duty vehicles, and a program for cleaner fleet vehicles. Identification and regulation of hazardous air pollutants are addressed in Title III. Under Title V, conditions for operating permits are specified. In 1997, EPA promulgated new ambient air quality standards for fine particulates (PM2.5) and ozone. The implementation guidelines, including deadlines, are under development.

California Clean Air Act (CCAA)

The CCAA designates air basins as either in attainment or nonattainment for each state air quality standard. The South Coast Air Basin is designated as a "severe" nonattainment area for ozone, CO, NO_2, and PM10. The CCAA set specific targets for achieving clean air, including an annual five-percent reduction in pollutants (averaged every five consecutive three-year periods) until attainment is reached. It also incorporates the permit programs of the CAA, including New Source Review (NSR) of stationary sources, and requires a mandatory vehicle inspection program for vehicles registered in nonattinment areas (smog check).

Air Quality Management Plan (AQMP)

The 2003 AQMP describes a comprehensive air pollution control program focused on attaining the state and federal ambient air quality standards and planning requirements in the Basin and those portions of the Southeast Desert Air Basin that are under the SCAQMD's jurisdiction, (the Antelope and Cochella Valleys). It calls for the implementation of all-feasible control measures, and the advancement and use of technologies for which breakthroughs are on the horizon. The AQMP is updated every 3 years. Revisions to the Plan are considered amendments to the SIP.

Regional Comprehensive Plan and Guide (RCP&G)

The RCP&G, developed by the Southern California Association of Governments (SCAG), was adopted in May 1995. It provides a framework for regional goals, and assists local jurisdictions in meeting state and federal requirements and devising appropriate land use strategies. The components of the RCP&G, which include air quality, transportation and land use, among others, each contain goals and strategies for identifying and reducing cumulative impacts from new projects and plans, as required by CEQA and other state and federal regulations.

Framework and Air Quality Elements

The City approved a comprehensive update to the long-term growth strategy in its General Plan. The Framework Element sets policy direction for the City's 35 Community Plan areas, in which detailed land use plans are described, and 12 citywide Elements (e.g., Transportation and Housing). The Framework Element supports land use and transportation policies and patterns that will assist the region in meeting air quality goals, for example, by encouraging the location of residential and commercial uses near transit centers and continuing the City's "centers" development concept.

The Air Quality Element was adopted in November 1992. The objectives are to aid the region in attaining state and federal air quality standards, while continuing to allow economic growth and improvement in the quality of life for City residents. This Element also discusses how the City plans to implement local programs contained in the SCAQMD's AQMP.

Los Angeles County Congestion Management Program

The Congestion Management Program (CMP) for Los Angeles County was developed to meet the requirements of Section 65089 of the California Government Code and addresses regional congestion by linking transportation, land use, and air quality decisions. The goals of the CMP

include the following:

- To link land use, transportation, and air quality decisions;

- To develop a partnership among transportation decision-makers on devising appropriate transportation solutions that include all modes of travel; and

- To propose transportation projects that are eligible for state gas tax funds.

Responsibilities of Regulatory Agencies

Environmental Protection Agency (EPA)

The EPA administers the CAA and other air quality legislation. As a regulatory agency, EPA's principal functions include the following: (1) setting federal ambient air quality standards; (2) preparing guidance for and approval of SIPs to meet or maintain these ambient air quality standards; (3) establishing national emission limits for major sources of air pollution; (4) inspecting and monitoring emission sources; (5) enforcing federal air quality laws and promulgating new regulations; and, (6) providing financial and technical support for air quality research and development programs.

California Air Resources Board (CARB)

The CARB is the state agency responsible for the coordination and administration of both state and federal air pollution control programs in California. The CARB prepares and submits a SIP to EPA, undertakes research, sets state ambient air quality standards, provides technical assistance to local air districts, compiles emission inventories, develops suggested control measures, establishes emission standards for motor vehicles, and provides oversight of air district control programs.

SCAQMD

SCAQMD shares responsibility with the CARB for ensuring that all state and federal ambient air quality standards are achieved and maintained throughout the Basin. Local air districts, including the SCAQMD, are responsible for the preparation of AQMPs, inspection of stationary sources, monitoring of ambient air quality, and planning activities such as modeling and maintenance of the emission inventory. State law assigns to local air districts the primary responsibility for the control of air pollution from stationary sources, while reserving an oversight role for the CARB. Local air districts are also responsible for developing mobile source strategies necessary to achieve the ambient air quality standards, while CARB regulates tailpipe emissions

from mobile sources.

SCAG

SCAG is a joint powers agency encompassing the counties of Los Angeles, Orange, Imperial, Riverside, San Bernardino, and Ventura and is the Metropolitan Planning Organization (MPO) for this region. SCAG's responsibility with respect to air quality planning is primarily in developing transportation, land use and energy conservation measures as part of the RCP&G, Regional Transportation Improvement Program (RTIP), and Regional Transportation Plan (RTP). SCAG also has statutory authority in conjunction with the SCAQMD for the implementation and monitoring of land use strategies and transportation control measures contained in the AQMP. SCAG prepares the required air quality conformity analyses for transportation plans, programs, and projects to comply with the federal Transportation Conformity Rule. As part of the CEQA process for regionally significant projects, SCAG evaluates the consistency of such projects with the goals and policies of the RCP&G.

B.1. CONSTRUCTION EMISSIONS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

III.a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

III.b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

III.c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

III.d) Would the project expose sensitive receptors to substantial pollutant concentrations?

B. Introduction

Construction of new projects has the potential to create air quality impacts through earth moving operations and the use of heavy-duty equipment. Fugitive dust emissions result from land clearing, demolition, ground excavation, cut and fill operations, and equipment traffic over temporary roads at construction sites. Mobile source emissions, primarily nitrogen oxides (NOx), result from the use of construction equipment such as bulldozers, trucks, and scrapers. These emissions are most significant when using heavy-duty, diesel-fueled equipment. Mobile source emissions also result from vehicle trips by construction workers to and from the project site. Emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources individually, as well as collectively.

As described in B. AIR QUALITY (the Introduction to the Air Quality sections), a number of plans, policies and regulations have been adopted by agencies at the local, state and federal levels to address air quality concerns. Each of these plans contains regulations, control

strategies, or policies and programs designed to reduce the air pollutant emissions of new, and in some cases existing, development projects. The primary strategy related to construction emissions implemented and enforced by the South Coast Air Quality Management District (SCAQMD) is Rule 403, Fugitive Dust. Exhibits B.1-1 and B.1-2 reproduce a list of dust control strategies allowed by Rule 403. Compliance with SCAQMD rules and permit conditions is a component of the region's efforts to achieve and maintain air quality standards.

Refer to B.2. OPERATIONAL EMISSIONS for a discussion of carbon monoxide (CO) hotspots and F.2. HUMAN HEALTH HAZARDS for removal of asbestos containing material.

C. Screening Criteria

- Would site preparation or construction activities for the proposed project result in substantial emissions that would not be controlled on site by existing regulations?

A "yes" response to the preceding question indicates that further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR, may be required. Refer to the Significance Threshold for Construction Emissions, and review the associated Methodology to Determine Significance as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact from Construction Emissions from the proposed project.

D. Evaluation of Screening Criteria

Although the City of Los Angeles has not adopted specific guidance with regard to construction emissions, a number of sources are available to assist in this evaluation. SCAQMD's CEQA Air Quality Handbook contains a Screening Table for Construction based on construction emissions occurring over a three-month (quarterly) period (CEQA Air Quality Handbook pages 6-12). The table lists the sizes and amounts of various types of development projects and construction activities, over which a potentially significant air quality impact could occur, considering both dust generation and exhaust from construction equipment. In addition, the Environmental Protection Agency (EPA) publication, Compilation of Air Pollutant Emission Factors (AP-42), contains emission factors and methodologies for calculating emissions from off-highway mobile construction equipment and non-vehicular equipment. AP-42 also contains factors to estimate the dust generation per acre of graded land.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

Although the City has not adopted a Citywide significance threshold for construction emissions, SCAQMD's CEQA Air Quality Handbook and/or EPA's AP-42 contain emission factors and assessment methodologies. It is the responsibility of the lead City department to determine the appropriate standards. This *Thresholds Guide* reprints guidance from the CEQA Air Quality Handbook to assist in the evaluation of project impacts, as determined appropriate by each lead City agency.

Project-related factors to be used in a case-by-case evaluation of significance include the following:

Combustion Emissions from Construction Equipment

Type, number of pieces and usage for each type of construction equipment;
Estimated fuel usage and type of fuel (diesel, natural gas) for each type of equipment; and
Emission factors for each type of equipment.

Fugitive Dust

Grading, Excavation and Hauling:

Amount of soil to be disturbed on-site or moved off-site;
Emission factors for disturbed soil;
Duration of grading, excavation and hauling activities;
Type and number of pieces of equipment to be used; and
Projected haul route.

Heavy-Duty Equipment Travel on Unpaved Roads:

Length and type of road;
Type, number of pieces, weight and usage of equipment; and
Type of soil.

Other Mobile Source Emissions
Number and average length of construction worker trips to project site, per day; and
Duration of construction activities.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, provide the regulatory framework and discuss regional and local air quality, including ambient air monitoring data from the monitoring station closest to or most representative of the project site. Monitoring data may be obtained from the SCAQMD Air Quality Evaluation Staff or the CEQA Air Quality Handbook. Identify the location of sensitive receptors, such as residences, schools, childcare centers, hospitals, parks, or similar uses, in relation to the project site.

Project Impacts

Using the information described in the significance factors listed above, and guidance from the appropriate source, calculate the emissions from all construction-related activities, including equipment, earth moving, and worker travel, using the worst-case day. Identify measures that will be taken as part of the construction activity to reduce air emissions, including measures to comply with Rule 403. Determine the impact from all project-related construction emissions.

Cumulative Impacts

Review the related projects list and identify those projects with construction schedules that would coincide with the schedule of the proposed project. Estimate the potential emissions from the related projects that would occur during construction of the proposed project, based on available information and using the methodology above. Determine the combined emissions for the proposed and related projects and the resulting cumulative impact.

Sample Mitigation Measures

All construction projects must comply with the requirements of SCAQMD Rule 403, Fugitive Dust, which requires the implementation of Reasonably Available Control Measures (RACM) for all fugitive dust sources, and the Air Quality Management Plan (AQMP), which identifies Best Available Control Measures (BACM) and Best Available Control Technologies (BACT) for area sources and point sources, respectively.

Potential mitigation measures beyond current requirements include the following:

Establish an on-site construction equipment staging area and construction worker parking lot, located on either paved surfaces or unpaved surfaces subjected to soil stabilization treatments, as close as possible to a public highway. Control access to public roadways by limiting curb cuts/driveways to minimize project construction impacts upon roadway traffic operations;

Properly maintain non-vehicular equipment engines to minimize the volume of exhaust emissions;

Use electricity from power poles, rather than temporary diesel or gasoline powered generators;

Use on-site mobile equipment powered by alternative fuel sources (i.e., methanol, natural gas, propane or butane);

Pave construction roads;

Inspect construction equipment prior to leaving the site and wash off loose dirt with wheel washers, as necessary; and

Provide ridesharing or shuttle service for construction workers.

3. DATA, RESOURCES, AND REFERENCES

Air Quality Element, 1992. Available from the City Planning Department's Central Publications Unit at 200 N. Spring St., 5th Floor, Los Angeles, California 90012; Telephone: (213) 978-1255.

EPA, Compilation of Air Pollutant Emission Factors, AP-42.

SCAQMD, CEQA Air Quality Handbook, 1993. AQMP and Appendices, adopted August 2003.

SCAQMD, Rules and Regulations. Volumes I, II and III. Information regarding a particular rule or regulation may be obtained by calling the SCAQMD at (909) 396-3600 or 1-(800)-CUT-SMOG.

See also B. AIR QUALITY for description of regulatory framework, including the regulations and agencies involved.

Exhibit B.1-1

REPRINT OF SCAQMD RULE 403 (Amended December 1998), PAGE 14

REASONABLY AVAILABLE CONTROL MEASURES FOR HIGH WIND CONDITIONS

FUGITIVE DUST
SOURCE CATEGORY CONTROL MEASURES

Earth-moving

(1A) Cease all active operations, OR

(2A) Apply water to soil not more than 15 minutes prior to moving such soil. **Disturbed surface areas**

(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR

(1B) Apply chemical stabilizers prior to wind event; OR

(2B) Apply water to all unstabilized disturbed areas 3 times per day, if there is any evidence of wind-driven fugitive dust, watering frequency is increased to a minimum of 4 times per day; OR

(3B) Take the actions specified in Table 2, Item (3C); OR

(4B) Utilize any combination of control actions (1B), (2B) and (3B) such that, in total, these actions apply to all disturbed surface areas.

Unpaved roads

(1C) Apply chemical stabilizers prior to wind event; OR

(2C) Apply water twice [once] per hour during active operation; OR

(3C) Stop all vehicular traffic.

Open storage piles

(1D) Apply water twice [once] per hour; OR

(2D) Install temporary coverings.

Paved road track-out

(1E) Cover all haul vehicles; OR

(2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.

All Categories

(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 1 may be used.

*Measures in [brackets] are reasonably control measures and only apply to sources not within the South Coast Air Basin.

Exhibit B.1-2
REPRINT OF SCAQMD RULE 403 (Amended December 1998), PAGES 15 AND 16

DUST CONTROL FOR EXEMPTION FROM PARAGRAPH (d)(4)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS

Earth-moving (except construction cutting and filling areas, and mining operations)

(1a) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR

(1a-1) For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.

Earth-moving: Construction fill areas:

(1b) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board, and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Earth-moving: Construction cut areas and mining operations

(1c) Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.

Exhibit B.1-2, continued
REPRINT OF SCAQMD RULE 403 (Amended December 1998), PAGES 15 AND 16

DUST CONTROL FOR EXEMPTION FROM PARAGRAPH (d)(3)

FUGITIVE DUST
SOURCE CATEGORY CONTROL ACTIONS

Disturbed surface areas (except completed grading areas)

(2a/b) Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 [70] percent of the unstabilized areas.

Disturbed surface area: Completed grading areas

(2c) Apply chemical stabilizers within five working days of grading completion; OR
(2d) Take actions (3a) or (3c) specified for inactive disturbed surface areas

Inactive disturbed surface areas

(3a) Apply water to at least 80 [70] percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR

(3b) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR

(3c) Establish a vegetative ground cover within 21 [30] days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR

(3d) Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Unpaved Roads

(4a) Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR

(4b) Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR

*Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

Exhibit B.1-2, continued
REPRINT OF SCAQMD RULE 403 (Amended December 1998), PAGES 15 AND 16

DUST CONTROL FOR EXEMPTION FROM PARAGRAPH (d)(3)

FUGITIVE DUST
SOURCE CATEGORY CONTROL ACTIONS

Unpaved Roads (cont'd.)

(4c) Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.

Open storage piles

(5a) Apply chemical stabilizers; OR

(5b) Apply water to at least 80 [70] percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR

(5c) Install temporary coverings, OR

(5d) Install a three-sided enclosure with walls with no more than 50 percent porosity, which extend, at a minimum, to the top of the pile.

All Categories

(6a) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

*Measures in [brackets] are reasonably available control measures and only apply to sources not within the South Coast Air Basin.

B.2. OPERATIONAL EMISSIONS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

III.a): Would the project conflict with or obstruct implementation of the applicable air quality plans?

III.b): Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

III.c): Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including exceeding emissions which exceed quantitative thresholds for ozone precursors)?

III.d): Would the project expose sensitive receptors to substantial pollutant concentrations?

III.e): Would the project create objectionable odors affecting a substantial number of people?

B. Introduction

Operational emissions are defined as those, which occur after project construction activities have been completed, and the project becomes operational. Operational emissions are produced by the occupants of a facility or development and by both mobile and stationary sources connected to the facility or development. Depending on the characteristics of the individual project, operational activities have the potential to generate emissions of criteria and/or toxic air contaminants. This section focuses on emissions of criteria pollutants by point, mobile, and area sources. Toxic air emissions, which may occur during operational activities, are discussed separately in B.3. TOXIC AIR CONTAMINANTS.

Stationary source emissions include point source emissions that have an identifiable location, such as a smokestack, as well as area source emissions, such as fumes or minor sources of exhaust, which are emitted by multiple, small sources. Stationary point sources include project equipment and processes such as power plants and refinery boilers, while area sources originate from diverse sources such as generators and residential water heaters. Certain industrial and commercial operations, such as dairies and wastewater treatment plants, may

result in odors that impact sensitive receptors in the surrounding area.

Mobile source emissions occur as a result of motor vehicle, train, ship, and airplane travel. Motor vehicle emissions result from passenger vehicles and truck travel throughout the South Coast Air Basin (Basin) and are generally analyzed on a regional basis. Projects can be either direct sources of vehicle trips, such as a bus or shipping service, or indirectly generate or attract trips from or to the project site, such as a regional shopping center or employee work site.

Motor vehicle emissions can influence local air quality through changes in carbon monoxide (CO) concentrations, which are usually highest at busy intersections, parking garages, or other focused areas of vehicle activity. Because CO dissipates quickly, and based on methodologies established by the South Coast Air Quality Management District (SCAQMD) and California Air Resources Board (CARB), changes in CO concentrations are generally analyzed only where they would be in proximity to sensitive receptors.

Regulatory Framework

As described in B. AIR QUALITY, a number of plans, policies, and regulations have been adopted by local, state and federal agencies to address air quality concerns. Each of these plans and regulations are designed to reduce criteria pollutants for which state and federal health-based standards have been set.

Emissions from new, expanded and/or relocated stationary sources are regulated extensively by the SCAQMD through Regulation XIII, New Source Review (NSR); the permitting process for specific equipment and industrial processes; and compliance with source-specific regulations. NSR requires that any net increase in air pollutants from new or modified sources is offset by a reduction in emissions from another source. If the potential to emit is small (less than four tons/year) for any given criteria pollutant, a facility is exempt from providing emission offsets. However, if potential annual emissions are equal to or greater than four tons of reactive organic gases (ROG), nitrogen oxides (NOx), sulfur oxides (SOx), or particulate matter (PM10), they must be offset by Emission Reduction Credits (ERCs). The rule also requires that new sources install Best Available Control Technology (BACT) as a means of limiting air emissions.

In October 1993, the SCAQMD adopted the Regional Clean Air Incentives Market (RECLAIM) program to provide certain stationary source facilities added flexibility in meeting emission reduction requirements and to lower the cost of compliance. RECLAIM facilities are those that generate four or more tons of NOx and SOx per year. Each facility is assigned an emissions cap that decreases over time, and is allowed to select appropriate and cost-effective strategies to meet the emissions cap. Facilities are allowed "RECLAIM Trading Credits"

(RTCs) to account for excess reduction of emissions, which can be traded (sold) to other facilities that are not able to reduce emissions as effectively.

Title V of the Clean Air Act Amendments (CAAA) requires certain facilities to obtain a single, facility-wide air permit, which consolidates and replaces all previously issued air permits for individual pieces of equipment. Locally, Title V is implemented through SCAQMD's Regulation XXX and is applicable to a facility if it is a Major stationary source or subject to Title IV, solid waste incineration requirements, a New Source Performance Standard (NSPS), or a National Emission Standard for Hazardous Air Pollutants (NESHAP). Major sources are facilities with actual emissions of 8 tons per year of volatile organic compounds (VOC), NOx, or any single Hazardous Air Pollutant (HAP) or with yearly emissions in excess of 80 tons of SOx, 40 tons of CO, or 56 tons of PM10.

The SCAQMD's Rule 2202, On-Road Motor Vehicle Mitigation Options (required for employers of more than 250 people), provides a menu of strategies to reduce or otherwise mitigate the mobile source emissions resulting from employee commute trips. In addition, land use strategies and improvements to public transit that result in fewer single occupant vehicle (SOV) trips are being implemented by various agencies in the region, including the City. Other mobile source emission reduction strategies, such as market incentives and intercredit trading programs, are currently under study. Tailpipe emissions are regulated by CARB.

In air quality nonattainment and maintenance areas, transportation plans, programs, and projects must contribute to reducing motor vehicle emissions and be drawn from a conforming air quality plan. Conformity is a determination made by the Metropolitan Planning Organization (MPO) and United States Department of Transportation (DOT) that the transportation plans and programs meet the "purpose" of the State Implementation Plan (SIP), namely, reducing pollutant emissions to meet the National Ambient Air Quality Standards (NAAQS). All federally assisted and regionally significant projects, including non-federally assisted projects, are subject to the federal Transportation Conformity Rule. The Southern California Association of Governments (SCAG) is the MPO for the 5-county southern California region, including Los Angeles County and its member cities.

Because the City of Los Angeles has not established or adopted Citywide screening criteria or significance thresholds for operational emissions, the *Thresholds Guide* reprints guidance from the SCAQMD's CEQA Air Quality Handbook to assist in the evaluation of project impacts. The Screening Criteria, Evaluation of Screening Criteria, Significance Threshold and Project Impact sections that appear in this document are all reprinted from, or summaries of, the guidance in the CEQA Air Quality Handbook. For further information, please refer to the CEQA Air Quality Handbook, available from the SCAQMD. It is the responsibility of the lead City department to determine the appropriate significance criteria.

C. Screening Criteria

Would the proposed project:

Result in a development and/or activity level equal to or greater than the thresholds provided in the CEQA Air Quality Handbook's Screening Table for Operation – Daily Thresholds of Potential Significance for Air Quality[1] (see Exhibit B.2-1)?

Conflict with the regional population forecast and distribution in the most recent Air Quality Management Plan (AQMP)?

Have the potential to create or be subjected to an objectionable odor or localized CO hot spot that could impact sensitive receptors?

A "yes" response to any of the preceding questions indicates that further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Operational Emissions, and review the associated Methodology to Determine Significance as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact from Operational Emissions from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, and identify all new or modified sources of stationary and mobile source emissions. Use Exhibit B.2-1 to assess the potential to exceed the daily emissions thresholds for criteria pollutants. Consider the population likely to result from project implementation and identify conflicts with the regional population forecast and distribution in the most recent AQMP. Determine the potential for objectionable odors to impact sensitive receptors. Sensitive land uses include residences, board and care facilities, schools, playgrounds, hospitals, parks, childcare centers, and outdoor athletic facilities.

Compare this information to the Screening Criteria.

[1] *This table is based on potential mobile source emissions for specified land uses and is not intended to screen for stationary sources. Stationary sources are screened on an individual basis by SCAQMD permit staff. (J. Nadler, SCAQMD, personal communication, October 1997.)*

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A proposed project would normally have a significant impact on air quality from project operations if any of the following would occur:

Operational emissions exceed 10 tons per year of volatile organic gases or any of the daily thresholds presented below (as reprinted from the CEQA Air Quality Handbook):

Pollutant	Significance Threshold (lbs./day)
ROG	55
NOx	55
CO	550
PM10	150
SOx	150

Either of the following conditions would occur at an intersection or roadway within one-quarter mile of a sensitive receptor:

The proposed project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 parts per million (ppm), respectively; or

The incremental increase due to the project is equal to or greater than 1.0 ppm for the California 1-hour CO standard, or 0.45 ppm for the 8-hour CO standard.

The project creates an objectionable odor at the nearest sensitive receptor.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

The air quality regulatory framework;
Description of existing ambient air quality conditions as indicated by data from the SCAQMD monitoring station closest to, or most representative of, the project site;

Summary of regional climate and air quality conditions, including a wind rose (which diagrams the frequency of occurrence for each wind direction), if odors are anticipated;

Description of the project site and surrounding area, including the location of sensitive receptors; and

Summary of the existing transportation system and traffic conditions, such as traffic volumes, Level of Service (LOS), transit facilities, etc.

Project Impacts

Project-related factors to be used in evaluating significance include the following:

Type, number of pieces, and usage of equipment;

Rate, quantity, and type of fuel consumption;

Emission factors, assuming implementation of applicable rules and regulations;

Type(s) and size(s) of land uses, including location of vehicle driveways and parking facilities;

The location and usage of equipment or processes that may emit odors;

Modes of transportation, fleet mix, length, number, and type (e.g., work, non-work) of trips, main routes;

Number of employees per land use category; and

Vehicle speeds and ambient temperature.

Pollutant emission rates for known pieces of equipment or processes, as well as energy consumption, are generally available from the manufacturer or from the SCAQMD. If information regarding the number and type of equipment proposed is not available, stationary source emissions may be estimated by using other indicators, such as emission rates per square foot of development. Standardized default values are provided in the CEQA Air Quality Handbook, or consult CARB source classification codes and Environmental Protection Agency (EPA) emission factors.

There are three main methods of determining mobile source and energy consumption emissions as identified by the SCAQMD, depending on the level of detail needed. These include the use of:

Screening Tables 9-7 and 9-8 in the CEQA Air Quality Handbook;

Computer modeling, using the most recent version of Mobile Assessment for Air Quality Impacts (MAAQI); and

Methodology and emission factors in Appendix 9 of the CEQA Air Quality Handbook.

The MAAQI model, and the methodology in Appendix 9 of the CEQA Air Quality Handbook, allow estimation of emissions of criteria pollutants from vehicle trips associated with new or modified development, incorporating the most recent vehicle emission factors (EMFAC) from CARB. User-defined inputs to the models include project type, average vehicle miles traveled, year, season, trip speed, and other parameters. This information would be identified in the project traffic study. (See Appendix 9 of the CEQA Air Quality Handbook for more information.) Determine project-related mobile source emissions and compare to the daily emissions threshold reprinted from the CEQA Air Quality Handbook in the significance threshold.

Localized Mobile Sources (CO Hotspots)

Calculate future CO levels and the incremental increase in CO levels resulting from the proposed project at an intersection, driveway, parking facility, or roadway within one-quarter mile of a sensitive receptor. Assess whether there is an exceedance of the California standards.

Where more detailed or site specific analysis is desired, the CEQA Handbook recommends a dispersion model to estimate potential CO "hotspots," such as CALINE and CAL3QHC. For a detailed explanation of the CALINE4 model, refer to the California Air Resources Board publication *Air Quality Technical Analysis Note (AQ-TAN):* Microscale CO Procedures for California Users. Caltrans has also prepared a “CO Protocol” which is available for use within California and was developed based on information specific to California roads and driving conditions. Project-specific information from the traffic study or SCAQMD default values may be used.

Ambient CO concentrations through the year 2010 are presented in the CEQA Handbook and in the SCAQMD's *Draft Technical Report V-I: Assessment of Nitrogen Dioxide and Carbon Monoxide in the South Coast Air Basin.*

Based on the project's operational components, including activities and measures designed to reduce odors, determine whether the project would create an objectionable odor at the nearest sensitive receptor. Consider patterns of air flow/prevailing winds as applicable.

Using the information from the Evaluation of Screening Criteria, the project evaluation described above, and guidance from the appropriate source, calculate the emissions from operational activities, using the worst-case conditions. Identify measures that will be taken as part of the project to reduce air emissions. Determine the impact from all project sources.

Cumulative Impacts

Review the list of related projects and identify those that would have pollutant or odor emissions. Determine the potential impacts of all such projects, together with the proposed project, using the methodology above.

Sample Mitigation Measures

Potential mitigation measures include the following:

Install on-site pollution control equipment;

Modify industrial processes to reduce emissions;

Provide telecommunications centers near residential areas;

Establish shuttle service from residential areas to transit centers or commercial core areas;

Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks;

Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.);

Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes;

Provide video-conferencing facilities;

Implement home dispatching system where employees receive routing schedule by phone instead of driving to work;

Use low-emission fleet vehicles;

Provide on-site child care facilities;

Provide services, facilities, or incentives to reduce employee work trips. Consider ride share programs or shuttle service for employees;

Include adequate ventilation systems in parking structures to dissipate CO emissions;

Contribute to signal synchronization at congested areas;

Locate sensitive receptors away from potential "hotspots;" and

Provide barriers, such as wall or vegetative screen, between hotspots and sensitive receptors.

See L.1 INTERSECTION CAPACITY for Transportation Demand Management (TDM) measures.

See M.4 ENERGY for energy conservation mitigation measures.

3. DATA, RESOURCES, AND REFERENCES

SCAQMD, CEQA Staff (909-396-3109) and www.aqmd.gov\ceqa.

CARB. AQ-TAN. Microscale CO Procedures for California Users. June 1988.

CARB. CALINE4 - A Dispersion Model For Predicting Air Pollutant Concentrations Near Roadways. Revised June 1989. www.dot.ca.gov/hq/env/air/calinesw.htm.

California Department of Transportation (Caltrans). CO Transportation Project Protocol, 1997.

Local Government Commission (LGC), Land Use Strategies for More Livable Places, June 1992. (This publication may be obtained by writing to LGC, 909 12th Street, Suite 205, Sacramento, CA 95814.)

SCAQMD, Draft Technical Report V-I: Assessment of NO_2 and CO in the SCAB. December 1990.

See also B. AIR QUALITY and B.1. CONSTRUCTION EMISSIONS.

Urbemis 2002 (version 7.4.2) A Model that Estimates Air Pollution from a Wide Variety of Land Use Projects. www.aqmd.gov/ceqa/urbemis.htm.

Exhibit B.2-1
REPRINT OF SCAQMD CEQA AIR QUALITY HANDBOOK, PAGES 6-10 TO 6-12
SCREENING TABLE FOR OPERATION
DAILY THRESHOLDS OF POTENTIAL SIGNIFICANCE FOR AIR QUALITY

Primary Land Use	Potentially Significant Air Quality Impact
Residential	
Single Family Housing	166 units
Apartments	261 units
Condominiums	297 units
Mobile Homes	340 units
Retirement Community	612 units
Education	
Elementary School	220,000 sq.ft.
High School	177,000 sq.ft.
Community College	150,000 sq.ft.
University [a]	813 students
Commercial	
Airport [a]	15 Daily Commercial Flights
Business Park	136,000 sq.ft.
Day Care	26,000 sq.ft.
Discount Store [a]	32,000 sq.ft.
Fast Food w/o Drive-Thru	3,500 sq.ft.
Fast Food with Drive-Thru	2,800 sq.ft.
Hardware Store [a]	28,000 sq.ft.
Hotel	213 rooms
Medical Office	61,000 sq.ft.
Motel	220 rooms
Movie Theater [a]	30,000 sq.ft.
Car Sales [a]	43,000 sq.ft.
Office (small, 10-100)	96,221 sq.ft.
Office (medium, 100-200)	139,222 sq.ft.
Office (large, 200->)	201,000 sq.ft.
Office Park	171,000 sq.ft.
Racquet Club	98,000 sq.ft.
Research Center	245,000 sq.ft.
Resort Hotel	199 rooms
Restaurant	23,000 sq.ft.
Restaurant (high-turnover) [a]	9,000 sq.ft.

Exhibit B.2-1, continued
REPRINT OF SCAQMD CEQA AIR QUALITY HANDBOOK, PAGES 6-10 TO 6-12
SCREENING TABLE FOR OPERATION
DAILY THRESHOLDS OF POTENTIAL SIGNIFICANCE FOR AIR QUALITY

Primary Land Use	Potentially Significant Air Quality Impact
Commercial (cont'd.)	
Shopping Center (small, 10-500)	22,000 sq.ft.
Shopping Center (medium, 500-1,000)	50,000 sq.ft.
Shopping Center (large, 1,000-1,600)	64,000 sq.ft.
Special Activity Center [a] (Stadiums and Amusement Parks)	87 employees
Supermarket	12,500 sq.ft.
Industrial/Mining	
Light Industrial	276,000 sq.ft.
Heavy Industrial [a]	1,284,000 sq.ft.
Industrial Park	276,000 sq.ft.
Aircraft Manufacturing & Repairs	[b]
Bulk Terminals	[b]
Cement Plant	[b]
Chemical Plant	[b]
Hazardous Waste Treatment & Storage	[b]
Manufacturing	500,000 sq.ft.
Mining	[b]
Pulp/Paper Mills	[b]
Refinery	[b]
Institutional/Governmental	
Clinic [a]	94,000 sq.ft.
Government Center [a]	83,000 sq.ft.
Hospital [a]	176 Beds
Library	51,000 sq.ft.
Nursing Home	741 Beds
U.S. Post Office	26,000 sq.ft.
Freeway Lane Addition	All
Designation of a New Transportation Corridor	All
New Freeway/Highway	All
Auxiliary Lanes	Beyond One Ramp

Exhibit B.2-1, continued
REPRINT OF SCAQMD CEQA AIR QUALITY HANDBOOK, PAGES 6-10 TO 6-12
SCREENING TABLE FOR OPERATION
DAILY THRESHOLDS OF POTENTIAL SIGNIFICANCE FOR AIR QUALITY

Primary Land Use	Potentially Significant Air Quality Impact
Institutional/Governmental (cont'd.)	
Waterport	[b]
Sewage Treatment Plant	[b]
Rail	All
Cogeneration Project	[b]
Landfill	[b]
Incineration	Hazardous, Medical or Municipal Waste
Power Generating Facility	[b]
Waste-To-Energy Plant	[b]

[a] *Trip generation rates from the 5th Edition ITE Manual were based upon small sample sizes.*

[b] *New facilities, expansions or other changes that could result in emissions exceeding the significance thresholds.*

These size construction projects have the potential to exceed the daily emissions significance thresholds. Local governments should use these thresholds as screening tools when a project proponent first approaches the lead agency for a permit, to determine whether or not the proposed project will be significant. Moreover, using these thresholds, a project proponent should be advised to include feasible mitigation measures at the project design level rather than in later stages of the project.

Definitions:

"Manufacturing" means to make goods and articles by hand or machinery, often on a large scale and with division of labor.

"Industry" means any large-scale business activity or manufacturing productive enterprises collectively, especially as distinguished from agriculture.

B.3. TOXIC AIR CONTAMINANTS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

III.a): Would the project conflict with or obstruct implementation of the applicable air quality plan?

III.b): Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

III.d): Would the project expose sensitive receptors to substantial pollutant concentrations?

B. Introduction

The California Health and Safety Code (HSC) Section 39655 defines a toxic air contaminant as "an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health." Toxic air contaminants are further classified as carcinogenic or non-carcinogenic substances.

Due to the adverse potential health effects of exposure to toxic air contaminants, both the federal and state governments have established lists of pollutants, which are either regulated at the state level through AB 1807, or at the federal level through the National Emissions Standards for Hazardous Air Pollutants (NESHAPs). The state regulations governing toxic air contaminants are more stringent than federal regulations. The primary responsibility for the implementation of these regulations within the City resides with the South Coast Air Quality Management District (SCAQMD) through its permitting authority. SCAQMD Rules 1401 (New Source Review (NSR) of Carcinogenic Air Contaminants) and 212 (Standards for Approving Permits) implement HSC Section 41700 that requires efforts to be undertaken to prevent new emissions that endanger public health.[1] The California Air Pollution Control Officers Association (CAPCOA) has set forth specific guidelines for the assessment of non-carcinogenic air contaminants from stationary point sources.

[1] *SCAQMD Rule 1402 regulates toxic emissions from existing facilities.*

SCAQMD's CEQA Air Quality Handbook (pages 3-6 to 3-7) lists the federal and state legislation that governs the regulation of toxic air contaminants. In addition to AB 1807 (Tanner Air Toxics Act), AB 2588 addresses toxic "hot spots," AB 3205 regulates toxic releases within 1,000 feet of schools, and AB 3374 involves monitoring of disposal sites.

Under Title III of the 1990 Clean Air Act Amendments (CAAA), the Environmental Protection Agency (EPA) was required to publish a list of categories of major sources of the Hazardous Air Pollutants (Toxics or HAPs) listed in Section 112 by November 1991. That list was then divided into a 10-year regulatory schedule for developing Maximum Achievable Control Technology (MACT) standards for every category or subcategory with specific accomplishments required in 2, 4, 7, and 10 year periods after enactment.

A carcinogenic air contaminant is a substance that has been shown to cause cancer in animals or humans. There is no specific concentration of carcinogenic air contaminants that can be considered completely safe. Thus, the amount of increased risk a person has of getting cancer from exposure to carcinogenic air toxics is used as an indicator of potential significant health effects.

Non-carcinogenic toxic air contaminants are defined as those which cause health effects other than cancer, such as lung, kidney, or liver diseases; respiratory or eye irritation; and nervous, reproductive or immune system disorders. By using health studies and adding safety margins, health experts have set reference exposure levels for these toxic chemicals. The risk of non-cancer health effects is described as a ratio, or hazard index. It compares an individual's highest exposure levels at a given site to the reference exposure level for that toxic.

Impacts from toxic air contaminants can occur during either the construction or operational phases of a project. During certain construction activities, potential releases of toxic air contaminants could occur during site remediation activities, or during building demolition. Toxic air contaminants may also be released during industrial or manufacturing processes, or other activities that involve the use, storage, processing, or disposal of toxic materials.

For a discussion of accidental chemical releases, please refer to F.1. RISK OF UPSET/EMERGENCY PREPAREDNESS. Exposure to asbestos is discussed in F.2. HUMAN HEALTH HAZARDS.

C. Screening Criteria

- Would the project use, store, or process carcinogenic or non-carcinogenic toxic air contaminants which could result in airborne emissions?

A "yes" response to the preceding question indicates that further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the significance threshold for Toxic Air Contaminants, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact from Toxic Air Contaminants from the proposed project.

D. Evaluation of Screening Criteria

Review the proposed project and its associated components, including demolition, site preparation, construction, and operation. Determine the potential for toxic airborne emissions. Professional assistance may be required. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The regulatory framework for the toxic material(s) and process (es) involved;
- The proximity of the toxic air contaminants to sensitive receptors;
- The quantity, volume and toxicity of the contaminants expected to be emitted;
- The likelihood and potential level of exposure; and
- The degree to which project design will reduce the risk of exposure.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include a discussion of the applicable regulatory setting and existing facilities or operations in the area, which may release toxic air

emissions. Identify the location and type of all sensitive uses, which could be impacted by project emissions.

Project Impacts

Review the proposed project including construction and operation activities. Identify and evaluate project features or components that would reduce the risk of exposure. The CEQA Air Quality Handbook defines the following land uses as sensitive receptors: residences, schools, playgrounds, child care facilities, long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, and outdoor athletic facilities. Consider the regulatory framework and determine the resulting risk of exposure. Additional information to assist with project evaluation is provided in the CEQA Air Quality Handbook.

Cumulative Impacts

Review the related projects and identify those that would involve the potential release of toxic air contaminants and could contribute to a concentration of toxic air contaminants. Evaluate the potential cumulative impacts as described above for Project Impacts. Information to assist with cumulative evaluation is provided in the CEQA Air Quality Handbook.

Sample Mitigation Measures

New sources of toxic air contaminants are regulated in the South Coast Air Basin (Basin) by the SCAQMD. Permit requirements generally result in emissions that are considered to be less than significant by the SCAQMD. Consult the CEQA Air Quality Handbook for additional information.

Potential mitigation measures include the following:

- Provide barriers that reduce emissions (e.g., screens, vents, closed systems);
- Use non-toxic or less toxic substances in project construction or operation; and
- Investigate opportunities and implement programs to improve efficiency and/or reduce the amount of waste emissions generated.

3. DATA, RESOURCES, AND REFERENCES

SCAQMD, Toxics Division. Information on health risk assessments, toxics permits and compliance may be obtained by calling the SCAQMD Toxics and Waste Management Branch at (909) 396-2388.

CAPCOA, Air Toxics Assessment Manual, 1987 and Air Toxics "Hot Spots" Program Risk Assessment Guidelines. (updated yearly). Available by calling CAPCOA at (916) 676-4323.

California Air Resources Board (CARB). Documents available for each AB 1807 toxic air contaminant which is identified. Contact the CARB's Public Information Office at (916) 322-2990 or call ARB Air Quality Measures Branch (916) 445-6318. California Air Toxics Program web page http://www.arb.ca.gov/toxics/toxics.htm.

HSC Section 44300 et sec. Air Toxics "Hot Spots" Information and Assessment Act of 1987 and Section 39650 et sec. Toxic Air Contaminants (Chapter 3.5).

SCAQMD, Procedures for Preparing Risk Assessments to Comply with Air Toxics Rules of the SCAQMD.

Environmental Protection Agency (EPA), Guideline on Air Quality Models (revised). EPA-450/2-78-027R. Available at http://www.epa.gov/

See also B. AIR QUALITY, B.1. CONSTRUCTION EMISSIONS, and B.2. OPERATIONAL EMISSIONS.

C. BIOLOGICAL RESOURCES

C. BIOLOGICAL RESOURCES

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

IV.a): Would the project 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?

IV.b): Would the project 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?

IV.c): Would the project 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?

IV.d): Would the project 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?

IV.e): Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

IV.f): Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

B. Introduction

A wide variety of sensitive biological resources, including both plant and animal species, reside in or use resources within the City of Los Angeles. The City encompasses a variety of open space and natural areas that serve as habitat for sensitive species. Much of this natural open space is found in or is adjacent to the foothill regions of the San Gabriel, Santa Susana, Santa Monica and Verdugo Mountains, the Simi Hills, and along the coastline between Malibu and the Palos Verdes Peninsula.

Many of the outlying areas are contiguous with larger natural areas, and may be part of significant wildlife habitats or movement corridors. In contrast, the central and valley portions of the City contain fewer natural areas.

Various-sized remnants of native habitats, such as hillside and canyon areas, wetland habitats, dunes, beaches and marine habitats exist in many areas of the City. Although these areas may have been modified from their natural conditions, they are still important habitats for wildlife. Habitat values are generally highest in areas of relatively large acreage adjacent to other similar habitat systems. Some sensitive biotic resources may persist even in urbanized settings, such as oak trees, rare plants, peregrine falcons, Monarch butterflies and bats.

Federal and state agencies, including the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (DFG), maintain listings of sensitive species and habitat (i.e., federal or state listed endangered, federal or state listed threatened, Species of Special Concern, federal or state candidate species; and federally listed critical habitat).

A project may impact biological resources through the loss or destruction of individuals of a sensitive species or through degradation of sensitive habitat. Habitat degradation may occur through grading or excavation, increases in water or air pollutants, increased noise, light, or vibration, interruption of fresh or salt water supplies, reduction in food supplies or foraging areas, or interference with established wildlife movement patterns on or between habitat areas. Projects, which create long-term or episodic impacts to natural areas -- such as by generating toxic fumes or fugitive dust -- could also result in degradation or destruction of a natural habitat. New development, construction, roadways, and agricultural use all have the potential to lower or remove natural resource values of natural open space systems.

Exhibit C-1 divides the City into five geographic zones for the purpose of identifying potential sensitive biological resources. Natural open space areas within the City's 11 Planning Subregions that may contain habitat for sensitive species are shown on Exhibits C-2 through C-5. These maps are based upon interpretation of aerial photography of the City dated November 1992[1]. The maps include open space areas, as well as several areas that appear to be devoted to agriculture and mineral extraction. The latter areas are mapped because they are of substantial size and presently or potentially meet habitat needs for plants and animals. Urban parks, golf courses, and small reservoirs are excluded from this mapping unless they are physically contiguous with other habitats, such as at the Sepulveda and Hansen flood control basins. A few vacant lots within the City are also indicated on these maps by virtue of their size and present or future potential to support biological

[1] *Areas that have been developed since November 1992 may be shown as open space habitat on these maps.*

resources. Additionally, Significant Ecological Areas (SEAs), established by the County of Los Angeles through its General Plan, are shown. Exhibit C-6, describes the SEAs, open space habitats, and other potential/known sensitive resources in each planning subregion.

Both federal and state legislation calls for the protection of sensitive species, and the habitat that supports them, to reduce the chance that existing and future development will seriously endanger the continued existence of native biological resources. The presence of adequate habitat, including food and water, shelter, and nesting sites, is critical to a species' long-term survival. Exhibit C-7 provides a summary of existing known sensitive biological resources and classifications within the City of Los Angeles and vicinity, along with their federal and state listed status, habitat requirements, and the biological assessment zone (from Exhibit C-1) in which the species may exist. This exhibit also provides applicable classifications from the California Native Plant Society (CNPS).

The habitat types in the remaining natural open space areas are quite diverse. Chaparral, which supports a wide variety of wildlife, is most prevalent on the north slopes and higher-elevation south slopes of the Santa Monica and Verdugo Mountains. Open-structured coastal scrub and grassland are prevalent on the lower-elevation south slopes of these ranges, and also in the Simi Hills, Santa Susana and San Gabriel Mountains. Grasslands also occur in flood control basins and near reservoirs in various parts of the City. Along the coast, sandy beaches, rocky cliffs, headlands and promontories support marine invertebrates, fishes, mammals, birds and plants. In addition, coastal habitats, including the dunes, marshes and bluffs, support a number of unique, threatened and endangered plants and animals.

For the purposes of the *Thresholds Guide*, a sensitive biological resource is defined as follows:

- A plant or animal that is currently listed by a state or federal agency(ies) as endangered, threatened, rare, protected, sensitive or a Species of Special Concern or federally listed critical habitat;

- A plant or animal that is currently listed by a state or federal agency(ies) as a candidate species or proposed for state or federal listing; or

- A locally designated or recognized species or habitat.

C. Screening Criteria

For projects proposed on sites within the City of Los Angeles that are located in Area 5 of Exhibit C-1, or **in the unshaded portions** of Exhibits C-2 through C-5:

- Do known individuals or populations of a sensitive species use or inhabit the site during one or more seasons of the year, according to readily available published accounts, the project proponent and/or property owner?

- Is the project site immediately adjacent to undeveloped natural open space containing native vegetation (such as the shaded areas on Exhibits C-2 through C-5) or does the site appear to serve as a buffer between existing development and more natural habitat areas? Could it be part of a movement corridor or habitat linkage system?

- Is a natural water source, such as a lake, river, vernal pool, ephemeral stream, marsh or the ocean present on or adjacent to the site?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Biological Resources and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Biological Resources from the proposed project.

For projects proposed on sites within the City of Los Angeles that are located **within a shaded open space area** as identified on Exhibits C-2 through C-5:

- Do known individuals or populations of a sensitive species use or inhabit the site during one or more seasons of the year, according to readily available published accounts, the project proponent and/or property owner?

- Does the project site contain natural open space and/or known native vegetation?

- Does the site serve as a buffer between existing development and more natural habitat areas?

- Does the site serve as a known wildlife movement corridor between habitat areas?

- Is a natural water source, such as a lake, river, vernal pool, ephemeral stream, marsh or the ocean present on, or immediately adjacent to, the project site?

- Is the project site relatively undisturbed or undeveloped, that is, free of structures, agricultural fields, pavement, etc.? Is it free of regular maintenance activities such as disking or clearing, maintenance and repair of linear utilities, maintenance or repair of roads, or maintenance and repair of municipal reservoirs and associated infrastructure?[2]

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Biological Resources and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to each of the previous questions indicates that there would normally be no significant impact on Biological Resources from the proposed project.

D. Evaluation of Screening Criteria

Locate the proposed project site on the appropriate map presented in Exhibits C-1 through C-5. Determine the existing conditions on the project site and surrounding area, including whether existing vegetation is native, urbanized, or ruderal (i.e, weedy or introduced plants where native vegetation has been disturbed).

If the site is located in an unshaded portion of Exhibits C-2 through C-5, review the first set of screening questions. Look for evidence that a sensitive species outside of the normal range, or an urban migratory species, uses or inhabits the site during one or more seasons. Look for unmanaged vegetation, cave-like areas, evidence of nesting, hunting, tracks or droppings, and review readily available published accounts of such sightings. Also, confer with the property owner and project proponent. Check for natural sources of water on or adjacent to the site as well as proximity of the site to areas of undeveloped open space to determine whether the site could serve as a buffer or wildlife movement corridor.

If the site is located within a shaded portion of Exhibits C-2 through C-5, review the second set of questions. Review Exhibits C-1 and C-7 to assist in identifying which species may potentially be located on the project site. If the project site has been developed or substantially disturbed since these maps were prepared in November 1992, use the questions for sites within the unshaded

[2] *Natural surface disturbances, such as fire or flood, are not considered to be resource-degrading.*

portions of the maps. The federal and state species lists change periodically; always compare with the most recent edition.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact on biological resources if it could result in:

- The loss of individuals, or the reduction of existing habitat, of a state or federal listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or federally listed critical habitat;

- The loss of individuals or the reduction of existing habitat of a locally designated species or a reduction in a locally designated natural habitat or plant community;

- Interference with wildlife movement/migration corridors that may diminish the chances for long-term survival of a sensitive species;

- The alteration of an existing wetland habitat; or

- Interference with habitat such that normal species behaviors are disturbed (e.g., from the introduction of noise, light) to a degree that may diminish the chances for long-term survival of a sensitive species.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- A physical description of the project site, including acreage, topography, presence of sensitive features (e.g., wetlands, flowing, standing or ephemeral water sources, rock outcroppings, caves, etc.), major habitats and vegetation communities present, potential presence of wildlife populations, sensitive resources, migration corridors, and relationship to the surrounding land;

- In marine environments, describe the presence or absence of tidal wetlands, the bottom topography and depth, access to open ocean systems, information on existing biota, and the existence of movement or migration corridors of marine mammals; and

- A statement of the potential for existing sensitive resources, based upon review of Exhibit C-7, and other biological reference documents, including the California Natural Diversity Database (CNDDB), federal and state agency lists, regulatory statutes, and applicable City documents.

- A review of local, state, and federal regulations that apply to the project site.

Prepare or reference baseline assessments of potential occurrence of sensitive resources (from literature and existing resource data bases) and conduct a field reconnaissance survey, as needed. Surveys should be performed during appropriate seasons, and should include all significant biotic elements, including corridor and habitat linkages, with an assessment of the nature of their occurrence (e.g., resident, transient, migratory, etc.). Species inventories should include organisms observed during surveys, along with those reasonably expected to occur over time, with a listing of sensitive biological elements and their agency status. See Exhibit C-7 for a list of sensitive resources potentially present within the City, and Exhibits C-1 through C-5 for habitat maps for various areas of the City.

Project Impacts

Prepare a biological assessment of the site, based on the known and potential biological resources on and adjacent to the site. Determine the actual presence or absence within project boundaries or on adjacent lands of sensitive plants, animals or habitats listed as "potentially present" in resource databases. Also, note the quality of existing vegetation.

Review the project description, including site preparation, construction and operational plans, to identify which biological resources could be lost or degraded by project implementation, if any, including habitats, shelter, movement corridors, foraging grounds, and nesting areas. Professional assistance may be required. Compare the results to the Significance Threshold. Incremental loss of areas used seasonally may be significant depending upon the value of the habitat that remains.

Cumulative Impacts

Review the list of related projects and identify those that, in combination with the proposed project, could impact sensitive biological resources. Consider especially impacts to the same species, habitat, or open space area as those affected by the proposed project. Include site preparation and construction activities as well as operational activities. Note whether the projects could combine to obstruct wildlife movement corridors, contribute to habitat fragmentation, or affect sensitive plants or animals. Assess the incremental losses to habitat, foraging areas, wintering grounds, nesting sites, etc., and any potential takings of sensitive species.

Also, evaluate the impact of cumulative project operational activities on sensitive species and habitats. Consider effects such as increased traffic, noise, fumes, general human activity, ambient lighting, fencing, fugitive dust pollution, infiltration of herbicides or industrial waste chemicals, and harassment of wildlife by domestic pets.

Sample Mitigation Measures

Specific project mitigation measures should be based on recommendations in the biological assessment and involve consultation with appropriate resource protection agencies. Potential mitigation measures include the following:

- Revise project construction plans to avoid grading or excavation during sensitive seasons (e.g., rain, nesting, etc.);

- Design the project such that the most biologically-sensitive portions of the site are preserved for natural habitat;

- Block human and domestic animal access to sensitive habitats adjacent to the project site;

- Provide for revegetation/restoration after project construction; and

- Mitigation banking: Compensate (to the satisfaction of resource agencies) for the loss of habitat values in one area by purchasing or deed-restricting similar or better habitat systems on other sites. These areas would be high value ecosystems, preferably containing viable populations of sensitive resources.

3. DATA, RESOURCES, AND REFERENCES

Los Angeles County Department of Regional Planning; Telephone: (213) 974-6411. SEA information. http://planning.co.la.ca.us.

Exhibit C-8 contains general references regarding biological resources in the Los Angeles area.

USFWS, Ecological Services, Carlsbad Field Office, 6010 Hidden Valley Road, Carlsbad, California, 92009; Telephone: (760) 431-9440. The USFWS can provide information regarding the Endangered Species Act, federally listed species, and federal wildlife resources and their protection.

Selected Legislation

Federal

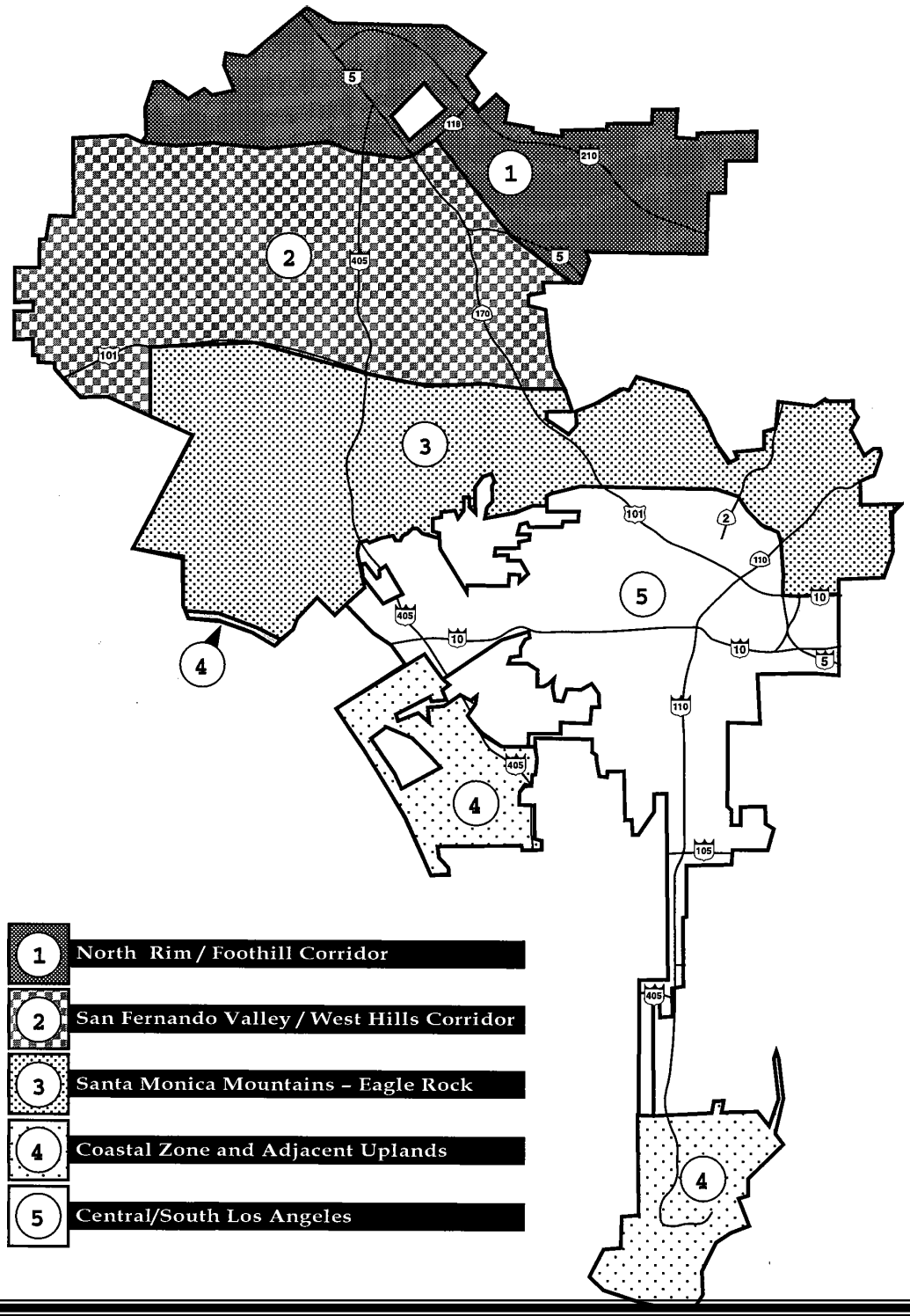
Endangered Species Act of 1973, PL 93-205 (16 U.S.C. 1531)

Purpose is to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth.

State

California Endangered Species Act, Fish and Game Code, Division 3, Chapter 1.5.

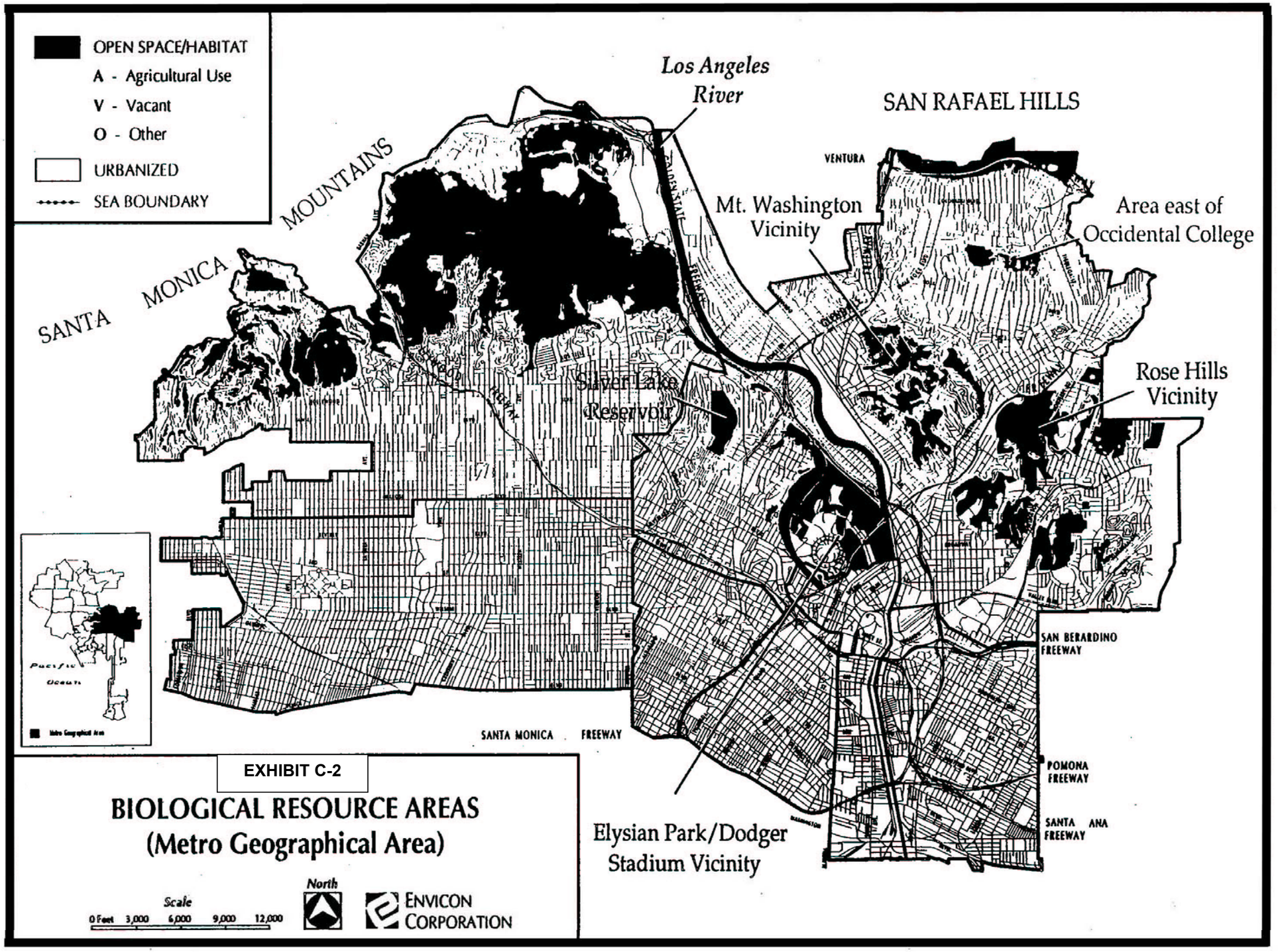
Declares that these species of fish, wildlife, and plants are of ecological, educational, historical, recreational, esthetic, economic, and scientific value to the people of this state, and the conservation, protection, and enhancement of these species and their habitat is of statewide concern. Provides for a state list of endangered and threatened species by the Fish and Game Commission and restricts activities that may impact these species.



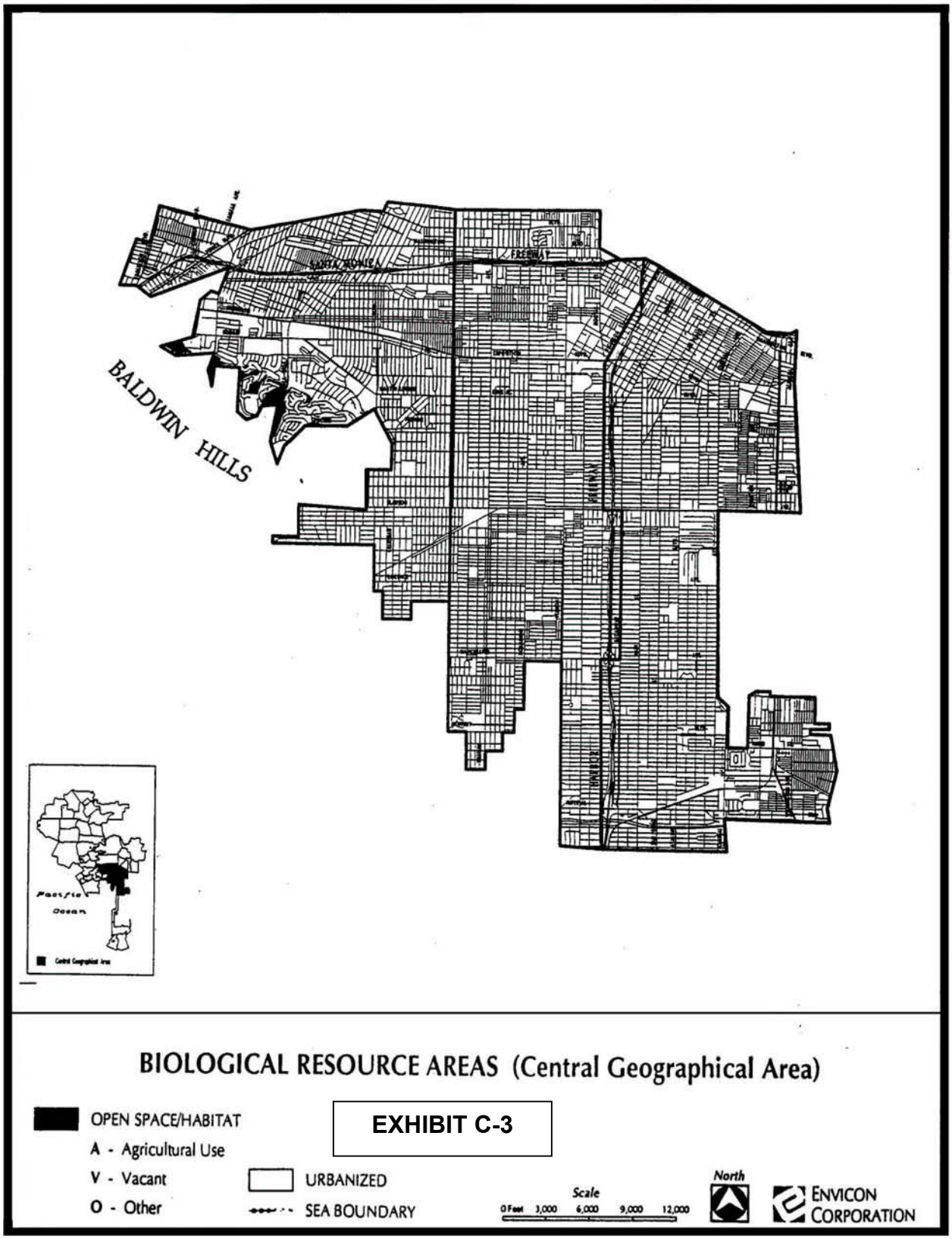
Planning
Consultants
Research

Exhibit C-1
Habitat-Oriented Biological Assessment Planning Zones

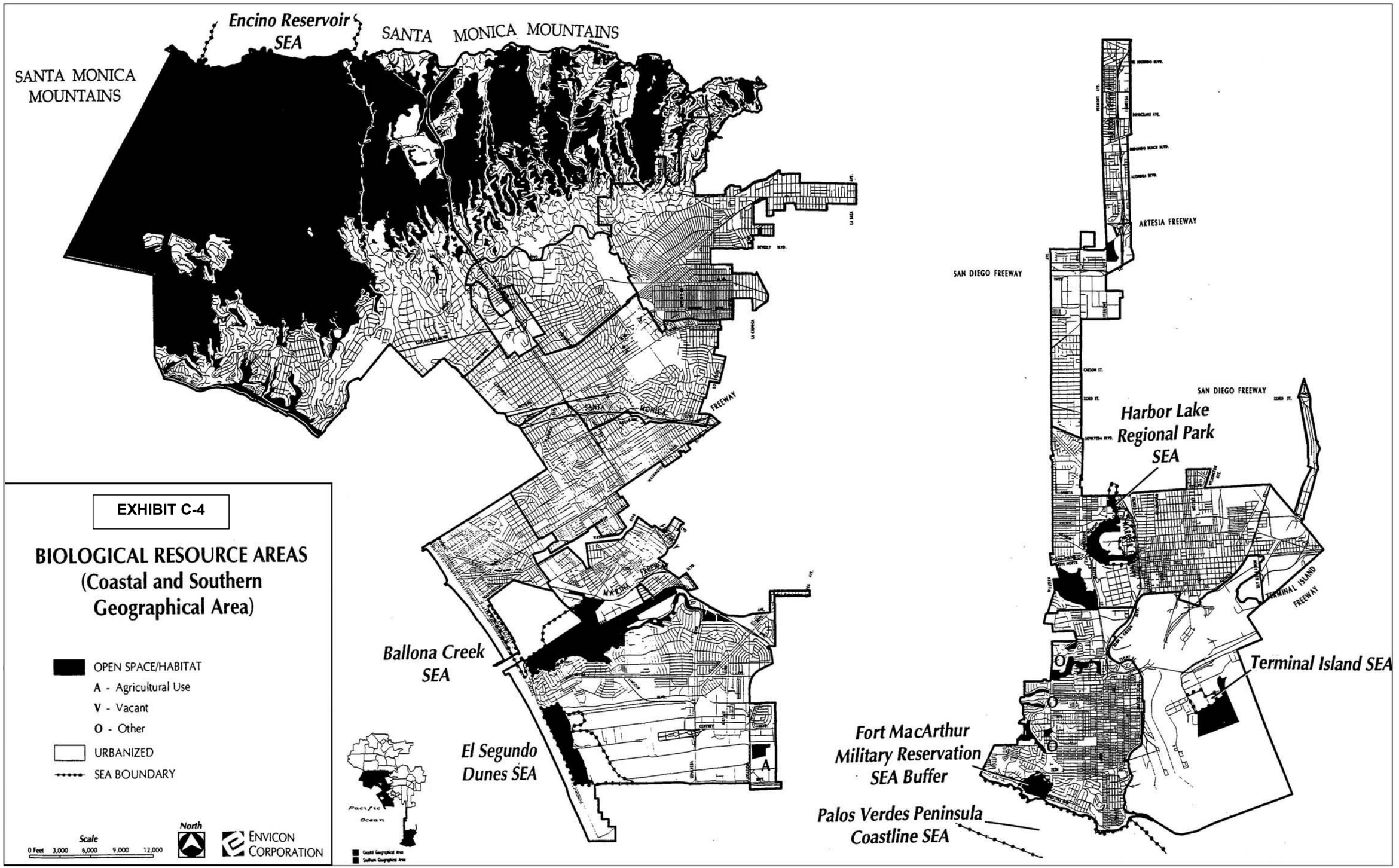
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OPEN SPACE/HABITAT
A - Agricultural Use
V - Vacant
O - Other
URBANIZED
SEA BOUNDARY
Los Angeles River
SAN RAFAEL HILLS
VENTURA
MOUNTAINS
SANTA MONICA
Mt. Washington Vicinity
Area east of Occidental College
Rose Hills Vicinity
Silver Lake Reservoir
SAN BERARDINO FREEWAY
POMONA FREEWAY
SANTA ANA FREEWAY
SANTA MONICA FREEWAY
Elysian Park/Dodger Stadium Vicinity
Pacific Ocean
Metro Geographical Area
EXHIBIT C-2
BIOLOGICAL RESOURCE AREAS
(Metro Geographical Area)
Scale
0 Feet 3,000 6,000 9,000 12,000
North
ENVICON CORPORATION

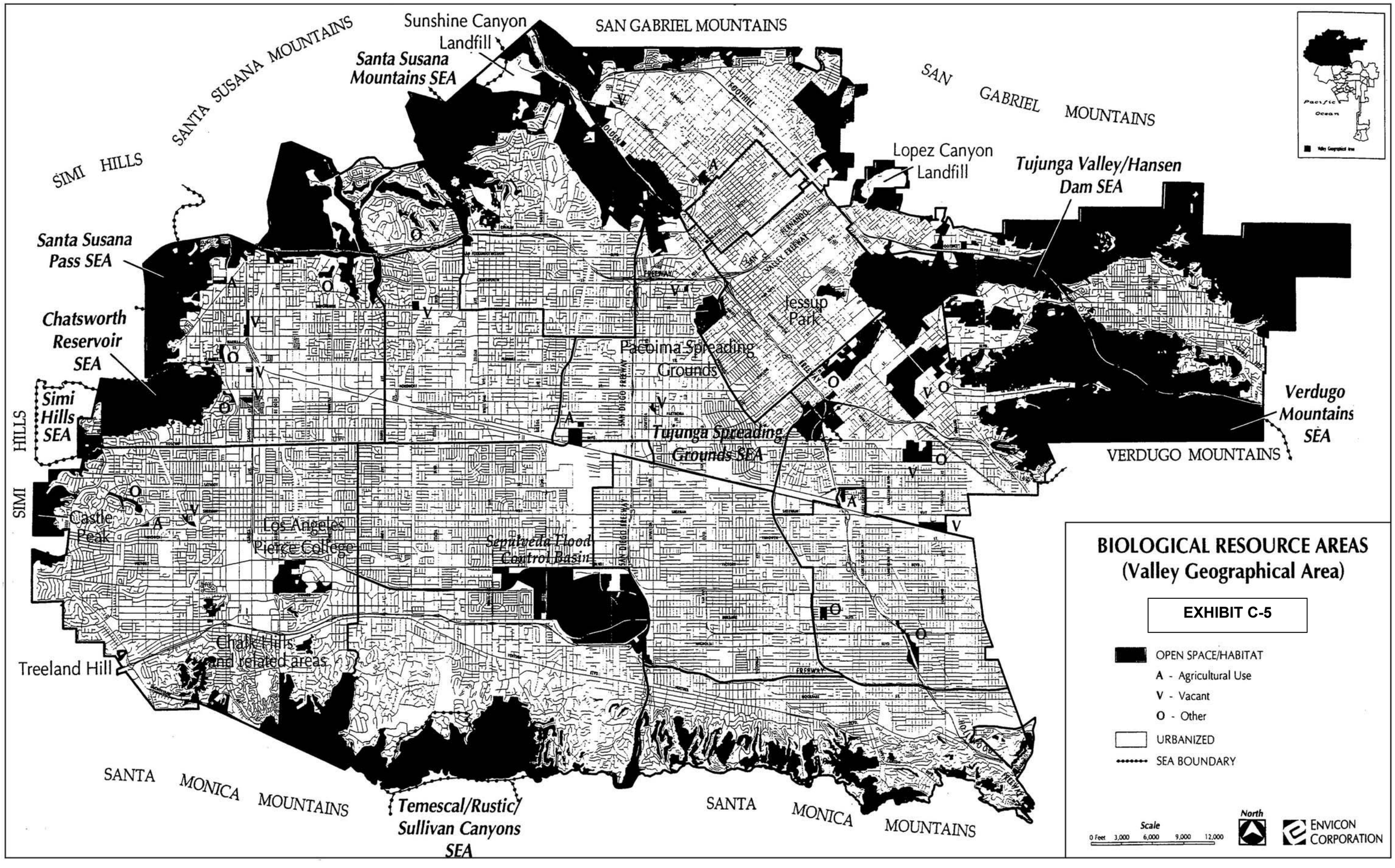
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BALDWIN HILLS
BIOLOGICAL RESOURCE AREAS (Central Geographical Area)
OPEN SPACE/HABITAT
A - Agricultural Use
V - Vacant
O - Other
URBANIZED
SEA BOUNDARY
EXHIBIT C-3
Scale
0 Feet 3,000 6,000 9,000 12,000
North
ENVICON CORPORATION

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Encino Reservoir SEA
SANTA MONICA MOUNTAINS
SANTA MONICA MOUNTAINS
SANTA MONICA FREEWAY
ARTESIA FREEWAY
SAN DIEGO FREEWAY
SAN DIEGO FREEWAY
Harbor Lake Regional Park SEA
TERMINAL ISLAND FREEWAY
Terminal Island SEA
Ballona Creek SEA
El Segundo Dunes SEA
Fort MacArthur Military Reservation SEA Buffer
Palos Verdes Peninsula Coastline SEA
EXHIBIT C-4
BIOLOGICAL RESOURCE AREAS
(Coastal and Southern Geographical Area)
OPEN SPACE/HABITAT
A - Agricultural Use
V - Vacant
O - Other
URBANIZED
SEA BOUNDARY
Scale
0 Feet 3,000 6,000 9,000 12,000
North
ENVICON CORPORATION
Pacific Ocean
Coastal Geographical Area
Southern Geographical Area

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SANTA SUSANA MOUNTAINS
SIMI HILLS
Sunshine Canyon Landfill
SAN GABRIEL MOUNTAINS
Santa Susana Mountains SEA
SAN GABRIEL MOUNTAINS
Lopez Canyon Landfill
Tujunga Valley/Hansen Dam SEA
Santa Susana Pass SEA
Chatsworth Reservoir SEA
Jessup Park
Pacoima Spreading Grounds
Simi Hills SEA
Tujunga Spreading Grounds SEA
Verdugo Mountains SEA
VERDUGO MOUNTAINS
SIMI HILLS
Castle Peak
Los Angeles Pierce College
Sepulveda Flood Control Basin
Chalk Hills and related areas
Treeland Hill
SANTA MONICA MOUNTAINS
Temescal/Rustic/ Sullivan Canyons SEA
SANTA MONICA MOUNTAINS
Pacific Ocean
Valley Geographical Area
BIOLOGICAL RESOURCE AREAS
(Valley Geographical Area)
EXHIBIT C-5
OPEN SPACE/HABITAT
A - Agricultural Use
V - Vacant
O - Other
URBANIZED
SEA BOUNDARY
Scale
0 Feet 3,000 6,000 9,000 12,000
North
ENVICON CORPORATION

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Exhibit C-6
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

The following discusses the open space resources and SEAs in each of the eleven Planning Subregions of the City, starting in the north and proceeding generally south. Within each subregion, the mapped open spaces and habitats they contain are briefly discussed, and the reader is referred to those general and site-specific accounts of biological resources that were found applicable to each subregion. Often, an open space area occurs in more than one subregion (e.g. Santa Monica Mountains). Such occurrences are discussed separately in each case, but in greatest detail when first encountered in the discussion. Therefore, the reader may find reference in the discussion to a prior description of an open space area in an earlier subregion. There is additional information about SEAs at the end of this section.[2]

Northwest Valley Planning Subregion

Chatsworth Reservoir SEA. The Chatsworth Reservoir is owned by the Los Angeles Department of Water and Power, and abuts the foot of the Simi Hills in the Western San Fernando Valley. A variety of habitats are present here, including grassland, oak woodland and savannah, freshwater marsh and open water, which offer important wintering and breeding grounds for songbirds and waterfowl (England and Nelson, 1976). The Chatsworth reservoir is one of five areas in the San Fernando Valley that is used regularly by wintering Canada Geese (*Branta canadensis*). Many-stemmed dudleya (*Dudleya multicaulis*) is reported in rocky areas on the south side of the reservoir (NDDB, 1994).

Simi Hills and Simi Hills SEA, and Santa Susana Pass SEA. The Simi Hills are generally located north of the Ventura Freeway (US 101), south of the Simi Valley Freeway (SR 118), and west of the San Fernando Valley. As such, they lie largely outside of the City boundary, and are mostly within Ventura County. However, portions of its eastern flank bordering the western San Fernando Valley from the vicinity of Castle Peak to Santa Susana Pass lie within the City. Wieslander (1934) mapped the vegetation of this region between 1927 and 1933. Wiekel (1983) has prepared a biological inventory and mapping for this area, although additional specific biological resource inventories of the Simi Hills within the City and County of Los Angeles are generally lacking. A survey over the areas of Dayton and Woolsey Canyons (Envicom Corp., 1990) in the Simi Hills just east of the Chatsworth Reservoir is the best representative inventory available for the eastern Simi Hills. Habitats present include grassland, coastal scrub, chaparral, riparian and oak woodland, and limited areas of walnut woodland. The state-listed Rare Santa Susana tarplant

[1] *Reprinted from the EIR for the Framework Element.*

[2] *SEA boundaries are established by Los Angeles County. The current legal boundaries and status should be verified.*

Exhibit C-6, continued
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

(*Hemizonia mint Jionii*) is prevalent in the sandstone outcrops, and Humboldt lily (*Lilium humboldtii ocellatum*) occurs in the under story of riparian woodland in upper Dayton Canyon.

The Simi Hills SEA is almost entirely within the unincorporated area of Los Angeles County, with only a small fraction extending into the City. The remaining portions of this SEA are located west of Chatsworth Reservoir and Valley Circle Boulevard, and north and south of Lakeside Park (a residential community). Santa Susana tarplant occurs adjacent to Valley Circle Boulevard in the northern area (Wishner, personal observation, 1990). The Simi Hills SEA contains representative examples of chaparral, coastal scrub, southern oak woodland and riparian woodland, and the area also serves as a wildlife corridor for movement between the Chatsworth Reservoir SEA and the large, undeveloped portions of the Simi Hills in Ventura County to the west (England and Nelson, 1976).

The southern portion of the Santa Susana Pass SEA that is located south of the Simi Valley Freeway (SR 118) is actually located in the Simi Hills, within the City of Los Angeles (the remainder of the SEA north of the freeway is in the Santa Susana Mountains, and outside the City boundary). The Santa Susana Pass SEA is an important wildlife movement zone between the Santa Susana Mountains and the Simi Hills (England and Nelson 1976), which is referred to as the "primary Simi Valley Freeway habitat linkage" by Edelman (1991). Intact crossings for large mammals include the Rocky Peak Road freeway overpass (just outside City/County line). Habitats encompassed by the Santa Susana Pass SEA (within the City) include chaparral, coastal scrub, grassland, oak woodland, and riparian woodland. The SEA also contains concentrations of Santa Susana tarplant, which is associated with sandstone outcrops in chaparral and coastal scrub habitats.

Discrepancies between the original boundaries recommended (England and Nelson, 1976) and adopted by the County of Los Angeles and the extent of open space habitat for plants and animals shown on Exhibits C-2 through C-5, are the result of "deletions" of areas from the SEA as they have become developed.

Santa Susana Mountains and Santa Susana Mountains SEA. The Santa Susana Mountains form an open-space link between the San Gabriel Mountains (northeast) and the Simi Hills and Santa Monica Mountains (southwest). With the exception of a resource inventory and mapping prepared by Wiekel (1983) and bird lists for O'Melveny Park (Martin, 1992), specific biological resource accounts of the Santa Susana Mountains are generally lacking. The range does support grassland, chaparral, oak woodland and savanna, riparian woodland, and big-cone spruce woodland (latter on the north slope only).

Exhibit C-6, continued
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

A small, eastern extension of the Santa Susana Mountains SEA is located within the City boundary, although much of the former SEA here is occupied by the Sunshine Canyon Sanitary Landfill.[3] Habitats of the Santa Susana Mountains SEA include grassland, coastal sage scrub, chaparral, oak woodland and savannah, and riparian woodlands (England and Nelson, 1976). Porter Ranch is also included in this geographic region.

Van Norman Reservoir and vicinity. This large open space area in the northern San Fernando Valley receives water via aqueduct over the San Fernando Pass--the divide between the Santa Susana and San Gabriel Mountains. The size of the reservoir containing open water was substantially reduced following the Sylmar earthquake in 1971, when the lower dam was drained. As a result, portions of that area have recovered to form willow forest habitat. Upland portions of the reservoir area support grassland and coastal scrub vegetation. The area is one of five, which are regularly used by wintering Canada geese. To the south and adjacent to the reservoir are agricultural lands, a cemetery, a parcel containing remnant grassland, coastal scrub and oak woodland, and several vacant lots. These form a cohesive unit, which offers resources for plants and animals as an adjunct to the reservoir site. Across the Golden State Freeway (I-5) from the Van Norman Reservoir (in the Northeast Valley subregion) is a substantial area of grassland, coastal scrub, and small open water habitat, which adds to the effective size and resource value of the reservoir site.

Pacoima Spreading Grounds. This area of storm water runoff collection located southwest of the junction of the Golden State Freeway (I-5) and the Simi Valley Freeway (SR 118) is divided approximately in half between the Northwest and Northeast Valley Planning Subregions. It supports marsh-like habitat when ponding occurs (City of Los Angeles, 1989), and offers opportunities for migrating waterfowl and shorebirds.

Northeast Valley Planning Subregion

San Gabriel Mountains. This subregion contains portions of the foothills of the San Gabriel Mountains bordering the San Fernando Valley and extending from the western end of the range eastward to Pacoima Canyon, Lopez Canyon, Little Tujunga Canyon and Big Tujunga Canyon. From there, the City includes the foothills of the range bordering on the San Gabriel Valley eastward to approximately Hines Canyon, and extending upward into the mountains to the vicinity of Mount Lukens. Biological resources of the San Gabriel Mountains are discussed generally (Hanes, 1976; Schoenherr, 1976 and 1992; USDA:FS, 1987; Long, 1994), but specific biological accounts of areas

[3] *The footprint of the landfill shown in Exhibit C-2 is as of November 1992, and does not reflect the expansion which has occurred since that date.*

Exhibit C-6, continued
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

within the City [with the exception of detailed vegetation maps prepared by Wieslander (1934)] are limited to project-related environmental impact reports and sensitive species records in the Natural Diversity Data Base. Habitats evident in the City boundary on aerial photographs include primarily coastal scrub and chaparral, and limited areas of oak and riparian woodlands, and grasslands.

Verdugo Mountains and Verdugo Mountains SEA. The City includes the entire northwestern end of this mountain range bordering the San Fernando Valley and the San Gabriel Valley. This geographic location makes the Verdugo Mountains an important habitat linkage between the San Gabriel Mountains to the north, and the Santa Monica Mountains to the south (England and Nelson, 1976). Both general and specific accounts of biological resources therein are lacking or limited to project-related environmental impact reports or accounts of sensitive species, and the detailed vegetation maps of the area prepared by Wieslander in 1934. As shown on aerial photographs, habitats present in these mountains include grassland, coastal scrub, chaparral, riparian and oak woodlands.

A substantial portion of the Verdugo Mountains SEA lies within the City, while the remainder is within the corporate boundaries of Burbank and Glendale. Although England and Nelson (1976) indicate "considerable information exists on the area," this information was not available for preparation of the General Plan Framework EIR.

Tujunga Valley/Hansen Dam Park SEA. The Tujunga Valley occupies the floodplain of Big Tujunga Canyon. Hansen Dam is a flood control basin receiving stream discharge from Lopez, Kagel, Little Tujunga, and Big Tujunga Canyons. The floodplain behind Hansen Dam (Hansen Dam Park) supports one of the last examples of alluvial scrub vegetation in the freshwater marsh, willow forest and scrub. Alluvial scrub is habitat for the state-listed Endangered Nevin's barberry (*Berberis nevinii*) and the state- and federally-listed Endangered slender-horned spineflower (*Dodecahema leptoceras*), which have been found here (England and Nelson, 1976; City of Los Angeles, 1989a). Long (1994) has prepared a list of plants and birds occurring at the Tujunga Ponds. The park reportedly (City of Los Angeles 1989) supports a south coast minnow/sucker stream which sustains native populations of arroyo chub (*Gila orcutti*) and Santa Ana sucker (*Catostomus santaanae*). Swift et al. (1993) report that arroyo chub remains common in Big Tujunga, whereas Pacific speckled dace (*Rhinichthys oscrilus*) and Santa Ana sucker have become scarce and perhaps extirpated. Areas to the southwest (below the dam) are used as a spreading ground for groundwater

Exhibit C-6, continued
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

recharge, which has created several freshwater marsh areas used by marsh birds, migratory waterfowl, and shorebirds (England and Nelson, 1976).[4]

Jessup Park. A small area of chaparral, coastal scrub and grassland habitats (as evident on aerial photographs) occurs just west of Hansen Dam Park--No specific details of biological resources present could be found in the available literature.

Tujunga Spreading Grounds SEA. This SEA is located in the Tujunga Wash downstream from Hansen Dam, at the juncture of the Golden State Freeway (I-5) and the Hollywood Freeway (SR 170). Although it contains little natural vegetation, it is an area of ponded water serving as an important nesting, feeding and resting ground for many migrating, resident and wintering bird species (England and Nelson, 1976).

Pacoima Spreading Grounds. This area of storm water runoff collection located southwest of the junction of the Golden State Freeway (I-5) and the Simi Valley Freeway (SR 118) is divided approximately in half between the Northwest and Northeast Valley Planning Subregions. It supports "marsh-like habitat" when ponding occurs (City of Los Angeles, 1989), and offers opportunities for migrating waterfowl and shorebirds

Van Norman Reservoir vicinity. Across the Golden State Freeway (I-5) from the Van Norman Reservoir (in the adjacent Northeast Valley subregion) is a substantial area of grassland, coastal scrub, and small open water habitat, which adds to the effective size and resource value of the reservoir site.

Southwest Valley Planning Subregion

Santa Monica Mountains and Encino Reservoir SEA. The biological resources of the Santa Monica Mountains are considered in general (Raven et al., 1986; Othmer, 1980; USDI:NPS, 1982; De Lisle et al., 1986). Wielander (1934) mapped the vegetation in detail between 1927 and 1933. Aside from project-related environmental impact reports and accounts of sensitive species, specific details are generally lacking. The subregion includes portions of the north slope of the range from the vicinity of Topanga Canyon Boulevard (south of US 101) eastward to the Sepulveda Pass (San Diego Freeway; I-405). As evidenced on aerial photographs, habitats in the area include mostly chaparral, but also oak and riparian woodland, and small amounts of grassland, coastal scrub and

[4] *The SEA boundary shown on Exhibit C-2 is as originally proposed by England and Nelson (1976). A portion of the area was "redesignated to open space," therefore, not adopted as SEA under the Los Angeles County General Plan.*

Exhibit C-6, continued
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

walnut woodland. A small portion of Topanga State Park is included in upper Caballero (Reseda) Canyon, with the bulk occurring in the West Los Angeles subregion.

The Encino Reservoir SEA contains "the best stand of inland chaparral, coastal scrub and streamside vegetation remaining on the inland slope of the Santa Monica Mountains" (England and Nelson, 1976). In addition, the reservoir itself is an open, fresh water habitat. Along with Chatsworth Reservoir, the Sepulveda Basin, Van Norman Reservoir, and Los Angeles Pierce College, the Encino Reservoir is an important wintering ground for Canada geese.

Simi Hills and Simi Hills SEA. The Simi Hills are represented in this subregion by small areas at the western end of the San Fernando Valley, with the majority occurring in the Northwest Valley subregion. As discussed for that subregion, with the exception of an inventory and mapping by Weikel (1983), general and specific accounts of biological resources of the range are lacking. As evidenced by aerial photographs, the area within the City and subregion support grassland, chaparral, coastal scrub, oak and riparian woodland, and walnut woodland. Castle Peak[5] is a prominent rocky peak that is a major roosting site for great horned (*Bubo virginianus*) and barn owls (*Tyto alba*), and probably a hibernaculum for one or more species of bats (Wishner, personal observation, 1987). None of the Simi Hills SEA occurs in the Southwest Valley subregion.

Los Angeles Pierce College. The campus of the former Clarence W. Pierce School of Agriculture retains a substantial amount of agricultural open space that is attractive to wintering Canada geese. As such, it is one of only five areas in the San Fernando Valley where Canada geese can forage. The recently-graded (fall 1993) Warner Ridge property adjacent to the west side of the Campus was also used by geese in the winter of 1994, since the area supported a dense growth of young grasses following the grading (Wishner, personal observation, 1994). In addition to the agricultural lands at Pierce College, the campus also contains an outdoor Nature Center with a pond and surrounding hillsides supporting grassland, and an arboretum. A number of sensitive or unusual bird species occur on the campus, especially in winter, and it is a popular location during the annual Christmas Bird Count conducted by the Audubon Society. The hilly portions of the campus represent an extension of the Chalk Hills discussed below.

Chalk Hills and related areas. The Chalk Hills in Woodland Hills are a privately-owned, small island of grassland vegetation south of the Ventura Freeway (US 101) in the foothills of the Santa Monica Mountains. Close proximity to these mountains enables this area to support wildlife species

[5] *Castle Peak is located west of Valley Circle Boulevard between Vanowen St. and Bell Canyon Rd.*

Exhibit C-6, continued
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

including coyote (*Canis latrans*), bobcat (*Felis rufies*), western harvest mouse (*Reithrodontomys megalotis*), and California quail (*Callipepla californica*). Barn owls, great horned owls, red-tailed hawks (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*) are resident in the trees of the surrounding neighborhood and forage in the grassland. The site is the only location of square-stemmed buckwheat (*Eriogonum angulosum*) in the Santa Monica Mountains zone. Similar, geologically-related areas occur between the Chalk Hills and Pierce College, and to the west of Topanga Canyon Boulevard both to the north and south of the Ventura Freeway (US 101), and again on the western edge of the subregion at Boething's Treeland Nursery.

