CITY OF DOWNEY

Downey Landing Specific Plan

Environmental Impact Report

Prepared for the

City of Downey

11111 Brookshire Avenue

Downey, CA 90241

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February 2002

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Final Program Environmental Impact Report

State Clearinghouse Number 2001031096

Prepared for:
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Summary

Introduction

This Draft Environmental Impact Report (DEIR) discusses the environmental impacts associated with the proposed Downey Landing Specific Plan project, and related activities. This Draft EIR provides a discussion of impacts by issue area and provides mitigation measures, where appropriate. Specific issue areas discussed in this EIR include: Aesthetics, Air Quality, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Public Services and Utilities, and Transportation and Traffic. Agricultural Resources, Biological Resources, Cultural Resources, Geology and Soils, Mineral Resources, and Recreation were determined to result in no environmental impacts, or less than significant environmental impacts. These issue areas were fully evaluated in the Revised Initial Study/Notice of Preparation (IS/NOP) for the proposed project, which is included as Appendix B to this document. An analysis of alternatives to the proposed project and long-term implications resulting from project implementation are also provided. In addition, the public review and approval process for the EIR is outlined.

Summary of Project Objectives

The objectives of the City of Downey (the Lead Agency) and the project applicants for the project are as follows:

- Develop a land use plan for a currently underutilized site, which at build-out will result in the development of a distinctive mixed-use project (i.e., retail center, television/film production facilities, business park, museum/learning center, and hospital and medical office facility) that is consistent with the goals and policies of the City's General Plan.
- Create employment opportunities that will replace the jobs that were lost with the closing of the NASA facility, with respect to both quantity and quality.
- Develop a specific plan that will ensure project compatibility with neighboring land uses through the use of land use controls and design guidelines, while providing for both employment and shopping opportunities.
- Increase and diversify the number of retail merchandise opportunities in the community for the purpose of capturing those Downey residents who are shopping elsewhere so as to reduce the City's leakage of sales tax revenue.
- Provide for the development of additional retail businesses so as to enlarge the City's retail trade area and in turn strengthen its economic base.

- Enhance the visual character of the project site, which in turn will help to strengthen the image of the community.
- Replace the project site's existing zoning districts with a mixed-use specific plan that recognizes the site's unique features and location advantages, provides for its orderly development, and attracts high-quality retailers, businesses, and technology companies.
- Provide public improvements to serve the project site and thereby ensure an improved environmental quality for onsite businesses and employees.
- Develop a built environment that reflects a high level of concern for architectural and urban design principles through a Specific Plan.
- Attract businesses that generate positive net revenues for the community to help support local services.
- Highlight the use of some of the site's existing buildings with the advantages they offer as locations for film and television production.
- Diversify and strengthen the City's economic base by attracting base-type businesses.
- Preserve that portion of Building 1 that has been designated historical.
- Prepare a specific plan that recognizes the history that occurred at the project site involving the development of NASA's Apollo and Space Shuttle programs.
- Develop a specific plan whose land use components are internally linked for pedestrian and vehicular travel.
- Replace the functionally outmoded Kaiser Bellflower hospital with new structures that meet current life safety, fire and seismic requirements for health care facilities.
- Continue to provide health care in Kaiser owned facilities to Kaiser members served by the Bellflower facility during the replacement of the Kaiser Bellflower hospital.
- Provide a consolidated and centralized medical center location for Kaiser members in the Downey/Bellflower community to receive medical care.
- Offer state-of-the-art medical care in facilities to be constructed and designed to optimize the quality of patient care in the new millennium.

Summary of Proposed Project

The proposed project consists of a Specific Plan for a mixed-use development proposal that is planned for the 160-acre former NASA site in Downey. Land uses planned for development include commercial retail, technology and business park, motion picture production, hospital, and medical office uses. Together, the project's buildings will total a maximum of approximately 3.7 million square feet (sq. ft.) of floor area in six distinct planning areas: five areas to be developed by Downey Landing, LLC and a sixth by Kaiser Foundation Hospitals. Retail uses will comprise approximately 410,000 sq. ft., and hospital/medical office and associate uses will total approximately 1.0 million sq. ft., with a 0.69 million sq. ft. parking garage. Depending on which option for development is selected, business park uses would total between 500,000 sq. ft. and 1,625,000 sq. ft. while studio uses would total between 243,000 sq. ft. and 1,121,000 sq. ft. In addition, a 50,000 sq. ft. learning center may be built on the site.