Sepulveda Flood Control Basin. The Los Angeles River and tributaries draining the western San Fernando Valley discharge into the Sepulveda Basin. A variety of open space land uses occur here including agriculture, wastewater treatment, outdoor recreation, and an outdoor nature center. The area is one of only five areas of the San Fernando Valley that is regularly used by wintering Canada geese. The area also includes grassland and open water habitats, as well as two lakes (one is concrete lined), and a segment of riparian woodland on the river. The basin is a popular location for the annual Christmas Bird Count conducted by the Audubon Society. A portion of the Sepulveda Basin has been restored to attract migratory waterfowl and other wildlife.

Southeast Valley Planning Subregion

No substantial areas of natural habitat for plants and animals are evident on aerial photographs covering this subregion. Although the Los Angeles River passes through this area, it is a vertical-walled, concrete-lined segment of the stream.

Metro Center Planning Subregion

Santa Monica Mountains and Griffith Park SEA. Griffith Park, located at the east end of the Santa Monica Mountains, supports coastal scrub, chaparral, riparian and oak woodland habitats. The area also includes the Hollywood Reservoir. England and Nelson (1976) consider Griffith Park an important "island" rest stop for migrating birds, as well as a "reservoir for native species" and "corridor" for wildlife movement between the Santa Monica Mountains and San Gabriel Mountains, via the Verdugo Mountains. The Department of Recreation and Parks manages a portion of the Park as a bird sanctuary.

Exhibit C-6, continued
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

Central Los Angeles Planning Subregion

No substantial areas of natural habitat for plants and animals are evident on aerial photographs covering this subregion. Although the Los Angeles River passes through this area, it is a vertical-walled, concrete-lined segment of the stream.

Northeast Los Angeles Planning Subregion

Los Angeles River. The river in this subregion is a concrete-lined conveyance channel, although a five-mile stretch of the river from Griffith Park to the Golden State (I-5) and Pasadena (SR 11) Freeway interchange contains a natural bottom (City of Los Angeles, 1991). The river is perennial below the Sepulveda Basin since 1985 as a result of the discharge of tertiary-treated wastewater from the Tillman Reclamation Plant. A limited amount of riparian scrub vegetation is present in the bed of the river, subject to scouring and reappearance elsewhere in the shifting bottom sediments.

Elysian Park/Dodger Stadium. Undeveloped portions of this area support chaparral and oak woodland vegetation, as evident on aerial photography. No specific details of biological resources present there could be found in the literature.

Mount Washington and vicinity. In the area east of the Golden State Freeway (I-5) and between the Glendale (SR 2) and Pasadena (SR 11) Freeways, there occurs a number of small pockets of grassland and coastal scrub habitat in the mountainous area in the vicinity of Mount Washington. No specific details of biological resources present there could be found in the literature.

Areas east of Occidental College. Small pockets of grassland and coastal scrub habitats remain in the mountainous area just to the east of Occidental College. No specific details of biological resources present there could be found in the literature.

Rose Hill/Arroyo Seco Parks and Vicinity. Areas of remnant grassland habitat occur at Rose Hill Park and Arroyo Seco Park, and in the mountainous terrain to the south and east. Included here is also the open water habitat of Ascot Reservoir. No specific details of the biological resources present there could be found in the literature.

Silverlake and Ivanhoe Reservoirs. These reservoirs located west of the Golden State (I-5) and Glendale (SR 2) freeway interchanges are concrete-lined open water habitats with some waterfowl use.

Exhibit C-6, continued
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

San Rafael Hills. The San Rafael Hills represent a southeastward extension of the Verdugo Mountains. A small portion of the foothills on the southern flank of these mountains and on both sides of the Foothill Freeway (I-210) occurs within this subregion. As evident on aerial photographs, the primary habitat type present is chaparral.

South Los Angeles Planning Subregion

No substantial areas of natural habitat for plants and animals are evident on aerial photographs covering this subregion.

Southwest Los Angeles Planning Subregion

El Segundo Dunes SEA. Located west of the runways of the Los Angeles International Airport, the El Segundo Dunes SEA is the last remnant of a coastal dune system that once stretched several miles in each direction from here (England and Nelson, 1976). A substantial portion of the original SEA has been deleted due to airport expansion. The present SEA borders a portion of Dockweiler Beach State Park. The vegetation found here, referred to as coastal dune scrub, occurs nowhere else in the County. The dunes support the entire world population of the El Segundo Blue butterfly (*Euphilotes battoides allyni*), a federally listed endangered species. Much of the area has been disturbed by a former residential development, but the area is currently undergoing restoration. The specific biological resources of the El Segundo Dunes are discussed by Mattoni (1990).

Ballona Wetlands and Ballona Creek SEA. The Ballona Wetlands, located just north of the El Segundo Dunes, are privately owned and subject to a future restoration (ca. 280 acres) of the area to tidally influenced coastal saltmarsh under the Playa Vista Plan (City of Los Angeles, 1992; Mattoni, 1990a). The specific biological resources of the Ballona region have been investigated in some detail (Dailey et al., 1974; Envicom Corp., 1979; Schreiber, 1981; Jones and Stokes Associates 1981; Corey, 1990; Corey and Massey, 1990; Allen, 1991; Carter, 1991; Henrickson, 1991; Mattoni, 1991; Soltz, 1991). Habitats present include coastal saltmarsh willow woodlands, freshwater marsh, coastal dunes, and coastal scrub. The Ballona Creek SEA, generally encompassing the Ballona Wetlands, is one of two remaining remnants of coastal saltmarsh habitat in Los Angeles County (England and Nelson, 1976), and is used as a breeding ground for several state-listed Endangered species including Belding's savanna sparrow (*Passerculus sandwichensis beldingi*), California least tern (*Sterna antillarum browni*), saltmarsh skipper (*Panoquina errans*), and saltmarsh harvest mouse (*Sorex ornatus salicornicus*).

Exhibit C-6, continued
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

Baldwin Hills. The Baldwin Hills support coastal scrub and grassland communities, reportedly containing plant species now found only at the edge of the Los Angeles Metropolitan area and on the desert side of the San Gabriel Mountains (England and Nelson, 1976)[6]. According to these authors, they are "one of the last remaining open spaces in the western portion of the Los Angeles Basin."

West Los Angeles Planning Subregion

Santa Monica Mountains including Topanga State Park. The largest portions of the Santa Monica Mountains that are contained within the City occur in this subregion. The biological resources of the Santa Monica Mountains are considered in general (Raven et al., 1986; Othmer, 1980; USDI:NPS, 1982; De Lisle et al., 1986). Wieslander (1934) mapped the vegetation in detail between 1927 and 1933. Muns (1983) has compiled a flora for Topanga State Park. Aside from project-related environmental impact reports and accounts of sensitive species, specific details are generally lacking. The subregion includes the south slopes of the range from Topanga State Park eastward to Laurel Canyon. As evidenced on aerial photographs, habitats in the area include mostly chaparral, but also coastal scrub, oak and riparian woodland, and small amounts of grassland.

Will Rogers State Park Beach coastline. In the Pacific Palisades, sandy beach as well as rocky and sandy intertidal zones offer habitat for shorebirds.

Stone Canyon Reservoir. There are actually two reservoirs here. The upper reservoir is concrete-lined, and the lower one is larger, with natural banks. The area provides habitat for waterfowl, and also support a small area of walnut woodland.

Harbor Planning Subregion

Palos Verdes Peninsula Coastline SEA. The City includes the eastern portion of this SEA from near Cabrillo Beach Park/Point Fermin westward to the City boundary. The Fort MacArthur Military Reservation is included as a buffer for the SEA. The shoreline encompasses headlands, rocky shoreline, sandy beaches, intertidal areas, kelp beds, coastal strand, and coastal scrub vegetation (England and Nelson, 1976). The coastal cliffs and offshore rocks offer roosting and feeding sites for shorebirds, gulls and other seabirds including the state- and federally-endangered brown pelican. The state- and federally-listed Endangered peregrine falcon (*Falco peregrinus*

[6] *This area was originally considered as a potential SEA in 1976, however, most of the area was "redesignated to open space", and has subsequently been incorporated into the Kenneth Hahn State Recreation Area (Koutnik, personal communication, Oct. 6, 1994).*

Exhibit C-6, continued
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

anatum), and Species of Special Concern prairie falcon (*Falco mexicanus*) are reported to winter along bluff tops in this area.

Harbor Lake Regional Park SEA. Harbor Lake Regional Park, located northwest of the junction of the Harbor Freeway (SR 110) and Anaheim Boulevard, supports one of two remaining wetland areas that once covered the South Bay area (the other area is Madrona Marsh, outside the City) (England and Nelson, 1976). Habitats present include willow forest, freshwater marsh and open water habitats, which support frogs, toads, water-dependent birds, and migratory birds. The Harbor Lake area is noted for the number of songbirds found there during migration, including many which are outside their normal ranges (so-called "vagrants").

San Pedro Harbor. This area is heavily used for shipping traffic and recreational activities (i.e., jet skis and boating). Some biological value does remain in the harbor, particularly along the northern part of the jetty separating the harbor from the open ocean. Of special interest is the sandy beach on the ocean-side of the jetty adjacent to Cabrillo Park, where grunion (*Leuresthes tenuis*) spawn in spring on nights of high tides following a full moon. The harbor also provides habitat for fish and water birds. The heavy human activity in the area has reduced the value of the harbor to wildlife.

Significant Ecological Areas (SEAs)

The County of Los Angeles, through its General Plan, established 61 Significant Ecological Areas (SEAs), which represent a wide variety of biological communities within the County. The SEAs function to preserve this variety and to provide a level of protection to the resources within them. These SEAs are living laboratories containing examples of the County's diverse ecological heritage. SEAs are intended to be preserved in an ecologically viable condition for the purposes of public education, research, and other non-disruptive outdoor uses but do not preclude limited compatible development. The County General Plan outlines a process to regulate land uses in these areas and creates an advisory committee of scientists appointed to oversee the regulation of these policies.

A conditional use permit is required for development in SEAs in order to protect resources contained in SEAs from incompatible development, which may result in or have potential for environmental degradation[7]. A biological constraints analysis is required to describe in a general manner the extent, location, and sensitivities of ecological resources found within an SEA.

[7] *Section 22.56.215 of the County Code.*

Exhibit C-6, continued
NATURAL HABITATS AND SIGNIFICANT ECOLOGICAL AREAS (SEAs) WITHIN THE CITY OF LOS ANGELES[1]

Development proposed within a designated SEA is subject to review based on design compatibility criteria provided to guide specific land use decisions.

The SEAs are classified into the following eight categories:

Class 1 - The habitat of state and federally listed endangered, rare, or threatened plants and animals

Class 2 - Biotic communities, vegetative associations, and habitats of plants and animal species that are either one of a kind, or are restricted in distribution on a regional basis.

Class 3 - Biotic communities, vegetative associations, and habitats of plants and animal species that are either one of a kind, or are restricted in distribution in Los Angeles County.

Class 4 – Habitat that serves, at some point in the life cycle of a species or group of species, as a concentrated breeding, feeding, resting, or migrating grounds, and is limited in availability.

Class 5 - Biotic resources that are of scientific interest because they either are at an extreme in the physical or geographic range of a population of community, or they represent an unusual variation in a population or community.

Class 6 – Areas important as game habitat or fisheries resources.

Class 7 - Areas that would preserve relatively undisturbed examples of natural biotic communities in Los Angeles County.

Class 8 - Special areas, not meeting the above criteria, but that have some notable biological features (such as a wildlife corridor) can also be designated as SEAs.

Exhibit C-7
SENSITIVE SPECIES COMPENDIUM - CITY OF LOS ANGELES[1]

KEY

State Status - California Department of Fish and Game (CDFG)	
SE	State Listed Endangered
ST	State Listed Threatened
CSC	Species of Special Concern[2]
SCE	State Candidate Endangered
SCT	State Candidate Threatened
SFP	State Fully Protected
SP	State Protected
SR	State Listed Rare
Federal Status - U.S. Fish and Wildlife Service (USFWS)	
FE	Federally Listed Endangered
FT	Federally Listed Threatened
FCH	Federally Listed Critical Habitat
FPE	Federally Proposed Endangered
FPT	Federally Proposed Threatened
FPCH	Federally Proposed Critical Habitat
FPD	Federally Proposed Delisting
FC	Federal Candidate Species
EXT	Extinct

_____

1 This list is current as of January 2001. Check the most recent state and federal lists for updates and changes, or consult the CDFG's California Natural Diversity Database.

2 CSC - California Special Concern species. The Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long term viability. Not all "Species of Special Concern" have declined equally; some species may be just starting to decline, while others may have already reached the point where they meet the criteria for listing as a "Threatened" or "Endangered" species under the State and/or Federal Endangered Species Acts.

Exhibit C-7, continued
SENSITIVE SPECIES COMPENDIUM - CITY OF LOS ANGELES

KEY (continued)

California Native Plant Society (CNPS)	
1A	Plants presumed extinct in California[3]
1B	Plants that are rare, threatened, or endangered in California or elsewhere[3]
2	Plants that are rare, threatened, or endangered in California, but more common elsewhere[3]
3	Plants about which more information is needed - a review list[4]
4	Plants of limited distribution - a watch list[5]

Habitat Code Designations - California Natural Diversity Database (CNDDB)	
AF	Alluvial Fan Sage Scrub
BW	Brackish Water
CB	Coastal Bluff Scrub
CD	Coastal Dunes
CH	Chaparral
CL	Coastal Lagoon

3 *All of the plants constituting Lists 1A, 1B, and 2 meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endatnered Species Act) of the California Department of Fish and Game Code, and are eligible for listing. According to the DFG, if the taxa on List 1A are rediscovered, they should be fully considered during preparation of environmental documents relating to CEQA. List 1B and 2 plants should be fully considered during preparation of environmental documents relating to CEQA.*

4 *Some of the plants constituting List 3 meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for listing. The DFG recommends that List 3 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.*

5 *Very few of the plants constituting List 4 meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and few, if any, are eligible for listing. Nevertheless, many of them are significant locally, and the DFG recommends that List 4 plants be evaluated for consideration during preparation of environmental documents relating to CEQA. This may be particularly appropriate for the type locality of a List 4 plant, for populations at the periphery of a species' range or in areas where the taxon is especially uncommon or has sustained heavy losses, or for populations exhibiting unusual morphology or occurring on unusual substrates.*

Exhibit C-7, continued
SENSITIVE SPECIES COMPENDIUM - CITY OF LOS ANGELES

KEY (continued)

Habitat Code Designations - California Natural Diversity Database (CNDDB) (Con't)	
CM	Coastal Salt Marsh
CO	Coastal Habitats
CP	Chenopod Scrub
CS	Coastal Sage Scrub
DR	Desert Riparian
DW	Desert Wash
ES	El Segundo Dunes
ET	Estuary
FM	Freshwater Marsh
GL	Grassland (native or introduced)
MF	Montane Forest (mixed hardwood, coniferous)
OW	Oak Woodland (coast live, valley, canyon or scrub oaks)
PJ	Pinyon-Juniper Woodland
PL	Playa Habitats, coastal or inland
RP	Riparian Scrub
RV	Rivers (open water or aquatic habitats)
RW	Riparian Woodland
SG/SJ	San Gabriel/San Jacinto Mountains
VP	Vernal Pools
WA	Water (general open water habitats)

Exhibit C-7, continued
SENSITIVE SPECIES COMPENDIUM - CITY OF LOS ANGELES

SCIENTIFIC NAME	COMMON NAME	STATUS	ZONE *	HABITAT
Invertebrates				
Euphilotes battoides allyni	El Segundo blue butterfly	FE	4	CD
Glaucopsyche lygdamus palosverdesensis	Palos verdes blue butterfly	FE, FCH	4	CS
Raphiomidas t. terminatus	El Segundo flower-loving fly	EXT	4	ES
Streptocephalus woottoni	Riverside fairy shrimp	FE, FPCH	4	CH
Fish				
Catostomus santaanae	Santa Ana sucker	CSC, FT	1,3	RV
Eucyclogobius newberryi	tidewater goby	CSC, FE, FPD, FCH	4	BW
Gasterosteus aculeatus williamsoni	unarmored threespine stickleback	FE, FPCH, SE, SFP	Unknown	
Gila orcutti	arroyo chub	CSC	1,2,3,4	RV
Onchorhynchus mykiss	southern steelhead	FE, FCH, CSC	Unknown	
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	CSC	1	RV
Amphibians				
Bufo microscaphus californicus	arroyo southwestern toad	CSC, SP, FE, FCH	1,2,3,4	RV, DR
Rana aurora draytoni	California red-legged frog	FT, FPCH, CSC, SP	1,2,3,4	
Rana muscosa	So. California population of mountain yellow-legged frog	FPE, CSC, SP	1,2,3,4	
Scaphiopus hammondii	western spadefoot toad	CSC, SP	1	VP, RV, CS, CH
Reptiles				
Anniella p. pulchra	silvery legless lizard	CSC	1,2,3,4	CH, OW, CS
Clemmys marmorata pallida	southwestern pond turtle	CSC, SP	1,2,3,4	RV
Lampropeltis zonata pulchra	San Diego mountain kingsnake	CSC, SP	1,2,3	CH, CS, OW
Phrynosoma coronatum blainvillei	San Diego horned lizard	CSC, SP	1,2,3,4	CS, CH, AF
Salvadora hexalepis virgultea	coast patch-nosed snake	CSC	1,2,3,4	CS, CH, OW
Thamnophis (Nerodia) hammondii	two-striped garter snake	CSC, SP	1,2,3,4	RV, FM
Xantusia riversiana	island night lizard	FT, SP	1,2,3,4	

* Refer to Exhibit C-1.

Exhibit C-7, continued
SENSITIVE SPECIES COMPENDIUM - CITY OF LOS ANGELES

SCIENTIFIC NAME	COMMON NAME	STATUS	ZONE *	HABITAT
Birds				
Accipiter cooperii	Cooper's hawk (nest)	CSC	1,2,3,4	RW, OW
Accipiter striatus (migrant)	sharp-shinned hawk (nest)	CSC	1,2,3,4	RW
Aimophila ruficeps canescens	So. Cal.rufous-crowned sparrow	CSC	1,2,3,4	CS, CH
Amphispiza b. belli	Bell's sage sparrow	CSC	1,2,3,4	CS, CH
Asio flammeus	short-eared owl	CSC	3,4	CM, FM
Asio otus	long-eared owl	CSC	1,2,3,4	OW, RP
Athene cunicularia hypugea	burrowing owl	CSC	1,2,3,4	GL, DW, CS, CB
Charadrius alexandrinus nivosus	western snowy plover	FT, FCH, CSC	4	PL, ET, CD
Charadrius montanus	mountain plover	FPT, CSC	1,2,3	
Chlidonias niger	black tern	CSC	4	PL, CO, ET
Circus cyaneus	northern harrier (nest)	CSC	1,2,3,4	FM, ET, CM
Coccyzus americanus occidentalis	western yellow-billed cuckoo	SE	1,2,3,4	RW
Cypseloides niger (migrant)	black swift (nest)	CSC	1,2,3,4	RV, waterfalls
Dendroica petechia brewsteri	yellow warbler (nest)	CSC	1,2,3,4	RP, RW, CH
Elanus leucurus	white-tailed kite	SFP	1,2,3,4	GL, ET, FM, OW
Epidonax traillii	willow flycatcher (all subspecies)	SE	1,3	RW, RP
Epidonax traillii extimus	Southwestern willow flycatcher	FE, FCH, SE	1,3	RW, RP
Eremophila alpestris actia	California horned lark	CSC	1,2,3,4	GL, CS
Falco columbarius (migrant)	Merlin	CSC	1,2,3,4	gen. Flyover
Falco mexicanus	prairie falcon (nest)	CSC	1,2,3,4	DR, DW, CH
Falco peregrinus anatum	American peregrine falcon	(FE delisted 8/25/99) SE, SFP	1,2,3,4	CO, PL, ET
Icteria virens	yellow-breasted chat (nest)	CSC	1,2,3,4	RP, RW
Ixobrychus exilis hesperis (migrant)	western least bittern	CSC	1,2,3,4	RP, ET, FM, SM
Lanius ludovicianus	Loggerhead shrike	CSC	1,2,3,4	CS, CH, CP, DW

* Refer to Exhibit C-1

Exhibit C-7, continued
SENSITIVE SPECIES COMPENDIUM - CITY OF LOS ANGELES

SCIENTIFIC NAME	COMMON NAME	STATUS	ZONE *	HABITAT
Birds (cont'd.)				
Laterallus jamaicensis coturniculus	California black rail	ST, SFP	4	FM, CM
Numenius americanus	long-billed curlew (nest)	CSC	4	CO, WA
Pandion haliaetus (migrant)	osprey (nest)	CSC	1,2,3,4	CO, WA, RV
Passerculus sanwichensis beldingi	Belding's savannah sparrow	SE	4	CM
Pelecanus occidentalis californicus	California brown pelican	SE, FE, SFP	4	CO
Phalacrocorax auritus	double-crested cormorant (rookery)	CSC	1,2,3,4	CO, WA, RV
Piranga rubra (migrant)	summer tanager	CSC	1,4	RW
Polioptila c. californica	California gnatcatcher	FT, FCH, CSC	1,4	CS, CH
Rallus longirostris levipes	light-footed clapper rail	SE, FE, SFP	4	CM
Riparia riparia (migrant)	bank swallow	ST	1,2,3	CO, RP, RV
Sterna antillarum browni	California least tern	SE, FE, SFP	4	CD, ET, PL
Vermivora virginiae (migrant)	Virginia's warbler	CSC	3	CH, OW, RW
Vireo bellii pusillus	least Bell's vireo	SE, FE, FCH	1,2,3	RP, RW
Mammals				
Antrozous pallidus pacificus	pallid bat	CSC	1,2,3,4	CS,CH,GL
Eumetopias jubatus	northern sea lion	FT	4	CO
Eumops perotis californicus	California mastiff bat	CSC	1,2,3,4	general
Lepus californicus bennettii	San Diego blacktailed jackrabbit	CSC	1,2,3,4	CS,CP,CH, DW
Macrotus californicus	California leaf-nosed bat	CSC	1	general
Microtis californicus stephensii	Stephen's California vole	CSC	4	FM,GL
Neotoma lepida intermedia	San Diego desert woodrat	CSC	1,2,3,4	CS,CH,DW
Onychomys torridus ramona	southern grasshopper mouse	CSC	1,3	CL,CS,CH, DW
Perognathus longimembris brevinasus	Los Angeles pocket mouse	CSC	1,4	CS,CH,DW
Perognathus longimembris pacificus	Pacific pocket mouse	CSC, FE	4	CS
Plecotus townsendii pallescens	pale big-eared bat	CSC	1,2,3,4	DW,CH,OW
Sorex ornatus salicornicus	southern Calif. saltmarsh shrew	CSC	4	CM

* Refer to Exhibit C-1

Exhibit C-7, continued
SENSITIVE SPECIES COMPENDIUM - CITY OF LOS ANGELES

SCIENTIFIC NAME	COMMON NAME	STATUS	ZONE*	HABITAT
Plants				
Abronia maritima	red sand-verbena	4	4	CD
Acanthomintha obovata cordata	heart-leaved thorn-mint	4	unknown	CH,OW,PJ, GL
Androsace elongata acuta	California androsace	4	unknown	CH,OW,CS
Aster greatae	Greata's aster	1B	unknown	CH
Astragalus brauntonii	Braunton's milk vetch	FE, 1B	2,3	MF,CH,CS, GL
Astragalus pycnostachyus v. *lanosissimus*	Ventura marsh milk-vetch	SE, FPE, 1B	3,4	CM
Astragalus tener v. *titi*	coastal dunes milk-vetch	SE, FE, 1B	4	CB,CD
Atriplex pacifica	south coast saltscale	1B	4	CB,CS,PL
Atriplex parishii	Parish's brittlescale	1B	1	CS,VP,PL
Atriplex serenana v. *davidsonii*	Davidson's saltscale	1B	unknown	CBS,CS
Baccharis malibuensis	Malibu baccharis	1B	3	CS,CH,OW
Baccharis p. plummerae	Plummer's baccharis	4	3	MF,CH,OW,CS
Berberis nevinii	Nevin's barberry	SE, FE, 1B	1,2,3	CH,AF,CS
Calandrinia breweri	Brewer's calandrinia	4	unknown	CH,CS
Calandrinia maritima	seaside calandrinia	4	4	CBS,GL
Calochortus catalinae	Catalina mariposa lily	4	1,2,3	CH,OW,CS, GL
Calochortus c. v. *clavatus*	club-haired mariposa lily	4	1,3	CH,OW,GL
Calochortus plummerae	Plummer's mariposa lily	1B	3	CH,OW,CS, GL,MF
Calystegia peirsonii	Peirson's morning-glory	4	1	CH,CS,OW, CS,MF
Calystegia sepium binghamiae	Santa Barbara morning-glory	1A	4	CM
Camissonia lewisii	Lewis's evening-primrose	3	unknown	CB,OW,CD, CS,GL
Castilleja plagiotoma	Mojave Indian paintbrush	4	1	PJ,GB
Centromadia parryi ssp. australis (Hemizonia minthornii)	Santa Susana tarplant	SR, 1B	1,2,3	CH, CS
Cercocarpus betuloides v. *blancheae*	island mountain-mahogany	4	3	CH
Chorizanthe parryi v. *fernandina*	San Fernando Valley spineflower	SCE, FC, 1B	1,3	CS
Chorizanthe p. v. *parryi*	Parry's spineflower	3	3	CS,AF,CH, OW
Chorizanthe spinosa	Mojave spineflower	4	1	CS,DW
Convolvulus simulans	small-flowered morning-glory	4	unknown	CS,GL
Cordylanthus m. maritimus	salt marsh bird's-beak	SE, FE, 1B	4	CM
Crossosoma californicum	Catalina crossosoma	1B	4	CS

Refer to Exhibit C-1

Exhibit C-7, continued
SENSITIVE SPECIES COMPENDIUM - CITY OF LOS ANGELES

SCIENTIFIC NAME	COMMON NAME	STATUS	ZONE *	HABITAT
Plants (Con't)				
Deinandra minthornii (Hemizonia parryi australis)	southern tarplant	1B	Unknown	ET, GL, VP
Dichondra occidentalis	western dichondra	4	4	CH,OW,CS, GL
Dithyrea maritima	beach spectaclepod	ST, 1B	4	CD,CS
Dodecahema leptoceras	slender-horned spineflower	SE, FE,1B	1	AF,CH
Dudleya b. blochmaniae	Blochman's dudleya	1B	3	CS,CB,CH, GL
Dudleya cymosa marcescens	marcescent dudleya	SR, FT, 1B	3	CH
Dudleya cymosa ovatifolia	Santa Monica Mtns. dudleya	FT, 1B	3,4	CH,CS
Dudleya multicaulis	many-stemmed dudleya	1B	2	CH,CS,GL
Dudleya virens	bright green dudleya	1B	4	CH,CS
Erysimum insulare suffrutescens	suffrutescent wallflower	4	unknown	CB,CD,CS
Fremontodendron mexicanum	Mexican flannelbush	SR, FE, 1B	1,2,3	MF,CH,OW
Galium angustifolium gabrielense	San Antonio Canyon bedstraw	4	1	MF
Galium cliftonsmithii	Santa Barbara bedstraw	4	2,4	OW
Galium johnstonii	Johnston's bedstraw	4	unknown	MF
Goodmania luteola	golden goodmania	4	Unknown	DW,PL,GL
Helianthus nuttallii parishii	Los Angeles sunflower	1A	3	CM,FM
Heuchera abramsii	Abram's alumroot	4	Unknown	MF
Heuchera elegans	urn-flowered alumroot	4	Unknown	MF
Hulsea vestita gabrielensis	San Gabriel Mtns. sunflower	4	1	MF
Juglans c. v. *californica*	So.Cal. black walnut	4	1,2,3	CH,OW,AF
Juncus acutus leopoldii	southwestern spiny rush	4	4	CD,CM
Juncus duranii	Duran's rush	4	Unknown	MF
Lasthenia glabrata coulteri	Coulter's goldfields	1B	Unknown	CM,PL,VP
Lepechinia fragrans	fragrant pitcher sage	4	3	CH
Lilium humboldtii ocellatum	ocellated Humboldt lily	4	1,2,3	CH,OW,CO
Linanthus orcuttii	Orcutt's linanthus	1B	Unknown	CH,MF
Lupinus elatus	silky lupine	4	Unknown	MF
Lupinus excubitus v. *johnstonii*	interior bush lupine	4	Unknown	MF
Lupinus peirsonii	Peirson's lupine	1B	Unknown	CH,CS,RW
Malacothamnus davidsonii	Davidson's bush mallow	1B	1,3	CS,RW
Microseris douglasii v. *platycarpha*	small-flowered microseris	4	Unknown	OW,CS,GL
Monardella cinerea	gray monardella	4	Unknown	MF

Refer to Exhibit C-1

Exhibit C-7, continued
SENSITIVE SPECIES COMPENDIUM - CITY OF LOS ANGELES

SCIENTIFIC NAME	COMMON NAME	STATUS	ZONE *	HABITAT
Plants (Con't)				
Monardella viridis saxicola	rock monardella	4	Unknown	CH,MF
Mucronea californica	California spineflower	4	Unknown	CH,CD,CS, GL
Muilla coronata	crowned muilla	4	Unknown	DW
Nama stenocarpum	mud nama	2	Unknown	FM
Nemacaulis d. v. *denudata*	coast woolly-heads	2	4	CD
Nemacladus gracilis	slender nemacladus	4	Unknown	OW,GL
Orcuttia californica	California Orcutt grass	SE, FE,1B	1,4	VP
Oreonana vestita	woolly mountain-parsley	1B	Unknown	MF
Oxytheca caryophylloides	chickweed oxytheca	4	Unknown	MF
Pentachaeta lyonii	Lyon's pentachaeta	SE, FE, 1B	3,4	CH,GL
Perideridia g. gairdneri	Gairdner's yampah	4	Unknown	CH,GL,VP,MF
Perideridia pringlei	adobe yampah	4	Unknown	CH,OW,CS
Phacelia exilis	Transverse Range phacelia	4	Unknown	MF
Phacelia mohavensis	Mojave phacelia	4	Unknown	OW,MF
Phacelia stellaris	Brand's phacelia	1B	Unknown	CD,CS
Polygala cornuta v. *fishiae*	Fish's milkwort	4	4	CH,OW,RW
Quercus engelmannii	Engelmann oak	4	Unknown	CH,OW,RW,GL
Ribes divaricatum v. *parishii*	Parish's gooseberry	1B	2	RW
Romneya coulteri	Coulter's matilija poppy	4	Unknown	CH,CS
Scutellaria bolanderi austromontana	southern skullcap	1B	Unknown	CH,OW,MF
Selaginella asprella	bluish spike-moss	4	Unknown	MF
Senecio ionophyllus	Tehachapi ragwort	4	Unknown	MF
Suaeda esteroa	estuary seablite	1B	4	CM
Suaeda taxifolia	woolly seablite	4	4	CB,CM
Swertia neglecta	pine green-gentian	4	Unknown	MF
Syntrichopappus lemmonii	Lemmon's syntrichopappus	4	Unknown	CH
Thermopsis californica v. *argentata*	silvery false lupine	4	Unknown	MF

Refer to Exhibit C-1

Exhibit C-7, continued
SENSITIVE SPECIES COMPENDIUM - CITY OF LOS ANGELES

NDDB Highest Inventory Priority Plant Communities of Los Angeles City	
Community	**Mapping Zone of Occurrence (NDDB data)**
Walnut Forest	3
California Walnut Woodland	1,2
Valley Oak Woodland	1,2
Southern Willow Scrub	1
Southern Sycamore Alder Riparian Woodland	1,2,3
Southern Mixed Riparian Forest	1
Southern Cottonwood Willow Riparian Forest	1,3
Southern Coast Live Oak Riparian Forest	1,2,3
Riversidian Alluvial Fan Sage Scrub	1
Valley Needlegrass Grassland	2
Southern Dune Scrub	1
Southern Coastal Bluff Scrub	4
Coastal Salt Marsh	3

Source: Frank Hovore & Associates, December 1995; Environmental Affairs Department, 2001.

Exhibit C-8
GENERAL REFERENCES

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D. CULTURAL RESOURCES

D.1. PALEONTOLOGICAL RESOURCES

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

V.c): Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

B. Introduction

Paleontological resources are the fossilized remains of organisms that have lived in the region in the geologic past and the accompanying geologic strata. Because the majority of species that have existed on Earth are extinct, the fossil record represents the primary source of data on ancient life forms. In addition, the fossil record is finite, and many scientists feel that no single species is sufficiently understood or represented in research as to preclude further need for specimens. Paleontological resources are considered non-renewable and important.

Paleontological resources occur throughout the City of Los Angeles. They are not evenly distributed; the potential for fossil occurrence depends on the rock type exposed at the surface in a given area. Rocks are classified into three principal types: igneous, metamorphic and sedimentary. Sedimentary rocks contain the bulk of fossils in the City, although metamorphic rocks may also contain fossils. Igneous rocks do not contain fossils. In addition to igneous and most metamorphic rocks, areas of artificial landfill, streambeds and beach sand do not contain fossils.

The older sedimentary rocks are exposed in the hills and mountains, while younger rock units are present in low-lying and flat valley and basin floors. The majority of igneous rocks in the region are found in the Santa Monica Mountains and the northern San Fernando Valley. Within the City of Los Angeles, metamorphic rocks are found mostly in the Santa Monica Mountains and within scattered exposures around the region.

Direct destruction of fossils within fossil-bearing rock units may result from grading or excavation associated with a project, particularly during the construction phase. Indirect destruction or loss of fossils exposed at the surface may result from increased erosion, human access, or other activity in a project area. Increased access could result from the opening of private or otherwise closed lands, new access routes through sensitive areas, or through excavation or the removal of

vegetation.

Paleontological resources are protected by state and federal legislation. State regulations mandate protection of paleontological resources on public lands and CEQA requires evaluation of impacts to paleontological sites. Paleontological resources are also subject to certain state regulations for historical resources.[1] City guidelines for the protection of paleontological resources are specified in Section VIII of the Conservation Element, and for public works projects, Standard Specifications for Public Works Construction, Section 6-3.2. Information on rock types can be found in 3. Data, Resources, and References.

C. Screening Criteria

- Could implementation of the project result in the disturbance of surface or subsurface fossils, either through site preparation, construction or operational activities, or through an increase in human activities at or near the fossil site?

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Paleontological Resources and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Paleontological Resources from the proposed project.

D. Evaluation of Screening Criteria

Assess the potential for discovery of paleontological resources. The following sources are available: existing paleontological surveys for the project site; Los Angeles County Natural History Museum; Environmental and Public Facilities Maps - Vertebrate Paleontological Resource Sensitivity Areas in the City of Los Angeles and Invertebrate Paleontological Resource Sensitivity Areas in the City of Los Angeles; Exhibit D.1-1; or other appropriate resources.

Evaluate the degree of disturbance to the project site. Consider whether the site has been vacant or covered by surfaces that required little or no excavation or grading, such that there has been little surface or subsurface disturbance. Sites from which native topsoil has been removed, such as

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1 *The California Office of Historic Preservation (OHP) has jurisdiction over projects that may impact historic resources. For regulation of historic resources, see Exhibits D.3-1 to D.3-3.*

landfills, are unlikely to retain paleontological resource potential.

Review the description of the project and the construction/operation activities. Assess the amount of grading, excavation, erosion, and increased human activity (e.g., opening of previously closed lands, new access routes through sensitive areas, or removal of vegetation that could disturb surface and subsurface fossils). Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- Whether, or the degree to which, the project might result in the permanent loss of, or loss of access to, a paleontological resource; and
- Whether the paleontological resource is of regional or statewide significance.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description of the physical setting, paleontology, and geology of the project site and surrounding area;
- Summary of surveys and research for the project site; and
- Summary of requirements and/or policies for paleontological resources that apply to the project. (See 3. Data, Resources, and References.)

Project Impacts

Using the information from the Evaluation of Screening Criteria, Environmental Setting, and project description, estimate the extent and importance of paleontological resources likely to be contained on the site and the consequences that would likely result from the project. Consider

compliance with guidelines and regulations such as the California Public Resources Code, Federal Antiquities Act, Conservation Element, and, for public works projects, Standard Specifications for Public Works Construction. Regional or statewide significance may be based on the quality and integrity of the resource, remaining supply, feasibility of recovery, or scientific or public importance. Assistance from the Los Angeles County Museum of Natural History or a professional consultant may be required.

Determine whether excavation, grading, or operational activities would impact to the depth of the subsurface rock units containing the fossils. Evaluate the potential destruction of fossils exposed on the surface by considering the increased human activity generated by the project, including potential for soil erosion, construction traffic in sensitive areas, and increased human access to sensitive areas after project completion. If the area has been disturbed through previous grading or excavation or installation of subsurface utilities, it is likely that fossils would have been discovered at that time, have been destroyed, or are no longer in their original location (e.g., they have been brought in from other areas with fill).

Cumulative Impacts

Review the list of related projects and estimate the extent of paleontological resources likely to be contained on the sites and the consequences that would likely result from these related projects. Determine the cumulative impact to fossils of regional or statewide significance from the related projects combined with the proposed project. In particular, consider cumulative impacts to fossils from the same time period. Evaluate the destruction of fossils by considering the cumulative increase in human activity, excavation, grading, or operational activities.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Revise the proposed project to avoid excavation or grading in areas with known or potential surface exposures of fossils, or within rock units with a high potential for paleontological resources;

- Provide erosion protection (e.g., retaining walls, drainage channels) to protect surface resources;

- Restrict or prevent access to sensitive resource areas on site;

- Retain a qualified paleontologist to monitor, and, if necessary, salvage scientifically significant fossil remains. Ensure scientific specimens become the property of a public, nonprofit educational institution, such as the Los Angeles County Museum of Natural History or similar institution;

- Protect subsurface fossils in place, through covering with appropriate soil materials; and

- Divert grading efforts in the area of an exposed fossil to allow evaluation and, if necessary, salvage of exposed fossils.

3. DATA, RESOURCES, AND REFERENCES

Los Angeles County Museum of Natural History, Department of Vertebrate Paleontology: 900 Exposition Boulevard, Los Angeles, California 90007; Telephone: (213) 763-3489, Lawrence G. Barnes Ph.D.; 213-763-3329. The Museum of Natural History does not maintain records of paleontological surveys or studies, but does perform record checks to determine if fossil resources are present within or near a project area, provides technical assistance, and acts as a repository for salvage fossils.

California Office of Historic Preservation: P.O. Box 942896, Sacramento, California 94296-0001; Telephone: (916) 653-6624. OHP has legal jurisdiction over projects, which may impact historic resources, which include certain paleontological resources. OHP can provide guidance as to the evaluation of significance of historic resources.

Conservation Element provides guidelines for the preservation of paleontological resources.

City Planning Department, Environmental and Public Facilities Maps (1997):

- Vertebrate Paleontological Resources Sensitivity Areas in the City of Los Angeles
- Invertebrate Paleontological Resources Sensitivity Areas in the City of Los Angeles

These maps were based on information prepared by the County of Los Angeles Natural History Museum in 1993 and delineate areas of similar paleontological sensitivity within the City. These sensitivity zones may contain several different rock units that share a common history of production of paleontological resources.

California Division of Mines and Geology (CDMG), 655 S. Hope St. Rm 700, Los Angeles, California 90017-2321; Telephone: (213) 239-0878. The following documents are available

from CDMG:

- CDMG Geologic Atlas Sheets of California - Los Angeles: These maps show the geologic formations underlying the City of Los Angeles in a single map, at a scale of 1:250,000.

- Dibblee Geological Foundation Maps - applicable United States Geological Survey (USGS) topographic quadrangle: Dibblee maps show geologic information in greater detail than Geologic Atlas Sheets, at a scale of 1:24,000, corresponding to 7½ minute USGS topographic quadrangles.

The Society of Vertebrate Paleontology, an international association of professional paleontologists, has developed guidelines for protection and preservation of paleontological resources, as well as mitigation standards for impacts to paleontological resources, in response to CEQA.

Rock Types

Sedimentary rocks are usually layered or bedded and formed from cemented accumulations of sand, silt or mud. The sedimentary rocks in the City range in age from the Cretaceous (100 million years before present) to the Recent periods. Intrusive igneous rocks, formed at depth from molten magma and intruded into other rock bodies, tend to be homogeneous masses, such as granite, and do not contain fossils. Extrusive igneous rocks, such as volcanic rocks, very rarely contain plants or animal fossils. Metamorphic rocks, products of modifications to igneous or sedimentary rocks by heat, pressure or fluids, may or may not contain fossils, depending on the degree of alteration and the original rock type.

Selected Legislation

Federal

Federal Antiquities Act of 1906 (P. L. 59-202; 32 Stat. 225)

This act forbids, and establishes criminal sanctions for, the disturbance of any object of antiquity on federal land without obtaining a permit from an authorizing authority.

Federal Land Management and Policy Act of 1976 (FLMPA) (P.L. 94-579, 43 U.S.C. 1701-1782)

FLMPA provides authority for the Bureau of Land Management (BLM) to regulate lands under its jurisdiction, to be managed in a manner to "protect the quality of scientific, scenic, historic,

ecological, environmental...and archaeological values." Authority is given to establish Areas of Critical Concern (ACEC).

National Environmental Policy Act (NEPA) of 1969 (P. L. 91-190; 83 Stat. 852, 42 U.S.C. 4321-3427)

With regard to paleontological resources, NEPA mandates the evaluation of impacts in order to "preserve important historic, cultural and natural aspects of our national heritage" (Section 101b.4).

State

Public Resources Code, Section 5097.5 (Stats. 1965, c. 1136, p. 2792)

This section prohibits "the excavation or removal of any vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands."

CEQA (13 PRC, 21000 et seq)

According to CEQA, "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California (Div. 1, PRC 5020.1) (italics added). This has been subsequently interpreted as requiring identification of potential adverse impacts of a project to any object or site of scientific importance.

Guidelines for the Implementation of CEQA, as amended May 10, 1980 (14 Ca. Admin. Code: 15000 et seq)

The CEQA Guidelines authorize the Lead Agency to require mitigation to reduce and avoid significant effects on the environment. CEQA, Appendix G, subsection J, states, "A project will normally have a significant effect on the environment if it will disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific study."

California Administrative Code, Title 14, Section 4307

States, "no person shall remove, injure, disfigure, deface, or destroy any object of paleontological, archaeological, or historical interest or value."

Local

Standard Specifications for Public Works Construction, Section 6-3.2

Requires that grading, excavation, or other ground disturbing activities for a public project be halted in the area of a paleontological or archaeological find, until such time as a resource expert can review the find, determine its significance, and if required, determine appropriate mitigation measures.

Exhibit D.1-1
PALEONTOLOGICAL POTENTIAL BY ROCK UNIT/GEOLOGIC FORMATION

Formation/Rock Unit	Paleontological Potential	Fossils Present
Palos Verdes Sand	High	Vertebrates and Invertebrates
San Pedro Sand	High	Vertebrates and Invertebrates
Lomita Marl	High	Vertebrates
Timms Point Silt	High	Vertebrates and Invertebrates
Fernando Formation or Reppeto Formation	High	Vertebrates and Invertebrates
Pico Formation	High	Vertebrates and Invertebrates
Monterey Formation	High	Vertebrates
Altamira Shale	High	Vertebrates
Model Formation	High	Vertebrates
Topanga Formation	High	Vertebrates and Invertebrates
Santa Suzana Formation[a]	High	Invertebrates
Chico Formation and/or Tuna Canyon Formation	High	Vertebrates and Invertebrates
Quaternary Alluvium	Low to High [b]	Vertebrates
Las Virgenes Sandstone[a]	Low	Invertebrates
Simi Conglomerate[a]	Low	none reported
Trabucco Formation	Low	none reported
Santa Monica Slate	Low	Invertebrates

[a] These rock units are grouped together as the Martinez Formation in the older literature on the region.

[b] Potential for discovery of resources in Quaternary deposits increases with increased depth of excavations.

NOTE: "Low," High" and "Undetermined" potential are scientifically recognized terms identifying the chance of fossil discovery during excavation into a given geologic unit. It is not uncommon for low potential deposits to overlay or otherwise cover more rock units with a high potential for discovery. Information on rock units on a particular site may be obtained from existing geotechnical studies prepared for the project site or from maps, such as the CDMG Geologic Atlas Sheets of California or the Dibblee Geological Foundation Maps.

Source: RMW Paleo Associates, 1995, based on literature, published and unpublished records of discovery of fossils in each geologic unit, the relative abundance of fossils at past discovery sites and the depositional environment associated with individual geologic units.

D.2. ARCHAEOLOGICAL RESOURCES

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

V.b): Would the project cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?

V.d): Would the project disturb any human remains, including those interred outside of formal cemeteries?

B. Introduction

Archaeology involves the physical, structural, and documentary evidence of past human endeavors. Such cultural resources may or may not be visible on the surface, and may be of either prehistoric or historic origin. Because of its climate, topography, and natural resources, the greater Los Angeles area is known to have supported prehistoric and historic cultures. The location of known archaeological sites is confidential to prevent scavenging of artifacts. Artifacts are considered finite and non-renewable resources.

Construction or operation activities, which affect the surface or subsurface of the ground at or near archaeological resources, can disturb or destroy them. Artifacts may be lost or destroyed through grading, crushing, scattering, or removal from the ground. In addition, scattering or otherwise taking the artifacts out of their original placement may result in the loss of important information about the relationship of artifacts to each other. With archaeological resources, the relationship of materials to each other in the ground is more informative than the same artifacts removed to a laboratory for study. Impacts may also occur through the alteration or destruction of a physical landscape with special values to Native Americans. The Native American Graves and Repatriation Act of 1990 protect Native American remains (see 3. Data, Resources, and References).

The California state inventory of known, documented archaeological resources for the Los Angeles area is maintained at the South Central Coastal (Regional) Information Center, at the Institute of Archaeology of the University of California at Los Angeles (UCLA) (known as the Information Center). All resources on this inventory should be evaluated for potential impacts in CEQA documentation. In addition, federal standards for eligibility to the National Register of

Historic Places[1] (National Register) may be used to determine whether known or potential resources should be examined under CEQA. Archaeological resources may be present on the grounds of historic sites or districts.

C. Screening Criteria

- Would the proposed project occur in an area with archaeological resources, human remains having archaeological associations, an archaeological study area, or a Native American sacred place, and involve grading, excavation, accelerated erosion, or other activities or changes to the site that could affect archaeological resources?

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Archaeological Resources, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Archaeological Resources from the proposed project.

D. Evaluation of Screening Criteria

The following sources may provide assistance in identifying the presence or potential presence of archaeological resources: existing archaeological surveys and documented historical accounts; the Information Center at the UCLA Institute of Archaeology; the Native American Heritage Commission; California Department of Transportation (Caltrans); the Army Corps of Engineers (ACOE); State Park Service; National Register; local, county, and state landmarks lists; Sanborn Fire Insurance maps; the Environmental and Public Facilities Map, Prehistoric and Historic Archaeological Sites and Survey Areas; and other appropriate resources.

Where sufficient information or research is not available to determine the presence or absence of archaeological resources, consider the following:

- Presence of elements or features that are historically or culturally important to a significant earlier community.

[1] *For federal eligibility criteria regarding listing of archaeological resources in the National Register, see Exhibit D.3-1 in D.3. HISTORICAL RESOURCES.*

- Features of the area that would create a favorable environment for prehistoric or historical use, such as:

  - A water source, travel corridor, native plants or animals, or sources of rock for construction, making tools, or artwork; or

  - Location in an area with unusual views, a defensive position or other values for ceremonial, ritual or astronomical observances.

Evaluate the degree of disturbance to the project site. Consider if the site has been vacant or covered by surfaces that required little or no excavation or grading, such that there has been little surface or subsurface disturbance (sites from which native topsoil has been removed, such as landfills, are unlikely to retain archaeological resource potential). Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact upon archaeological resources if it could disturb, damage, or degrade an archaeological resource or its setting that is found to be important under the criteria of CEQA because it:

- Is associated with an event or person of recognized importance in California or American prehistory or of recognized scientific importance in prehistory;

- Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions;

- Has a special or particular quality, such as the oldest, best, largest, or last surviving example of its kind;

- Is at least 100-years-old[2] and possesses substantial stratigraphic integrity; or

[2] *Although the CEQA criteria state that "important archaeological resources" are those which are at least 100-years-old, the California Register provides that any site found eligible for nomination to the National Register will automatically be included within the California Register and subject to all protections thereof. The National Register requires that a site or structure be at least 50-years-old.*

- Involves important research questions that historical research has shown can be answered only with archaeological methods.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description of the physical setting, archaeology, and geology of the project site and surrounding area;

- Summary of surveys and research for the project site; and

- Summary of requirements and/or policies for archaeological resources that apply to the project. (See 3. Data, Resources, and References).

Project Impacts

If the project site is located in an area with known or potential presence of an archaeological resource, archaeological study area, or human remains having archaeological associations, reviews the description of the project and construction/operation activities. Assess the amount of grading, excavation, erosion and increased human activity (e.g., opening of previously closed lands, new access routes through sensitive areas, or through removal of vegetation) that would occur with project implementation.

Estimate the importance of archaeological resources likely to be contained on the site and the consequences that would likely result from the project. The significance of a site is measured by eligibility of the resource to the California Register of Historical Resources (California Register) or the National Register. Criteria for listing in the National Register include association with events, persons, history or prehistory or embodiment of distinctive characteristics. These criteria are based on context (theme, place, and time), integrity (location, design, setting, materials, workmanship, feeling), and association. The California Register uses the National Register criteria for listing resources significant at the national, state, or local level.

Consider compliance with guidelines and regulations such as the California Public Resources Code, Federal Antiquities Act (and subsequent federal legislation), Conservation

Element, and, for public projects, Standard Specifications for Public Works Construction. Assistance from the Information Center or a professional consultant may be required.

Most existing archaeological site records, information about what areas have already been surveyed, information concerning sites that have been tested or evaluated, and a library of excavation reports, are maintained as part of the State Inventory at the Information Center. The most immediate and complete source of updated site information is a "Quick Check" conducted by the Information Center. Under new directives, the Information Center is beginning to gather information about designated landmarks, historical sites, and historical maps, but this archive is not yet complete. The Information Center maintains a list of qualified archaeological consultants which is made available on request.

Determine whether construction or operational activities would disturb, damage, or degrade an important resource or its setting. Consider excavation and grading that directly impacts a resource; construction of permanent buildings that result in loss of access to buried resources; added human activity that may lead to scavenging or uncovering of resources; and increases in soil erosion. If the area has been disturbed through previous grading or excavation or installation of subsurface utilities, it is likely that resources would have been discovered at that time or have been destroyed.

Cumulative Impacts

Review the list of related projects and identify those in areas with known or the potential presence of archaeological resources. In the same manner as for project impacts, estimate the extent and importance of archaeological resources likely to be contained on the sites and the consequences that would likely result from these related projects. Determine the cumulative impact from the related projects combined with the proposed project. In particular, consider cumulative impacts to the population of resources which would remain and impacts to groupings (e.g., same camp, village, or settlement). Evaluate the destruction of resources exposed on the surface by considering the cumulative increase in human activity and soil erosion.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Cover archaeological sites with a layer of fill before building surface facilities such as tennis courts, parking lots, or gardens above them, when the following

conditions can be met:

  - The underlying site will not be seriously compacted;
  - The fill will not be chemically active;
  - The site is protected against natural deterioration; and
  - The site has been recorded and tested, and full parameters are known, i.e., horizontal extent, depth, age, cultural complexity, etc;

- Deed archaeological sites into permanent conservation easements;

- Undertake data recovery. Data recovery requires the preparation of an excavation plan[3] which sets forth the size of the sample to be acquired, the methods and techniques of excavation, methods and techniques of laboratory studies to be conducted, documentation procedures, and the place where all materials and documentation will be curated; and

- Conduct resource recovery. Some features or objects (rock rings, rock art, structural elements, architectural elements, etc.) can be documented in place, and then either relocated for public interpretation on the subject property, or removed to a museum or other institution for safekeeping and display.

3 *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format. Preservation Planning Bulletin No. 4 (a).*

3. DATA, RESOURCES, AND REFERENCES

Information Center: UCLA Institute of Archaeology, Fowler Museum of Cultural History, Los Angeles, California 90095; Telephone: (310) 825-4361.

California Office of Historic Preservation (OHP), P.O. Box 942896, Sacramento, California 94296-0001; Telephone: (916) 653-6624. Maintains many publications, including Instructions for Recording Historical Resources, 1995, and California Register: Proposed Guidelines for the Nomination of Properties, 1995.

The Cultural Heritage Commission (CHC), Los Angeles Conservancy, Natural History Museum of Los Angeles County, and the Community Redevelopment Agency (CRA) of the City of Los Angeles, have limited inventories of historical landmarks, but their data do not include archaeological sites and should be augmented by consultation with the Information Center.

CEQA, Appendix K, Archaeological Resources, contains standards for review and mitigation.

Archaeological Resource Management Report (ARMR): Recommended Contents and Format, OHP, 1989. Contains a useful checklist and guidelines for reviewing the adequacy of the preparation and organization of archaeological reports.

CEQA and Archaeological Resources, 1994. Governor's Office of Planning and Research (OPR).

Conservation Plan Element: Section II-3, Preservation of Archaeological Sites and Paleontological Findings, 2001.

City of Los Angeles -- Archaeological Resources Information:

In a comprehensive review of the City's archaeological resources completed in August 1993, the Information Center, which assigns site numbers and curates site records, estimated that only two percent of the City's approximately 800 square miles has been surveyed for archaeological resources. At that time, however, 196 prehistoric sites, 50 historical sites, and 10 undefined isolated occurrences had already been recorded. Of these, at least 26 sites were known to contain human burials, and 10 sites had both prehistoric and historic components. The prehistoric sites include named Native American villages, buried deposits and features, pit houses, occupied caves and rockshelters, bedrock mortars, camp sites, cemeteries and rock art. Historical sites were distinctly underrepresented in the records, since standing historic structures have not been regularly assigned archaeological site numbers or assessed for the potential existence of associated buried features until

recent state guidelines advised that this should be done. The historical sites already recorded are as varied as pre-1830s limekilns, stage stops, mission structures and dams, a log cabin, many adobes, quarries, oil exploration and development features, a submerged ship, a Civil War asphalt mine, aspects of the Pueblo and early water canal features, Chinatown, and a Japanese labor camp.

Selected Legislation

Federal

Federal Antiquities Act of 1906 (P. L. 59-209; 16 U.S.C. 431-433)

Basis for all following legislation. The government, acting for the people, should protect archaeological and historical sites and "any object of antiquity," and preserve them for public availability. Forbids disturbance of said objects of antiquity on federal lands without a permit issued by the responsible agency. Establishes criminal sanctions for unauthorized use or destruction of antiquities.

Historic Sites Act of 1935 (P. L. 74-292, 16 U.S.C. 461-467, 49 Stat. 666)

Declares, "it to be national policy to preserve for public use historic sites, properties, buildings, and objects of national significance." Gives the National Park Service (NPS) (through the Secretary of the Interior) broad powers to execute this policy, including criminal sanctions, on both federal and non-federal lands. It also sets up an advisory board to aid the Secretary of the Interior in implementing this Act.

Reservoir Salvage Act of 1960 (P. L. 86-523; 74 Stat. 220)

Requires Secretary of the Interior to institute an archaeological salvage program in connection with federally funded reservoir programs requiring the responsible agencies to comply with this program.

Historic Preservation Act of 1966 (P. L. 89-665; 80 Stat. 915)

Expansion of the National Register to include sites of not only national, but local significance; authorizes program of matching funds for their acquisition and preservation; and establishes the Advisory Council on Historic Preservation to help implement and monitor this Act.

National Environmental Policy Act (NEPA) of 1969 (P. L. 91-190; 83 Stat. 852)

Requires that cultural resources be considered in assessing the environmental impact of proposed federal projects.

Executive Order 11593 of May 13, 1971: "Protection and Enhancement of the Cultural Environment" Richard M. Nixon (36 F.R. 8921)

States that the federal government shall provide leadership in preserving, restoring and maintaining the historic and cultural environment; specifies that all federal agencies shall institute inventories for historic and archaeological sites, and shall provide for their protection as specified by P. L. 89-665.

Archaeological and Historical Preservation Act of 1974 (P. L. 93-291, U.S.C. 469-469c; 88 Stat. 174)

Amends the Reservoir Salvage Act of 1960 to include all federal programs which may impact cultural resources; authorizes expenditure of program funds for salvage projects; and requires Secretary of the Interior to report annually to Congress on the effectiveness of the program.

Federal Land Policy and Management Act of 1976 (P. L. 94-579; 90 Stat. 2743)

Directs the Bureau of Land Management (BLM) to manage lands on the basis of multiple use in a manner that will protect the quality of scientific, historical, and archaeological values. It provides the guidelines for the acquisition and management of these resources.

American Indian Religious Freedom Act of 1978 (P. L. 95-341; 92 Stat. 469)

States that it is the policy of the United States to protect and preserve for Native Americans their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian including access to sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites.

Native American Heritage Bill - Chapters 1492 (1984) and 370 (1992)

Policy to protect Native American remains and maintain integrity of their archaeological database; and to establish guidelines for recordation of reburial of human remains and grave goods.

Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) - (P. L. 101-601; 104 Stat. 3048, 25 U.S.C. 3001)

Conveys to Native Americans, of demonstrated lineal descendence, human remains and funerary or religious items that are held by federal agencies and federally-supported museums, or that have been recovered from federal lands. Also makes the sale or purchase of Native American human remains, "whether or not they derive from federal or Indian lands, illegal."

State

California Public Resources Code

Section 5097.5 (Stats. 1965, C. 11362792)

Defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands. Prohibits the knowing destruction of objects of antiquity without a permit (expressed permission) on public lands, and provides for criminal sanctions. Amended in 1987 to require consultation with the California Native American Heritage Commission whenever Native American graves are found. Violations for taking or possessing remains or artifacts are felonies.

Chapter 1332, Section 5097.9

Establishes the California Native American Heritage Commission to make recommendations to encourage private property owners to protect and preserve sacred places in a natural state and to allow appropriate access to Native Americans for ceremonial or spiritual activities. The Commission is authorized to assist Native Americans in obtaining appropriate access to sacred places on public lands, and to aid state agencies in any negotiations with federal agencies for the protection of Native American sacred places on federally administered lands in California.

Section 5097.98-99 (Stats. 1982, C. 1492. Amended 1987)

Requires that the Governor's California Native American Heritage Commission be consulted whenever Native American graves are found. Makes it illegal to take or possess remains or artifacts taken from Native American graves. Does not apply to materials taken before 1984. Violations occurring after January 1, 1988, become felonies.

CEQA (P. R. C. Section 21001)

Requires that cultural resources be considered in assessing the environmental impact of proposed projects.

California Register (1993, AB 2881, Chapter 1075)

Amends the Public Resources Code as it affects historical resources. Purpose is to develop and maintain, "an authoritative guide to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Sites, places, or objects which are eligible to the National Register (50-years-old or more) are automatically included in the California Register.

California Penal Code, Title 14, Part 1, Section 622.5

Provides that any person, not the owner thereof, who willingly destroys or injures objects of archaeological or historical value, whether on public or private land, is guilty of a misdemeanor.

California Administrative Code, Title 14, Section 4307

States, "no person shall remove, injure, disfigure, deface or destroy any object of paleontological, archaeological, or historical interest or value."

Local

Standard Specifications for Public Works Construction, Section 6-3.2

Requires that grading, excavation, or other ground disturbing activities for a public project be halted in the area of a paleontological or archaeological find, until such time as a resource expert can review the find, determine its significance, and if required, determine appropriate mitigation measures.

D.3. HISTORICAL RESOURCES

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

V.a): Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

B. Introduction

Historical resources are found throughout the City of Los Angeles and are reminders of the City's historical and cultural development. Resources include, for example, buildings, structures, street lighting systems, spaces, sites, or components thereof. Uses include residential, non-residential (e.g., commercial, industrial, institutional), and public facilities. Resources may be important individually or as part of a district or grouping of complementary resources.

Significant historical resources include those designated or eligible for designation in the National Register of Historic Places (National Register); the California Register of Historical Resources (California Register) or other state program; as a City of Los Angeles Historic Cultural Monument; or in a City of Los Angeles Historic Preservation Overlay Zone (HPOZ). Historical resources may also include resources listed in the State Historic resources Inventory as significant at the local level or higher and those evaluated as potentially significant in a survey or other professional evaluation.

Agencies with jurisdiction over historical resources include the National Park Service (NPS), the California Office of Historic Preservation (OHP), and the City of Los Angeles (see Exhibits D.3-1 to D.3-4 for additional information). The NPS maintains the National Register. Criteria for listing in the National Register include association with events, persons, history, or prehistory or embodiment of distinctive characteristics. These criteria are based on context (theme, place, and time), integrity (location, design, setting, materials, workmanship, feeling, and association), and, if a recent resource, exceptional importance.

OHP implements state preservation law and is responsible for the California Register. The California Register uses the National Register criteria for listing resources significant at the national, state, or local level.

Within the City of Los Angeles, the Cultural Heritage Commission (CHC) is responsible for designating resources as Historic-Cultural Monuments. Monuments, which must meet criteria similar to those for the National Register, are designated and protected. The City assigns an HPOZ to an area that meets certain criteria in order to preserve historical resources and ensure that new development is compatible with the area. Projects within an HPOZ are monitored by the City Planning Department in order to maintain the historic integrity of the area.

Projects that affect historical resources, such as by demolition, relocation, rehabilitation, conversion, alteration, or construction, may have a significant impact. The stock of significant historical resources cannot be replenished and is finite. Thus, the permanent loss of a resource is irreversible. While, in some circumstances, the resource's integrity can be maintained after rehabilitation, conversion, alteration, or construction, insensitive work also may result in a significant impact.

C. Screening Criteria

- Are there historical resources on the project site or in the vicinity, which would be adversely impacted by the project through, for example, demolition, construction, conversion, rehabilitation, relocation, or alteration?

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Historical Resources, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Historical Resources from the proposed project.

D. Evaluation of Screening Criteria

Evaluate the historical significance of the resource by considering the following questions. In general, a "yes" response to any of the questions indicates an historical resource may be involved.

1. Has the site been coded by the Department of Building and Safety with a Zoning Instruction (ZI) number in the 145 series (which indicates prior identification of the property as historic)?

2. Has the resource been designated by the City of Los Angeles as an Historic-Cultural

Monument or as a contributor to an HPOZ?

3. Is the resource included within the California Register maintained by the OHP and ranked with an evaluation code of 1 (National Register listed resource) or 2 (determined eligible for listing in the National Register)?

4. Has the resource been classified as historic in an historical resources survey conducted as part of the updating of the Community Plan, the adoption of a redevelopment area or other planning project?

5. Is the resource subject to other federal, state, or local preservation guidelines or restrictions?

6. Does the resource have known associations with an architect, master builder or person or event important in history such that the resource may be of exceptional importance?

7. Is the resource over 50-years-old and a substantially intact example of an architectural style significant in Los Angeles? (Age is calculated from an original building permit or the Land Use Planning and Mapping System (LUPAMS) maintained by the City Planning Department. See Exhibit D.3-5 for significant architectural styles.)

Review the description of the proposed project and determine the type of activities proposed during site preparation, construction, and operation. Projects that affect historical resources, such as demolition, relocation, rehabilitation, conversion, alteration, or construction, may have a significant impact if the project results in a substantial adverse change which would impair historical significance. Insensitive rehabilitation, conversion, alteration or construction may also result in a significant impact. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact on historical resources if it would result in a substantial adverse change in the significance of an historical resource.

A substantial adverse change in significance occurs if the project involves:

- Demolition of a significant resource;
- Relocation that does not maintain the integrity and significance of a significant resource;

- Conversion, rehabilitation, or alteration of a significant resource which does not conform to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings; or

- Construction that reduces the integrity or significance of important resources on the site or in the vicinity.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Architectural description and condition of the resource(s);

- Listing, designation, or determination from city, state, or federal agency (e.g., listed or determined eligible for the National Register or California Register; designated as a City of Los Angeles Historic-Cultural Monument; included within an HPOZ as a contributor);

- Construction history (date of construction and major alterations, architect, builder and owner);

- Significance of owner, architect, builder, or architectural style in history; and

- Context of resource (population, district, grouping, etc.).

Project Impacts

Conduct an evaluation of the historical resource to determine its significance (based on listing or eligibility for listing). Field surveys and research, in addition to the review of the Initial Study screening process may be necessary to determine whether a resource is listed or eligible for listing. If a resource is not listed on the National Register, California Register, City of Los Angeles Historic-Cultural Monuments, or, if applicable, HPOZ, use the appropriate criteria for listing to determine whether it is eligible. Assistance is available from the agencies with jurisdiction over such resources and from the information included in 3. Data, Resources, and References. A professional consultant may be required.

Review the description of the proposed project and consider the potential impacts. When the demolition of an historical resource is proposed, weigh the impact given the significance of the resource and the population of similar resources which would remain. If the resource to be demolished is part of a district or grouping, also assess the impact to the listing or eligibility of the district or grouping.

When a significant historical resource is relocated, the ability to retain listing or eligibility depends upon individual circumstances. For example, relocation of a resource whose most significant feature is setting or position on a parcel would be more detrimental than if the key element is the architectural style and structural features. The style and feature would relocate with the building; however, the setting would not. Also, consider changes in the context (e.g., removal from a district).

Evaluate conversion, rehabilitation, or alteration to a significant historical resource in terms of the extent of the work and the impact on the listing or eligibility of the resource. Also, determine whether the work meets the standards for rehabilitation established by the Secretary of the Interior and the OHP (see Exhibits D.3-1 and D.3-4). Consider whether the conversion, rehabilitation, or alteration work would be compatible with the massing, size, scale, and architectural features of the resource. Projects more sensitive to historic integrity include minor repairs or temporary work that does not permanently affect significant elements and character.

If new construction is proposed, give key consideration to compatibility with the massing, size, scale, and architectural features of the historical resource(s). Determine the impacts to the setting and character of the area as well as whether the new construction might indirectly reduce the viability of a district or grouping of historical resources.

Cumulative Impacts

Review the list of related projects and identify those that:

- Are located within the same National Register district, HPOZ, general area, neighborhood, or community; or

- Involve resources with the same historical context or use (e.g., by the same architect or in the same period).

Determine the impact of the related projects. Consider the cumulative impacts of the proposed and related projects to the population of resources which would remain, and to districts and groupings.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Prepare a preservation plan or element which provides guidelines to ensure that the project conforms to the standards for rehabilitation established by the Secretary of the Interior and the OHP;

- Require new construction to be compatible with historical resources on the site and in the vicinity (e.g., mass, height, materials, setback, retention of mature landscaping);

- Require the project sponsor to relocate the historical resource or offer it for relocation by another individual or organization (provided that eligibility will be maintained following the relocation);

- Require the project sponsor to adaptively reuse the historical resource or incorporate it into the project;

- Undertake documentation according to the requirements of the Historic American Building Survey (HABS) such as large format photography, measured drawings and written narrative. Make available copies of this documentation to the Los Angeles Public Library (LAPL) and local preservation organizations and historical societies; and

- Require the project sponsor to allow local preservation organizations and historical societies to document the resource and/or remove significant historic elements for archives.

3. DATA, RESOURCES, AND REFERENCES

NPS, Pacific Great Basin Support Office, 1111 Jackson St., Suite 700, Oakland, CA. 94607, Telephone: (510) 817-1396. NPS maintains the National Register.

OHP, P.O. Box 942896, Sacramento, California 94296-0001; Telephone: (916) 653-6624. OHP duties include: administration of National Register, California Register, State Historical Landmarks and State Points of Historical Interest programs, and State Historical resources Inventory; Section 106 process (National Historic Preservation Act); and Responsible Agency for CEQA review.

CHC and the Cultural Affairs Department, 433 South Spring Street, 10th Floor, Los Angeles, California 90013; Telephone: INFO Desk (213) 473-7700. Responsible for designation and monitoring of City of Los Angeles Historic-Cultural Monuments.

Department of Building and Safety. Customer Call Center (888)-LA4-BUILD or outside Los Angeles County: (213) 977-6941, 201 N. Figueroa Street, Los Angeles, CA 90012. Maintains ZI codes for property parcels. The ZI 145 series is currently used for historic buildings.

City Planning Department; Telephone: (213) 482-7077; Bureau of Engineering; Telephone: (213) 847-8704; and Community Redevelopment Agency (CRA) of the City of Los Angeles; Telephone: (213) 977-1600, maintain historical resources surveys.

Bureau of Street Lighting; 600 S. Spring St. 14th Floor, Los Angeles, CA 90013. Telephone: (213) 847-6400, is responsible for historic street lights in the City.

Los Angeles Conservancy, a regional non-profit preservation organization; 523 W. 6th St. Los Angeles, CA 90014, Telephone: (213) 623-2489. This organization's activities include:

- Historical resources surveys;
- Information regarding how to obtain the results of surveys; and
- Information regarding the significance of particular architects and buildings.

Recording Historic Structures, HABS/Historic American Engineering Record, John A. Burns, ed, Washington: American Institute of Architects Press, 1989.

References to other sources are included within HABS/Historic American Engineering Record, An Annotated Bibliography, compiled by James C. Massey, et al, NPS, 1992.

Exhibit D.3-1
NATIONAL CRITERIA AND STANDARDS

National Register

To be eligible for listing in the National Register, a resource must possess significance in American history and culture, architecture, or archaeology. These criteria are the Register's standards for determining the significance of properties. Buildings, sites, districts, structures, or objects of potential significance must possess integrity of location, design, setting, and materials and meet one or more of four established criteria:

A. Are associated with events that have made a significant contribution to the broad patterns of our history;

B. Are associated with the lives of persons significant in our past;

C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Yield, or may be likely to yield, information important in prehistory or history.

Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

2. The historic character of a property shall be retained and preserved. The removal of historic material or alteration of features and spaces shall be avoided.

3. Each property shall be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other buildings, shall not be undertaken.

4. Most properties change over time; those changes that have acquired significance in their own right shall be retained and preserved.

5. Distinctive features, finishes and construction techniques or examples of skilled craftsmanship, which characterize an historic property, shall be preserved.

6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive historic feature, the new feature shall match

the old in design, color, texture, and other visual qualities, and where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Exhibit D.3-2
CALIFORNIA REGISTER CRITERIA AND EVALUATION SYSTEM

The evaluation instructions and classification system proscribed by OHP in its "Instructions for Completing the California Historical resources Inventory Form, June 1990" provide the following general categories of evaluation. Categories 1 through 4 involve various levels of National Register eligibility. The California Register may include surveyed resources ranked from 1 - 5.

1. Listed in the National Register.

2. Determined eligible for listing in the National Register in a formal process involving federal agencies.

3. Appears eligible for listing in the National Register in the judgment of the persons completing or reviewing the form.

4. May become eligible for listing in the National Register.

5. Ineligible for the National Register, but of local interest.

6. None of the above.

7. Undetermined.

Resources eligible to be nominated for listing in the California Register include:

- Individual historical resources;
- Historical resources contributing to the significance of an historic district under criteria adopted by the Commission;
- Historical resources identified as significant in historical resource surveys, if the survey meets the criteria listed in California Public Resources Code . 5024.1(g); and
- Locally designated resources if the criteria for local designation have been determined by the Commission to be consistent with California Register criteria adopted by the Commission.

Exhibit D.3-3
CITY OF LOS ANGELES CRITERIA

City of Los Angeles Historic-Cultural Monument Designation

In the City of Los Angeles, resources may be designated as Historic-Cultural Monuments under Sections 22.120, et seq., of the Los Angeles Municipal Code (LAMC). An historical or cultural monument is defined as:

> "any site (including significant trees or other plant life located thereon), building or structure of particular historic or cultural significance to the City of Los Angeles, such as historic structures or sites in which the broad cultural, political, economic or social history of the nation, state or community is reflected or exemplified, or which are identified with historic personages or with important events in the main currents of national, state or local history, or which embody the distinguishing characteristics of an architectural-type specimen, inherently valuable for a study of a period style or method of construction, or a notable work of a master builder, designer, or architect whose individual genius influenced his age."

City of Los Angeles Historic Preservation Overlay Zones (HPOZs)

HPOZs are essentially locally designated historic districts or groupings of historical resources. Under the HPOZ ordinance (LAMC Section 12.20.3.), to be significant, structures, natural features or sites within the involved area or the area as a whole shall meet one or more of the following criteria:

(A) has substantial value as part of the development, heritage or cultural characteristics of, or is associated with the life of a person important in the history of the city, state or nation;

(B) is associated with an event that has made a substantial contribution to the broad patterns of our history;

(C) is constructed in a distinctive architectural style characteristic of an era of history;

(D) embodies those distinguishing characteristics of an architectural type or engineering specimen;

(E) is the work of an architect or designer who has substantially influenced the development of the City;

(F) contains elements of design, details, materials or craftsmanship which represent an important innovation;

(G) is part of or related to a square, park or other distinctive area and should be developed or preserved according to a plan based on a historic, cultural, architectural or aesthetic motif;

(H) owing to its unique location or singular physical characteristics, represents an established feature of the neighborhood, community or City; or

(I) retaining the structure would help preserve and protect an historic place or area of historic interest in the City.

Exhibit D.3-4
STATE OFFICE OF HISTORIC PRESERVATION (OHP)
LIST OF NON-ADVERSE REPAIRS AND IMPROVEMENTS

According to the OHP and the Advisory Council on Historic Preservation, the following work does not usually involve adverse effect on historical resources:

1. Electrical work, limited to upgrading or in-kind replacement;

2. Plumbing work, limited to upgrading or in-kind replacement, with the exception of historic fixtures which shall be repaired when possible;

3. Installation of mechanical equipment, which does not affect the exterior of the building or require installation of new ductwork throughout the interior;

4. Repainting of existing painted surfaces if destructive surface preparation treatments are not used, including, but not limited to, water blasting, sandblasting, and chemical removal;

5. In-kind repair/partial replacement of porches, cornices, exterior siding, doors, balustrades, stairs, or other trim;

6. In-kind replacement of deteriorated windows;

7. Replacement of windowpanes in-kind or with double or triple glazing so long as glazing is clear and not colored and replacement does not alter existing window material and form;

8. Caulking and weather stripping with compatibly colored materials;

9. In-kind repair/replacement of roof materials;

10. Installation of insulation, with the exception of urea formaldehyde foam insulation or any thermal insulation with a water content into wall cavities, provided that decorative interior plaster or woodwork or exterior siding is not altered by this work item;

11. Installation of fire or smoke detectors;

12. Installation of security devices, including deadbolts, door locks, window latches, and door peepholes, and the installation of electronic security systems;

13. In-kind repair/replacement of driveway or walkways;

14. In-kind repair/replacement of fencing;

15. Floor refinishing;

16. In-kind repair/replacement of floors;

17. Installation of grab bars and minor interior modifications for handicap accessibility;

18. In-kind repair/replacement of signs and awnings; and

19. In-kind repair/replacement of interior stairs.

Exhibit D.3-5
ARCHITECTURAL STYLES AND PERIODS

The following architectural styles and related periods of significance are historically important in Los Angeles:

Adobe	1800-1870
Monterey	1840-1870
Greek Revival	1825-1860
Classical Revival	1840-1870
Italianate	1870-1900
Gothic Revival	1870-1900
Eastlake	1870-1900
Second Empire	1870-1885
Queen Anne	1880-1905
Chateauesque	1890-1915
American Foursquare	1894-1908
Turn of the Century	1895-1905
Beaux Arts	1895-1930
Mission Revival	1890-1915
Craftsman	1895-1925
Pueblo Revival	1900-1930
Commercial Vernacular	1910-1925
Spanish Colonial Revival	1915-1930
Modernism	1920-1940
Art Deco	1920-1940
Monterey Revival	1925-1940
Colonial Revival	1930-1945
Tudor Revival	1930-1945
Streamline Moderne	1935-1945
PWA Moderne	1930-1940
California Ranch House	1935-1990
Corporate International	1945-1990

Source: Los Angeles Conservancy, 1995.

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Queen Anne	1880-1905
Chateauesque	1890-1915
American Foursquare	1894-1908
Turn of the Century	1895-1905
Beaux Arts	1895-1930
Mission Revival	1890-1915
Craftsman	1895-1925
Pueblo Revival	1900-1930
Commercial Vernacular	1910-1925
Spanish Colonial Revival	1915-1930
Modernism	1920-1940
Art Deco	1920-1940
Monterey Revival	1925-1940
Colonial Revival	1930-1945
Tudor Revival	1930-1945
Streamline Moderne	1935-1945
PWA Moderne	1930-1940
California Ranch House	1935-1990
Corporate International	1945-1990

Source: Los Angeles Conservancy, 1995.

E. GEOLOGY

E.1. GEOLOGIC HAZARDS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

VI.a.i): Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving 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?

VI.a.ii): Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

VI.a.iii): Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

VI.a.iv): Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

VI.c): Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

VIII.j): Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?

B. Introduction

Geologic processes that result in geologic hazards include: surface rupture, ground shaking, ground failure, tsunamis, seiches, landslides, mudflows, and subsidence of the land.[1] Because the region is generally considered to be geologically active, most projects will be exposed to some risk from geologic hazards, such as earthquakes. Thus, significant geologic impacts exceed the typical risk of hazard for the region.

[1] *Sediment and erosion are addressed in E.2. SEDIMENTATION AND EROSION.*

Surface ruptures are the displacement and cracking of the ground surface along a fault trace. Surface ruptures are visible instances of horizontal or vertical displacement, or a combination of the two, typically confined to a narrow zone along the fault. The effects of ground shaking, the actual trembling or jerking motion of the ground during an earthquake, can vary widely across an area and depend on such factors as earthquake intensity and fault mechanism, duration of shaking, soil conditions, type of building, and other factors. Ground failure results from the cyclical ground acceleration generated during an earthquake, producing landslides, ground cracking, subsidence and differential settlement. Liquefaction is a form of earthquake-induced ground failure that occurs primarily in relatively shallow, loose, granular, water-saturated soils.

Tsunamis are large ocean waves generated by large-scale, short-duration submarine earthquakes. Tsunami waves are capable of traveling great distances (over 1,000 miles) and damaging low-lying coastal regions. Seiches are waves formed from oscillations in enclosed or restricted bodies of water (i.e., harbors, lakes). Seiches can cause water to overtop reservoirs and lakes.

Mudflows and landslides are the downslope movement of soil and/or rock under the influence of gravity. Mudflow and landslide processes are influenced by factors such as thickness of soil or fill over bedrock, steepness and height of slope, physical properties of the fill, soil or bedrock materials and moisture content. These factors may increase the effective force of gravity upon a slope, decrease the ability of a slope to resist gravitational influence or a combination of the two, which can lead to mudflows and landslides.

Subsidence is a localized mass movement that involves the gradual downward settling or sinking of the Earth's surface, resulting from the extraction of mineral resources, subsurface oil, groundwater, or other subsurface liquids, such as natural gas. Settlement is the gradual downward movement of a structure due to compression of the soil below the foundation. The principal cause of subsidence is the extraction of subsurface liquids, whereas settlement results from the compression of soils due to the weight of the structure or by surcharging following the placement of fill.

Construction is regulated by the Los Angeles Building Code, Sections 91.000 through 91.7016 of the Los Angeles Municipal Code (LAMC). The Los Angeles Building Code provides requirements for construction, grading, excavations, use of fill, and foundation work including type of materials, design, procedures, etc., which are intended to limit the probability of occurrence and the severity of consequences from geological hazards. Necessary permits, plan checks, and inspections are also specified.

C. Screening Criteria

- Is the project located in an area susceptible to unusual geologic hazards considering the following:

  - Designation on official maps and databases;

  - Past episodes on-site or in the surrounding area; and

  - Physical properties of the site, including the topography, soil or underlying bedrock (including thickness of bedrock and soil compressibility, strength, moisture content, and distribution)?

- Would the project include any of the following:

  - Placement of structures designed for regular occupancy or infrastructure on fill; or

  - Active or planned extraction (removal) of mineral resources, groundwater, oil, or natural gas on-site or in the surrounding area?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Geologic Hazards, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant Geologic Hazard impact from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, project site, and surrounding area. To assist in determining whether the project is located in an area of known or suspected geologic hazard, consult the following maps and databases:

- Environmental and Public Facilities Maps, including:

  - Alquist-Priolo Special Study Zones and Fault Rupture Study Areas,
  - Inundation and Tsunami Hazard Areas,

- Areas Susceptible to Liquefaction,
- Landslide Inventory and Hillside Areas,
- Areas Containing Significant Mineral Deposits, and
- Oil Field and Oil Drilling Areas;

- ZIMAS (Zone Information & Map Access System): http://zimas.lacity.org

- Navigate LA: http://navigatela.lacity.org/

- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for tsunami hazards

Using the above information, field research, published reports, or other appropriate maps or studies, as available, assess whether the project is located in an area susceptible to geologic hazards. Consider past episodes on site or in the surrounding area; steepness/height of slopes; physical properties of the soil; the presence of fill; or extraction of resources below the surface. If necessary, consult with the Bureau of Engineering or Department of Building and Safety.

Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant geologic hazard impact if it would cause or accelerate geologic hazards, which would result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description of the physical setting and geology, such as the topography, steepness and height of slopes or cliffs, physical properties of the soil and underlying bedrock, proximity to bodies of water, presence of fill, and extraction or mining activities;

- Identification of the geologic processes that may result in geologic hazards on the project site or in the surrounding area; and

- Summary of requirements and/or policies for geologic hazards that apply to the project site.

Project Impacts

Using the information from the Evaluation of Screening Criteria and the description of the proposed project, project site, and surrounding area, determine the geologic hazards that the project would cause or accelerate. Substantial damage to structures or infrastructure and exposure of people to substantial risk of injury is related to the probable frequency of potential geologic hazards (i.e., likely number of events per year or decade) and the probable severity of the consequences to people, property, or infrastructure that may result (i.e., injuries to people and the valuation of property damage). Consider that the geologically active nature of the region means that most projects will be exposed to geologic hazards, such as seismic activity. Significant impacts, as indicated by the significance threshold, exceed the typical risk of hazard for the region. Consider the type of uses that would be included in the project, the characteristics of the occupants of the project, and the change in risk of hazard or damage that would result from the project.

Cumulative Impacts

Review the description of the related projects. Identify those with elements, activities, or operations which would cause or accelerate geologic hazards that would extend off-site. Consider the impact from the combined effect of the related and proposed projects, in the same manner as described above for Project Impacts.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Use interim precautionary steps during construction; and
- Use design and structural features that exceed the requirements of the Los Angeles Building Code and Planning and Zoning Code. (Chapter 1 of the Municipal Code).

3. DATA, RESOURCES, AND REFERENCES

Department of Building and Safety, 201 North Figueroa Street, 4th Floor, Construction Services Center, Los Angeles, California 90012; Telephone: (213) 833-8389.

Bureau of Engineering, Geotechnical Engineering Group, 650 S. Spring St., Suite 495, Los Angeles, CA 90014. (213) 847-4010.

Bureau of Engineering, Structural Engineering Group, 650 S. Spring St., Suite 400, Los Angeles, CA. 90014. (213) 847-8774.

City Planning Department, Environmental and Public Facilities Maps (1996):

- Alquist-Priolo Special Study Zones and Fault Rupture Areas illustrates the approximate locations of Alquist-Priolo Special Study Zones and fault rupture areas;
- Inundation and Tsunami Hazard Areas;
- Areas Susceptible to Liquefaction;
- Landslide Inventory and Hillside Areas illustrates the approximate locations of hillside areas, areas with known or probable bedrock landslides, and areas of surficial landslides larger than five acres;
- Areas Containing Significant Mineral Deposits identifies areas within a Mineral Resource Zone (MRZ) 2. Projects within this designation may experience subsidence/settlement where mineral extraction has occurred or is planned; and
- Oil Field and Oil Drilling Areas show areas known to have supported at least six months of oil production, indicating an increased risk for subsidence.
- ZIMAS (Zone Information & Map Access System) http://zimas.lacity.org
- Navigate LA http://navigatela.lacity.org/
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps.

Planning and Zoning code is available from the City Planning Department's Central Publications Unit at 200 N. Spring St., 5th Floor, Los Angeles, CA., 90012; Online at: http://amlegal.com/los_angeles_ca/.

Selected Legislation

Federal

Flood Insurance Rate Maps (FIRMs) (10 CFR Section 1022.11, 43 CFR Section 64.3)

FIRMs are prepared by the Federal Insurance Administration of the Department of Housing and Urban Development (HUD) after a risk study for a community has been completed and the risk premium rates have been established. The maps indicate the risk premium zones applicable in the community and when those rates are effective. They are used in making flood plain determinations and to determine if a proposed action is located in the base or critical action flood plain, as appropriate.

State

Alquist-Priolo Earthquake Fault Zoning Act (PRC Section 2621.5)

Provides policies and criteria to assist cities, counties, and state agencies in the development of structures for human occupancy across the trace of active faults. Intended to provide the citizens of the state with increased safety and to minimize the loss of life during and immediately following earthquakes by facilitating seismic retrofitting to strengthen buildings, including historical buildings, against ground shaking.

E.2. SEDIMENTATION AND EROSION

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

VI.b): Would the project result in substantial soil erosion or the loss of topsoil?

B. Introduction

Projects that change the natural ground surface may expose earth materials, which are subject to erosion from both wind and water forces. Impacts are related to the amount of land exposed to wind and water forces and the characteristics of the site. Such erosion affects not only the integrity of the ground surface, but also results in the transport and deposition of dust in the surrounding locale and/or sediments in downstream water bodies. Impacts of sediment runoff on water quality are addressed in G.2. SURFACE WATER QUALITY.

Construction is regulated by the Los Angeles Building Code (Sections 91.7000 through 91.7016 of the Los Angeles Municipal Code (LAMC)). The Los Angeles Building Code provides requirements for construction, grading, excavations, use of fill, and foundation work including type of materials, design, procedures, etc., which are intended to limit the probability of occurrence and the severity of consequences from sedimentation and erosion. Necessary permits, plan checks, and inspections are specified. Also included in these requirements is the provision that any grading work in excess of 200 cubic yards (cu.yd.) that will occur between November 1 and April 15 (the "rainy season") must include an erosion control system approved by the Department of Building and Safety.

Under the National Pollutant Discharge Elimination System (NPDES), the State Water Resources Control Board has issued two general stormwater discharge permits for Los Angeles County to cover industrial and construction activities. The permits are required for specific industry types based on standard industrial classification and for construction activities on five acres or more. The Regional Water Quality Control Board (RWQCB) oversees implementation and enforcement of the general permits, including Waste Discharge Requirements (WDR). The Public Works Department, Bureau of Engineering, Stormwater Management Division, is the agency responsible for overseeing implementation of permit responsibilities for the City. Presently, under the General

Construction Stormwater Permit, projects greater than five acres are required to incorporate, to the maximum extent possible, permanent or post-construction best management practices (BMPs) in project planning and design.

C. Screening Criteria

- Would the project result in grading, clearing or excavation of more than 20,000 cu.yd. on a slope of ten percent or more?

- Does the project include grading, clearing, or excavation activities in an area of known or suspected erosion hazard (based upon designation on official maps and databases)?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Sedimentation and Erosion, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant Sedimentation and Erosion impact from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, project site, and surrounding area. To determine if the project is located in an area of known or suspected erosion hazard, consult the following maps and databases:

- Environmental and Public Facilities Maps, Landslide Inventory and Hillside Areas; and

- Zimas (Zone Information & Map Access System) http://zimas.lacity.org/

- Navagate LA http://navagatela.lacity.org

Indications of high and very high levels of erosion hazard indicate known or suspected erosion hazard. Determine whether the project includes grading, clearing or excavation activities that could result in sedimentation and erosion impacts. If necessary, use field research, published reports, or other appropriate studies, as available, or consult with the Bureau of Engineering or Department of Building and Safety. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have significant sedimentation or erosion impacts if it would:

- Constitute a geologic hazard to other properties by causing or accelerating instability from erosion; or

- Accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition which would not be contained or controlled on-site.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description of the physical setting and geology, such as the topography of the site, steepness and height of slopes or cliffs, characteristics of the soil, and type and extent of vegetation;

- Identification of the erosion processes that may result in geologic hazards on the project site or in the surrounding area; and

- Summary of requirements and/or policies for erosion hazards that apply to project site.

Project Impacts

Using the information from the Evaluation of Screening Criteria and the description of the proposed project, project site, and surrounding area, determine the erosion hazards that the project would cause or accelerate. Assess the probable frequency of potential geologic hazards (i.e., likely number of events per year or decade) and the probable severity of the consequences to people, property, or infrastructure that may result (i.e., injuries to people and the valuation of property damage). Consider the type of uses that would be included in the project, the characteristics of the occupants of the project, and the change in risk of

hazard or damage that would result from the project. Determine whether sediment runoff would be contained or controlled on-site. Exposure between November 1 and April 15 (the "rainy season") and removal of vegetative cover are more likely to result in erosion and sedimentation. Conditions such as steep slopes and cliffs or impermeable soil can also exacerbate runoff.

Cumulative Impacts

Review the description of the related projects. Identify those with activities or operations which would cause or accelerate erosion hazards. Assess the probable frequency of potential geologic hazards and the probable severity of the consequences to people, property, or infrastructure that may result from the combined effect of the proposed and related projects, in the same manner as described above for Project Impacts.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Establish an erosion control plan prior to construction;

- Revegetate cleared areas as soon as feasible after grading or construction with temporary seeding, permanent seeding, mulching, and stabilization, vegetative buffer strips, protection of trees, or other soil stabilization practices;

- Reduce sedimentation by using detention basins, straw bale dikes, silt fences, earth dikes, brush barriers, velocity dissipation devices, drainage swales, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, sediment traps, temporary sediment basins, or other controls; and

- Incorporate permeable paving materials that permit water penetration.

3. DATA, RESOURCES, AND REFERENCES

Department of Building and Safety, 201 North Figueroa Street, 3rd Floor, Construction Services Center, Los Angeles, California 90012; Telephone: (888) 524-2845. Technical requirements for grading activities and grading plan submittals are contained in the Los Angeles Building Code, and are outlined in form B-164 of the Department of Building and Safety.

Environmental and Public Facilities Maps (1996) Landslide Inventory and Hillside Areas illustrates the approximate locations of hillside areas, areas of known or probable bedrock landslides, and areas of surficial landslides larger than five acres.

General Permit No. CA 5000002 - WDR for Stormwater Runoff Associated with Construction Activities (Requirements of the NPDES).

Navigate LA available online at: http://navagate.la.lacity.org.

Zone Information & Map Access System, (ZIMAS) available online at: http://zimas.lacity.org

See also E.1. GEOLOGIC HAZARDS.

E.3. LANDFORM ALTERATION

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

I.b): Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

V.c): Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

B. Introduction

This section addresses the potential effects of a project on distinct and prominent geologic or physical features, such as hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds and wetlands. While some of the environmental impacts surrounding these resources are evaluated in other sections of this document (such as A.1. AESTHETICS), this section directly addresses the alteration of these landforms, which primarily occurs through grading and other earth moving activities. These activities may alter landforms in various ways, including lowering ridgelines, covering wetlands, filling canyons, or removing rock outcrops.

All grading in Los Angeles is regulated by the Los Angeles Building Code (Sections 91.7000 through 91.7016, of the Los Angeles Municipal Code (LAMC)), which includes requirements for excavations, fills, and the planting and irrigation of graded slopes. Grading may also be regulated by policies, which apply to specific geographic areas, such as those, which may be imposed by a specific plan, a local coastal program or the California Coastal Act, the Community Plan, or the General Plan and its elements.

Examples of specific policies that support the protection of distinct and prominent landforms include:

- Sections 30251 and 30253 of the California Coastal Act which require that activities within the coastal zone (generally includes land and water 1000 yards inland of the mean high tide line) minimize alteration of natural landforms and do not create or contribute to erosion, geologic instability, etc., in coastal areas;

- Several Community Plans encourage "cluster type" development in hillside areas in order to minimize the amount of grading and alteration of the natural landform; and

- The Mulholland Scenic Parkway Specific Plan includes policies, which regulate grading activities within the specific plan area. These policies are intended to minimize grading, preserve significant ridgelines, and minimize alteration of the natural landform characteristics of the Santa Monica Mountains through the use of grading standards set forth in the City Planning Department's Landform Grading Manual.

C. Screening Criteria

- Does the project site contain any distinct and prominent geologic or physical features that may be physically altered by project implementation?

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Landform Alteration, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Landform Alteration from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, proposed grading plans and proposed project operations. Identify any distinct and prominent resources on the project site, which may include, but are not limited to, hilltops, ridgelines, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, and wetlands. Determine whether the project activities could physically alter the identified landform(s) through, for example: lowering ridgelines; reducing wetlands or streambeds; filling canyons; or removing rock outcrops. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact on landform alteration if one or more distinct and prominent geologic or topographic features would be destroyed, permanently covered or

materially and adversely modified. Such features may include, but are not limited to, hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds and wetlands.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Describe the existing slopes and topography of the site and surrounding areas, including any distinct or prominent geologic or physical features. Include a map, as appropriate;

- Identify any specific grading or landform alteration policies that apply to the project site as imposed by any specific plan, local coastal program or the California Coastal Act, the Community Plan, the General Plan and its elements, the Hillside Ordinance or other portions of the LAMC; and

- Describe any drainage and diversion structures, retaining walls, cribbing and other surface protection devices existing on the site or immediately adjacent.

Project Impacts

Review the grading and construction plans to identify which distinct and prominent geologic or physical features on the project site would be impacted by project construction or operation. Determine what type of impact the project would have on the resource(s), such as major changes to existing slopes or ridgelines, the filling of canyons, removal or destruction of rock outcrops, covering of wetland areas, etc. Determine whether these changes would destroy an existing prominent resource and/or whether other project activities would result in adverse modifications. Note how long modifications would last and whether the resource would be restored.

The project-grading plan may be used to determine grading amounts and other earth moving activities that may impact a landform. Identify the location and quantities of cut and fill areas, height of cut and/or fill slopes, steepness and stability of proposed slopes and structures, details and location of proposed drainage devices, and, if it would impact an identified landform, the location of disposal sites for excess materials.

Cumulative Impacts

Review the list of related projects. Identify those with distinct and prominent geologic or physical features that would be altered. Assess the impact on these features from implementation of the related projects in the manner described above in Project Impacts. Identify cumulative impacts that would occur and determine their significance. Consider multiple impacts on a single feature or the combined impact on a group of like features.

Sample Mitigation Measures

Potential mitigation measures include the following:

- the modification of grading or excavation plans to avoid a distinct landform; and

- a reduction in amount of grading to conform to natural contours.

3. DATA, RESOURCES, AND REFERENCES

Specific plans, Coastal Act, especially policies 30251 and 30253, for projects within the coastal zone, and various specific plans, which include hillside areas, such as the Mulholland Scenic Parkway Specific Plan. Available from the City Planning Department's Central Publications Unit (see address and telephone below).

Landform Grading Manual, available from the City Planning Department's Central Publications Unit at 200 N. Spring St. 5th Floor, Los Angeles, California 90012; Telephone: (213) 978-1255.

See also E.1. GEOLOGIC HAZARDS and E.2. SEDIMENTATION AND EROSION.

E.4. MINERAL RESOURCES

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

X.a): Would the project result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the state?

X.b): Would the project 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 plan?

B. Introduction

Underlying the City of Los Angeles are finite deposits of non-renewable mineral resources, including petroleum and natural gas, limestone, and aggregate (e.g., rock, sand, and gravel). Development that includes placement of structures over resource areas or blocks access to a resource area results in the loss of availability of resources. Impacts are related to the characteristics of the resource and the degree of loss.

Federal, State and City agencies regulate or have documented the presence of mineral resources. The State Geologist, California Division of Mines and Geology (CDMG), and State Mining and Geology Board (SMGB) provide assistance and direction with regard to mineral resources. The SMGB uses a classification system that divides land into four Mineral Resource Zones (MRZ) based on quantity and significance of mineral resources. (See Exhibit E.4-1) Projects located within the MRZ-2 designation are subject to City policies established in Section VII, Mineral Resources, of the Conservation Element. The Bureau of Land Management (BLM) and the United States Forest Service (USFS) issue permits for mining activity on federal lands.

C. Screening Criteria

- Is the project located within, or would it block access to, a MRZ-2, or other known or potential mineral resource area (based upon designation on official maps and databases such as those identified below)?

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Mineral Resources, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Mineral Resources from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, project site, and surrounding area. To determine if the project is located in, or could block access to, a mineral resource area, consult the following maps:

- Environmental and Public Facilities Maps, including:

  - Areas Containing Significant Mineral Deposits; and
  - Oil Field and Oil Drilling Areas.

In addition, use field research, published reports, or other appropriate studies, as available, to assess whether the project is located in a MRZ-2 or other important mineral resource area. Consult with the CDMG as needed.

Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- Whether, or the degree to which, the project might result in the permanent loss of, or loss of access to, a mineral resource that is located in a MRZ-2 or other known or potential mineral resource area; and

- Whether the mineral resource is of regional or statewide significance, or is noted in the Conservation Element as being of local importance.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description of the project site and surrounding area;

- Discussion of the mineral resource on the site, as well as within a regional and statewide context; and

- Summary of the requirements and/or policies for mineral resources that apply to the project site.

Project Impacts

Using the information from the Evaluation of Screening Criteria and the description of the proposed project, assess whether implementation of the project would result in a loss of, or loss of access to, the identified mineral resource. Determine whether alternative means of accessing the mineral resource exist and whether the loss of access would be permanent or temporary. Also, consider the importance of the mineral on a state, regional and local level, in terms of economic value, remaining supply, and feasibility of recovering the resource.

Cumulative Impacts

Review the description of the related projects. Identify those with activities and operations, which are within, or would block access to, a MRZ-2 or other important mineral resource area. Assess whether the related projects would result in the cumulative loss of, or loss of access to the mineral resource(s). Consider the importance of the resource and then consider the impact from the combined effect of the proposed and related projects, in the same manner as described above for Project Impacts.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Design the project so that no or only nonpermanent structures are atop or blocking the mineral resource area; and

- Establish easements to preserve possible future use of the mineral resource.

3. DATA, RESOURCES, AND REFERENCES

CDMG, Southern California Regional Office located at 655 S. Hope St., #700, Los Angeles, California 90017-3231; Telephone: (213) 239-0878. CDMG prepares a Mineral Land Classification Report for the City of Los Angeles area. The criteria used in the classification reports are established by the SMGB and are contained in California Surface Mining and Reclamation Policies and Procedures, Special Publication 51, 1983.

City Planning Department, Environmental and Public Facilities Maps (1996):

- Areas Containing Significant Mineral Deposits illustrates the approximate locations of MRZ-2 areas within the City of Los Angeles; and
- Oil Field and Oil Drilling Areas shows areas known to have supported at least six months of oil production.

Conservation Element of the General Plan, available from the City Planning Department's Central Publications Unit at 200 N. Spring St. 5th Floor, Los Angeles, California 90012; Telephone: (213) 978-1255, Online at: http://www.lacity.org/PLN/.

Selected Legislation

State

Surface Mining and Reclamation Act of 1975

PRC Section 2711 declares that the extraction of minerals is essential to the continued economic well-being of the state and to the needs of the society, and that the reclamation of mined lands is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety.

Exhibit E.4-1
STATE MINING AND GEOLOGY BOARD (SMGB)
MINERAL RESOURCE ZONE (MRZ) CLASSIFICATIONS

The SMGB classification system divides land into four MRZs, reflecting varying degrees of significance. These categories are as follows:

- **MRZ-1**: Areas where available geologic information indicates there is little likelihood for the presence of significant mineral resources;

- **MRZ-2a:** Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present, as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information;

- **MRZ-2b:** Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present, as determined by limited data;

- **MRZ-3a:** Areas containing known mineral occurrences of undetermined mineral resource significance;

- **MRZ-3b:** Areas containing inferred mineral occurrences of undetermined mineral resource significance. Land classified MRZ-3b represents areas in geologic settings that appear to be favorable environments for the occurrence of specific types of mineral deposits; and

- **MRZ-4:** Areas of no known mineral occurrences where geologic information does not rule out either the presence or absence of significant mineral resources.

F. HAZARDS

F.1. RISK OF UPSET/EMERGENCY PREPAREDNESS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

VII.a): Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

VII.b): Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous chemicals into the environment?

VII.e): For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project create a safety hazard for people residing or working in the project area?

VII.f): For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

VII.g): Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

B. Introduction

Hazardous materials generally are chemicals, which have the capability of causing harm during an accidental release or mishap, and are characterized as being toxic, corrosive, flammable, reactive, an irritant or strong sensitizer. The term “hazardous substances” encompasses every chemical regulated by both the United States Department of Transportation's (DOT) "hazardous materials" regulations and the Environmental Protection Agency's (EPA) "hazardous waste" regulations, including emergency response. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment.

Activities and operations that use or manage hazardous or potentially hazardous or explosive substances could create a hazardous situation if an accidental explosion or release of these substances occurred. Individual circumstances, including the type of substance, quantity used or managed, and the nature of the activities and operations, affect the probable frequency and severity of consequences from a hazardous situation. Federal, state, and local laws regulate the use and management of hazardous or potentially hazardous or explosive substances. For example, the Clean Air Act Amendments (CAAA) of 1990 require facilities that exceed federal threshold levels of listed substances to prepare Risk Management Plans. State threshold levels have also been established.

Emergency response plans and emergency evacuation plans specify appropriate actions to be undertaken with regard to emergency situations such as warning systems, evacuation plans/procedures, and emergency action plans. These plans are required by state environmental and occupational health laws and regulations for businesses that use specified hazardous or extremely hazardous materials or involve a potential threatened release of acutely hazardous materials above certain threshold limits. Projects may require new or revised plans due to the construction or expansion of operations.[1]

Creation of human health hazards or exposure of people to existing sources of potential health hazards, including asbestos, is addressed in F.2. HUMAN HEALTH HAZARDS. According to the federal Occupational Safety and Health Administration (OSHA), hazardous chemicals are chemicals that would be a risk to employees if there is exposure in the workplace. They are listed and regulated through OSHA and the California Occupational Safety and Health Administration (CalOSHA).

Toxic air emissions are addressed in B.3. TOXIC AIR CONTAMINANTS.

C. Screening Criteria

- Would the project use or manage hazardous or potentially hazardous or explosive substances (including, but not limited to, oil, pesticides, chemicals, or radiation)?

- Would the project require a new or revised risk management plan, emergency response, or emergency evacuation plan?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Risk of Upset/Emergency Preparedness, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Risk of Upset/Emergency Preparedness from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project. Determine whether operation or construction would involve the use, generation, disposal, transport, or management of potentially hazardous or explosive substances (including, but not limited to, oil, pesticides, chemicals, or radiation) in

[1] *Risks due to earthquake-related hazards are addressed in E.1. GEOLOGIC HAZARDS.*

sufficient quantities to cause a potential hazard. Emergency response and evacuation plans are required for businesses that use hazardous materials or involve a potential threatened release of acutely hazardous materials during operation or construction. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The regulatory framework;
- The probable frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of a hazardous substance;
- The degree to which the project may require a new, or interfere with an existing, emergency response or evacuation plan, and the severity of the consequences; and
- The degree to which project design will reduce the frequency or severity of a potential accidental release or explosion of a hazardous substance.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description of the project site, including any on-site activities or structures;
- Physical description of land uses and activities in the surrounding area and along appropriate transportation routes (generally, from the project site to the nearest designated truck route), including distance to sensitive receptors, such as schools, hospitals, or residential uses;
- Description of emergency response or evacuation plan(s) affecting the project and/or the surrounding area; and
- Summary of the regulatory framework.

Project Impacts

Review the description of the proposed project. Identify the activities and operations which would involve the use, generation, disposal, transport, or management of potentially hazardous or explosive substances (including, but not limited to, oil, pesticides, chemicals, or radiation) in sufficient quantities to cause a potential hazard. Estimate the probable frequency of a potential accidental release or explosion of a hazardous substance and the probable severity of the consequences to people or property that would result. Elements of individual projects, such as the type of substance, the quantity used or managed, and the nature of the activities and operations, affect the risk of accidental explosion or release of hazardous substances. Identify and evaluate project features or components that would reduce the risk associated with use or management of hazardous, potentially hazardous, or explosive substances. Consider the regulatory framework and determine the resulting risk.

Review applicable emergency response or evacuation plans. Determine the impact of the project on implementation of the plan(s) and whether the project would require new or expanded plans to be written, because of project activities or location.

Cumulative Impacts

Review the description of the related projects. Identify those with activities and operations which would involve the use, generation, disposal, transport, or management of potentially hazardous or explosive substances (including, but not limited to, oil, pesticides, chemicals, or radiation). Determine the combined impact from the related and proposed projects, in the same manner as described above for Project Impacts. Determine the cumulative impact on the implementation and adequacy of emergency response or evacuation plans due to increases in the amount of hazardous materials used or the location of the projects.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Use non-toxic or less toxic substances in project construction or operation;

- Investigate opportunities and implement programs to reduce the amount of waste chemicals generated; and

- Redesign operations and or use alternate transportation routes.

3. DATA, RESOURCES, AND REFERENCES

Los Angeles Fire Department (LAFD), Bureau of Fire Prevention and Public Safety; 200 N. Main St., Room 1000, Los Angeles, CA. 90012; Telephone: Research Unit (213) 485-6021.

Los Angeles County Fire Department, Hazardous Materials Division; Telephone: (213) 890-4045.

CalOSHA Consultation Service; 10350 Heritage Park Dr., Suite 201, Santa Fe Springs, CA 90670. Telephone: (562) 944-9366, or Consultation Toll Free at (888) 963-9424.

Hazardous materials are defined and listed in various federal and state laws and regulations. These include, but are not limited to, 40 CFR 302 (hazardous substances), 40 CFR 261 (hazardous waste), 49 CFR 172.101 and appendices (hazardous materials), 22 CCR, Section 66261 (hazardous waste), 20 HSC, Chapter 6.5 (hazardous waste).

Requirements for emergency response plans, emergency evacuation plans, and emergency action plans can be found in numerous state and federal laws and regulations. A partial list includes, but is not limited to, the following: 29 CFR 1910.120; Title 8, CCR Sections 3215, 3220 and 5192; Title 22 CCR Section 66265.50-52; and 20 HSC Sections 25504 and 25534.

Risk Management Plans are required under certain conditions by federal and state laws and regulations. The regulations list substances and threshold levels that trigger preparation of Risk Management Plans. Some relevant federal regulations can be found in 40 CFR 68 et seq, which implement Section 112(r)(7) of the CAAA. Some State regulations are listed in Title 22 CCR Section 66261.113, 20 HSC Section 25531 et seq., Title 8 Section 5189, and Title 19 Sections 2510 and 2620 to 2732.

Work place operations and exposure are included in laws and regulations of OSHA and CalOSHA. See, for example, 29 CFR 1910 and Title 8, CCR, Section 5192(a)(3)(A) through (D) and Section 5155.

F.2. HUMAN HEALTH HAZARDS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

VII.a): Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

VII.b): Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous chemicals into the environment?

VII.c): Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

VII.d): Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

B. Introduction

A variety of activities, operations, and projects can create human health hazards, or expose people to existing sources of potential health hazards. Impacts can result directly from a process or substance (e.g., removal of asbestos containing materials) or indirectly (e.g., transmission of a disease by rodents or insects). Individual circumstances, including the type of hazard and nature of the activities and operations, affect the probable frequency and severity of consequences from the health hazard. Federal, state, and local laws regulate these hazards.

Hazardous materials generally are substances which, by their nature and reactivity, have the capability of causing harm or a health hazard during normal exposure or an accidental release or mishap, and are characterized as being toxic, corrosive, flammable, reactive, an irritant or strong sensitizer. The term “hazardous substances” encompasses chemicals regulated by both the United States Department of Transportation's (DOT) "hazardous materials" regulations and the Environmental Protection Agency's (EPA) "hazardous waste" regulations, including emergency response. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment. A designation of “acutely” or “extremely” hazardous refers to specific listed chemicals and quantities.

A health hazard may also occur where there is contact with or contamination from asbestos-containing material (ACM), which includes both friable ACM and Class I nonfriable ACM. Friable asbestos is more easily airborne than non-friable asbestos. Actions which may cause ACM to be broken, crumbled, pulverized, or reduced to powder include physical wear and disturbance by mechanical force, such as, but not limited to, sanding, sand blasting, cutting or abrading, improper handling or removal, or leaching of matrix binders. Class I nonfriable ACM includes, but is not limited to, fractured or crushed asbestos cement products, transite materials, mastic, roofing felts, roofing tiles, cement water pipes and resilient floor covering. Friable ACM is material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. California Occupational Safety and Health Administration (CalOSHA) defines asbestos-containing construction material as material which contains more than 1/10 of 1 percent asbestos by weight.

Risk of accidental explosion or release of hazardous substances and interference with an emergency response or evacuation plan is addressed in F.1. RISK OF UPSET/EMERGENCY PREPAREDNESS. According to the Occupational Safety and Health Administration (OSHA), hazardous chemicals are chemicals that would be a risk to employees if there were exposure above specified limits in the workplace. They are listed and regulated through OSHA and CalOSHA.

C. Screening Criteria

- Would the project create a health hazard, such as by introducing or directly modifying any of the following (or similar) facilities/activities:

    - Pipeline for hazardous or potentially hazardous or explosive substance which is:

        - More than eight miles in length; or

        - Less than eight miles in length with more than one-half mile subject to activity at any time;

    - Subterranean storage field or above ground tanks;

    - Solid waste facility;

    - Waste water treatment plant;

    - Major utility transmission or distribution facility;

- Land use or activity with recognized vector (e.g., rodents, insects, etc.) management problems; or

- Facility that uses or manages hazardous substances in sufficient quantities to cause a potential hazard?

- Would the project locate people adjacent to a health hazard, such as any of the above uses?

- Would the project create a health hazard through activities that involve the disturbance, removal, storage, or disposal of ACM or lead paints?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Human Health Hazards, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Human Health Hazards from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, project site, and surrounding area. Determine whether any of the uses or activities listed would be part of the project or adjacent to the project site. Health hazards may be created by increasing the frequency or severity of consequences from human exposure to hazardous materials or conditions. Vector management issues may include conditions or activities that attract rodents, insects, or other vectors. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The regulatory framework for the health hazard;

- The probable frequency and severity of consequences to people from exposure to the health hazard; and

- The degree to which project design would reduce the frequency of exposure or severity of consequences of exposure to the health hazard.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description of the project site and surrounding area, identifying potential health hazards and sensitive receptors; and

- Summary of applicable health and safety regulations.

Project Impacts

Review the description of the proposed project, project site, and surrounding area. Identify the activities and operations, which could create a health hazard. Specific circumstances, including the type of hazard, distance between the hazard and people, and the nature of the activities and operations, affect the probable frequency and severity of the consequences. Identify and evaluate project features or components that would reduce the human health risk below that typically associated with the proposed land use or activity. Considering this and the regulatory framework, determine the resulting hazard.

Cumulative Impacts

Review the description of the related projects. Identify those with activities or operations, which would create a health hazard, such as by introducing any of the uses or activities listed in the Screening Criteria to locations where people could be impacted. Determine the combined impact from the proposed and related projects, in the same manner as described above for Project Impacts.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Relocate storage of hazardous substances away from site boundaries;
- Develop a community warning plan;

- Provide spill containment measures;

- Develop a health and safety plan;

- Provide barriers that contain hazards (e.g., appropriate buffers between land uses or air curtains of sufficient strength to control insect vectors); and

- Reduce or eliminate conditions that exacerbate the frequency or severity of occurrences (e.g., avoid landscaping, such as ivy, which can provide nesting areas for rodents; prevent ponding of water which can provide breeding areas for mosquitos).

3. DATA, RESOURCES, AND REFERENCES

Los Angeles County Department of Health Services; 313 N. Figueroa St., Los Angeles, CA 90012. Telephone: (213) 240-8144.

South Coast Air Quality Management District (SCAQMD), Rules and Regulations. Regulation X – Subpart M and Rules 470, 1108, 1108.1, 1120, 1403, and 1414. Information regarding a particular rule or regulation may be obtained by calling the SCAQMD at (909) 396-2000 or 1-800-CUT-SMOG.

Federal extremely hazardous substances and planning thresholds are listed in 40 CFR 355, Appendices A and B. State extremely hazardous substances and planning thresholds are referenced in 19 CCR 2729(a). State acutely hazardous materials and threshold quantities are listed in 8 CCR 5189, Appendix A and referenced in 20 HSC 25532.

State extremely hazardous wastes are asterisked in 22 CCR, Div. 4.5, Chapter 11, Appendix X and referred to in 22 CCR 66261.110 and 66261.113.

State and federal acutely hazardous wastes are listed in 22 CCR 66261.33(c) and 40 CFR 261. Subpart D, respectively.

Asbestos-containing construction material is defined in 8 CCR 1529(b), a CalOSHA regulation.

See also F.1. RISK OF UPSET/EMERGENCY PREPAREDNESS.

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G. WATER RESOURCES

G. WATER RESOURCES

G.1. SURFACE WATER HYDROLOGY

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

VIII.c): Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

VIII.d): Would the project 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- or off-site?

VIII.e): Would the project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff?

VIII.g): Would the project 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?

VIII.h): Would the project place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

VIII.i): Would the project 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?

XVI.b): Would the project result in the construction of new water or wastewater treatment facilities, the construction of which could cause significant environmental effects?

XVI.c): Would the project 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?

B. Introduction

This section addresses the potential surface water hydrology impacts that may be associated with the implementation of a project, including flood hazard impacts and changes in the amount or movement of surface water. Surface water impacts may occur when a project results in either

increased on- or off-site storm water flows, changes in absorption rates, alterations to existing surface water flow patterns or directions (including the intake and use of water from a surface water body), or other factors which result in a changed rate of flow. Surface waters include lakes, rivers, streams, reservoirs, the ocean, and similar water bodies. Flood hazard is defined as flooding which occurs during a storm event, particularly the 50-year developed storm event.[1] Impacts may also occur when development of a project results in the depletion of natural flood plain values through development of land within a flood plain area, which is accounted for in the 50-year developed storm event. These impacts typically result in an increased potential for flood hazard.

C. Screening Criteria

- Is the project located within a 100-year flood plain, an area designated as hillside (as identified in the Los Angeles Municipal Code (LAMC) Section 91.7001), or other known flood-prone area?

- Would run-off from the project site drain onto an unimproved street or on to adjacent properties other than public right-of-way (ROW)?

- Would project implementation affect a surface water body such that the amount of surface water, current, course or direction of flow would change?

- Would the run-off factor for the developed project site exceed the percentage of imperviousness for the existing land use category, as contained in the Bureau of Engineering Manual, Part G, Storm Drain Design?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Surface Water Hydrology, and review the associated Methodology to Determine Significance, as appropriate.

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[1] *The 50-year developed storm event is the maximum predicted rainfall event used by the City and County of Los Angeles for determining storm water runoff quantities utilized in the design of the local storm drain system. This specification has been incorporated in the Bureau of Engineering Manual Part G, Storm Drain Design. The year refers to a calculated storm magnitude, which would occur with an approximate frequency of every 50 years. "Developed" refers to hydrology calculations, which assume that all land is developed according to its general plan/zoning designation. A "developed condition" permeability factor is assigned to each parcel, even if it is currently vacant, in order to design adequate storm drain facilities for future conditions.*

A "no" response to each of the preceding questions indicates that there would normally be no significant impact on Surface Water Hydrology from the proposed project.

D. Evaluation of Screening Criteria

Identify the location of the proposed project site using the Environmental and Public Facilities Maps (100 Year and 500 Year Flood Plains and Landslide Inventory and Hillside Areas) and/or relevant Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). In addition, use the United States Geological Survey (USGS) topographic map(s) for the site and any available project or field study information to determine the potential for flooding.

Determine whether changes to the project site would cause run-off to drain on to an unimproved street or on to adjacent properties other than public ROW. Review the proposed activities and geological conditions of the project site and surrounding area to determine the project's potential to affect the existing current, direction of flow, or amount of water in a surface water body, including lakes, rivers, streams, or the ocean. Consult the Department of Public Works Bureau of Engineering, Los Angeles County Flood Control District and the Army Corps of Engineers (ACOE), as necessary.

Review the project plans and identify the percentage of imperviousness for the site, after project completion. Compare to the percentage for the existing zoning classification reproduced in Exhibit G.1-1. See the Bureau of Engineering Storm Drain Manual if assistance is needed.

Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A proposed project would normally have a significant impact on surface water hydrology if it would:

- Cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources;

- Substantially reduce or increase the amount of surface water in a water body; or

- Result in a permanent, adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow.

B. Methodology to Determine Significance

Environmental Setting

Describe the project site, including the topography, soil types, location and size of impermeable surfaces (buildings, paving, hardscape, parking lots), location within a flood plain, and the size and location of drainage facilities. Note the existing direction of flow of surface water runoff from the site. Identify storm drains and surface water bodies to which the runoff drains directly or eventually.

Project Impacts

Determine whether the project would result in a change in water flows during a projected 50-year developed storm event that would flood the site or off-site properties, upstream or downstream and cause harm to people or damage to property or sensitive biological resources (see C. BIOLOGICAL RESOURCES for a definition of sensitive biological resources). Consider topography, soil types, location and size of impermeable surfaces, the size and location of drainage facilities, and flood control facilities. Mechanisms of flood control include, but are not limited to: dams, flood control basins, levees, channelization, pumping stations, upstream retention, diversion of run-off, and spreading grounds. Also, consider the nature of the land uses involved when determining the likelihood of harm or damage. (The City has designated certain land uses as appropriate to locate within a defined flood plain.)

Determine whether the project would result in an increase or decrease of water in a surface water body during project construction or operation, and whether project-related changes in the current or direction of flow of water would be permanent and adverse. Consult with the Bureau of Engineering, the Los Angeles County Flood Control District, or the ACOE, as appropriate.

Cumulative Impacts

Identify the related projects that could affect the same surface water body or flood plain as the proposed project. Using the methodology identified in Project Impacts, determine the combined effect of the proposed and related projects. Consult with the Bureau of Engineering and other flood control agencies, as appropriate.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Construct new or improved existing storm water management facilities to reduce or retard the amount of peak runoff from the project site. Such measures may include the construction of detention basins or other structures that will slow down or delay the peak flow of storm water runoff from the site;
- Redesign the project such that structures and other important facilities that would be adversely affected by flooding are no longer located within flood hazard areas or so that the floodway open space is preserved;

- Raise the building pad or ground floor of proposed structures to an elevation above flood prone areas; and

- Reduce impervious surfaces and materials. Maximize landscaped and natural areas.

3. DATA, RESOURCES, AND REFERENCES

Bureau of Engineering Public Counters. Construction Services Center, 4th Floor, 201 North Figueroa Street, Los Angeles, California 90012; Telephone: (213) 977-6032. Valley District, Van Nuys Municipal Building, 14410 Sylvan Street, 2nd Floor, Van Nuys, California 91401; Telephone: (818) 756-8421. Harbor District, San Pedro Municipal Building, 638 South Beacon Street, Room 400, San Pedro, California 90731; Telephone: (310) 732-4677. West Los Angeles District, 1828 Sawtelle Boulevard, 3rd Floor, Los Angeles, CA 90025-5516; Telephone: (310) 575-8384.

Bureau of Engineering, Structural and Technical Engineering, 650 South Spring Street, Room 400, Los Angeles, California 90014-1913; Telephone: (213) 847-4010.

Department of Building and Safety, Construction Services Center, 201N. Figueroa St., 4th Floor, Los Angeles, California 90012; Telephone: (213) 847-8774.

Los Angeles County Flood Control District, 900 South Fremont, Alhambra, California 91803; Telephone: (626) 458-5100.

ACOE, 911 Wilshire Boulevard, #1525, Los Angeles, California 90017; Telephone: (213) 452-3908.

Bureau of Engineering Manual, Part G, Storm Drain Design.

Flood Insurance Rate Maps (FIRMs) (10 CFR Section 1022.11, 43 CFR Section 64.3). FIRMs are prepared by the Federal Insurance Administration of the Department of Housing and Urban Development (HUD) after a risk study for a community has been completed and the risk premium rates have been established. The maps indicate the risk premium zones applicable in the community and when those rates are effective. They are used in making flood plain determinations and to determine if a proposed action is located in the base or critical action flood plain, as appropriate.

USGS topographic maps.

City Planning Department, Environmental and Public Facilities Maps (1996):

- 100 Year and 500 Year Flood Plains; and
- Landslide Inventory and Hillside Areas.

Exhibit G.1-1
DEVELOPMENT CLASSIFICATIONS
(Typical Percentage of Imperviousness, by Zone)

Zoning Classification	Type of Development	I_d
	Park (lawn areas only)	15
	Undeveloped Hillside or Mountainous Areas[a]	35
A1, A2, RA	Agricultural and One-Family Dwelling	35
RE11, RE15, RE20, RE40	One-Family Dwelling - Level Area	35
	- Hillside Area	50
R1, RD1.5, RD2	One-Family Dwelling - Large Hillside Lot	50
RS, R1, RE9	One-Family Dwelling - Level Area	40
	- Hillside Area	70
R2, RW1, RW2, RD3, RD4, RD5, RD6	Multiple Dwelling	60
R3	Multiple Dwelling	70
R4, R5, P, PB, CR, C1, C2, C4, C5, CM, MR1, MR2, M1, M2, M3	Multiple Dwelling, Parking, All Commercial and Manufacturing	100
	Playgrounds, Schools	100
RPD[b]	¾ of land area with I_d per development above; ¼ of land area with I_d for park	

Notes:

I_d is the percentage of imperviousness of a sub-area.

[a] To be used in computing runoff prior to development regardless of zoning classification.

[b] Residential Planned Development – Investigate development (in field or from plans) before allocating value of I_d

Source: Bureau of Engineering Manual Part G, Storm Drain Design.

G.2. SURFACE WATER QUALITY

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

VIII.a): Violate any water quality standards or waste discharge requirements?

VIII.b): Substantially deplete groundwater supplies or interfere substantially with ground water recharge such that there would be a net deficit in aquifer volume of 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)?

VIII.C): substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

VIII.g): Place housing within a l00-year flood hazard area as mapped on a federal flood hazard Boundary or flood Insurance Rate Map or other flood hazard delineation map?

B. Introduction

Water quality may be impacted by pollutants discharged directly into receiving waters. Industrial flows discharged from manufacturing, cleaning, or cooling operations, and activities such as dewatering of groundwater encountered during construction can usually be directed to an outfall or pipe and are therefore categorized as "point sources."

Water quality may also be affected by pollutants found in surface water runoff originating from a wide range of dispersed sources, or "nonpoint sources." In rural settings, such as agricultural or forestland, this runoff is treated as non-point sources. In urban settings, this runoff is typically guided into a "storm drain system" and ultimately discharged to the receiving waters at a specific location(s). Hence, these storm drain system discharges are treated as point sources. Stormwater runoff is part of the natural hydrologic cycle. Drainage patterns and pollutant concentrations are frequently altered through processes such as urbanization and agriculture. Recent studies have indicated that stormwater runoff is a significant source of water pollution, which may result in declines in fisheries and other aquatic life, restrictions on recreational activities, and general

impairment of the existing and potential beneficial uses of receiving waters. "Stormwater runoff" encompasses "urban runoff," which includes the discharge of pollutants to water bodies from such non-storm (or "dry weather") related activities as irrigation, hosing sidewalks, draining swimming pools, and washing cars. Dry weather flows also include illegal discharges to the storm drain system, such as unauthorized connections, leaks, or spills.

Regulatory Framework

In 1948, Congress enacted the Water Pollution Control Act, which has since been amended significantly on several occasions, and is now commonly referred to as the Clean Water Act (CWA). The CWA delineates a national permitting system for point discharges known as the National Pollutant Discharge Elimination System (NPDES). NPDES is the basic regulatory and enforcement tool available under the CWA. NPDES permits typically incorporate specific discharge limitations for point source discharges to ensure that dischargers meet permit conditions and protect state-defined water quality standards. California is authorized to administer key components of the federal water quality management program in the state.

The existing NPDES framework was expanded in 1987 to regulate stormwater runoff (discharges) originating from municipal and industrial sources. The Los Angeles Regional Water Quality Control Board (LARWQCB) is authorized to implement a municipal stormwater-permitting program as part of its general NPDES authority, as an agent of the State Water Resources Control Board (State Board). Municipal permits typically require permittees to develop an areawide stormwater management plan, implement best management practices (BMPs) and perform stormwater monitoring. The City of Los Angeles is a co-permittee under the County of Los Angeles municipal permit.

In general, environmental impacts to surface water quality are assessed in relation to the existing characteristics of the body of water that would receive the discharge (receiving water body), including its size, flows, designated beneficial uses, and present concentrations of pollutants. Increased concentrations of toxic metals, organic compounds, suspended solids, nutrients, pathogenic microorganisms and other pollutants, or changes in temperature may result in sedimentation, eutrophication, habitat degradation, and/or threats to public health.

For point source discharges from proposed projects, the nature of the discharge is directly related to the process that produces the discharge. Nonpoint source impacts to receiving waters during project operation are related to such factors as land use type, size, design, and intensity. Construction activities may also result in the discharge of stormwater runoff pollutants, including dissolved solids, to receiving waters. If a project includes point source discharges, the

pollutants associated with the discharges may need to be identified and quantified for an NPDES permit from the LARWQCB.

Major surface water bodies in the City of Los Angeles include: the Los Angeles River, Tujunga Wash, Ballona Channel, Santa Monica Bay, and San Pedro Bay. In addition, the City is served by an extensive network of storm drains which either drain directly to the Santa Monica Bay, San Pedro Bay, or to waterways that ultimately drain to Santa Monica or San Pedro Bays.

C. Screening Criteria

Would the proposed project:

- Involve or allow an activity or process that would result in a point source discharge to a receiving water body?

- Create conditions, which may result in soil erosion, sediment runoff or nonpoint sources of contamination?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Surface Water Quality, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Surface Water Quality from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, project site, and surrounding area. Consider the location, size and slope of the site and the type, size, and intensity of land use(s) proposed. A receiving water body may include rivers, lakes, reservoirs, the ocean and others, as appropriate. Evaluate activities such as manufacturing, processing, cleaning, grading, cooling, dredging, dewatering of groundwater (during construction or operation), auto-related uses (e.g., parking[1], auto

[1] *The City of Los Angeles CEQA Guidelines include a categorical exemption for surface parking lots of up to 110 spaces (equivalent to 35,310 square feet).*

repair), storage of raw materials and/or finished products, use or storage of solid waste or hazardous/toxic materials, agriculture, waste water treatment operations, and landfills. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact on surface water quality if discharges associated with the project would create pollution, contamination or nuisance as defined in Section 13050 of the California Water Code (CWC) (see definitions below) or that cause regulatory standards to be violated, as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include a general description of the project site and adjacent areas to which runoff currently drains directly or eventually. Describe the locations of on- or off-site water bodies and existing drainage outlets (i.e., storm drains). Address the existing water quality of water bodies to which the site drains and applicable adopted water quality objectives or standards. Water quality is increasingly being addressed through watershed programs. Within the next few years TMDLs (Total Maximum Daily Loads) will be developed for local watersheds, and the impact of projects on the TMDL allocations will need to be evaluated.

Project Impacts

The CWC includes the following definitions:

"**Pollution**" means an alteration of the quality of the waters of the state to a degree which unreasonably affects either of the following: 1) the waters for beneficial uses or 2) facilities which serve these beneficial uses. "Pollution" may include "Contamination."

"**Contamination**" means an impairment of the quality of the waters of the state by waste to a degree, which creates a hazard to the public health through poisoning or through the spread of

disease. "Contamination" includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.

"**Nuisance**" means anything which meets all of the following requirements: 1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; 2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and 3) occurs during, or as a result of, the treatment or disposal of wastes.

Review the description of the proposed project, project site and surrounding area. Determine the nature, quantity, duration, and affect of project discharges. Describe any proposed treatment of the discharge. Assess the impact on the receiving water body relative to existing conditions and any applicable water quality objectives or standards. Consider factors such as the size of the site as a percentage of the entire watershed and the predominant land uses in the watershed. The percentage of imperviousness factors reproduced in Exhibit G.1-1[2] may be used to evaluate the relative amount of runoff from various land use types. Consult with the Bureau of Engineering, the Los Angeles County Flood Control District, the LARWQCB, the Environmental Protection Agency (EPA), or the Army Corps of Engineers (ACOE), as appropriate. A professional consultant may be required.

Cumulative Impacts

Review the description of the related projects. Identify those that are in the same watershed or that drain to the same water body as the proposed project. Evaluate the combined impact on the receiving water body of related project discharges in combination with the proposed project discharge as described for project impacts.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Establish an erosion control plan prior to construction. Include such measures as:

[2] *Exhibit G.1-1, Development Classifications, is found in G.1. SURFACE WATER HYDROLOGY.*

- Use of natural drainage, detention ponds, sediment ponds, or infiltration pits to allow runoff to collect and seep into the ground at a rate which would reduce or prevent downhill erosion,

- Use of barriers to direct and slow the rate of runoff and to filter out large-sized sediments,

-

- Use of downdrains or chutes to carry runoff from the top of a slope to the bottom, and

- Control the use of water for irrigation so as to avoid off-site runoff;

- Employ permeable paving materials that permit water penetration to a soil depth of 18 inches or more, or provide a coefficient of runoff of 0.6 or less;

- Include properly designed and maintained biological oil and grease removal systems in new storm drain systems to treat water before it leaves the project site;

- Properly store hazardous materials to prevent contact with precipitation or runoff;

- Develop and maintain effective monitoring and cleanup program for spills and leaks of hazardous materials;

- Place equipment to be repaired or maintained in uncovered areas on a pad of absorbent material to contain leaks, spills, or small discharges;

- Provide periodic and consistent removal of landscape and construction debris;

- Sweep parking lots at regular, frequent intervals to remove debris. Remove any significant chemical residue left by vehicles by appropriate methods;

- Use non-toxic alternatives for such applications as insecticides, herbicides, rodenticides, and fertilizers. Apply chemical controls only when precipitation is not forecast for the area;

- Use permeable surfaces (such as grassy swales, green strips near parking areas, or porous pavement) to allow infiltration to reduce the peak flow of runoff and minimize the transport of pollutants to receiving waters;

- Install detention basins to remove suspended solids by settlement. Fit basins with trash racks at the inlets to catch floating solids; and

- Periodically monitor the water quality of runoff before discharge.

3. DATA, RESOURCES, AND REFERENCES

For updated information about City ordinances and permit requirements for surface water runoff, contact the Bureau of Engineering, Stormwater Management Division, at 650 South Spring Street, Suite 700, Los Angeles, California 90014; Telephone: 213-847-6350.

LARWQCB Waste Discharge Requirements, Stormwater/Urban Runoff Discharge for Los Angeles County and Co-Permittees, Water Quality Order No. 96-054, NPDES Permit No. CAS614001.

LARWQCB Water Quality Control Plan, June 13, 1994.

National Research Council, Monitoring Southern California's Coastal Waters 1990.

Santa Monica Bay Restoration Project, State of the Bay 1993, January 1994.

State Board, General Permit for Stormwater Discharges Associated With Construction Activities, Water Quality Order No. 92-06-DWQ; General Permit No. CAS000002.

State Board, General Permit for Stormwater Discharges Associated With Industrial Activities Excluding Construction Activities, Water Quality Order No. 91-13-DWQ (as amended by Water Quality Order No. 92-12-DWQ); General Permit No. CAS000001.

State Board, Ocean Plan, August 1995.

State Board, Stormwater Bulletin Board Service. Monitoring data for various watersheds in California.

State Board, Stormwater Quality Task Force, California Stormwater Best Management Practice Handbooks, March 1993. Provides general guidance in developing and implementing BMPs for stormwater quality for municipal, industrial and construction activities. Primarily

addresses the requirements of the stormwater program as developed from section 402 (p) of the CWA.

EPA, Office of Wastewater Enforcement and Compliance, Draft Stormwater Pollution Prevention for Industrial Activities, 1992.

EPA, Water Planning Division, Final Report of the Nationwide Runoff Program, December 30, 1983.

Regulatory Framework

The State Board has the overall responsibility to develop and implement state water quality control policy and is the EPA-designated agency for administering applicable federal CWA programs, including adopting water quality standards for waters of the state. The California Water Code (CWC) establishes nine administrative areas in the State, which are administered by Regional Water Quality Control Boards (RWQCB), which adopt Water Quality Control Plans for their respective regions. The Water Quality Control Plans designate beneficial uses for each receiving water body and establish water quality objectives to ensure reasonable protection of the beneficial uses. The primary method of plan implementation for point discharges is through the issuance of permits.

The owner or operator of any facility discharging or proposing to discharge waste to surface waters (typically from a point source) is required to apply for an NPDES permit with the appropriate RWQCB. Effluent limits are set by the RWQCB for each potential pollutant in accordance with applicable state and federal water quality criteria for the receiving water body. Within the City, the criteria are contained in the Los Angeles Region Basin Plan. The owner or operator of any facility discharging or proposing to discharge waste that may affect groundwater quality or from which waste may be discharged in a diffused manner (e.g. erosion from soil disturbance) must first obtain Waste Discharge Requirements (WDR) from the appropriate RWQCB.

The State Board has issued two general stormwater discharge permits to cover industrial and construction activities, which are required for specific industry types based on standard industrial classification and construction activities on one acre or more or less than one acre but are part of a larger common plan of development that in total disturbs one or more acres. The RWQCB oversees implementation and enforcement of the general permits. The Bureau of Sanitation and Watershed Protection, Stormwater Management Division, are the agencies responsible for overseeing implementation of permit responsibilities for the City. Presently, under

the General Construction Stormwater Permit, projects of one acre or greater are required to incorporate, to the maximum extent possible, permanent or post-construction BMPs in project planning and design as discussed in the current permit, which was approved in December 2001.

Selected Legislation

Federal

NPDES (40 CFR Sec. 122.1)

The NPDES program requires permits for the discharge of pollutants from any point source into waters of the United States. These point sources include: concentrated animal feeding operations, concentrated aquatic animal production facilities, discharges into aquaculture projects, and discharges of stormwater.

Federal Water Pollution Control Act (Clean Water Act - CWA) (33 U.S.C. 1251)
Clean Water Act Amendments of 1972, PL 92-500
Clean Water Act Amendments of 1977, PL 95-217
Clean Water Act Amendments of 1987, PL 100-4

The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.

State

CWC, Division 7 Water Quality

This division of the Code addresses: the conservation, control and utilization of water resources; water quality; and charges the state and regional water boards with coordination and control of water quality. Section 13050 defines pollution, contamination and nuisance, as well as other terms used in the water code.

G.3. GROUNDWATER LEVEL

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

VIII.b): Would the project 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)?

VIII.f): Would the project otherwise substantially degrade water quality?

VIII.g): Would the project 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?

VIII.i): Would the project 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?

VIII.j): Would the project inundation by seiche, tsunami, or mudflow?

B. Introduction

The City of Los Angeles overlies eight groundwater basins as identified in the Los Angeles Region Water Quality Control Plan, adopted by the Los Angeles Regional Water Quality Control Board (LARWQCB), and designated by the California Department of Water Resources (DWR). The Los Angeles Coastal Plain includes the West Coast Basin, the Central Basin, the Santa Monica Basin, and the Hollywood Basin. The San Fernando Valley overlies the San Fernando Basin and portions of the Eagle Rock, Verdugo, and Sylmar Basins. These groundwater basins are depicted in Exhibits G.3-1 and G.3-2. The Los Angeles Region Water Quality Control Plan identifies several beneficial uses common to all of these basins including municipal and domestic supply, industrial process and industrial service supply, and agricultural supply.

Groundwater is a major component of the water supply for many public water suppliers in the Los Angeles metropolitan area, and is also used by private industries, as well as a limited number of

private agricultural and domestic users. Local groundwater provides approximately 15 percent of the total water supply of the City of Los Angeles. The Los Angeles Department of Water and Power (DWP) owns and operates these wells and can act as lead agency under CEQA for projects involving wells and water production facilities. Production rights are adjudicated in three of the four major groundwater basins (West Coast, Central, and San Fernando Basins), and are monitored and controlled by a Watermaster. The DWP serves as the Watermaster for the San Fernando Basin. Production rights are not adjudicated in the Santa Monica and Hollywood basins.

Each groundwater basin is replenished by deep percolation of precipitation and return water from irrigation. Individual basins may also be replenished by surface spreading of local runoff, imported water and reclaimed water; injection of imported water (for protection against saline intrusion); and subsurface inflow from other basins. The major spreading areas are generally on the higher portions of the valley floor near the mountain front, or along major streams or channels.

Water table changes and/or changing the direction of flow may result from extracting groundwater for water supply needs or site dewatering, increasing or decreasing groundwater recharge, intercepting and removing groundwater from cuts or excavations, or remediation of contaminated groundwater. Earthwork cuts or excavations in areas of shallow groundwater may necessitate the use of temporary or permanent removal of groundwater by dewatering systems.[1] Groundwater recharge may be reduced if an area currently available for spreading of stream runoff is reduced, if permeable streambeds are lined, or if permeable areas located above groundwater basins are replaced by hard surfaces (paving, buildings, etc.). Groundwater recharge may be increased if larger permeable areas are created.

Possible impacts resulting from lowering the water table include changes in the production of nearby existing wells, reduced basin yield, salt water intrusion (see G.4, GROUNDWATER QUALITY), subsidence (see E.1., GEOLOGIC HAZARDS), stream flow reduction (see G.1., SURFACE WATER HYDROLOGY), impacts to vegetation, and changes in the direction and rate of travel of existing contaminants in the groundwater. Possible impacts of raising the water table include seepage or other impacts on below ground structures, structural damage from settling or expansion of clay soils (see E.1., GEOLOGIC HAZARDS), and changes in the direction and rate of flow of contaminants including saltwater intrusion (see G.4. GROUNDWATER QUALITY).

[1] *Permanent removal of groundwater allocated to DWP requires an agreement with DWP.*

C. Screening Criteria

- Does the project include the installation of production water wells or a permanent groundwater extraction or dewatering system in a groundwater basin used for potable water supply purposes?

- Does the project include planned groundwater recharge through surface spreading or injection?

- Would the project involve cuts or excavation that would intercept an aquifer?
- Would the project reduce permeable areas overlying a spreading ground used for groundwater recharge?

- Would the run-off factor for the developed project site exceed the percentage of imperviousness for the existing land use category, as contained in Part G of the Bureau of Engineering Manual, Storm Drain Design[2]?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Groundwater Level, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to each of the preceding questions indicates that there would normally be no significant impact from the proposed project on Groundwater Level.

D. Evaluation of Screening Criteria

Review the description of the proposed project, project site and surrounding area. Locate any underlying groundwater basins, aquifers, and spreading grounds. Review Exhibits G.3-1 and G.3-2, and the Environmental and Public Facilities Map, Groundwater Basins and Groundwater Contamination Areas, as necessary. Identify any proposed water wells, recharge activities, permanent groundwater extraction or dewatering systems, or any proposed cuts or excavations that may intercept an aquifer. Evaluate whether there would be a reduction in permeable areas overlying a spreading ground used for groundwater recharge. Determine the percentage of imperviousness and review Exhibit G.1-1.[2] Compare this information with the Screening Criteria.

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2 *Percentage of imperviousness factors from the Bureau of Engineering Manual are reprinted in G.1. SURFACE WATER HYDROLOGY in Exhibit G.1-1.*

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact on groundwater level if it would:

- Change potable water levels sufficiently to:
  - Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or to respond to emergencies and drought;
  - Reduce yields of adjacent wells or well fields (public or private); or
  - Adversely change the rate or direction of flow of groundwater; or
- Result in demonstrable and sustained reduction of groundwater recharge capacity.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Identification and description of the underlying groundwater basin(s), including the level, quality, direction of flow, and existing uses of the water;
- Location, existing uses, production capacity, quality, and other pertinent data for spreading grounds and potable water wells in the vicinity (usually within a one mile radius);
- Area and degree of permeability of soils on site; and
- Ongoing or planned groundwater remediation activities.

Project Impacts

Review the description of the proposed project and the information from the Evaluation of Screening Criteria.

Determine which activities could impact the groundwater resources by considering the following factors:

- The rate, duration, location and quantity of extraction, dewatering, spreading, injection, or other activities;

- The projected reduction in groundwater resources and any existing wells in the vicinity (usually within a one mile radius); and

- The projected change in local or regional groundwater flow patterns.

For subsurface cuts and excavation that intercept an aquifer, determine the projected change in localized flow and the quantities of potable groundwater that would require removal, if any. Note impacts to structures from seepage or other potential conditions and determine whether groundwater removals would be temporary or permanent.

If there is a projected loss of a large permeable area, including permeable streambeds, which historically allowed water to percolate, address the following:

- The total amount of permeable area that would be covered or lost;

- The average reduction in volume of recharge water due to project implementation (short-term and long-term, if applicable); and

- The lost recharge potential as compared to the adjudicated or estimated safe yield of the underlying groundwater basin.

Consult with local and regional water agencies and utilities, as needed.

Cumulative Impacts

Review the list of related projects and identify those located over the same groundwater basin or near the same recharge area or well(s) as the proposed project that could change potable water levels or reduce groundwater recharge capacity. Analyze the potential combined effects of the related projects with the proposed project, using the method described in Project Impacts.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Relocate proposed wells;
- Compensate existing, adjacent well owners who would be affected by the proposed project;
- Reduce proposed impermeable areas that would result in loss of recharge capacity;
- Construct replacement recharge capacity at an alternative location in the same basin;
- Avoid areas of shallow groundwater when locating roadways, underground trenches, and buildings requiring subsurface foundations; and
- If use of areas with shallow groundwater is deemed unavoidable, develop a dewatering plan, subject to review and approval of the City. The plan may include such measures as:
  - Modify the structural design of the project so that a permanent dewatering system is not needed, where feasible;
  - Removal of all standing water from excavations during construction;
  - Installation of subsurface drains;
  - Construction of retaining walls to carry water collecting behind the wall to a controlled drainage system;

- Sealing bedrock fractures; or
- Returning the water to the groundwater basin by injection well, where feasible.

3. DATA, RESOURCES, AND REFERENCES

LADWP/Upper Los Angeles River Area (ULARA) Watermaster, 111 North Hope Street, Los Angeles, California 90012-2694; Telephone: (213) 367-0896.

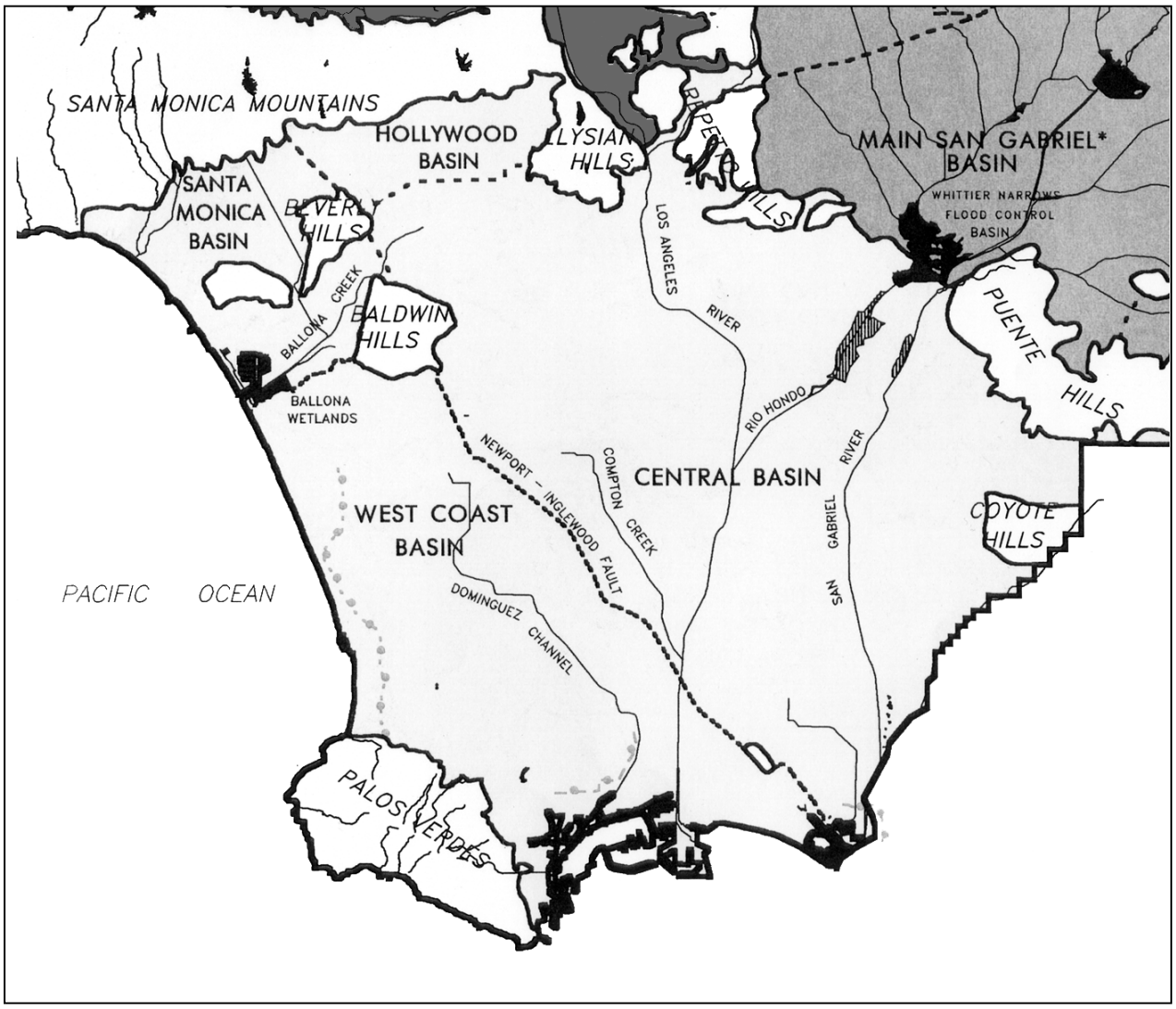
Adjudication Documentation, Report of Referee, Superior Court, Los Angeles County No. 650079, July 1992. A thorough description of the groundwater resources of the San Fernando Valley area.

DWR, Annual Watermaster Reports, published for the Central Basin, West Coast Basin, and Upper Los Angeles River Basin (covering the San Fernando Basin).

DWR Bulletin 104: Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, June 1991. The most comprehensive study of the area resources for the Coastal Plain Basins.

City Planning Department, Environmental and Public Facilities Maps (1996): Groundwater Basins and Groundwater Contamination Areas.

LARWQCB, Water Quality Control Plan, June 13, 1994.

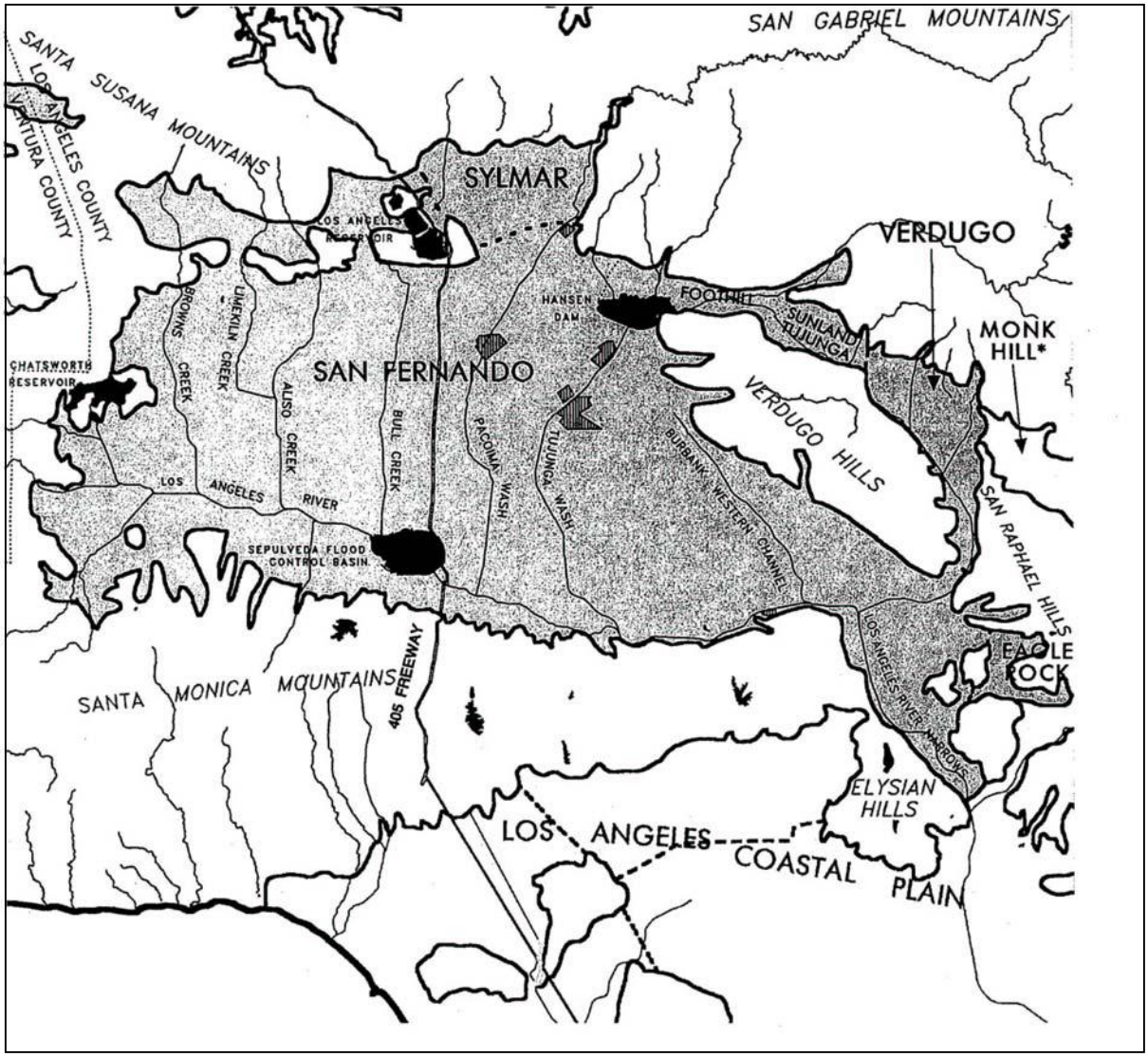


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N

Exhibit G. 3-1
Los Angeles Basin

_____ Regional Boundary
_____ Streams
* The main San Gabriel is a part of the San Gabriel groundwater basins



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N

Exhibit G. 3-2
San Fernando Basin

_____ Regional Boundary
_____ Streams
..... County Line

G.4. GROUNDWATER QUALITY

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

VIII.ga): Would the project 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?

VIII.h): Would the project place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

B. Introduction

The City of Los Angeles overlies eight groundwater basins, as identified in the Los Angeles Region Water Quality Control Plan, adopted by the Los Angeles Region Water Quality Control Board (LARWQCB) and designated by the California Department of Water Resources (DWR). The Los Angeles Coastal Plain includes the West Coast Basin, the Central Basin, the Santa Monica Basin and the Hollywood Basin. The San Fernando Valley overlies the San Fernando Basin, and portions of the Eagle Rock, Verdugo and Sylmar Basins. These groundwater basins are depicted in Exhibits G.3-1 and G.3-2[1].

The Los Angeles Region Water Quality Control Plan identifies a number of beneficial uses common to all of these basins, including municipal and domestic supply, industrial process and industrial service supply, and agricultural supply. It also establishes water quality objectives for a number of constituents of each groundwater basin to protect these uses, identifies existing water quality problems in general terms, and sets forth an implementation plan to maintain or improve groundwater quality to allow the objectives to be met.

Historically, the groundwater basins have become contaminated as a result of human activities and natural phenomena. Contamination can result from spills, leaks, leachate, or discharges of contaminants; returns from agricultural or urban irrigation; salt water intrusion; septic system and wastewater discharges; and other sources. Areas of contaminated groundwater are relatively well-

documented in the Los Angeles area by several agencies that regulate, use or manage groundwater supplies, including the LARWQCB. The Environmental and Public Facilities Map, Groundwater Basins and Groundwater Contamination Areas, indicates major known areas of contamination underlying the City.

Degradation of groundwater quality may result from a variety of activities, including: the discharge or application of wastewater, groundwater, or solid waste to the land surface or subsurface areas; groundwater injections or withdrawals, or other activities that could result in a change in the flow direction of existing plumes of groundwater contamination or saltwater intrusion; drilling that intercepts areas of groundwater contamination; leaking underground or above-ground storage tanks; or accidental spills or releases or other hazardous materials on permeable soils. (See also G.3. GROUNDWATER LEVEL.)

Responsibility for implementation of the Water Quality Control Plan to protect groundwater quality rests with the LARWQCB. A primary mechanism of implementation used by the LARWQCB is the issuance and enforcement of permits (Waste Discharge Requirements, or WDRs) for discharge of any wastewater, groundwater, or contaminants to the ground surface or subsurface. Discharges that require WDRs include, but are not limited to: septic systems, dewatering systems, holding/equalization tanks, evaporation ponds, percolation ponds and leachfields, landfills, land treatment units (bioremediation), oil field brine disposal and land disposal of wastes. Additionally, the LARWQCB, California Department of Toxic Substances Control (DTSC), and the Environmental Protection Agency (EPA) can investigate, regulate, and remediate groundwater contamination (e.g. Superfund projects).

C. Screening Criteria

- Would the project include the installation or operation of water wells,[2] or any groundwater extraction or recharge system, that is in the vicinity (usually within one mile) of the coast, an area of known groundwater contamination or seawater intrusion, a municipal supply well or spreading ground facility?

- Would the project include surface or subsurface application or introduction of potential contaminants or waste materials during construction or operation? Examples of such projects include: on-site disposal systems (septic systems), holding/equalization tanks, evaporation ponds, underground or above-ground storage tanks, percolation ponds and

[2] *Other than monitoring wells and wells intended to remediate existing, or prevent future, groundwater contamination or saltwater intrusion.*

leachfields, landfills and other land surface waste disposal facilities, land treatment units (bioremediation), oil field brine disposal, and agricultural activities.

- Could the project result in releases or spills of contaminants that could reach a groundwater recharge area or spreading ground or otherwise reach groundwater through percolation?

- Would the project involve drilling to or through a clean or contaminated aquifer?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Groundwater Quality, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Groundwater Quality from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project site, construction and operational activities and the relationship of the site to underlying groundwater basins. Review Exhibits G.3-1 and G.3-2,[3] and the Environmental and Public Facilities Map, Groundwater Basins and Groundwater Contamination Areas, or other relevant maps, reports, and studies to identify groundwater recharge areas, spreading grounds, aquifers, or known areas of contamination. Identify any proposed installation or operation of water wells; groundwater extraction or recharge systems; direct or indirect introduction of contaminants; or drilling to or through an aquifer. Compare this information to the Screening Criteria.

The LARWQCB is a primary source of information regarding existing water quality problems. In addition, water utilities and the Watermaster of each adjudicated groundwater basin may be contacted for information regarding water rights, hydrologic features and groundwater contamination.

[3] *See G.3. GROUNDWATER LEVEL.*

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally result in a significant impact on groundwater quality if it would:

- Affect the rate or change the direction of movement of existing contaminants;
- Expand the area affected by contaminants;
- Result in an increased level of groundwater contamination (including that from direct percolation, injection or salt water intrusion); or
- Cause regulatory water quality standards at an existing production well to be violated, as defined in the California Code of Regulations (CCR), Title 22, Division 4, and Chapter 15 and in the Safe Drinking Water Act.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Identification and description of the underlying groundwater basin(s), recharge areas, spreading grounds, aquifers and wells. Include the quality, quantity and use of the water;
- Area and degree of permeability of soils on the project site and in areas where operations could involve surface discharges;
- The location and nature of any existing groundwater contamination in the vicinity of the project site (usually within a one-mile radius), including saltwater intrusion and leaking underground storage tanks (available from the local fire department, the County Health Department, or the State Leaking Underground Storage Tanks (LUST) database);
- Description of any ongoing or planned remediation activities; and
- Existing groundwater levels and direction of flow in the vicinity of the project.

Project Impacts

Using the information from the Evaluation of Screening Criteria, describe proposed construction and operational features of the project that involve any intrusion into groundwater, including extraction, dewatering, planned surface application, subsurface disposal, percolation, or injection of potential contaminants or waste materials. Consider the characteristics of the material proposed for application or injection; any pre-treatment; methods of application, injection; etc. Analyze any potential changes in the amount of groundwater contamination (e.g., concentration, levels or area involved) or the rate and direction of flow of existing groundwater contamination due to project-related activities. Also, determine the impact on the water quality of existing production wells and the size of the contaminated area.

Cumulative Impacts

Review the list of related projects and identify those located over the same groundwater basin or in the vicinity of the same area of known groundwater contamination, or seawater intrusion, municipal supply well, spreading ground facility or the coast that could increase groundwater contamination. Analyze the potential combined effect of the related projects with the project using the methods described in Project Impacts.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Modification to reduce or eliminate the discharge or contamination;
- Reduction or modification of planned groundwater extraction; and
- Treatment of extracted contaminated water.

3. DATA, RESOURCES, AND REFERENCES

Los Angeles Department of Water and Power (DWP)/Upper Los Angeles River Area (ULARA), 111 North Hope Street, Los Angeles, California 90012; Telephone: (213) 367-0906. Annual ULARA Watermaster Report describes water rights, and general hydrologic features for the San Fernando, Sylmar, Eagle Rock and Verdugo Basins, and groundwater contamination.

Los Angeles Fire Department (LAFD) - Records of known leaking underground storage tanks and other information on the location and use of hazardous materials.

LARWQCB, 320 West 4th Street, Suite 200, Los Angeles, California 90013; Telephone: (213) 576-6600.

City Planning Department, Environmental and Public Facilities Maps (1996): Groundwater Basins and Groundwater Contamination Areas.

LARWQCB Remedial Investigation of Groundwater Contamination in the San Fernando Valley, December 1991, which describes the nature and extent of groundwater contamination in the San Fernando, Sylmar, Verdugo and Eagle Rock basins. Also provides geologic and hydrogeologic characterizations for each basin.

LARWQCB, Los Angeles Region Water Quality Control Plan, 1994, which describes groundwater basins, beneficial uses, water quality objectives, and the implementation plan to protect water quality objectives and beneficial uses.

Safe Drinking Water Act of 1974, PL 93-523; Safe Drinking Water Act of 1986, PL 99-339, which establishes a federal program to monitor and increase the safety of all commercially and publicly supplied drinking water.

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H. LAND USE

H.1. LAND USE CONSISTENCY

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

IX.b): Would the project conflict with any applicable land use plan, policy, or regulation of an 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 or mitigating an environmental effect?

IX.c): Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

B. Introduction

This section addresses the consistency or compliance of proposed projects with the goals and policies of the General Plan and its elements, including the Framework Element, 35 adopted Community Plans, as well as the Planning and Zoning Code,[1] and any applicable specific plans, interim control ordinances (ICOs), community design overlay districts (CDOs), local coastal plans and redevelopment plans. City and regional utility plans and other adopted plans that contain environmental policies related to the physical environment that are applicable to the project activities and/or site may also be relevant.

C. Screening Criteria

- Is the project inconsistent with the General Plan or its elements, or an applicable specific plan, local coastal plan, redevelopment plan, interim control ordinance or adopted environmental goals or policies?

- Would the project require a General Plan amendment or zone change?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the

[1] *Chapter 1 of the Los Angeles Municipal Code (LAMC).*

Significance Threshold for Land Use Consistency, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Land Use Consistency from the proposed project.

D. Evaluation of Screening Criteria

Review the proposed project for consistency with the General Plan and other adopted environmental goals and policies. Potential areas of inconsistency include, but are not limited to: land use type; height, bulk, design or density; waste or wastewater generation; resource consumption or degradation; and other plan policies that relate to the physical environment. Use the most recent Community Plan maps and Zone Information & Map Access System (ZIMAS) http://zimas.lacity.org/ to assist in identifying ordinances and plan areas that may pertain to the project site, or consult the Community Planning Bureau of the City Planning Department. As appropriate, evaluate the General Plan and its elements (including the Framework Element), Community Plans, specific plans, ICOs, CDO's, local coastal plans, redevelopment plans, Planning & Zoning Code, utility plans, and resource management plans. Identify and assess the project's consistency with applicable habitat conservation plans or natural community conservation plans. Consider whether policies are mandatory or guidance, and which is the agency with primary jurisdiction. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- Whether the proposal is inconsistent with the adopted land use/density designation in the Community Plan, redevelopment plan or specific plan for the site; and

- Whether the proposal is inconsistent with the General Plan or adopted environmental goals or policies contained in other applicable plans.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Community Plan land use and density designation;

- Zoning designation and other Planning and Zoning Code land use regulations relevant to the project site;
-
- Adopted ICOs, specific plan, redevelopment plan, CDO's local coastal plan or provisions of the Coastal Act, if any, applicable to the project site;

- Other City land use policies, such as the General Plan and Elements, including the Framework Element, Airport Hazard Zone Regulations, etc., if applicable to the project site; and

- Adopted City environmental policies, ordinances and plans, such as the City Solid Waste Management Policy Plan (CiSWMPP), Source Reduction and Recycling Element (SRRE), utility and resource conservation plans or programs, wastewater policies, Clean Air Program (CAP), etc., if any, applicable to the project site.

Project Impacts

Using the information from the Evaluation of Screening Criteria, evaluate the project for consistency with detailed local standards and requirements as well as with the broader context of the General Plan and its elements, environmental plans and policies, and regional utility/environmental plans. Identify project elements that conflict with the plans or policies and whether the conflict(s) would result in the project being inconsistent with the land use designation and/or environmental goals and policies of the City. Consider whether the project includes a proposed General Plan (land use) amendment and/or zone change, and whether all elements of the inconsistency have been addressed (i.e., density, design, etc.). For conflicts with environmental goals and policies, consider whether the project would interfere with the City's efforts to meet such goals, or be inconsistent with adopted policies.

Cumulative Impacts

Identify related projects in the vicinity of the proposed project and evaluate them in the same manner as the proposed project to determine if, when viewed together with the proposed project, conformance with the General Plan or other adopted plans or environmental policies would be significantly affected. Consider whether the combination of projects would conflict with the planned land uses and densities in the General Plan, or would interfere with adopted environmental goals and plans. Plans with a broad, regional perspective may be more applicable or useful in evaluating cumulative impacts because the goals and objectives of these plans may be implemented by comprehensive measures taken by government agencies.

Sample Mitigation Measures

Generally, a project determined to be inconsistent with the General Plan will require, as a condition of approval, a General Plan amendment or zone change to eliminate the inconsistency. This requires a finding that the requested change would not substantially alter the City's goals for the affected community. To mitigate an inconsistency prior to this determination, consider the following:

- Modify the project's proposed land uses to be consistent with designated land uses, zoning and/or General Plan and its element(s); or

- Relocate proposed structures or reduce the project's density/intensity to reduce conflicts or inconsistencies with the Land Use Element and plans.

3. DATA, RESOURCES, AND REFERENCES

The following references are available from the City Planning Department, Community Planning Bureau, 200 N. Spring St., 6th Floor, Los Angeles, California 90012. The Bureau may be reached at (213) 978-3893:

- General Plan and its elements, including the Framework Element and the 35 adopted Community Plans;
- District Zoning maps;
- ICOs;
- CDOs;
- Specific plans;
- Local coastal plans; and
- Airport Hazard Zone maps.

Planning and Zoning Code, (Chapter 1 of the LAMC) is available from the City Planning Department's Central Publications Unit at 200 N. Spring St., 5th Floor, Los Angeles, California 90012; Telephone: (213) 978-1255. For further information, call (213) 978-1310

Zone Information & Map Access System (ZIMAS) available online at: http://zimas.lacity.org.

Redevelopment plans are available from the Community Redevelopment Agency (CRA) of the City of Los Angeles, 354 South Spring Street, Suite 800, Los Angeles, California 90013; Telephone: (213) 977-1600.

City utility plans are available from the following City departments:

Department of Water and Power

- Utility Plans/Power Division
  111 North Hope Street, Room 1121
  Los Angeles, California 90012
  Telephone: (213) 367-0285

- Urban Water Management Plan
  Division of Public Affairs
  Telephone: (213) 367-1361

Department of Public Works
Bureau of Sanitation
- Wastewater plans
  Wastewater Engineering Service Division
  Telephone: (323) 342-6235

- Hyperion System
  Hyperion Treatment Plant
  Telephone: (310) 648-5000

CiSWMPP and SRRE are available from the Solid Resources Citywide Recycling Division of the Bureau of Sanitation, 433 South Spring Street, 5th Floor, Los Angeles, California 90013; Telephone: (213) 473-8228.

Southern California Association of Governments (SCAG) is the Metropolitan Planning Organization (MPO) for the region and offers resources and assistance. SCAG is located at 818 West Seventh Street, 12th Floor, Los Angeles, California 90017; Telephone: (213) 236-1800.

California Department of Fish and Game, South Coast Region, 4949 Viewridge Avenue, San Diego, CA 92123-1662; Telephone: (858) 467-4201.

H.2. LAND USE COMPATIBILITY

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

IX.a): Would the project physically divide an established community?

IX.b): Would the project conflict with any applicable land use plan, policy, or regulation of an 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 or mitigating an environmental effect?

IX.c): Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

B. Introduction

This section addresses the potential for projects or programs to create situations of incompatibility between land uses or activities. Such incompatibility may result from environmental impacts associated with the proposed land use. Examples of incompatibility include land uses, which create noise, odor, safety hazards, visual, or other environmental impacts which conflict with surrounding land uses and the activities and conditions typically associated with those land uses. In addition, a project may disrupt the physical arrangement of an established community by introducing new infrastructure or isolating land uses that could interrupt the typical activities or change the land use conditions in a community.

C. Screening Criteria

- Would the project include a land use type that is incompatible with existing or proposed adjacent land uses (due to size, intensity, density or type of use)?

- Would the project include features such as a highway, aboveground infrastructure, or an easement through an established neighborhood community that could cause a permanent disruption in the physical arrangement of that established community or otherwise isolate an existing land use?

- Would the project result in a “spot” zone?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Land Use Compatibility and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant Land Use Compatibility impact from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, including the proposed land use or activity, and the size, density and intensity of the operation. Noise, odor, signage, safety hazards, traffic or other impacts may indicate an incompatibility with existing adjacent or surrounding land uses or current zoning for those sites, if vacant. Also, consider the types of land uses surrounding the project and the typical activities that occur at these sites, compared to those that would occur at the proposed project. Indicate the presence or lack of buffers between the project and adjacent land uses of other types. Note that a zone change required to implement the project may indicate a potential incompatibility with adjacent existing land uses. Review specific plans for urban design compatibility programs or regulations and their relevance to project design.

If the project includes elements such as a highway, aboveground infrastructure or an easement, identify the existing land uses that would be removed or would be adjacent to the new infrastructure. Determine the duration of any disruption of the physical arrangement of an established neighborhood or community. Such impacts may result from a physical separation or the creation of barriers that would disrupt the social or physical interaction between established land uses that comprise a neighborhood or community.

A “spot” zone occurs when the zoning or land use designation for only a portion of a block changes, or a single zone or land use designation becomes surrounded by more or less intensive land uses.

Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The extent of the area that would be impacted, the nature and degree of impacts, and the type of land uses within that area;

- The extent to which existing neighborhoods, communities, or land uses would be disrupted, divided or isolated, and the duration of the disruptions; and

- The number, degree, and type of secondary impacts to surrounding land uses that could result from implementation of the proposed project.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, describe and map, as appropriate, the existing land uses and current zoning of the project site and the properties in the immediate vicinity of the proposed project. Also, identify uses near the site such as schools, libraries and residences which may be particularly sensitive to potential nuisance impacts (e.g., noise, odor, safety hazards) associated with the proposed project.

If the proposed project may disrupt or divide an established community, evaluate the existing neighborhoods or communities immediately surrounding the project. Address the type of land uses in the area, and the location of residences, businesses, schools, and other community facilities in relation to the proposed project and supporting residences.

Project Impacts

A significant land use compatibility impact may be indicated by the presence of one or more significant project impacts, which suggest that the location or intensity of the proposed project could conflict with existing uses. However, the presence of project impacts does not automatically indicate a land use compatibility impact and the effect of these impacts should be evaluated within the primary impact category (e.g., noise, traffic).

Evaluate the nature, extent and number of secondary impacts to determine the extent of any conflict between the project and existing uses in the area. Consider the type of activities typically expected to occur at land uses adjacent to the project and whether nuisance impacts from the proposed project would conflict with these activities.

If the proposed project would add such features as a highway, aboveground infrastructure or easement, determine the extent to which existing neighborhoods or communities would be impacted by its implementation. Evaluate the extent of the physical separation, barrier or other disruption of existing land uses or activities that could result from the proposed project. Indicate the duration of the disruption (e.g., long-term, permanent) of the physical or social interaction between land uses that comprise an established neighborhood or community.

Cumulative Impacts

The cumulative impact assessment should identify other known projects or land use changes proposed in the vicinity of the project that may either combine with the proposed project to create a land use incompatibility with the existing land uses, or be subject to nuisance impacts resulting from a proposed project that creates a land use incompatibility with the related projects. Evaluate the potential impacts using the methodology described above.

Sample Mitigation Measures

Mitigation measures to reduce secondary impacts are found in the individual sections (noise, traffic, etc.). Potential mitigation measures that may reduce land use compatibility impacts include:

- Change the project design, configuration, visual screening, setbacks, building heights, etc., to be compatible with surrounding uses;

- Restrict certain operational characteristics of the proposed use to reduce or eliminate impacts, such as limiting hours of operation or placing restrictions on specific types of uses or activities proposed for the project, etc.;

- Provide enclosed structures around certain activities that normally occur outdoors;

- Place aboveground infrastructure under ground, or grade separate key portions of the proposed highway, rail line, or other infrastructure to minimize physical separations;

- Provide pedestrian and bicycle routes or crossings to increase mobility; and

- Provide a buffer (such as a decorative wall or landscaping) where residential uses are adjacent to non-residential uses.

3. DATA, RESOURCES, AND REFERENCES

City Planning Department, 201 North Figueroa Street, 3rd Floor, Los Angeles, California 90012; Telephone: (213) 977-6083. For plan check, first go to Counter A, 4th floor (Building and Safety). They will refer visitors to the Planning Department as appropriate.

See also H.1. LAND USE CONSISTENCY.

I. NOISE

I.1. CONSTRUCTION NOISE

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

XI.a): Would the project result in 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?

XI.b): Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

XI.d): Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

XI.e): For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

XI.f): For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

B. Introduction

Construction of facilities and structures requires the use of equipment, which may generate high noise levels and adversely affect noise sensitive uses.[1] In assessing the impact of construction noise upon the environment, the nature and level of activities that generate the noise, the pathway through which the noise travels, the sensitivity of the receptor, and the period of exposure are all considered.

Environmental noise is measured in decibels (dB). To better approximate the range of sensitivity of the human ear to sounds of different frequencies, the A-weighted decibel scale (dBA) was devised. Because the human ear is less sensitive to low frequency sounds, the A-scale de-emphasizes these frequencies by incorporating frequency weighting of the sound signal. When the A-scale is used, the decibel levels are represented by dBA. On this scale, the range of human hearing extends from about 3 dBA to about 140 dBA. A 10-dBA increase is judged by most people as a doubling of the sound level.

[1] *For impacts during operation, see I.2 OPERATIONAL NOISE, I.3. RAILROAD NOISE, and I.4. AIRPORT NOISE, as appropriate.*

To account for the fluctuation in noise levels over time, noise impacts are commonly evaluated using time-averaged noise levels. The Community Noise Equivalent Level (CNEL) represents an energy average of the A-weighted noise levels over a 24-hour period with 5 dBA and 10 dBA increases added for nighttime noise between the hours of 7:00 p.m. and 10:00 p.m. and 10:00 p.m. to 7:00 a.m., respectively. The increases were selected to account for reduced ambient noise levels during these time periods and increased human sensitivity to noise during the quieter periods of the day.

Typical construction equipment types are presented in Exhibit I.1-1. Noise levels from these equipment types ranges from 76 to 91 dBA for equipment powered by internal combustion engines, saws, and vibrators and from the mid-80s to more than 100 dBA for impact equipment. Exhibit I.1-2 provides typical noise levels for each construction phase. The excavation and finishing phases include the noisiest construction activities.

The Environmental Protection Agency (EPA), establishes emission standards for construction equipment according to the provisions of the Noise Control Act of 1972, set forth in 40 CFR, Part 204. In addition, the City of Los Angeles Noise Ordinance addresses noise generated at construction sites, including permissible hours of construction, increases in ambient noise levels, and the technical feasibility of reducing noise from certain construction equipment. The Los Angeles Police Department (LAPD) enforces the provisions of the Noise Ordinance.[2]

C. Screening Criteria

- Would construction activities occur within 500 feet of a noise sensitive use?

- For projects located within the City of Los Angeles, would construction occur between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at anytime on Sunday?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Construction Noise and review the associated Methodology to Determine Significance, as appropriate.

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2 *Refer to Sections 41.40, 112.02, and 112.05 of the Los Angeles Municipal Code (LAMC). Technical infeasibility means that specified noise limitations cannot be achieved despite the use of mufflers, shields, sound barriers and/or any other noise reduction devices or techniques during operation of the equipment.*

A "no" response to all of the preceding questions indicates that there would normally be no significant impact from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, including information on construction activities. Consult a map showing the location of noise sensitive uses within 500 feet of the project site. Noise sensitive uses include residences, transient lodgings, schools, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks. Determine whether construction activities would occur within 500 feet of a noise sensitive use or during the hours specified in the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact on noise levels from construction if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise sensitive use;

- Construction activities lasting more than 10 days in a three month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use; or

- Construction activities would exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at anytime on Sunday.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Identification of noise sensitive land uses within 500 feet of the project site, including description, location, and distance from the project; and

- Quantification of ambient noise levels (existing and projected at the time of construction) measured in CNEL.

One of the following methodologies can be used to determine ambient noise levels:

- Field measurements involving the use of a noise meter at and surrounding the project site;

- "Presumed Ambient Noise Levels," as set forth in the LAMC, Section 111.03 (see Exhibit I.1-3); or

- A noise monitoring program performed according to the procedures set forth in the LAMC, Sections 111.02 and 112.05. This involves taking measurements at selected locations to establish ambient background noise levels.

Project Impacts

Review the description of the proposed project, including the duration of construction activities. Identify the type, amount, and scheduling of construction equipment to be used during each construction phase, and the distance from construction activities to noise sensitive uses.

Calculate the noise emissions from individual equipment by using the noise levels shown in Exhibits I.1-1 and I.1-2, or other applicable references, the distance to the noise sensitive uses, and noise attenuation standards. Noise models may be used, as appropriate. Noise levels 50 feet from a source decrease by approximately 3 dBA over a hard, unobstructed surface, such as asphalt, and by approximately 4.5 dBA over a soft surface, such as vegetation. For every doubling of distance thereafter, noise levels drop another 3 dBA over a hard surface and 4.5 dBA over a soft surface. Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of emissions as that shown in Exhibit I.1-1.

Determine the combined noise levels from equipment that will be operated simultaneously. Noise levels measured in decibels increase logarithmically and cannot be added arithmetically. When transmission path topography between the construction noise source and the receptor location is complex, consult an experienced noise specialist, as necessary.

Establish the change in noise level from construction activities at the location of sensitive receptors. Subtract the projected noise level without construction equipment from the projected noise level during construction activities. Considering the number of days various noise levels are

projected, determine whether construction activities would exceed both the number of days, times of day, and dBA increases in the Significance Threshold.

Cumulative Impacts

As feasible, identify construction activities for related projects that would coincide with the project's construction operations. Calculate noise levels using the methodology in Project Impacts and logarithmically add the noise from these construction activities to the project-related construction noise to determine the cumulative effect of the construction activities. Consult a noise specialist, or use a noise model, as needed.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Use noise control devices, such as equipment mufflers, enclosures, and barriers. Natural and artificial barriers such as ground elevation changes and existing buildings can shield construction noise. Stage construction operations as far from noise sensitive uses as possible;

- Avoid residential areas when planning haul truck routes;

- Maintain all sound-reducing devices and restrictions throughout the construction period;

- Replace noisy equipment with quieter equipment (for example, a vibratory pile driver instead of a conventional pile driver and rubber-tired equipment rather than track equipment); and

- Change the timing and/or sequence of the noisiest construction operations to avoid sensitive times of the day.

3. DATA, RESOURCES, AND REFERENCES

Noise Ordinance No. 161,574, LAMC Section 112.05 and No. 166,170, LAMC Section 41.40 provide construction hours and construction equipment noise thresholds.

Noise Ordinance No. 156,363, LAMC Section 111.02 provides sound level measurement procedures.

Noise Ordinance No. 156,363, LAMC Section 111.03 provides ambient noise levels.

Los Angeles Association of Environmental Professionals (AEP), Thresholds of Significance, Construction noise threshold used by Port of Long Beach, 1992.

EPA, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, Prepared by Bolt, Beranek and Newman, 1971.

Categories of Construction Equipment

1. Impact equipment and tools: This group includes pile drivers, pavement breakers, tampers, rock drills, and small; hand-held pneumatically, hydraulically, or electrically powered tools. In the case of conventional pile drivers, whether steam-powered or diesel-powered, the impact of the hammer dropping onto the pile is the dominant noise-generating component. However, sonic or vibratory pile drivers do not produce impact noise as it vibrates the pile at resonance, rather than using a drop hammer.

2. Equipment powered by internal combustion engines: The internal combustion engine, usually of the diesel type, is used to provide motive and/or operating power. Engine powered equipment can be divided into categories according to its mobility and operating characteristics as earthmoving equipment (highly mobile), materials handling equipment (semi-mobile), and stationary equipment.

3. Other equipment: Certain types of construction equipment, such as power saws or concrete vibrators do not fall under either of the two categories above.

Selected Legislation

Federal

Federal Noise Control Act of 1972 (40 CFR Sec. 204)

Public Law 92-574. Regulates noise emissions from operation of all construction equipment and facilities; establishes noise emission standards for construction equipment and other categories of equipment; and provides standards for the testing, inspection, and monitoring of such equipment. Gives states and municipalities primary responsibility for noise control.

State

California Noise Control Act of 1973 (Health and Safety Code, Division 28)

Declares that excessive noise is a serious hazard to the public health and welfare; establishes the Office of Noise Control with the responsibility to set standards for noise exposure in cooperation with local governments or the state legislature.

Exhibit I.1-1
NOISE LEVEL RANGES OF TYPICAL CONSTRUCTION EQUIPMENT

Equipment	Levels in dBA at 50 feet[a]
Front Loader	73-86
Trucks	82-95
Cranes (moveable)	75-88
Cranes (derrick)	86-89
Vibrator	68-82
Saws	72-82
Pneumatic Impact Equipment	83-88
Jackhammers	81-98
Pumps	68-72
Generators	71-83
Compressors	75-87
Concrete Mixers	75-88
Concrete Pumps	81-85
Back Hoe	73-95
Pile Driving (peaks)	95-107
Tractor	77-98
Scraper/Grader	80-93
Paver	85-88

[a] Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of emissions as that shown in this table.

Source: EPA, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971.

Exhibit I.1-2
OUTDOOR CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level (dBA Leq)	
	50 feet	Noise Levels at 50 feet with Mufflers (dBA)
Ground Clearing	84	82
Excavation, Grading	89	86
Foundations	78	77
Structural	85	83
Finishing	89	86

Source: EPA, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971.

Exhibit I.1-3
PRESUMED AMBIENT NOISE LEVELS (dBA)

Zone		Day	Night
Residential:	A1, A2, RA, RE, RS, RD, RW1, RW2, R1, R2, R3, R4, R5	50	40
Commercial:	P, PB, CR, C1, C1.5, C2, C4, C5, CM	60	55
Manufacturing:	M1, MR1, MR2	60	55
Heavy Manufacturing:	M2, M3	65	65

Source: LAMC, Section 111.03.

I.2. OPERATIONAL NOISE

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

XI.a): Would the project result in 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?

XI.b): Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

XI.c): Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

XI.d): A substantial temporary or periodic increase in ambient noise levels in the project vicinity above the existing without the project?