Synopsis of Alternatives

According to CEQA Guidelines Section 15126.6, the discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if the alternative would impede, to some degree, the attainment of project objectives or would be more costly. These alternatives usually take the form of no project, reduced project size, different project design, or suitable alternative project sites, and are governed by a "rule of reason," which requires the identification of only those alternatives necessary to permit a reasoned choice between the alternatives and proposed project.

Alternatives Found to Be Infeasible

As further described in Chapter 4 of the EIR, the following alternatives were found to be infeasible:

- Alternative site.
- Reduced Scale Alternative.
- No Project/Less Intense/Reasonably Foreseeable Use Alternative.

Potentially Feasible Alternative

A feasible alternative to the proposed project is summarized as follows.

No Project/No Development Alternative

In addition to alternative development scenarios, Section 15126.6(e) of the CEQA Guidelines requires the analyses of a "no project" alternative. This "no project" analysis must discuss the existing condition, as well as what would be reasonably expected to occur in the foreseeable future if

the project were not to be approved. The No Project/No Development Alternative, analyzed here, represents the *status quo,* or maintaining the project site in its current state, which is predominantly unoccupied except for interim movie industry uses of a portion of the site for production and sound stage activities. No new environmental effects would directly result from the selection of this alternative. Maintenance of the project site in the present state would allow the site to continue in its current, predominantly abandoned state. Because the site would not be developed, any significant and adverse environmental impacts directly or cumulatively associated with the proposed project would be avoided; however, this alternative would not meet the basic project objectives outlined above. Vacancy would not constitute the highest and best use of the site, which is zoned for General Manufacturing; no increased employment opportunities would be created; no additional retail merchandise shopping opportunities would be created to serve the residents of Downey and strengthen the City's economic base; the visual character of the site would not be enhanced; businesses that generate positive net revenues for the community would not be attracted to the area; and no development regulations for the site would result.

The No Project/No Development option most significantly lessens all environmental impacts associated with the proposed project, and would be considered the environmentally superior alternative. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the "no project" alternative is identified as environmentally superior, the EIR shall also identify an environmentally superior alternative among the other alternatives. The No Project/Less Intense/Reasonably Foreseeable Use option also lessens the environmental impacts associated with the proposed project, but does not meet basic project objectives. Therefore, although the other alternatives could reduce the environmental impacts of the proposed project, the other alternatives would not achieve basic project objectives.

Issues to be Resolved

- On-site circulation - A detailed design of these proposed improvements has not been conducted to determine if they are feasible relative to such issues as right-of-way availability and other physical constraints. Phasing of traffic related improvements and precise design requirements will be addressed as identified in the Traffic and Circulation section of this Draft EIR.

Classification of Environmental Impacts

Potential environmental impacts have been classified in the following categories:

Less Than Significant: Results in no substantial adverse change to existing environmental conditions;

Potentially Significant: Constitutes a substantial adverse change to existing environmental conditions that can be mitigated to less than significant levels by implementation of feasible mitigation measures or by the selection of an environmentally superior project alternative;

Significant and Unavoidable: Constitutes a substantial adverse change to existing environmental conditions that cannot be fully mitigated by implementation of all feasible mitigation measures, or by the selection of an environmentally superior project alternative; and

Lastly, cumulative impacts are also analyzed in this environmental document. The analysis of cumulative impacts considers the impacts of the proposed project together with the impacts of other reasonably foreseeable approved and pending projects proposed for development in the vicinity.

Impact Summary Tables

Pursuant to Section 15123(b)(1) of the State CEQA Guidelines, The following tables contain a summary of significant environmental impacts associated with the proposed project, the mitigation measures proposed, and the level of significance of the impacts following the implementation of those measures. Table S-1 contains significant, unavoidable impacts, which would require a Statement of Overriding Considerations if the proposed project is approved. Table S-2 contains potentially significant impacts that can be reduced to a less-than-significant level with the mitigation measures shown in the table.