XI.e): For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

XI.f): For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

B. Introduction

Stationary and mobile vehicular noise sources associated with the operation of a project may increase existing noise levels and/or adversely expose people to severe noise levels.[1]

Environmental noise is measured in decibels (dB). To better approximate the range of sensitivity of the human ear to sounds of different frequencies, the A-weighted decibel scale (dBA) was devised. Because the human ear is less sensitive to low frequency sounds, the A-scale de-emphasizes these frequencies by incorporating frequency weighting of the sound signal. When the A-scale is used, the decibel levels are represented by dBA. On this scale, the range of human hearing extends from about 3 dBA to about 140 dBA. A 10-dBA increase is judged by most people as a doubling of the sound level.

[1] *For other noise impacts, see I.1. CONSTRUCTION NOISE, I.3. RAILROAD NOISE, and I.4. AIRPORT NOISE, as appropriate.*

To account for the fluctuation in noise levels over time, noise impacts are commonly evaluated using time-averaged noise levels. The Community Noise Equivalent Level (CNEL) represents an energy average of the A-weighted noise levels over a 24-hour period with 5 dBA and 10 dBA increases added for nighttime noise between the hours of 7:00 p.m. and 10:00 p.m. and 10:00 p.m. to 7:00 a.m., respectively. The increases were selected to account for reduced ambient noise levels during these time periods and increased human sensitivity to noise during the quieter periods of the day.

Because stationary noise sources include a wide range of noise-generating equipment and processes, which come from an equally wide range of uses, noise levels generated by stationary sources can vary substantially (for examples and descriptions, see 3. Data, Resources, and References). The effects of stationary noise depend on factors such as characteristics of the equipment and operations, distance and pathway between the generator and receptor, and weather. Stationary noise sources may be regulated at the point of manufacture (e.g., equipment or engines) or as a part of local codes and requirements (e.g., noise ordinance or zoning).

The predominant noise source within the City of Los Angeles is transportation, including railroad, airport and motor vehicle sources. Traffic volume, average speed, vehicular fleet mix (i.e., combination of automobiles, motorcycles, buses, and trucks), roadway steepness, distance and characteristics of the pathway between generator and receptor, and weather all influence the level of noise near roadways. For example, as the roadway traffic volume, speed, proportion of fleet mix represented by trucks, and roadway grade increase, so do the composite noise levels at the locations affected by the traffic noise. However, as the roadway volume increases beyond a certain point, congestion increases, in turn causing reduced traffic speeds, which would to some extent offset noise from the traffic volume increase. Dense urban areas within the City of Los Angeles may experience noise levels ranging from the low- to high-70 decibel range. The California Department of Motor Vehicles (DMV) has jurisdiction over noise emissions from individual vehicles (Motor Vehicle Code Section 23130).

C. Screening Criteria

- Would the proposed project introduce a stationary noise source[2] likely to be audible beyond the property line of the project site?

- Would the project include 75 or more dwelling units, 100,000 square feet (sf) or greater of

[2] *Stationary noise sources may include, but are not limited to, machinery, engines, energy production, and other mechanical or powered equipment and activities such as loading and unloading or public assembly that may occur at commercial, industrial, manufacturing, or institutional facilities. Stationary noise sources do not include vehicles entering or exiting the property.*

nonresidential development or have the potential to generate 1,000 or more average daily vehicle trips?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Operational Noise, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact from Operational Noise from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project and the project traffic study to determine the size of each land use involved, information on stationary noise sources such as machinery or motorized equipment, and the vehicle trips that would be generated by the project. L.1. INTERSECTION CAPACITY explains how to calculate the number of average daily vehicle trips.

Determine the noise level from stationary sources at the property line by evaluating the decibel output of each source, the distance to the property line and the path over which the sound travels. Use an applicable noise model, as needed. In general, at a distance of 50 feet from the source over a hard surface, the decibel level decreases by 3 dBA, and over a soft surface (such as grass) the decibel level decreases by 4.5 dBA. For every doubling of distance thereafter, noise levels drop another 3 dBA over a hard surface and 4.5 dBA over a soft surface.[3]

Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact on noise levels from project operations if the project causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5 dBA or greater noise increase (see the chart below).

[3] *Federal Highway Administration (FHWA), Highway Traffic Noise Prediction Model (FHWA R77-108), 1978.*

Land Use	Community Noise Exposure CNEL, db			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single Family, Duplex, Mobile Homes	50 - 60	55 - 70	70 - 75	above 70
Multi-Family Homes	50 - 65	60 - 70	70 - 75	above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	above 80
Transient Lodging - Motels, Hotels	50 - 65	60 - 70	70 - 80	above 80
Auditoriums, Concert Halls, Amphitheaters	-	50 - 70	-	above 65
Sports Arena, Outdoor Spectator Sports	-	50 - 75	-	above 70
Playgrounds, Neighborhood Parks	50 - 70	-	67 - 75	above 72
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 75	-	70 - 80	above 80
Office Buildings, Business and Professional Commercial	50 - 70	67 - 77	above 75	-
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	above 75	-

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: California Department of Health Services (DHS).

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Identification of surrounding land uses, including description, location and distance from the project; and

- Quantification of ambient noise levels (existing and projected at the time of project occupancy) measured in CNEL.

One of the following methodologies can be used to determine ambient noise levels:

- Field measurements involving the use of a noise meter at and surrounding the project site;

- "Presumed Ambient Noise Levels," as set forth in the Los Angeles Municipal Code (LAMC), Section 111.03 (see Exhibit I.1-1[4]); or

- A noise-monitoring program performed according to the procedures set forth in LAMC, Section 111.02 and 112.05. This involves taking measurements at selected locations to establish ambient background noise levels.

Project Impacts

The change in ambient noise levels is measured by adding project-generated operational noise to the projected future ambient noise level at the time of project occupancy. The incremental increase in noise generated by the project is the project impact. Calculate the future exterior ambient noise level according to the procedure outlined above, under Environmental Setting.

Stationary Sources

Review the project description and identify the type, amount, noise impact, and operating characteristics of proposed equipment on the project site (e.g., 24-hour function, sporadic use expected). Identify the distance and the characteristics of the pathway between the noise source and the nearby land uses that would receive the noise. Noise models may be used, as appropriate.

Noise levels 50 feet from a source decrease by approximately 3 dBA over a hard, unobstructed surface, such as asphalt, and by approximately 4.5 dBA over a soft surface, such as a vegetated area. For every doubling of distance thereafter, noise levels drop another 3 dBA over a hard surface and 4.5 dBA over a soft surface. These reduction rates can be used to adjust noise levels at the noise receptor locations, based on their relative distances from the project equipment.

[4] *See I.1. CONSTRUCTION NOISE.*

Once noise levels from individual pieces of equipment on the project site have been calculated, logarithmically add together the noise levels from all equipment operating simultaneously. (Noise levels measured in decibels increase logarithmically and cannot be added arithmetically.) Where the noise transmission path between the source and the receptor is complex, consult a noise specialist as necessary.

To determine the change in noise level, subtract the projected ambient noise level without the project's stationary noise from the projected noise level during project operation. Use the chart in the Significance Threshold to determine the significance of the difference.

Mobile Vehicular Sources

Review the project description, determine the number of vehicle trips to be generated by the project, and distribute the trips on the street system (use the traffic study or methodology described in L.1. INTERSECTION CAPACITY). Determine the characteristics of the noise transmission pathway. Using a mobile noise prediction model, project the future exterior ambient noise levels for these streets with and without the proposed project. Base the selected noise model on the Federal Highway Administration (FHWA) highway noise prediction procedures described in FHWA-77-108 or the most recent revision. The City of Los Angeles recommends the use of either LEQV2 or SOUND32 prediction models as developed by California Department of Transportation (Caltrans). LEQV2 requires the following information: (a) traffic volumes, (b) roadway, barrier and receiver geometry, (c) vehicle speed, (d) number of lanes, (e) fleet mix, and (f) drop-off rates. It uses angles, distances and elevations to define source-receptor spatial relationships. SOUND32 requires the following information: (a) traffic volumes, (b) roadway, barrier and receiver geometry, and (c) drop-off rates. This model uses a three dimensional coordinate system to define source-receptor spatial relationships.

If monitoring was used to quantify existing noise levels, use existing traffic conditions (volumes, roadway geometry, etc.) to model the existing noise levels. A comparison of monitored existing noise levels and modeled existing noise levels can be used to calibrate the modeling resulting.

To determine the change in noise level, subtract the projected noise level on the selected roadways without the project's traffic-generated noise from the projected noise level, including the project's traffic-generated noise. Use the chart in the Significance Threshold to determine the significance of the difference.

Noise levels increase approximately 3 dBA for each doubling of roadway traffic volume, assuming that the speed and fleet mix remain constant. A change in vehicle speed can also change noise levels. If vehicle speed and fleet mix can be assumed to remain constant after project implementation, and the project would result in traffic that is less than double the existing traffic, then the project's mobile noise impacts can be assumed to be less than significant.

For a program-level analysis where project details are unknown, assume the full build out of allowable land use and density. Use the methodology above to determine program-generated noise increases.

Cumulative Impacts

For impacts from stationary sources, as feasible, identify the type and amount of equipment to be used by the related projects. Determine whether noise from these sources would impact the same land uses impacted by the proposed project. For those, calculate and logarithmetically add the related project noise to project-generated noise to determine the cumulative effect of the activities.

The analysis for project impacts from mobile vehicular sources uses future traffic levels to establish future ambient noise levels. As these traffic levels include trips from the related projects, additional evaluation is not required.

Sample Mitigation Measures

Potential mitigation measures include the following:

Stationary Sources

- Redesign the source to radiate less noise (e.g., substitute a quieter equipment type process or enclose the source with sound absorbent material);

- Use insulation or construct solid barriers between noise sources and noise receivers;

- Separate noise sources from noise receivers by distances sufficient to attenuate the noise to acceptable levels;

- Insulate structures;

- Limit the hours of use for the equipment;

- Prepare an acoustical analysis and adopt the resulting insulation and attenuation measures; and

- Conduct inspections of the equipment prior to issuance of the occupancy permit to verify on-site containment of noise emissions.

Mobile Vehicular Sources

- Attenuate the sound by using barriers, or redirect sound transmission paths;

- Reduce vehicle trip generation, or reduce speed limits on roadways; and

- Locate any delivery, truck loading, or trash pickup areas as far from noise sensitive land uses as possible. Limit designated hours for deliveries.

3. DATA, RESOURCES, AND REFERENCES

Noise Element, 1999. Available from the City Planning Department's Central Publications Unit at 200 N. Spring St., 5th Floor, Los Angeles, California 90012; Telephone: (213) 978-1255.

Noise Ordinance No. 156,363, LAMC Section 111.02 provides sound level measurement procedures.

Noise Ordinance No. 156,363, LAMC Section 111.03 provides ambient noise levels.

Noise Control Act of 1972.

Association of Environmental Professionals (AEP), Thresholds of Significance, Noise Thresholds, 1992.

FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108), 1978.

LEQV2 and SOUND32 sound prediction models, developed by Caltrans.

California Noise Insulation Standards, CAC, Title 25, Housing and Community Development.

California Motor Vehicle Code, Section 23130.

Stationary Source Categories

Agricultural operations: Agricultural noise is generated by a host of soil preparation and crop harvesting equipment, pesticide applicators, and conveying and elevating equipment.

Commercial/Institutional: Building service equipment is generally considered a stationary noise source. Building service equipment includes heating, ventilating, and air conditioning facilities, water and waste water systems elevators, and escalators. The most common urban noise source in the air conditioning category is the modern high efficiency-cooling tower, which contains two noise sources - fans and water spray. The increasing use of window or through the wall packaged air conditioning units leads to the generation of noise outside. In addition to their inherent noise characteristics, as these units age, loose metal parts and window frames may rattle.

Home workshops and gardening tools: Noise from these sources includes various motors that operate power mowers, power trimmers, edgers and leaf blowers, and power operated saws and drills.

Industrial: Much of the equipment used in industry and many industrial processes and operations generate noise. The intakes and discharges from fans, compressors, and engines often penetrate the walls of industrial buildings. Even a wholly enclosed industrial plant can generate noise because ducts and piping outside buildings radiate the noises generated from the inside. Inadequately insulated walls and roofs transmit noise. Sheet metal walls, for example, vibrate in response to inside noise and become effective noise radiators. Outdoor industrial operations also constitute sources of noise, including storage operations, steel and scrap yards, and truck and rail freight handling yards.

Lumbering operations: These operations involve the use of diesel powered equipment, chain saws, and hoisting and conveying equipment. Sawmill noise is produced by saws and planers and other lumber shaping equipment, the operation of hoisting and conveying equipment, and the operation of yard and loading equipment.

Mineral production: Mineral production includes both surface and underground mining; sand and gravel pit operations, and crushed rock operations. Noises generated from these sources include sounds emanating from rock crushers, screens, conveyor belts, diesel engines, electric motors, dump trucks, power shovels, rock drills, and blasting.

Petroleum production and refining: Principal sources of noise from petroleum production operations include pressure-reducing valves in pipes, steam turbines, derricks, gear boxes, compressors, electric

motors, diesel engines, and maintenance equipment.

Port Operations: Primary noise sources from port activities include bulk-loading facilities, shipping container-handling equipment, truck traffic, and train movements. The sound of ship engines and trains running contribute to the low steady-state noise emanating from a port, which is punctuated by ship whistles and train horns.

Public and private utilities: Public and private utilities engage in construction activities producing the same kind of noises discussed in I.1 CONSTRUCTION NOISE. They also operate hydroelectric, steam and diesel electric generation plants, compressors, pumps and pipelines, all of which generate noises similar to those discussed above as industrial noise sources.

Public services: Sources of noise from public services include sirens on emergency vehicles, truck and loading noise from rubbish collection and disposal, and equipment noise generated through the maintenance of streets, sewers and water systems.

Mobile Source Categories

Automobiles: The passenger automobile usually makes much less noise than other types of motor vehicles. They produce little exhaust noise except at low frequencies. The combination of wind, gearing, and tire noises produces an identifiable spectrum of noise at speeds over 40 mph and at distances over 100 feet. At higher speeds, this combination of sounds is identifiable at distances up to one mile under quiet ambient conditions. The loudest element of automobile noise at a long distance is the sound of tires.

Buses: Buses tend to radiate less noise than other heavy vehicles because their engine compartments are sealed. Bus noise, however, usually increases with use because of damage to these seals.

Motorcycles: Motorcycle noise is distinctive because, in addition to noise from intake, exhaust, and gearing systems, motorcycles radiate considerable noise directly through the engine walls.

Trucks: Trucks make more noise than other motor vehicles. Diesel trucks are generally the most significant motor vehicle noise source. A single, large diesel truck may produce noise levels equal to noise generated by 30 passenger cars. Under most conditions of operation, exhaust noise predominates. At low speeds, under heavy acceleration, engine and transmission noise may be louder. At high speeds on level roadways, tire noise predominates. Other sources of noise from trucks include the chassis, brakes, sheet metal parts, loose pins, and cargo.

I.3. RAILROAD NOISE

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

XI.a): Would the project result in 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?

XI.b): Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

XI.c): A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

XI.d): A substantial temporary or periodic increase in ambient noise levels in the project vicinity above the existing without the project?

B. Introduction

Railroad operations may increase existing noise levels and/or adversely affect noise-sensitive land uses. The effects of railroad noise depend on factors such as characteristics of the equipment and operations; distance and characteristics of the pathway between the generator and receptor; and weather. Section 17 of the Federal Noise Control Act, rather than state or local regulations, establishes controls and limits on railroad operations, through the United States Environmental Protection Agency (EPA) and United States Department of Transportation (U.S. DOT).

Environmental noise is measured in decibels (dB). To better approximate the range of sensitivity of the human ear to sounds of different frequencies, the A-weighted decibel scale (dBA) was devised. Because the human ear is less sensitive to low frequency sounds, the A-scale de-emphasizes these frequencies by incorporating frequency weighting of the sound signal. When the A-scale is used, the decibel levels are represented by dBA. On this scale, the range of human hearing extends from about 3 dBA to about 140 dBA. A 10 dBA increase is judged by most people as a doubling of the sound level.

To account for the fluctuation in noise levels over time, noise impacts are commonly evaluated using time-averaged noise levels. The Community Noise Equivalent Level (CNEL) represents an energy average of the A-weighted noise levels over a 24-hour period with 5 dBA and 10 dBA

during these time periods and increased human sensitivity to noise during the quieter periods of the day. The Day-Night Sound Level (Ldn), like CNEL, measures noise exposure over a 24-hour period and adds a penalty based on the time of day, although only for late night/early morning hours (10 dBA penalty from 10:00 p.m. to 7:00 a.m.). Thus, the Ldn measurement is slightly less sensitive than CNEL, but it results in very similar noise ratings for most community settings, usually differing by less than 1 dBA.

Railroad operations are generally classified into either line operations or yard operations. Line operations consist of the movements of trains of various types over the main line and local tracks; yard operations are the various activities concentrated in a railway terminal. Yard operations generate noise through the disassembling and recoupling of cars to form new trains, and the maintenance and repair of cars and locomotives. For analytical purposes these may be considered as complex sources of stationary noise. Railroad operations are a much more common source of railroad noise than yard operations. The noise generated by train pass-bys is based on the type of vehicle in use, how it is operated, and the configuration of the track-bed relative to the surrounding terrain. The Federal Transit Authority (FTA) regulates noise generated by moving trains (e.g. whistles, warning signals, wheels on rails), rail maintenance yards, and activity associated with rail facilities.

The Department of Housing and Urban Development (HUD) prepared a Noise Guidebook, which addresses railroad noise, provides guidance on calculating noise levels from railroad operations, and includes a threshold of 3,000 feet between a railroad line and a noise-sensitive land use.

C. Screening Criteria

- Would project development result in a noise-sensitive land use being located within 3,000 feet of a railroad line?

- Would the project result in an increase in the number or length of non-commuter trains operating on existing tracks within 3,000 feet of a noise-sensitive land use?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Railroad Noise and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact from Railroad Noise from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, including information on railroad activities. Consult a map showing the location of noise-sensitive land uses within 3,000 feet of the project site. Noise-sensitive land uses include residences, schools, libraries, hospitals, day-care facilities, convalescent/retirement homes, and parks. Determine whether the project would result in railroad noise being generated within 3,000 feet of a noise-sensitive land use.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact with regard to exterior noise levels resulting from railroad operations if the project causes noise measured at the property line of a noise sensitive receptor to increase by 3 dBA in CNEL, to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5 dBA or greater noise increase (see the chart below).

Land Use	Community Noise Exposure CNEL, db			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single Family, Duplex, Mobile Homes	50 - 60	55 - 70	70 - 75	above 70
Multi-Family Homes	50 - 65	60 - 70	70 - 75	above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	above 80
Playgrounds, Neighborhood Parks	50 - 70	---	67 - 75	above 72

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: California Department of Health Services (DHS).

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Identification of noise-sensitive land uses within 3,000 feet of the project site, including description, location and distance from the site; and

- Ambient noise levels (existing and future) measured in CNEL.

One of the following methodologies can be used to determine ambient noise levels:

- Field measurements involving the use of a noise meter at and surrounding the project site;

- "Presumed Ambient Noise Levels", as set forth in the Los Angeles Municipal Code (LAMC), Section 111.03 (see Exhibit I.1-1[1]); and

- A noise measurement program performed according to the procedures in the LAMC, Section 111.02 and 112.05. This involves taking measurements at selected locations to establish ambient background noise levels.

Project Impacts

Review the project description and identify the proposed number and type of rail operations per day. Use a map showing existing land uses to determine the location of, and distance between, sensitive receptors and railroad noise sources.

Guidance in the HUD Noise Guidebook can be used to calculate the resulting Ldn and, thus, CNEL levels. Using Exhibits I.3-1 and I.3-2, and based on the receptor distance from the railroad track, locate the appropriate distance on the horizontal axis (Effective Distance) and vertical axis (Average Daily Number of Operations). At the point of intersection of these two measurements, the diagonal axis will show the Ldn level.

HUD Methodology Assumptions:

- A clear line of sight exists between the railway track and the sensitive receptor;
- There are 50 cars per train;

[1] *See I.1. CONSTRUCTION NOISE.*

- The average train speed is 30 miles per hour; and

- Nighttime operations represent 15 percent of the 24-hour total.

With diesel locomotives:

- There are two locomotives per train; and

- The site is not near a grade crossing requiring prolonged use of the train's horn or whistle.

With rapid transit and passenger trains:

- Rails are welded together.

If the project characteristics vary substantially from the HUD methodology assumptions, consult a qualified noise specialist for a more detailed analysis, as necessary. For diesel locomotives, the model described in *Assessment of Noise Environment Around Railroad Operations* may be utilized.[2] It includes variables not included in the HUD model, such as attenuation due to barrier shielding, duration in time of a train pass-by, correction for the presence of additional helper locomotives on an upgrade, and accounting for welded rails, bridges, and grade crossings. In addition, this model has several graphs for use in conjunction with the formula. These graphs include the decibel volume for the duration of a train pass-by depending on distance from the source, the noise level of rail cars based on the speed they are traveling, and the attenuation of sound levels due to a shielding barrier.

Establish the change in noise level from the project. Subtract the projected noise level without the project's railroad operations from the projected noise level with the project's railroad operations. Compare this information to the Significance Threshold.

Cumulative Impacts

As feasible, identify the type and amount of railroad activity expected as a result of related projects. Consider noise-sensitive land uses within 3,000 feet of the proposed and related projects(s). Add the increase in noise at the sensitive receptors from the related projects to that from the proposed project to determine the cumulative impact.

2 *Wyle Laboratories, Assessment of Noise Environments Around Railroad Operations, pages 3-24 - 3-37, 1973.*

Sample Mitigation Measures

Potential mitigation measures include the following:

Railroad Lines and Vehicles

- Use continuous welded rail instead of jointed rail on the steel wheel/rail interface;
- Utilize lightweight trucks to minimize unsprung weight;
- Use special grinding (truing) equipment to ensure smooth wheel/rail interaction;
- Use resilient rail fasteners instead of fixed rail fasteners for track fixation;
- Utilize resiliently supported ties where resilient rail fasteners are inadequate; and
- Provide sound barrier walls or insulation.

Rail Yards

- Enclose rail yards with solid fencing or walls;
- Insulate buildings; and
- Include sound attenuators on fans and ducts.

3. DATA, RESOURCES, AND REFERENCES

American Public Transit Association, Guidelines and Principles for Design of Rapid Transit Facilities, 1983.

T.J. Schultz, W.J. Galloway, Office of Policy Development and Research, HUD, Noise Assessment Guidelines - Technical Background, 1980.

U.S. DOT, Los Angeles Rail Rapid Transit Project Final Environmental Impact Statement (EIS), 1983.

EPA, Background Document for Railroad Noise Emission Standards, 1975.

HUD, Noise Guidebook.

Wilson, Ihrig and Associates, Inc., Noise and Vibration Study for the Metro Rail Project, Final Report, 1982.

Wyle Laboratories, Assessment of Noise Environments Around Railroad Operations, 1973 (prepared for Southern Pacific Transportation Co., Union Pacific Railroad, the Atchison, Topeka and Santa Fe Railway Company, the Association of American Railroads.)

See also I.2. OERATIONAL NOISE.

Railroad Operations and Characteristics

There are three major railroad companies with regular freight traffic operating in the City of Los Angeles: Southern Pacific, Santa Fe, and Union Pacific. The Southern Pacific has an active rail yard in the Boyle Heights area within the City of Los Angeles. The Santa Fe and Union Pacific rail yards are located outside the City of Los Angeles, in the cities of Vernon and Commerce, respectively. In addition, such rapid transit systems as Amtrak, light rail trains (Blue Line), and commuter trains (MetroLink) serve the City of Los Angeles.

There are three general types of railroad vehicles: locomotives, rail cars, and rapid transit vehicles. These vehicles, either in combination with one of the other types or by themselves, form three general train categories. These are freight trains, conventional passenger trains, and rapid transit trains. A freight train consists of one or more locomotives, usually diesel, pulling a combination of various types of freight cars. A conventional passenger train is similar to a freight train in that it consists of one or more locomotives pulling several coaches, but one important difference is that the locomotive may either be diesel-electric or all electric (there are also gas turbine locomotives, but these are few in numbers). The third type, rapid transit trains, differs from the others in that there is not a centralized source of propulsion pulling a series of cars, but rather electric motors on the axles of each car.

A diesel locomotive utilizes a diesel engine driving an electrical alternator or generator, which in turn drives electric traction motors on the wheels. An all-electric locomotive, on the other hand, obtains its electrical power from an external source; normally an overhead line or third rail, to drive its traction motors. Having no propulsion system, freight cars and passenger coaches generate noise mainly by the rolling of the wheels on the rails. The magnitude of the noise depends heavily on the condition of the wheels and track, and on the type of vehicle suspension. In regards to rail cars, modern passenger coaches with auxiliary hydraulic suspension systems in addition to normal springs can be about 10 dBA quieter than older passenger coaches or freight cars which have only springs. The noise of rapid transit trains, even though there are electric motors on each axle that are sources of noise, is also predominantly generated by the interaction of the wheels upon the rails. In fact,

because rapid transit vehicles are usually newer and have better suspension systems, they are generally quieter than freight cars or passenger coaches. Exhibit I.3-4 shows average noise levels for locomotives, locomotives with mufflers and railcars.

Evidence indicates that jointed tracks exceed noise levels produced by welded tracks by up to 8 dBA. Railway traffic noise can be affected by several other sources, including jointed tracks, as indicated in Exhibit I.3-5. Rail yard noise is usually not an issue due to the size of rail yards and their location in less noise sensitive industrial areas. However, Exhibit I.3-6 includes some average noise levels for different sources of rail yard noise.

Selected Legislation

Federal

Section 17 of the Federal Noise Control Act requires that the EPA set noise emission standards for the equipment and facilities of interstate railroad carriers and establishes that the Secretary of Transportation will enforce them. In order to ensure safety considerations and technological availability, any standard or revision to a standard may be issued only after consulting with the Secretary of Transportation. These standards apply to the equipment's use and maintenance. On December 31, 1975, the EPA issued its first railroad noise regulation. This regulation set noise emission standards for locomotives and rail cars operated by interstate rail carriers. The regulation, which became effective December 31, 1976, set the following noise emission standards for locomotives measured from a distance of 100 feet:

73 dBA at idle;
93 dBA stationary at all other throttle settings; and
96 dBA moving at any speed.

The standards established for rail cars were:

88 dBA up to 46 miles per hour; and
93 dBA greater than 45 miles per hour.

For new locomotives in service after December 31, 1979, the standards set were:

70 dBA at idle;
87 dBA stationary at all other throttle settings; and
90 dBA moving.

In January 1980, the EPA published final noise emission regulations for four railroad noise sources. The regulations, which took effect in January 1984, set additional noise emission standards for rail yard operations and equipment, such as switcher locomotives, retarders, and car coupling.

Local

The Noise Element includes the following guidelines:

- Ensure that any steel track rapid transit system serving the City considers the use of welded rails in preference to jointed rails in order to reduce track vibration noise; and

- Develop a program to encourage railroads to provide noise-attenuating buffers along railroad rights-of-way (ROW) in residential areas.

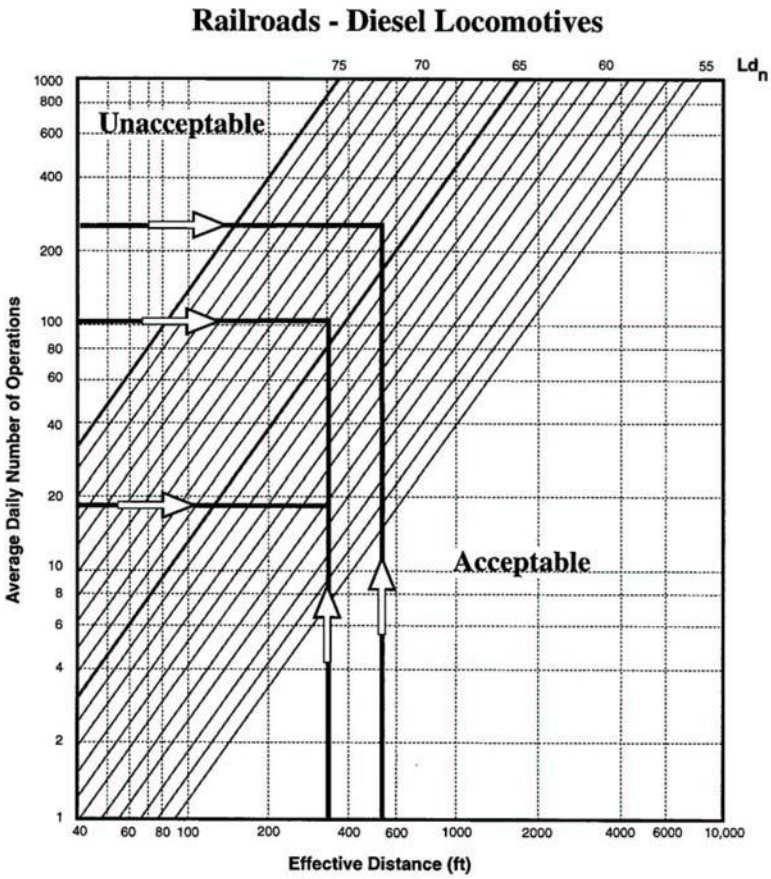


Exhibit I.3-1

Planning
Consultants
Research

FIGURE 1
DIESEL LOCOMOTIVES NOISE
Source: U.S. Department of Housing and Urban Development

Railroads - Rapid Transit and Railway Cars

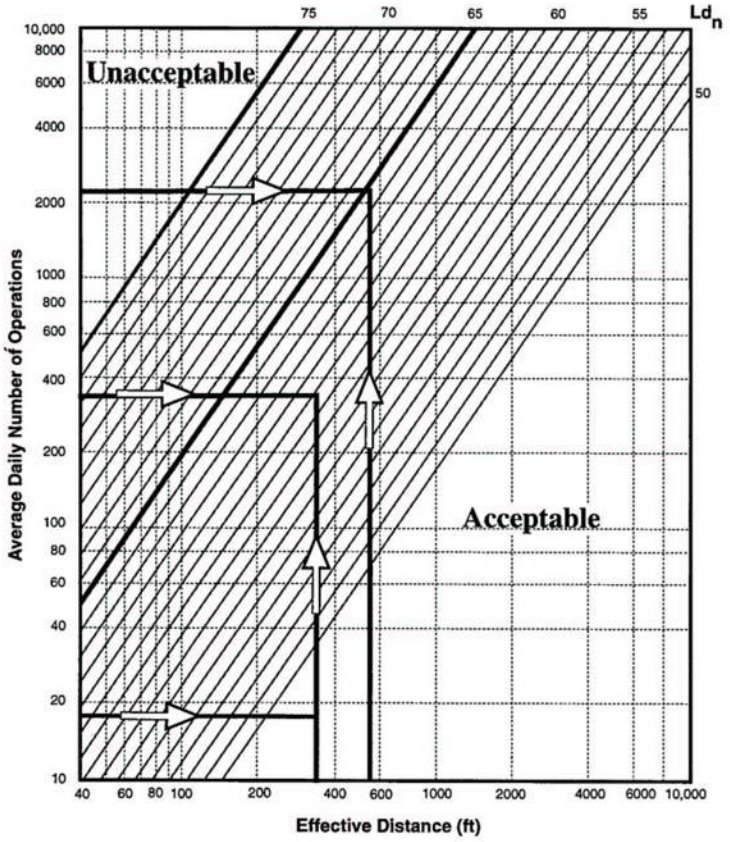


Exhibit I.3-2

Planning
Consultants
Research

FIGURE 2
ELECTRIC RAPID TRANSIT NOISE
Source: U.S. Department of Housing and Urban Development

Exhibit I.3-3
AVERAGE LOCOMOTIVE, RAILCAR, AND RAPID TRANSIT NOISE LEVELS

Type	Overall Maximum[a] (dBA)
Locomotive	93
Locomotive with Exhaust Muffler	87
Railcar -less than 45 miles per hour (mph)	88
Railcar - over 45 mph	93
Rapid Transit	85

[a] At a distance of 100 feet

Source: EPA, Background Document for Railroad Noise Emission Standards, pages 2-2 to 2-4.

Exhibit I.3-4
VARIABLES AFFECTING RAILCAR WHEEL/RAIL NOISE EMISSION

Variable	Noise Emission[a]
Jointed Rails (vs. Welded)	4 to 8 dBA
Grade Crossings	6 to 8 dBA
Wheel Irregularities – Flat Spots or Built-up Tread	Up to 15 dBA
Bridges	
a. Light Steel Structure	Up to 30 dBA
b. Heavy Steel Structure	Up to 15 dBA
c. Concrete Structure	0 to 12 dBA
Short Radius Curves	
a. Less than 600 foot radius	15 to 25 dBA
b. 600 to 900 foot radius	5 to 15 dBA

[a] These factors are assumed to act individually. When in combinations of two or more, the net increase will not be equal to the sum of each component, but most likely the largest individual factor.

Source: Wyle Laboratories, Assessment of Noise Environments Around Railroad Operations, page 2-3.

Exhibit I.3-5
AVERAGE RAIL YARD NOISE LEVELS

Noise Source	Level (dBA)[a]
Switcher Movement	76 - 80
Car Impact	91
Retarder	94 - 109
Public Address Systems	90 - 95
Engine Load Tests	92
Locomotive Service Racks	79.5
Mechanical Refrigerator Car - Engine Side	71
Mechanical Refrigerator Car - Condenser Side	64
Idling Locomotive	73
Idling Locomotive with Exhaust Muffler	70

[a] At a distance of 100 feet

Source: Wyle Laboratories, Assessment of Noise Environments Around Railroad Operations, pages 4-1 to 4-29.

I.4. AIRPORT NOISE

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

XI.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?

XI.b): Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

XI.c): A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

XI.d): A substantial temporary or periodic increase in ambient noise levels in the project vicinity above the existing without the project?

XI.e): For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

XI.f): For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

B. Introduction

New or modified airport and heliport operations and associated aircraft activities may increase existing noise levels and may adversely affect noise-sensitive land uses. The California Department of Transportation's (Caltrans) Division of Aeronautics has developed a set of noise regulations, based on the Federal Aviation Administration's (FAA) Federal Aviation Regulations (FAR), which set noise limits for specific aircraft and provide guidance for land-use compatibility around airports. The effects of airport noise depends on factors such as characteristics of the equipment and operations; distance and pathway between the generator and receptor; and weather. Noise generated due to aircraft flyovers depends upon such variables as type and size of the aircraft (e.g. 2- or 3-engine turbofan versus 4-engine widebody turbofan) and its operating characteristics (primarily its thrust level).

The four airports operated by the City of Los Angeles include Los Angeles International (LAX), Van Nuys, Palmdale, and Ontario. The Burbank-Pasadena-Glendale Airport, due to its proximity to the City, influences the noise environment in some areas of Los Angeles. Noise levels generated by the operation of two other airports within or near the City of Los Angeles, Santa

Monica Municipal Airport and Whiteman Airport, generally do not exceed 65 decibels within the Community Noise Equivalency Level (CNEL) contours, and as such do not strongly influence the City's noise environment.

Environmental noise is measured in decibels (dB). To better approximate the range of sensitivity of the human ear to sounds of different frequencies, the A-weighted decibel scale (dBA) was devised. Because the human ear is less sensitive to low frequency sounds, the A-scale de-emphasizes these frequencies by incorporating frequency weighting of the sound signal. When the A-scale is used, the decibel levels are represented by dBA. On this scale, the range of human hearing extends from about 3 dBA to about 140 dBA. A 10-dBA increase is judged by most people as a doubling of the sound level.

To account for the fluctuation in noise levels over time, noise impacts are commonly evaluated using time-averaged noise levels. CNEL represents an energy average of the A-weighted noise levels over a 24-hour period with 5dBA and 10 dBA penalties added for nighttime noise between the hours of 7:00 p.m. and 10:00 p.m. and 10:00 p.m. to 7:00 a.m., respectively. The penalties were selected to account for reduced ambient noise levels during these time periods and increased human sensitivity to noise during the quieter periods of the day. The Day-Night Sound Level (Ldn), like CNEL, measures noise exposure over a 24-hour period and adds a penalty based on the time or day, although only for late night/early morning hours (10 dBA penalty). Thus, the Ldn measurement is slightly less sensitive than CNEL, but it results in very similar noise ratings for most community settings, usually differing by less than 1 dBA.

For the purpose of airport noise impact analyses, CNEL levels are described as contours. A contour is an interpolation of noise levels drawn to connect all points of a similar level. These contours are displayed on maps and appear similar to topographical contours, forming "footprints" surrounding a noise source.

The FAA regulates noise levels for aircraft at all United States airports. In 1969, FAR Part 36 certified noise levels for specific aircraft. FAR Part 150, Airport Noise Compatibility Planning, which became effective in 1981, provides guidance for land-use compatibility around airports. This FAR established a voluntary program, which provides that airport noise impacts are quantified and made public and that noise compatibility plans and mitigation measures are subject to public review and FAA approval. Part 150 states that in general, residential uses are not compatible within the 65 or above dBA Ldn contour and that all types of land uses are compatible in areas below 65 dBA Ldn. In addition, the FAA's Airport Environmental Handbook indicates that its threshold of significance is a 1.5 dBA Ldn increase in noise in any sensitive area located within the 65 dBA Ldn contour.

The Division of Aeronautics is responsible for granting variances from compliance with state noise laws for airports in California. The Division of Aeronautics has also developed noise regulations, adopted in 1970, which are based in part on the FAR Part 150 guidelines. These regulations state that the aircraft noise level in a residential setting should be no greater than 65 dB CNEL. One of the objectives of the Division of Aeronautics is to create an urban development pattern in which all land included within the 65 dB CNEL contour is devoted to either airport or non-sensitive land uses.

C. Screening Criteria

- If the proposed project includes the construction or expansion of an airport or heliport and has the potential to expose noise-sensitive land uses to high noise levels (through proximity of such land uses to the flight path, etc.), would the project result in an incompatible land use existing within the 65 dB CNEL contour of an airport or heliport?

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Airport Noise and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact from Airport Noise from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, including information on airport activities. Consult a map showing the 65 dB CNEL contour and surrounding land uses. Consider whether potential incompatible land uses have acoustical insulation, an avigation agreement with the airport operator, etc. Operations at commercial airports involving turboprop or piston engine aircraft under 70,000 lbs. have reduced potential to expose sensitive land uses to high noise levels because of the quieter noise levels generated by these aircraft. Compare this information with the screening criteria to determine whether incompatible uses would be located within the 65 dB CNEL contour.

Incompatible land uses include the following[1]:

- Residences, including but not limited to, detached single-family dwellings, multi-family dwellings, high-rise apartments, condominiums and mobile homes, unless:

[1] *Division of Aeronautics, Noise Standards (Title 21, Subchapter 6, Article 1) 1990, pages 225-226.*

- An avigation easement[2] for aircraft noise, has been acquired by the airport proprietor;

- A dwelling unit which was in existence at the same location prior to January 1, 1989, and has adequate acoustic insulation to ensure an interior CNEL of 45 dB or less due to aircraft noise in all habitable rooms;

- A residence is a high rise apartment or condominium having an interior CNEL of 45 dB or less in all habitable rooms due to aircraft noise, and an air circulation or air conditioning system, as appropriate;

- A residence exposed to an exterior CNEL less than 80 dB (75 dB if the residence has an exterior normally occupiable private habitable area) where the airport proprietor has made a genuine effort to acoustically treat the residence or acquire avigation easements for the residence involved, or both, but the property owner has refused to take part in the program; or

- A residence which is owned by the airport proprietor;

- Public and private schools of standard construction for which an avigation easement for noise has not been acquired by the airport proprietor, or that do not have adequate acoustic performance to ensure an interior CNEL of 45 dB or less in all classrooms due to aircraft noise;

- Hospitals and convalescent homes for which an avigation easement for noise has not been acquired by the airport proprietor, or that do not have adequate acoustic performance to provide an interior CNEL of 45 dB or less due to aircraft noise in all rooms used for patient care; and

- Churches and other places of worship for which an avigation easement for noise has not been acquired by the airport proprietor or that do not have adequate acoustic performance to ensure an interior CNEL of 45 dB or less due to aircraft noise.

[2] *An avigation easement is a legal agreement to purchase the right to fly over a property owner's land without penalty.*

2 DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A significant impact on ambient noise levels would normally occur if noise levels at a noise sensitive use attributable to airport operations exceed 65 dB CNEL and the project increases ambient noise levels by 1.5 dB CNEL or greater.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following:

- Identification of ambient noise levels (existing and future) measured in CNEL. Use the 65 dB CNEL contour map or mathematical models to assess existing (at the expected time of project implementation) noise conditions. Model future noise levels by establishing parameters and assumptions, including aircraft fleet compositions at the airport for which a project is being analyzed, fleet forecasts, appropriate aircraft substitutions, departure profiles, tracks, thrusts settings, operational time of day (day, evening, or night), airport configurations (runway length and location, departure and landing thresholds, etc), and the algorithms used to calculate individual aircraft noise profiles. Use a recognized aircraft noise model, such as one of the following:

  - The Integrated Noise Model (INM), developed by the FAA and used extensively for commercial airports, produces noise contours to geographically demonstrate the location and level of average, weighted noise impacts;

  - The Area Equivalent Method (AEM), developed by the FAA, produces the aggregate area of noise impact without demonstrating the location of specific noise levels; it can be used as a screening tool to determine whether the more sophisticated and time consuming INM is warranted;

  - The Helicopter Noise Model (HNM), developed by the FAA, is used for projects which primarily involve helicopter operations; and

  - The Noise Map, developed by the United States Air Force (USAF), is primarily used to analyze military operations.

- Characterization of noise-sensitive land uses within the 65-dBA contour of airport operations, including the description and location within the contour. Identify noise attenuation devices, avigation easements, and other relevant features of the land uses; and

Project Impacts

Use the information from the Evaluation of Screening Criteria and Environmental Setting and one of the aircraft noise models described above to develop future noise contours. Results from the INM are preferred for commercial airports because of the level of sophistication and detail provided. Identify noise sensitive uses at which noise levels exceed 65 dB CNEL as a result of airport operations. Calculate the increase in ambient noise levels due to project operations at these locations. Compare this information to the Significance Threshold.

Cumulative Impacts

The projection of future baseline ambient noise levels incorporates background increases in noise and airport-related noise from the related projects. Therefore, no new analysis is required.

Sample Mitigation Measures

Possible mitigation measures include the following:

- Redirect air traffic over the ocean (for coastal airports) or over less populated areas;*

- Acquire noise-impacted land. The FAA's Uniform Relocation Assistance and Real Property Acquisition rules and provisions govern land acquisition and relocation assistance;

- Purchase avigation easements;

- Reduce the number of flights during evening and nighttime hours;*

- Increase takeoff angles within safety parameters or reducing thrust settings, depending on proximity and configuration of surrounding land uses;*

- Plan runway utilization schedules to take into account adjacent residential areas, noise characteristics of aircraft, and noise-sensitive time periods;*

- Employ shielding to obstruct the noise path to incompatible uses, using natural terrain, buildings, and other obstructions to noise; and

- Develop compatible land uses within the noise boundary through rezoning, or application of acoustical insulation.

* ***Strategies marked with * require FAA approval***

3. DATA, RESOURCES, AND REFERENCES

Los Angeles World Airports, Van Nuys Airport Noise Control Regulation EIR, 1992.

Los Angeles World Airports, Draft Van Nuys Airport Master Plan, 1995.

Division of Aeronautics, Noise Standards, 1990.

FAA, Airport Environmental Handbook, 1985.

See also I.2. OPERATIONAL NOISE.

Selected Legislation

Federal

FAR, Part 36

Establishes noise standards and provisions for issuing certificates for various types of aircraft. Also, the aircraft must meet the airworthiness regulations constituting the type certification basis of the aircraft under the conditions in which compliance with this part is shown.

FAR, Part 150

Describes the procedures, standards, and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs. Makes matching funds available for abatement programs.

State

California Airport Noise Standards Act, 1970 (CAC, Title 4)

Implements the FAA airport standards, administered by the State Division of Aeronautics. Requires civilian airports to meet FAA noise standard of 65 dB CNEL at airport boundaries.

CCR, Title 21 (Business Regulations)

Requires airports to monitor noise impacts and report to the County Airport Land Use Commission and State Division of Aeronautics on a quarterly basis.

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J. POPULATION AND HOUSING

J.1. POPULATION AND HOUSING GROWTH

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

XII.a): Would the project induce substantial population growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

XII.b): Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

B. Introduction

The quantity and distribution of population and households in the City affects the environment, use of infrastructure, and the demand for public services. Thus, in order to respond to and plan for future population and households, the General Plan, including the Framework and Housing Elements, and the Southern California Association of Government (SCAG) Regional Comprehensive Plan and Guide (RCP&G) include forecasts of population and housing trends.[1] Because the projections are used to plan the infrastructure and level of service required to support the future population, actual growth in excess of the projections can lead to deficiencies. According to the CEQA Guidelines Section 15064(e): "Economic and social changes resulting from a project shall not be treated as significant effects on the environment. Economic or social changes may be used, however, to determine that a physical change shall be regarded as a significant effect on the environment." Population and housing growth are examples of economic and social changes.

Population refers to the occupants of housing projects, population indirectly associated with workers of proposed non-residential projects, or changes in the amount and distribution of

[1] *The City of Los Angeles uses two different estimates of its population. The first is prepared by the California Department of Finance (DOF) and provided to SCAG. For purposes of conformity with the requirements of these other agencies, the City uses this estimate when and where appropriate. The City Planning Department prepares an estimate of its population based on a number of locally derived factors including: building and demolition permits issued, school enrollments, and the percentage of active electric meters. The City Planning Department estimates are used for planning purposes in the City of Los Angeles. It should be noted that both sets of numbers are estimates and, therefore, only close approximations of the actual population. Every 10 years these estimates are reconciled by the U.S. Census.*

population and employment permitted by adoption or revision to a land use plan. Important areas include changes in the number, characteristics, geographic distribution, and timing of new residents directly or indirectly resulting from a proposed project, and the degree to which project-related changes are consistent with City, regional or other adopted population growth policies. Other issues are the degree to which project-related population is already present in the area under analysis (i.e., already residing or working in the area), or whether they represent in-migrants (i.e., likely to relocate into the area from some other more distant location as a result of the project).

Housing impacts may result directly from projects, which include housing units, or indirectly from, for example, revisions to the Housing Element or changes in housing demand associated with new non-residential development projects. Important issues include changes in the number, characteristics (including rent level or purchase price), geographic distribution, and timing of new housing units associated with a proposed project, supply-demand relationships, and the degree to which project-related changes are consistent with City, regional or other adopted housing growth policies.

C. Screening Criteria

- Would the project include a General Plan amendment, which could result in an increase in population over that projected in the adopted Community Plan or General Plan?

- Would the project induce substantial growth on the project site or surrounding area?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Population and Housing Growth, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Population and Housing Growth from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project and the surrounding area. Determine whether the project includes a General Plan amendment, and identify the potential to induce substantial growth. General Plan amendments which could result in an increase in population are those for which the population in the planning subregion containing the project site would exceed the population forecast in the Framework Element after buildout to the maximum amount permitted under the General Plan amendment. The potential to induce substantial growth may be indicated by the introduction of a project in an undeveloped area or the extension of major infrastructure. As

necessary, contact the City Planning Department Demographics and Framework Monitoring Sections for current analysis, data, and department policy. Examples of major infrastructure systems include: major roads, highways, or bridges; major utility or service lines; major drainage improvements; or grading which would make accessible a previously inaccessible area. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The degree to which the project would cause growth (i.e., new housing or employment generators) or accelerate development in an undeveloped area that exceeds projected/ planned levels for the year of project occupancy/buildout, and that would result in an adverse physical change in the environment;

- Whether the project would introduce unplanned infrastructure that was not previously evaluated in the adopted Community Plan or General Plan; and

- The extent to which growth would occur without implementation of the project.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Recent population and housing growth trends for the planning subregion containing the project site (e.g., past 10 years);

- Forecast or projection of population and housing growth for the planning subregion containing the project site; and

- Summary of population and/or housing growth policies that affect or regulate the project site. These may include, for example, the Community Plan, General Plan

(including the Framework and Housing Elements), redevelopment plan, the City's Housing and Urban Development (HUD) Consolidated Plan, or SCAG's RCP&G.

Project Impacts

Determine the amount of growth from the project by calculating the number of housing units included as part of the project and the occupancy of the units. Occupancy is related to design and the number of bedrooms per unit (i.e., for seniors, large families, etc.). For non-residential uses, estimate the population associated with employees based on the type of use and the corresponding type of employment (e.g., degree of skill required, wage levels, likelihood of causing in-migration). To evaluate the degree to which the project would exceed adopted population or housing projections for the planning subregion containing the project site, consider forecasts found in, for example, the applicable specific plan, General Plan, Framework Element, Community Plan, redevelopment plan, or RCP&G. A physical change in the environment would affect the land, air, water, flora, fauna, noise conditions, minerals, objects of historic or aesthetic significance, etc.

If the project is in an area that is currently undeveloped or unserved by major infrastructure, and the project would introduce infrastructure or accelerate development, then non-contiguous "leapfrog" or other undesirable or inefficient development patterns may result if project growth is not consistent with adopted projections and policies. Consider whether the proposed infrastructure has been analyzed or planned for in the Community Plan. Examples of major infrastructure systems include: major roads, highways, or bridges; major utility or service lines; major drainage improvements; or grading which would make accessible a previously inaccessible area.

Evaluate the extent to which growth would occur without implementation of the project by determining the amount, timing, and location of growth contemplated for the project site and surrounding area in the adopted population and housing projections. Compare this to the growth anticipated with the proposed project and determine whether potential impacts are significant.

Cumulative Impacts

Determine the increase in housing units, occupancy and population associated with the related projects in the same manner as described above under Project Impacts. Compare the combined effect of the growth from the project and the related projects to the amount, timing and location of growth forecast for the project site and surrounding area in the adopted population and housing projections. If the area is currently underdeveloped or the project

introduces new major infrastructure, also note whether the project or related projects would introduce infrastructure or accelerate development.

Sample Mitigation Measures

As noted in the Introduction, population and housing growth are not considered significant effects on the environment. Secondary or indirect impacts, such as increased traffic or noise, may be significant and may be physical changes caused by population and housing growth. Thus, mitigating these secondary impacts may mitigate the effects of population and housing growth.

3. DATA, RESOURCES, AND REFERENCES

City of Los Angeles: For adopted housing policies, see the Housing and Framework Elements and the City's HUD Consolidated Plan. The HUD Consolidated Plan is updated annually in July, and is available from the Community Development Department (CDD) at 215 West Sixth Street, Los Angeles, California 90014; Telephone: (213) 485-4682. For current population and housing estimates, see Population and Housing Estimates, 1999 (updated periodically), City Planning Department, Demographical Research Unit, 200 N. Spring St., 7th Floor, Los Angeles, California 90012; Telephone: (213) 978-1416; Internet: www.lacity.org/PLN (click on *Statistical Info).*

SCAG: RCP&G, Chapter 3: Growth Management. SCAG's regional growth forecast to the year 2025 is available in a Small Area Forecast edition, which includes employment, households and population (including limited characteristics) at the census tract level for the entire six-county SCAG region. Available at SCAG offices, 818 West Seventh Street, 12th Floor, Los Angeles, California 90017; Telephone: (213) 236-1800; Internet: www.scag.ca.gov.

Center for the Continuing Study of the California Economy (CCSCE): This research center based in Palo Alto, California, publishes an annual five-year forecast of economic and population growth at the county level. See for example, California County Projections, which includes data on population growth, household growth, and income growth, for each county in the state, including Los Angeles County. CCSCE is located at 610 University Avenue, Palo Alto, CA 94301; Telephone: (650) 321-8550.

U.S. Census of Population and Housing: The Bureau of the Census is generally regarded as the most authoritative source of population and housing data, although its estimates are only prepared every 10 years. Summary Tape Files 1 and 3 provide the most commonly used data, at a scale as small as a census block. Available at public libraries.

J.2. POPULATION AND HOUSING DISPLACEMENT

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

XII.b): Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

XII.c): Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

B. Introduction

Within the City of Los Angeles, the supply of and demand for housing, especially affordable housing, indicates that the existing stock should be preserved, maintained, and expanded in order to provide for the population. The CEQA Guidelines Section 15064(e) states "economic and social changes resulting from a project shall not be treated as significant effects on the environment. Economic or social changes may be used, however, to determine that a physical change shall be regarded as a significant effect on the environment."

A recent study prepared for the Housing Department[1] explored some of the current housing problems in the City of Los Angeles, including:

- Lack of growth in the supply of housing despite an increasing number of households;
- Household-housing type mismatch because average unit size is small and declining, while average household size is large and increasing;
- Overcrowding; and
- Increasing rent burden such that more than 30 percent of income goes for rent. This situation is related to household size, income, ethnicity, as well as the age of the head of the household.

[1] *Housing Department, 1994 Housing Study, prepared by Hamilton, Rabinovitz & Alschuler, Inc., December 1995.*

Adopted City programs and policies, designed to increase and conserve the supply of housing, particularly the supply of housing affordable to lower-income households, are contained in the Housing and Framework Elements, the Housing and Urban Development (HUD) Consolidated Plan, redevelopment plans, and the Rent Stabilization Ordinance. Examples of these policies and other regulations include:

- Housing Element, which discourages the demolition of affordable housing and encourages the replacement of affordable housing; obligates the City to provide relocation services to persons who are displaced as a result of City actions; and mandates mitigation of relocation and displacement hardships caused by housing demolitions, conversions or neighborhood gentrification;

- Comprehensive Housing Affordability Study (CHAS) -- a component of the HUD Consolidated Plan -- which contains a description of current housing policy, particularly with respect to low-income housing needs;

- The Rent Stabilization Ordinance, which includes requirements for relocation payments to tenants under "no-fault" evictions;

- State redevelopment law which specifies actual relocation assistance, in addition to payments, for displaced households and requires replacement of all lost units that occur within or as a result of redevelopment projects subject to a written agreement with the redevelopment agency or where financial assistance is provided by the redevelopment agency; and

- Federal law that mandates relocation payments and assistance when displacement results from a project supported with federal funds (e.g., HUD financing).

C. Screening Criteria

- Would the project result in a net loss of housing equal to or greater than a one-half block equivalent of habitable housing units through demolition, conversion, or other means? (One-half block is generally equivalent to 15 single-family or 25 multi-family dwelling units.)

- Would the project result in the net loss of any existing housing units affordable to very low- or low-income households (as defined by federal and/or City standards), through demolition, conversion, or other means?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Population and Housing Displacement, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Population and Housing Displacement from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project and determine the number and type of housing units, which will be eliminated and added as a result of the proposed project. Calculate the net change in the number of habitable housing units, as well as units affordable to very low- or low-income households (See Exhibit J.2-1). Affordable units can be lost through conversion to market rate units. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The total number of residential units to be demolished, converted to market rate, or removed through other means as a result of the proposed project, in terms of net loss of market-rate and affordable units;

- The current and anticipated housing demand and supply of market rate and affordable housing units in the project area;

- The land use and demographic characteristics of the project area and the appropriateness of housing in the area; and

- Whether the project is consistent with adopted City and regional housing policies such as the Framework and Housing Elements, HUD Consolidated Plan and CHAS policies, redevelopment plan, Rent Stabilization Ordinance, and the Regional Comprehensive Plan and Guide (RCP&G).

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description of existing land uses on the project site and in the surrounding area;

- Recent (e.g., past 10 years) housing supply and demand trends, as well as housing supply characteristics (e.g., vacancy patterns, tenure, rent and sale price levels) for the project site and surrounding area;

- Housing supply and demand forecasts for the project site and surrounding area; and

- Summary of housing displacement policies applicable to the project. These may include policies in the Framework and Housing Elements, HUD Consolidated Plan, redevelopment plans, and the Rent Stabilization Ordinance.

Project Impacts

Review the description of the proposed project and identify the net change in the number of habitable housing units, as well as units affordable to low- and very-low income households, from the Evaluation of Screening Criteria.

To determine current and anticipated housing demand and supply in the project area, use the Population Estimate and Housing Inventory prepared by the City Planning Department, field research, published reports, or market research studies, as appropriate.

In evaluating the characteristics of the project area, survey the land uses and zoning designations for parcels in the surrounding area. Determine the character of the area and any recent housing trends, and consider the appropriateness of housing in that location in light of applicable housing policies and plans. Land use compatibility is addressed in H.2 LAND USE COMPATIBILITY.

Identify adopted housing projects in, for example, the applicable redevelopment plans, the Framework Element, HUD Consolidated Plan, Rent Stabilization Ordinance, or RCP&G. If necessary, consult with the City Planning Department, Housing Department, or Community Redevelopment Agency (CRA) of the City of Los Angeles.

Evaluate whether the project would be consistent with these policies.

Cumulative Impacts

Determine the number and type of housing units to be eliminated and added as a result of the related projects in the same manner as described above for Project Impacts. Compare the combined effect of the displacement from the project and the related projects to the current and anticipated housing demand and supply in the project area and adopted housing policies.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Exceed the statutory requirements for relocation assistance; and

- Increase the number of housing units affordable to lower income households.

3. DATA, RESOURCES, AND REFERENCES

Population and Housing Estimates are available from the City Planning Department, Citywide Demographics Unit, 200 N. Spring Street, 7th Floor, Los Angeles, California 90012; Telephone: (213) 978-1416; Internet: www.lacity.org/PLN (click on *Statistical Info).*

Redevelopment plans are available from the CRA, 354 South Spring Street, Suite 800, Los Angeles, California 90013; Telephone: (213) 977-1600.

Rent Stabilization Ordinance, City of Los Angeles, adopted 1979 (periodically updated and revised). Available at the Housing Department's Public Counter, 3550 Wilshire Boulevard, 15th floor, Los Angeles, California 90010, open Monday through Friday from 8:00 a.m. to 4:30 p.m., or call toll free (866) 557-7368.

Housing Department, 1994 Rental Housing Study, prepared by Hamilton, Rabinovitz & Alschuler, Inc., December 1995.

See also J.1. POPULATION AND HOUSING GROWTH.

Selected Legislation

Federal

24 CFR Part 970.5

Tenants who are to be displaced as a result of demolition or disposition must be relocated to other decent, safe, sanitary, and affordable housing (at rents no higher than permitted under the Uniform Relocation Assistance and Real Property Acquisition Policies Act). The new housing, to the maximum extent practicable, should be housing of the tenants' choice, on a nondiscriminatory basis, without regard to race, color, religion (creed), national origin, handicap, age, or sex, in compliance with applicable Federal and State laws.

In addition to provision of relocation housing, assistance to all displaced tenants includes assistance in finding other suitable housing, including payment of actual, reasonable moving costs, and counseling and advisory services to assure that full choices and real opportunities exit for tenants displaced from public housing scheduled for demolition or other disposition to select relocation housing in a full range of neighborhoods in which suitable relocation housing may be found, in and outside areas of minority concentration.

Exhibit J.2-1

**MAXIMUM AFFORDABLE RENT
FOR VERY LOW- AND LOW-INCOME HOUSEHOLDS
IN THE CITY OF LOS ANGELES, FY 2003**

Household Income Category as Percent of Median Family Income (MFI)	Household Size					
	1-Person	2-Persons	3-Persons	4-Persons	5-Persons	6-Persons
Very Low-Income (up to 50% of MFI)						
Maximum Household Income[a]	$19,740	$22,560	$25,380	$28,200	$30,456	$32,712
Maximum Monthly Rent[b]	494	564	635	705	761	818
Low-Income (51-80% of MFI)						
Maximum Household Income (73% of MFI)[a]	$28,820	$32,938	$37,055	$41,172	$44,466	$47,760
Maximum Monthly Rent[b]	720	823	926	1,029	1,112	1,194

[a] Per Department of HUD.

[b] Assumes 30% of monthly income for rent, rounded to nearest dollar.

Source: Department of HUD; Hamilton, Rabinowitz & Alschuler, Inc., 1996 and the City of Los Angeles Housing Department, 2003.

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K. PUBLIC SERVICES

K.1. POLICE PROTECTION

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

XIII.a.ii): 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 police protection?

B. Introduction

Public protection service and law enforcement are provided by the Los Angeles Police Department (LAPD) which operates 18 stations (also called areas) citywide within four Bureaus (Central, South, West, and Valley). Statistical data is compiled by Reporting Districts, smaller units within the stations.

Service needs are related to the size of the population and geographic area served, the number and type of calls for service, and other community characteristics. Projects that affect these factors may increase the demand for service from the LAPD.

The effect of increased traffic congestion on response times for police protection and other emergency services is discussed in K.2. FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES.

C. Screening Criteria

- Would the proposed project result in a net increase of 75 residential units, 100,000 square feet (sf) of commercial floor area, or 200,000 sf of industrial floor area?

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Police Protection, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Police Protection from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project and determine the type of land use(s) proposed (i.e., commercial, industrial, residential), and the size of the project (i.e., number of units, square footage). Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The population increase resulting from the proposed project, based on the net increase of residential units or square footage of non-residential floor area;

- The demand for police services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements to LAPD services (facilities, equipment, and officers) and the project's proportional contribution to the demand; and

- Whether the project includes security and/or design features that would reduce the demand for police services.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Name and characteristics of the station and Reporting District in which the project is located. If the Bureau, station, and Reporting District are unknown, refer to Exhibits K.1-1 through K.1-19; and

- Description of scheduled improvements to LAPD services (facilities, equipment, and officers) at the station serving the project site.

Project Impacts

Consider the description and location of the project. Determine the net population increase resulting from the project. The population conversion factors below may be used.

Based on consultation with LAPD, evaluate the demand for police services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements (facilities, equipment, and officers) and the project's proportional contribution to the demand.

Evaluate project security features (e.g., security cameras, officers, lights, fencing, gates, etc.) if any, and any other project features, which would reduce the expected demand for police service.

POLICE SERVICE POPULATION CONVERSION FACTORS

Land Use	Conversion Factor
Residential	
Single, one-, two-bedroom units	3 persons/unit
Three-, four-bedroom units	4 persons/unit
Office	4 persons/1,000 sf
Retail	3 persons/1,000 sf
Hotel	1.5 persons/room/day

Cumulative Impacts

Identify the related projects, which would be served by the same LAPD facilities as the proposed project. Consider the characteristics of the related projects in terms of size, location, and types of land uses. Determine the net population increase resulting from the related projects. Based on consultation with LAPD, evaluate the cumulative demand for police services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements (facilities, equipment, and officers) to the relevant LAPD facilities. As feasible, evaluate known security features (e.g., security cameras, officers, lights, fencing, gates, etc.) and any other features, which will reduce

the expected cumulative demand for police service. Consider the combined impact of the proposed and related projects and the project's proportional contribution to the cumulative demand.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Require the project applicant to consult with the LAPD's Crime Prevention Section on the design and implementation of a security plan for the proposed project. Consider the following elements:

  - use of private security guards to monitor and patrol the project site during project construction and operation;

  - design entryways, elevators, lobbies and parking areas with lighting that eliminates areas of concealment;

  - eliminate areas of dead space;

  - provide solid core doors with deadbolt locks to all offices, shops, and hotel units; and

  - provide walls and fencing around parking areas.

3. DATA, RESOURCES, AND REFERENCES

LAPD, Crime Prevention Section, Telephone: (213) 485-3134.

Safety Element

Environmental and Public Facilities Maps (1996):

- Police Department Facilities; and
- Police Department Community Outreach Centers.

Exhibit K.1-1
Location of Los Angeles Police Department Bureaus and Areas

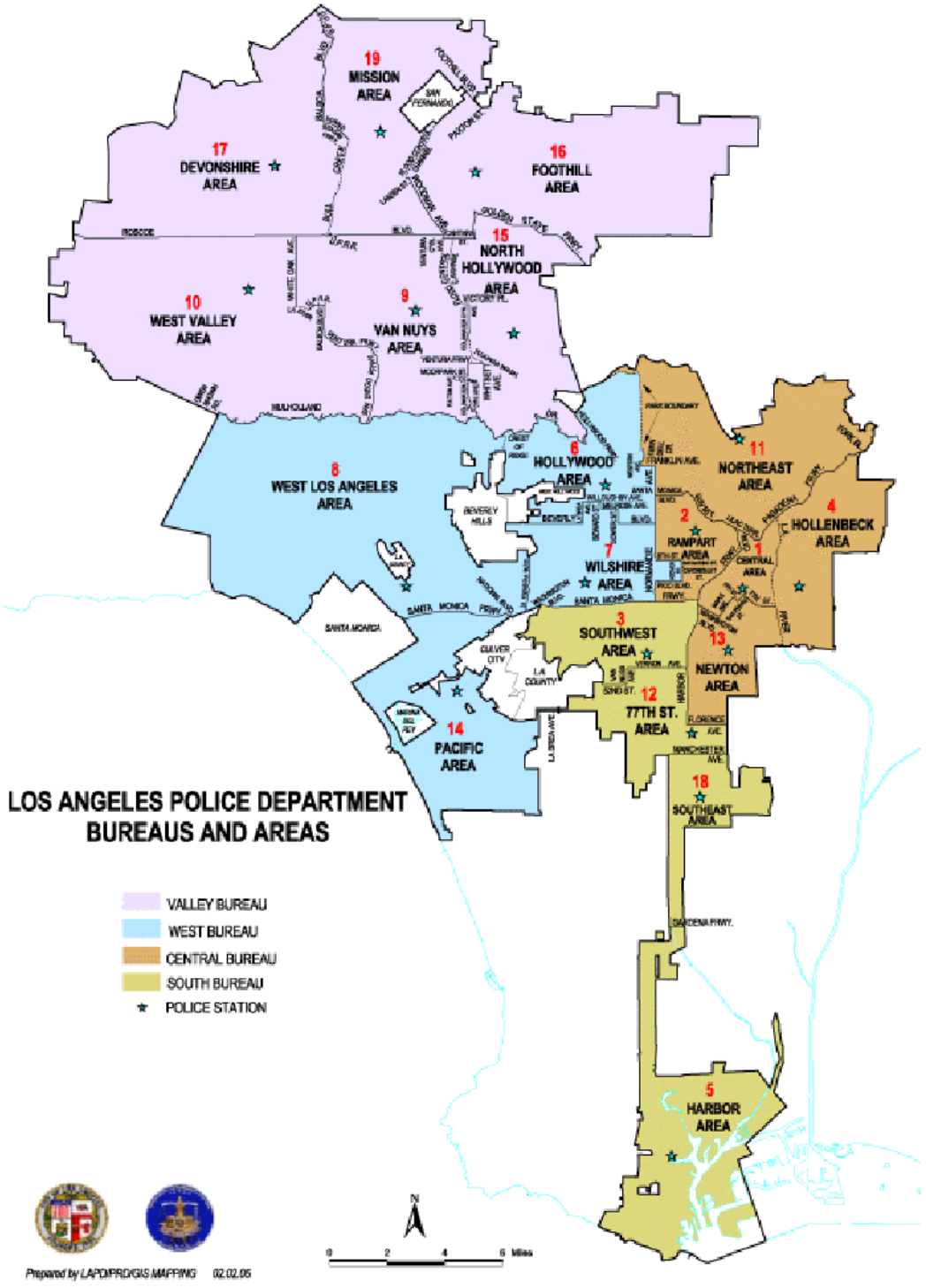


Exhibit K.1-1, continued
KEY TO LOCATION OF LOS ANGELES POLICE BUREAUS/AREAS

CENTRAL BUREAU

251 E. 6th Street, LA, CA 90014
(213) 485-3101

Central Area
251 E. 6th Street, LA, CA 90014
(213) 485-3294

Rampart Area
2710 W. Temple Street, LA, CA 90026
(213) 485-4061

Hollenbeck Area
2111 E. First Street, LA, CA 90033
(213) 485-2942

Northeast Area
3353 San Fernando Road, LA, CA 90065
(213) 485-2563

Newton Area
3400 South Central, LA, CA, 90011
(323) 846-6524

WEST BUREAU

4849 West Venice, Suite 213, LA, CA 90019
(213) 473-0277

Hollywood Area
1358 N. Wilcox Avenue,
Hollywood, CA. 90028
(213) 485-4302

Wilshire Area
4861 Venice Boulevard, LA, CA. 90019
(213) 485-4022

West Los Angeles Area
1663 Butler Avenue, LA, CA. 90025
(310) 575-8404

Pacific Area
12312 Culver Boulevard, LA, CA. 90066
(310) 202-4502

VALLEY BUREAU

6240 Sylmar Avenue, Van Nuys, CA 91401
(818) 756-8303

Van Nuys Area
6240 Sylmar Avenue, Van Nuys, CA 91401
(818) 756-8343

West Valley Area
19020 Vanowen Street, Reseda, CA 91335
(818) 756-8542

North Hollywood Area
11640 Burbank Blvd., North Hollywood, CA 91601
(818) 756-8861

Mission Area
11121 Sepulveda Blvd, Mission Hills, CA 91345
(818) 838-9800

Foothill Area
12760 Osborne Street, Pacoima, CA 91331
(818) 756-8861

Devonshire Area
10250 Etiwanda Avenue, Northridge, CA 91325
(818) 756-8285

SOUTH BUREAU

7600 S. Broadway, LA, CA 90003
(213) 485-4251

Southwest Area
1546 Martin Luther King Jr. Boulevard, LA, CA 90062
(213) 485-2582

SOUTH BUREAU(cont.)

Exhibit K.1-1, continued
KEY TO LOCATION OF LOS ANGELES POLICE BUREAUS/AREAS

Harbor Area
2175 John S. Gibson Boulevard
(310) 548-7605

77th Street Area
7600 S. Broadway, LA, CA 90003
(213) 485-4164

Southeast Area
145 W. 108th Street
(213) 485-6914

OTHER FACILITIES

Parker Center
150 N. Los Angeles Street
Los Angeles, CA 90012
(213) 485-3266

Air Support Division
555 E. Ramirez Street
Los Angeles, CA 90012
(213) 485-2600

LAX SubStation
802 World Way
Los Angeles, CA 90045
310-646-2255
Airport Substation
(213) 485-5299

Jail Division
150 N. Los Angeles Street
Los Angeles, CA 90012
(213) 485-2547

Juvenile Division
150 N. Los Angeles Street
Los Angeles, CA 90012
(213) 485-2801

Metropolitan Division
Central Facilities Building
251 E. 6th Street, Room 221
Los Angeles, CA 90014
(213) 485-4091

Motor Transport Division
151 N. San Pedro Street
Los Angeles, CA 90012
(213) 485-3495

Police Training and Education
1880 N. Academy Drive
Los Angeles, CA 90012
(213) 847-3000

Ahmanson Recruit Training Center
5651 W. Manchester Boulevard
Los Angeles, CA 90045
(213) 342-3010

The Edward M. Davis EVOC
Firearms/Tactics Training Facility
12001 Blucher Avenue
Granada Hills, CA 91344
818-832-3700

Supply Division
555 E. Ramirez Street
Los Angeles, CA 90012
(213) 485-2909

Exhibit K.1-2

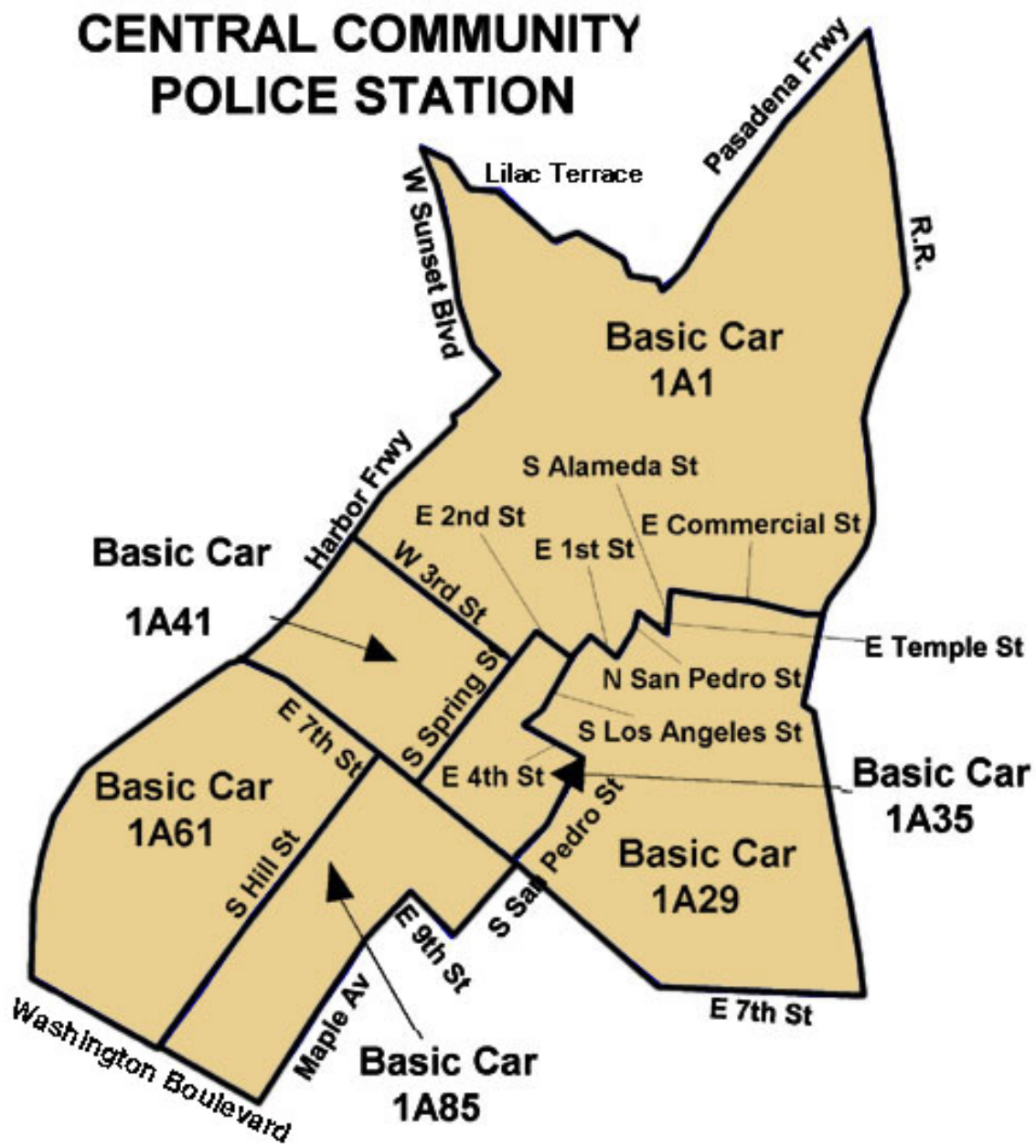

CENTRAL COMMUNITY
POLICE STATION
Pasadena Frwy
Lilac Terrace
W Sunset Blvd
R.R.
Basic Car
1A1
Harbor Frwy
S Alameda St
E 2nd St
E Commercial St
E 1st St
Basic Car
1A41
W 3rd St
E Temple St
N San Pedro St
S Spring St
E 7th St
S Los Angeles St
E 4th St
Basic Car
1A35
Basic Car
1A61
S Hill St
S San Pedro St
Basic Car
1A29
E 9th St
Maple Av
E 7th St
Washington Boulevard
Basic Car
1A85

Exhibit K.1-3

RAMPART COMMUNITY POLICE STATION

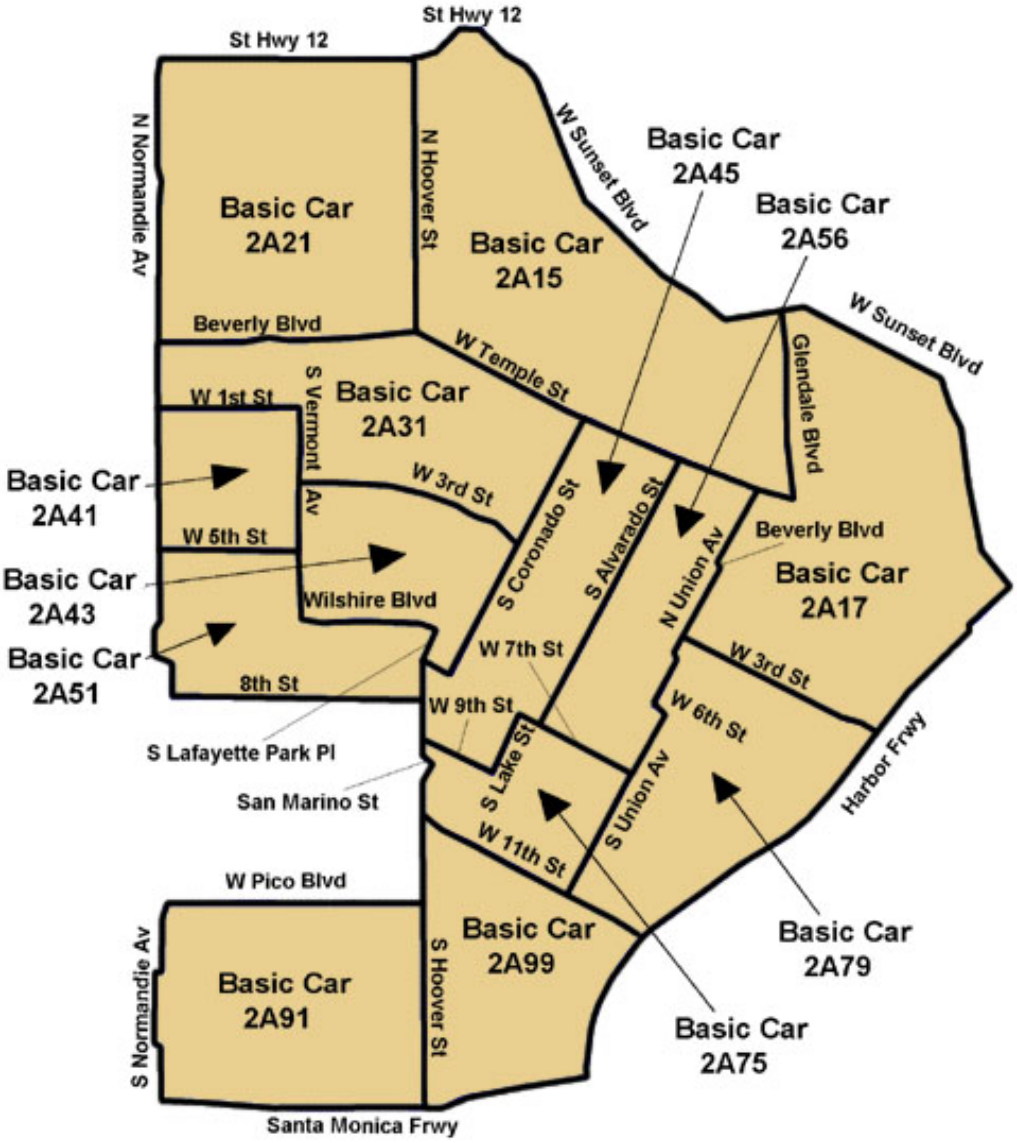


Exhibit K.1-4


HOLLENBECK COMMUNITY POLICE STATION
South Pasadena
Alhambra
Vernon
Basic Car 4A3
Basic CAr 4A9
Basic Car 4A15
Basic Car 4A59
Basic Car 4A53
Basic Car 4A71
Basic Car 4A97
Pasadena Frwy
Kendall Av
Collis Av
Cudahy St
Harriman Av
Montecito Dr
Reynolds Av
St Hwy 110
Radio Dr
Mercury Av
Collis Av
Unnamed St
E Avenue 28
Pyrites St
Huntington Dr S
Daly St
N Broadway
R.R.
Klamath St
N Eastern Av
Valley Blvd
N Soto St
San Bernardino
I-10
Wabash Av
Santa Ana Frwy
Pleasant Av
S State St
E 4th St
E 1st St
N Evergreen Av
S Soto St
E 4th St
R.R.
S Soto St
Eucilid Av
E 6th St
N Mission St
Santa Ana Frwy
Santa Monica Frwy
S Grande Vista
R.R.
R.R.
Woland Av
R.R.

Exhibit K.1-5

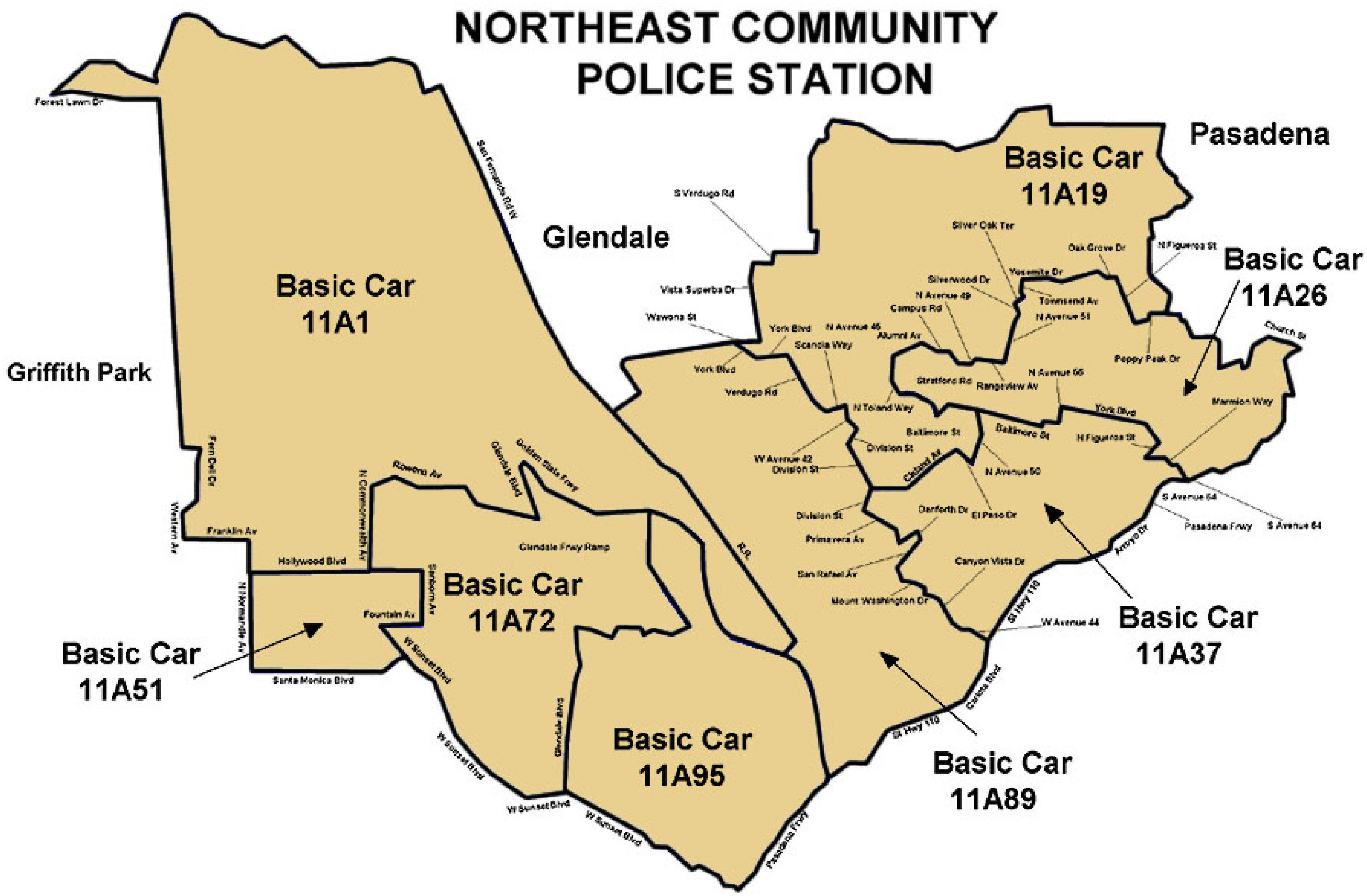

NORTHEAST COMMUNITY
POLICE STATION
Pasadena
Glendale
Griffith Park
Basic Car
11A1
Basic Car
11A19
Basic Car
11A26
Basic Car
11A72
Basic Car
11A51
Basic Car
11A37
Basic Car
11A95
Basic Car
11A89

Exhibit K.1-6

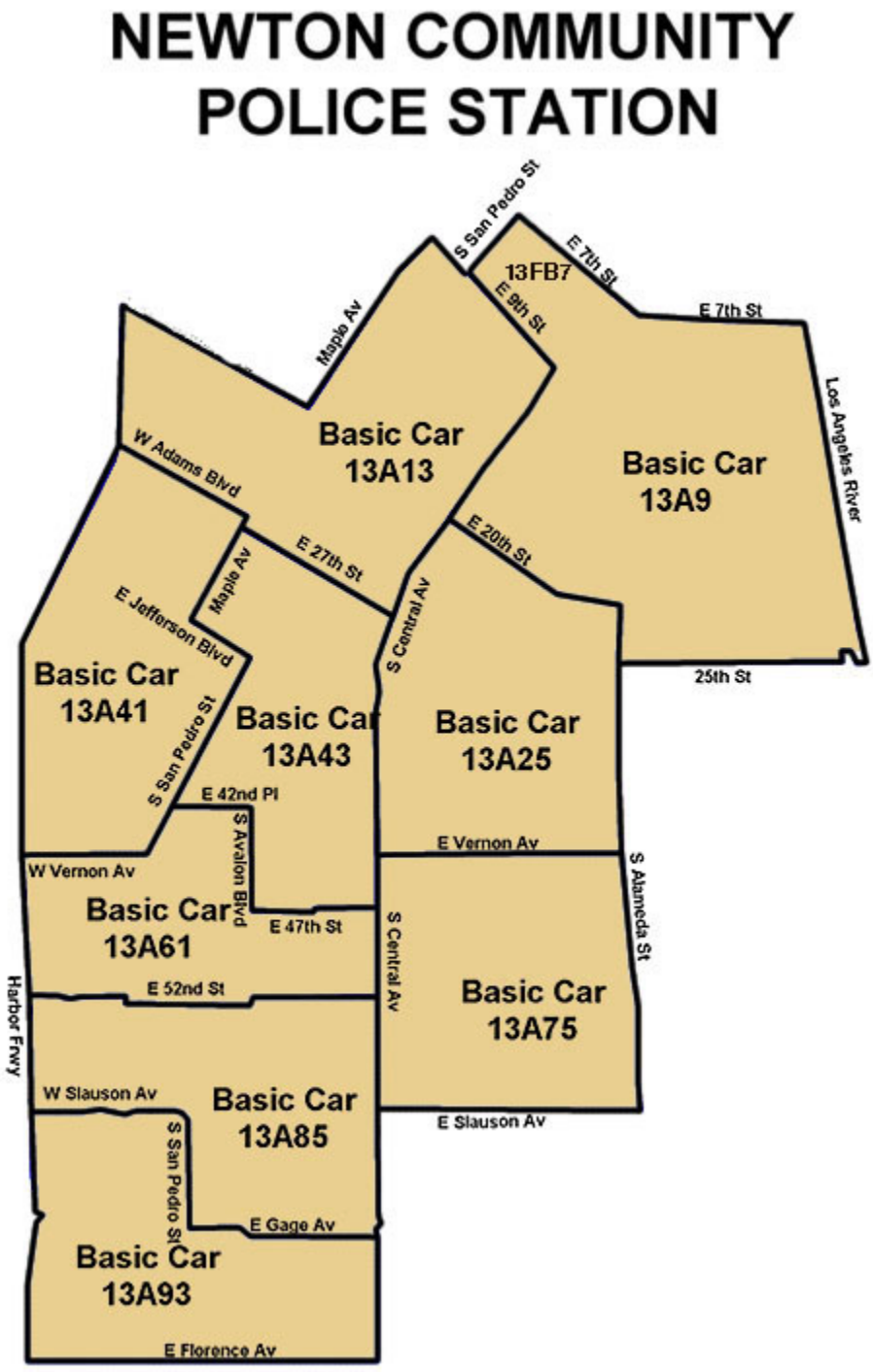

NEWTON COMMUNITY POLICE STATION
S San Pedro St
E 7th St
13FB7
E 9th St
E 7th St
Maple Av
Basic Car 13A13
Basic Car 13A9
Los Angeles River
W Adams Blvd
E 27th St
E 20th St
Maple Av
E Jefferson Blvd
S Central Av
Basic Car 13A41
Basic Car 13A43
Basic Car 13A25
25th St
S San Pedro St
E 42nd Pl
S Avalon Blvd
E Vernon Av
S Alameda St
W Vernon Av
Basic Car 13A61
E 47th St
S Central Av
Harbor Frwy
E 52nd St
Basic Car 13A75
W Slauson Av
Basic Car 13A85
E Slauson Av
S San Pedro St
E Gage Av
Basic Car 13A93
E Florence Av

Exhibit K.1-7

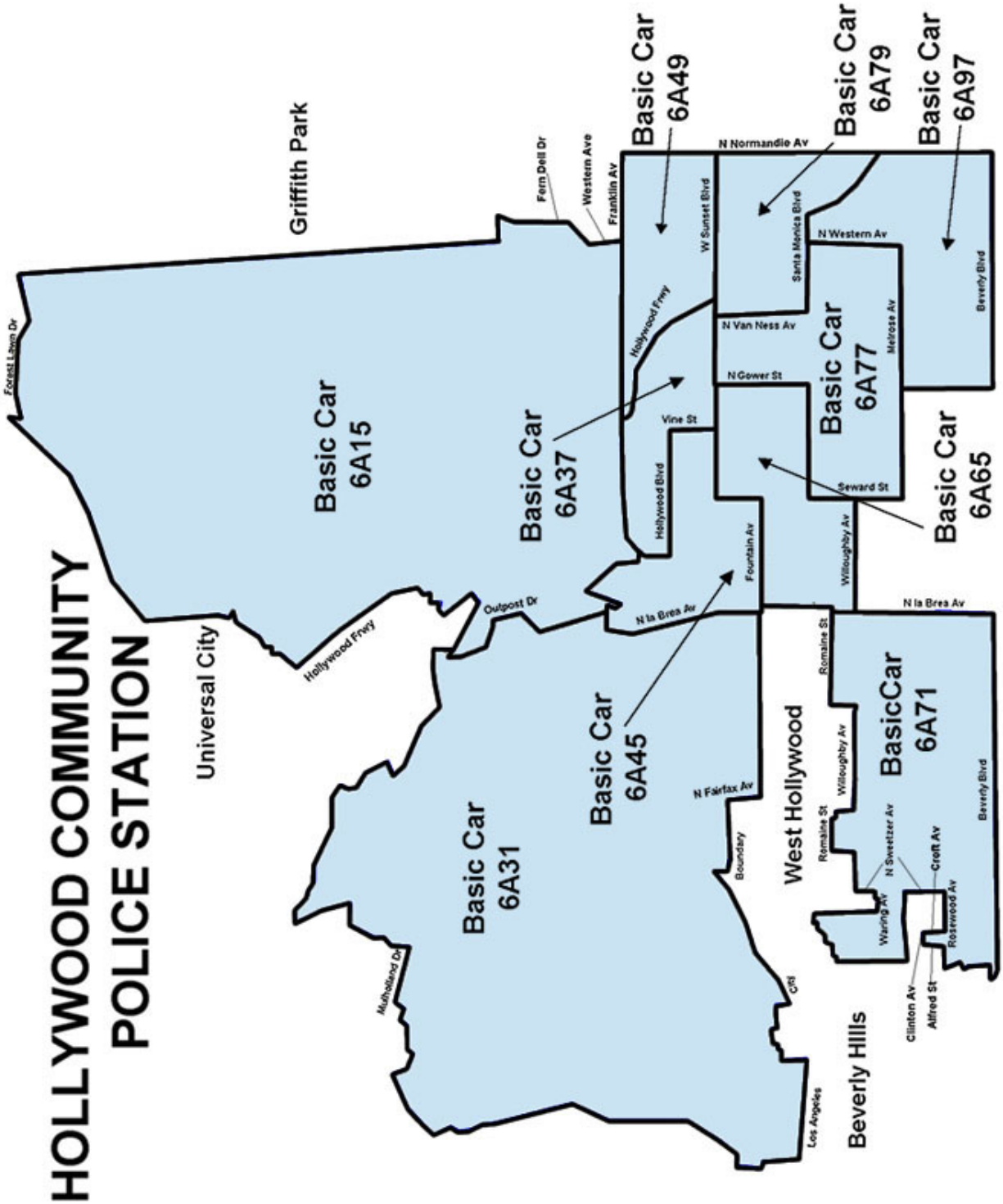

HOLLYWOOD COMMUNITY POLICE STATION
Griffith Park
Universal City
Beverly Hills
West Hollywood
Basic Car 6A15
Basic Car 6A37
Basic Car 6A45
Basic Car 6A31
Basic Car 6A49
Basic Car 6A79
Basic Car 6A97
Basic Car 6A77
Basic Car 6A65
BasicCar 6A71
Hollywood Frey
Fern Dell Dr
Western Ave
Franklin Av
W Sunset Blvd
N Normandie Av
Santa Monica Blvd
N Western Av
Beverly Blvd
N Van Ness Av
Melrose Av
N Gower St
Vine St
Hollywood Blvd
Seward St
Willoughby Av
Fountain Av
Outpost Dr
N la Brea Av
Romaine St
N Fairfax Av
Boundary
N Sweetzer Av
Croft Av
Waring Av
Rosewood Av
Clinton Av
Alfred St
Mulholland Dr
Cliff
Los Angeles

Exhibit K.1-8

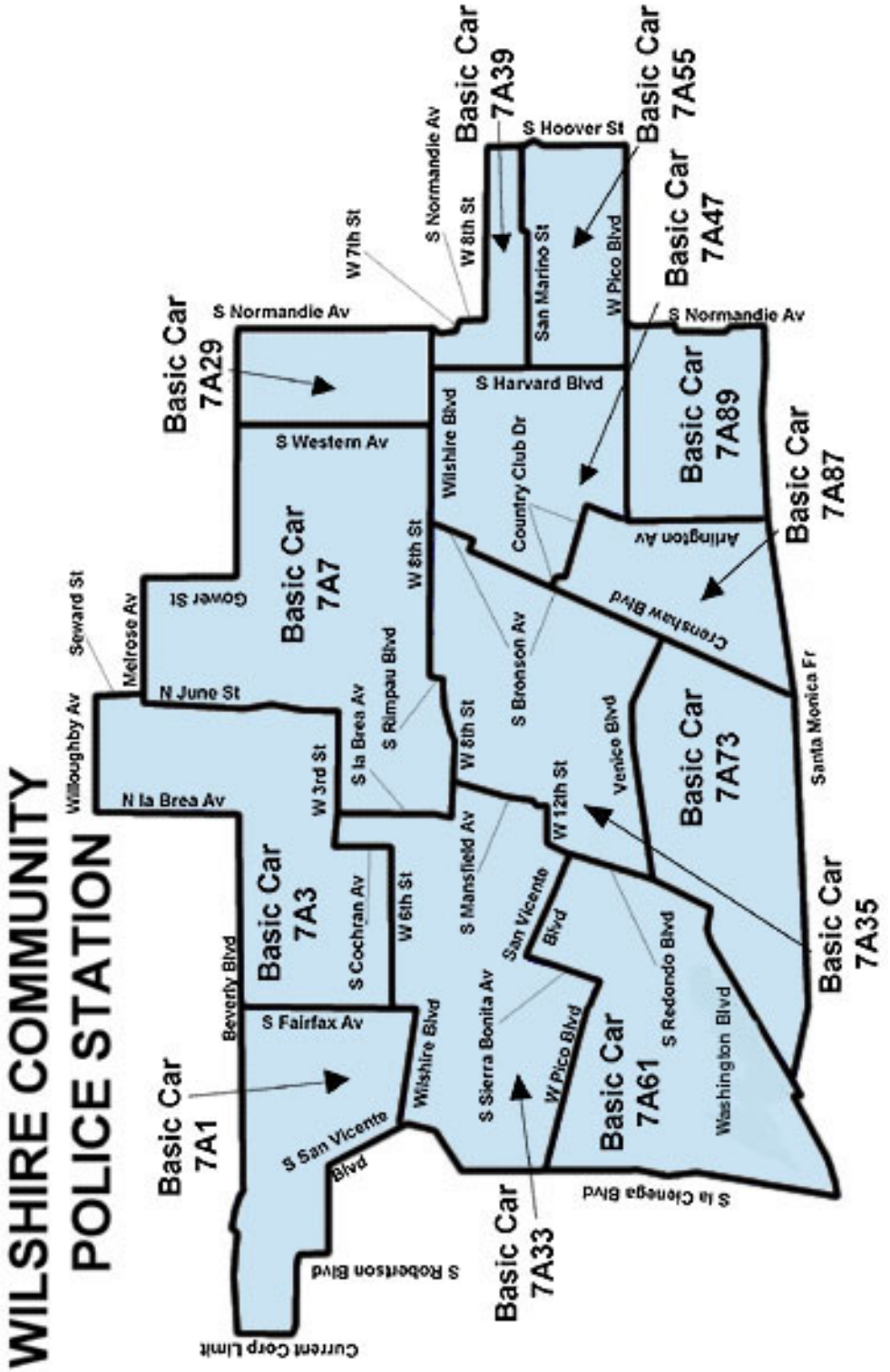

WILSHIRE COMMUNITY
POLICE STATION
Basic Car 7A1
Basic Car 7A3
Basic Car 7A7
Basic Car 7A29
Basic Car 7A33
Basic Car 7A35
Basic Car 7A39
Basic Car 7A47
Basic Car 7A55
Basic Car 7A61
Basic Car 7A73
Basic Car 7A87
Basic Car 7A89
S Normandie Av
S Western Av
S Harvard Blvd
S Hoover St
W 7th St
W 8th St
W 6th St
W 3rd St
W 12th St
N June St
N la Brea Av
Melrose Av
Seward St
Willoughby Av
Gower St
S la Brea Av
S Rimpau Blvd
S Bronson Av
S Mansfield Av
S Cochran Av
S Fairfax Av
Beverly Blvd
Wilshire Blvd
W Pico Blvd
San Marino St
Country Club Dr
Arlington Av
Crenshaw Blvd
Venice Blvd
San Vicente Blvd
S Sierra Bonita Av
S Redondo Blvd
Washington Blvd
Santa Monica Fr
S la Cienega Blvd
S Robertson Blvd
Current Corp Limit

Exhibit K.1-9

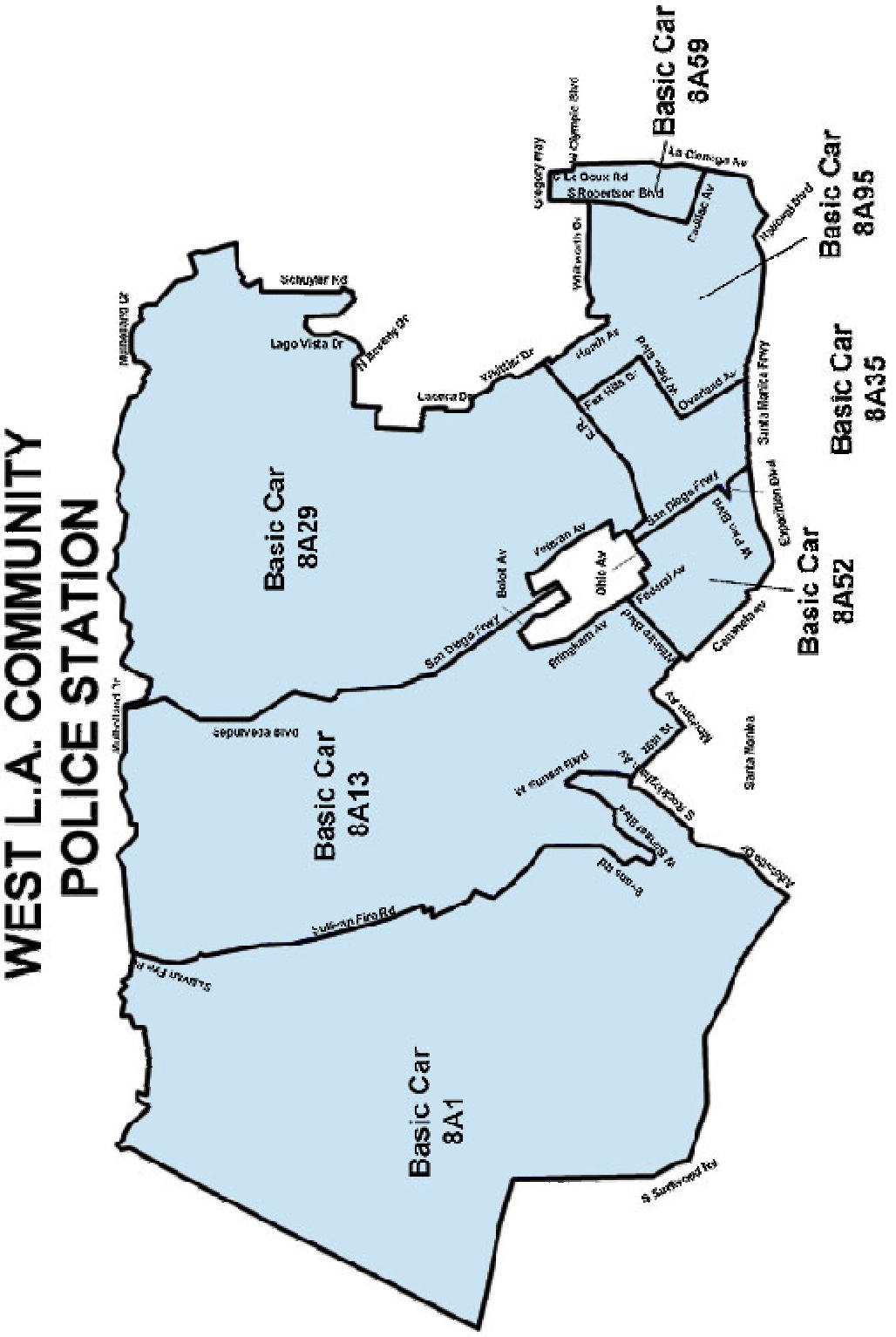

WEST L.A. COMMUNITY POLICE STATION
Basic Car 8A59
Basic Car 8A95
Basic Car 8A35
Basic Car 8A52
Basic Car 8A29
Basic Car 8A13
Basic Car 8A1
La Cienega Ave
S Robertson Blvd
Cadillac Ave
Aydelott Dr
Whitworth Dr
Schuyler Rd
Lago Vista Dr
Lacera Dr
Overland Ave
Santa Monica Freey
Exposition Blvd
San Diego Freey
Bundy Dr
Veteran Ave
Ohio Ave
Federal Ave
Barrington Ave
Sepulveda Blvd
W Pico Blvd
Santa Monica
Sullivan Fire Rd
S Sunkist Rd

Exhibit K.1-10

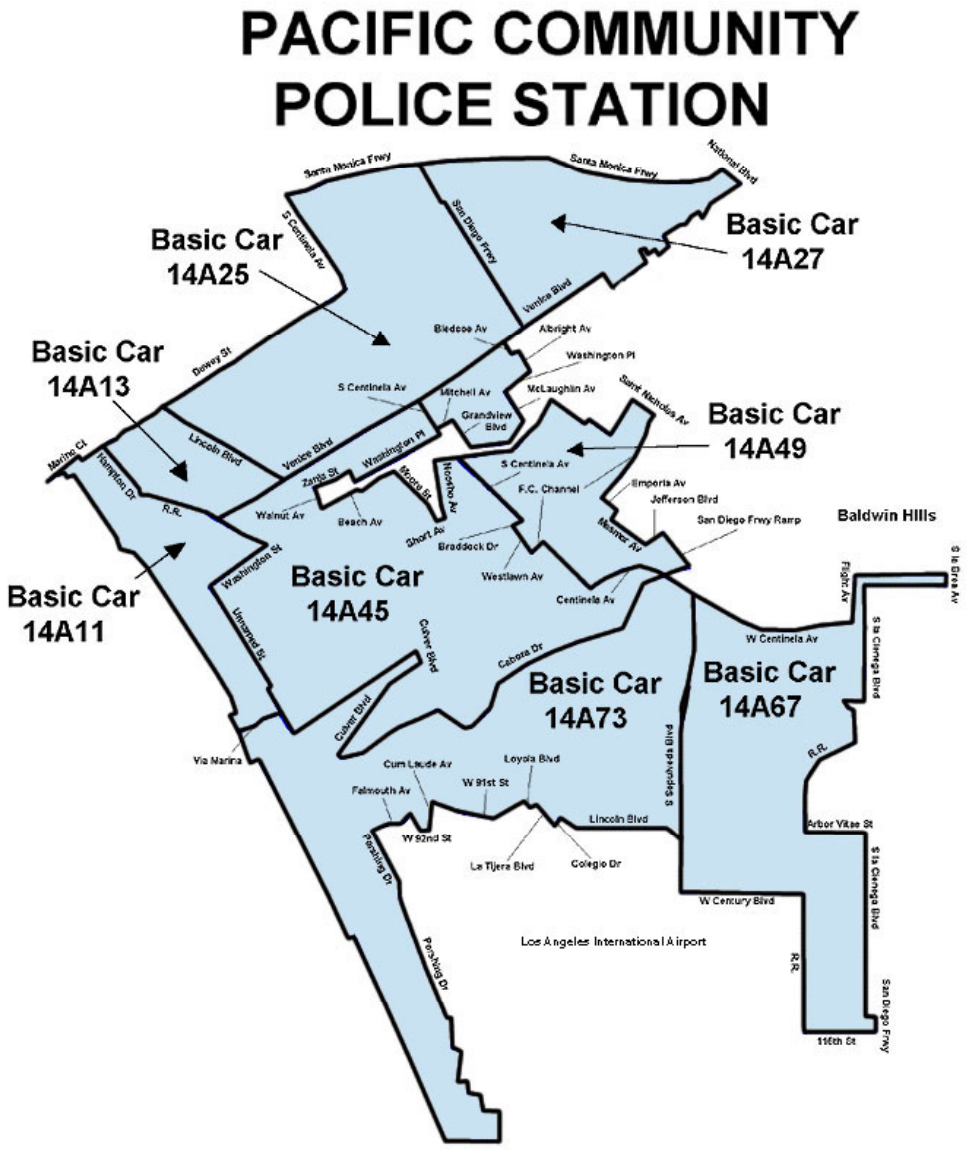


Exhibit K.1-11

VAN NUYS COMMUNITY POLICE STATION

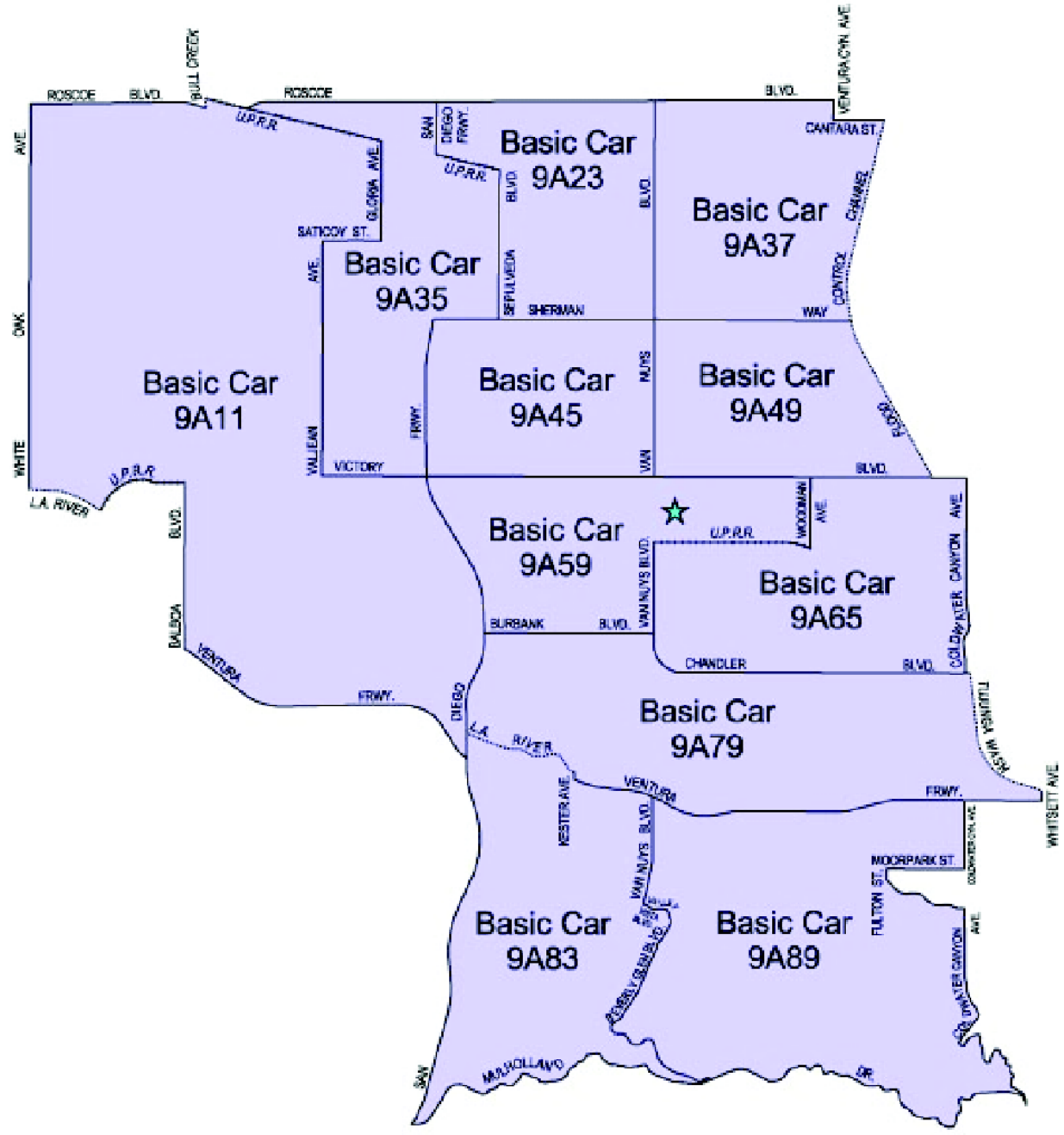


Exhibit K.1-12

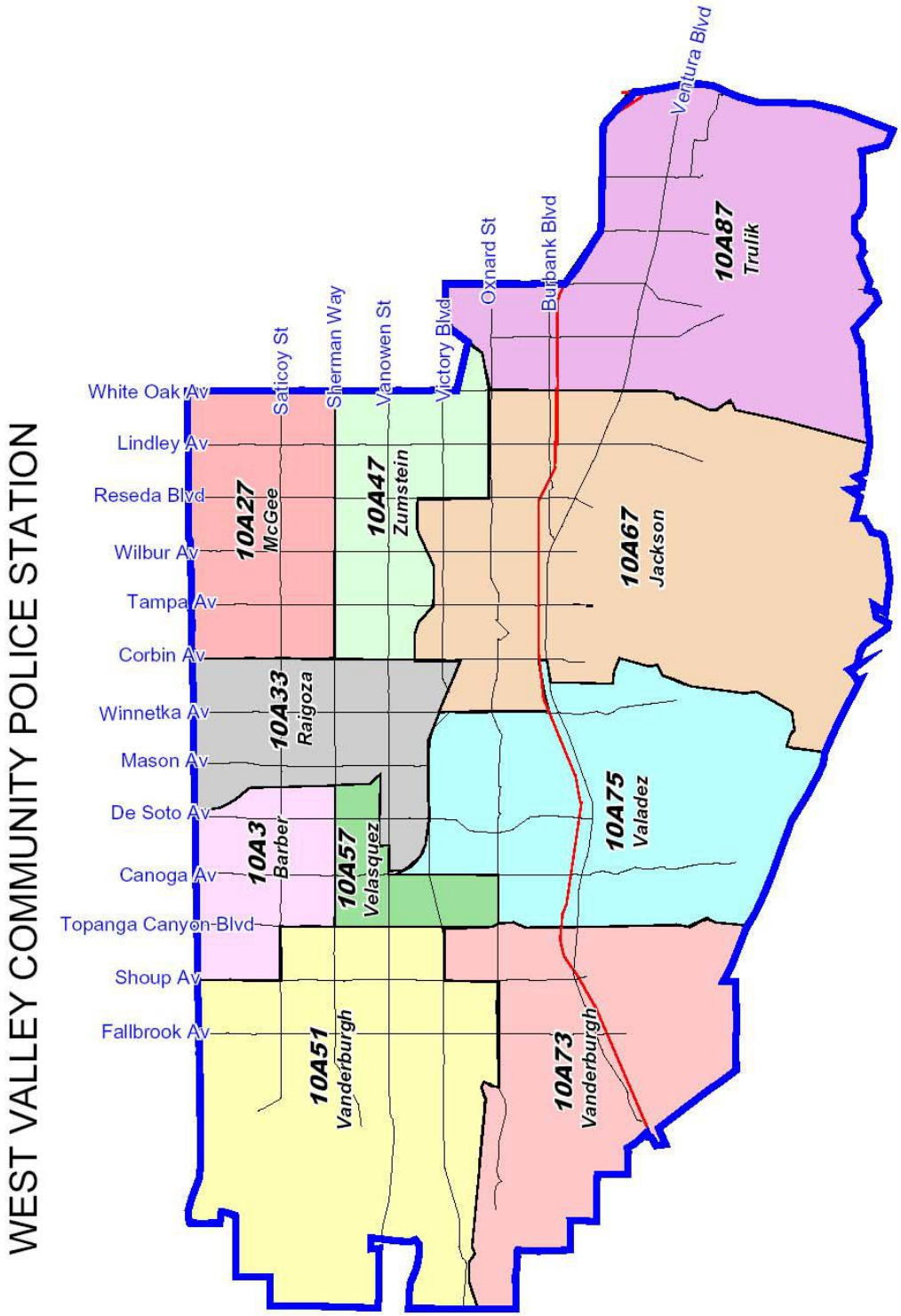


Exhibit K.1-13

NORTH HOLLYWOOD COMMUNITY POLICE STATION

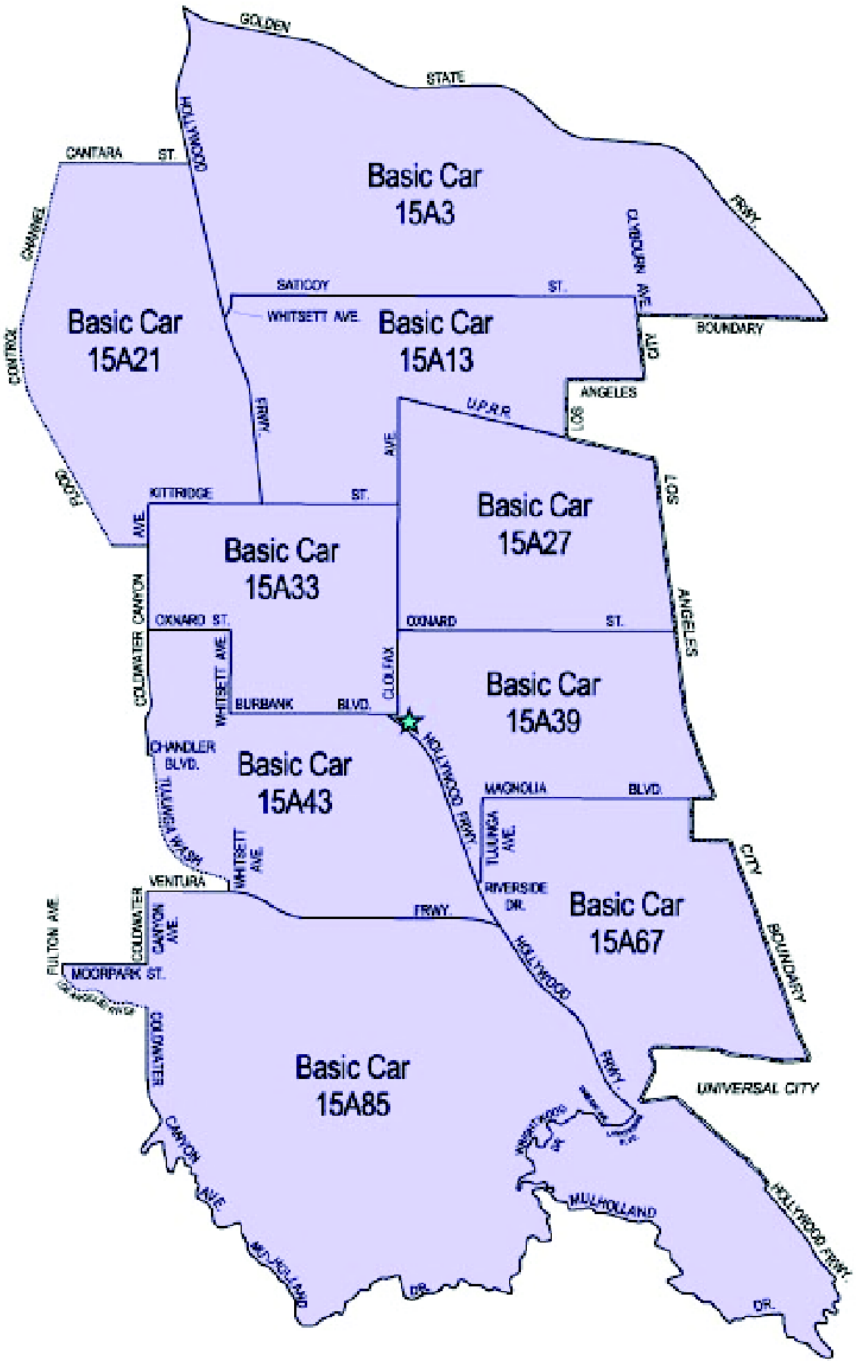


Exhibit K.1-14

MISSION COMMUNITY POLICE STATION

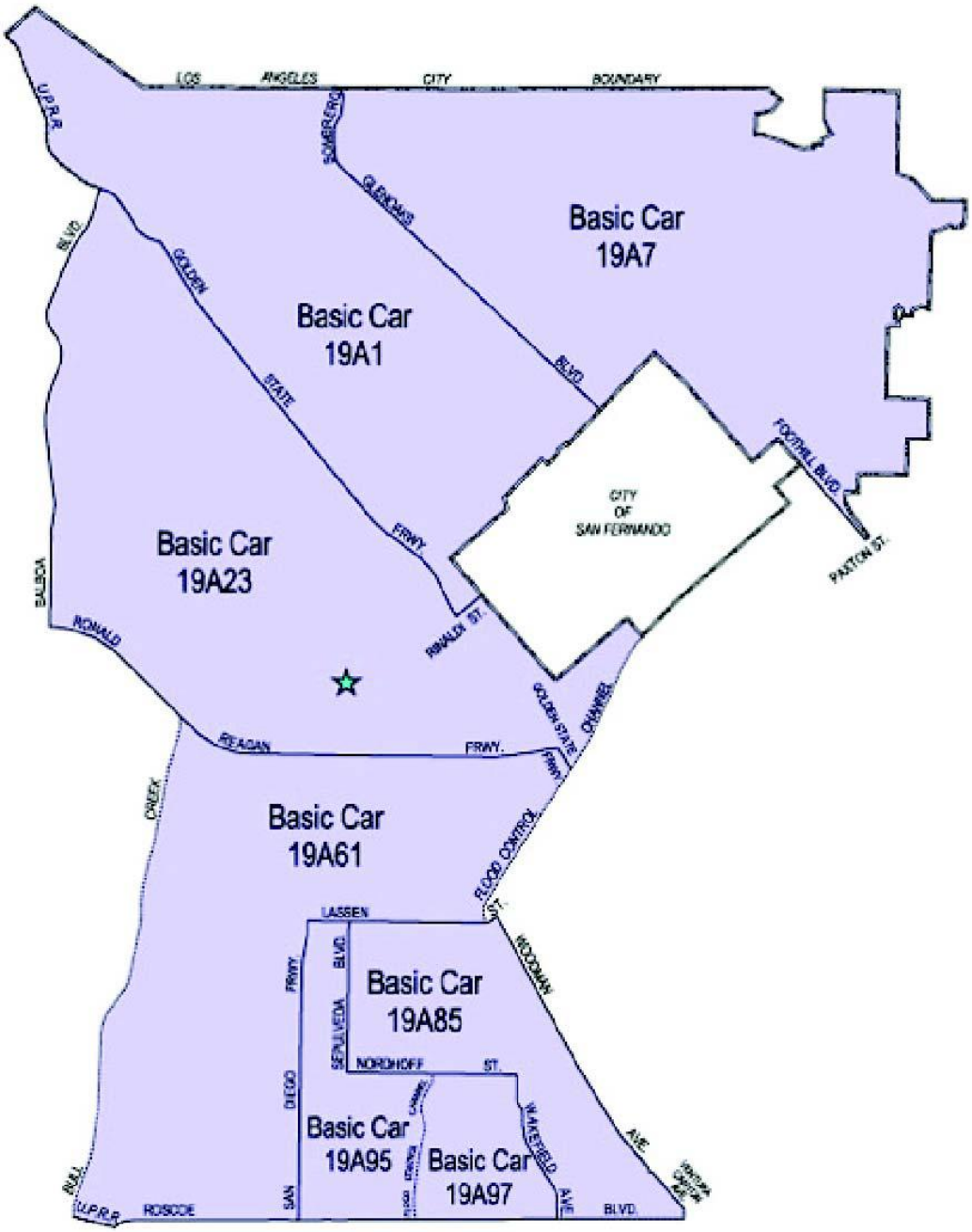


Exhibit K.1-15

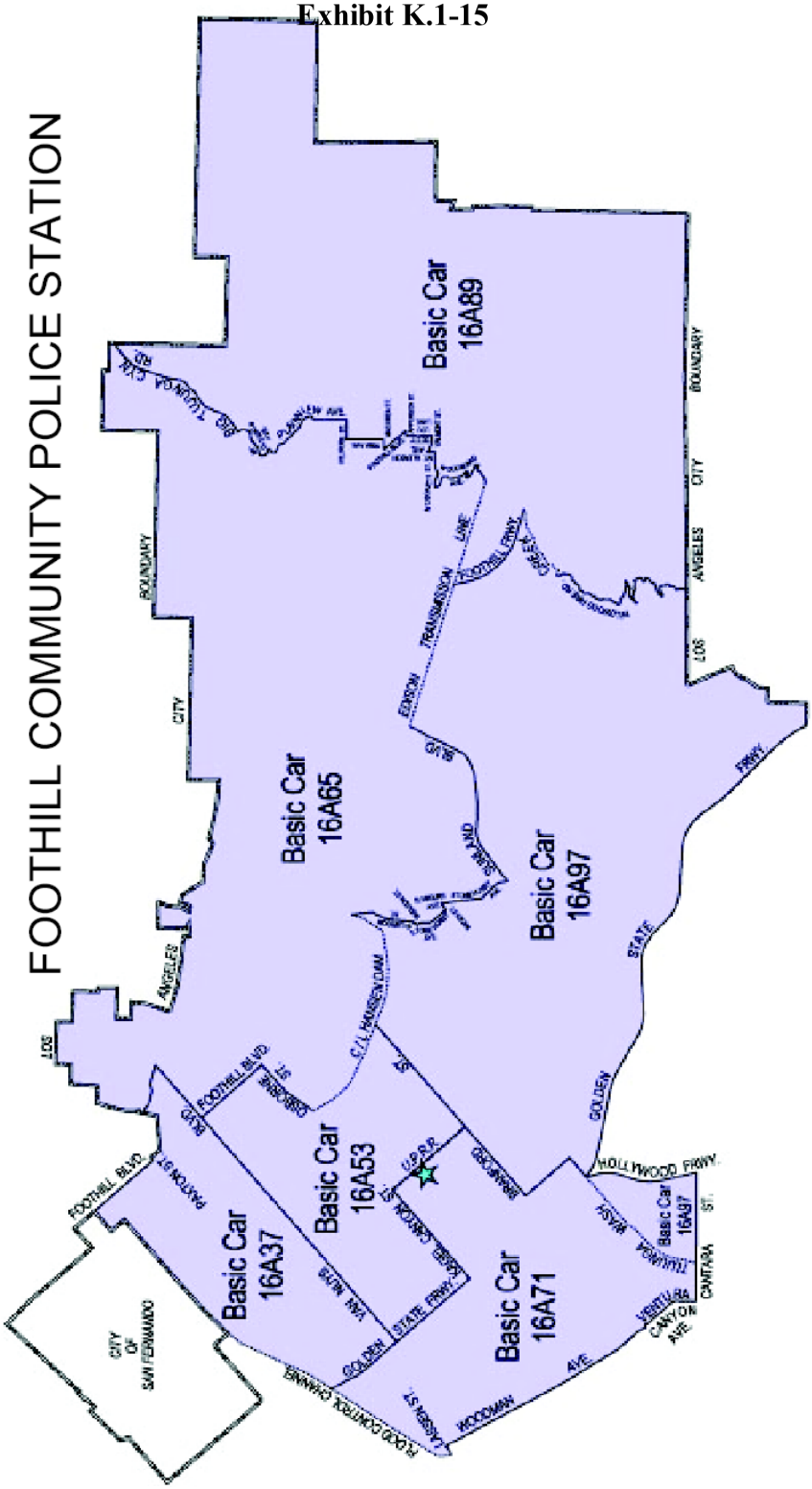


Exhibit K.1-16

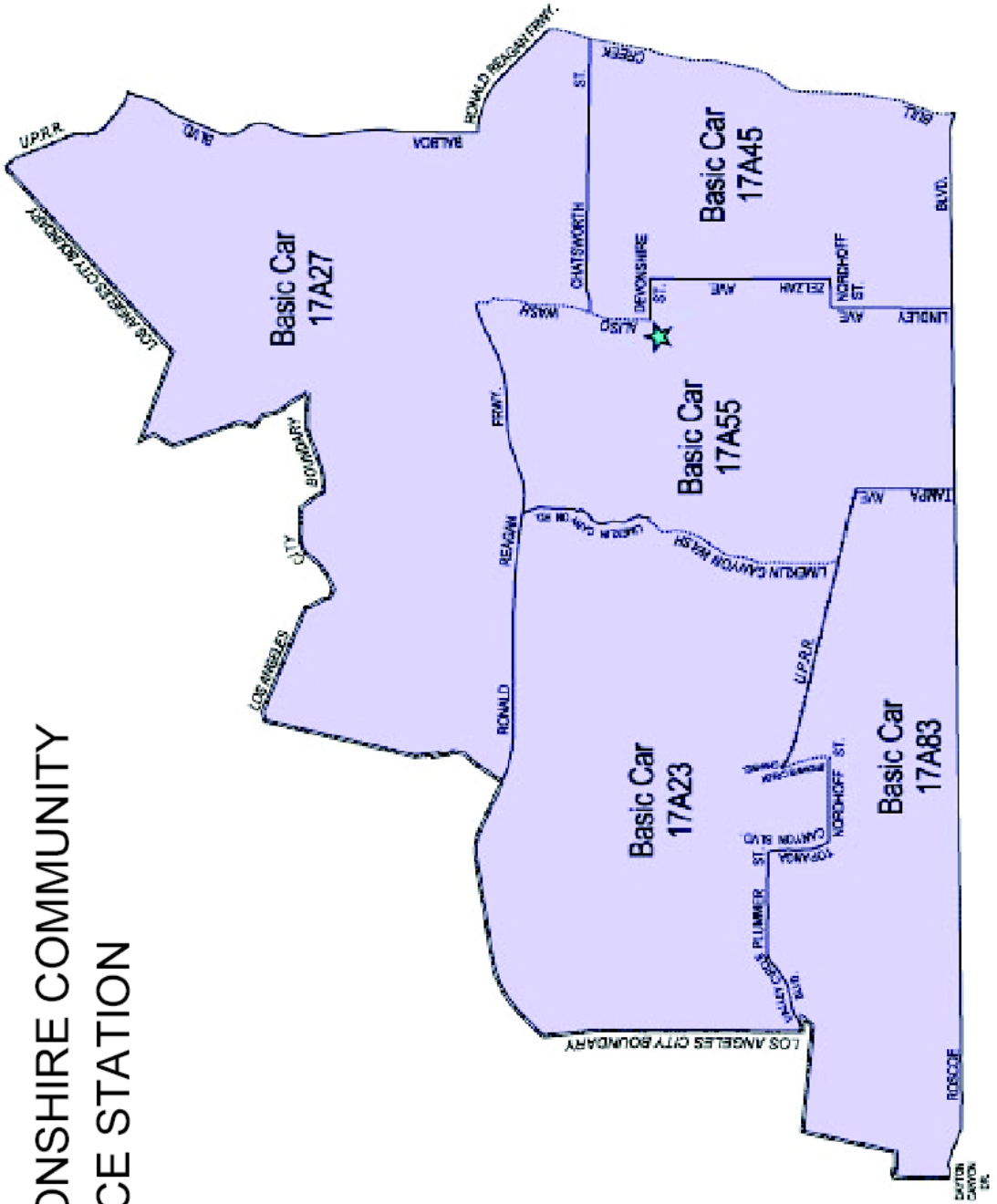


Exhibit K.1-17

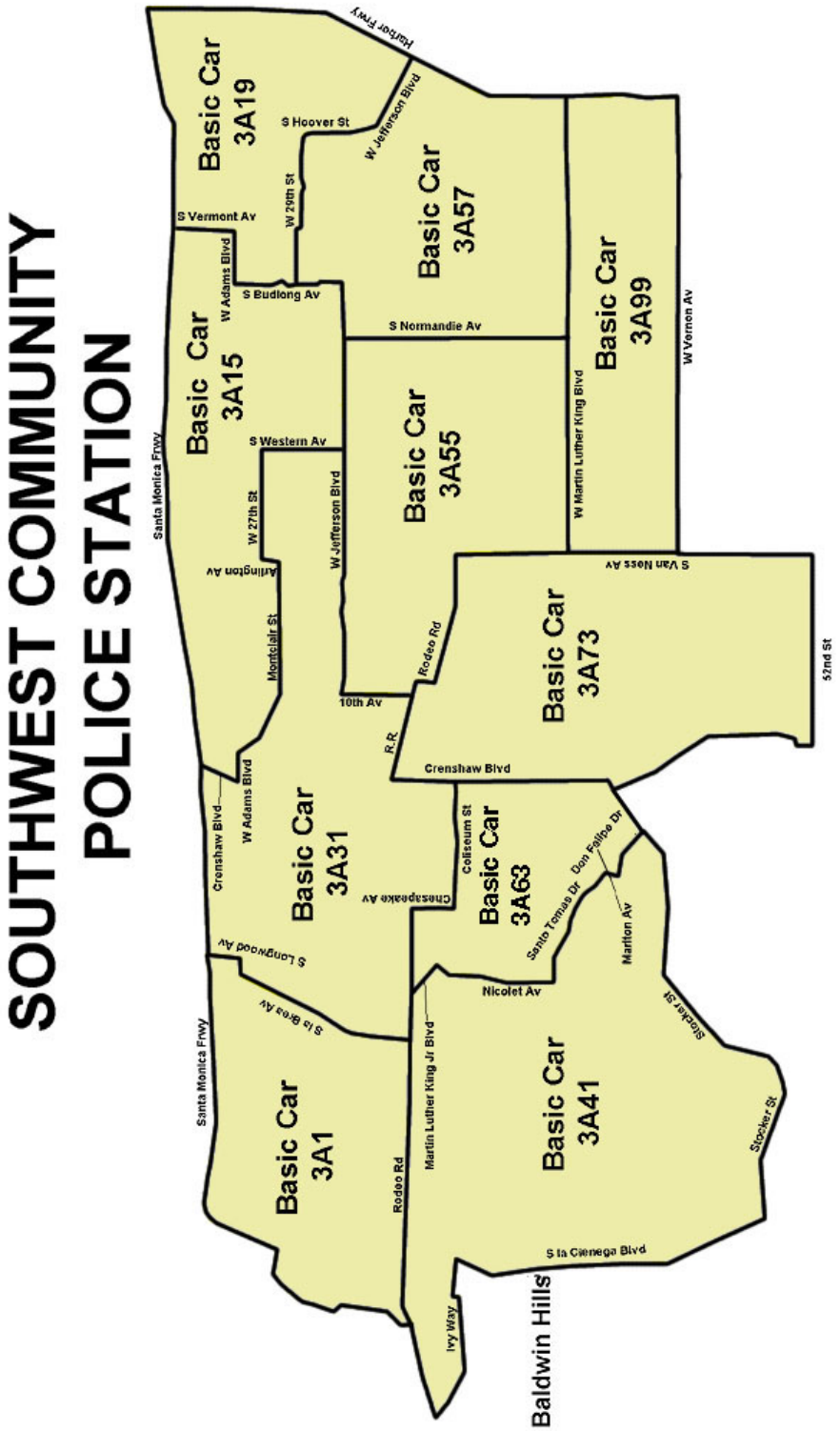


Exhibit K.1-18



Exhibit K.1-19

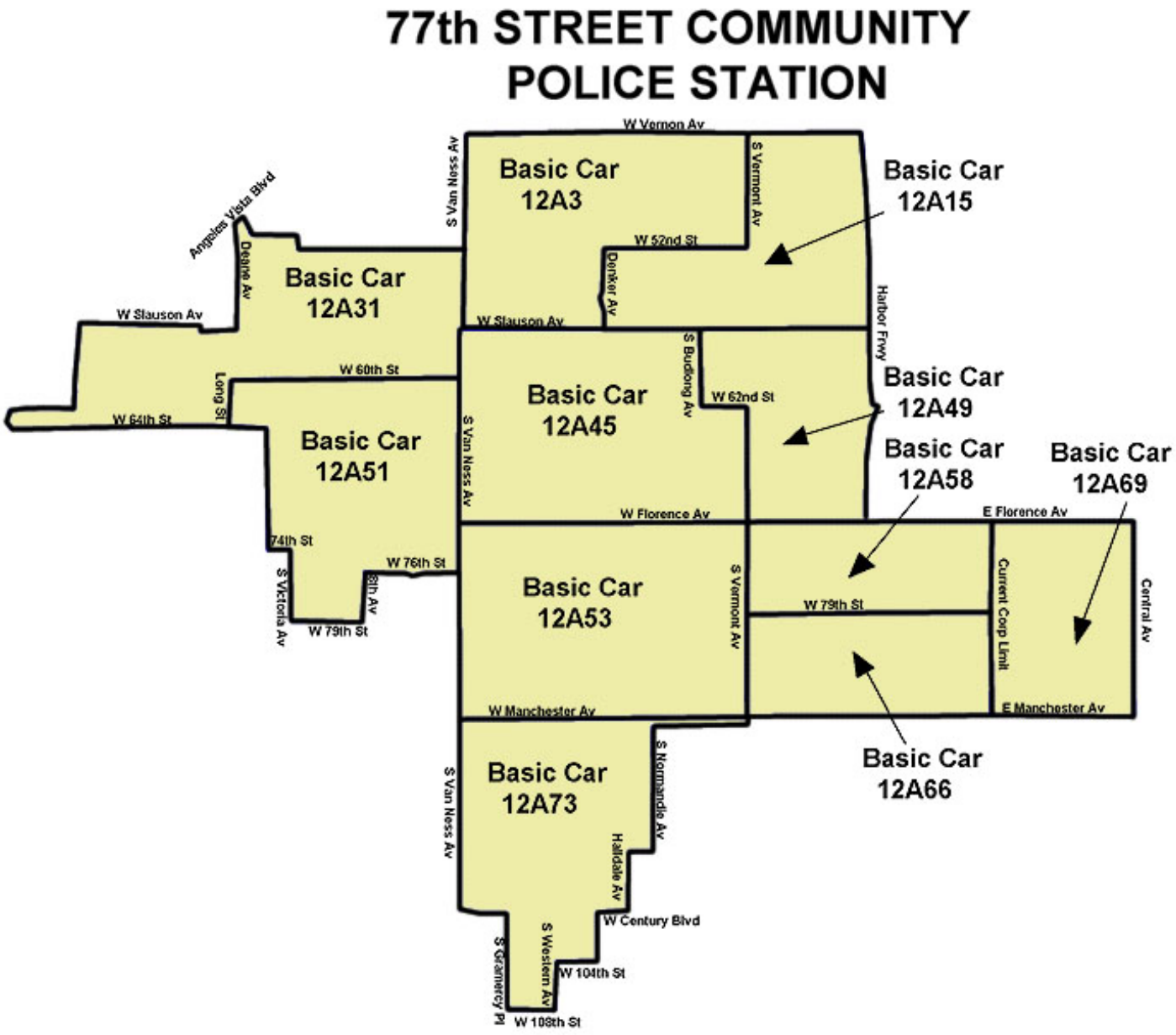
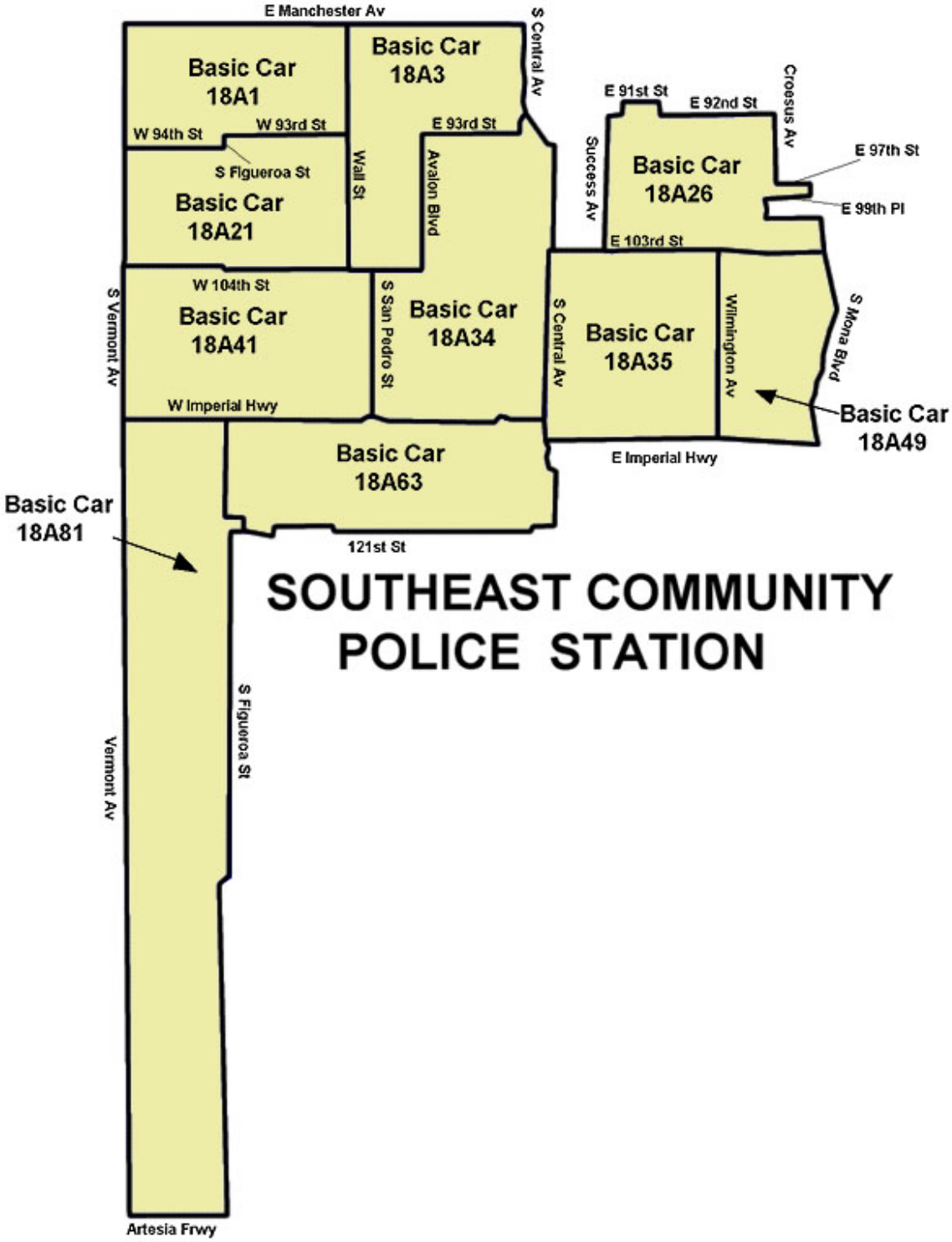


Exhibit K.1-20



K.2. FIRE PROTECTION & EMERGENCY MEDICAL SERVICES

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

VII.e): For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

VII.f): For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working within the project area?

VII.g): Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

VII.h): Would the project 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?

XIII.a.i): 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 fire protection?

B. Introduction

Within the City of Los Angeles, fire prevention and suppression services and emergency medical services are provided by the Los Angeles Fire Department (LAFD). The LAFD operates more than 100 fire stations grouped into 18 battalions and three divisions. Equipment includes engines, trucks, paramedic engines, crash units, hazardous materials response and decontamination units, foam carriers, rescue ambulances, helicopters, and boats.

New development projects in the City may increase the demand for fire protection and emergency medical services. The LAFD evaluates new project impacts on a project-by-project basis. Beyond the standards in the Los Angeles Fire Code, consideration is given to project size and components, required fire-flow, response time and distance for engine and truck companies, fire hydrant sizing and placement standards, access, and potential to use or store hazardous

materials. Risk of upset impacts due to potentially hazardous or explosive materials are discussed in F.1. RISK OF UPSET/EMERGENCY PREPAREDNESS.

C. Screening Criteria

- Would the project be located farther from an engine or truck company than the maximum response distances, based on the project's proposed land use(s), as indicated in the following chart?

Land Use	Maximum Response Distance (miles)	
	Engine Company	Truck Company
Neighborhood Land Uses		
Low Density Residential/High Density Residential/Neighborhood	1.50	1.50
Regional Land Uses		
Commercial Industrial/Commercial	1.00	1.50
Commercial and Industrial Centers		
High Density Commercial/High Density Industrial	0.75	1.00

Source: Los Angeles Fire Code, Los Angeles Municipal Code (LAMC), Section 57.09.07.

- Is the project located in a brush fire hazard area, hillside, or area with inadequate fire hydrant service or street access?

- Does the project involve the use, manufacture or storage of toxic, readily-combustible, or otherwise hazardous materials?

- Would the project's location provide for adequate LAFD access (e.g., adequate street/fire lane width--minimum 20 feet clear and unobstructed with an approved turn around, grade not exceeding 15 percent, dead-ends not exceeding 700 feet)?

- Are there any street intersections with a level of service (LOS) of E or F near the project site that would adversely impact response time?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Fire Protection and Emergency Medical Services, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Fire Protection and Emergency Medical Services from the proposed project.

D. Evaluation of Screening Criteria

Review the project description, site characteristics, Exhibit K.2-1 and the following Environmental and Public Facilities Maps:

- Fire Department Truck and Engine Company Service Areas for Neighborhood Land Uses, Regional Land Uses, and Commercial and Industrial Centers in the City of Los Angeles;
- Brush Fire Hazard Areas;
- Selected Wildfire Hazard Areas; and
- Inadequate Fire Hydrant Service Areas.

To calculate the response distance to the nearest engine and truck companies, begin by using the maps to locate the fire stations nearest to the project site. The response distance is the actual travel distance, which would be required, not the direct distance point-to-point. All stations listed in Exhibit K.2-1 are engine companies or Task Forces. All Task Force stations include an engine company and a truck company.

Intersection LOS can be determined through a traffic study (see L.1. INTERSECTION CAPACITY) or through consultation with the Los Angeles Department of Transportation (LADOT). Consider intersections on the path between the fire station and project site, focusing on intersections that provide access to the project.

Also, determine areas with inadequate access in consultation with the LAFD, City Planning Department, and Bureau of Engineering. Finally, check the project description for evidence of use, manufacture or storage of toxic, readily combustible, or otherwise hazardous materials.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact on fire protection if it requires the addition of a new fire station or the expansion, consolidation or relocation of an existing facility to maintain service.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description (including response distances) and map of LAFD facilities that serve the project (for assistance, see Exhibit K.2-1). Identify intersections at LOS E or F that provide access to the project;

- Discussion of fire hydrants and fire-flow levels serving the project site (for assistance, contact the Los Angeles Department of Water and Power (DWP)); and

- Description of existing brush fire potential and existing street facilities (e.g., substandard street width).

Project Impacts

Consider the description of the proposed land use, fire-related needs (e.g., use of hazardous materials), any project design features which would reduce or increase the demand for fire protection services, and whether the project site meets the recommended response time and distance requirements. Also, evaluate the site conditions and surrounding area for substandard street width, adequacy of fire hydrant service, brush fire hazard areas, and hillside conditions. Consult with LAFD's Construction Services Unit to determine the project's effect on fire protection and emergency medical services. Specifically evaluate the need for a new fire station or expansion, relocation, or consolidation of an existing facility to accommodate increased demand.

Cumulative Impacts

Identify the related projects, which would be served by the same LAFD facilities as the proposed project. Consider the characteristics of the related projects in terms of: land uses; response time and distance for fire companies; toxic, readily combustible, or otherwise hazardous materials; and site location (substandard street width, adequacy of fire hydrant service, brush fire hazard areas, and hillside conditions). Based on consultation with LAFD's Construction Services Unit, determine the cumulative effect on fire protection and emergency medical services. Specifically evaluate the need for a new fire station or expansion, relocation, or consolidation of an existing facility to accommodate increased demand.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Provide and maintain fire-retardant landscaping and/or an irrigated buffer zone;

- Prohibit structures in fire hazard areas;

- Use construction and design features, which reduce fire potential and/or promote containment (e.g., increased spacing between buildings, fire-resistant landscaping); and

- Develop an emergency response plan.

3. DATA, RESOURCES, AND REFERENCES

City of Los Angeles Fire Department, Construction Services Unit, 200 North Main Street, Room 1000, Los Angeles, California 90012; Telephone: (213) 977-6354.
Los Angeles Fire Code. www.lafd.org/code.htm

Environmental and Public Facilities Maps (1996):

- Fire Department Truck and Engine Company Service Areas for Neighborhood Land Uses, Regional Land Uses, and Commercial and Industrial Centers in the City of Los Angeles;
- Brush Fire Hazard Areas;
- Selected Wildfire Hazard Areas; and
- Inadequate Fire Hydrant Service Areas.

Exhibit K.2-1
LOS ANGELES FIRE DEPARTMENT STATION LOCATIONS

Fire Station	Address	Equipment	Division	Battalion
1	2230 Pasadena Avenue Los Angeles, CA 90031	Task Force, Rescue Ambulance, Food Services	1	7
2	1962 E. Cesar Chavez Avenue Los Angeles, CA 90033	Task Force, Paramedic Ambulance	1	7 HQ
3	108 N. Freemont Avenue Los Angeles, CA 90012	Task Force, Rescue Ambulance, Bus, Light Utility, Hazardous Materials Response Unit	1 HQ	1
4	800 N. Main Street Los Angeles, CA 90012	Task Force, Squad, Rescue Ambulance, Command Post Utility	1	1
5	8900 S. Emerson Avenue Los Angeles, CA 90045	Task Force, Paramedic Ambulance	2	4 HQ
6	326 N. Virgil Avenue Los Angeles, CA 90004	Engine Company, Paramedic Ambulance, Rescue Ambulance	1	11 HQ
8	11351 Tampa Avenue Northridge, CA 91234	Assessment Engine, Paramedic Engine, Brush Patrol	3	15
9	430 E. 7th Street Los Angeles, CA 90014	Engine Company, Task Force, Rescue Ambulance	1	1 HQ
10	1335 S. Olive Street Los Angeles, CA 90015	Task Force, Rescue Ambulance, Paramedic Ambulance, Food Services	1	1
11	1819 W. 7th Street Los Angeles, CA 90057	Task Force, Paramedic Ambulance, Rescue Ambulance	1	11
12	5921 N. Figueroa Street Los Angeles, CA 90042	Task Force, Paramedic Ambulance	1	2
13	1206 S. Vermont Avenue Los Angeles, CA 90006	Engine Company, Rescue Ambulance	1	11
14	3401 S. Central Avenue Los Angeles, CA 90011	Task Force, Paramedic Ambulance, Rescue Ambulance	2	3
15	915 W. Jefferson Boulevard Los Angeles, CA 90007	Task Force, Rescue Ambulance	2	3
16	2011 N. Eastern Avenue Los Angeles, CA 90032	Assessment Engine, Rescue Ambulance	1	7
17	1601 S. Santa Fe Avenue Los Angeles, CA 90021	Engine Company, Light Force, Paramedic Ambulance, Foam Tender, Hazardous Materials Decontamination Unit	1	1

Exhibit K.2-1, continued
LOS ANGELES FIRE DEPARTMENT STATION LOCATIONS

Fire Station	Address	Equipment	Division	Battalion
18	12050 Balboa Boulevard Los Angeles, CA 91344	Assessment Engine, Rescue Ambulance	3	15
19	12229 Sunset Boulevard Los Angeles, CA 90049	Engine Company, Paramedic Ambulance, Rescue Ambulance	1	9
20	2144 Sunset Boulevard Los Angeles, CA 90026	Task Force, Paramedic Ambulance	1	11
21	1187 E. 52nd Street Los Angeles, CA 90011	Engine Company, Paramedic Ambulance	2	3
23	17281 Sunset Boulevard Pacific Palisades, CA 90272	Assessment Engine, Paramedic Ambulance, Brush Patrol	1	9
24	9411 Wentworth Street Sunland, CA 91040	Assessment Engine. Paramedic Ambulance, Brush Patrol	3	12
25	2927 Whittier Boulevard Los Angeles, CA 90023	Assessment Engine, Rescue Ambulance, Arson Unit, Tunnel Utility	1	7
26	2009 S. Western Avenue Los Angeles, CA 90018	Task Force, Paramedic Ambulance, Rescue Ambulance	2	3
27	1327 N. Cole Avenue Los Angeles, CA 90028	Task Force, Paramedic Ambulance, Rescue Ambulance, Urban Search & Rescue	1	5 HQ
28	11641 Corbin Avenue Porter Ranch, CA 91326	Assessment Light Force, Rescue Ambulance, Brush Patrol	3	15
29	4029 W. Wilshire Boulevard Los Angeles, CA 90010	Task Force, Paramedic Ambulance, Rescue Ambulance, Decon Tender	1	11
33	6406 S. Main Street Los Angeles, CA 90003	Task Force, Paramedic Ambulance, Rescue Ambulance	2 HQ	13
34	3661 7th Avenue Los Angeles, CA 90018	Engine Company, Paramedic Ambulance, Rescue Ambulance	2	3
35	1601 N. Hillhurst Avenue Los Angeles, CA 90027	Task Force, Paramedic Ambulance, Rescue Ambulance, Brush Patrol	1	5
36	Under Construction 1005 N. Gaffey Street, San Pedro, CA 90732		2	6
37	1090 Veteran Avenue Los Angeles, CA 90024	Task Force, Paramedic Ambulance	1	9 HQ

Exhibit K.2-1, continued
LOS ANGELES FIRE DEPARTMENT STATION LOCATIONS

Fire Station	Address	Equipment	Division	Battalion
38	124 E. "I" Street Wilmington, CA 90744	Task Force, Paramedic Ambulance, Haz-Mat Tender	2	6
39	14415 Sylvan Street Van Nuys, CA 91401	Engine Company, Assessment Light Force, Paramedic Ambulance	3	10 HQ
40	330 Ferry Street Terminal Island, CA 90731	Assessment Engine, Rescue Ambulance, Rehab Air Tender	2	6
41	1439 N. Gardner Street Los Angeles, CA 90046	Engine Company, Paramedic Ambulance, Rescue Ambulance, Brush Patrol	1	5
42	2021 Colorado Boulevard Los Angeles, CA 90041	Assessment Engine, Rescue Ambulance	1	2
43	10234 National Boulevard Los Angeles, CA 90034	Engine Company, Paramedic Ambulance	2	18
44	1410 Cypress Avenue Los Angeles, CA 90065	Assessment Engine, Rescue Ambulance, Brush Patrol, Swift Water Rescue, Bicycle Medic	1	2
46	4370 S. Hoover Street Los Angeles, CA 90037	Engine Company, Paramedic Ambulance, Rescue Ambulance,	2	3 HQ
47	4575 Huntington Dr South Los Angeles, CA 90032	Task Force, Paramedic Engine, Brush Patrol	1	7
48	1601 S. Grand Avenue San Pedro, CA 90731	Assessment Engine, Light Force, Rescue Ambulance, Haz-Mat Squad	2	6
49	400 Yacht Street, Berth 194 Wilmington, CA 90744	Assessment Engine, Rescue Ambulance, Fireboats 3 & 4	2	6 HQ
50	3036 Fletcher Drive Los Angeles, CA 90065	Assessment Engine, Light Force, Rescue Ambulance	1	2
51	10435 Sepulveda Boulevard Los Angeles, CA 90045	Assessment Engine, Paramedic Ambulance	2	4
52	4957 Melrose Avenue Los Angeles, CA 90029	Engine Company, Paramedic Ambulance	1	5
55	4455 E. York Boulevard Eagle Rock, CA 90041	Engine Company, Paramedic Ambulance	1	2 HQ
56	2759 Rowena Avenue Los Angeles, CA 90039	Assessment Engine, Paramedic Ambulance, Heavy Rescue	1	2

Exhibit K.2-1, continued
LOS ANGELES FIRE DEPARTMENT STATION LOCATIONS

Fire Station	Address	Equipment	Division	Battalion
57	7800 S. Vermont Avenue Los Angeles, CA 90044	Engine Company, Paramedic Ambulance, Rescue Ambulance	2	13 HQ
58	1556 S. Robertson Boulevard Los Angeles, CA 90035	Task Force, Paramedic Ambulance	2	18
59	11505 Olympic Boulevard Los Angeles, CA 90064	Assessment Engine, Paramedic Ambulance, Rehab Air Tender	1	9
60	5320 Tujunga Avenue North Hollywood, CA 91601	Task Force, Paramedic Ambulance, Rescue Ambulance, Foam Tender	3	14 HQ
61	5821 W. 3rd Street Los Angeles, CA 90036	Task Force, Paramedic Ambulance, Rescue Ambulance	2	18
62	3631 Centinela Avenue Los Angeles, CA 90066	Assessment Engine, Paramedic Ambulance, Swift Water Rescue	2	4
63	1930 Shell Avenue Venice, CA 90291	Task Force, Paramedic Ambulance	2	4
64	118 W. 108th Street Los Angeles, CA 90061	Task Force, Paramedic Ambulance, Rescue Ambulance	2	13
65	1801 E. Century Boulevard Los Angeles, CA 90002	Engine Company, Paramedic Ambulance	2	13
66	1909 W. Slauson Boulevard Los Angeles, CA 90047	Task Force, Paramedic Ambulance, Rescue Ambulance	2	13
68	5023 W. Washington Blvd Los Angeles, CA 90016	Engine Company, Paramedic Ambulance, Rescue Ambulance	2	18 HQ
69	15045 Sunset Boulevard Pacific Palisades, CA 90272	Task Force, Paramedic Ambulance	1	9
70	9861 Reseda Boulevard Northridge, CA 91324	Engine Company, Assessment Light Force, Paramedic Ambulance, Haz-Mat Squad	3	15 HQ
71	107 S. Beverly Glen Blvd Los Angeles, CA 90024	Assessment Engine, Paramedic Ambulance	1	9
72	6811 De Soto Avenue Canoga Park, CA 91303	Task Force, Paramedic Ambulance	3	17 HQ
73	7419 Reseda Boulevard Reseda, CA 91335	Engine Company, Assessment Light Force, Paramedic Ambulance	3	17

Exhibit K.2-1, continued
LOS ANGELES FIRE DEPARTMENT STATION LOCATIONS

Fire Station	Address	Equipment	Division	Battalion
74	7777 Foothill Boulevard Tujunga, CA 91042	Engine Company, Assessment Light Force, Paramedic Ambulance, Brush Patrol	3	12
75	15345 San Fernando Mission Mission Hills, CA 91340	Engine Company, Assessment Light Force, Paramedic Ambulance, Haz-Mat Tender	3	12
76	3111 N. Cahuenga Boulevard Los Angeles, CA 90068	Assessment Engine, Rescue Ambulance	1	5
77	8943 Glenoaks Boulevard Sun Valley, CA 91352	Assessment Engine, Rescue Ambulance	3	12
78	4230 Coldwater Canyon Ave Studio City, CA 91604	Assessment Engine, Paramedic Ambulance	3	14
79	18030 S. Vermont Avenue Gardena, CA 90247	Assessment Engine, Paramedic Ambulance	2	13
80	6911 World Way West Los Angeles, CA 90045	Airport Crash Rescue, Airport Foam	2	4
81	14123 Nordhoff Street Arleta, CA 91331	Assessment Engine, Paramedic Ambulance, Rescue Ambulance	3	12
82	1800 N. Bronson Avenue Los Angeles, CA 90028	Assessment Engine, Paramedic Ambulance	1	5
83	5001 Balboa Boulevard Encino, CA 91316	Assessment Engine, Paramedic Ambulance, Brush Patrol, Water Tender, Emergency Lighting Trailer, Medical Supply Trailer	3	10
84	5340 Canoga Avenue Woodland Hills, CA 91364	Assessment Engine, Paramedic Ambulance, Brush Patrol	3	17
85	1331 W. 253rd Street Harbor City, CA 90710	Task Force, Paramedic Ambulance, Urban Search & Rescue, Medical Supply Trailer, Emergency Lighting Trailer	2	6
86	4305 Vineland Avenue North Hollywood, CA 91602	Assessment Engine, Paramedic Ambulance, Urban Search & Rescue, Swift Water Rescue, Water Tender	3	14
87	10241 Balboa Boulevard Northridge, CA 91324	Assessment Engine, Paramedic Ambulance	3	15
88	5101 N. Sepulveda Boulevard Sherman Oaks, CA 91403	Task Force, Paramedic Ambulance, Urban Search & Rescue, Tractor Company, Command Post Vehicle	3 HQ	10

Exhibit K.2-1, continued
LOS ANGELES FIRE DEPARTMENT STATION LOCATIONS

Fire Station	Address	Equipment	Division	Battalion
89	7063 Laurel Canyon Blvd North Hollywood, CA 91605	Task Force, Paramedic Ambulance, Rescue Ambulance, Rehab Air Tender, Urban Search & Rescue	3	14
90	7921 Woodley Avenue Van Nuys, CA 91406	Task Force, Paramedic Ambulance	3	10
91	14430 Polk Street Sylmar, CA 91342	Assessment Engine, Paramedic Ambulance, Rescue Ambulance	3	12
92	10556 W. Pico Boulevard Los Angeles, CA 90064	Engine Company, Assessment Light Force, Paramedic Ambulance	2	18
93	19059 Ventura Boulevard Tarzana, CA 91356	Task Force, Paramedic Ambulance	3	17
94	4470 Coliseum Street Los Angeles, CA 90016	Task Force, Paramedic Ambulance, Rescue Ambulance, Brush Patrol	2	18
95	10010 International Road Los Angeles, CA 90045	Task Force, Paramedic Ambulance, Haz-Mat Squad	2	4
96	21800 Marilla Street Chatsworth, CA 91311	Engine Company, Assessment Light Force, Paramedic Ambulance	3	15
97	8021 Mulholland Drive Los Angeles, CA 90046	Assessment Engine, Paramedic Ambulance	3	14
98	13035 Van Nuys Boulevard Pacoima, CA 91331	Engine Company, Assessment Light Force, Paramedic Ambulance, Rescue Ambulance, Decon Tender	3	12 HQ
99	14145 Mulholland Drive Beverly Hills, CA 90210	Assessment Engine, Paramedic Ambulance, Brush Patrol, Arson Investigation Unit	3	10
100	6751 Louise Avenue Van Nuys, CA 91406	Engine Company, Paramedic Ambulance, Foam Tender, Swift Water Rescue	3	17
101	1414 25th Street San Pedro, CA 90732	Engine Company, Paramedic Ambulance, Foam Tender	2	6
102	13200 Burbank Boulevard Van Nuys, CA 91401	Light Force, Paramedic Ambulance	3	14
103	18143 Parthenia Street Northridge, CA 91324	Assessment Engine, Paramedic Ambulance	3	15
104	8349 Winnetka Avenue Canoga Park, CA 91306	Engine Company, Paramedic Ambulance	3	15

Exhibit K.2-1, continued
LOS ANGELES FIRE DEPARTMENT STATION LOCATIONS

Fire Station	Address	Equipment	Division	Battalion
105	6345 Fallbrook Avenue Woodland Hills, CA 91364	Engine Company, Assessment Light Force, Paramedic Ambulance	3	17
106	23004 Roscoe Boulevard West Hills, CA 91304	Assessment Engine, Rescue Ambulance, Fuel Tender	3	17
107	20225 Devonshire Street Chatsworth, CA 91311	Engine Company, Paramedic Ambulance	3	15
108	12520 Mulholland Drive Beverly Hills, CA 90210	Assessment Engine, Rescue Ambulance	3	14
109	16500 Mulholland Drive Los Angeles, CA 90049	Assessment Engine, Rescue Ambulance, Brush Patrol	3	10
110	2945 Miner St. Berth 44-A San Pedro, CA 90731	Fireboats & SCUBA Operations	2	6
111	954 S. Seaside Avenue, Berth 260 San Pedro, CA 90731	Fireboat	2	6
112	444 South Harbor Blvd. San Pedro, CA 90731	Engine Company, Paramedic Ambulance, Fireboats	2	6
114	8060 Balboa Place Van Nuys, CA 91406	Air Operations, Crash Rescue, Airport Foam	3	10

HQ means Headquarters
Source: LAFD, 1994 & 2003. 2006.

K.3. PUBLIC SCHOOLS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

XIII.c): 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 schools?

B. Introduction

Within the City of Los Angeles, the Los Angeles Unified School District (LAUSD) provides public education for over 900,000 total students in all programs. The school district educates students in grades K-12 at 557 schools. There are 429 elementary schools; 76 middle schools; and 52 high schools.[1] The LAUSD also offers a number of other schools and centers. Additionally, the LAUSD provides public education partially or entirely within 26 incorporated Los Angeles County cities.

School service needs are related to the size of the residential population, the geographic area served, and community characteristics. Projects that affect these factors (e.g. by increasing residential population in an area) may increase the demand for public school facilities.

C. Screening Criteria

Would the project result in a net increase of at least 75 residential units, 100,000 square feet (sf) of commercial floor area or 200,000 sf of industrial floor area?

A "yes" response to the preceding question indicates further study in an expanded Initial Study,

[1] *For an accounting of the number see LAUSD website at www.lausd.k12.ca/lausd/offices/office-of-Communications/and look for fingertip facts. LAUSD, fingertip facts: 2002-2003, December 2002*

Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Public Schools, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Public Schools from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project and determine the type of land use(s) proposed (i.e., commercial, industrial, residential), and the size of the project (i.e., number of units, square footage). Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The population increase resulting from the proposed project, based on the increase in residential units or square footage of non-residential floor area;

- The demand for school services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements to LAUSD services (facilities, equipment and personnel) and the project's proportional contribution to the demand;

- Whether (and the degree to which) accommodation of the increased demand would require construction of new facilities, a major reorganization of students or classrooms, major revisions to the school calendar (such as year-round sessions), or other actions which would create a temporary or permanent impact on the school(s); and

- Whether the project includes features that would reduce the demand for school services (e.g., on-site school facilities or direct support to LAUSD).

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Identify the name, location and description of schools serving the project site (including capacity, enrollment and operating characteristics). Use Exhibits K.3-1 through K.3-9, or contact LAUSD Master Planning & Demographics Branch, Office of the Chief Facilities Executive for assistance and to confirm the accuracy of data; and

- Describe the population and geographic area served, as well as community characteristics.

Project Impacts

Review the description of the project and surrounding area. Determine the net population increase resulting from the project, and identify the public schools that would be used by the project residents. LAUSD has prepared student generation factors in order to estimate the number of students expected from various residential development (reproduced in Exhibit K.3-10). Evaluate the demand for public schools anticipated at the time of project buildout, compared to the expected level of service available. Consider, as applicable, scheduled improvements (renovation, expansion, or addition) to schools serving the project and the project's proportional contribution to the demand. As necessary, consult with the LAUSD. Evaluate project features, which would reduce the demand for services (e.g., on-site school facilities or direct support to the LAUSD).

Cumulative Impacts

Identify the related projects, which would be served by the same schools as the proposed project. Consider the characteristics of the related projects in terms of size, location, and type of land uses. Determine the net population increase resulting from the related projects. As above, evaluate the cumulative demand for services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements (renovation, expansion, or addition). As necessary, consult with LAUSD. As feasible, evaluate known features of the related projects (e.g., on-site school facilities or direct support to the LAUSD), which would reduce the expected cumulative demand for public

education services. Consider the combined impact of the proposed and related projects and the project's proportional contribution to the cumulative demand for public education services.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Provide on-site school amenities; and
- Provide direct support to the LAUSD, including land, equipment, funding, etc. Facilities Office of the Chief Executive Master Planning & Demographics Branch.

3. DATA, RESOURCES, AND REFERENCES

LAUSD, 355 S. Grand Ave., 31st FLR. Los Angeles, 90012; can be contacted at: (213) 633-7606 or http://www.lausd.net.

Environmental and Public Facilities Maps (1996):

- Elementary Schools;
- Middle Schools; and
- High Schools.

Exhibit K.3-1

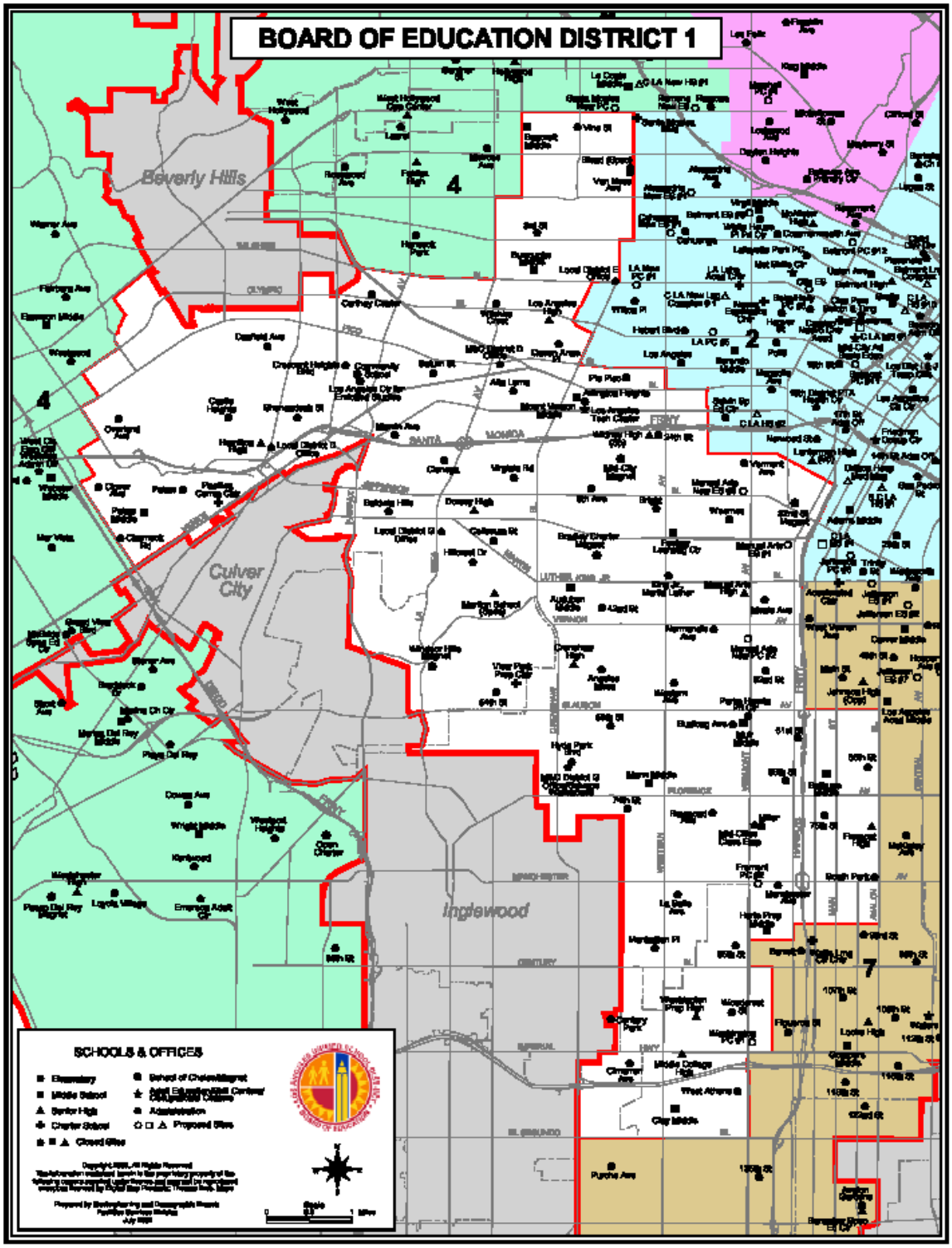

BOARD OF EDUCATION DISTRICT 1
Beverly Hills
Culver City
Inglewood
SCHOOLS & OFFICES

Exhibit K.3-2

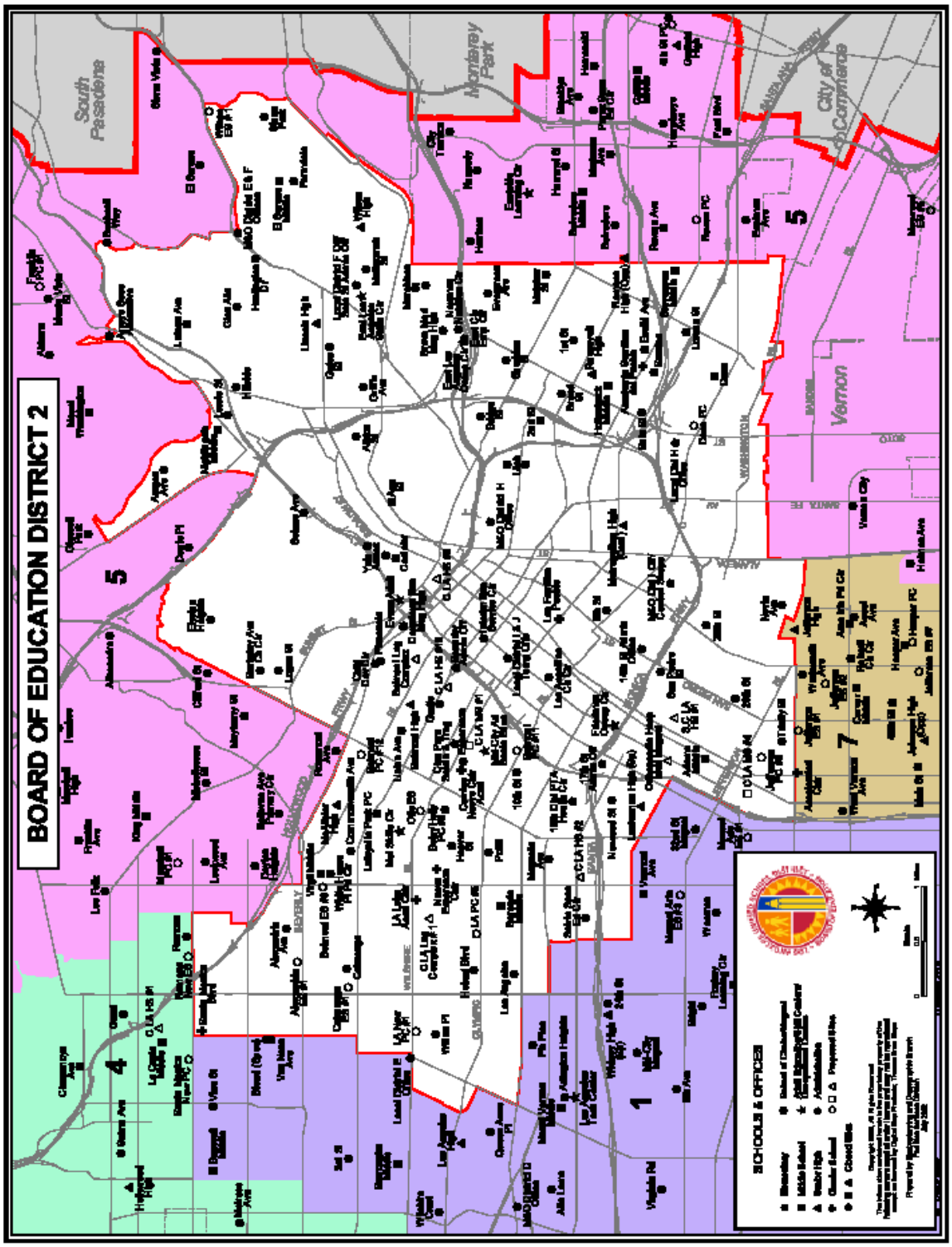

BOARD OF EDUCATION DISTRICT 2
South Pasadena
Monterey Park
City of Commerce
Vernon
SCHOOLS & OFFICES

Exhibit K.3-3

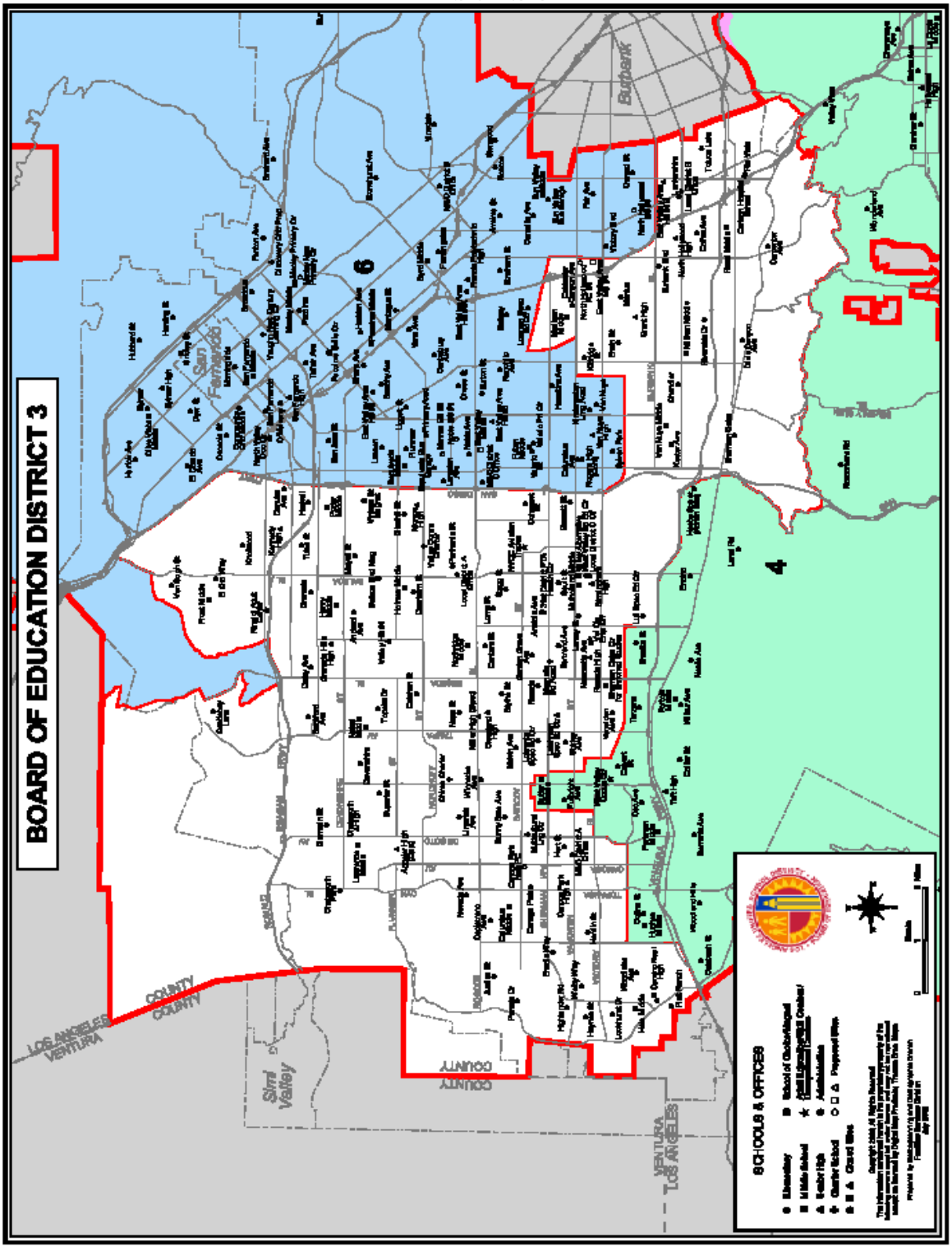

BOARD OF EDUCATION DISTRICT 3
Burbank
San Fernando
Simi Valley
LOS ANGELES COUNTY
VENTURA COUNTY
VENTURA
LOS ANGELES
SCHOOLS & OFFICES

Exhibit K.3-4

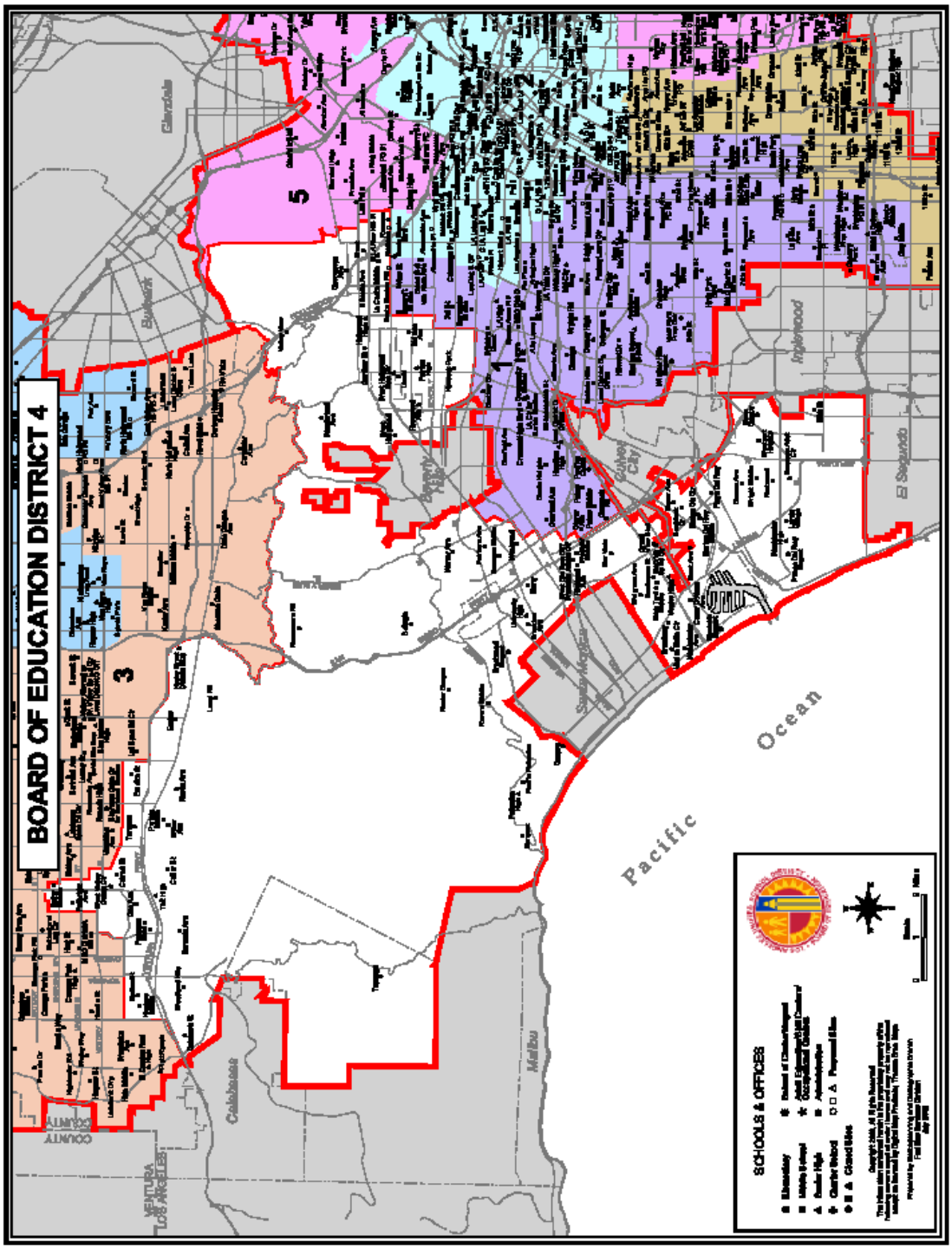

BOARD OF EDUCATION DISTRICT 4
5
2
3
Glendale
Burbank
Inglewood
El Segundo
Pacific
Ocean
Malibu
Calabasas
SCHOOLS & OFFICES