TABLE S-1
SIGNIFICANT UNAVOIDABLE IMPACTS
(DECISION MAKERS MUST ISSUE A "STATEMENT OF OVERRIDING CONSIDERATIONS" UNDER SECTION 15093 OF THE CEQA GUIDELINES IF THE PROJECT IS APPROVED)

Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
Aesthetics/Lighting	**Impact 3.1-1:** The proposed Downey Landing, L.L.C. project would introduce a substantial source of nighttime light that could affect sensitive uses in the project vicinity. **Impact 3.1-2:** The proposed Kaiser project would introduce a substantial source of nighttime light into the project vicinity. **Cumulative Impact 3.1-3:** The proposed project would contribute to the exposure of residential areas in the City to increased nighttime light and glare intensities.	No feasible mitigation measures would reduce light and glare impacts to less than significant levels	Significant
Air Quality	**Impact 3.2-1:** Daily Demolition and Construction Emissions **Impact 3.2-2:** Daily Operational Emissions	**Mitigation Measure 3.2-1:** Develop and implement a construction management plan, as approved by the City of Downey, which includes the following measures recommended by the SCAQMD, or equivalently effective measures approved by the SCAQMD: ▪ Configure construction parking to minimize traffic interference. ▪ Provide temporary traffic controls during all phases of construction activities to maintain traffic flow (e.g., flag person). ▪ Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the degree practicable. ▪ Re-route construction trucks away from congested streets. ▪ Consolidate truck deliveries when possible. ▪ Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.	Significant

TABLE S-1
SIGNIFICANT UNAVOIDABLE IMPACTS
(DECISION MAKERS MUST ISSUE A "STATEMENT OF OVERRIDING CONSIDERATIONS" UNDER SECTION 15093 OF THE CEQA GUIDELINES IF THE PROJECT IS APPROVED)

Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
		▪ Maintain equipment and vehicle engines in good condition and in proper tune as per manufacturers' specifications and per SCAQMD rules, to minimize exhaust emissions. ▪ Suspend use of all construction equipment operations during second stage smog alerts. Contact the SCAQMD at 800/242-4022 for daily forecasts. ▪ Use methanol- or natural gas-powered mobile equipment and pile drivers instead of diesel if readily available at competitive prices. Use propane- or butane-powered on-site mobile equipment instead of gasoline if readily available at competitive prices. **Mitigation Measure 3.2-2:** Implement all rules and regulations by the Governing Board of the SCAQMD which are applicable to the development of the project (such as Rule 402 – Nuisance and Rule 403 – Fugitive Dust) and which are in effect at the time of development. The following measures are currently recommended to implement Rule 403 – Fugitive Dust. These measures have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation. ▪ Apply approved non-toxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas inactive for four days or more). ▪ Replace ground cover in disturbed areas as quickly as possible. ▪ Enclose, cover, water twice daily, or apply approved soil binders to exposed piles (i.e., gravel, sand, and dirt) according to manufacturers' specifications. ▪ Water active grading sites at least twice daily. ▪ Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour. ▪ All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code. ▪ Sweep streets at the end of the day if visible soil material is carried over to adjacent roads (recommend water sweepers using reclaimed water if readily available). ▪ Install wheel washers where vehicles enter and exit unpaved roads onto paved	

TABLE S-1
SIGNIFICANT UNAVOIDABLE IMPACTS
(DECISION MAKERS MUST ISSUE A "STATEMENT OF OVERRIDING CONSIDERATIONS" UNDER SECTION 15093 OF THE CEQA GUIDELINES IF THE PROJECT IS APPROVED)

Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
		roads, or wash off trucks and any equipment leaving the site each trip. ▪ Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces. ▪ Enforce traffic speed limits of 15 miles per hour or less on all unpaved roads. **Mitigation Measure 3.2-3:** All new structures constructed on the Downey Landing, L.L.C. project site shall utilize solar or low emission water heaters to reduce natural gas consumption and emissions. **Mitigation Measure 3.2-4:** All new structures constructed on the site shall have wall and attic insulation that exceeds current Title 24 requirements by at least five (5) percent. **Mitigation Measure 3.2-5:** The site plans developed for the project shall incorporate transit shelters and benches at appropriate locations along the site perimeter. The transit stops shall include route signs and displays. **Mitigation Measure 3.2-6:** The site plans developed for the project shall incorporate street lighting that illuminates pedestrian pathways. **Mitigation Measure 3.2-7:** The landscape plans developed for the project shall identify the location of shade trees to shade on-site sidewalks. **Mitigation Measure 3.2-8:** The site plans developed for the project shall incorporate street furniture along on-site pedestrian pathways. **Mitigation Measure 3.2-9:** The site plans developed for the project shall incorporate pedestrian safety designs and infrastructure at street/driveway crossings. **Mitigation Measure 3.2-10:** The site plans developed for the project shall incorporate secure bicycle parking features. **Mitigation Measure 3.2-11:** The site plans developed for the non-commercial areas	

TABLE S-1
SIGNIFICANT UNAVOIDABLE IMPACTS
(DECISION MAKERS MUST ISSUE A "STATEMENT OF OVERRIDING CONSIDERATIONS" UNDER SECTION 15093 OF THE CEQA GUIDELINES IF THE PROJECT IS APPROVED)

Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
		of the project shall designate preferential parking spaces for carpool/vanpool parking.	
Hazards and Hazardous Materials	None.	None.	N/A
Hydrology and Water Quality	None.	None.	N/A
Land Use and Planning	None.	None.	N/A
Noise	None.	None.	N/A
Population and Housing	None.	None.	N/A
Public Services and Utilities	None.	None.	N/A
Transportation and Traffic	The Congestion Management Program (CMP) impact on the Century Freeway (I-105) during the morning and afternoon peak periods would be significant unavoidable traffic impacts that are anticipated to result from the proposed project.	There are no feasible project-related mitigation measures available for this impact.	Significant

TABLE S-2
SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED
(DECISION MAKERS MUST MAKE "FINDINGS" UNDER SECTION 15091 OF THE CEQA GUIDELINES IF THE PROJECT IS APPROVED).

Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
Aesthetics/Lighting	None.	None.	N/A
Air Quality	None.	None.	N/A
Hazards and Hazardous Materials	**Impact 3.3-1:** Construction of the proposed project could expose workers to previously undetected pockets of contaminated soils. **Impact 3.3-2:** Demolition and/or renovation of existing structures on the project site could expose workers and the environment to asbestos-containing materials (ACM). **Impact 3.3-3:** Demolition and/or renovation of existing structures on the project site could expose workers and the environment to lead-based paint waste and residues. **Impact 3.3-4:** Construction of the proposed Kaiser project could expose individuals to an increased health risk associated with exposure to contaminated soils. **Impact 3.3-5:** Operation of the proposed Kaiser project could expose individuals to an increased health risk associated with the use, storage,	**Mitigation Measure 3.3-1:** Compliance with applicable plans and policies. The Applicant and the City shall comply with all applicable Federal, State and local plans and policies regarding hazardous substances and contaminant remediation including, but not limited to the applicable provisions of the Toxic Substances Control Act (TSCA), the Asbestos Hazard Emergency Response Act (AHERA), the California Health and Safety Code, the California Hazardous Waste Control Law, and other applicable provisions of the California Code of Regulations (CCR), as well as applicable regulations promulgated by the U.S. and California Occupational Safety and Health Administrations (OSHA) and Environmental Protection Agency (EPA). **Mitigation Measure 3.3-2:** Formulation of a procedure to be implemented in the event of discovery of previously unknown pockets of contaminated soils. Prior to issuance of a grading permit, the City of Downey shall, in consultation with and with the approval of the RWQCB, formulate a plan to be implemented in the event that grading or excavation activities during construction expose potentially contaminated soils (e.g., soils that exhibit staining or odors). At a minimum, the plan shall identify the RWQCB as a responsible agency, and shall include the following specific points: ▪ A qualified construction monitor shall be designated and shall be present on-site during grading and excavation activity. ▪ The construction monitor shall be responsible for identifying pockets of potentially contaminated soils, and, upon identification of potential contaminants, for implementing the procedures outlined in the plan ▪ All work in the vicinity of the affected area shall cease. ▪ The Los Angeles RWQCB shall be contacted. ▪ The appropriate California Health and Safety Code procedures shall be followed. The plan shall also identify a procedure for sampling, testing, and remediation, as appropriate, of contaminated soils, and for obtaining the concurrence of and necessary clearance from the RWQCB, before construction activities can resume. The plan shall also provide for the preventative procedures for the protection of construction workers during work in areas where contaminated soils have	Less Than Significant

TABLE S-2
SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED
(DECISION MAKERS MUST MAKE "FINDINGS" UNDER SECTION 15091 OF THE CEQA GUIDELINES IF THE PROJECT IS APPROVED).

Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
	transportation, and disposal of hazardous substances **Cumulative Impacts.** For the purposes of this analysis, cumulative impacts are evaluated on a City-wide level, since exposure of contaminated soils or the potential localized release of asbestos or lead-based paint waste are likely to remain contained. Construction activities associated with the proposed project could expose workers to lead-based paint, ACM, and undetected pockets of contaminated soils; however, as described above in Section 3.3.5, Mitigation Measures 3.3-1 and 3.3-2 require compliance with applicable procedures to minimize exposure to and release of these materials. Because the possible risks associated with construction activities would be minimized (i.e., reduced to a less-than-significant level), the project's contribution to risks associated with the construction-related release of or exposure to hazardous materials would not be cumulatively considerable, and this cumulative impact	previously been discovered. **Mitigation Measure 3.3-3:** Preparation of a Phase II Environmental Site Assessment for the Proposed Kaiser project site. Prior to issuance of a grading permit, Kaiser shall retain a qualified consultant to prepare a Phase II Environmental Site Assessment (ESA), for review and approval by the City Planning Department or its qualified designee, and shall demonstrate, to the City's satisfaction, that Kaiser has implemented all applicable recommendations of the Phase II ESA.	

TABLE S-2
SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED
(DECISION MAKERS MUST MAKE "FINDINGS" UNDER SECTION 15091 OF THE CEQA GUIDELINES IF THE PROJECT IS APPROVED).

Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
	would be less than significant. The proposed Kaiser project would routinely use and transport hazardous substances and would generate chemical and biological waste. However, as described above in Section 3.3.3, the Kaiser facility would be regulated by federal, State, and local agencies, and would be required to comply with all applicable provisions of the statutes and regulations listed in Table 3.3-1. Additionally, as described in Section 3.3.5, Mitigation Measure 3.3-1 would reduce risks associated with operation activities to less-than-significant levels. Therefore, despite the site of the project, the project's contribution to an increased risk of construction-related and operational hazards would not be cumulatively considerable, and would therefore be less than significant.		
Hydrology and Water Quality	**Impact 3.4-1:** The calculated increase in runoff for the entire site due to construction of the project is approximately 20.2 cfs (278.0 cfs to 298.2 cfs), which is about 7.5% (see Table 3.4-1 below). Most of this increase	**Mitigation Measure 3.4-1:** Prior to issuance of a grading permit, a final grading plan, final drainage plan, and final hydrologic/hydraulic analysis shall be submitted to the City of Downey for review and approval. Final design of the project storm drain system shall be consistent with the recommendations of the final hydrologic/hydraulic analysis and in conformance with the requirements of the City of Downey.	Less Than Significant

TABLE S-2
SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED
(DECISION MAKERS MUST MAKE "FINDINGS" UNDER SECTION 15091 OF THE CEQA GUIDELINES IF THE PROJECT IS APPROVED).

Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
	can be attributed to the increase in watershed area from the existing site of approximately 6 acres (134 acres to 142 acres), or an increase of almost 6%. **Impact 3.4-2:** Grading and construction activities on the project site have the potential to result in short-term adverse water quality impacts. These activities may increase erosion and contribute sediment to surface waters. Additionally, improper handling of construction materials and/or equipment may result in accidental spills that could adversely affect water quality. **Impact 3.4-3:** The proposed project has the potential to result in long-term adverse impacts to water quality due to the addition of pollutants typical of urban runoff. Additional automobile traffic generated from the proposed use of the site, as compared to the current use, could result in an increased incremental concentration of urban contaminants in storm runoff. **Cumulative Impacts.** The	**Mitigation Measure 3.4-2:** Prior to the issuance of grading permits for each phase, the applicant shall submit and obtain approval of construction drainage and erosion control plans for each phase of grading. The control measures contained in the plan shall be approved by the City of Downey prior to any construction activities. The plans shall serve as the basis for the construction portion of the SWPPP and shall include the applicable measures such as the following: ▪ Diversion of offsite runoff away from the construction site; ▪ Prompt revegetation of proposed landscaped areas; ▪ Perimeter sandbagging or temporary basins to trap sediment; ▪ Regular sprinkling of exposed soils during construction phases; ▪ Installation of a minor retention basin(s) to alleviate discharge of increase flows; ▪ Specifications for construction waste handling and disposal; and, ▪ Erosion control measures maintained throughout the construction period. **Mitigation Measure 3.4-3:** Prior to the issuance of a grading permit, the project applicants shall file a Notice of Intent (NOI) with the State and comply with the requirements of the NPDES General Construction Permit, including the preparation of a SWPPP and a SUSMP incorporating BMPs for construction and post-construction control of runoff. The SWPPP and SUSMP shall be prepared by a Civil or Environmental Engineer for review and approval by the City of Downey. The plans shall reduce the discharge of pollutants to the maximum extent practical using management practices, control techniques and systems, design and engineering methods, and such other provisions that are appropriate. The plans shall include applicable post-construction measures such as the following: ▪ Control of impervious area runoff, including installation of detention basins, retention areas, filtering devices, energy dissipaters, pervious drainage systems, porous pavement alternatives; ▪ Implement regular sweeping of impervious surfaces such as parking lots and entry drives; ▪ Use of efficient irrigation practices; ▪ Provision of infiltration trenches and basins; ▪ Linings for urban runoff conveyance channels; ▪ Vegetated swales and strips; ▪ Protection of slopes and channels; ▪ Landscape design such as xeriscape or other design minimizing use of fertilizers;	

TABLE S-2
SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED
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Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
	scope of the cumulative analysis for the drainage impacts is limited at this point to site specific impacts and the ability of the project to mitigate these impacts. As discussed earlier, the City's Water Master Plan is not available at this time. However, the project's impact upon the City's Water system and demand will be mitigated to a less than significant level by Mitigation Measure 3.4-1. The scope of the cumulative analysis for water quality impacts is governed by the SUSMPS adopted by City ordinance. The project's contribution to water quality impacts can be mitigated to a less than significant level. Therefore, water quality impacts from a cumulative perspective can also be mitigated to a less than significant level.	▪ Minimize storm water runoff through site design; and, ▪ Minimize outdoor storage, including trash container areas. **Mitigation Measure 3.4-4:** Prior to the issuance of building permits for the project, the project applicants shall implement conditions of the City of Downey regarding storm drainage improvements that shall include, but not be limited to: ▪ Construct the necessary storm drainage improvements (including detention basins if needed) to handle increased flows and provide BMPs.	
Land Use and Planning	None.	None.	N/A
Noise	Construction Noise Level: Use of construction equipment would generate both steady state and episodic noise that would be heard both on and off	**Mitigation Measure 3.6-1:** The project developer shall incorporate the following best management practices for noise control of demolition and construction activities into the construction documents to be implemented by all project contractors: ▪ Maximize the physical separation between noise generators and noise receptors. Such separation includes, but is not limited to, the following measures: provide	Less Than Significant

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SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED
(DECISION MAKERS MUST MAKE "FINDINGS" UNDER SECTION 15091 OF THE CEQA GUIDELINES IF THE PROJECT IS APPROVED).

Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
	the project site. Studio Noise Sources: Sources of noise including peoples voices, loudspeakers, mechanical equipment, and even staged explosions could exceed the City's adopted Municipal Code noise standards at the Kaiser hospital and nearby residential properties.	enclosures for stationary equipment and barriers around particularly noisy areas on the site or around the entire site; use shields, impervious fences, or other physical sound barriers, to inhibit the transmission of noise to sensitive receptors; and position stationary equipment to minimize noise impacts on the community; ▪ Require that all construction equipment engines be properly tuned and muffled according to manufacturers' specifications; ▪ Select haul routes for the removal of excavation materials and transport of building materials in conjunction with the City of Downey such that noise-sensitive (e.g., residential) areas are avoided as much as possible; and ▪ Neighbors within 500 feet of construction areas shall be notified of the construction schedule in writing, prior to construction. The project sponsor shall designate a "disturbance coordinator" who shall be responsible for responding to any local complaints regarding construction noise. The coordinator (who may be an employee of the developer or general contractor) shall determine the cause of the complaint and shall require that reasonable measures warranted to correct the problem be implemented. A telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site fence and on the notification sent to neighbors adjacent to the site. ▪ Construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m. with no construction allowed on Sunday.	
Population and Housing	None.	None.	N/A
Public Services and Utilities	**Impact 3.8-1:** The proposed project could result in a potentially significant impact to the City's domestic water system and supply. **Impact 3.8-2:** The proposed project will have a significant impact on the infrastructure of the reclaimed water system serving the City of Downey. **Impact 3.8-3:** It is anticipated	**Mitigation Measure 3.8-2:** Prior to the issuance of building permits, the project applicants shall obtain the appropriate clearances from the City of Downey and the County Sanitation Districts of Los Angeles County regarding proposed wastewater improvements to ensure that adequate wastewater capabilities are available at all proposed points of connection. These improvements include, but are not limited to, • Design and install all on-site and off-site sanitary sewer improvements required for the project. **Mitigation Measure 3.8-2:** Prior to the issuance of building permits, the project applicants shall obtain the appropriate clearances from the City of Downey and the County Sanitation Districts of Los Angeles County regarding proposed wastewater	Less Than Significant

TABLE S-2
SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED
(DECISION MAKERS MUST MAKE "FINDINGS" UNDER SECTION 15091 OF THE CEQA GUIDELINES IF THE PROJECT IS APPROVED).

Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
	that the proposed project will generate additional demands for fire service water as compared to the existing under-utilized site. **Impact 3.8-4:** It is anticipated that the proposed project will generate additional demands for electricity as compared to the existing under-utilized site. **Impact 3.8-5:** It is anticipated that the proposed project will generate an increased demand for natural gas. **Impact 3.8-6:** It is anticipated that the proposed project will generate an additional demand for schools that are already overcrowded. **Impact 3.8-7:** It is anticipated that the proposed project will generate an additional demand for police protection. **Cumulative Impacts.** Infrastructure capacity for utilities and other public services is a regional problem due to recent and projected population increases in the Southern California area. This	improvements to ensure that adequate wastewater **capacities are available at all proposed points of connection. These improvements include, but are not limited to,** **Design and install all on-site and off-site sanitary sewer improvements required for the project.** **Mitigation Measure 3.8-3:** The City of Downey is the water purveyor in and for the City. Prior to final design, the project applicants shall provide estimated water usage requirements, on a summer and winter basis, to the Public Works Department for review. **In the event that project demand exceeds the City's ability to provide adequate potable water to the project, the project applicants shall be responsible for all costs associated with providing both the supply and infrastructure that will ensure adequate water supply to the site.** **Mitigation Measure 3.8-4:** Prior to the issuance of building permits, the project applicants shall implement conditions of the City of Downey regarding domestic water improvements that shall include, but not be limited to: ▪ Design and install an on-site public water loop system that joins the main water lines on Lakewood, Bellflower, Imperial Highway, Stewart & Gray Road, and Clark. **Mitigation Measure 3.8-5:** Prior to issuance of building permits, the project applicants shall coordinate with the City of Downey and the Central Basin Water District to: ▪ ▪ Design and install a double-piping system in or around the proposed buildings as feasible for the use of reclaimed water for non-potable plumbing, landscaping, cooling towers and industrial uses per Sections 13550-13556 of the California Water Code. ▪ Design and install, with the approval of the City Department of Public Works, any necessary reclaimed water extension along Imperial Highway and/or Lakewood Boulevard and/or from Independence Park in order to service the proposed project. Each applicant is to bear its proportionate share of costs for any necessary reclaimed water extension. **Mitigation Measure 3.8-6:** Prior to the issuance of building permits for the project, the project applicants shall obtain the appropriate clearances from the City of	