Exhibit K.3-5

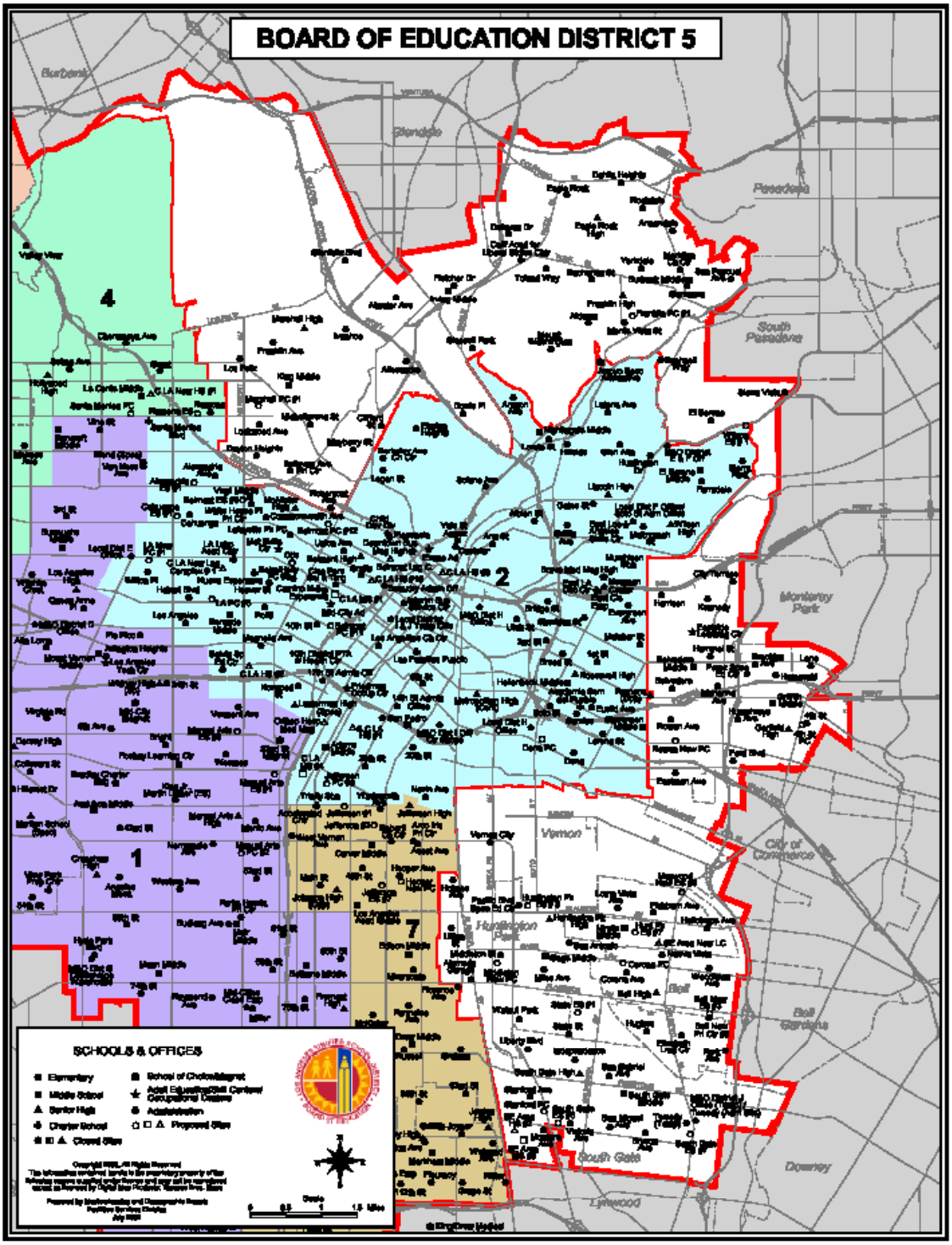

BOARD OF EDUCATION DISTRICT 5
SCHOOLS & OFFICES
Burbank
Glendale
Pasadena
South Pasadena
Monterey Park
Vernon
City of Commerce
Huntington Park
Bell
Bell Gardens
South Gate
Downey
Lynwood
1
2
4
7

Exhibit K.3-6

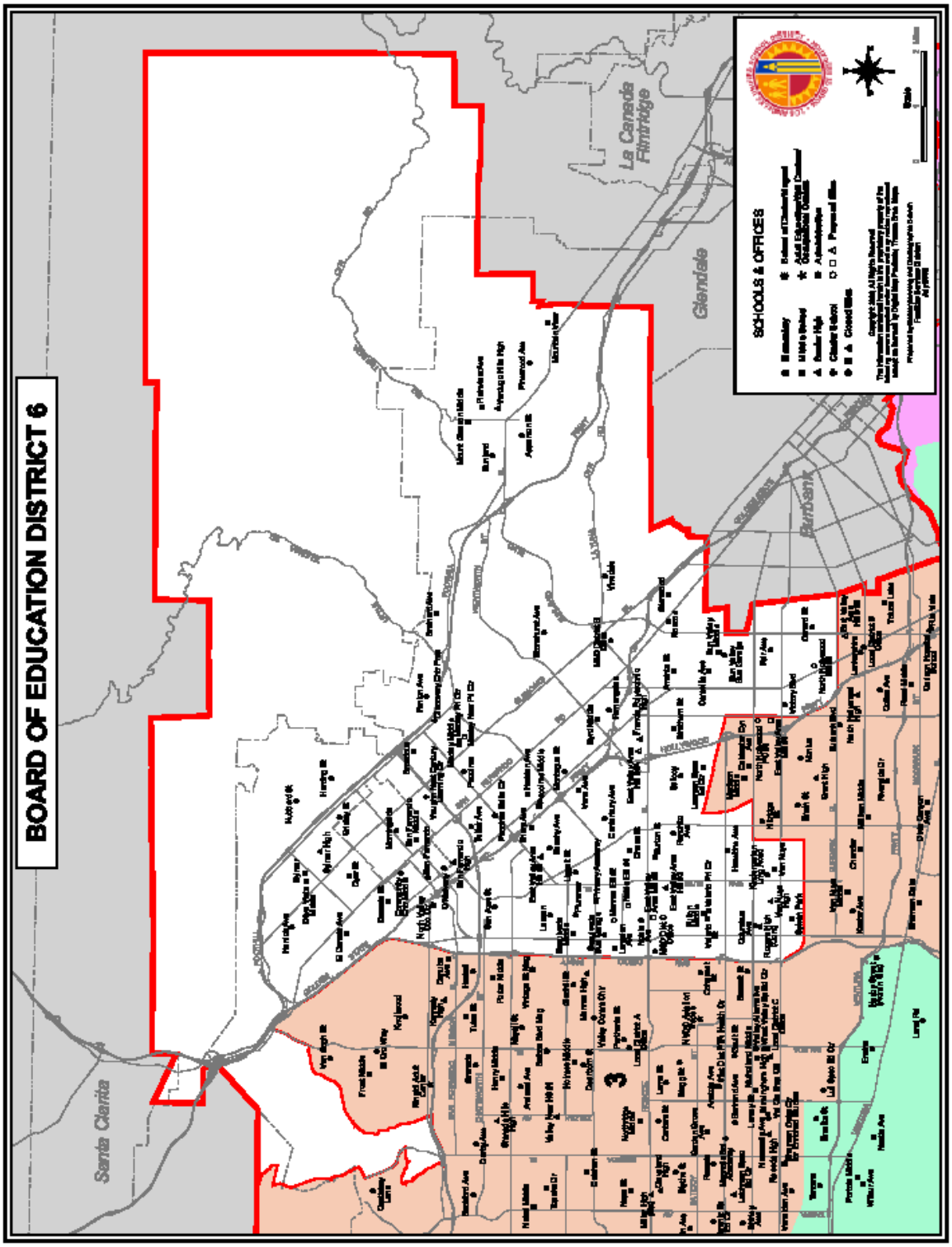

BOARD OF EDUCATION DISTRICT 6
SCHOOLS & OFFICES
La Canada Flintridge
Glendale
Burbank
Santa Clarita
3

Exhibit K.3-7

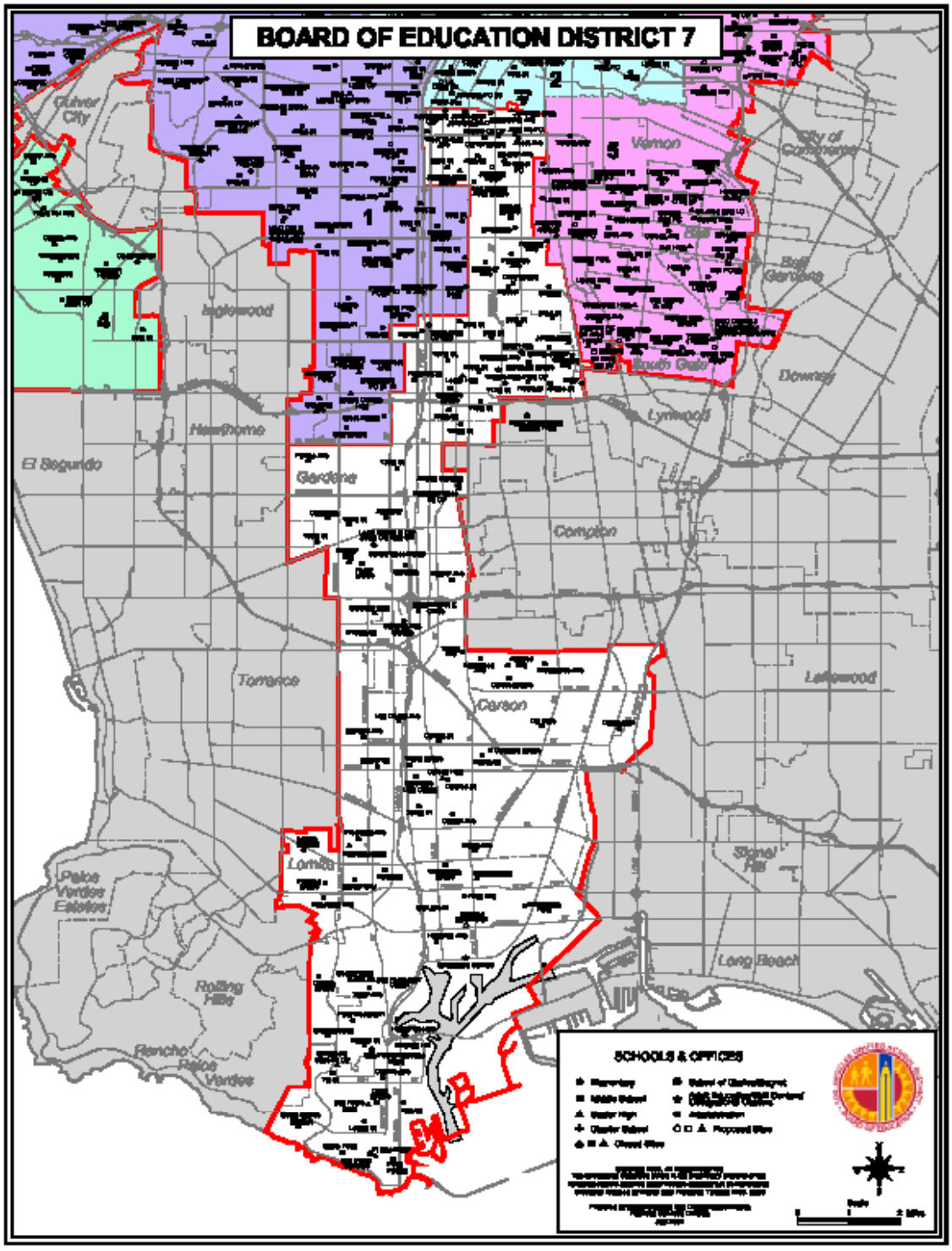

BOARD OF EDUCATION DISTRICT 7
Culver City
Vernon
City of Commerce
Bell Gardens
Huntington Park
South Gate
Downey
Lynwood
Hawthorne
El Segundo
Gardena
Compton
Torrance
Carson
Lakewood
Signal Hill
Palos Verdes Estates
Lomita
Long Beach
Rolling Hills
Rancho Palos Verdes
SCHOOLS & OFFICES

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
107TH ST EL	147 E 107TH ST LOS ANGELES, CA 90003	4 TRK	1047	1341
109TH ST EL	10915 S MC KINLEY AVE LOS ANGELES, CA 90059	1 TRK	540	540
10TH ST EL	1000 GRATTAN ST LOS ANGELES, CA 90015	3 TRK	1210	1768
112TH ST EL	1265 E 112TH ST LOS ANGELES, CA 90059	1 TRK	821	821
116TH ST EL	11610 STANFORD AVE LOS ANGELES, CA 90059	1 TRK	597	597
118TH ST EL	144 E 118TH ST LOS ANGELES, CA 90061	1 TRK	934	934
122ND ST EL	405 E 122ND ST LOS ANGELES, CA 90061	1 TRK	977	977
135TH ST EL	801 W 135TH ST GARDENA, CA 90247	3 TRK	721	1037
153RD ST EL	1605 W 153RD ST GARDENA, CA 90247	1 TRK	727	727
156TH ST EL	2100 W 156TH ST GARDENA, CA 90249	1 TRK	412	412
15TH ST EL	1527 S MESA ST SAN PEDRO, CA 90731	4 TRK	740	949
186TH ST EL	1581 W 186TH ST GARDENA, CA 90248	1 TRK	962	962
1ST EL	2820 E FIRST ST LOS ANGELES, CA 90033	1 TRK	874	874
20TH ST EL	1353 E 20TH ST LOS ANGELES, CA 90011	3 TRK	728	1063
232ND PL EL	23240 ARCHIBALD AVE CARSON, CA 90745	1 TRK	543	543
24TH ST EL	2055 W 24TH ST LOS ANGELES, CA 90018	3 TRK	1179	1662
28TH ST EL	2807 STANFORD AVE LOS ANGELES, CA 90011	3 TRK	1479	2179
2ND ST EL	1942 E SECOND ST LOS ANGELES, CA 90033	1 TRK	802	802
3RD ST EL	201 S JUNE ST LOS ANGELES, CA 90004	1 TRK	831	831
36th ST	1771 W. 36th ST LOS ANGELES, CA 90018		866	
42ND ST EL	4231 FOURTH AVE LOS ANGELES, CA 90008	1 TRK	807	807
49TH ST EL	750 E 49TH ST LOS ANGELES, CA 90011	3 TRK	1315	1947
4TH ST EL	420 S AMALIA AVE LOS ANGELES, CA 90022	3 TRK	849	1235
52ND ST EL	816 W 51ST ST LOS ANGELES, CA 90037	3 TRK	1071	1534
54TH ST EL	5501 S EILEEN AVE LOS ANGELES, CA 90043	4 TRK	567	703
59TH ST EL	5939 SECOND AVE LOS ANGELES, CA 90043	1 TRK	529	529
61ST ST EL	6020 S FIGUEROA ST LOS ANGELES, CA 90003	4 TRK	958	1207
66TH ST EL	6600 S SAN PEDRO ST LOS ANGELES, CA 90003	4 TRK	1124	1420
68TH ST EL	612 W 68TH ST LOS ANGELES, CA 90044	4 TRK	967	1243
6TH AVE EL	3109 SIXTH AVE LOS ANGELES, CA 90018	3 TRK	822	1138
74TH ST EL	2112 W 74TH ST LOS ANGELES, CA 90047	1 TRK	865	865
75TH ST EL	142 W 75TH ST LOS ANGELES, CA 90003	4 TRK	1475	1878
7TH ST EL	1570 W SEVENTH ST SAN PEDRO, CA 90732	1 TRK	580	580
92ND ST EL	9211 GRAPE ST LOS ANGELES, CA 90002	3 TRK	840	1181
93RD ST EL	330 E 93RD ST LOS ANGELES, CA 90003	4 TRK	1263	1609
95TH ST EL	1109 W 96TH ST LOS ANGELES, CA 90044	4 TRK	1249	1575

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
96TH ST EL	1471 E 96TH ST LOS ANGELES, CA 90002	1 TRK	1021	1021
98TH ST EL	5431 W 98TH ST LOS ANGELES, CA 90045	1 TRK	409	409
99TH ST EL	9900 S WADSWORTH AVE LOS ANGELES, CA 90002	1 TRK	799	799
9TH ST EL	820 TOWNE AVE LOS ANGELES, CA 90021	1 TRK	529	529
ALBION EL	322 S AVE 18 LOS ANGELES, CA 90031	1 TRK	585	585
ALDAMA EL	632 N AVE 50 LOS ANGELES, CA 90042	4 TRK	691	875
ALEXANDRIA EL	4211 OAKWOOD AVE LOS ANGELES, CA 90004	3 TRK	1277	1857
ALLESANDRO EL	2210 RIVERSIDE DR LOS ANGELES, CA 90039	3 TRK	437	619
ALTA LOMA EL	1745 VINEYARD AVE LOS ANGELES, CA 90019	3 TRK	790	1131
AMBLER EL	319 E SHERMAN DR CARSON, CA 90746	1 TRK	583	583
AMESTOY EL	1048 W 149TH ST GARDENA, CA 90247	1 TRK	915	915
ANATOLA EL	7364 ANATOLA AVE VAN NUYS, CA 91406	1 TRK	564	564
ANDASOL EL	10126 ENCINO AVE NORTHRIDGE, CA 91325	1 TRK	633	633
ANGELES MESA EL	2611 W 52ND ST LOS ANGELES, CA 90043	1 TRK	811	811
ANN EL	126 E BLOOM ST LOS ANGELES, CA 90012	1 TRK	408	408
ANNALEE EL	19410 S ANNALEE AVE CARSON, CA 90746	1 TRK	594	594
ANNANDALE EL	6125 POPPY PEAK DR LOS ANGELES, CA 90042	1 TRK	459	459
APPERSON EL	10233 WOODWARD AVE SUNLAND, CA 91040	1 TRK	604	604
ARAGON EL	1118 ARAGON AVE LOS ANGELES, CA 90065	3 TRK	615	887
ARLINGTON HTS EL	1717 SEVENTH AVE LOS ANGELES, CA 90019	4 TRK	868	1117
ARMINTA EL	11530 STRATHERN ST NO HOLLYWOOD, CA 91605	3 TRK	808	1181
ASCOT EL	1447 E 45TH ST LOS ANGELES, CA 90011	3 TRK	963	1391
ATWATER EL	3271 SILVER LAKE BLVD LOS ANGELES, CA 90039	1 TRK	573	573
AVALON GARDENS EL	13940 S SAN PEDRO ST LOS ANGELES, CA 90061	1 TRK	382	382
BALDWIN HILLS EL	5421 RODEO RD LOS ANGELES, CA 90016	1 TRK	616	616
BANDINI EL	425 N BANDINI ST SAN PEDRO, CA 90731	1 TRK	512	512
BARRETT EL	419 W 98TH ST LOS ANGELES, CA 90003	1 TRK	1295	1295
BARTON HILL EL	423 N PACIFIC AVE SAN PEDRO, CA 90731	4 TRK	713	897
BASSETT EL	15756 BASSETT ST VAN NUYS, CA 91406	4 TRK	1045	1361
BEACHY EL	9757 BEACHY AVE PACOIMA, CA 91331	4 TRK	766	927
BECKFORD EL	19130 TULSA ST NORTHRIDGE, CA 91326	1 TRK	661	661
BEETHOVEN EL	3711 BEETHOVEN ST LOS ANGELES, CA 90066	1 TRK	458	458
BELVEDERE EL	3724 E FIRST ST LOS ANGELES, CA 90063	4 TRK	1250	1621
BERTRAND EL	7021 BERTRAND AVE RESEDA, CA 91335	1 TRK	549	549
BLYTHE EL	18730 BLYTHE ST RESEDA, CA 91335	1 TRK	662	662
BONITA EL	21929 BONITA ST CARSON, CA 90745	1 TRK	787	787
BRADDOCK DRIVE EL	4711 INGLEWOOD BLVD CULVER CITY, CA 90230	1 TRK	722	722

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
BRAINARD EL	11407 BRAINARD AVE LAKE VIEW TERRACE, CA 91342	1 TRK	425	425
BREED EL	2226 E THIRD ST LOS ANGELES, CA 90033	1 TRK	855	855
BRIDGE EL	605 N BOYLE AVE LOS ANGELES, CA 90033	1 TRK	539	539
BRIGHT EL	1771 W 36TH ST LOS ANGELES, CA 90018	1 TRK	899	899
BROAD AVE EL	24815 BROAD AVE WILMINGTON, CA 90744	4 TRK	993	1269
BROADACRES EL	19424 S BROADACRES AVE CARSON, CA 90746	1 TRK	545	545
BROADOUS EL	12561 FILMORE ST PACOIMA, CA 91331	4 TRK	872	1076
BROADWAY EL	1015 LINCOLN BLVD VENICE, CA 90291	1 TRK	628	628
BROCKTON EL	1309 ARMACOST AVE LOS ANGELES, CA 90025	1 TRK	377	377
BROOKLYN AVE EL	4620 CESAR CHAVEZ AVE LOS ANGELES, CA 90022	1 TRK	774	774
BRYSON EL	4470 MISSOURI AVE SOUTH GATE, CA 90280	3 TRK	800	1175
BUCHANAN EL	5024 BUCHANAN ST LOS ANGELES, CA 90042	3 TRK	603	875
BUDLONG EL	5940 S BUDLONG AVE LOS ANGELES, CA 90044	1 TRK	1517	1517
BURBANK EL	12215 ALBERS ST NO HOLLYWOOD, CA 91607	4 TRK	509	625
BURTON EL	8111 CALHOUN AVE PANORAMA CITY, CA 91402	4 TRK	719	890
BUSHNELL WAY EL	5507 BUSHNELL WAY LOS ANGELES, CA 90042	1 TRK	711	711
CABRILLO EL	732 S CABRILLO AVE SAN PEDRO, CA 90731	4 TRK	574	730
CAHUENGA EL	220 S HOBART BLVD LOS ANGELES, CA 90004	3 TRK	885	1281
CALABASH EL	23055 EUGENE ST WOODLAND HILLS, CA 91364	1 TRK	421	421
CALAHAN EL	18722 KNAPP ST NORTHRIDGE, CA 91324	1 TRK	512	512
CALVERT EL	19850 DELANO ST WOODLAND HILLS, CA 91367	1 TRK	621	621
CAMELLIA EL	7451 CAMELLIA AVE NO HOLLYWOOD, CA 91605	3 TRK	1002	1450
CANFIELD EL	9233 AIRDROME ST LOS ANGELES, CA 90035	1 TRK	446	446
CANOGA PARK EL	7438 TOPANGA CYN BLVD CANOGA PARK, CA 91303	3 TRK	1004	1432
CANTARA EL	17950 CANTARA ST RESEDA, CA 91335	1 TRK	790	790
CANTERBURY EL	13670 MONTAGUE ST PACOIMA, CA 91331	1 TRK	997	997
CANYON EL	421 ENTRADA DR SANTA MONICA, CA 90402	1 TRK	429	429
CAPISTRANO EL	8118 CAPISTRANO AVE CANOGA PARK, CA 91304	1 TRK	590	590
CAROLDALE	22424 CAROLDALE AVE, CARSON CA 90745	1 TRK	987	987
CARPENTER EL	3909 CARPENTER AVE STUDIO CITY, CA 91604	1 TRK	971	971
CARSON EL	161 E CARSON ST CARSON, CA 90745	4 TRK	816	1004
CARTHAY CENTER EL	6351 W OLYMPIC BLVD LOS ANGELES, CA 90048	1 TRK	559	559
CASTELAR EL	840 YALE ST LOS ANGELES, CA 90012	1 TRK	937	937
CASTLE HTS EL	9755 CATTARAUGUS AVE LOS ANGELES, CA 90034	1 TRK	650	650
CASTLEBAY LN EL	19010 CASTLEBAY LN NORTHRIDGE, CA 91326	1 TRK	877	877
CATSKILL EL	23536 CATSKILL AVE CARSON, CA 90745	1 TRK	943	943
CENTURY PK EL	10935 S SPINNING AVE INGLEWOOD, CA 90303	1 TRK	942	942

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
CHANDLER EL	14030 WEDDINGTON ST VAN NUYS, CA 91401	1 TRK	652	652
CHAPMAN EL	1947 MARINE AVE GARDENA, CA 90249	1 TRK	526	526
CHARNOCK ROAD EL	11133 CHARNOCK RD LOS ANGELES, CA 90034	1 TRK	667	667
CHASE EL	14041 CHASE ST PANORAMA CITY, CA 91402	1 TRK	972	972
CHATSWORTH EL	22005 DEVONSHIRE ST CHATSWORTH, CA 91311	1 TRK	512	512
CHEREMOYA EL	6017 FRANKLIN AVE LOS ANGELES, CA 90028	4 TRK	457	598
CIENEGA EL	2611 S ORANGE DR LOS ANGELES, CA 90016	4 TRK	837	1041
CIMARRON EL	11559 CIMARRON AVE HAWTHORNE, CA 90250	1 TRK	600	600
CITY TERRACE EL	4350 CITY TERRACE DR LOS ANGELES, CA 90063	1 TRK	597	597
CLARA PRIM CENTER-	4504 ASCOT AVE, LOS ANGELES, CA 90011			
CLIFFORD EL	2150 DUANE ST LOS ANGELES, CA 90039	1 TRK	241	241
CLOVER EL	11020 CLOVER AVE LOS ANGELES, CA 90034	1 TRK	576	576
COEUR D ALENE EL	810 COEUR D'ALENE AVE VENICE, CA 90291	1 TRK	458	458
COHASSET EL	15810 SATICOY ST VAN NUYS, CA 91406	1 TRK	887	887
COLDWATER CYN EL	6850 COLDWATER CYN AVE NO HOLLYWOOD, CA	3 TRK	1016	1484
COLFAX EL	11724 ADDISON ST NO HOLLYWOOD, CA 91607	1 TRK	594	594
COLISEUM EL	4400 COLISEUM ST LOS ANGELES, CA 90016	1 TRK	450	450
COLUMBUS AVE EL	6700 COLUMBUS AVE VAN NUYS, CA 91405	4 TRK	571	732
COMMONWEALTH EL	215 S COMMONWEALTH AVE LOS ANGELES, CA 90004	3 TRK	609	871
COMPTON EL	1515 E 104TH ST LOS ANGELES, CA 90002	1 TRK	585	585
CORONA EL	3825 BELL AVE BELL, CA 90201	3 TRK	1337	1924
COWAN EL	7615 COWAN AVE LOS ANGELES, CA 90045	1 TRK	588	588
CRESCENT HEIGHTS	1661 S. CRESCENT HEIGHTS, LOS ANGELES, CA 90035	1 TRK	332	332
CRESTWOOD ST EL	1946 W CRESTWOOD ST RANCHO PALOS VERDES, CA 90275	1 TRK	559	559
DACOTAH	1314 DACOTAH ST, LOS ANGELES, CA 90023		NEW	NEW
DAHLIA HTS EL	5063 FLORISTAN AVE LOS ANGELES, CA 90041	1 TRK	434	434
DANUBE EL	11220 DANUBE AVE GRANADA HILLS, CA 91344	1 TRK	491	491
DARBY EL	10818 DARBY AVE NORTHRIDGE, CA 91326	1 TRK	649	649
DAYTON HEIGHTS EL	607 N WESTMORELAND AVE LOS ANGELES, CA 90004	4 TRK	847	1051
DEARBORN EL	9240 WISH AVE NORTHRIDGE, CA 91325	1 TRK	628	628
DEL AMO EL	21228 WATER ST CARSON, CA 90745	1 TRK	574	574
DELEVAN DRIVE EL	4168 W AVE 42 LOS ANGELES, CA 90065	1 TRK	588	588
DENA EL	1314 DACOTAH ST LOS ANGELES, CA 90023	3 TRK	805	1125
DENKER EL	1620 W 162ND ST GARDENA, CA 90247	4 TRK	945	1199
DIXIE CANYON EL	4220 DIXIE CANYON AVE SHERMAN OAKS, CA 91423	1 TRK	697	697
DOLORES EL	22526 DOLORES ST CARSON, CA 90745	1 TRK	916	916
DOMINGUEZ EL	21250 SANTA FE AVE LONG BEACH, CA 90810	1 TRK	767	767

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
DORRIS PLACE EL	2225 DORRIS PL LOS ANGELES, CA 90031	1 TRK	660	660
DYER EL	14500 DYER ST SYLMAR, CA 91342	4 TRK	954	1230
EAGLE ROCK EL	2057 FAIR PARK AVE LOS ANGELES, CA 90041	1 TRK	1045	1045
EASTMAN EL	4112 E OLYMPIC BLVD LOS ANGELES, CA 90023	1 TRK	1573	1573
EL DORADO EL	12749 EL DORADO AVE SYLMAR, CA 91342	1 TRK	813	813
ELIZABETH	4811 ELIZABETH ST, CUDAHY, CA 90201	3 TRK	2348	
EL ORO EL	12230 EL ORO WAY GRANADA HILLS, CA 91344	1 TRK	582	582
EL SERENO EL	3838 ROSEMEAD AVE LOS ANGELES, CA 90032	1 TRK	756	756
ELYSIAN HEIGHTS EL	1562 BAXTER ST LOS ANGELES, CA 90026	1 TRK	468	468
EMELITA EL	17931 HATTERAS ST ENCINO, CA 91316	1 TRK	618	618
ENCINO EL	16941 ADDISON ST ENCINO, CA 91316	1 TRK	665	665
ERWIN EL	13400 ERWIN ST VAN NUYS, CA 91401	1 TRK	1218	1218
ESHELMAN EL	25902 ESHELMAN AVE LOMITA, CA 90717	4 TRK	657	768
ESPERANZA EL	680 LITTLE ST LOS ANGELES, CA 90017	3 TRK	821	1141
EUCLID EL	806 EUCLID AVE LOS ANGELES, CA 90023	1 TRK	857	857
EVERGREEN EL	2730 GANAHL ST LOS ANGELES, CA 90033	1 TRK	1263	1263
FAIR EL	6501 FAIR AVE NO HOLLYWOOD, CA 91606	3 TRK	1263	1821
FAIRBURN EL	1403 FAIRBURN AVE LOS ANGELES, CA 90024	1 TRK	444	444
FARMDALE EL	2660 RUTH SWIGGETT DR LOS ANGELES, CA 90032	1 TRK	863	863
FENTON EL	11828 GAIN ST LAKE VIEW TERRACE, CA 91342	OTHER		931
FERNANGELES EL	12001 ART ST SUN VALLEY, CA 91352	3 TRK	1019	1457
FIGUEROA EL	510 W 111TH ST LOS ANGELES, CA 90044	3 TRK	722	989
FISHBURN EL	5701 FISHBURN AVE MAYWOOD, CA 90270	3 TRK	921	1314
FLETCHER DR EL	3350 FLETCHER DR LOS ANGELES, CA 90065	3 TRK	780	1101
FLORENCE EL	7211 BELL AVE LOS ANGELES, CA 90001	3 TRK	947	1345
FLOURNOY EL	1630 E 111TH ST LOS ANGELES, CA 90059	1 TRK	907	907
FORD BLVD EL	1112 S FORD BLVD LOS ANGELES, CA 90022	1 TRK	1519	1519
FRANKLIN EL	1910 N COMMONWEALTH AVE LOS ANGELES, CA 90027	1 TRK	562	562
FRIES EL	1301 FRIES AVE WILMINGTON, CA 90744	3 TRK	873	1281
FULLBRIGHT EL	6940 FULLBRIGHT AVE CANOGA PARK, CA 91306	1 TRK	660	660
GARDEN GROVE EL	18141 VALERIO ST RESEDA, CA 91335	1 TRK	534	534
GARDENA EL	647 W GARDENA BLVD GARDENA, CA 90247	4 TRK	746	950
GARDNER EL	7450 HAWTHORN AVE LOS ANGELES, CA 90046	1 TRK	608	608
GARVANZA EL	317 N AVE 62 LOS ANGELES, CA 90042	4 TRK	573	684
GATES EL	3333 MANITOU AVE LOS ANGELES, CA 90031	3 TRK	820	1181
GAULT EL	17000 GAULT ST VAN NUYS, CA 91406	1 TRK	579	579
GERMAIN EL	20730 GERMAIN ST CHATSWORTH, CA 91311	1 TRK	918	918

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
GLASSELL PARK EL	2211 W AVE 30 LOS ANGELES, CA 90065	4 TRK	767	971
GLEDHILL EL	16030 GLEDHILL ST NORTH HILLS, CA 91343	1 TRK	801	801
GLEN ALTA EL	3410 SIERRA ST LOS ANGELES, CA 90031	1 TRK	458	458
GLENFELIZ BLVD EL	3955 GLENFELIZ BLVD LOS ANGELES, CA 90039	1 TRK	695	695
GLENWOOD EL	8001 LEDGE AVE SUN VALLEY, CA 91352	1 TRK	798	798
GRAHAM EL	8407 S FIR AVE LOS ANGELES, CA 90001	3 TRK	1004	1487
GRANADA EL	17170 TRIBUNE ST GRANADA HILLS, CA 91344	1 TRK	625	625
GRAND VIEW EL	3951 GRAND VIEW BLVD LOS ANGELES, CA 90066	1 TRK	847	847
GRANT EL	1530 N WILTON PL LOS ANGELES, CA 90028	3 TRK	1090	1575
GRAPE EL	1940 E 111TH ST LOS ANGELES, CA 90059	1 TRK	764	764
GRATTS EL	309 LUCAS AVE LOS ANGELES, CA 90017	3 TRK	717	1053
GRIDLEY EL	1907 EIGHTH ST SAN FERNANDO, CA 91340	3 TRK	815	1208
GRIFFIN EL	2025 GRIFFIN AVE LOS ANGELES, CA 90031	1 TRK	748	748
GRIFFITH JOYNER EL	1963 E 103RD ST LOS ANGELES, CA 90002	1 TRK	1201	1201
GULF EL	828 W "L" ST WILMINGTON, CA 90744	3 TRK	1049	1497
HADDON EL	10115 HADDON AVE PACOIMA, CA 91331	3 TRK	1071	1554
HALLDALE EL	21514 HALLDALE AVE TORRANCE, CA 90501	1 TRK	722	722
HAMASAKI EL	4865 E FIRST ST LOS ANGELES, CA 90022	1 TRK	651	651
HAMLIN EL	22627 HAMLIN ST CANOGA PARK, CA 91307	1 TRK	591	591
HAMMEL EL	438 N BRANNICK AVE LOS ANGELES, CA 90063	1 TRK	1101	1101
HANCOCK PARK EL	408 S FAIRFAX AVE LOS ANGELES, CA 90036	1 TRK	788	788
HARBOR CITY EL	1508 W 254TH ST HARBOR CITY, CA 90710	3 TRK	570	792
HARDING EL	13060 HARDING ST SYLMAR, CA 91342	1 TRK	825	825
HARRISON	3529 CITY TERRACE DRIVE, LOS ANGELES, CA 90063	1 TRK	1455	1455
HART ST EL	21040 HART ST CANOGA PARK, CA 91303	4 TRK	873	1077
HASKELL EL	15850 TULSA ST GRANADA HILLS, CA 91344	1 TRK	494	494
HAWAIIAN EL	540 HAWAIIAN AVE WILMINGTON, CA 90744	4 TRK	1037	1333
HAYNES EL	6624 LOCKHURST DR WEST HILLS, CA 91307	1 TRK	423	423
HAZELTINE EL	7150 HAZELTINE AVE VAN NUYS, CA 91405	3 TRK	944	1359
HELIOTROPE EL	5911 WOODLAWN AVE MAYWOOD, CA 90270	3 TRK	1029	1514
HERRICK EL	13350 HERRICK AVE SYLMAR, CA 91342	1 TRK	839	839
HILLCREST DR EL	4041 HILLCREST DR LOS ANGELES, CA 90008	4 TRK	947	1216
HILLSIDE EL	120 E AVE 35 LOS ANGELES, CA 90031	3 TRK	554	761
HOBART BLVD EL	980 S HOBART BLVD LOS ANGELES, CA 90006	3 TRK	1457	2103
HOLMES EL	5108 HOLMES AVE LOS ANGELES, CA 90058	1 TRK	589	589
HOOPER EL	1225 E 52ND ST LOS ANGELES, CA 90011	3 TRK	1486	2142
HOOVER EL	2726 FRANCIS AVE LOS ANGELES, CA 90005	3 TRK	1548	2273

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
HUBBARD EL	13325 HUBBARD ST SYLMAR, CA 91342	1 TRK	1062	1062
HUGHES EL	4242 CLARA ST CUDAHY, CA 90201	3 TRK	1071	1529
HUMPHREYS EL	500 S HUMPHREYS AVE LOS ANGELES, CA 90022	1 TRK	1046	1046
HUNTINGTON DR EL	4435 N HUNTINGTON DR LOS ANGELES, CA 90032	1 TRK	817	817
HYDE PARK EL	3140 HYDE PARK BLVD LOS ANGELES, CA 90043	4 TRK	884	1133
INDEPENDENCE EL	8435 VICTORIA AVE SOUTH GATE, CA 90280	3 TRK	796	1161
IVANHOE EL	2828 HERKIMER ST LOS ANGELES, CA 90039	1 TRK	424	424
JUSTICE EL	23350 JUSTICE ST CANOGA PARK, CA 91304	1 TRK	606	606
KENNEDY EL	4010 E RAMBOZ DRIVE LOS ANGELES, CA 90063	1 TRK	868	868
KENTER CANYON EL	645 N KENTER AVE LOS ANGELES, CA 90049	1 TRK	500	500
KENTWOOD EL	8401 EMERSON AVE LOS ANGELES, CA 90045	1 TRK	521	521
KESTER EL	5353 KESTER AVE VAN NUYS, CA 91411	1 TRK	780	780
KING JR EL	3989 S HOBART BLVD LOS ANGELES, CA 90062	1 TRK	1109	1109
KITTRIDGE EL	13619 KITTRIDGE ST VAN NUYS, CA 91401	3 TRK	906	1294
KNOLLWOOD EL	11822 GERALD AVE GRANADA HILLS, CA 91344	1 TRK	639	639
LA SALLE EL	8715 LA SALLE AVE LOS ANGELES, CA 90047	1 TRK	1159	1159
LANAI EL	4241 LANAI RD ENCINO, CA 91436	1 TRK	541	541
LANE EL	1500 CESAR CHAVEZ AVE MONTEREY PARK, CA 91754	1 TRK	576	576
LA NEW #3	1211 SOUTH HOBART BLVD, LOS ANGELES, CA 90006		NEW	NEW
LANGDON EL	8817 LANGDON AVE NORTH HILLS, CA 91343	3 TRK	1125	1672
LANKERSHIM EL	5250 BAKMAN AVE NO HOLLYWOOD, CA 91601	4 TRK	736	940
LASSEN EL	15017 SUPERIOR ST NORTH HILLS, CA 91343	1 TRK	785	785
LATONA EL	4312 BERENICE AVE LOS ANGELES, CA 90031	3 TRK	419	561
LAUREL EL	925 N HAYWORTH AVE LOS ANGELES, CA 90046	1 TRK	499	499
LEAPWOOD EL	19302 LEAPWOOD AVE CARSON, CA 90746	1 TRK	586	586
LELAND EL	2120 S LELAND ST SAN PEDRO, CA 90731	1 TRK	755	755
LEMAY EL	17520 VANOWEN ST VAN NUYS, CA 91406	1 TRK	439	439
LIBERTY EL	2728 LIBERTY BLVD SOUTH GATE, CA 90280	3 TRK	961	1369
LIGGETT EL	9373 MOONBEAM AVE PANORAMA CITY, CA 91402	3 TRK	1010	1443
LILLIAN EL	5909 LILLIAN ST LOS ANGELES, CA 90001	1 TRK	781	781
LIMERICK EL	8530 LIMERICK AVE CANOGA PARK, CA 91306	1 TRK	1175	1175
LOCKHURST EL	6170 LOCKHURST DR WOODLAND HILLS, CA 91367	1 TRK	615	615
LOCKWOOD EL	4345 LOCKWOOD AVE LOS ANGELES, CA 90029	3 TRK	813	1154
LOGAN EL	1711 W MONTANA ST LOS ANGELES, CA 90026	4 TRK	1164	1465
LOMA VISTA EL	3629 E 58TH ST MAYWOOD, CA 90270	3 TRK	1242	1785
LORENA EL	1015 S LORENA ST LOS ANGELES, CA 90023	1 TRK	959	959
LORETO EL	3408 ARROYO SECO AVE LOS ANGELES, CA 90065	3 TRK	534	756

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
LORNE EL	17440 LORNE ST NORTHRIDGE, CA 91325	1 TRK	481	481
LOS ANGELES EL	1211 S HOBART BLVD LOS ANGELES, CA 90006	3 TRK	907	1300
LOS FELIZ EL	1740 N NEW HAMPSHIRE AVE LOS ANGELES, CA 90027	1 TRK	849	849
LOYOLA VILLAGE EL	8821 VILLANOVA AVE LOS ANGELES, CA 90045	1 TRK	432	432
MACLAY PRIMARY	12513 GAIN ST, PACOIMA, CA 91331	4 TRK	300	
MAGNOLIA EL	1626 S ORCHARD AVE LOS ANGELES, CA 90006	3 TRK	1332	1919
MAIN ST EL	129 E 53RD ST LOS ANGELES, CA 90011	3 TRK	1125	1623
MALABAR EL	3200 E MALABAR ST LOS ANGELES, CA 90063	1 TRK	1106	1106
MANCHESTER EL	661 W 87TH ST LOS ANGELES, CA 90044	3 TRK	1242	1785
MANHATTAN EL	1850 W 96TH ST LOS ANGELES, CA 90047	1 TRK	887	887
MAR VISTA EL	3330 GRANVILLE AVE LOS ANGELES, CA 90066	1 TRK	760	760
MARIANNA EL	4215 E GLEASON ST LOS ANGELES, CA 90063	1 TRK	548	548
MARQUEZ EL	16821 MARQUEZ AVE PACIFIC PALISADES, CA 90272	1 TRK	790	790
MARVIN EL	2411 MARVIN AVE LOS ANGELES, CA 90016	4 TRK	834	1038
MAYALL EL	16701 MAYALL ST NORTH HILLS, CA 91343	1 TRK	657	657
MAYBERRY EL	2414 MAYBERRY ST LOS ANGELES, CA 90026	1 TRK	500	500
MC KINLEY EL	7812 MC KINLEY AVE LOS ANGELES, CA 90001	1 TRK	1007	1007
MELROSE EL	731 N DETROIT ST LOS ANGELES, CA 90046	1 TRK	376	376
MELVIN EL	7700 MELVIN AVE RESEDA, CA 91335	1 TRK	743	743
MENLO EL	4156 MENLO AVE LOS ANGELES, CA 90037	3 TRK	985	1393
MEYLER EL	1123 W 223RD ST TORRANCE, CA 90502	4 TRK	1052	1326
MICHELTORENA EL	1511 MICHELTORENA ST LOS ANGELES, CA 90026	4 TRK	670	811
MIDDLETON EL	6537 MALABAR ST HUNTINGTON PARK, CA 90255	3 TRK	1393	2044
MILES EL	6720 MILES AVE HUNTINGTON PARK, CA 90255	3 TRK	1792	2596
MILLER EL	830 W 77TH ST LOS ANGELES, CA 90044	3 TRK	951	1359
MIRAMONTE EL	1400 E 68TH ST LOS ANGELES, CA 90001	3 TRK	1533	2253
MONLUX EL	6051 BELLAIRE AVE NO HOLLYWOOD, CA 91606	1 TRK	762	762
MONTAGUE EL	13000 MONTAGUE ST PACOIMA, CA 91331	OTHER	8	1132
MONTARA AVE EL	10018 MONTARA AVE SOUTH GATE, CA 90280	3 TRK	635	897
MONTE VISTA EL	5423 MONTE VISTA ST LOS ANGELES, CA 90042	4 TRK	698	869
MORNINGSIDE EL	576 N MACLAY AVE SAN FERNANDO, CA 91340	3 TRK	847	1260
MOUNTAIN VIEW EL	6410 OLCOTT ST TUJUNGA, CA 91042	1 TRK	775	775
MT WASHINGTON EL	3981 SAN RAFAEL AVE LOS ANGELES, CA 90065	1 TRK	434	434
MULTNOMAH EL	2101 N INDIANA AVE LOS ANGELES, CA 90032	1 TRK	564	564
MURCHISON EL	1501 MURCHISON ST LOS ANGELES, CA 90033	1 TRK	940	940
NAPA EL	19010 NAPA ST NORTHRIDGE, CA 91324	4 TRK	731	919
NESTLE EL	5060 NESTLE AVE TARZANA, CA 91356	1 TRK	598	598

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
NEVADA EL	22120 CHASE ST CANOGA PARK, CA 91304	1 TRK	788	788
NEVIN EL	1569 E 32ND ST LOS ANGELES, CA 90011	3 TRK	613	840
NEWCASTLE EL	6520 NEWCASTLE AVE RESEDA, CA 91335	1 TRK	500	500
NOBLE EL	8329 NOBLE AVE NORTH HILLS, CA 91343	3 TRK	1211	1799
NORMANDIE EL	4505 S RAYMOND AVE LOS ANGELES, CA 90037	4 TRK	1162	1483
NORMONT EL	1001 W 253RD ST HARBOR CITY, CA 90710	4 TRK	503	634
NORWOOD EL	2020 OAK ST LOS ANGELES, CA 90007	4 TRK	963	1219
NUEVA VISTA EL	4412 RANDOLPH ST BELL, CA 90201	3 TRK	1017	1470
O MELVENY EL	728 WOODWORTH ST SAN FERNANDO, CA 91340	4 TRK	726	907
OSCEOLA EL	14940 OSCEOLA ST SYLMAR, CA 91342	4 TRK	459	550
OVERLAND EL	10650 ASHBY AVE LOS ANGELES, CA 90064	1 TRK	620	620
OXNARD EL	10912 OXNARD ST NO HOLLYWOOD, CA 91606	3 TRK	843	1211
PACIFIC PALISADES	800 VIA DE LA PAZ PACIFIC PALISADES, CA 90272	1 TRK	513	513
PACOIMA EL	11016 NORRIS AVE PACOIMA, CA 91331	OTHER	1340	1663
PALMS EL	3520 MOTOR AVE LOS ANGELES, CA 90034	1 TRK	600	600
PARK AVE EL	5027 LIVE OAK ST CUDAHY, CA 90201	3 TRK	817	1157
PARK WESTERN EL	1214 PARK WESTERN PL SAN PEDRO, CA 90732	1 TRK	416	416
PARMELEE EL	1338 E 76TH PL LOS ANGELES, CA 90001	3 TRK	1107	1632
PARTHENIA EL	16825 NAPA ST NORTH HILLS, CA 91343	4 TRK	747	951
PIO PICO	1512 So. ARLINGTON AVE, LOS ANGELES, CA. 91042	3 TRK	1655	
PINEWOOD EL	10111 SILVERTON AVE TUJUNGA, CA 91042	1 TRK	936	936
PLAINVIEW EL	10819 PLAINVIEW AVE TUJUNGA, CA 91042	1 TRK	625	625
PLASENCIA EL	1321 CORTEZ ST LOS ANGELES, CA 90026	4 TRK	1076	1377
PLAYA DEL REY EL	12221 JUNIETTE ST CULVER CITY, CA 90230	1 TRK	323	323
PLUMMER EL	9340 NOBLE AVE NORTH HILLS, CA 91343	3 TRK	1236	1782
POINT FERMIN EL	3333 KERCKHOFF AVE SAN PEDRO, CA 90731	1 TRK	429	429
POLITI EL	2481 W 11TH ST LOS ANGELES, CA 90006	3 TRK	871	1259
POMELO EL	7633 MARCH AVE CANOGA PARK, CA 91304	1 TRK	892	892
PRESIDENT EL	1465 W 243RD ST HARBOR CITY, CA 90710	1 TRK	699	699
PURCHE EL	13210 PURCHE AVE GARDENA, CA 90249	1 TRK	732	732
QUEEN ANNE EL	1212 QUEEN ANNE PL, LOS ANGELES, CA 90019	1 TRK	579	579
RAMONA EL	1133 N MARIPOSA AVE, LOS ANGELES, CA 90029	3 TRK	1006	1479
RANCHITO EL	7940 RANCHITO AVE, PANORAMA CITY, CA 91402	3 TRK	548	770
RAYMOND AVE EL	7511 RAYMOND AVE LOS ANGELES, CA 90044	4 TRK	851	1085
RESEDA EL	7265 AMIGO AVE RESEDA, CA 91335	1 TRK	601	601
RICHLAND EL	11562 RICHLAND AVE LOS ANGELES, CA 90064	1 TRK	516	516
RIO VISTA EL	4243 SATSUMA AVE NO HOLLYWOOD, CA 91602	1 TRK	518	518

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
RITTER EL	11108 WATTS AVE LOS ANGELES, CA 90059	1 TRK	493	493
RIVERSIDE EL	13061 RIVERSIDE DR SHERMAN OAKS, CA 91423	1 TRK	898	898
ROCKDALE EL	1303 YOSEMITE DR LOS ANGELES, CA 90041	1 TRK	376	376
ROSCOE EL	10765 STRATHERN ST SUN VALLEY, CA 91352	3 TRK	851	1227
ROSCOMARE EL	2425 ROSCOMARE RD LOS ANGELES, CA 90077	1 TRK	569	569
ROSEMONT EL	421 N ROSEMONT AVE LOS ANGELES, CA 90026	3 TRK	1071	1591
ROSEWOOD EL	503 N CROFT AVE LOS ANGELES, CA 90048	1 TRK	624	624
ROWAN EL	600 S ROWAN AVE LOS ANGELES, CA 90023	3 TRK	1135	1658
RUSSELL EL	1263 E FIRESTONE BLVD LOS ANGELES, CA 90001	3 TRK	1017	1450
SAN ANTONIO ELEM	6222 STATE ST HUNTINGTON PARK, CA 90255	3 TRK	473	633
SAN FERNANDO EL	1130 MOTT ST SAN FERNANDO, CA 91340	4 TRK	832	1081
SAN GABRIEL EL	8628 SAN GABRIEL AVE SOUTH GATE, CA 90280	3 TRK	760	1056
SAN JOSE EL	14928 CLYMER ST MISSION HILLS, CA 91345	1 TRK	786	786
SAN MIGUEL EL	9801 SAN MIGUEL AVE SOUTH GATE, CA 90280	3 TRK	1033	1471
SAN PASCUAL EL	815 SAN PASCUAL AVE LOS ANGELES, CA 90042	1 TRK	487	487
SAN PEDRO EL	1635 S SAN PEDRO ST LOS ANGELES, CA 90015	4 TRK	689	860
SANTA MONICA COMM	1022 N VAN NESS AVE LOS ANGELES, CA 90038	3 TRK	1003	1488
SATICOY EL	7850 ETHEL AVE NO HOLLYWOOD, CA 91605	1 TRK	851	851
SATURN EL	5360 SATURN ST LOS ANGELES, CA 90019	4 TRK	735	948
SELMA EL	6611 SELMA AVE LOS ANGELES, CA 90028	1 TRK	749	749
SERRANIA EL	5014 SERRANIA AVE WOODLAND HILLS, CA 91364	1 TRK	842	842
SHARP EL	13800 PIERCE ST PACOIMA, CA 91331	4 TRK	954	1215
SHENANDOAH EL	2450 SHENANDOAH ST LOS ANGELES, CA 90034	1 TRK	985	985
SHERIDAN ST EL	416 N CORNWELL ST LOS ANGELES, CA 90033	1 TRK	1506	1506
SHERMAN OAKS EL	14755 GREENLEAF ST SHERMAN OAKS, CA 91403	1 TRK	1052	1052
SHIRLEY EL	19452 HART ST RESEDA, CA 91335	1 TRK	989	989
SHORT EL	12814 MAXELLA AVE LOS ANGELES, CA 90066	1 TRK	646	646
SIERRA PARK EL	3170 BUDAU AVE LOS ANGELES, CA 90032	4 TRK	1009	1290
SIERRA VISTA EL	4342 ALPHA ST LOS ANGELES, CA 90032	1 TRK	399	399
SOLANO EL	615 SOLANO AVE LOS ANGELES, CA 90012	1 TRK	298	298
SOTO EL	1020 S SOTO ST LOS ANGELES, CA 90023	1 TRK	510	510
SOUTH PARK EL	8510 TOWNE AVE LOS ANGELES, CA 90003	4 TRK	919	1175
STAGG EL	7839 AMESTOY AVE VAN NUYS, CA 91406	1 TRK	547	547
STANFORD EL	2833 ILLINOIS AVE SOUTH GATE, CA 90280	3 TRK	1246	1794
STATE EL	3211 SANTA ANA ST SOUTH GATE, CA 90280	3 TRK	1105	1585
STERRY EL	1730 CORINTH AVE LOS ANGELES, CA 90025	1 TRK	455	455
STONEHURST EL	9851 STONEHURST AVE SUN VALLEY, CA 91352	1 TRK	476	476

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
STONER EL	11735 BRADDOCK DR CULVER CITY, CA 90230	1 TRK	706	706
STRATHERN EL	7939 ST CLAIR AVE NO HOLLYWOOD, CA 91605	3 TRK	965	1378
SUNLAND EL	8350 HILLROSE ST SUNLAND, CA 91040	1 TRK	761	761
SUNNY BRAE EL	20620 ARMINTA ST WINNETKA, CA 91306	1 TRK	959	959
SUNRISE EL	2821 E SEVENTH ST LOS ANGELES, CA 90023	1 TRK	710	710
SUPERIOR EL	9756 OSO AVE CHATSWORTH, CA 91311	1 TRK	595	595
SYLMAR EL	13291 PHILLIPPI AVE SYLMAR, CA 91342	3 TRK	816	1157
SYLVAN PARK EL	6238 NOBLE AVE VAN NUYS, CA 91411	3 TRK	902	1310
TAPER EL	1824 TAPER AVE SAN PEDRO, CA 90731	1 TRK	761	761
TARZANA EL	5726 TOPEKA DR TARZANA, CA 91356	1 TRK	629	629
TELFAIR EL	10975 TELFAIR AVE PACOIMA, CA 91331	1 TRK	1320	1320
TOLAND WAY EL	4545 TOLAND WAY LOS ANGELES, CA 90041	1 TRK	591	591
TOLUCA LAKE EL	4840 CAHUENGA BLVD NO HOLLYWOOD, CA 91601	1 TRK	803	803
TOPANGA EL	141 N TOPANGA BLVD TOPANGA, CA 90290	1 TRK	428	428
TOPEKA DR EL	9815 TOPEKA DR NORTHRIDGE, CA 91324	1 TRK	713	713
TOWNE EL	18924 TOWNE AVE CARSON, CA 90746	1 TRK	583	583
TRINITY EL	3736 TRINITY ST LOS ANGELES, CA 90011	3 TRK	1279	1866
TULSA EL	10900 HAYVENHURST AVE GRANADA HILLS, CA 91344	1 TRK	616	616
TWEEDY EL	9515 PINEHURST AVE SOUTH GATE, CA 90280	3 TRK	596	896
UNION EL	150 S BURLINGTON AVE LOS ANGELES, CA 90057	3 TRK	1434	2020
UTAH EL	255 N CLARENCE ST LOS ANGELES, CA 90033	1 TRK	825	825
VALERIO EL	15035 VALERIO ST VAN NUYS, CA 91405	4 TRK	1092	1418
VALLEY VIEW EL	6921 WOODROW WILSON DR LOS ANGELES, CA 90068	1 TRK	288	288
VAN DEENE EL	826 W JAVELIN ST TORRANCE, CA 90502	1 TRK	569	569
VAN GOGH EL	17160 VAN GOGH ST GRANADA HILLS, CA 91344	1 TRK	530	530
VAN NESS EL	501 N VAN NESS AVE LOS ANGELES, CA 90004	4 TRK	472	563
VAN NUYS EL	6464 SYLMAR AVE VAN NUYS, CA 91401	3 TRK	641	916
VANALDEN EL	19019 DELANO ST RESEDA, CA 91335	1 TRK	626	626
VAUGHN	13330 VAUGHN ST, SAN FERNANDO,CA 91340		1070	
VENA EL	9377 VENA AVE PACOIMA, CA 91331	1 TRK	685	685
VERMONT EL	1435 W 27TH ST LOS ANGELES, CA 90007	4 TRK	1235	1601
VERNON CITY EL	2360 E VERNON AVE LOS ANGELES, CA 90058	1 TRK	299	299
VICTORIA EL	3320 MISSOURI AVE SOUTH GATE, CA 90280	3 TRK	1151	1676
VICTORY EL	6315 RADFORD AVE NO HOLLYWOOD, CA 91606	3 TRK	1089	1557
VINE EL	955 N VINE ST LOS ANGELES, CA 90038	3 TRK	760	1076
VINEDALE EL	10150 LA TUNA CANYON RD SUN VALLEY, CA 91352	1 TRK	505	505
VIRGINIA EL	2925 VIRGINIA RD LOS ANGELES, CA 90016	1 TRK	633	633

Exhibit K.3-8

ELEMENTARY

Name	Address	Calendar	Capacity	
			2 Semester	Operating
WADSWORTH EL	981 E 41ST ST LOS ANGELES, CA 90011	3 TRK	1173	1711
WALGROVE EL	1630 WALGROVE AVE LOS ANGELES, CA 90066	1 TRK	595	595
WALNUT PARK EL	2642 OLIVE ST HUNTINGTON PARK, CA 90255	3 TRK	1078	1563
WARNER EL	615 HOLMBY AVE LOS ANGELES, CA 90024	1 TRK	741	741
WEEMES EL	1260 W 36TH PL LOS ANGELES, CA 90007	4 TRK	1412	1822
WEIGAND EL	10401 WEIGAND AVE LOS ANGELES, CA 90002	3 TRK	433	595
WELBY EL	23456 WELBY WAY CANOGA PARK, CA 91307	1 TRK	534	534
WEST ATHENS EL	1110 W 119TH ST LOS ANGELES, CA 90044	4 TRK	956	1212
WEST HOLLYWOOD	970 N HAMMOND ST WEST HOLLYWOOD, CA 90069	1 TRK	366	366
WEST VERNON EL	4312 S GRAND AVE LOS ANGELES, CA 90037	3 TRK	1083	1561
WESTERN EL	1724 W 53RD ST LOS ANGELES, CA 90062	1 TRK	1053	1053
WESTMINSTER EL	1010 ABBOT KINNEY BLVD VENICE, CA 90291	1 TRK	564	564
WESTPORT HTS EL	6011 W 79TH ST LOS ANGELES, CA 90045	1 TRK	620	620
WESTWOOD EL	2050 SELBY AVE LOS ANGELES, CA 90025	1 TRK	877	877
WHITE HOUSE PLACE	108 SO. BIMINI PLACE, LOS ANGELES, CA 90004	3 TRK	328	
WHITE POINT EL	1410 SILVIUS AVE SAN PEDRO, CA 90731	1 TRK	548	548
WILBUR EL	5213 CREBS AVE TARZANA, CA 91356	1 TRK	821	821
WILMINGTON PK EL	1140 MAHAR AVE WILMINGTON, CA 90744	1 TRK	1303	1303
WILSHIRE CREST EL	5241 W OLYMPIC BLVD LOS ANGELES, CA 90036	1 TRK	825	825
WILTON PL EL	745 S WILTON PL LOS ANGELES, CA 90005	3 TRK	1051	1519
WINNETKA EL	8240 WINNETKA AVE CANOGA PARK, CA 91306	1 TRK	687	687
WONDERLAND EL	8510 WONDERLAND AVE LOS ANGELES, CA 90046	1 TRK	232	232
WOODCREST EL	1151 W 109TH ST LOS ANGELES, CA 90044	3 TRK	1140	1665
WOODLAKE EL	23231 HATTERAS ST WOODLAND HILLS, CA 91367	1 TRK	710	710
WOODLAND HILLS EL	22201 SAN MIGUEL ST WOODLAND HILLS, CA 91364	1 TRK	746	746
WOODLAWN EL	6314 WOODLAWN AVE BELL, CA 90201	3 TRK	944	1332
YORKDALE EL	5657 MERIDIAN ST LOS ANGELES, CA 90042	1 TRK	691	691

Exhibit K.3-8

MIDDLE

Name	Address	Calendar	Capacity	
			2 Semester	Operating
ADAMS MS	151 W 30TH ST LOS ANGELES, CA 90007	3 TRK	2400	3360
AUDUBON MS	4120 11TH AVE LOS ANGELES, CA 90008	1 TRK	2400	2400
BANCROFT MS	929 N LAS PALMAS AVE LOS ANGELES, CA 90038	1 TRK	2036	2036
BELVEDERE MS	312 N RECORD AVE LOS ANGELES, CA 90063	1 TRK	2754	2754
BERENDO MS	1157 S BERENDO ST LOS ANGELES, CA 90006	3 TRK	2400	3360
BETHUNE MS	155 W 69TH ST LOS ANGELES, CA 90003	3 TRK	2400	3360
BURBANK MS	6460 N FIGUEROA ST LOS ANGELES, CA 90042	3 TRK	2400	3360
BURROUGHS MS	600 S MC CADDEN PL LOS ANGELES, CA 90005	1 TRK	2400	2400
BYRD MS	9171 TELFAIR AVE SUN VALLEY, CA 91352	4 TRK	2226	2771
CARNEGIE MS	21820 BONITA ST CARSON, CA 90745	1 TRK	2400	2400
CARVER MS	4410 MC KINLEY AVE LOS ANGELES, CA 90011	3 TRK	2394	3333
CLAY MS	12226 S WESTERN AVE LOS ANGELES, CA 90047	1 TRK	2400	2400
COLUMBUS MS	22250 ELKWOOD ST CANOGA PARK, CA 91304	1 TRK	2230	2230
CURTISS MS	1254 E HELMICK ST CARSON, CA 90746	1 TRK	2268	2268
DANA MS	1501 S CABRILLO AVE SAN PEDRO, CA 90731	1 TRK	2400	2400
DODSON MS	28014 MONTEREINA DR SAN PEDRO, CA 90732	1 TRK	2400	2400
DREW MS	8511 COMPTON AVE LOS ANGELES, CA 90001	3 TRK	2400	3360
EDISON MS	6500 HOOPER AVE LOS ANGELES, CA 90001	3 TRK	2400	3360
EL SERENO MS	2839 N EASTERN AVE LOS ANGELES, CA 90032	1 TRK	2544	2544
EMERSON MS	1650 SELBY AVE LOS ANGELES, CA 90024	1 TRK	2003	2003
FLEMING MS	25425 WALNUT ST LOMITA, CA 90717	1 TRK	2400	2400
FOSHAY	3751 SOUTH HARVARD, LOS ANGELES, CA 900218	3 TRK	2838	
FROST MS	12314 BRADFORD PL GRANADA HILLS, CA 91344	1 TRK	2163	2163
FULTON MS	7477 KESTER AVE VAN NUYS, CA 91405	1 TRK	2434	2434
GAGE MS	2880 E GAGE AVE HUNTINGTON PARK, CA 90255	3 TRK	3104	3823
GOMPERS MS	234 E 112TH ST LOS ANGELES, CA 90061	1 TRK	2400	2400
GRIFFITH MS	4765 E FOURTH ST LOS ANGELES, CA 90022	1 TRK	2400	2400
HALE MS	23830 CALIFA ST WOODLAND HILLS, CA 91367	1 TRK	2801	2801
HARTE PREP MS	9301 S HOOVER ST LOS ANGELES, CA 90044	1 TRK	2400	2400
HENRY MS	17340 SAN JOSE ST GRANADA HILLS, CA 91344	1 TRK	1703	1703
HOLLENBECK MS	2510 E SIXTH ST LOS ANGELES, CA 90023	1 TRK	2977	2977
HOLMES MS	9351 PASO ROBLES AVE NORTHRIDGE, CA 91325	1 TRK	1718	1718
IRVING MS	3010 ESTARA AVE LOS ANGELES, CA 90065	1 TRK	2400	2400
KING MS	4201 FOUNTAIN AVE LOS ANGELES, CA 90029	3 TRK	2400	3360
LAWRENCE MS	10100 VARIEL AVE CHATSWORTH, CA 91311	1 TRK	2400	2400
LE CONTE MS	1316 N BRONSON AVE HOLLYWOOD, CA 90028	3 TRK	2400	3360

Exhibit K.3-8

MIDDLE

Name	Address	Calendar	Capacity	
			2 Semester	Operating
LOS ANGELES ACAD MS	644 E 56TH ST LOS ANGELES, CA 90011	3 TRK	2400	3360
MACLAY MS	12540 PIERCE AVE PACOIMA, CA 91331	4 TRK	2387	2993
MADISON MS	13000 HART ST NO HOLLYWOOD, CA 91605	1 TRK	2431	2431
MANN MS	7001 S ST ANDREWS PL LOS ANGELES, CA 90047	1 TRK	2400	2400
MARINA DEL REY MS	12500 BRADDOCK DR LOS ANGELES, CA 90066	1 TRK	2018	2018
MARK TWAIN MS	2224 WALGROVE AVE LOS ANGELES, CA 90066	1 TRK	2079	2079
MARKHAM MS	1650 E 104TH ST LOS ANGELES, CA 90002	1 TRK	2400	2400
MILLIKAN MS	5041 SUNNYSLOPE AVE SHERMAN OAKS, CA 91423	1 TRK	2327	2327
MOUNT GLEASON MS	10965 MT GLEASON AVE SUNLAND, CA 91040	1 TRK	2074	2074
MOUNT VERNON MS	4066 W 17TH ST LOS ANGELES, CA 90019	1 TRK	2400	2400
MUIR MS	5929 S VERMONT AVE LOS ANGELES, CA 90044	4 TRK	2400	3360
MULHOLLAND MS	17120 VANOWEN ST VAN NUYS, CA 91406	1 TRK	2400	2400
NIGHTINGALE MS	3311 N FIGUEROA ST LOS ANGELES, CA 90065	1 TRK	2400	2400
NIMITZ MS	6021 CARMELITA AVE HUNTINGTON PARK, CA 90255	3 TRK	3232	3993
NOBEL MS	9950 TAMPA AVE NORTHRIDGE, CA 91324	1 TRK	2400	2400
NORTHRIDGE MS	17960 CHASE ST NORTHRIDGE, CA 91325	1 TRK	2131	2131
OLIVE VISTA MS	14600 TYLER ST SYLMAR, CA 91342	1 TRK	2400	2400
PACOIMA MS	9919 LAUREL CANYON BLVD PACOIMA, CA 91331	1 TRK	2400	2400
PALMS MS	10860 WOODBINE ST LOS ANGELES, CA 90034	1 TRK	2400	2400
PARKMAN MS	20800 BURBANK BLVD WOODLAND HILLS, CA 91367	1 TRK	1742	1742
PEARY MS	1415 W GARDENA BLVD GARDENA, CA 90247	4 TRK	2400	3072
PORTER MS	15960 KINGSBURY ST GRANADA HILLS, CA 91344	1 TRK	2400	2400
PORTOLA MS	18720 LINNET ST TARZANA, CA 91356	1 TRK	2463	2463
REED MS	4525 IRVINE AVE NO HOLLYWOOD, CA 91602	3 TRK	2400	3360
REVERE MS	1450 ALLENFORD AVE LOS ANGELES, CA 90049	1 TRK	2400	2400
SAN FERNANDO MS	130 N BRAND BLVD SAN FERNANDO, CA 91340	1 TRK	2400	2400
SEPULVEDA MS	15330 PLUMMER ST NORTH HILLS, CA 91343	3 TRK	2400	3360
SOUTH GATE MS	4100 FIRESTONE BLVD SOUTH GATE, CA 90280	3 TRK	3376	4110
STEVENSON MS	725 S INDIANA ST LOS ANGELES, CA 90023	1 TRK	2400	2400
SUN VALLEY MS	7330 BAKMAN AVE SUN VALLEY, CA 91352	3 TRK	2400	3360
SUTTER MS	7330 WINNETKA AVE CANOGA PARK, CA 91306	1 TRK	2400	2400
VAN NUYS MS	5435 VESPER AVE VAN NUYS, CA 91411	1 TRK	2400	2400
VIRGIL MS	152 N VERMONT AVE LOS ANGELES, CA 90004	3 TRK	2400	3360
WEBSTER MS	11330 W GRAHAM PL LOS ANGELES, CA 90064	1 TRK	2075	2075
WHITE MS	22102 S FIGUEROA ST CARSON, CA 90745	1 TRK	2400	2400
WILMINGTON MS	1700 GULF AVE WILMINGTON, CA 90744	1 TRK	2400	2400
WRIGHT MS	6550 W 80TH ST LOS ANGELES, CA 90045	1 TRK	2130	2130

Exhibit K.3-8

SENIOR

Name	Address	Calendar	Capacity	
			2 Semester	Operating
BANNING SH	1527 LAKME AVE WILMINGTON, CA 90744	1 TRK	3314	3314
BELL SH	4328 BELL AVE BELL, CA 90201	3 TRK	3172	4447
BELMONT SH	1575 W 2ND ST LOS ANGELES, CA 90026	3 TRK	3177	4425
BIRMINGHAM SH	17000 HAYNES ST VAN NUYS, CA 91406	1 TRK	3776	3776
CANOGA PARK SH	6850 TOPANGA CYN BLVD CANOGA PARK, CA 91303	1 TRK	2588	2588
CARSON SH	22328 S MAIN ST CARSON, CA 90745	1 TRK	3600	3600
CHATSWORTH SH	10027 LURLINE AVE CHATSWORTH, CA 91311	1 TRK	3600	3600
CLEVELAND SH	8140 VANALDEN AVE RESEDA, CA 91335	1 TRK	3698	3698
CRENSHAW SH	5010 11TH AVE LOS ANGELES, CA 90043	1 TRK	3236	3236
DORSEY SH	3537 FARMDALE AVE LOS ANGELES, CA 90016	1 TRK	2320	2320
EAGLE ROCK HS	1750 YOSEMITE DR LOS ANGELES, CA 90041	1 TRK	2883	2883
EL CAMINO REAL SH	5440 VALLEY CIRCLE BLVD WOODLAND HILLS, CA 91367	1 TRK	3885	3885
FAIRFAX SH	7850 MELROSE AVE LOS ANGELES, CA 90046	1 TRK	3238	3238
FRANKLIN SH	820 N AVE 54 LOS ANGELES, CA 90042	3 TRK	2783	3844
FREMONT SH	7676 S SAN PEDRO ST LOS ANGELES, CA 90003	3 TRK	3450	4853
GARDENA SH	1301 W 182ND ST GARDENA, CA 90248	1 TRK	3600	3600
GARFIELD SH	5101 E SIXTH ST LOS ANGELES, CA 90022	3 TRK	3600	5040
GRANADA HILLS SH	10535 ZELZAH AVE GRANADA HILLS, CA 91344	1 TRK	3905	3905
GRANT SH	13000 OXNARD ST VAN NUYS, CA 91401	1 TRK	3600	3600
HAMILTON SH-COMPLEX	2955 S ROBERTSON BLVD LOS ANGELES, CA 90034	1 TRK	2813	2813
HOLLYWOOD SH	1521 N HIGHLAND AVE LOS ANGELES, CA 90028	3 TRK	2283	3205
HUNTINGTON PARK SH	6020 MILES AVE HUNTINGTON PARK, CA 90255	3 TRK	3177	4437
JEFFERSON SH	1319 E 41ST ST LOS ANGELES, CA 90011	3 TRK	2551	3542
JORDAN SH	2265 E 103RD ST LOS ANGELES, CA 90002	1 TRK	2449	2449
KENNEDY SH	11254 GOTHIC AVE GRANADA HILLS, CA 91344	1 TRK	3238	3238
LINCOLN SH	3501 N BROADWAY LOS ANGELES, CA 90031	1 TRK	3078	3078
LOCKE SH	325 E 111TH ST LOS ANGELES, CA 90061	1 TRK	3586	3586
LOS ANGELES SH	4650 W OLYMPIC BLVD LOS ANGELES, CA 90019	3 TRK	3508	4931
MANUAL ARTS SH	4131 S VERMONT AVE LOS ANGELES, CA 90037	3 TRK	2908	4050
MARSHALL SH	3939 TRACY ST LOS ANGELES, CA 90027	3 TRK	3586	5045
MONROE SH	9229 HASKELL AVE NORTH HILLS, CA 91343	3 TRK	3600	5040
NARBONNE SH	24300 S WESTERN AVE HARBOR CITY, CA 90710	1 TRK	3524	3524
NO HOLLYWOOD	5231 COLFAX AVE NO HOLLYWOOD, CA 91601	3 TRK	3415	4766
PALISADES CHRTR	15777 BOWDOIN ST PACIFIC PALISADES, CA 90272	1 TRK	2760	2760
POLYTECHNIC SH	12431 ROSCOE BLVD SUN VALLEY, CA 91352	3 TRK	2859	3981

Exhibit K.3-8

SENIOR

Name	Address	Calendar	Capacity	
			2 Semester	Operating
RESEDA SH	18230 KITTRIDGE ST RESEDA, CA 91335	1 TRK	3528	3528
ROOSEVELT SH	456 S MATHEWS ST LOS ANGELES, CA 90033	3 TRK	4246	5420
SAN FERNANDO	11133 O'MELVENY AVE SAN FERNANDO, CA 91340	3 TRK	3841	5181
SAN PEDRO SH	1001 W 15TH ST SAN PEDRO, CA 90731	1 TRK	3514	3514
SOUTH GATE SH	3351 FIRESTONE BLVD SOUTH GATE, CA 90280	3 TRK	3401	4764
SYLMAR SH	13050 BORDEN AVE SYLMAR, CA 91342	1 TRK	3571	3571
TAFT SH	5461 WINNETKA AVE WOODLAND HILLS, CA 91364	1 TRK	3712	3712
UNIVERSITY SH	11800 TEXAS AVE LOS ANGELES, CA 90025	1 TRK	2600	2600
VAN NUYS SH	6535 CEDROS AVE VAN NUYS, CA 91411	3 TRK	4040	5420
VENICE SH	13000 VENICE BLVD LOS ANGELES, CA 90066	1 TRK	3235	3235
VERDUGO HILLS SH	10625 PLAINVIEW AVE TUJUNGA, CA 91042	1 TRK	2411	2411
WASHINGTON PREP SH	10860 S DENKER AVE LOS ANGELES, CA 90047	3 TRK	2831	3940
WESTCHESTER SH	7400 W MANCHESTER AVE LOS ANGELES, CA 90045	1 TRK	3546	3546
WILSON SH	4500 MULTNOMAH ST LOS ANGELES, CA 90032	1 TRK	2921	2921

Exhibit K.3-8

CONTINUATION HIGH SCHOOLS

Name	Address	Calendar
ADDAMS HS	16341 DONMETZ ST GRANADA HILLS, CA 91344	1 TRK
ANGEL'S GATE HS	3200 S ALMA ST SAN PEDRO, CA 90731	1 TRK
AVALON HS	1425 N AVALON BLVD WILMINGTON, CA 90744	1 TRK
BOYLE HEIGHTS HS	544 S MATHEWS ST LOS ANGELES, CA 90033	CONTIN
CENTRAL HS	716 E 14TH ST LOS ANGELES, CA 90021	CONTIN
CHEVIOT HILLS HS	9200 CATTARAUGUS AVE LOS ANGELES, CA 90034	1 TRK
DEL REY HS	8701 PARK HILL DR LOS ANGELES, CA 90045	1 TRK
DOUGLAS HS	10500 LINDLEY AVE NORTHRIDGE, CA 91326	1 TRK
EAGLE TREE CONTN HS	22628 S MAIN ST CARSON, CA 90745	1 TRK
EARHART HS	5355 COLFAX AVE NO HOLLYWOOD, CA 91601	CONTIN
EINSTEIN HS	15938 TUPPER ST NORTH HILLS, CA 91343	CONTIN
ELLINGTON HS	1541 W 110TH ST LOS ANGELES, CA 90047	CONTIN
EVERGREEN HS	13101 DRONFIELD AVE SYLMAR, CA 91342	1 TRK
GREY HS	6510 ETIWANDA AVE RESEDA, CA 91335	1 TRK
HIGHLAND PARK HS	928 N AVE 53 LOS ANGELES, CA 90042	CONTIN
HOPE HS	7840 TOWNE AVE LOS ANGELES, CA 90003	CONTIN
INDEPENDENCE HS	6501 BALBOA BLVD VAN NUYS, CA 91406	1 TRK
INDIAN SPRINGS HS	1441 S BARRINGTON AVE LOS ANGELES, CA 90025	1 TRK

Exhibit K.3-8

CONTINUATION HIGH SCHOOLS

Name	Address	Calendar
LEONIS HS	5445 MANTON AVE WOODLAND HILLS, CA 91367	1 TRK
LEWIS HS	12508 WICKS ST SUN VALLEY, CA 91352	CONTIN
LONDON HS	12924 OXNARD ST VAN NUYS, CA 91401	1 TRK
METROPOLITAN HS	727 S WILSON ST LOS ANGELES, CA 90021	CONTIN
MISSION HS	11015 O'MELVENY AVE SAN FERNANDO, CA 91340	CONTIN
MONETA HS	1230 W 177TH ST GARDENA, CA 90248	1 TRK
MONTEREY HS	466 S FRASER AVE LOS ANGELES, CA 90022	CONTIN
MT LUKENS HS	7705 SUMMITROSE ST TUJUNGA, CA 91042	1 TRK
NEWMARK HS	134 WITMER ST LOS ANGELES, CA 90026	CONTIN
ODYSSEY HS	8693 DEARBORN AVE SOUTH GATE, CA 90280	CONTIN
OWENSMOUTH HS	6921 JORDAN AVE CANOGA PARK, CA 91303	1 TRK
PATTON HS	24514 S WESTERN AVE HARBOR CITY, CA 90710	1 TRK
PHOENIX HS	12971 ZANJA ST LOS ANGELES, CA 90066	1 TRK
PUEBLO DE L.A. HS	2506 ALTA ST LOS ANGELES, CA 90031	1 TRK
RODIA HS	2315 E 103RD ST LOS ANGELES, CA 90002	1 TRK
ROGERS HS	15141 LEMAY ST VAN NUYS, CA 91405	CONTIN
SAN ANTONIO HS	2861 RANDOLPH ST HUNTINGTON PARK, CA 90255	CONTIN
STONEY POINT HS	10010 DE SOTO AVE CHATSWORTH, CA 91311	1 TRK
TEMESCAL CANYON HS	777 TEMESCAL CYN. RD PACIFIC PALISADES, CA 90272	1 TRK
THOREAU HS	5429 QUAKERTOWN AVE WOODLAND HILLS, CA 91364	1 TRK
TRUTH HS	11015 S AVALON BLVD LOS ANGELES, CA 90061	1 TRK
VIEW PARK CONTN HS	4701 RODEO RD LOS ANGELES, CA 90016	1 TRK
WHITMAN HS	7795 ROSEWOOD AVE LOS ANGELES, CA 90036	CONTIN
YOUNG HS	3051 W 52ND ST LOS ANGELES, CA 90043	1 TRK

Exhibit K.3-8

NEW & CONTINUATION MULTI-TRACK YEAR-ROUND SCHOOL *ELEMENTARY*

Name	Address
10TH ST	HAZELTINE AVE
20TH ST	HELIOTROPE AVE
24TH ST	HILLCREST DRIVE
28TH ST	HOBART BOULEVARD
49TH ST	HOOPER AVE
52ND ST	HOOVER ST
66TH ST	HUGHES
68TH ST	HYDE PARK BOULEVARD
75TH ST	KITTRIDGE ST

Exhibit K.3-8

NEW & CONTINUATION MULTI-TRACK YEAR-ROUND SCHOOL *ELEMENTARY*

Name	Address
92ND ST	LANGDON AVE
95TH ST	LANKERSHIM
107TH ST	LATONA AVE
ALDAMA	LIBERTY BOULEVARD
ALEXANDRIA AVE	LILLIAN ST
ALLESANDRO	LOCKWOOD AVE
ALTA LOMA	LOGAN ST
ARAGON AVE	LOMA VISTA AVE
ARLINGTON HEIGHTS	LORETO ST
ARMINTA ST	LOS ANGELES
ASCOT AVE	LOS FELIZ
BASSETT ST	MAGNOLIA
BEACHY AVE	MAIN ST
BROAD AVE	MANCHESTER AVE
BROADOUS	MENLO AVE
BRYSON AVE	MIDDLETON ST
BUCHANAN ST	MILES AVE
CAHUENGA	MILLER
CAMELIA AVE	MIRAMONTE
CANOGA PARK	MONTAGUE ST
CHEREMOYA AVE	MONTARA AVE
CIENEGA	MONTE VISTA ST
COLDWATER CANYON	MORNINGSIDE
COMMONWEALTH AVE.	NAPA ST
CORONA AVE	NEVIN AVE
DAYTON HEIGHTS	NOBLE AVE
DYER ST	NORMONT
ESPERANZA	NORWOOD ST
FAIR AVE	NUEVA VISTA
FENTON AVE	O'MELVENY
FERNANGELES	OSCEOLA ST
FIGUEROA ST	OXNARD ST
FISHBURN AVE	PACOIMA
FLETCHER DRIVE	PARK AVE
FLORENCE AVE	PARMELEE AVE
FRIES AVE	PLACENTIA
GARDENA	PLUMMER
GARVANZA	POLITI

Exhibit K.3-8

NEW & CONTINUATION MULTI-TRACK YEAR-ROUND SCHOOL *ELEMENTARY*	
Name	Address
GATES ST	RAMONA
GLASSELL PARK	RANCHITO AVE
GRAHAM	RAYMOND AVE
GRANT	ROSCOE
GRATTS	ROSEMONT AVE
GRIDLEY ST	RUSSELL
GULF AVE	SAN ANTONIO
HADDON AVE	SAN FERNANDO
HAWAIIAN AVE	SAN GABRIEL AVE
SAN MIGUEL AVE	SANTA MONICA BLVD.
SATURN ST	SHARP AVE
STANFORD AVE	STATE ST
STRATHERN ST	SYLMAR
SYLVAN PARK	TRINITY ST
TWEEDY	UNION AVE
VALERIO ST	VAN NESS AVE
VAN NUYS	VERMONT AVE
VICTORIA AVE	VICTORY BOULEVARD
VINE ST	WADSWORTH AVE
WALNUT PARK	WEEMES
WEIGAND AVE	WEST VERNON AVE
WILTON PLACE	WOODCREST
WOODLAWN AVE	

NEW & CONTINUATION MULTI-TRACK YEAR-ROUND SCHOOL *MIDDLE SCHOOL*	
NAME	ADDRESS
ADAMS	BERENDO
BETHUNE	BYRD
CARVER	DREW
EDISON	GAGE
LE CONTE	MACLAY
MOUNT VERNON	NIMITZ
SOUTH GATE	SUN VALLEY
VIRGIL	

Exhibit K.3-8

NEW & CONTINUATION MULTI-TRACK YEAR-ROUND SCHOOL *SENIOR HIGH SCHOOL*	
NAME	ADDRESS
BELL	BELMONT
FRANKLIN	FREMONT
GARFIELD	HOLLYWOOD
HUNTINGTON PARK	JEFFERSON
LOS ANGELES	MANUAL ARTS

NEW & CONTINUATION MULTI-TRACK YEAR-ROUND SCHOOL *SENIOR HIGH SCHOOL*				
NAME	ADDRESS			
MARSHALL	MONROE			
POLYTECHNIC	ROOSEVELT			
SAN FERNANDO	SOUTH GATE			
WASHINGTON PREP				

SPAN SCHOOLS (NOT MAGNETS)

Name	Address	Calendar	Capacity	
			2 Semester	Operating
CAROLDALE LRNG	22424 CAROLDALE AVE CARSON, CA 90745	1	1433	1433
ELIZABETH LC	4811 ELIZABETH ST CUDAHY, CA 90201	3	2279	3198
FOSHAY LC	3751 S HARVARD BLVD LOS ANGELES, CA 90018	3 TRK	2582	3600
HARRISON EL	3529 CITY TERRACE DR LOS ANGELES, CA 90063	3 TRK	929	1311
PIO PICO EL	1512 S ARLINGTON AVE LOS ANGELES, CA 90019	3 TRK	1850	2592
VAUGHN EL	13330 VAUGHN ST SAN FERNANDO, CA 91340	OTHER	8	652

PRIMARY CENTER

Name	Address	Calendar	Capacity	
			2 Semester	Operating
ARCO IRIS PRIMRY CTR	4504 ASCOT AVE LOS ANGELES, CA 90011	3 TRK	140	200
BELL #3 NEW PC	7326 S WILCOX AVE CUDAHY, CA 90201	4 TRK	240	320
BELLEVUE PRIMARY SCH	610 N MICHELTORENA ST LOS ANGELES, CA 90026	4 TRK	275	340
KINDERGARTEN LRN ACD	6555 SYLMAR AVE VAN NUYS, CA 91401	3 TRK	225	305
LAFAYETTE PARK PC	310 S LAFAYETTE PARK PL LOS ANGELES, CA 90057	3 TRK	240	340
MACARTHUR PARK PC	2300 W 7TH ST LOS ANGELES, CA 90057	4 TRK	260	390
MACLAY PRIMARY CTR	12513 GAIN ST PACOIMA, CA 91331	4 TRK	245	305
PARKS/HUERTA PRIMARY	1020 W 58TH PL LOS ANGELES, CA 90044	1 TRK	240	240
PRIMARY ACADEMY	9075 WILLIS AVE PANORAMA CITY, CA 91402	3 TRK	330	490
VALERIO NEW PC	14935 VALERIO ST VAN NUYS, CA 91405	4 TRK	292	332
WHITE HSE PL PRIMARY	108 S BIMINI PL LOS ANGELES, CA 90004	3 TRK	200	300

Exhibit K.3-8

MAGNET-SELF CONTAINED (ELEM)

Name	Address	Calendar	Capacity	
			Semester	Op.
BALBOA G/HA MAG	17020 LABRADOR ST NORTHRIDGE, CA 91325	1 TRK	677	677
BRADLEY ENV/HUMAN MG	3875 DUBLIN AVE LOS ANGELES, CA 90008	1 TRK	710	710
BRENTWOOD SCI MAG	740 GRETNA GREEN WAY LOS ANGELES, CA 90049	1 TRK	1190	1190
COMMUNITY MAGNET SCH	11301 BELLAGIO RD LOS ANGELES, CA 90049	1 TRK	424	424
CRESCENT HTS EL	1661 S CRESCENT HTS BLVD LOS ANGELES, CA 90035	1 TRK	396	396
LOMITA MATH/SCI MAG	2211 W 247TH ST LOMITA, CA 90717	4 TRK	1307	1307
OPEN CHARTER MAG SCH	5540 W 77TH ST LOS ANGELES, CA 90045	1 TRK	384	384
PASEO DEL REY NAT SC	7751 PASEO DEL REY PLAYA DEL REY, CA 90293	1 TRK	515	515
S SHORES PER ARTS MG	2060 W 35TH ST SAN PEDRO, CA 90732	1 TRK	449	449
VINTAGE MATH/SCI MAG	15848 STARE ST NORTH HILLS, CA 91343	1 TRK	679	679
WINDSOR M/S AERO MAG	5215 OVERDALE DR LOS ANGELES, CA 90043	1 TRK	710	710

SPECIAL EDUCATION

Name	Address	Calendar	Capacity	
			Semester	Operating
BANNEKER SP ED CTR	14024 S SAN PEDRO ST LOS ANGELES, CA 90061	1 TRK		
BLEND EL	5210 CLINTON ST LOS ANGELES, CA 90004	1 TRK		
CARLSON HSP SCH(K-12	10952 WHIPPLE ST NO HOLLYWOOD, CA 91602	1 TRK		
LANTERMAN HS	2328 ST JAMES PL LOS ANGELES, CA 90007	1 TRK		
LEICHMAN SP ED CTR	19034 GAULT ST RESEDA, CA 91335	1 TRK		
LOKRANTZ SP ED CTR	19451 WYANDOTTE ST RESEDA, CA 91335	1 TRK		
LOWMAN SP ED CTR	12827 SATICOY ST NO HOLLYWOOD, CA 91605	1 TRK		
LULL SP ED CTR	17551 MIRANDA ST ENCINO, CA 91316	1 TRK		
MARLTON SCH	4000 SANTO TOMAS DR LOS ANGELES, CA 90008	1 TRK		
MCBRIDE SP ED CTR	3960 CENTINELA AVE LOS ANGELES, CA 90066	1 TRK		
MILLER HS	8218 VANALDEN AVE RESEDA, CA 91335	1 TRK		
PACIFIC BL SP ED CTR	5714 PACIFIC BLVD HUNTINGTON PARK, CA 90255	1 TRK		
PEREZ SP ED CTR	4540 MICHIGAN AVE LOS ANGELES, CA 90022	1 TRK		
SALVIN SP ED CTR	1925 BUDLONG AVE LOS ANGELES, CA 90007	1 TRK		
SELLERY SP ED CTR	15805 S BUDLONG AVE GARDENA, CA 90247	1 TRK		
WEST VALLEY SP ED	6649 BALBOA BLVD VAN NUYS, CA 91406	1 TRK		
WIDNEY HS	2302 S GRAMERCY PL LOS ANGELES, CA 90018	1 TRK		
WILLENBERG SP ED CTR	308 WEYMOUTH AVE SAN PEDRO, CA 90732	1 TRK		

Exhibit K.3-8

OPPORTUNITY SCHOOLS/UNITS

Name	Address	Calendar	Capacity	
			Semester	Operating
AGGELER HS	21050 PLUMMER ST CHATSWORTH, CA 91311	CONTIN		
MC ALISTER HS-CYESIS	155 N OCCIDENTAL BLVD LOS ANGELES, CA 90026	CONTIN		
RILEY HS-CYESIS	1524 E 103RD ST LOS ANGELES, CA 90022	CONTIN		

SPAN MAGNET

Name	Address	Calendar	Capacity	
			Semester	Operating
32ND/USC PER ART MAG	822 W 32ND ST LOS ANGELES, CA 90007	1 TRK	734	734
ARROYO SECO MUSM SCI	4805 SYCAMORE TERR LOS ANGELES, CA 90042	1 TRK	542	542
LACES MAG	5931 W 18TH ST LOS ANGELES, CA 90035	1 TRK	1618	1618
MID-CITY MAGNET	3150 W ADAMS BLVD LOS ANGELES, CA 90018	1 TRK	370	370
SOCES MAG	18605 ERWIN ST RESEDA, CA 91335	1 TRK	1780	1780
VALLEY ALTERN MAG	6701 BALBOA BLVD VAN NUYS, CA 91406	1 TRK	576	576
WESTSIDE LDRSHIP MAG	104 ANCHORAGE ST MARINA DEL REY, CA 90292	1 TRK	463	463

MAGNET-SELF CONTAINED SENIOR (SS)

Name	Address	Calendar	Capacity	
			Semester	Operating
BRAVO MEDICAL MAG	1200 N CORNWELL ST LOS ANGELES, CA 90033	1 TRK	1709	1709
DOWNTOWN BUSINESS MAG	1081 W TEMPLE ST LOS ANGELES, CA 90012	1 TRK	671	671

COMMUNITY DAY SCHOOL (T)

Name	Address	Calendar	Capacity	
			Semester	Operating
CDS COOPER	2210 TAPER AVE SAN PEDRO, CA 90731	1 TRK		
CDS JOHNSON	333 E 54TH ST LOS ANGELES, CA 90011	CONTIN		
CDS WEST HOLLYWOOD	1049 FAIRFAX AVE LOS ANGELES, CA 90046	CONTIN		
RAMONA HS	231 S ALMA AVE LOS Angeles, CA 90063	CONTIN		

Exhibit K.3-9

Revised

Los Angeles Unified School District
STUDENT GENERATION FACTORS

TYPE	NO. OF BEDROOMS	GENERATION FACTOR				
		ELEMENTARY		JUNIOR HIGH	SENIOR HIGH	
		K-6	K-5	7-9 & 6-8	10-12	9-12
Lower Income Areas						
Single-family	2	.3	.26	.15	.15	.2
	3 or more	.6	.52	.25	.25	.34
Townhouse	1	.0	.0	.0	.0	.0
	2	.05	.043	.02	.02	.027
	3 or more	.2	.17	.1	.1	.14
Medium Income Areas						
Single-family	2	.25	.22	.1	.1	.14
	3 or more	.5	.43	.25	.25	.34
Townhouse	1	.0	.0	.0	.0	.0
	2	.04	.035	.02	.02	.027
	3 or more	.15	.13	.075	.075	.1
Higher Income Areas						
Single-family	2	.2	.17	.1	.1	.14
	3 or more	.4	.35	.2	.2	.27
Townhouse	1	.0	.0	.0	.0	.0
	2	.03	.026	.02	.02	.027
	3 or more	.075	.065	.03	.03	.04
Multiple (Rented) (Units that permit children)	1	.0	.0	.0	.0	.0
	2	.25	.22	.1	.1	.14
	3 or more	.6	.52	.2	.2	.27
Multiple (Condominium)	1	.0	.0	.0	.0	.0
	2	.03	.026	.02	.02	.027
	3 or more	.05	.043	.02	.02	.027

K.4. RECREATION AND PARKS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

XIII.2.iv): 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 parks?

XIV.a.): Would the project 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?

XIV.b): Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have a physical effect on the environment?

B. Introduction

Within the City of Los Angeles, the Department of Recreation and Parks operates over 16,000 acres of park land comprised of some 150 recreation centers and 386 park sites Citywide.[1] Facilities at neighborhood parks include softball, basketball, volleyball, table games, handicrafts, lawn games, small children's play areas and community buildings. In addition to the facilities at a neighborhood park, community parks provide baseball diamonds, combined football and soccer fields, tennis, handball courts, swimming pools, and picnic areas. In ocean areas outside the Los Angeles Harbor and at beaches, there are also other opportunities such as marine recreation (e.g., boating and waterside entertainment).

The Public Recreation Plan, a portion of the Service Systems Element, includes service standards and goals for recreational facilities and operations. The City is updating the 1980 plan as a part of current long-range planning efforts.

The Quimby Act allows California municipalities to require parkland dedications of new

[1] *Department of Recreation and Parks, Valley Region Informational Guide, and telephone interview, 2003.*

residential subdivisions, or to charge fees to developers in lieu of park land dedication. The City of Los Angeles enacted ordinances, which implement the Quimby Act and require dedications and fees for other types of permits and approvals.[2] The Quimby fee is based on the number of units and zoning for the project and site.

Service needs are related to the size of the population and geographic area served and community characteristics. Projects that affect these factors (e.g., by increasing residential population in an area) may increase the demand for recreation facilities.

C. Screening Criteria

- Would the project result in a net increase of 50 or more residential units that would adversely impact recreation and park services and/or facilities due to the project's proximity to, or expected usage of, those facilities or services?

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Recreation and Parks, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Recreation and Parks from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project and determine the number of net new residential units proposed. Compare this information to the Screening Criteria, considering the type of residential units proposed, the total size, and the project's proximity to recreation and park facilities.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

[2] *Refer to the following Sections of the Los Angeles Municipal Code (LAMC): Subdivision Requirements - 17.12 and 17.58; Zone Change requirements - 12.32 and 12.33; and Dwelling Unit Construction Tax - 21.10.3.*

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The net population increase resulting from the proposed project;

- The demand for recreation and park services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements to recreation and park services (renovation, expansion, or addition) and the project's proportional contribution to the demand; and

- Whether the project includes features that would reduce the demand for recreation and park services (e.g., on-site recreation facilities, land dedication or direct financial support to the Department of Recreation and Parks).[3]

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- The name, description, and location of recreation and park facilities serving the project and their respective acreage. Generally, this includes neighborhood parks and recreational sites within one mile of the project site, community parks and recreational sites within two miles and other park or recreational facilities or sites as appropriate. Refer to the Environmental and Public Facilities Maps, Community Parks, Neighborhood Parks, Regional Parks, and other Park Facilities, or contact the Department of Recreation and Parks, Planning and Development Office, as necessary; and

- Describe the population and geographic area served, as well as the community characteristics.

Project Impacts

Review the description of the project and surrounding area. Determine the net

[3] *The use of utility easements or transmission line right-of-way (ROW) for park or recreational facilities requires an agreement with the utility.*

population increase resulting from the project and identify the recreational facilities that would be used by project residents. Evaluate the demand for recreational services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements (renovation, expansion, or addition) and the project's proportional contribution to the demand. As necessary, consult with the Department of Recreation and Parks. Evaluate project features which would reduce the demand for services (e.g., on-site recreation facilities or direct support to the Department of Recreation and Parks).

Cumulative Impacts

Identify the related projects which would be served by the same recreational facilities as the proposed project. Consider the characteristics of the related projects in terms of size, location, and types of land uses. Determine the net population increase resulting from the related projects. As above, evaluate the cumulative demand for recreational facilities anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements (renovation, expansion or addition). As necessary, consult with the Department of Recreation and Parks. As feasible, evaluate known features of the related projects that would reduce the demand for recreation services (e.g., on-site recreation facilities or direct support to the Department of Recreation and Parks). Consider the combined impact of the related and proposed projects and the project's proportional contribution to the cumulative demand.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Provide on-site recreational amenities; and

- Provide direct support to the Department of Recreation and Parks, including land, equipment, funding, etc.

3. DATA, RESOURCES, AND REFERENCES

Department of Recreation and Parks, Planning and Development Office; Telephone: (213) 485-5671.

Public Recreation Plan, a portion of the Public Facilities and Service Element, October 1980.

General Plan Framework Element, July 1996, re-adopted August 2001.

LAMC (Sections 17.12, 17.58, 12.32, 12.33, and 21.10.3).

Environmental and Public Facilities Maps (1996):

- Community Parks;
- Neighborhood Parks; and
- Regional Parks and Other Park Facilities.

The Quimby Act, California Government Code Section 66477, allows the legislative body of a city or county, by ordinance, to require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative map or parcel map.

K.5. LIBRARIES

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

XIII.e): 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 other public facilities?

B. Introduction

Within the City of Los Angeles, the Los Angeles Public Library (LAPL) System provides library services at the Central Library, eight regional branch libraries, 67 community branches and four bookmobiles. Approximately 6 million books and other materials comprise the City Library collection. The Central Library houses 2.2 million of these.[1]

The Public Libraries Plan, an element of the City's General Plan, includes service standards and goals for library facilities and operations. In 1988, the Library adopted its own master plan for libraries and subsequently funded it through two bonds (1989 & 1998). The final phase of the library master plan will be completed in 2004 when the final bond libraries are opened. Current site selection criteria are listed in Exhibit K.5-1.

Service needs are related to the size of the population and geographic area served and community characteristics. Projects that affect these factors (e.g., by increasing residential population in an area) may increase the demand for service from the LAPL.

C. Screening Criteria

- Would the proposed project result in a net increase of 75 residential units or more?

[1] *LAPL, Public Relations Fact Sheet, provided by Robert Reagan, Public Information Director, December 29, 1994 and Los Angeles Public Library, 2003.*

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Libraries and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Libraries from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project and determine the number of net new residential units proposed. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The net population increase resulting from the proposed project;

- The demand for library services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements to library services (renovation, expansion, addition or relocation) and the project's proportional contribution to the demand; and

- Whether the project includes features that would reduce the demand for library services (e.g., on-site library facilities or direct support to the LAPL).

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Name, location, and description of the LAPL facilities serving the project site, including capacity, population served, operating characteristics, and scheduled improvements. Generally, this includes libraries within two miles. If unknown, refer to the Environmental and Public Facilities Map, Los Angeles Public Libraries, or see Exhibit

K.5-2. (For information about improvements, contact the LAPL Library Construction Unit.); and

- Description of the population and geographic area served, as well as community characteristics.

Project Impacts

Review the description of the project and surrounding area. Determine the net population increase resulting from the project and identify the LAPL facilities that would be used by the project residents. Identify existing facilities and their capacities. Evaluate the demand for library services anticipated at the time of the project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements (renovation, expansion, or addition) and the project's proportional contribution to the demand. As necessary, consult with LAPL. Evaluate project features, which would reduce the demand for library services (e.g., on-site library facilities or direct support to LAPL). Describe any characteristics of the project area, such as a college or other library near the project site, that would reduce the demand for LAPL services.

Cumulative Impacts

Identify the related projects, which would be served by the same LAPL facilities as the proposed project. Consider the characteristics of the related projects in terms of size, location, and types of land uses. Determine the net population increase resulting from the related projects. As above, evaluate the cumulative demand for library services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements (renovation, expansion, addition, or relocation). As necessary, consult with LAPL. As feasible, evaluate known features of the related projects (e.g., on-site library facilities or direct support to the LAPL), which would reduce the expected cumulative demand for library service. Consider the combined impact of the proposed and related projects and the project's proportional contribution to the cumulative demand.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Provide on-site or other private library facilities; and

- Provide direct support to the LAPL, including land, equipment, materials, funding, etc.

3. DATA, RESOURCES, AND REFERENCES

LAPL, Branch Facilities Division; Telephone: (213) 228-7576.

The Environmental and Public Facilities Map (1996), Los Angeles Public Libraries, shows the location of LAPL facilities and their service radii.

Exhibit K.5-1
LOS ANGELES PUBLIC LIBRARY (LAPL)
Branch Facilities
Site Selection Criteria

1. Branch building size standards are:

Population Served	Size of Facility (sf)	Property Required (sf)
Above 50,000	12,500	32,500
Below 50,000	10,500	27,500
Expansion or Special Situations*	Special Size	
Regional Branch	Up to 20,000	52,000

*Due to available property size and configuration, architectural constraints or opportunities, or building code requirements, some facilities may differ from the recommended sizes.

2. Security conscious design located in retail center.

3. A one-story library building with interior layouts designed to accommodate:

   - Full access for the disabled;
   - Interior layouts designed to accommodate electronic technology;
   - Substantial shelving and seating capacities; and
   - To include a community meeting room.

4. Good visibility and street access.

5. Easily accessible by car, by bus and on foot.

6. Taking into consideration the relative locations of all schools served by the branch.

7. Taking into consideration the relative locations of neighboring branch libraries.

Exhibit K.5-2
LOS ANGELES PUBLIC LIBRARY (LAPL)
BRANCH FACILITIES

Name & Address of Branch	Building Size (In Square Feet)		Branch Facilities Plan a
	Existing	Proposed	
Angeles Mesa 2700 W. 52nd St.	4,750	5,250	Structurally reinforce and renovate existing historic building.
Arroyo Seco Regional 6145 N. Figueroa St.	10,200	14,000	New 2-story building on existing site. Open June 2003
Ascot 120 W. Florence Ave..	6,642	10,500	New building. Open April 2004
Atwater Village 3379 Glendale Blvd.	5,900	------	New building (1989), meets standard.
Baldwin Hills 2906 S. La Brea Ave.	5,278	12,000	New building opened Feb 2002
Benjamin Franklin 2200 E. First St.	9,656	9,656	New building. (1975), meets standard.
Brentwood 11820 San Vicente Blvd.	3,463	10,500	New 2-story building on existing site. (1994).
Cahuenga 4591 Santa Monica Blvd.	10,621	12,000	Structurally reinforce, renovate and expand on existing historic building. Obtain adjacent site. Provide parking.
Canoga Park 7260 Owensmouth Ave.	6,469	12,500	Grand opening, Aug 2004
Chatsworth Temp. Loc.* 10044 Old Depot Plaza Rd..	5,463	12,500	Permanent location: 21052 Devonshire St., Grand opening Sept. 2004

Exhibit K.5-2, continued
LAPL BRANCH FACILITIES

Name & Address of Branch	Building Size (In Square Feet)		Branch Facilities Plan a
	Existing	Proposed	
Chinatown 639 N. Hill St.	14,162 Leased	14,500	New building. Opened Feb. 2003
Cypress Park 1150 Cypress Ave.	3,080	10,750	Opened Jan. 2003.
Eagle Rock 5027 Caspar Ave.	12,411	------	New building (1981); meets standard.
Echo Park 1410 W. Temple	7,919	12,500	Relocate. Obtain site for new building.
Edendale 2011 W. Sunset Blvd.	None	12,500	Grand opening Sept. 2004.
El Sereno 5226 Huntington Dr., S.	4,274	10,500	Grand opening Sept. 2004.
Encino -Tarzana 18231 Ventura Blvd.	5,404	12,500	New building on site. Opened April 2003.
Exposition Park [b] 3665 S. Vermont Ave.	9,656	15,000	Renovate. Long Range: Expand. Obtain adjacent site.
Fairfax 'Express Station' Branch closed for remodeling 161 S. Gardner St.	5,230	12,500	Relocate. New building 75% complete.
Felipe de Neve 2820 W. Sixth St.	7,761	9,000	Structurally reinforce, renovate and expand on existing historic building. Provide parking.
Goldwyn-Hollywood Regional 1623 N. Ivar Ave.	19,000	------	New building (1986); meets standard. Long Range: Obtain site for parking.

Exhibit K.5-2, continued
LAPL BRANCH FACILITIES

Name & Address of Branch	Building Size (In Square Feet)		Branch Facilities Plan a
	Existing	Proposed	
Granada Hills 10640 Petit Ave.	11,310	------	New building; expanded (1975); meets standard. Closed for Seismic repair.
Harbor Gateway-Harbor City 24000 Western Ave.	6,300 Leased	14,500	Project in progress - bid and Award 45% Complete
Hyde Park 2205Florence Ave.	4,389	10,500	Grand opening, Oct. 2004
Jefferson 2211 W. Jefferson Blvd.	2,980	9,000	Renovate and expand. Obtain adjacent site for parking.
John C. Fremont 6121 Melrose Ave.	4,276	8,000	Structurally reinforce, renovate and expand on existing historic building. Obtain adjacent site. Provide parking.
John Muir 1005 W. 64th Street	4,850	8,000	Structurally reinforce, renovate and expand. Obtain adjacent site. Provide parking.
Junipero Serra 4607 S. Main St.	Leased 3,922	10,500	Relocate. Obtain site for new building.
Lake View Terrace 12002 Osborne Street	12,500		
La Biblioteca del Pueblo de Lincoln Heights 2530 Workman St.	7,072	10,500	Structurally reinforce, renovate and expand on existing historic building. Provide parking.
Little Tokyo 203 S. Los Angeles St.	2,500	12,500	Construction 75% complete
Los Feliz 1874 Hillhurst Ave.	2,250	10,500	Relocate. Obtain site for new building.

Exhibit K.5-2, continued
LAPL BRANCH FACILITIES

Name & Address of Branch	Building Size (In Square Feet)		Branch Facilities Plan a
	Existing	Proposed	
Winchester 7114 W. Manchester Ave.	4,369	12,500	Obtain site for new building.
Malabar 2801 Wabash Ave.	1,168	6,000	Structurally reinforce, renovate and expand historic building.
Mar Vista 12006 Venice Blvd.	5,450	12,500	Grand Opening, March 2003
Mark Twain 9621 S. Figueroa St.	4,342	9,900	Grand opening, Jan. 2003.
Memorial 4625 W. Olympic Blvd.	7,217	10,500	Structurally reinforce, renovate and expand on existing historic building. Provide parking.
Mid Valley Regional & Bookmobile Headquarters 16244 Nordhoff St.	27,981	------	New building on City-owned site. Complete. (1996).
North Hollywood Regional 5211 Tujunga Ave.	12,597	15,150	Expand on existing historic building to add a multipurpose meeting room & parking lot. Grand opening, November 2002.
Northridge 9051 Darby Ave.	6,240	12,500	New building on existing site. Grand opening, Dec. 2003.
Pacoima 13605 Van Nuys	5,511	11,300	New building on existing site. Grand opening, April 2002.
Palisades 861 Alma Real Dr.	7,025	11,500	New bldg. On existing site. Grand opening, Feb. 2002.
Palms-Rancho Park 2920 Overland Ave.	6,342	10,500	New building on existing site. Grand opening, Nov. 2002.

Exhibit K.5-2, continued
LAPL BRANCH FACILITIES

Name & Address of Branch	Building Size (In Square Feet)		Branch Facilities Plan a
	Existing	Proposed	
Panorama City 14345 Roscoe Blvd.	6,101	12,500	New building on existing site. Obtain adjacent site.
Pico Union 1030 S. Alvarado	None	12,500	Grand opening, May 2004.
Pio Pico – Koreatown 694 S Oxford Ave	18,000	------	*New address*
Platt 23600 Victory Blvd.	14,053	------	New building on City-owned site. Complete (1995).
Playa Vista 6400 Playa Vista Dr.	None	10,500	New building on a site to be provided by the Playa Vista developer. Grand opening, May 2004.
Porter Ranch 11371 Tampa Ave.	12,300	------	New building on City-owned site. Complete (1995).
R. L. Stevenson 803 Spence St.	4,474	5,000	Structurally reinforce, renovate and expand on existing historic building.
Robertson 1719 S. Robertson Blvd.	3,505	10,500	New 2-story building on existing site.
San Pedro Regional 931 S. Gaffey St.	20,000	------	New building (1983); meets standard. Long Range: Obtain adjacent site for added parking. Ceremony and Dedication, Jan. 2001
Sherman Oaks 14245 Moorpark St.	None	12,500	Renovate and expand on existing site. Obtain adjacent site. Grand opening, May 2003.
Silver Lake, Ph. I To be determined.	5,230	10,500	Project in site and land acquisition stage.

Exhibit K.5-2, continued
LAPL BRANCH FACILITIES

Name & Address of Branch	Building Size (In Square Feet)		Branch Facilities Plan a
	Existing	Proposed	
Studio City 12511 Moorpark St.	5,230	10,500	New building on existing site. Obtain adjacent site.
Sun Valley 7935 Vineland Ave.	5,230	12,500	New building on existing site. Obtain adjacent site. Grand opening, Sept. 2003.
Sunland-Tujunga 7771 Foothill Blvd.	4,500	10,500	New building on existing site. Obtain adjacent City-owned site.
Sylmar 14561 Polk St.	5,511	12,500	New building on existing site. Obtain adjacent site. Grand opening, Sept. 2003.
Valley Plaza 12311 Vanowen St.	5,450	10,500	Renovate and expand on existing site. Grand opening, Jan. 2004.
Van Nuys 6250 Sylmar Ave. Mall	12,814	------	Renovate existing building and optimize parking lot. Transfer Valley Bookmobile Unit to Mid-Valley Regional Branch Library. Complete (1996).
Venice – Abbot Kinney 501 S. Venice Blvd.	5,581	10,500	Relocate. New building on City-owned site.
Vermont Square 1201 W. 48th St.	8,000	------	Structurally reinforce and renovate existing historic building with small expansion. Complete (1996).
Vernon – Leon H. Washington Jr Memorial 4505 S. Central Ave.	10,325	------	New building; meets standard.
Washington Irving 4117 W. Washington Blvd.	3,918	10,500	Relocate. Obtain site for new building.

Exhibit K.5-2, continued
LAPL BRANCH FACILITIES

Name & Address of Branch	Building Size (In Square Feet)		Branch Facilities Plan a
	Existing	Proposed	
Alma Reaves Woods - Watts 10205 Compton Ave.	3,542	12,500	Exchange Library-owned property for CRA land on the corner of 102 and Compton. New building on CRA site.
West Los Angeles Regional 11360 Santa Monica Blvd.	13,740	13,740	Renovate existing building. Long Range: Obtain adjacent site for parking.
West Valley Regional 19036 Vanowen St.	12,469	14,000	Renovate and expand to add a multipurpose meeting room on existing site. Grand opening, Oct. 2002
Westchester-Loyola Village 7114 W. Manchester Ave.	5,918	12,500	Relocate and combine with Loyola Village. Obtain site for new building. Grand opening, June 2003.
Westwood 1246 Glendon Ave.	None	12,500	Under construction, 80% complete.
Will & Ariel Durant 7140 W. Sunset Blvd..	4,155	12,500	Relocate. Obtain site for new building. Grand opening, Jan 2004.
Wilmington 1300 North Avalon Blvd.	10,500	------	New building (1988); meets standard.
Wilshire 149 N. St. Andrews Pl.	6,258	------	Structurally reinforce and renovate existing historic building.
Woodland Hills 22200 Ventura Blvd.	6,272	12,500	New building on existing site. Grand opening, Aug. 2003.
Westwood	None	12,500	Obtain site for new building.

Adopted by the Board of Library Commissioners August 24, 1988; Revised 1991, 1992, 1998, 1999, 2001, 2002.
LAPL, 1998 Library Bond Program Annual Report, July 2003 and July 2004.

a) Some historic building renovations will not include parking.

L. TRANSPORTATION

L.1. INTERSECTION CAPACITY

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

XV.a): Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads or congestion at intersections)?

XV.b): Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

B. Introduction

This issue involves the ability of an intersection to accommodate the increased vehicular traffic demands associated with a proposed project. The impact typically results from the addition of new project-generated traffic to an intersection. In situations where a project involves street vacations or other substantial street system changes, it can also result from diverted or shifted traffic caused by the project.[1] Impacts may also result from a combination of new trips and diverted traffic. The impact is measured as the effect of the project on traffic operating conditions, expressed in terms of level of service (LOS) and either volume to capacity (V/C) ratio (for signalized intersections) or average vehicle delay (for unsignalized intersections). Impacts are related to factors such as type of use, size of project, access points, capacity of the transportation system, and other characteristics of the project and surrounding area. For impacts on emergency access, see K.2. FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES.

Intersection capacity impacts are evaluated when project details, such as land use and size, location of access points, etc., are known. If these features are not known, see L.2. STREET SEGMENT CAPACITY. Intersection capacity impacts are typically evaluated for permanent traffic increases after project completion, but can also be evaluated for temporary traffic increases generated during project construction. Impacts should be evaluated for a future study year usually

[1] *Impacts related to loss of capacity due to temporary lane closures associated with projects requiring construction activity within the street are discussed in L.8. IN-STREET CONSTRUCTION IMPACTS.*

set one or two years after the expected year of project completion. The following traffic scenarios should be analyzed:

- Existing Conditions;
- Cumulative (Future) Base Conditions (also termed the "No Project" alternative); and
- Cumulative (Future) Plus Project Conditions

C. Screening Criteria

- Would the proposed project generate and/or cause a diversion or shift of 500 or more daily trips or 43 or more p.m. peak hour vehicle trips on the street system?

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Intersection Capacity, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant Intersection Capacity impact from the proposed project.

D. Evaluation of Screening Criteria

If the project is expected to generate new or shift existing vehicular traffic, estimate the number of peak hour trips expected to result from project implementation and compare this information to the Screening Criteria.

To estimate new project trips, apply the appropriate trip generation rates to the proposed project land uses.[2] The following two sources of trip rates are preferred:

- Standard trip generation rates/equations contained in the latest edition of Trip Generation, published by the Institute of Transportation Engineers (ITE); and

- Trip generation rates specified in a Transportation Specific Plan (TSP) or Interim Control Ordinance (ICO) must be used if the project is located in a TSP or ICO area.

[2] *Note that traffic studies which are required by City of Los Angeles Department of Transportation (LADOT) (CEQA and non-CEQA) are also subject to the policies and procedures of LADOT's Traffic Study Policies and Procedures Manual as well as requirements of applicable specific plans. Contact LADOT at (213) 580-1195 for further information.*

If the above sources do not provide rates for a particular land use under study, or due to unique characteristics of the project it is believed that standard rates are not appropriate, the following alternative techniques may be considered:

- Use of alternative published rates, such as those contained in the latest edition of Trip Generators (San Diego Association of Governments (SANDAG));

- Use of rates empirically derived from trip generation studies of similar developments or facilities; and

- Explicit derivation of vehicle trips based upon estimation of person trips. For example, because little or no trip rate data exist for museum facilities, trip generation for such developments could be derived by applying mode split and vehicle occupancy data to estimated person trips for the various generators (patrons, employees, service/delivery).

If the project is expected to divert or shift traffic, estimate the amount based on the project characteristics and on ambient traffic volumes for the affected streets/intersections and compare to the Screening Criteria.

For freeway ramp intersections, use the same trip generation rates and calculate the number of trips that would occur at identified ramp intersections in the a.m. or p.m. peak hour. See the Project Impact section for a discussion of trip distribution methods.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A proposed project would normally have a significant impact on intersection capacity if the project traffic causes an increase in the V/C ratio on the intersection operating condition after the addition of project traffic of one of the following:

V/C ratio increase $\geq$0.040 if final LOS* is C
V/C ratio increase $\geq$0.020 if final LOS* is D
V/C ratio increase $\geq$0.010 if final LOS* is E or F

* "Final LOS" is defined as projected future conditions including project, ambient, and related project growth but without project traffic mitigation.

Note that if stricter criteria are required in an applicable local TSP or ICO, those criteria will apply.

If an unsignalized intersection is projected to operate at LOS C, D, E or F, re-analyze the intersection using the signalized intersection methodology to determine the significance of impacts using the sliding scale criteria described above.

B. Methodology to Determine Significance

Environmental Setting

Describe the existing traffic conditions based on the appropriate study area, time periods, existing transportation facilities, traffic counts, and LOS.

Study Area and Time Periods for Analysis. Identify the geographic study area (i.e., intersections to be analyzed), based on project size, type, location and existing levels of traffic, in consultation with Los Angeles Department of Transportation (LADOT). Include intersections of surface streets with other surface streets and with freeway ramps, as well as the appropriate Congestion Management Program (CMP) arterial monitoring intersections.[3]

For most projects, analyze existing traffic for both the a.m. and p.m. weekday peak hours. For some projects, analysis of p.m., midday or weekend periods is appropriate if those are expected to be the prime periods of trip generation for the project (e.g., a recreational project).

Existing Setting. Describe existing traffic conditions, including:

- A description of the existing street system serving the defined study area (i.e., number of lanes, traffic control devices, on-street parking, etc.);

- Existing lane configurations and signal phasing at study intersections;

- Existing peak hour traffic turning movements at study intersections. Traffic counts should not be more than two years old; and
- Quantify the existing LOS at the intersections to be analyzed using the appropriate intersection capacity methodology described below:

[3] *See Exhibit L-3 in L. TRANSPORTATION for a map of CMP monitoring locations.*

- Signalized Intersections - For the analysis of signalized intersections, determine peak hour LOS based on the Critical Movements Analysis (CMA) methodology contained in the Transportation Research Board's (TRB) Circular No. 212 - Interim Materials on Highway Capacity at the identified intersections. Summarize V/C ratio and LOS in the study; and

- Two-Way and All-Way Stop-Controlled (Unsignalized) Intersections - For two-way and all-way stop-controlled intersections, use the procedures described in Chapter 10 of TRB's Highway Capacity Manual, Special Report 209, Third Edition. Summarize average vehicle delay and LOS in the study.

LOS definitions for signalized and unsignalized intersections are listed in Exhibits L.1-1 and L.1-2. For additional details regarding intersection LOS calculation, see LADOT's Traffic Study Policies and Procedures Manual.

Project Impacts

Project impacts are typically based upon a comparison of intersection LOS for cumulative base and cumulative base plus project (final LOS) conditions. The cumulative base conditions are comprised of existing traffic levels increased by a factor to account for ambient growth, plus projected traffic levels from known related projects in the vicinity. Using the appropriate intersection capacity methodologies described above, quantify the cumulative plus project LOS at the study intersections for the projected cumulative plus project traffic volumes. The project impact is determined by comparing the projected cumulative base and cumulative plus project intersection LOS, using the defined significance threshold.

Project Trip Generation. The preferred methods of calculating trip generation rates are described above in Evaluation of Screening Criteria.

Depending upon the particular characteristics of the project, one or more of the following adjustments to the project trip generation may be appropriate (consult with LADOT for applicability):

- Central Business District (CBD) Trips - If the project is located within the CBD, defined as the area bordered by the Santa Ana Freeway to the north, Los Angeles Street to the east, the Santa Monica Freeway to the south, and the Harbor Freeway to the west, trip reduction factors may be applied to reflect prevailing CBD mode splits. (Consult with LADOT for most current rates.);

- Pass-by Trips – "Pass-by trips" occur when a proportion of traffic generated by a shopping center, for example, is not new to the area but is actually diverted from the flow of traffic that already existed on the adjacent street system. LADOT's discount rates for pass-by trips are shown in Exhibit L.1-3;

- Mode Split Adjustments - The mode split inherent in the ITE trip generation rates for most land uses reflect a relatively modest transit usage (typically less than 5 percent), and thus a low average vehicle ridership (AVR). If the project is located in an area where transit mode split or vehicle occupancy is considered to be higher than normal, identify the prevailing or projected mode split(s) for the project area to determine an appropriate adjustment to the ITE rates. Several data sources are available to perform this evaluation, including the South Coast Air Quality Management District (SCAQMD) Regulation XV data (through March 1996) which summarizes employee trips by travel mode, data from the Los Angeles County Metropolitan Transportation Authority (Metro), Southern California Association of Governments (SCAG), Southern California Rideshare office, and/or City of Los Angeles Citywide Framework regional travel demand models;

- Captive Market (Internal) Trips - For mixed-use projects, different land uses or trip generators may capture patronage from within the project site. The following sources are available to estimate captive market reductions:

    - National Cooperative Highway Research Program (NCHRP) Report 323 - Travel Characteristics at Large-Scale Suburban Activity Centers;

    - Trip Generation; and

    - Urban Land Institute (ULI) Shared Parking.

- Removal of Existing Land Uses - Trips from existing land uses which will be removed, but have been in place at least six months within the last two years, may be credited against the new trips generated by the project (if "existing" traffic counts reflect the existing land use). Projects within a TSP area may be subject to different regulations in regards to existing use trip credits. If driveway counts are not available, trip generation for the existing uses should be estimated using the trip generation procedures described above.

Trip Distribution. The geographic distribution of traffic generated by developments is dependent upon such factors as: the type and density of the proposed land uses; the geographic

distribution of the population, employment, and commercial centers that would attract the project-generated traffic (i.e., the "market" area); the location of site access points in relation to the surrounding street system; the level of congestion on local streets; and the physical characteristics of the street system. To identify total project trip distribution, develop individual distribution patterns for each land use associated with both the project and cumulative projects. Distribution patterns can be based upon: information from previous traffic studies; trip table data from SCAG or City of Los Angeles Framework regional travel demand forecasting models; or most recent CMP.

Cumulative Impacts

The cumulative base traffic forecasts consist of three elements: existing traffic; ambient increases due to regional growth and development; and traffic from specific known development projects in the vicinity of the project. Ambient regional growth is derived through the application of an annual growth factor to existing traffic volumes. The ambient growth factor should be no higher than the regional growth factors contained in the most recent CMP and should usually be less to avoid double counting of trips generated by cumulative projects when the cumulative projects are consistent with the long-range forecasts used to develop the ambient regional growth factor.

The list of cumulative projects (including pertinent descriptive data such as location, types and sizes of land uses, and status) should be developed from files maintained by the LADOT and supplemented with data from the City Planning Department and the Community Redevelopment Agency (CRA) of the City of Los Angeles (for adopted redevelopment areas). General criteria that should be considered for the selection of cumulative projects include:

- The sphere of influence for cumulative projects, based on their proposed size and likely influence on traffic patterns, generally within one or two miles of the proposed project;

- Very large, regionally significant projects that are located outside the typical sphere of influence (i.e., beyond two miles from the analysis area), but could impact intersections analyzed for the project; and
- Projects proposed within neighboring jurisdictions if they could impact the same analyzed intersections.

Determine the trip generation and distribution for cumulative projects using the procedures described above for the project. Add the existing traffic volumes, factored by the ambient

growth rate, to the estimated cumulative projects trips to develop cumulative base traffic projections at the study intersections.

Using the appropriate intersection capacity methodologies described in Evaluation of Screening Criteria, quantify the cumulative base LOS at the study intersections for the projected cumulative traffic volumes. Also, incorporate any approved mitigation measures associated with the cumulative projects into the cumulative base traffic assessment.

Cumulative Plus Project Impact

Using the project trip generation estimates and distribution patterns developed above, assign the project-generated trips to the street system. Then, add the estimated project-generated trips to the cumulative base traffic volumes to develop cumulative plus project traffic projections at the study intersections. Determine the final LOS[4] and the change in the V/C ratio and compare to the Significance Threshold.

Sample Mitigation Measures

Potential mitigation measures include transportation demand management (TDM) measures, transportation system management (TSM) measures, physical roadway improvements, or a combination thereof. The following lists a variety of possible mitigation measures in priority order per LADOT guidelines. Consult with LADOT, as needed, for further information.

TDM Measures reduce single occupancy vehicle (SOV) trips and encourage ridesharing and transit use.[5] Individual measures and actions which could be included in a TDM plan include the following:

- A commuter transportation coordinator;
- Carpool and vanpool program, including participation in a computerized matching system;
- Parking management techniques, including elimination of parking subsidies, constraining the parking supply, preferential parking for rideshare vehicles, offering a cash equivalent of parking costs as a travel allowance, etc;
- Encourage non-vehicle modes, such as bicycling, walking, or telecommuting;

[4] *"Final LOS" is defined as projected future conditions including project, ambient, and related project growth, but without project traffic mitigation.*

[5] *See the most recent edition of LADOT's Traffic Study Policies and Procedures Manual for a description of the requirements for preparation and content of a TDM plan.*

- Flexible or staggered work hours, potentially including compressed work weeks (i.e., 4/40 or 9/80 plans);
- Transit incentives and improvements, including subsidized transit passes, distribution of transit information and schedules, and provision of shelters or benches at bus stops and/or layover areas;
- Vehicle trip reduction incentives and services affecting visitors to the project, such as shoppers, clients, patrons, etc; and
- Site trip generation cap and/or parking cap including trip monitoring agreements.

Transit Capacity and Access Improvements:

- Implementation of a local shuttle bus service providing direct access from the project site to multimodal or rail transit stations;
- Bus benches, shelters, or other amenities;
- Concrete bus pads and bus stops; and
- Contributions toward transit stations or centers.

Traffic Signal Improvements:

- Addition of a signal to the City of Los Angeles' Automated Traffic Surveillance and Control (ATSAC) system (available only where ATSAC has not yet been constructed or a fully-funded construction contract has not been awarded);
- Upgrade of an existing ATSAC signal system to Adaptive Traffic Control System (ATCS);
- Signal modifications, including signal timing, coordination, phasing improvements, etc; and
- New signals, which requires a traffic signal warrants analysis.[6]

Physical Improvements:

- Turn restrictions;
- One-way streets;
- Conversion of mixed-flow lanes to High Occupancy Vehicle (HOV) lanes (permanently or during peak periods);
- Reversible HOV or mixed-flow lanes;
- New roadway;

[6] *See Traffic Manual of the California Department of Transportation (Caltrans), Manual on Uniform Traffic Control Devices, by the Federal Highway Administration (FHWA), and Warrants for Traffic Signals (LADOT) to evaluate the need for traffic signals.*

- Roadway widening to add lanes;
- Extension of truncated street;
- Intersection grade separation;
- Partial intersection grade separation (i.e., left-turn flyovers);
- New freeway on- or off-ramps;
- Redesign of freeway on- and off-ramps;
- Median construction/modification to restrict access;
- Pedestrian crossing grade separation; and
- Flaring of intersections to add turn lanes.

Street Restriping and Parking Prohibitions:

- Restriping to add lanes, with or without parking removal or restrictions;
- Protected left turn pockets, or free right turn lanes; and
- Parking restrictions, daily or during peak hours.

Trip Fees/Mitigation Trust Fund:

If the project is located in a TSP area, an applicant may be required by City Ordinance to pay "trip fees" into a mitigation trust fund for implementation of larger regional projects that are specified in the TSP. If a traffic study demonstrates that the applicant is responsible for only a portion of a large and costly mitigation measure, such as a bridge or freeway ramp, a fair share contribution toward the cost of the improvement may be an acceptable mitigation.

3. DATA, RESOURCES, AND REFERENCES

LADOT, Bureau of Transportation Programs and Development Review, 100 South Main Street, 9th Floor, Los Angeles, California 90012; Telephones: (213) 972-8485 (Metro/South L.A.), (818) 374-4690 (Valley), and (213) 485-1062 (West/Coastal). For traffic study scoping, intersection/street as-built plans, traffic count files, or other assistance.

LADOT, Traffic Study Policies and Procedures Manual, March 2002 or most recent. Warrants for Traffic Signals.

City Planning Department, Community Planning Bureau, 200 North Spring Street, 6th Floor, Los Angeles, California 90012; Telephones: (213) 978-1168 (South L.A.), (213) 978-1179 (Metro/Central), (213) 978-1177 (West/Coastal). For ICOs, TSPs, Framework Regional Travel Demand Forecasting Model, Circulation Element, Proposed Transportation Element, and other planning documents.

American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 2004.

Caltrans, Highway Design Manual, 5th Edition, July 1995.

Caltrans, Traffic Manual, September 1992.

Caltrans, 2004 Traffic Volumes on California State Highways, 2005 (or latest edition).

Federal Highway Administration (FHWA), Manual on Uniform Traffic Control Devices (MUTCD), Revision 1, 2003.

ITE, Traffic Access and Impact Studies for Site Development: A Recommended Practice, 1991.

ITE, Traffic Engineering Handbook, 5th Edition, 1999

ITE, Transportation and Land Development, 2003.

ITE, Transportation Planning Handbook, 2003.

LACMTA, CMP for Los Angeles County, adopted July 2004 (or most recent).

SANDAG, Trip Generators, October 1993 (or latest edition).

SCAG, 1991 Southern California Origin-Destination Survey, Summary Findings, February 1993. Available by calling (213) 236-1800.

TRB, Circular No. 212 - Interim Materials on Highway Capacity, 1980.

TRB, Highway Capacity Manual, Special Report 209, Third Edition, 1994.
NCHRP Report 323 - Travel Characteristics at Large-Scale Suburban Activity Centers, 1989.

ULI, Shared Parking, Second Edition, 2005.

FHWA, Manual on Uniform Traffic Control Devices, 2003.

FHWA, Technology Sharing Report 80-204, Design of Urban Streets, January 1980.

Exhibit L.1-1
LEVEL OF SERVICE (LOS) DEFINITIONS FOR SIGNALIZED INTERSECTIONS

LOS	Volume to Capacity (V/C) Ratio	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 - 0.800	GOOD. Occasionally drivers have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: TRB, Circular No. 212, Interim Materials on Highway Capacity, 1980.

Exhibit L.1-2
LEVEL OF SERVICE (LOS) DEFINITIONS FOR TWO-WAY AND ALL-WAY STOP-CONTROLLED INTERSECTIONS

LOS	Average Vehicle Delay (seconds)
A	0.0 - 5.0
B	5.1 - 10.0
C	10.1 - 20.0
D	20.1 - 30.0
E	30.1 - 45.0
F	> 45.0

Source: TRB, Highway Capacity Manual, Special Report 209, Third Edition, 1994.

Exhibit L.1-3
PASS-BY TRIP DISCOUNT RATES

The pass-by trip reduction rates shown below are used for land development projects by the LADOT. However, these rates are superseded by additional guidelines provided in TSPs or ICOs. These rates are not applicable to review of impacts at project driveways and the intersection(s) immediately adjacent to the project site, and are not used in determining the need for a traffic study.

PASS-BY TRIP DISCOUNT RATE	LAND USE CATEGORY
10%	Shopping Center 600,000 sf or more, Quality Restaurant, Specialty Retail, Furniture Store, Medical Office, Day Care, Theater/Cinema, Auto Sales/Repair
20%	Shopping Center 300,000 to less than 600,000 sf, Bank/Savings & Loan, High Turnover Restaurant, Car Wash, Hardware/Lumber Store, Garden Center, Recreation/Health Club
30%	Shopping Center 100,000 to less than 300,000 sf, Discount Club, Discount Store, Auto Parts, Music/Video Store
40%	Shopping Center 50,000 to less than 100,000 sf, Supermarket, Drugstore, Bookstore
50%	Shopping Center less than 50,000 sf, Fast Food Restaurant, Gasoline/Service Station, Convenience Market, Flower/Bakery/Yogurt Shop, Dry Cleaner, Liquor Store

Note: sf = square feet

Source: LADOT.

L.2. STREET SEGMENT CAPACITY

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

XV.a): Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

B. Introduction

This issue involves the ability of a street or roadway segment to accommodate increased vehicular traffic demands associated with a proposed project. The impact typically results from the addition of new traffic generated by a project to a street segment although, in situations where a project involves street vacations or other substantial street system changes, it can also result from diverted or shifted traffic caused by the project or a combination of new and diverted traffic.[1] The impact is measured as the effect of the project on traffic operating conditions, expressed in terms of level of service (LOS) and volume to capacity (V/C) ratio. Impacts are related to factors such as type of use, development densities, capacity of transportation system, and other characteristics of the project and surrounding area.

Street segment capacity impacts are generally evaluated in program-level analyses (such as specific plans or long-range development projects) for which details regarding specific land use types, sizes, project access points, etc., are not known. If such details are known, see L.1. INTERSECTION CAPACITY for applicability. As a travel demand forecasting model is generally used to develop traffic projections, the future study year will usually be the same as the horizon year used by the regional models. Depending on the project, it may not be necessary to evaluate street segment capacity impacts in addition to intersection capacity impacts. Street segment capacity impacts are evaluated for permanent traffic increases after project completion.

[1] *Impacts related to loss of capacity due to temporary lane or street closures associated with projects requiring construction activity within the street are discussed in L.8. IN-STREET CONSTRUCTION IMPACTS.*

The following traffic scenarios are to be analyzed for street segment capacity impacts:

- Existing Conditions;
- Cumulative Base Conditions (scenario assuming "No Growth" in program area); and
- Cumulative Plus Project Conditions (project can represent full buildout of a plan or a probable market scenario).

C. Screening Criteria

- Would the proposed project generate and/or cause a diversion or shift of 500 or more daily vehicle trips or 43 or more a.m. or p.m. peak hour trips?

A "yes" response to the preceding question indicates that further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Street Segment Capacity, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Street Segment Capacity from the proposed project.

D. Evaluation of Screening Criteria

Estimate the project trip generation using the trip generation and distribution methodologies in L.1. INTERSECTION CAPACITY. Compare the result to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A proposed project would normally have a significant street segment capacity impact if project traffic causes an increase in the V/C ratio on the street segment operating condition after the addition of project traffic equal to or greater than the following:

V/C ratio increase ≥0.080 if final LOS* is C
V/C ratio increase ≥0.040 if final LOS* is D
V/C ratio increase ≥0.020 if final LOS* is E or F

* "Final LOS" is defined as projected future conditions including project, ambient, and related project growth but without project traffic mitigation.

B. Methodology to Determine Significance

Environmental Setting

Describe the existing traffic conditions based on the appropriate study area, time periods, existing transportation facilities, traffic counts, and LOS, as detailed below.

Study Area and Time Periods for Analysis. Identify the geographic study area (i.e., street segments to be analyzed), based on project size, type, location, and existing levels of traffic, in consultation with the Los Angeles Department of Transportation (LADOT). Include key major streets and secondary highways and the appropriate arterial street approaches in the Congestion Management Program (CMP). For most projects, analyze existing traffic for both the a.m. and p.m. weekday peak hours. For some projects, analysis of other time periods, such as mid-day or weekend periods, may be required if those are expected to be the prime periods of trip generation for the project (e.g., a recreational project).

Existing Setting. Inventory existing traffic conditions including, the following:

- A description of the existing street system serving the defined study area (i.e., number of lanes, traffic control devices, on-street parking, etc.); and

- Existing peak hour traffic volumes on study street segments. Traffic counts should not be older than two years.

Quantify the existing peak hour V/C ratios and LOS at the study street segments using the street capacity methodology described below.

Street Segment Capacity Methodology. Peak hour roadway (street segment) capacities are based upon several parameters including number of lanes, median type, roadway width, parking conditions, and spacing of signalized intersections. Vehicle capacities are based on the street classification. Consult with LADOT regarding roadway capacities, as needed.

For each study street segment, divide peak hour directional traffic volumes by the directional street segment capacity (determined by multiplying the number of lanes with the selected lane capacity) to calculate a V/C ratio, which is then used to determine LOS. LOS definitions for street segments are included in Exhibit L.2-1.

Project Impacts

Impacts are determined by comparing street segment LOS for the cumulative base and cumulative plus project (final LOS) traffic projections, using the defined significance threshold. The Los Angeles Department of Transportation (LADOT) should be consulted to determine the method in which to develop the traffic projections. Future base traffic volumes may be calculated using traffic growth factors or by employing a travel demand forecast model.

- **Travel Demand Forecasting Model.** Use the focused travel demand forecasting model, which is based on the Citywide Framework model, to forecast future traffic conditions. Additional street network and traffic zone detail should be added in the program study area, which requires disaggregation of the Framework model trip tables. The development of the focused area model may require other modifications and calibration. Consult with LADOT for further information.

- **Program Trip Generation**. Once the model is calibrated, replace the Framework model vehicle projections for the study area with trip ends consistent with the expected type and level of development under the project. Trips should be generated by trip type (e.g., home-work, home-other, non-work), and converted to peak hour trip tables.

- **Trip Distribution**. Using the focus area model, it is suggested that a trip table balancing process be used for each trip type to replicate the trip distribution inherent in the Framework model, prior to conversion of the daily trip tables to peak hour.

Cumulative Impacts

As described above in Project Impacts, develop the focus area model using the Citywide Framework model as the basis for the remainder of the City and the region, with additional model detail added in the program study area. The long-range regional socioeconomic growth projections inherent in the Framework model (which incorporates socioeconomic projections from the Southern California Association of Governments (SCAG) for the region outside of Los Angeles) would represent cumulative base conditions for the study. If necessary, the model trip tables can be adjusted to account for significant large cumulative developments which were not included in the original Framework model trip tables.

Cumulative Plus Project Impacts

Project impacts are usually compared against future cumulative base conditions (the "No Growth" scenario for programs). The model trip tables will likely require modification to replace future growth inherent in the regional models with "no growth" estimates for the program area. Follow the procedures described above for program trip generation to modify the trip tables. Using the street segment capacity methodology described previously, quantify cumulative base LOS at the study street segments from the travel demand focus area model and compare to cumulative plus project LOS (final LOS).[2]

Sample Mitigation Measures

See L.1. INTERSECTION CAPACITY.

3. DATA, RESOURCES, AND REFERENCES

See L.1. INTERSECTION CAPACITY.

[2] *"Final LOS" is defined as projected future conditions including project, ambient, and related project growth, but without project traffic mitigation.*

Exhibit L.2-1
LEVEL OF SERVICE (LOS) DEFINITIONS FOR ARTERIAL STREET SEGMENTS

LOS	Volume to capacity (V/C) Ratio	Definition
A	0.000 - 0.600	EXCELLENT. Primarily free-flow conditions at about 90 percent of free-flow speed. Vehicles are completely free to maneuver within the traffic stream. Stopped delay at signalized intersections is minimal.
B	0.601 - 0.700	VERY GOOD. Reasonably unimpeded flow at about 70 percent of free-flow speed. Ability to maneuver is only slightly restricted and delay at intersections is not bothersome.
C	0.701 - 0.800	GOOD. Stable operations at about 50 percent of free-flow speed. Ability to maneuver and change lanes may be restricted at mid-block locations. Motorists will begin to experience appreciable tension while driving.
D	0.801 - 0.900	FAIR. Small increases in flow begin to cause substantial increases in intersection approach delay. Ability to maneuver becomes more difficult, with speeds about 40 percent of free-flow speed.
E	0.901 -1.000	POOR. Characterized by significant delays at intersection approaches and travel speeds about one-third of free-flow speed or less. Ability to maneuver is severely restricted and driver tension is high.
F	> 1.000	FAILURE. Extremely low travel speeds and unstable traffic flow. Characterized by long delays at intersection approaches, severe difficulty in maneuvering between lanes, and extremely high driver tension.

Source: Adapted from Transportation Research Board (TRB), Highway Capacity Manual, Special Report 209, Third Edition, 1994.

L.3 FREEWAY CAPACITY

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

XV.a): Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

XV.b): Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

B. Introduction

This issue involves the ability of a freeway segment or a freeway on- or off-ramp to accommodate increased vehicular traffic demands associated with a proposed project. The impact typically results from the addition of new traffic generated by a project. The impact is measured in terms of the project's effect on freeway operating conditions expressed as level of service (LOS) and demand to capacity (D/C) ratio. On- and off-ramps, similar to street segments, are evaluated in terms of volume to capacity (V/C) ratios and LOS.

Freeway capacity impacts can be evaluated for both short-range development projects and long-range projects for which details, such as site access points, are not yet known. Freeway capacity impacts are typically evaluated for permanent traffic increases after project completion, but can also be evaluated for temporary traffic increases generated during project construction. The future year to be analyzed should be consistent with that analyzed in the intersection capacity or street segment capacity analysis.

The California Department of Transportation (Caltrans) is responsible for the construction and operation of state highways and interstate freeways. Traffic congestion is monitored regionally by the County Transportation Commissions (Los Angeles County Metropolitan Transportation Authority (Metro)), according to state requirements.

C. Screening Criteria

- Would the proposed project add 150 or more one-way vehicle trips to a Congestion Management Program (CMP) mainline freeway monitoring segment during either the a.m. or p.m. peak hours?

- Would the proposed project add 50 or more a.m. or p.m. peak hour trips to a freeway on- or off-ramp?

A "yes" response to any of the preceding questions indicates that further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Freeway Capacity and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Freeway Capacity from the proposed project.

D. Evaluation of Screening Criteria

Estimate the number of trips to be generated by the proposed project using the trip generation and distribution methodologies in L.1. INTERSECTION CAPACITY and compare to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant freeway capacity impact if project traffic causes an increase in the D/C ratio on a freeway segment or freeway on- or off-ramp of 2 percent or more capacity (D/C increase $\geq$0.02), which causes or worsens LOS F conditions (D/C >1.00).

B. Methodology to Determine Significance

Environmental Setting

Describe the existing traffic conditions based on the appropriate study area, time periods, existing transportation facilities, traffic counts, and LOS.

Study Area and Time Periods to be Analyzed. Identify the geographic study area (i.e., freeway segments and on- or off-ramp(s) to be analyzed) based on project size, type, location, and existing levels of traffic.

For most projects, analyze existing traffic for both the a.m. and p.m. weekday peak hours. For some projects, other time periods, such as mid-day or weekend periods, may be required if those are expected to be the prime periods of trip generation (e.g., for a recreational project).

Existing Setting. Inventory existing traffic conditions, including the following:

- A description of the freeway system serving the study area (i.e., number of lanes, location of interchanges and ramps serving study area, etc.); and

- Existing peak hour traffic volumes on study freeway segments and on- and off-ramps.

Existing freeway traffic counts can be obtained from the most recent CMP or Caltrans. Traffic counts should not be older than two years.

Freeway Capacity Methodology. Quantify the existing peak hour D/C ratios and LOS at the study freeway segments by dividing peak hour directional traffic volumes by the directional freeway segment capacity (determined by multiplying the number of mainline freeway lanes with a per lane capacity value of 2,000 vehicles per hour) to calculate a D/C ratio, which is then used to determine LOS. Exhibit L.3-1 shows LOS definitions for freeway segments. This is the methodology described in the Congestion Management Program (CMP).

On- and Off-Ramp Methodology. Calculate V/C ratios and LOS for study on- and off-ramps.[1] Traffic counts may be obtained from Caltrans, Metro, Los Angeles Department of Transportation (LADOT), field counts, or other appropriate methods. Ramp capacity is a function of the number of lanes, their configuration, and road geometry. LOS definitions for on- and off-ramps are the same as arterial street segments (Exhibit L.2-1).[2]

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1 *See Transportation Research Board's (TRB) Highway Capacity Manual, Special Report 209. Third Edition, 1994*

2 *See L.2. STREET SEGMENT CAPACITY.*

Project Impacts

Estimate the project trips to be added to freeway segments and on- and off-ramps using the trip generation and distribution methodologies in L.1. INTERSECTION CAPACITY, or L.2. STREET SEGMENT CAPACITY, as appropriate. Add to the future cumulative base levels and compare the resulting LOS and D/C ratio to the significance threshold to determine project impacts.

Cumulative Impacts

Follow the methodologies presented in L.1. INTERSECTION CAPACITY, or L.2. STREET SEGMENT CAPACITY, as appropriate. Future base traffic volumes may also be calculated by using the traffic growth factors provided in the most recent edition of the CMP, through consultation with Caltrans, or through subarea modeling.

Cumulative Plus Project Impacts

Add project traffic volumes at freeway segments and on- and off-ramps to the cumulative base levels. Compare the resulting LOS and D/C ratios to the Significance Threshold.

Sample Mitigation Measures

See L.1. INTERSECTION CAPACITY.

3. DATA, RESOURCES, AND REFERENCES

See L.1. INTERSECTION CAPACITY.

Exhibit L.3-1
LEVELS OF SERVICE (LOS) FOR FREEWAY SEGMENTS

Level of Service (LOS)	Demand to Capacity (D/C) Ratio	Service Rating	Flow Conditions
A	0.00 – 0.35	Good	Operating speed of 55+ mph. No delay. Highest quality of service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed.
B	>0.35 – 0.54	Good	Operating speed of 50 mph. Minimal delay. Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability.
C	>0.54 – 0.77	Adequate	Operating speed of 45 mph. Minimal delay. Stable traffic flow, but less freedom to select speed, change lanes, or pass. Density increasing.
D	>0.77 – 0.93	Adequate	Operating speed of 40 mph. Minimal delay. Approaching unstable flow. Speed tolerable but subject to sudden and considerable variation. Less maneuverability and driver comfort.
E	>0.93 – 1.000	Poor	Operating speed of 35 mph. Significant delays. Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability and low driver comfort.
F	>1.000	Poor	Operating speed up to 20 mph. Considerable delays. Forced traffic flow. Speed and flow may drop to zero with high densities.

Source: Adapted from CMP for Los Angeles County, LACMTA, 2004

L.4. NEIGHBORHOOD INTRUSION IMPACTS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

XV.a): Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

B. Introduction

This issue involves impacts of traffic generated by the project, and/or traffic diverted or shifted due to the project, on local streets in residential neighborhoods. Such impacts may result from increased traffic volumes on neighborhood streets or increased delays for vehicles exiting the neighborhood. Traffic conditions are typically expressed in terms of daily volume of traffic.

Evaluation of potential neighborhood intrusion impacts requires details regarding site access. Impacts are related to traffic volume, location of site access points in relation to neighborhood streets, traffic controls, and capacity of area streets. Neighborhood intrusion impacts are typically evaluated for permanent traffic increases after project completion, but can also be evaluated for temporary traffic increases during project construction. Analyze the same future year that is analyzed in the intersection capacity analysis. The Los Angeles Department of Transportation (LADOT) may require a Residential Neighborhood Traffic Management Program be prepared for certain projects. Contact LADOT for further information.

C. Screening Criteria

Would the proposed project:

- Generate more than 120 daily vehicle trips to a local residential street?

A "yes" response to the preceding question indicates that further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the

Significance Threshold for Neighborhood Intrusion Impacts, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Neighborhood Intrusion from the proposed project.

D. Evaluation of Screening Criteria

The potential for neighborhood intrusion is generally based on preliminary trip generation and distribution and the location of project access points relative to local residential streets. Use the project traffic study or see L.1. INTERSECTION CAPACITY for trip generation and distribution methodologies and compare the results to the Screening Criteria. Identify the number of trips distributed to local neighborhood streets. Also, identify points at which project traffic could impact a local residential street located adjacent to, or across an arterial from, the project.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant neighborhood intrusion impact if project traffic increases the average daily traffic (ADT) volume on a local residential street in an amount equal to or greater than the following:

ADT increase ≥ 16% if final ADT* <1,000
ADT increase ≥12% if final ADT* ≥1,000 and <2,000
ADT increase ≥10% if final ADT* ≥2,000 and <3,000
ADT increase ≥8% if final ADT* ≥3,000

* "Final ADT" is defined as total projected future daily volume including project, ambient, and related project growth.

The significance of neighborhood intrusion impacts related to vehicle delay shall be determined on a case-by-case basis.

B. Methodology to Determine Significance

Environmental Setting

Describe existing traffic conditions based on the appropriate study area, time periods, existing transportation facilities, traffic counts and level of service (LOS), as detailed below.

Study Area and Time Periods to be Analyzed. Determine the residential street segments to be analyzed, based upon consideration of the potential trip generation of the project, the location of project access points, and the residential streets which are most likely to be affected. Residential neighborhood intrusion impacts are measured in terms of daily traffic volumes.

Existing Setting. Describe existing traffic conditions, including the existing residential streets to be included in the study (i.e., number of lanes, traffic control devices, on-street parking, etc.) and existing daily traffic volumes on the analyzed residential streets. Traffic counts should not be older than two years.

Project Impacts

Use the project traffic study or use the methodology in L.1. INTERSECTION CAPACITY to estimate the daily trip generation and distribute it on the street system to forecast the amount of project traffic which may travel along the analyzed residential streets. Determine the project impact by comparing the projected cumulative base and cumulative plus project ADT volumes for the analyzed residential streets and comparing the result to the Significance Threshold

Cumulative Impacts

Develop cumulative base daily traffic forecasts for the analyzed residential streets, considering both the proposed project and related projects, using the methodology in L.1. INTERSECTION CAPACITY. Determine the resulting impact.

Sample Mitigation Measures

Similar to intersection capacity impacts, potential mitigation measures for neighborhood intrusion impacts can include Transportation Demand Management (TDM) measures to reduce overall traffic levels, transportation system management (TSM) measures or physical improvements on arterial streets to encourage travel on non-residential streets (as listed in L.1. INTERSECTION CAPACITY). In addition, neighborhood traffic control measures can be implemented as mitigation measures to discourage travel on local residential streets. Specific mitigation measures are generally determined through consultation with LADOT, the appropriate City Council office, and the community. Neighborhood traffic control measures include:

- Speed humps;

- Signalized mid-block pedestrian crosswalks;
- Traffic signal timing modifications;
- Additional stop signs;
- Speed limit reductions;
- Diverters or semi-diverters;
- Cul-de-sac or street closure;
- Chokers or narrowing of street widths; and
- Turn restrictions.

In addition, LADOT may require a Residential Neighborhood Traffic Management Program be prepared. Contact LADOT for further information.

3. DATA, RESOURCES, AND REFERENCES

American Society of Civil Engineers **, Residential Streets Task Force**, Stanford P. LaHue, Sr., chmn., Residential Streets, Second Edition, 1990.

Institute of Transportation Engineers (ITE), Residential Street Design and Traffic Control, 2001.

See also L.1. INTERSECTION CAPACITY.

L.5. PROJECT ACCESS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

XV.d): Would the project increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

XV.e): Would the project result in inadequate emergency access?

XV.g): Would the project conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

B. Introduction

Project access impacts relate to the provision of access to and from the project site, and may include safety, operational, or capacity impacts. Impacts can be related to vehicular/vehicular, vehicular/bicycle or vehicle/pedestrian conflicts as well as to operational delays caused by slowing and/or queing to access a project site. These conflicts may be created by the driveway configuration or through the placement of project driveways in areas of inadequate visibility, adjacent to bicycle or pedestrian facilities, or too close to busy or congested intersections. Evaluation of project access impacts requires details regarding land use, size, design, location of access points, etc. These impacts are typically evaluated for permanent conditions after project completion, but can also be evaluated for temporary conditions during project construction. See K.2 FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES for impacts related to emergency vehicles.

Project access can be analyzed in qualitative and/or quantitative terms, in conjunction with a review of internal site circulation and access to parking areas. In addition, peak hour LOS may be quantified for primary site access points, as necessary, using the procedures discussed previously in L.1. INTERSECTION CAPACITY.

C. Screening Criteria

- Would the proposed project generate 500 or more daily trips or 43 or more vehicle trips during either the a.m. or p.m. peak hours?

If yes, would any of the following occur:

- Is a project driveway proposed on a major or secondary highway within 150 feet of an intersection with another major or secondary highway?

- Would a project driveway intersect an on-street bicycle lane or cross a sidewalk in an area of high pedestrian activity?

- Can it be readily perceived that there are access risks or deficiencies associated with the adjoining street system due to curves, slopes, walls or other barriers to adequate lines of sight?

A "yes" response to the first question and one of the other three questions indicates that further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Project Access, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the first question and all of the following questions indicates that there would normally be no significant Project Access impacts from the proposed project.

D. Evaluation of Screening Criteria

Identify the estimated number of daily and peak hour trips the project would generate using the project traffic study or the methodology in L.1. INTERSECTION CAPACITY. Review project site plans and the existing transportation facilities (including bicycle and pedestrian facilities) surrounding the project site. Roadway classifications are noted in the Transportation Element, or consult with Los Angeles Department of Transportation (LADOT). LADOT can also advise regarding access risks or deficiencies that may contribute to unsafe conditions. For projects in areas of potentially high pedestrian activity, consider performing a pedestrian capacity or LOS analysis. Compare the results to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

Project Access (operational)

A project would normally have a significant project access impact if the intersection(s) nearest the primary site access is/are projected to operate at LOS E or F during the a.m. or p.m. peak hour, under cumulative plus project conditions.

Bicycle, Pedestrian and Vehicular Safety

The determination of significance shall be on a case-by-case basis, considering the following factors:

- The amount of pedestrian activity at project access points.
- Design features/physical configurations that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists.
- The type of bicycle facility the project driveway(s) crosses and the level of utilization.
- The physical conditions of the site and surrounding area, such as curves, slopes, walls, landscaping or other barriers, that could result in vehicle/pedestrian, vehicle/ bicycle or vehicle/vehicle impacts.

B. Methodology to Determine Significance

Environmental Setting

Determine the existing LOS at the intersections nearest the project site (see the traffic study or L.1. INTERSECTION CAPACITY, as appropriate). Describe existing traffic facilities and conditions, including bicycle lanes and/or paths and sidewalks with regular pedestrian activity. Note the distance between site access points and arterial intersections and other conditions (such as curves or grade changes) that may affect traffic safety.

Project Impacts

To identify operational access impacts, use the methodology described in L.1. INTERSECTION CAPACITY and calculate the cumulative plus project volume to capacity (V/C) ratio at the intersection(s) nearest the project access by estimating project-generated trips and adding to the cumulative base projections. Determine the corresponding LOS for the a.m. and p.m. peak hours and compare to the significance threshold.

For vehicle/vehicle and bicycle and pedestrian safety impacts, review all project access points, internal circulation, and parking access from an operational and safety perspective (for example, turning radii, driveway queuing, line of sight for turns into and out of project

driveway(s)). Where project driveways would cross pedestrian facilities or bicycle facilities (bike lanes or bike paths), consider operational and safety issues related to the potential for vehicular/pedestrian and vehicular/bicycle conflicts and the severity of consequences that could result. In areas with high levels of pedestrian or bicycle activity, the collection of pedestrian or bicycle count data may be required.

Cumulative Impacts

Review the related projects or growth assumptions for projects that could impact the same street segments or intersections as the proposed project. For qualitative assessments, review project site access plans for projects that would impact the same primary intersections, bicycle routes or pedestrian facilities as the proposed project. Determine the combined impact and the project's contribution.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Installation of a traffic signal or stop signs or electronic warning devices at site access points;
- Redesign and/or relocation of project access points;
- Redesign of the internal (on-site) circulation system;
- Installation of stop-signs and pavement markings internal to the site; and
- Restrict or prohibit turns at site access points.

3. DATA, RESOURCES, AND REFERENCES

Institute of Transportation Engineers (ITE), Guidelines For Driveway Location & Design, 1987.

See also L.1. INTERSECTION CAPACITY.

L.6. TRANSIT SYSTEM CAPACITY

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

VI.h): Would the proposal result in a substantial impact upon existing transportation systems?

B. Introduction

This issue involves the potential impacts of the proposed project on the existing transit system ridership and capacity from the increased demand by project residents, employees, patrons, etc. Where project details are known, impacts are evaluated on specific transit lines. Where specific development sizes and land use are not known, analyses can be at a more generalized level for the project area. Transit system capacity impacts are typically evaluated for permanent impacts after project completion.

C. Screening Criteria

- Will an Environmental Impact Report (EIR) be prepared for the proposed project to evaluate potential transportation impacts?

A "yes" response to the preceding question indicates that further study of this issue may be required. Refer to the Significance Threshold for Transit System Capacity, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that no further review of Transit System Capacity would normally be required.

D. Evaluation of Screening Criteria

Review the description of the proposed project and the CEQA determination for other transportation impacts. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the projected number of additional transit passengers expected with implementation of the proposed project and available transit capacity.

B. Methodology to Determine Significance

Environmental Setting

Describe the public transit system serving the study area, including both existing and planned bus, rail, and paratransit systems. Include all local fixed route transit services within a ¼ mile radius of the proposed project site, and express bus routes and passenger rail services within a two mile radius of the project site.

Project Impacts

Use the traffic study to identify the estimated number of daily and peak hour trips to be generated by the proposed project and the mode split analysis to determine the number of transit trips expected. If this has not been done, use the methodology in the trip generation section of L.1. INTERSECTION CAPACITY, or the most recent Congestion Management Program (CMP).

Identify the expected impacts; consult with the affected transit operators as needed. The transit operator (Los Angeles Department of Transportation (LADOT) or other) may request additional information in response to the Notice of Preparation (NOP). Note any design or program elements of the project, if any, that will encourage public transit use, including the applicable requirements of the City's Transportation Demand Management (TDM) Ordinance and any project-specific measures that will enhance capacity or support transit use (i.e., employee shuttles, van pools).

Cumulative Impacts

Identify the related projects which would use any of the same systems or transit lines as the proposed project. Assess the combined impact of the proposed and related projects and the project's proportional contribution to the cumulative demand using the methodology described above for Project Impacts.

Sample Mitigation Measures

Mitigation measures for transit impacts could occur at either the project or transit operator level. The following are some options to consider; all would require coordination with the transit operator and/or LADOT.

Measures Implemented by Project:

- Install bus stop shelters, benches, or other amenities;
- Provide new private transit service (e.g., employee shuttles, private commuter express services);
- Contribute facilities, equipment, or funds to increase the capacity of existing transit systems, add stations, upgrade traffic signals to alow for Transit Priority Systems, or expedite transit flow; and
- Provide concrete bus pads at bus stops.

Measures Implemented by Transit Operator:

- Minor re-routing of public transit line;
- Increased frequency of public transit service; and
- Provide new public transit service.

3. DATA, RESOURCES, AND REFERENCES

See L.1. INTERSECTION CAPACITY.

L.7. PARKING

1. INITIAL STUDY CHECKLIST PROCESS

A. Initial Study Checklist Question

XV.f): Would the project result in inadequate parking?

B. Introduction

Parking impacts can result from the provision of an insufficient parking supply to serve a project. Such impacts can be manifested by spillover of project parking demands to nearby on-street or off-street parking facilities. Concerns often arise if project parking demands intrude into nearby residential neighborhoods.

Parking impacts are analyzed for projects when details regarding land use, size, proposed parking supply and internal layout, etc., are known. Parking impacts are typically evaluated for permanent conditions after project completion. To evaluate temporary conditions during project construction, see L.8 IN-STREET CONSTRUCTION IMPACTS.

C. Screening Criteria

- Would the project's proposed parking supply be less than that required by City code, including Los Angeles Municipal Code (LAMC), Transportation Specific Plan (TSP) or Interim Control Ordinance (ICO) requirements, prior to applying for a variance, exemption, or amendment, if any apply to the project?

- If the project is located within the coastal zone (generally, 1000 yards inland of the mean high tide line), would the project's proposed parking supply be less than that required by California Coastal Commission requirements?

A "yes" response to any of the preceding questions indicates that further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Parking, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant Parking impacts from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project. Apply the appropriate City parking requirements (including LAMC, TSP, ICO, Specific Plan (SP) or Transit Oriented District (TOD) requirements, if any) to the proposed project land uses to determine the required amount of parking. Determine California Coastal Commission requirements if the project is located within the coastal zone. Compare these amounts to the proposed parking supply and review the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant impact on parking if the project provides less parking than needed as determined through an analysis of demand from the project.

B. Methodology to Determine Significance

Environmental Setting

Describe the existing parking supply in the vicinity of the proposed project, including both on-street and off-street parking. Also note any existing parking on the project site. Include a summary of current parking utilization within ¼ mile of the project site if the project proposes using other off-street or on-street parking spaces to meet the code requirements.

Project Impact

Demand Analysis. There are several factors which can affect the actual parking demand for a project. Depending upon individual project characteristics, one or more of the following specialized demand analyses could be performed:

- Transit Mode Split Discount - City parking requirements can be adjusted downward to reflect prevailing or projected transit ridership, to account for an existing or proposed transit/rail station in proximity to the project or if the project is located in an area with a high level of transit service. The LAMC

indicates that a reduction of up to 40 percent in parking requirements can be assumed for a project located at a rail station. (Also, see mode split discussion in trip generation section of L.1. INTERSECTION CAPACITY for relevant details.)

- Effect of Captive Market - The proximity of several land use types in a mixed-use development creates a potential for a captive market. Closeness facilitates walking between activities rather than using a vehicle, potentially reducing parking demands. The following sources are available to assist in estimating captive market reductions:

  - National Cooperative Highway Research Program (NCHRP) Report 323 - Travel Characteristics at Large-Scale Suburban Activity Centers;

  - Trip Generation; and

  - Urban Land Institute's (ULI) Shared Parking.

- Shared Parking - There is also a potential for shared use of parking spaces in mixed use or other projects. The shared use concept considers the fact that the peak parking demand does not occur simultaneously for the various land use elements. The shared parking model incorporates standardized hourly accumulation factors by land use types which represent the percentage of peak parking demand generated during each hour of the day. Use the methodology presented in the publication Shared Parking. The shared parking concept can also account for seasonal variations, using factors contained in Shared Parking.

- Parking Demand Rates - If, due to unique land uses or characteristics of the project (e.g., mixed use, senior housing), the City parking requirements are not considered appropriate for a project, other sources could be used to determine the peak parking demands for the project, including:

  - Shared Parking;

  - Institute of Transportation Engineers' (ITE) Parking Generation;

- Parking demand rates empirically derived from parking utilization/duration surveys conducted at similar facilities in similar areas; and

- Explicit derivation of parking demand based upon estimation of person trip generation and mode split.

Compare parking demand from one of the above methods to the proposed parking supply.

Cumulative Impacts

Identify the related projects which would utilize the same on-street or off-street parking facilities as the proposed project. Consider any deficiencies in the proposed parking supply. Evaluate the combined impact of the related and proposed projects.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Develop and implement an aggressive transportation demand management (TDM) plan. TDM measures, which result in fewer vehicles traveling to and from a project, such as increased ridesharing and increased transit use, also reduce parking needs (see L.1. INTERSECTION CAPACITY for further discussion of TDM measures);

- Modify the project to provide additional on-site parking;

- Enter into agreements with owners of nearby parking facilities to use their facilities as project parking; and

- Provide employee parking at a remote off-site location connected to the project site with a shuttle bus service.

3. DATA, RESOURCES, AND REFERENCES

Planning and Zoning Code, (Chapter 1 of the LAMC), Parking requirements, ICOs, TSPs, Local Coastal Plans. Available from the City Planning Department's Central Publications Unit at 200 N. Spring Street, Los Angeles, California 90012; Telephone: (213) 978-1255.

ITE, Manual of Traffic Engineering Studies, 2001.

ITE, Parking Generation, 3rd Edition, 2004.

ULI and the National Parking Association, The Dimensions of Parking, Fourth Edition, 2000.

See also L.1. INTERSECTION CAPACITY.

L.8. IN-STREET CONSTRUCTION IMPACTS

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

XV.a): Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

XV.e): Would the project result in inadequate emergency access?

B. Introduction

This impact category addresses major in-street construction activity of an extended duration that is not exempt from the CEQA process.[1] This category also includes impacts associated with projects requiring major construction activity within a street right-of-way (ROW), such as temporary loss of access to adjacent parcels, temporary loss of bus stops, and temporary loss of on-street parking. (Off-street parking is addressed in L.7. PARKING.) Impacts associated with in-street construction activity are evaluated when details, such as the location, duration, and type of construction activity within the street ROW, are known. Given that these impacts are temporary and generally occur early in the project construction phase, the analyses are based on existing or near-term conditions. The Los Angeles Department of Transportation (LADOT) may require a traffic control plan whether or not project impacts are deemed to be significant. See K.2. FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES for impacts related to emergency vehicles.

C. Screening Criteria

- Would a project not exempted in Article VII of the City CEQA Guidelines require construction activities to take place within a major or secondary highway ROW which would necessitate temporary lane, alley, or street closures for more than one day (including day and evening hours, and including overnight closures if on a residential street)?

- Would a non-exempt project require construction activities to take place within a collector or local street ROW which would necessitate temporary lane, alley, or street closures for more than seven days (including day and evening hours, and including overnight closures if on a residential street)?

- Would in-street construction activities result in the loss of regular vehicular or pedestrian access to an existing land use for more than one day, including day and evening hours and overnight closures if access is lost to residential units?

- Would in-street construction activities result in the temporary loss for more than one day of an existing bus stop or rerouting of a bus route that serves the project site?

A "yes" response to any of the preceding questions indicates that further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for In-Street Construction Impacts, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact from In-Street Construction of the proposed project.

D. Evaluation of Screening Criteria

Review project construction plans to determine whether construction activities would result in street closures, blocked access or the loss or rerouting of transit stops. Determine the classification of street affected based upon width and average daily traffic, or contact LADOT for assistance. Identify bus stops and bus routes that serve the project construction area. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

[1] *See City of Los Angeles CEQA Guidelines, Article VII, Categorical Exemptions.*

Temporary Traffic Impacts:

- The length of time of temporary street closures or closures of two or more traffic lanes;
- The classification of the street (major arterial, state highway) affected;
- The existing traffic levels and level of service (LOS) on the affected street segments and intersections;
- Whether the affected street directly leads to a freeway on- or off-ramp or other state highway;
- Potential safety issues involved with street or lane closures; and
- The presence of emergency services (fire, hospital, etc.) located nearby that regularly use the affected street.

Temporary Loss of Access:

- The length of time of any loss of vehicular or pedestrian access to a parcel fronting the construction area;
- The availability of alternative vehicular or pedestrian access within ¼ mile of the lost access; and
- The type of land uses affected, and related safety, convenience, and/or economic issues.

Temporary Loss of Bus Stops or Rerouting of Bus Lines:

- The length of time that an existing bus stop would be unavailable or that existing service would be interrupted;
- The availability of a nearby location (within ¼ mile) to which the bus stop or route can be temporarily relocated;

- The existence of other bus stops or routes with similar routes/destinations within a ¼ mile radius of the affected stops or routes; and

- Whether the interruption would occur on a weekday, weekend or holiday, and whether the existing bus route typically provides service that/those day(s).

Temporary Loss of On-Street Parking:

- The current utilization of existing on-street parking;

- The availability of alternative parking locations or public transit options (e.g. bus, train) within ¼ mile of the project site; and

- The length of time that existing parking spaces would be unavailable.

B. Methodology to Determine Significance

Environmental Setting

Describe the physical setting, including the classification of adjacent streets, on-street parking conditions in the immediate vicinity of the construction project, a description of the land uses affected by construction, and an inventory of existing bus stops and transit lines within a ¼ mile radius of the construction site. See L.1. INTERSECTION CAPACITY if construction impacts on intersection operating conditions are to be evaluated. See L.2. STREET SEGMENT CAPACITY if construction impacts on street segment operating conditions are to be evaluated.

Project Impacts

Review proposed construction procedures/plans to determine whether construction activity within the street ROW would require any of the following:

- Street or lane closures;

- Block existing vehicle or pedestrian access to parcels fronting the street;

- Closure or movement of an existing bus stop or rerouting an existing bus line;

- Removal of existing, heavily used, on-street parking spaces; or
- Creation of traffic hazards.

Compare the results to the significance factors to determine the level of impact. Consider safety and economic concerns, existing traffic levels, as well as congestion impacts.

Intersection and/or street segment capacity analyses may be used to determine whether street construction would result in significant impacts on the LOS. Project impacts would be determined by comparing the intersection or street segment LOS for pre-construction and construction conditions, which could incorporate expected traffic shifts.

Cumulative Impacts

Review the related projects list for those proposals with concurrent construction schedules. Identify those projects that would impact the same streets, bus stops, bus routes, parking spaces and/or access points. Determine the impact of the related projects in combination with that of the proposed project.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Traffic management plan;
- Detour plan;
- Modification of construction procedures (e.g., cut-and-cover techniques rather than open cut techniques);
- Limit major road traffic obstructions to off-peak hours;
- Coordinate with emergency service and public transit provider agencies;
- Provide alternative vehicular and/or pedestrian access to affected parcels;
- Coordinate access with adjacent property owners and tenants;

- Provide advance notification of temporary bus stop loss and/or bus line relocation;

- Provide and sign temporary bus stops within a reasonable walking distance of closed bus stops;

- Identify temporary alternative bus route(s), and provide and sign bus stops along that route;

- Provide advance notice of temporary parking loss; and

- Identify temporary parking replacement or alternative adjacent parking within a reasonable walking distance.

3. DATA, RESOURCES, AND REFERENCES

Public Works Standards Inc., Work Area Traffic Control Handbook, Ninth Edition, 2003

California Department of Transportation (Caltrans), State of California Manual of Traffic Controls for Construction and Maintenance Work Zones, 1990.

Federal Highway Administration (FHWA), Manual on Uniform Traffic Control Devices (MUTCD), Revision 1, 2003.

FHWA, National Highway Institute, Design and Operation of Work Zone Traffic Control, Participant Notebook, 1987.

See also L.1. INTERSECTION CAPACITY.

M. PUBLIC UTILITIES

M.1. WATER

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

XVI.b): Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

XVI.d): Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

B. Introduction

Potable water is provided in the City by the Los Angeles Department of Water and Power (LADWP). The City receives a significant portion of its supply from the Metropolitan Water District of Southern California (MWD). Additional information on the City's water supply and distribution infrastructure is provided in 3. Data, Resources, and References.

The quantity of water consumed by a project is determined by several factors, including the size, type and characteristics of a project. The need for construction of new or replacement water facilities (e.g., reservoirs, storage tanks, water mains, filtration plants, pumps, wells, and other connections or distribution facilities) would depend on the existing capacity and anticipated demand for the project area.

The Federal government has mandated low-flush toilets via the Energy/Policy act of 1992. The City of Los Angeles Ordinance Nos. 163,532 and 164,093, adopted in 1988, require new buildings to utilize low-flush toilets and urinals (1.5 gallons per flush) in order to obtain building permits. In addition, Title 20 of the California Administrative Code (CAC) Section 1604 establishes efficiency standards (i.e., maximum flow rates) for all new showerheads, lavatory faucets, and sink faucets and prohibits the sale of fixtures that do not comply with the regulations. City Ordinance No. 163,532 also contains provisions requiring xeriphytic (low-water consumption) landscaping.

Under Senate Bill 901, (Public Resources Code (PRC) and California Water Code (CWC) 10910), effective January 1, 1996, when a lead agency prepares a notice of preparation (NOP) for an

EIR for projects of a certain size, the water agency must assess whether the water demand anticipated for the project is covered by the water agency's master water management plan. If the water agency concludes that supplies are insufficient, it must provide the lead agency with: its plans for additional water supplies, including estimated total costs and financing methods associated with acquiring additional water supplies; all federal, state, and local permits, approvals, or other entitlements necessary to acquire or develop the additional water supplies; and estimated timeframes for acquiring the additional water supplies. This information is then incorporated into the project's environmental documentation.

LADWP updates its Urban Water Management Plan every five years to account for changing conditions. This Plan projects water supply and distribution needs based on anticipated growth in population, housing, and employment and identifies water supply strategies to meet this demand. LADWP currently expects to have adequate water supplies for all anticipated development in the City.

C. Screening Criteria

- Would implementation of the proposed project cause the Community Plan area to exceed the projected growth in population, housing, or employment for the year of project occupancy/buildout?

- Would the project's water consumption require the construction of additional off-site water infrastructure?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Water, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Water from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, project site, and adjacent or surrounding area, including water infrastructure serving the area. Determine whether new off-site water infrastructure would be required to meet project needs. Consult with LADWP as necessary. Infrastructure could include water mains, storage tanks, reservoirs, filtration plants, pumps, wells, and other connections

or distribution facilities. Based on the project land use types, determine the population, housing units, and employment to be generated by the project. Add this to existing levels and compare to the totals projected in the Community Plan for the year of project occupancy. Consult with the City Planning Department as needed. Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The total estimated water demand for the project;
- Whether sufficient capacity exists in the water infrastructure that would serve the project, taking into account the anticipated conditions at project buildout;
- The amount by which the project would cause the projected growth in population, housing or employment for the Community Plan area to be exceeded in the year of the project completion; and
- The degree to which scheduled water infrastructure improvements or project design features would reduce or offset service impacts.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description of major water infrastructure serving the project site, including the type of facilities, location and sizes, and any planned improvements;
- Description of the water conditions for the project area and known improvement plans; and

- The existing population, housing, and employment for the Community Plan area in which the project site is located.

Project Impacts

Review the project description and the information from the Environmental Setting and Evaluation of Screening Criteria. Determine what improvements would be needed, if any, to adequately serve the project. Describe the degree to which presently scheduled off-site improvements offset impacts. As necessary, consult with LADWP or the latest Urban Water Management Plan.

Consider the water conditions for the project area, known improvement plans, and the project's water demand. The project's water demand can be calculated on the basis of estimated population and per capita demands (for residential land uses), unit demand factors by acre (for residential and non-residential land uses), or from a direct analysis of facilities and fixtures (for non-residential land uses). For planning purposes, LADWP generally forecasts demand based upon population trends and average per capita factors. LADWP does not maintain any standard unit demand factors for specific types of land uses. Residential demands can be approximated based upon LADWP per capita data. The average FY 2001-2002 residential water demand was estimated at 101 gallons per capita per day (gpcd), derived by dividing total residential water use by total estimated population within LADWP's service area.[1] This is based upon the combined Citywide mix of multiple family and single family dwelling units. In general, demand from single-family units tends to be higher, primarily because of a higher rate of outside water use for landscaping. Water demand from multi-family units tends to be lower than this average. MWD may also be consulted for typical water demand factors.

Any water conservation measures included in the proposed project, particularly those that are beyond requirements of present regulations, should be described and their impact on water use factored into the project demand, to the extent possible. These would include such measures as water reuse, drip irrigation systems, and/or computerized (moisture-sensitive) irrigation systems.

If not done under Evaluation of Screening Criteria, determine the change in population, housing units, and employment generated by the project. Compare these figures to the totals projected in the Community Plan for the year of project occupancy. Consult with the City

[1] *LADWP, Urban Water Management Plan, Fiscal Year 2001-2002 Update.*

Planning Department as needed. Determine the impact from growth which exceeds the projections.

Cumulative Impacts

Review the list of related projects. Identify those that would utilize the same water infrastructure. Using the methodology described above in Project Impacts, determine the combined effect of the related projects and the proposed project on water infrastructure and the growth in population, housing and employment projected in the Community Plan.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Incorporate a recirculating hot water system to reduce waste in long piping systems where water must be run for considerable periods before hot water is received at the outlet. Use tankless water heaters;

- Retrofit other buildings within the City to offset the net water consumption induced by the proposed project;

- Use reclaimed water as a source for project irrigation systems;

- Set automatic irrigation systems to irrigate during early morning or evening hours to minimize water loss due to evaporation and reset to water less in cooler months and during rainfall season;

- Use drip irrigation and soak hoses in lieu of sprinklers to lower the amount of water lost to evaporation and overspray;

- Practice xeriscaping that exceeds City requirements;

- Recycle all water used in cooling systems to the maximum extent possible;

- If a fleet will be maintained, incorporate a water recycling system in on-site facilities for washing vehicles; and
- Perform regular preventive maintenance on all pumps, valves, and piping, in the project's water system to minimize water waste.

3. DATA, RESOURCES, AND REFERENCES

LADWP, Water Supply Division, Water Resources Unit, 111 North Hope Street, Los Angeles, California 90012; Telephone: (213) 367-2661. Current information on annual Citywide water consumption can be obtained from annual reports prepared by LADWP, or by contacting the Water Supply Division directly.

City of Los Angeles Landscape Ordinance (No. 170,978) establishes consistent landscape standards for projects, including water management, conservation and xeriscape.

The Urban Water Management Plan (UWMP) for the City of Los Angeles is prepared every five years and contains data regarding future water demand projections, water supply sources, and other water system planning information. (Available through LADWP.)

Fiscal Year 2001-2002 Annual UWMP update for questions call (213) 367-0800.

Environmental and Public Facilities Maps (1996):

- Potable Water Distribution System; and
- Potable Water Delivery System Service Areas.

Water Supply and Distribution Background Information

LADWP is responsible for supplying water within the City limits, and for ensuring that the delivered water quality meets applicable California health standards for drinking water. Total Citywide 2002 potable water demand was estimated at 670,099 acre feet (AF), and is projected to be about 749,900 AF by the year 2015.[2]

LADWP's water supply comes from these sources: local groundwater, reclaimed water, Owens Valley water, Colorado River Water, and California Aqueduct Water. Local groundwater is produced primarily from wells in the San Fernando Valley, and provides approximately 11 percent of the total supply during fiscal year 2001-2002. Two Owens Valley aqueducts owned by the City bring water from the eastern slopes of the High Sierras. Historically, the Owens Valley supplied a large majority of the City's water supply, but the amount of this source that the City can divert has been significantly reduced as a result of the settlement of environmental litigation. Most of the

[2] *LADWP, Urban Water Management Plan, June 1995.*

remainder of the water supply is purchased from MWD and delivered either from the Colorado River or from the Sacramento-San Joaquin Delta via the California Aqueduct.

LADWP has instituted significant water conservation measures that were particularly successful in reducing demands during drought. In 1995, reclaimed water supplied about 3,000-4,000 AF of water (about six percent of total demand), and the City expects to supply up to 12 percent (90,000 AF) of its total water demand with reclaimed water by the year 2015.

LADWP supplies water that meets or exceeds all health-related state and federal standards, accomplished in part in the following ways: (1) filtration of the Los Angeles Aqueduct supply at a state-of-the-art treatment plant; (2) control of access to water supply and storage areas; (3) control of algae growth and/or covering of reservoirs; (4) continuous disinfection of water entering mains; and (5) water quality testing, inspection, cross-control prevention, and older main replacement.

Water supply infrastructure includes water storage facilities, transmission and distribution pipelines, booster pumping stations, pressure reducing stations, and other related facilities. Water storage is essential for the conservation of water to supply daily peaks, meet high demand conditions, and provide for firefighting and emergencies. The City water system has 110 tanks and reservoirs ranging in size from 10 thousand to 60 billion gallons with a total capacity of 109 billion gallons. Water is distributed through a network of over 7,200 miles of water mains ranging from 4 inches to 120 inches in diameter. Because of the size and range in elevation (0 to 2,400 feet) the system has been divided into 102 pressure zones, with almost 90 booster pumping stations to provide water service at higher elevations.

Selected Legislation

State

California Administrative Code, Title 20, Section 1604 (efficiency standards)

Water Conservation in Landscaping Act, California Government Code, Division 1, Chapter 3, Article 10.8, Section 65591-65600. This Act calls for Department of Water Resources (DWR) to promote and prepare model ordinance. Provides for water efficient landscape ordinance to be adopted by local agencies.

M.2. WASTEWATER

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Question

XVI.a): Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

XVI.b): Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

XVI.c): Would the project 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?

XVI.d): Would the project 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?

B. Introduction

The City of Los Angeles operates wastewater treatment and reclamation facilities which serve most of its incorporated areas and several other cities and unincorporated areas in the Los Angeles basin and San Fernando Valley. The elements of the existing system are two treatment plants, two water reclamation plants, a collection system consisting of over 6,500 miles of local, trunk, mainline and major interceptor sewers, five major outfall sewers, and 46 pumping plants. (See Exhibit M.2-1).

Wastewater service and planning areas are determined by natural drainage patterns and do not generally conform to City boundaries. Cities that have contractual rights to discharge specific quantities of wastewater into the City's system are Beverly Hills, Burbank, Culver City, El Segundo, Glendale, San Fernando, Santa Monica, and Universal City. The City serves Marina Del Rey and the Naval Yard in San Pedro. In addition, County Sanitation Districts 4, 5, 9, 11, 16 and 27 serve parts or all of Hollywood, Inglewood, Windsor Hills, Baldwin Hills, Alhambra, Pasadena, and South Pasadena, which also have contractual rights to discharge specific quantities of wastewater into the City's system. The Los Angeles County Sanitation Districts serve the Harbor Gateway as well as several small "islands" north of Inglewood.

The sanitary sewer system serving the City of Los Angeles and its contract agencies is operated under the jurisdiction of the Department of Public Works. The Bureau of Sanitation provides advance planning and financial management, and maintains and operates the wastewater collection and treatment system. The Bureau of Engineering provides design and construction engineering. More detailed information on the City's wastewater collection and treatment system is included in 3. Data, Resources, and References.

Wastewater service requirements are related to the size and type of projects and geographic area served. New projects (e.g., residential, commercial, industrial) may increase wastewater generation and affect wastewater collection and treatment systems. The City's Wastewater Capital Improvement Program (CIP) includes planned improvements to the City's major sewers, pumping plants, and treatment/reclamation plants which are intended to provide capacity in the larger components for planned patterns of development. City Ordinance No. 166,060 (Sewer Allocation) limits the annual increase in wastewater flows discharged into the Hyperion Treatment System to 5 million gallons per day (mgd).

C. Screening Criteria

- Would the project produce wastewater flows greater than existing flows in an area shaded on Exhibits M.2-2 through M.2-11

- Would the project produce a new or increased average daily wastewater flow of 4,000 gallons per day (gpd) or more, regardless of location?

- Does the proposed project include a change in land use limitations (such as a zone change, variance or General Plan amendment), which could allow greater average daily flows than could be produced following the current land use limitations?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Wastewater, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant Wastewater impact from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project and project site and determine the wastewater generation that would be expected with full implementation of the project. If the proposed project would generate wastewater flows larger than existing flows, locate the project and appropriate point of connection to the wastewater collection system on the sewer capacity threshold study area maps, Exhibits M.2-2 through M.2-11, prepared by the Department of Public Works. If the project would change the land use limitations, compare the maximum average daily flows produced by the current land use and zoning designations with the amount that could be produced under the proposed project. The sewage generation factors contained in Exhibit M.2-12 may be used to calculate average daily wastewater flows for a variety of land uses. If needed, consult with the sewer permit counter staff (see 3. DATA, RESOURCES, AND REFERENCES).

Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

A project would normally have a significant wastewater impact if:

- The project would cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained; or

- The project's additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or General Plan and its elements.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Location of the proposed development and appropriate point of connection to the wastewater collection system on the pertinent Sewer Wye Map;

- Description of the existing wastewater system which would serve the project, including its capacity and current flows. Include plans for additions or expansions of the existing system, and the population projected for the planning subregion; and

- Summary of adopted wastewater-related plans and policies that are relevant to the project area.

Project Impacts

Using the information from the Evaluation of Screening Criteria and the description of the proposed project, project site and existing wastewater infrastructure; evaluate the project's wastewater system needs. Pertinent information includes the size, type of use, and location of the proposed project, the point of connection to the wastewater collection system, and the anticipated average daily wastewater flow, taking into consideration design or operational features that would reduce or offset service impacts. If applicable, compare the maximum average daily flows anticipated with the proposed project to the maximum flows that could be produced under the existing land use designation and zoning.

Compare the project's wastewater system needs to the appropriate sewer's capacity and/or the wastewater flows anticipated in the Wastewater Facilities Plan or General Plan (including specific plans, Community Plans, etc.). A sewer's capacity is considered constrained if the depth of flow is equal to or greater than three-quarters of the sewer's diameter; "measurable" means any change greater than ½ inch (0.013 meters). Consult with the Department of Public Works sewer permit counter staff, if necessary, to gauge the anticipated capacity and demand conditions at project buildout and/or to prepare a sewer availability assessment.

Wastewater flow in gpd may be calculated by applying wastewater generation flow factors (see Exhibit M.2-12) for each of the land uses/facility types for the project. The flows for all applicable land uses may then be added in order to obtain total projected wastewater flow.

Example:

To calculate the wastewater flow from a mixed-use development with 20 one-bedroom condominiums, 20 two-bedroom condominiums, and 4,000 gross square feet (gsf) of general commercial/retail, use the wastewater generation flow factors from Exhibit M.2-12 as follows:

Residential Uses:

One bedroom condos: 20 x 120	gpd/unit	=	2,400 gpd
Two bedroom condos: 20 x 160	gpd/unit	=	3,200 gpd

Commercial Uses:

Retail:	4,000 gsf x 80 gpd/1,000 gsf	=	320 gpd
TOTAL PROJECT:			5,920 gpd

Cumulative Impacts

Review the list of related projects. Identify those that would be served by the same wastewater facilities as the proposed project. In the same manner as for Project Impacts, evaluate the cumulative impact on wastewater infrastructure. To the extent known, consider design or operational features of the related projects that would reduce or offset service impacts typically expected. Identify any wastewater capital improvement projects that would reduce or offset the expected service impacts. Determine the combined effect of the proposed project and the related projects on the wastewater infrastructure.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Retrofit other buildings with low-flow plumbing fixtures to offset wastewater generation associated with the project;

- Install a holding tank large enough to hold three times the project daily wastewater flow so that the tank would hold all project wastewater during peak wastewater flow periods for discharge into the wastewater collection system during off-peak periods;

- Include a grey water system to reuse wastewater from the project;

- Offset excess wastewater generation by restricting the wastewater generation of other land uses within the same service area (e.g., by dedicating open space); and

- Construct new wastewater treatment or conveyance infrastructure, or capacity enhancing alterations to existing systems.

3. DATA, RESOURCES, AND REFERENCES

For the most recent data and information regarding wastewater treatment and conveyance, contact the Bureau of Sanitation, Wastewater Engineering Services Division.

Wastewater Engineering Services Division
2714 Media Center
Los Angeles, CA 90065
Telephone: (323) 342-6256

Detailed information about the location, size and slope of existing sewers is available on line at http://navigatela.lacity.org/ and at the Bureau of Engineering's public counters:

Central District……201 North Figueroa Street, 3rd Floor, Counter C
Los Angeles, California. 90012
Telephone: (213) 977-7030

Valley District……..6262 Van Nuys Boulevard, Suite 251
Van Nuys, California 91401
Telephone: (818) 374-5090

West Loas Angeles District……1828 Sawtelle Blvd., 3rd Floor
West Los Angeles, California 90025
Telephone: (310) 575-8384

Harbor District……..638 South Beacon Street, Suite 402
San Pedro, California 90731
Telephone: (310) 732-4677

Information about the land uses anticipated in the general plan is available on line at http://navigatela.lacity.org/ and at the City Planning Department's Community Planning Bureau public counters. See Chapter H for contact information.

Ordinance No. 166,060 (Sewer Allocation) limits the annual increase in the wastewater quantity discharged into the HTP system to five mgd. Bureau of Engineering Special Order No. SO06-0691 changed the design peak dry weather flow for sanitary sewers from three-quarter depth to one-half the sewer diameter to implement the City-adopted goal of no overflows or diversions

from the wastewater collection system. Since these two criteria impact the sewer capacity availability assessment and approval, they should be considered in the evaluation of project impacts. Engineering personnel at the sewer permit counters implement the ordinance.

City of Los Angeles, City Planning Department. General Plan Framework Element, 1996 readopted, August 8, 2001.

The current Wastewater Facilities Plan, which addresses the City's wastewater treatment and collection needs over a 2010 planning horizon, was adopted by the City Council on January 22, 1991. The Plan is currently being revised through an integrated resource planning effort to address demand and capacity through 2020 with new construction and expansion of facilities and operations; water reclamation; and conservation. (Integrated Plan for the Wastewater Program.)

Bureau of Engineering, Wastewater Program Management Division. Wastewater Capital Improvement Program Management Plan. Part D. General Procedural Memorandum No. 16. Sewer Availability Assessment for Proposed Developments.

Wastewater Facilities Background Information

Hyperion Treatment Plant

The Hyperion Treatment Plant (HTP) is located on a 144-acre (58.3 ha) site adjacent to Santa Monica Bay, southwest of the Los Angeles International (LAX) Airport. The drainage area served by the plant is approximately 328,000 acres (133,000 ha) of the greater metropolitan area. The largest wastewater treatment facility in the City, HTP provides full secondary treatment for an average dry weather flow of 413 mgd (1.56 million m^3/d). Solids handling facilities are provided fro 468 dry tons per day.

A small portion of the HTP's effluent is reused, principally for recharging barrier wells, but most of the effluent is discharged into Santa Monica Bay. The five-mile outfall consists of a 12-foot (3.66m) diameter reinforced concrete pipe, a wye structure, and two diffuser legs that discharge primary and secondary treated effluent at a depth of 187 feet (57 m). The city also maintains a one-mile outfall, which is a 12-foot (3.66m) diameter reinforced concrete pipeline terminating at a depth of 50 feet (15.2), in standby condition in case of emergency.

Raw sludge removed from the primary sedimentation system and excess waste activated sludge from the activated sludge system, are pumped into anaerobic sludge digesters for stabilization. The resulting biosolids are either reused in agriculture, or used by landfills as daily cover. No biosolids are discharged into the ocean.

The HTP receives sewage from five major interceptor sewer systems:

- **Central Outfall Sewer (COS)**, serving South Central Los Angeles, El Segundo, and portions of Culver City;

- **North Central Outfall Sewer-North Outfall Sewer (NCOS-NOS)**, serving the southern portions of the cities of Burbank and Glendale, eastern portions of the San Fernando Valley, sections of eastern, central, and south-central Los Angeles, and portions of Culver City;

- **North Outfall Sewer-La Cienega, San Fernando Valley Relief (NOS-LCSFVRS)**, serving the central, northeastern, and western areas of the San Fernando Valley, the western portion of the City, and Beverly Hills, Hollywood, and Playa Del Rey;

- **Coastal Interceptor Sewer System (CIS)**, serving Pacific Palisades, Venice, Mar Vista, the City of Santa Monica and adjacent areas of Los Angeles County; and

- **North Outfall Replacement Sewer (NORS)**, designed to take the pressure off of the North Outfall Sewer.

Within the HTP Service Area, the City operates and maintains pumping plants at those locations where, because of inadequate hydraulic head, sewage flow must be pumped in order to reach the approximate treatment facility. These pumping plants vary in size from capacities of about 30 to 100 gallons per minute (gpm) (114-379 l/min) to capacities of up to 35,000 gpm (132,000 l/min).

Tillman Water Reclamation Plant

The Donald C. Tillman Water Reclamation Plant (TWRP) is located in the West San Fernando Valley at the intersection of Victory Boulevard and Woodley Avenue on the edge of the Sepulveda Flood Control Basin. TWRP has a current design capacity of 80 mgd (0.302 million m^3/d).

The TWRP is an upstream plant that treats constant flows, since it has the ability to bypass flow to the HTP for treatment. The TWRP receives its influent wastewater from the Additional Valley

Outfall Relief Sewer (AVORS) as well as the East Valley Interceptor Sewer (LCSFVRS) tunnel and the downstream system. This hydraulic relief eliminates dry weather overflows from the North Outfall Treatment Facility (NOTG) into Ballona Creek in Culver City.

The tertiary effluent from TWRP is used by the City for irrigating nearby parks, golf courses, greenbelt areas, and for filling the manmade Balboa Lake, or is discharged to the Los Angeles River. All waste solids are returned to AVORS for transport to HTP.

Los Angeles-Glendale Water Reclamation Plant

The Los Angeles-Glendale Water Reclamation Plant (LAGWRP) is located at the southwest junction of the Los Angeles River Flood Control Channel and Colorado Boulevard between Griffith Park and Glendale.

The LAGWRP is a full tertiary treatment facility with capacity to provide tertiary treatment for an average dry weather flow of 20 mgd (0.76 million m^3/d). The plant receives its influent wastewater from the North Outfall Sewer (NOS), thus providing hydraulic relief for the downstream interceptor conveyance facilities and the HTP, while producing recycled water. The plant effluent is pumped to the recycled water distribution system or flows by gravity to the Los Angeles River. All Solids removed from the treatment process are returned untreated to the North Outfall Sewer for conveyance to and treatment at the Hyperion Treatment Plant.

There are two other wastewater treatment facilities in the LAGWRP service area: the Burbank Water Reclamation Plant and the Los Angeles Zoo Treatment Facility.

The Burbank Water Reclamation Plant located in and owned and operated by the City of Burbank. It treats an average flow of 8.5 mgd and its effluent is used for industrial purposes or discharged to the Burbank Western Flood control Channel, a tributary channel to the Los Angeles River. Solids from the Burbank Water Reclamation Plant are conveyed to and treated at the Hyperion Treatment Plant.

The Los Angeles Zoo Treatment Facility is adjacent to the west side of the Golden State Freeway just south of the Ventura Freeway. It provides primary treatment, chlorination and dechlorination of 2.5 mgd of runoff and wash-down water from animal enclosures. The effluent is discharged to the Los Angeles River and the solids are discharged to the North Outfall Sever for conveyance to and treatment at the Hyperion Treatment Plant.

Terminal Island Treatment Plant

The Terminal Island Treatment Plant (TITP) is located on Terminal Island in the Los Angeles Harbor area and covers approximately 20 acres (8 ha). The existing facility provides tertiary treatment for an average dry weather flow of 30 mgd (0.114 million m^3/d). In addition to tertiary treatment, advanced treatment (microfiltration with reverse osmosis) can be provided for 5 mgd. The tertiary effluent flows to the Los Angeles Outer Harbor to a point approximately 3,000 feet (914 m) off-shore via a 60-inch (1,520 mm) diameter outfall. Advanced treated water is used for recharging barrier wells, landscape irrigation, boiler water and cooling water. Solids from the TITP (up to about 19 dry tons per day) are thickened, anaerobically digested, dewatered and hauled to Kern, San Diego, Los Angeles, and Riverside Counties for land application and reuse as a soil amendment.

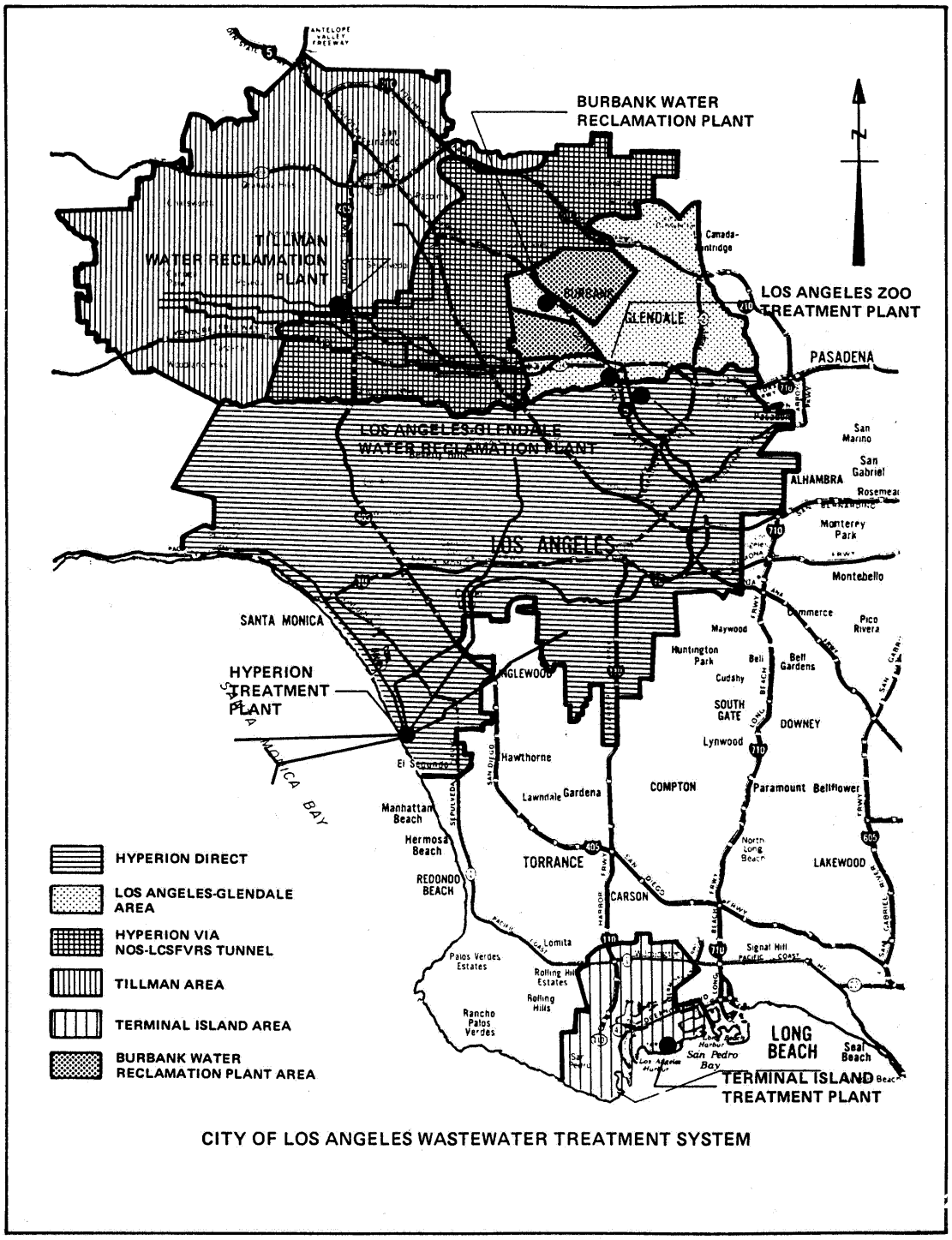

BURBANK WATER RECLAMATION PLANT
TILLMAN WATER RECLAMATION PLANT
LOS ANGELES ZOO TREATMENT PLANT
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
HYPERION TREATMENT PLANT
TERMINAL ISLAND TREATMENT PLANT
BURBANK
GLENDALE
PASADENA
LOS ANGELES
SANTA MONICA
INGLEWOOD
TORRANCE
CARSON
COMPTON
LONG BEACH
ALHAMBRA
MONTEBELLO
DOWNEY
LAKEWOOD
HYPERION DIRECT
LOS ANGELES-GLENDALE AREA
HYPERION VIA NOS-LCSFVRS TUNNEL
TILLMAN AREA
TERMINAL ISLAND AREA
BURBANK WATER RECLAMATION PLANT AREA
CITY OF LOS ANGELES WASTEWATER TREATMENT SYSTEM

Exhibit M.2-1

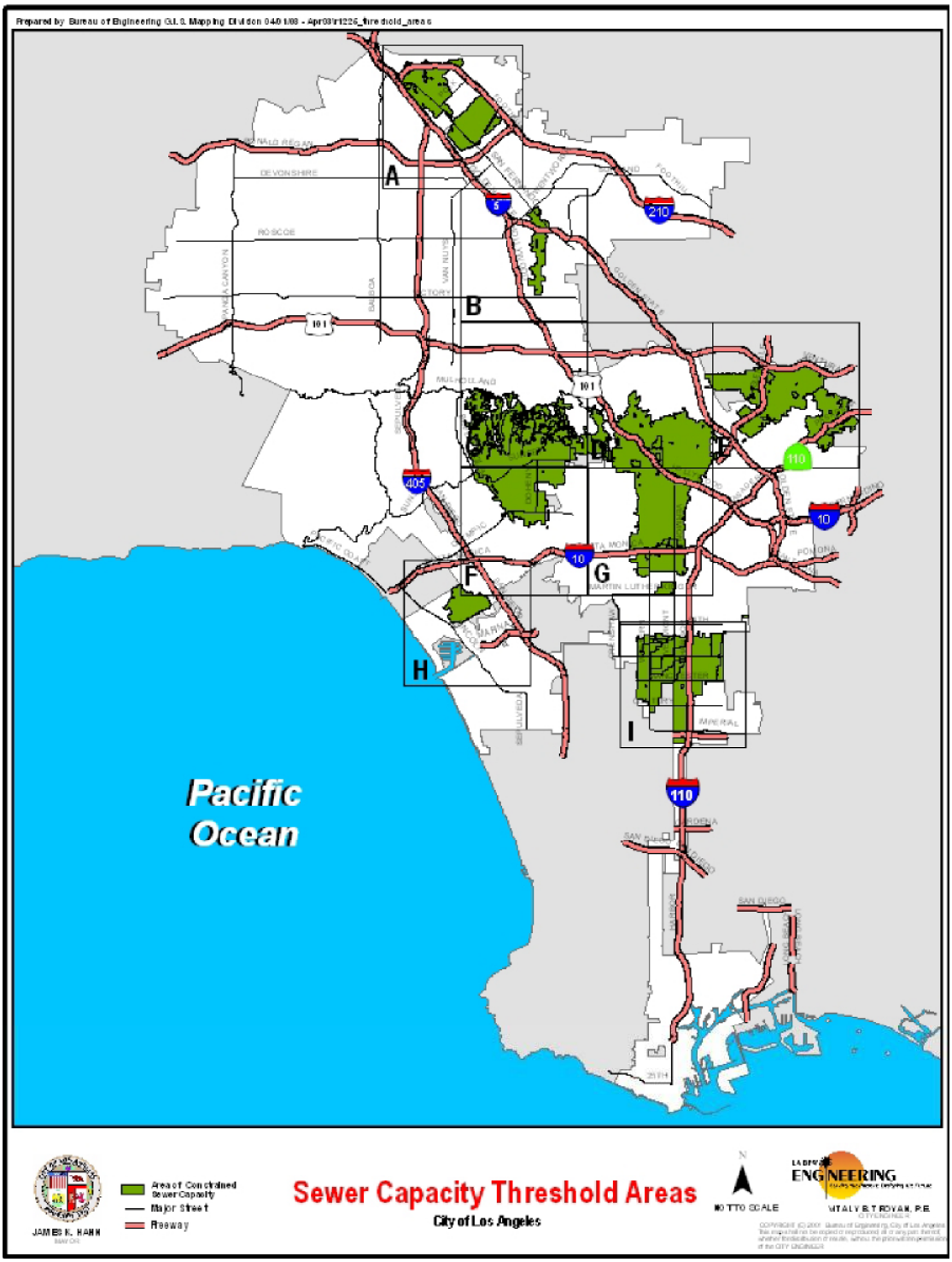

Pacific Ocean
Area of Constrained Sewer Capacity
Major Street
Freeway
Sewer Capacity Threshold Areas
City of Los Angeles
A
B
D
F
G
H
I
405
10
110
101
210

Exhibit M. 2-2

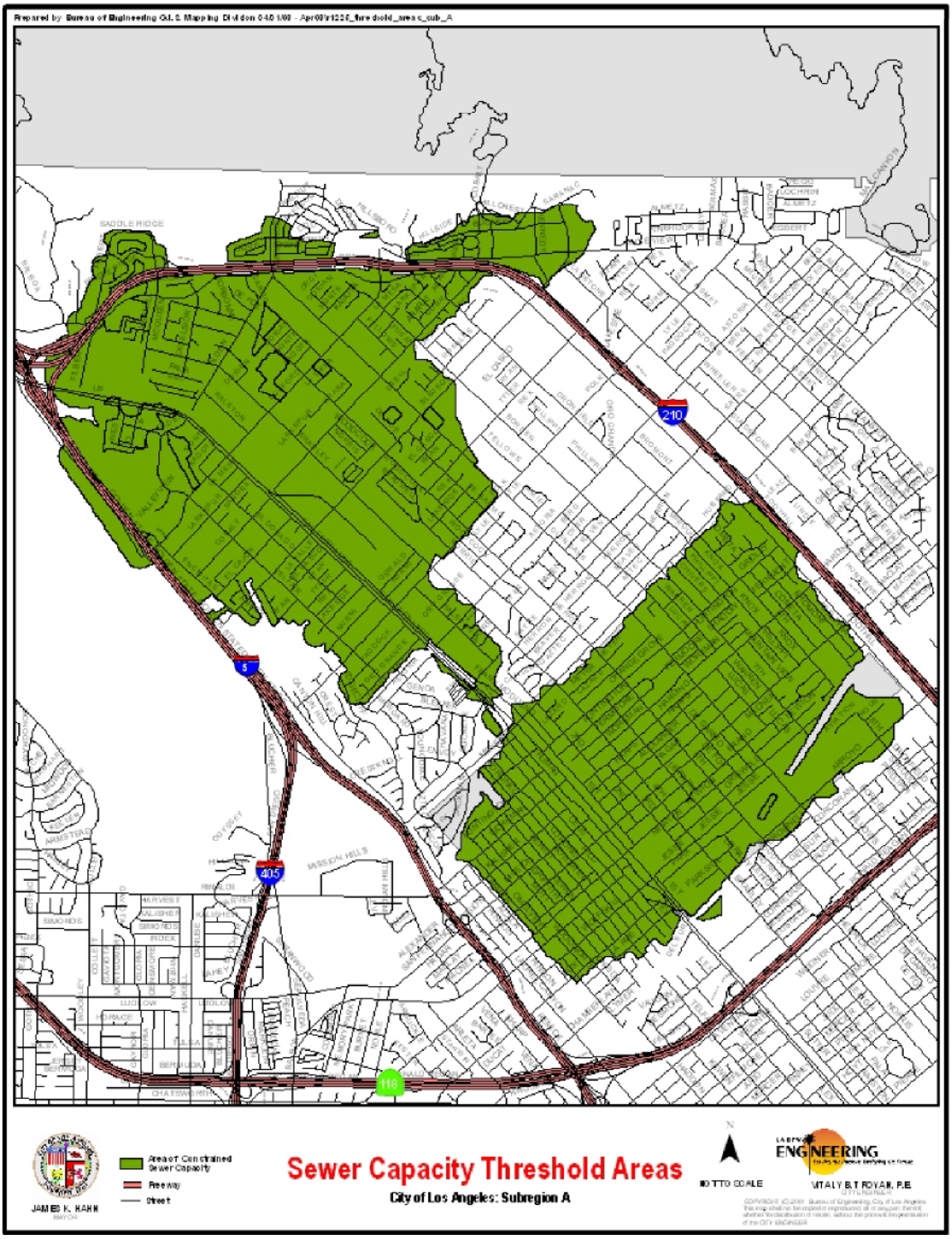

Area of Constrained Sewer Capacity
Freeway
Street
Sewer Capacity Threshold Areas
City of Los Angeles: Subregion A
ENGINEERING
VITALY B.T ROYAK, P.E.
405
210
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118

Exhibit M. 2-3

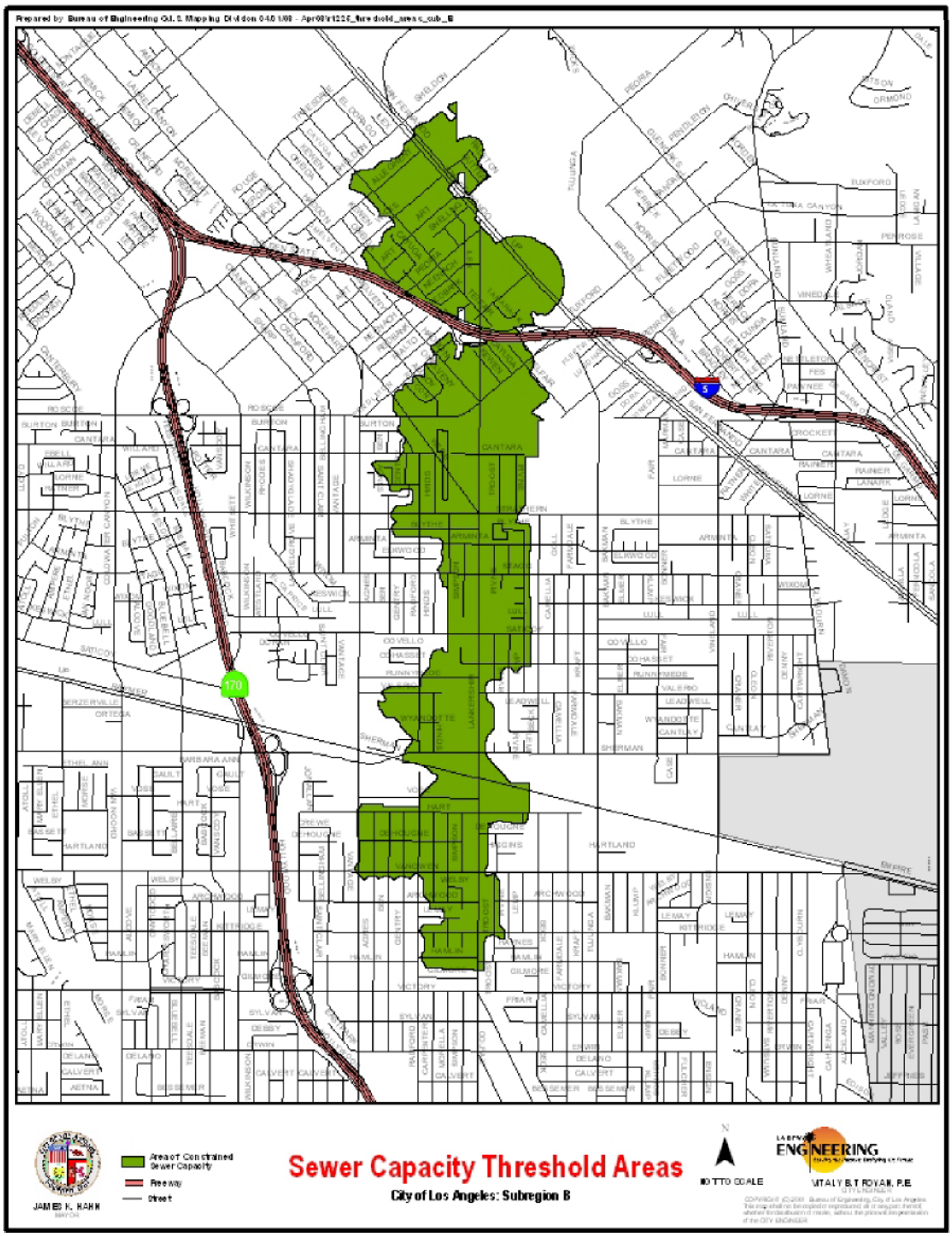

Area of Constrained Sewer Capacity
Freeway
Street
Sewer Capacity Threshold Areas
City of Los Angeles: Subregion B
NOT TO SCALE
ENGINEERING
VITALY B.T ROYAN, P.E
JAMES K. HAHN

Exhibit M.2-4

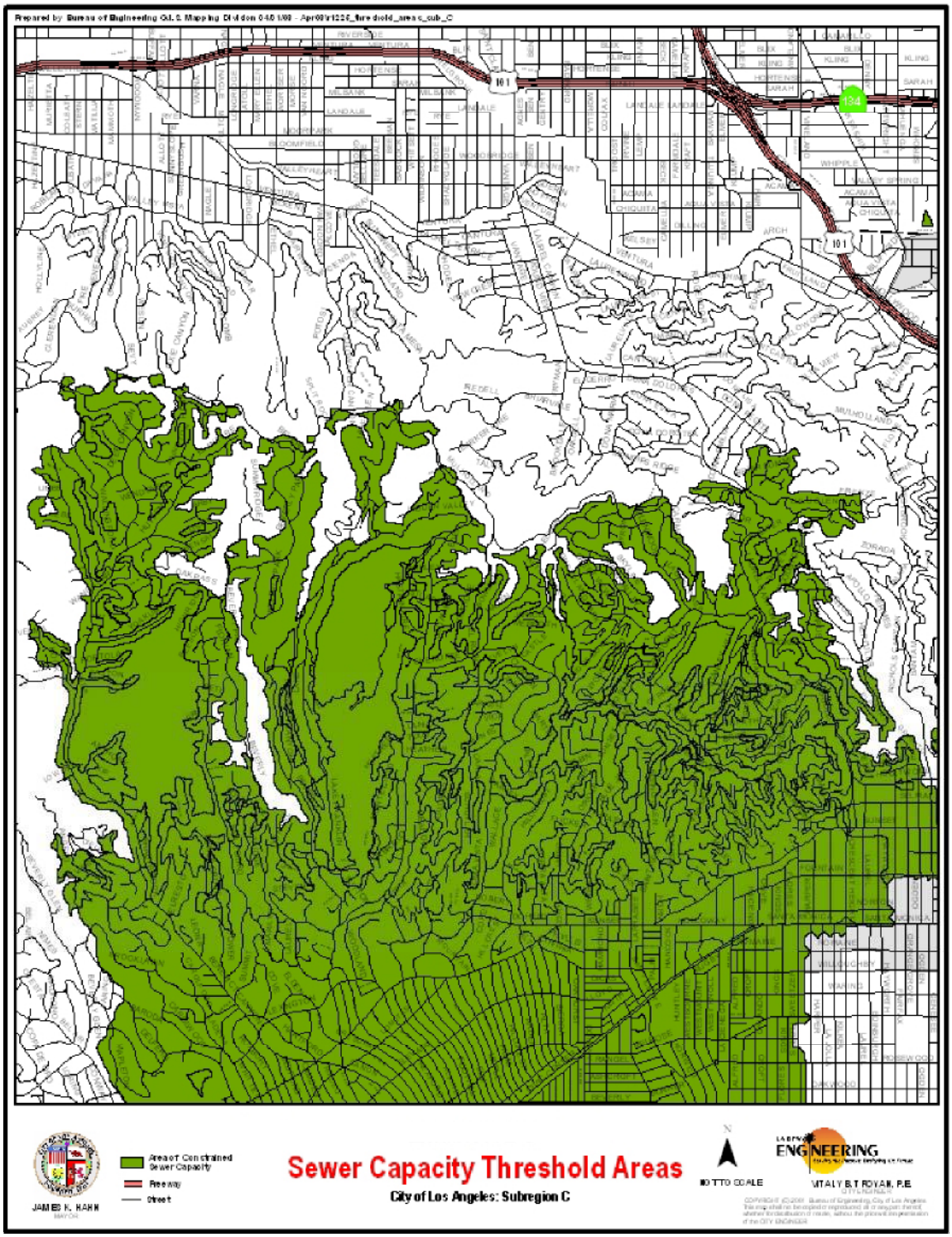

Prepared by: Bureau of Engineering GIS & Mapping Division
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134
Area of Constrained Sewer Capacity
Freeway
Street
Sewer Capacity Threshold Areas
City of Los Angeles: Subregion C
NOT TO SCALE
ENGINEERING
VITALY B. T. ROYAK, P.E.
JAMES K. HAHN

Exhibit M. 2.5

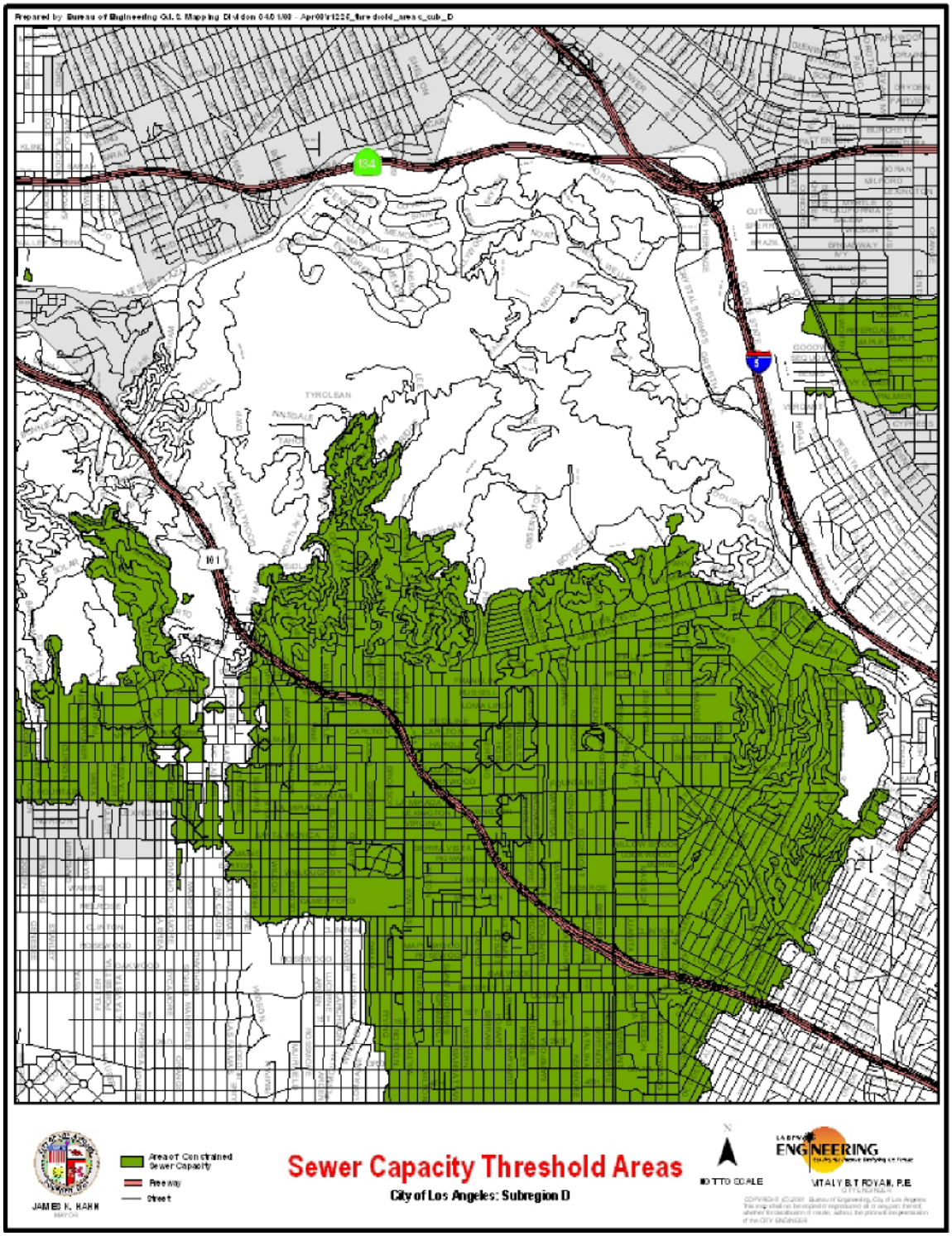

Area of Constrained Sewer Capacity
Freeway
Street
Sewer Capacity Threshold Areas
City of Los Angeles: Subregion D
NOT TO SCALE
ENGINEERING
VITALY B.T. ROYAK, P.E.
JAMES K. HAHN

Exhibit M.2-6

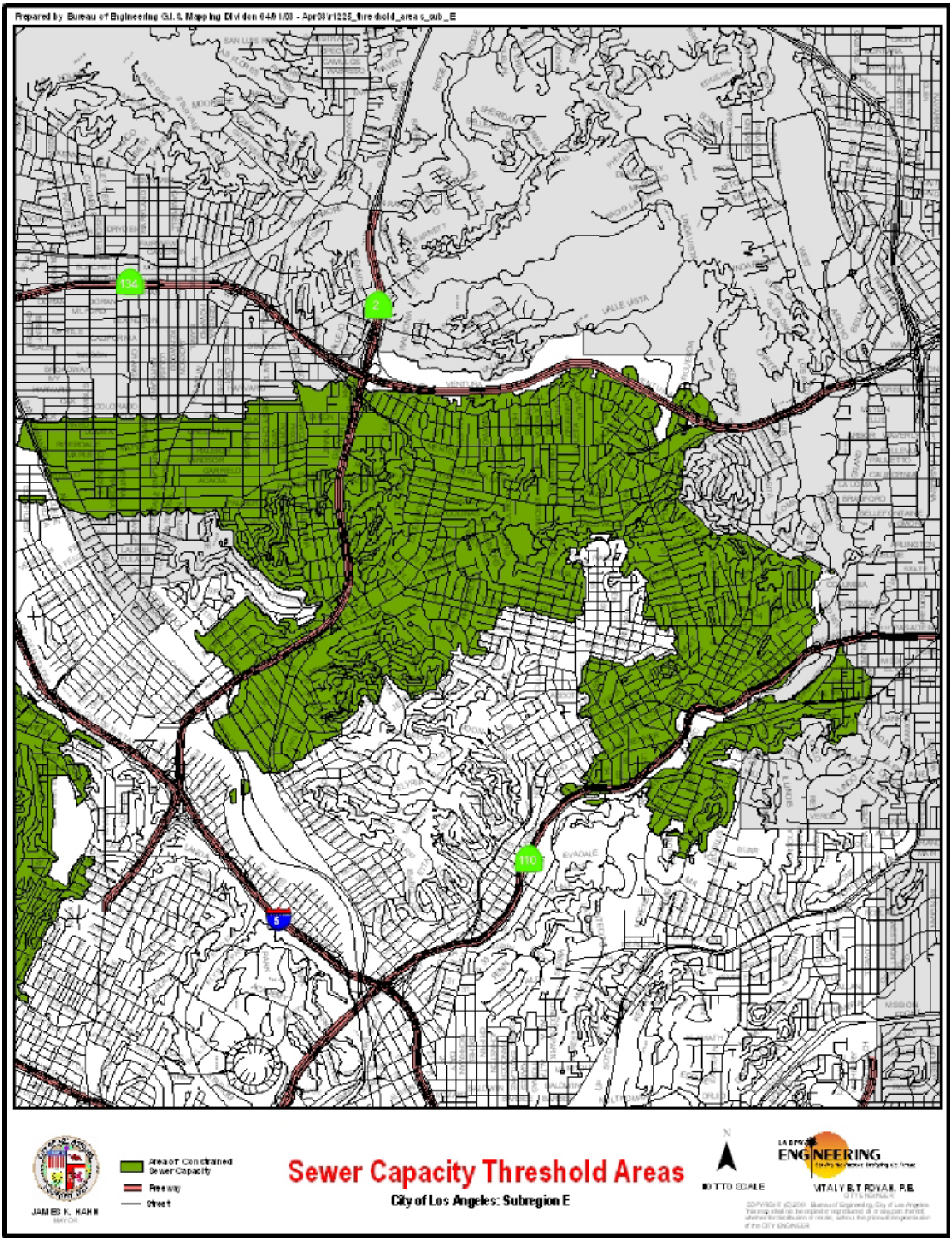

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Area of Constrained Sewer Capacity
Freeway
Street
Sewer Capacity Threshold Areas
City of Los Angeles: Subregion E
JAMES K. HAHN
MAYOR
ANTONIO R. VILLARAIGOSA
MAYOR
ENGINEERING
VITALY B.T. ROYAK, P.E.
CITY ENGINEER

Exhibit M.2-7

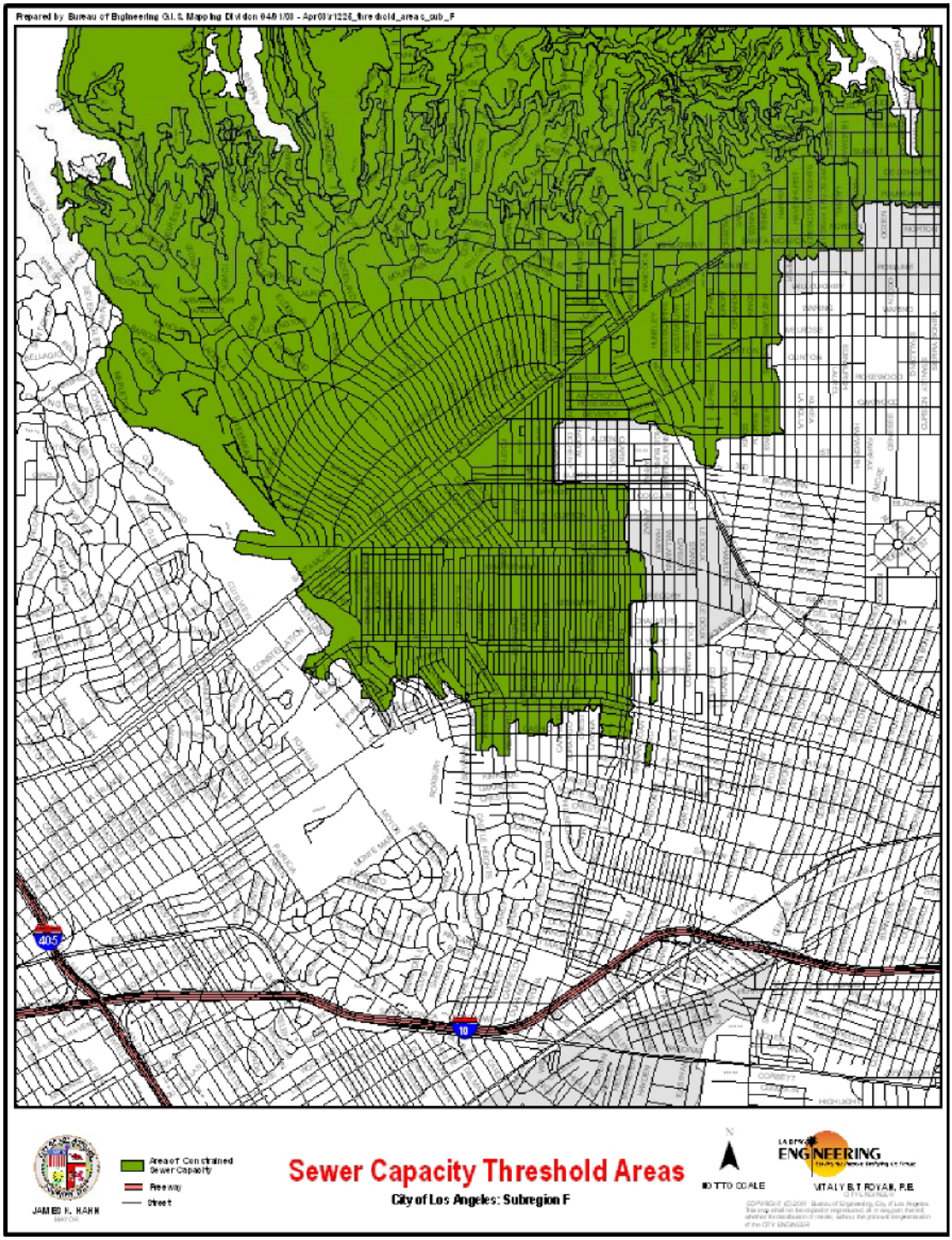

Area of Constrained Sewer Capacity
Freeway
Street
Sewer Capacity Threshold Areas
City of Los Angeles: Subregion F
NOT TO SCALE
ENGINEERING
VITALY B.T. ROYAN, P.E.
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Exhibit M.2-8

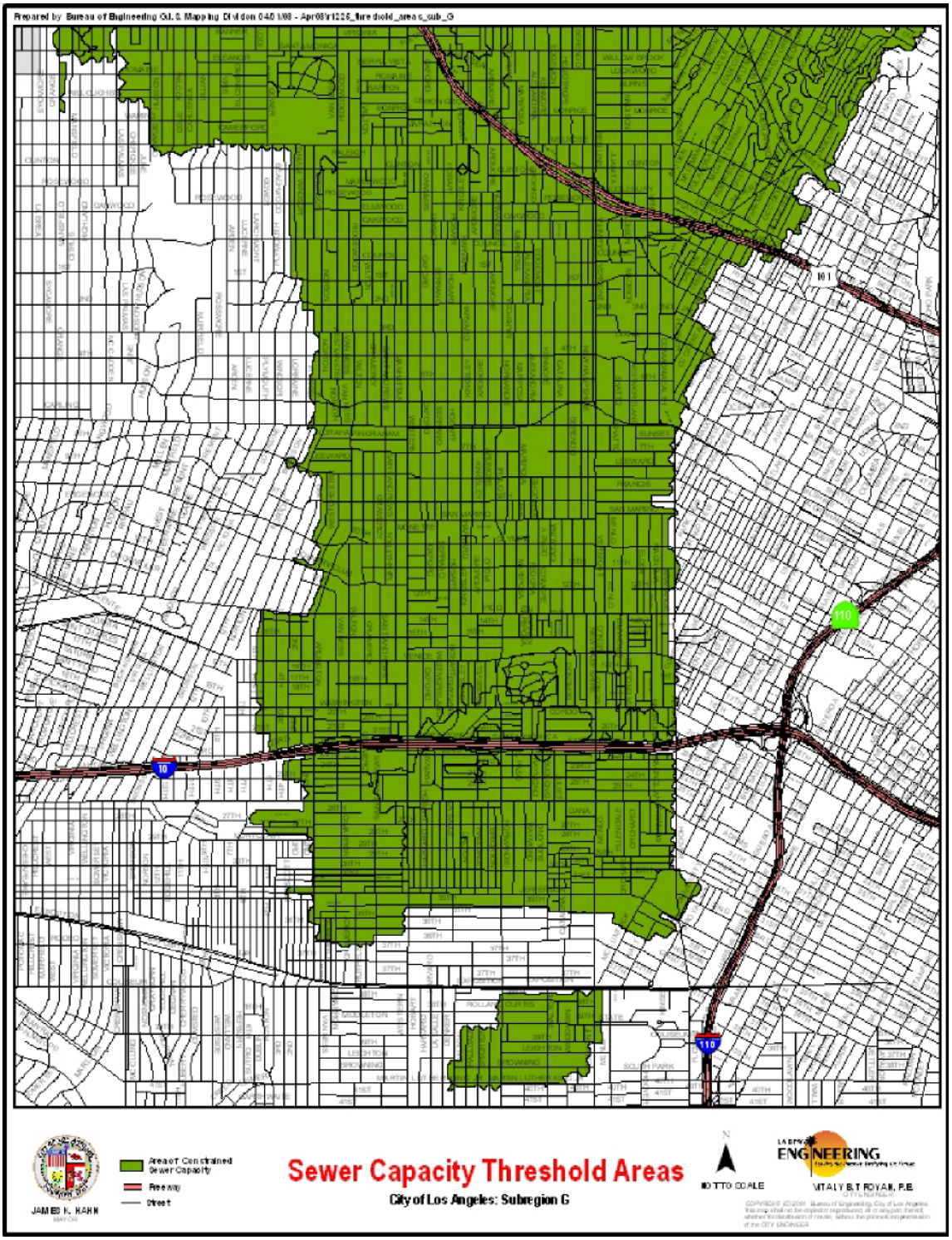

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Area of Constrained Sewer Capacity
Freeway
Street
Sewer Capacity Threshold Areas
City of Los Angeles: Subregion G
NOT TO SCALE
ENGINEERING
VITALY B. T. ROYAN, P.E.
JAMES K. HAHN
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Exhibit M.2-9

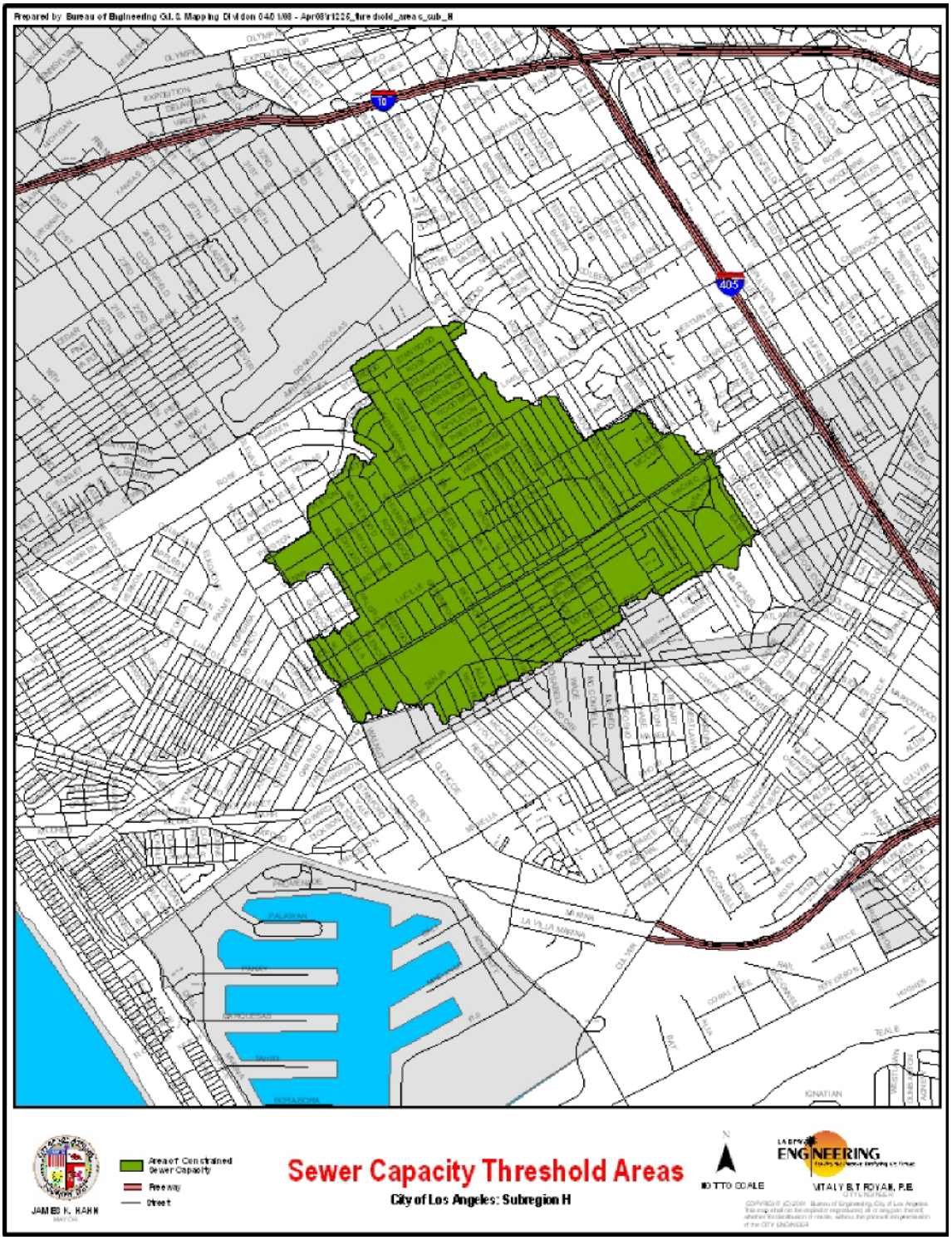


Exhibit M.2-10

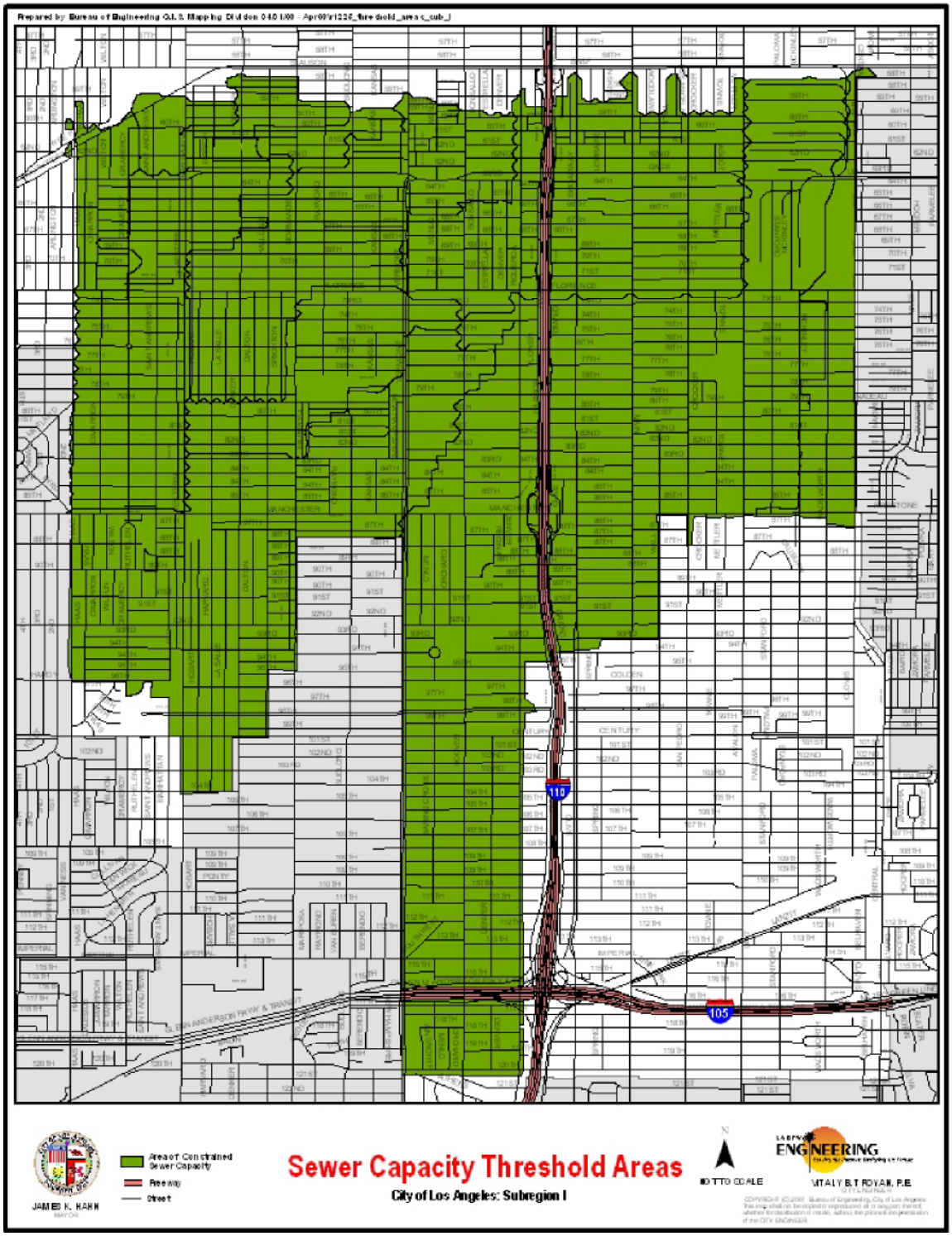


Exhibit M. 2-11

Exhibit M.2-12
SEWAGE GENERATION FACTORS

Type Description	Average Daily Flow (Gpd/unit)
Acupuncture Office/Clinic	150/1000 Gr.sq.ft.
Arcade - Video Games	80/1000 Gr.sq.ft.
Auditorium	4/seat
Auto Parking	20/1000 Gr.sq.ft.
Auto Body/Mech Repair Shop	800/1000 Gr.sq.ft. + Process Flow
Bakery	280/1000 Gr.sq.ft.
Bank: Headquarters	150/1000 Gr.sq.ft.
Bank: Branch	80/1000 Gr.sq.ft.
Banquet Room/ Ballroom	800/1000 Gr.sq.ft.
Bar: Cocktail, Fixed Seat	18/seat
Bar: Juice (No Baking Facilities)	120/1000 Gr.sq.ft.
Bar: Juice (With Baking Facilities)	280/1000 Gr.sq.ft.
Bar: Cocktail Public Table Area	500/1000 Gr.sq.ft.
Barber Shop	100/1000 Gr.sq.ft.
Beauty Parlor	280/1000 Gr.sq.ft.
Building Construction Field Office	150/office
Bowling Alley: Alley, Lanes & Lobby Area	80/1000 Gr.sq.ft.
Bowling Facility: Arcade/ Bar/ Restaurant/ Dancing	See Individual Categories
Cafeteria: Fixed Seat	30/seat
Car Wash: Automatic	Process Flow
Car Wash: Coin Operated Bays	Process Flow
Car Wash: Hand Wash	Process Flow
Car Wash: Counter & Sale Area	80/1000 Gr.sq.ft
Chapel: Fixed Seat	4/seat
Chiropractic Office	150/1000 Gr.sq.ft.
Church: Fixed Seat	4/seat
Church School: Day Care/elem	8/occupant
Church School: One Day Use/week	200/1000 Gr.sq.ft.
Cocktail Lounge: Fixed Seat	18/seat
Coffee House: No Pastry Baking & No Food Prep.	120/1000 Gr.sq.ft.
Coffee House: Pastry Baking Only	280/1000 Gr.sq.ft.
Coffee House: Serves Prepared Food	30/seat
Cold Storage: No Sales	20/1000 Gr.sq.ft.
Cold Storage: Retail Sales	80/1000 Gr.sq.ft.
Comfort Station: Public	100/fixture
Commercial Use	80/1000 Gr.sq.ft.
Community Center	4/occupant
Conference Room of Office Bldg.	Same as other areas in an office bldg.
Counseling Center[1]	150/1000 Gr.sq.ft.
Credit Union	150/1000 Gr.sq.ft.
Dairy	Process Flow
Dairy: Barn	Process Flow
Dairy: Retail Area	80/1000 Gr.sq.ft.

[1] *Counseling center include marriage counseling centers, alcohol/drug rehabilitation/dependency centers, nutrition center, diet centers, etc.*

Exhibit M.2-12, continued
SEWAGE GENERATION FACTORS

Type Description	Average Daily Flow (Gpd/unit)
Dancing Area of Bar or Nightclub	600/1000 Gr.sq.ft.
Dance Studio	80/1000 Gr.sq.ft.
Dental Office/Clinic	250/1000 Gr.sq.ft.
Doughnut Shop	280/1000 Gr.sq.ft.
Drug Rehabilitation Center	150/1000 Gr.sq.ft.
Equipment Booth	20/1000 Gr.sq.ft.
Film Processing – 1-Hour Photo, etc.	100/1000 Gr.sq.ft.
Film Processing – Industrial	80/1000 Gr.sq.ft. + Process Flow
Food Processing Plant	80/1000 Gr.sq.ft. + Process Flow
Gas Station: Self Service	100/w.c.
Gas Station: Four Bays Maximum	430/station
Golf Course: 18-hole/ 9-hole Green Area	0
Golf Course: Driving Range	0
Golf Course Facility: Lobby/Office/Restaurant/Bar	See Individual Categories
Gymnasium – Basketball, Volleyball	250/1000 Gr.sq.ft.
Hanger (Aircraft)	80/1000 Gr.sq.ft.
Health Club/ Spa[2]	800/1000 Gr.sq.ft.
Homeless Shelter	75/bed
Hospital	75/bed
Hospital: Convalescent	75/bed
Hospital: Animal	280/1000 Gr.sq.ft.
Hospital: Psychiatric	75/bed
Hospital: Surgical	450/bed
Hotel: Use Guest Rooms Only	130/room
Jail	85/inmate
Kennel: Dog Kennel/Open Run	100/1000 Gr.sq.ft.
Laboratory: Commercial	250/1000 Gr.sq.ft.
Laboratory: Industrial	Process Flow
Laundromat	170/machine
Library: Public Area	80/1000 Gr.sq.ft.
Library: Stacks, Storage	25/1000 Gr.sq.ft.
Lobby of Retail Area[3]	80/1000 Gr.sq.ft.
Lodge Hall	4/seat
Lounge	See Lobby of Retail Area
Machine Shop	80/1000 Gr.sq.ft. + Process Flow
Manufact or Indust Facility	80/1000 Gr.sq.ft. + Process Flow
Massage Parlor	275/1000 Gr.sq.ft.
Medical Building	250/1000 Gr.sq.ft.
Medical Lab in Hospital	250/1000 Gr.sq.ft.

[2] *Health club/spa includes lobby area, workout floors, aerobic rooms, swimming pools, Jacuzzi, sauna, locker rooms, showers, and restrooms. If a health club/spa has a gymnasium facility, use the gymnasium rate for that portion. Gymnasiums include basketball courts, volleyball courts, and any other large open space with low occupancy density.*

[3] *Lobby of retail includes lounges, holding rooms, waiting areas, etc.*

Exhibit M.2-12, continued
SEWAGE GENERATION FACTORS

Type Description	Average Daily Flow (Gpd/unit)
Medical Office/ Clinic	250/1000 Gr.sq.ft.
Mini-mall	80/1000 Gr.sq.ft.
Mortuary: Embalming	5/7 Gr.sq.ft.
Mortuary: Chapel	4/seat
Mortuary: Living Area	80/1000 Gr.sq.ft.
Motel: Use Guest Rooms Only	130/room
Museum: All Areas	20/1000 Gr.sq.ft.
Museum: Office over 15%	150/1000 Gr.sq.ft.
Museum: Sales Area	80/1000 Gr.sq.ft.
Office Building	150/1000 Gr.sq.ft.
Office Building with Cooling Tower	180/1000 Gr.sq.ft.
Plating Plant	80/1000 Gr.sq.ft. + Process Flow
Pool Hall (No Alcohol)	80/1000 Gr.sq.ft.
Post Office: Full Service[4]	150/1000 Gr.sq.ft.
Prisons	175/inmate
Residential Dorm: College or Residential	75/student
Residential: Apt. -Bachelor/single	80/dwelling Unit
Residential: Apt. - 1 Bedroom	120/dwelling Unit
Residential: Apt. - 2 Bedroom	160/dwelling Unit
Residential: Apt. - 3 Bedroom	200/dwelling Unit
Residential: Apt. - >3 Bedroom	40/additional bedroom
Residential: Boarding House	75/bed
Residential: Condo - 1 Bedroom	120/dwelling Unit
Residential: Condo - 2 Bedroom	160/dwelling Unit
Residential: Condo - 3 Bedroom	200/dwelling Unit
Residential: Condo - >3 Bedroom	40/additional bedroom
Residential: Duplex/ Townhouse/ SFD - 1 Bd.	130/dwelling Unit
Residential: Duplex/ Townhouse/ SFD - 2 Bd.	180/dwelling Unit
Residential: Duplex/ Townhouse/ SFD - 3 Bd.	230/dwelling Unit
Residential: Duplex/ Townhouse/ SFD - >3 Bd	50/additional bedroom
Residential: Room Addition – Bedroom	50/additional bedroom
Residential: Room Addition Other Than Bedroom	0
Residential: Room Conversion into Bedroom	50/additional bedroom
Residential: Room Conversion into Other Than Bedroom	0
Residential: Mobile Home	160/dwelling Unit
Residential: Artist 2/3 of Area	250/dwelling Unit
Residential: Artist Residence	80/dwelling Unit
Residential: Guest Home With Kitchen	See Residential: Apartment
Residential: Guest Home without Kitchen	50/bedroom
Rest Home	75/bed
Restaurant: Drive-in	40/stall
Restaurant: Drive-in	20/seat

[4] *Full service post offices include U.S. Postal Service, UPS, Federal Express, and other private express mail services.*

Exhibit M.2-12, continued
SEWAGE GENERATION FACTORS

Type Description	Average Daily Flow (Gpd/unit)
Restaurant: Fast Food - Indoor Seat	20/seat
Restaurant: Fast Food - Outdoor Seat	12/seat
Restaurant: Full Service - Indoor Seat	30/seat
Restaurant: Full Service - Outdoor Seat	18/seat
Restaurant: Take-out	300/1000 Gr.sq.ft.
Retail Area	80/1000 Gr.sq.ft.
Rifle Range: Shooting Stalls, Shooting Lanes, Lobby	80/1000 Gr.sq.ft.
Rifle Range Facility: Bar, Restaurant	See Individual Categories
School: Arts/Dancing/Music (Part Time)	80/1000 Gr.sq.ft.
School: Arts/Dancing/Music (Full Time)	See type of school below
School: Day Care Center	8/child
School: Elementary or Junior High[5]	8/student
School: High School[5]	12/student
School: Kindergarten	200/1000 Gr.sq.ft.
School: Martial Arts (Part Time)	80/1000 Gr.sq.ft.
School: Martial Arts (Full Time)[5]	See type of school below
School: Nursery - Day Care	8/child
School: Special Class	8/student
School: Trade or Vocational[5]	12/student
School: Training[5]	12/student
School: University or College[5]	18/student
School: Dormitory[6]	75/student
School: Stadium, Pavilion	4/seat
Spa/ Jacuzzi: Commercial - with backwash	Process Flow
Spa/ Jacuzzi: Residential, replaceable filter crtrdg	0
Storage: Building/Warehouse	20/1000 Gr.sq.ft.
Storage: Self Storage Bldg.	20/1000 Gr.sq.ft.
Store: Ice Cream/Yogurt	80/1000 Gr.sq.ft.
Store: Retail	80/1000 Gr.sq.ft.
Studio: Film/ TV – Audience Viewing Room	4/seat
Studio: Film/ TV – Regular Use Indoor Filming Area	80/1000 Gr.sq.ft.
Studio: Film/ TV – Indust. Use Film Proc, Machine Shop	80/1000 Gr.sq.ft. + Process Flow
Studio: Recording	80/1000 Gr.sq.ft.
Swimming Pool: Commercial with backwash	Process Flow
Swimming Pool: Residential replaceable filter crtrdg	0
Tanning Salon: Independent, No Shower	80/1000 Gr.sq.ft.
Tanning Salon: Within a Health Spa/Club	800/1000 Gr.sq.ft.

[5] *The sewage generation factor for schools based on student capacity covers the following facilities: classrooms and lecture halls, professors' offices, administration offices, laboratories for classes or research, libraries, bookstores, student/professor lounges, school cafeterias, warehouses and storage areas, auditoriums and gymnasiums. For any facility not listed under "schools" (e.g., stadium), see the generation factor listed for that land use type.*

[6] *The sewage generation factor for a college dormitory based on student capacity also includes the sewage generation factor for the dormitory cafeterias.*

Exhibit M.2-12, continued
SEWAGE GENERATION FACTORS

Type Description	Average Daily Flow (Gpd/unit)
Theatre: Drive-in	10/vehicle
Theatre: Live/Music/Opera	4/seat
Theatre: Cinema	4/seat
Tract: Commercial/ residential	1/acre
Trailer: Construction/Field Office	150/office
Veterinary Clinic/Office	280/1000 Gr.sq.ft.
Warehouse	20/1000 Gr.sq.ft.
Warehouse with Office	Use Factor for Each Separate Category
Waste Dump: Recreational	430/station
Wine Tasting Room: Kitchen	215/1000 Gr.sq.ft.
Wine Tasting Room: All Areas	80/1000 Gr.sq.ft.

Notes:

Gpd/unit = Gallons per day (gpd) per unit as indicated.

Gr.sq.ft. = Gross Square Feet: area included within the exterior or the surrounding walls of a building excluding courts.

GPM Peak = Peak Flow in gallons per minute. There is an assumption that the peak to average flow ratio is 3.5. Therefore, 1.0 gpm x 1440 minutes/day divided by 3.5 = 412 gpd which is the unit flow factor in the table.

See next page for metric equivalents.

Source: Bureau of Sanitation. Sewerage Facilities Charge, Sewage Generation Factors for Residential and Commercial Categories. Effective June 6, 1996.

METRIC CONVERSION

The President's Executive Order 12770, Metric Usage in Federal Government Programs, was signed on July 25, 1991. Federal regulations recently enacted require that all government affairs be conducted in metrics. The City of Los Angeles must comply with the resultant federal regulations in order to obtain federal funding and permit approvals. For example, federally funded street improvement projects must be designed, advertised and contracted in metric units.

In response to the federal government's actions, the City Engineer has issued a Metric Conversion Manual and a Special Order for metric conversion within the Bureau of Engineering intended to keep the Bureau current with the situation and allow time to analyze the full impact of the conversion while protecting potential federal funding. Review of private development standards and requirements is currently under way and will be the subject of a separate Special Order. That study will determine whether land developers should submit documents and plans in metrics or if they may continue to use Imperial units. Meanwhile, the following is intended for use only with Table 1 and the foregoing thresholds.

GALLONS	EQUIVALENT LITERS (1 qt = .9463 l)	gpd/1000 Gr.sq.ft. converted to l per day / 100 m2	GALLONS	EQUIVALENT LITERS (1 qt = .9463 l)	gpd/1000 Gr.sq.ft. converted to l per day / 100 m2
800	3,028	3,260	130	492	530
600	2,271	2,445	120	454	489
500	1,893	2,037	100	379	407
450	1,703	1,834	85	322	346
430	1,628	1,752	80	303	326
412	1,560	1,679	75	284	306
300	1,136	1,222	50	189	204
280	1,060	1,141	40	151	163
275	1,041	1,120	30	114	122
250	946	1,019	25	95	102
230	871	937	20	76	81
215	814	876	18	68	73
200	757	815	12	45	49
180	681	733	10	38	41
175	662	713	8	30	33
170	643	693	5	19	20
160	606	652	4	15	16
150	568	611	1	4	4

1 gpd/acre = 9 liters per day per hectare

M.3. SOLID WASTE

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

XVI.f): Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

XVI.g): Would the project comply with federal, state, and local statutes and regulations related to solid waste?

B. Introduction

The management of solid waste in the City of Los Angeles involves public and private refuse collection services as well as public and private operation of solid waste transfer, resource recovery, and disposal facilities. The Bureau of Sanitation provides collection services primarily to single family residences and some of the smaller multi-family residences. The City is also responsible for collecting waste from the City Hall complex, some public buildings, parks and fire stations. Multi-family residences, such as apartment complexes and condominiums, and commercial and industrial buildings, contract with a private company to collect and transport their materials for disposal or recycling.

The solid waste management hierarchy encompasses the system of solid waste source reduction, composting, transformation and disposal. The demolition, construction, and operation of projects results in the generation of solid waste. Project impacts are related to: the amount of waste generated and diverted; the need for additional solid waste collection routes or disposal facilities; and compliance with adopted policies and objectives.

In September 1989, the California Integrated Solid Waste Management (ISWM) Act (also known as AB 939) was passed. It required each city in the state to divert at least 25 percent of its solid waste from landfill disposal through source reduction, recycling, and composting, by the end of 1995. Cities must now divert at least 50 percent of their waste stream. AB 939 further requires each city to conduct a Solid Waste Generation Study and to prepare annually a Source Reduction and Recycling Element (SRRE) to describe how it will reach its goals.

The City of Los Angeles has also prepared a Solid Waste Management Policy Plan

(CiSWMPP), which was adopted by the City Council in November 1994. The CiSWMPP is a long-term planning document containing goals, objectives and policies for solid waste management for the City. It specifies citywide diversion goals and disposal capacity needs.

C. Screening Criteria

- Would implementation of the proposed project result in solid waste generation of five tons or more per week?

A "yes" response to the preceding question indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration, or EIR may be required. Refer to the Significance Threshold for Solid Waste, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to the preceding question indicates that there would normally be no significant impact on Solid Waste from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project. Estimate typical project waste generation. The following solid waste generation factors may be used*:

- Residential 12.23 pounds per household per day
- Commercial 10.53 pounds per employee per day
- Industrial 8.93 pounds per employee per day

* These factors are estimates prior to recycling, composting or other waste diversion programs. Factors do not include generation of construction debris.

Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- Amount of projected waste generation, diversion, and disposal during demolition, construction, and operation of the project, considering proposed design and operational features that could reduce typical waste generation rates;

- Need for an additional solid waste collection route, or recycling or disposal facility to adequately handle project-generated waste; and

- Whether the project conflicts with solid waste policies and objectives in the SRRE or its updates, CiSWMPP, Framework Element or the Curbside Recycling Program, including consideration of the land use-specific waste diversion goals contained in Volume 4 of the SRRE.[1]

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include a description of the solid waste collection services (both diversion and disposal), and facilities which would serve the project. Include the name, location, and other relevant characteristics of the services or facilities, such as the remaining capacity of nearby landfills, daily capacity at recycling centers, the availability of disposal and recycling services, the materials accepted, etc.

Project Impacts

Based on the proposed land uses and their sizes, calculate the amount of anticipated solid waste that would result from implementation of the proposed project. Include both demolition and construction waste and waste generated by project operations. Identify any design measures, such as recycling programs and other waste diversion features, that would reduce the amount typically expected. Consider whether the project's waste would require the addition of a new solid waste collection route or other major improvements.

Compare the project's anticipated waste generation with the land use-specific waste diversion goals in the SRRE, if applicable, and with the overall waste reduction goals in the

[1] *Waste diversion goals have been identified for a limited number of targeted waste generators and materials. Future updates of the SRRE may expand the land uses and materials covered, or modify the current waste diversion goals.*

CiSWMPP, the Framework Element, and Curbside Recycling Program. Note whether the project would support the City's waste reduction goals and/or whether the project would meet specific waste diversion targets, if applicable. A project need not guarantee that it would meet the land use specific waste diversion goals in the SRRE; however, project proponents should identify measures to incorporate into the project to work toward meeting the goals.

Cumulative Impacts

Review the description of the related projects. Identify those that affect the same solid waste collection, disposal, and recycling facilities as the proposed project. Determine the amount of waste generation and diversion from these related projects and then consider the combined impact of the proposed related projects, in the same manner as described above for Project Impacts.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Incorporate recycled content materials in building products, furnishings and building maintenance;

- Recycle construction and demolition debris and California Redemption Value (CRV) generated during construction;

- Use mulching, composting, and grass-cycling on landscaped areas. Use xeriscaping or other low maintenance methods in landscape design;

- Develop a project recycling plan that includes the design and allocation of recycling collection and storage space in the project. As a result of the City's space allocation ordinance, the Los Angeles Municipal Code (LAMC) includes provisions for recycling areas or rooms in all new development projects and certain expansions;

- Incorporate a statement or brochure instructing occupants about source reduction, recycling and procurement of recycled content materials into the ownership agreement, property management agreements and tenant agreements;

- Institute an employee participation recycling program whereby employees are given individual containers/bins to separate newspaper, white and/or colored paper for

regular collection by recyclers;

- Educate residents about proper household hazardous waste collection programs;

- Institute employee education which would, through a series of brief educational sessions, outline various methods whereby employees can further contribute to methods of recycling/conservation in the office and home (e.g., contracting with firms for the purchase of recycled paper, use of two-sided reports, replacement of styrofoam cups with coffee mugs); and

- Conduct an annual waste audit review to measure the effectiveness of the tenant education program and recycling collection activities. Use the results to improve the project recycling plan. Include:

    - A review of purchasing patterns to eliminate materials not compatible with the established waste diversion program;

    - A review of operating procedures which generate either large amounts of waste or non-recyclable materials;

    - A review of occupancy uses and activities;

    - The evaluation and expansion of recyclable materials to be included in a recycling program; and

    - A review of employee awareness of recycling program goals, procedures, and accomplishments, as well as evaluations and implementation of training for all project occupants.

3. DATA, RESOURCES, AND REFERENCES

The Bureau of Sanitation provides information regarding citywide generation, disposal and diversion rates, disposal facilities, commercial, industrial, and residential programs, and collection contracts and agencies. Solid Resources Citywide Recycling Division is located at 433 S. Spring Street, Suite 500, Los Angeles, California 90013; Telephone: (213) 473-8228. For information on commercial, industrial, institutional, and multi-family diversion programs and resources, contact the Integrated Waste Management Office at 433 S. Spring Street, 5th Floor, Los Angeles, California 90013; Telephone: (213) 473-8150.

ISWM Act of 1989 (Public Resources Code 40050 et. seq.) requires specific waste diversion rates in cities and counties by the target years of 1995 (at least 25 percent) and 2000 (at least 50 percent) and mandates, through the California Integrated Waste Management Board (CIWMB) preparation of the SRRE.

CiSWMPP is a long-term planning document containing goals, objectives and policies for solid waste management and specifies citywide diversion goals and disposal capacity at 62 percent by the year 2005.

SRRE contains programs and policies for fulfillment of the goals of the ISWM Act and is updated annually. An executive summary of the 1995 annual update is available from the IWMO free of charge.

The Space Allocation Ordinance (No. 171687) was adopted by the City Council on August 6, 1997, and includes requirements for recycling centers and facilities as well as for areas for collecting and loading recyclable materials. All new construction development projects, multiple family residential development projects of four or more units where the addition of floor area is 25 percent or more, and other development projects where the addition of floor area is 30 percent or more shall provide an adequate Recycling Area or Room for collecting and loading recyclable materials. The ordinance specifies the size, location, conditions of operations, and restrictions on Recycling Areas or Rooms. See Subdivision 19 of Section A of Section 12.21 of the LAMC. Additional information is available from the IWMO.

M.4. ENERGY

1. INITIAL STUDY SCREENING PROCESS

A. Initial Study Checklist Questions

VIII.a): Would the project conflict with adopted energy conservation plans?

VIII.b): Would the project use non-renewable resources in a wasteful and inefficient manner?

XII.a): Would the proposal result in a need for new systems, or substantial alterations to power or natural gas?

B. Introduction

Within the City of Los Angeles, electricity is provided by the Los Angeles Department of Water and Power (LADWP), and natural gas is provided by the Southern California Gas Company (The Gas Company). Energy service requirements are related to the size and type of projects, and the geographic area served. New projects (e.g., residential, commercial, industrial) may increase energy consumption and affect the energy distribution infrastructure.

Customers in the City consume electricity at a rate of approximately 22 million megawatt hours per year. Of LADWP's nearly 1.4 million customers, the largest number of customers are residential. Business and industry customers, however, consume about 70 percent of the electricity. A portion of the electrical consumption is also dedicated to street lighting and water supply distribution.[1] Additional background on electric infrastructure is found in 3. Data, Resources, and References.

The Gas Company serves about 19 million people in more than 530 cities in Southern and Central California, throughout 23,000 square miles. Of the approximately 5.4 million customers, nearly 4.5 million are residential. The average natural gas consumption for residential uses is 50

[1] *LADWP, Statistics, Fiscal Year 1993-94.*
LADWP, 2003.

therms per year.[2] The Gas Company has about 48,000 miles of gas mains, of which 44,000 miles are for distribution and 3,319 miles are for transmission and/or storage.

Title 24 of the California Code of Regulations establishes energy conservation standards for new construction. These standards relate to insulation requirements, glazing, lighting, shading, and water and space heating systems. Also, the California Subdivision Map Act requires that new subdivision designs provide for future passive or natural heating and cooling opportunities, to the maximum extent feasible. The Los Angeles Municipal Code (LAMC) incorporates these state requirements.

C. Screening Criteria

- Would the project design or operation conflict with adopted energy conservation plans or policies of the City, or exceed the growth anticipated in the applicable Community Plan?

- Would the project, result in the need for new (off-site) energy supply facilities, or major capacity enhancing alterations to existing facilities?

A "yes" response to any of the preceding questions indicates further study in an expanded Initial Study, Negative Declaration, Mitigated Negative Declaration or EIR may be required. Refer to the Significance Threshold for Energy, and review the associated Methodology to Determine Significance, as appropriate.

A "no" response to all of the preceding questions indicates that there would normally be no significant impact on Energy from the proposed project.

D. Evaluation of Screening Criteria

Review the description of the proposed project, project site, and energy distribution infrastructure. Determine the energy supply and distribution systems required to serve the project. New off-site energy supply facilities or capacity enhancing alterations to existing facilities include installation, replacement of, or upgrades to, power plants, receiving stations, distribution stations, natural gas mains, or storage or connecting systems. If necessary, consult with the LADWP or The Gas Company.

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[2] *The Gas Company, Fact Sheet, Spring 1993, and telephone communication, Mr. Don Dockray, The Gas Company, June 17, 1994 and interview, 2004.*

Also, consider conflicts with the energy conservation and infrastructure programs and policies of applicable utility plans, specific plans, the General Plan and its elements, or the Community Plan.

To evaluate the potential increase in growth, and the corresponding demand for energy from a proposed General Plan amendment, compare the projected population of the applicable planning subregion before and after the General Plan amendment. The Framework Element identifies future population goals for the City. If assistance in determining population projections for a planning subregion is needed, contact the City Planning Department, Community Planning Bureau.

Compare this information to the Screening Criteria.

2. DETERMINATION OF SIGNIFICANCE

A. Significance Threshold

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The extent to which the project would require new (off-site) energy supply facilities and distribution infrastructure, or capacity enhancing alterations to existing facilities;

- Whether and when the needed infrastructure was anticipated by adopted plans; and

- The degree to which the project design and/or operations incorporate energy conservation measures, particularly those that go beyond City requirements.

B. Methodology to Determine Significance

Environmental Setting

In a description of the environmental setting, include the following information:

- Description of the electricity and natural gas supply and distribution infrastructure serving the project site. Include plans for new transmission facilities or expansion of existing facilities; and

- Summary of adopted energy conservation plans and policies relevant to the project.

Project Impacts

Using the information from the Evaluation of Screening Criteria and the description of the proposed project, project site and the existing energy distribution infrastructure, evaluate the new energy supply and distribution systems which the project would require. Describe the energy conservation features that would be incorporated into project design and/or operation that go beyond City requirements, or that would reduce the energy demand typically expected for the type of project proposed. Consult with the DWP or The Gas Company, if necessary to gauge the anticipated supply and demand conditions at project buildout.

If project demand would require new infrastructure, determine whether the infrastructure was anticipated by adopted plans, such as applicable utility plans, specific plans, the General Plan and its elements, or the Community Plan. If the new energy supply or distribution system was anticipated at a later time by adopted plans, consider the impact of accelerating additions or alterations.

Cumulative Impacts

Review the list of related projects. Identify those that would be served by the same energy distribution infrastructure as the proposed project. In the same manner as for Project Impacts, evaluate the cumulative impact on energy supply and distribution infrastructure. To the extent known, consider energy conservation features that would be incorporated into the related projects and the impact of these features on the need for new energy supply and distribution infrastructure systems typically expected with the type of projects proposed. Determine whether new energy supply and distribution infrastructure systems would be required as a results of the combined effect of the proposed project and the related projects.

Sample Mitigation Measures

Potential mitigation measures include the following:

- Use tinted and solar reflective glass on appropriate exposures, such as the exterior-facing and/or most solar-exposed sides of the building, to reduce cooling loads;

- Use natural lighting and/or lighting types that are more efficient than incandescent lighting;
- Incorporate light sensors which automatically shut off the lights when occupants have left the room;

- Use lighting switches and thermostats equipped with multi-switch provisions for control by occupants and building personnel;

- Time control public area lighting, both interior and exterior;

- Install a variable air volume system which reduces energy consumption for air cooling and heating or water heating;

- Design the project with air conditioning which will have a 100 percent outdoor air economizer cycle to obtain free cooling during dry outdoor climatic periods;

- Do not allow office lighting loads to exceed an average 2.3 watts per square foot of conditioned floor area;

- Control mechanical systems (heating, ventilation, and air conditioning (HVAC)) and lighting) with computer time clocks;

- Recycle lighting system heat for space heating during cool weather. Exhaust lighting system heat via ceiling plenums, to reduce cooling loads in warm weather;

- Cascade ventilation air from high-priority areas to low-priority areas before being exhausted, thereby decreasing the volume of ventilation air required. For example, cascade air from occupied space to corridors to mechanical spaces before being exhausted;

- Distribute electricity within the project at 480/277 volts, three-phase, and stepped down where necessary for 110-volt outlets using dry transformers. Operate installed lighting systems at 227 volts;

- Design buildings to be well-sealed and include vestivules to prevent outside air from infiltrating and increasing interior space conditioning loads;

- Finish exterior walls and roofs with light-colored materials with high emissivity characteristics to reduce cooling loads. Use light-colored materials for interior walls to reflect more light and thus increase lighting efficiency;

- Use solar water heating for swimming pools.

3. DATA, RESOURCES, AND REFERENCES

LADWP, 111 North Hope Street, Los Angeles, California 90012; Power System Telephone: (213) 367-0285.

City Planning Department, Community Planning Bureau, 200 N. Spring St., City Hall, Los Angeles, California 90012; Telephone: (Eastside) (213)-978-1183, (Metro/Central) (213)-978-1179, (South LA) (213)-978-1168, (West/Coastal) (213)-978-1177, (Valley - 6262 Van Nuys Blvd., Van Nuys, California 91401) (818) 347-5055.

The Gas Company, (213) 244-2518, for information regarding natural gas consumption and infrastructure.

LAMC Sections 12.95.2 and 12.95.3 require projects, which include conversion of residential, commercial, or industrial uses, to submit a report concerning compliance with the Title 24 energy conservation standards.

LADWP, Power for the 21st Century (brochure).

LADWP, The Power System and Los Angeles (brochure).

LADWP, Los Angeles Department of Water and Power (brochure).

Electrical Consumption

The largest single source of power supply for the LADWP is coal, which provides 55 percent of the City's energy. Oil and natural gas provide about 20 percent of the City's energy; hydroelectricity accounts for about four percent; nuclear, 10 percent; and the remainder (11 percent) comes from purchased power.[3] The sources of coal-fired power production are three coal-fired power plants located outside California, in which the LADWP owns shares. The greatest amount of coal-fired power is received from the Intermountain Generating Station near Delta, Utah. About one-fifth of the LADWP's power production is received from the Mohave Power Plant in southern Nevada and the Navajo Power Project near Page, Arizona. Of the four power plants producing energy from natural gas located within the Los Angeles Basin, the largest of these is the Haynes Generating Station in Long Beach. The other plants are the Valley, Harbor, and Scattergood generating stations.

[3] *LADWP, Statistics, Fiscal Year 1991-1992"*

The two main hydroelectric power plants serving the City include Hoover Dam, on the Colorado River, and Castaic Power Plant, on the California State Aqueduct, about 22 miles north of the City. In addition, hydroelectric power is derived from several smaller Los Angeles Aqueduct stations, as well as purchased from other producers, mainly the Columbia River Power System. Nuclear power has been a source of electricity for the City since 1986, from the Palo Verde Nuclear Generating Station near Phoenix.

The LADWP has 21 receiving stations, designed to handle large quantities of bulk power from the major transmission lines connected to the power generating plants in California and neighboring states. The receiving stations lower the voltage of electricity to subtransmission levels, sending the power on to 120 distributing stations in the City. The distribution stations either serve a large manufacturing or commercial center directly or, as in most cases, they each supply a five- to ten-square mile area for residential and business consumers. The distribution stations reduce the voltage from 34,500 to 4,800 volts for efficient distribution of electricity to local transformers. The local distribution system consists of 6,100 miles of overhead pole-lines and 2,200 miles of underground cable.[4]

To accommodate future needs, the LADWP prepares 10-year and 20-year plans. The 10-year plan, updated annually, forecasts demand, distribution, and transmission needs to maintain system integrity. The 20-year plan, also updated annually, forecasts resource needs based on demand projections. The power system is designed to accommodate the maximum peak load of the City, which far exceeds the needs of any one project. In addition, the Electrical Infrastructure Systems Element of the General Plan indicates where major transmission facilities are anticipated.

4 *LADWP, The Power System and Los Angeles, December 1990.*