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Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
	population increase creates additional demand for public services, which may already be at or near capacity. It has been determined that, with implementation of recommended mitigation measures, all project-specific impacts to public services can be reduced to a less-than-significant level. The Lead Agency has consequently determined that the contribution of the proposed project to cumulative public services impacts in the Los Angeles County Southeast Subregion (Gateway Cities Subregion) would be less than cumulatively considerable.	Downey and the Central Basin Municipal Water District regarding proposed reclaimed water improvements to insure that adequate reclaimed water services are maintained and provided including: ▪ Submit a final reclaimed water usage analysis plan and final public reclaimed water extension plan. **Mitigation Measure 3.8-7:** Prior to the issuance of building permits, the project applicants shall implement conditions of the City of Downey regarding reclaimed water improvements that shall include, but not be limited to: ▪ Construct the necessary reclaimed water extension along Imperial Highway and/or Lakewood Boulevard and/or from Independence Park in order to service the proposed project. Each applicant is to bear its proportionate share of costs for any necessary reclaimed water extension. ▪ Design and install the reclaimed water on-site landscape irrigation system. ▪ Prepare landscape plans utilizing drought-tolerant landscape. **Mitigation Measure 3.8-8:** Prior to approval of the final map, the project applicants shall coordinate with the City of Downey Public Works and Fire Department to: ▪ Determine current fire flow data based on specific project plans; determine fire flow, on-site fire hydrant and building sprinkler requirements for each portion of the project. ▪ Certify existing building sprinkler systems and/or required modifications, if any. ▪ Develop an interim fire system plan to provide protection during demolition of the current on-site system, including removal of existing pump houses. ▪ Prior to issuing building permits, design and install a new permanent fire system to provide protection for the site. All onsite fire service water shall be interconnected with available City water sources around the project site. **Mitigation Measure 3.8-9:** Prior to issuance of building permits, the project applicants shall submit a final on-site fire system plan to the City of Downey Public Works Department and the Fire Department for review and approval. **Mitigation Measure 3.8-10:** Business tenants shall develop and implement	

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Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
		appropriate recycling programs. The recycling programs shall be subject to review and approval by the City Public Works Department prior to issuance of an occupancy permit. Further, prior to the issuance of occupancy permits, business tenants shall demonstrate, to the satisfaction of the City Public Works Department, the installation of appropriate trash compaction devices to reduce the volume of solid waste going to area landfills. **Mitigation Measure 3.8-11:** Business tenants shall develop and implement energy-conservation programs. These conservation programs shall be subject to review and approval by the City Public Works Department prior to issuance of an occupancy permit. Mitigation Measure 3.8-12: Prior to issuance of building permits, the applicants shall pay the School District all required school fees. **Mitigation Measure 3.8-13:** Prior to issuance of occupancy permits, the project applicants shall complete an analysis of projected employee populations over a 24-hour (weekday) period to determine applicable shifts/periods of time to which police personnel could be added to maintain the current standard of 1.07 police officers per 1,000 population. The project applicants are obligated to pay fees for any additional police personnel determined to be required after such determination is made and shall enter into an agreement with the City of Downey and the DPD for payment of such fees. **Mitigation Measure 3.8-14:** Prior to the issuance of occupancy permits, the project applicants shall each draft an on-site security plan for the development to be reviewed by the City of Downey and the Downey Police Department.	
Transportation and Traffic	**Impact 3.9-1:** Traffic generated by the proposed project would result in an increase of 0.02 or greater in the ICU value for intersections that are projected to operate at Level of Service E or F.	**Mitigation Measure 3.9-1:** Provide a Second Northbound-to-Westbound Left-Turn Lane on Lakewood Boulevard at the Lakewood/Firestone Intersection, -OR- Provide Right-Turn Lanes in the Northbound, Southbound, and Eastbound Directions and Double Left-Turn Lanes in the Eastbound and Westbound Directions, as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic	Less than Significant

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SIGNIFICANT ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED
(DECISION MAKERS MUST MAKE "FINDINGS" UNDER SECTION 15091 OF THE CEQA GUIDELINES IF THE PROJECT IS APPROVED).

Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
	Impact 3.9-2: Traffic generated by the proposed project would result in a significant impact on the Century Freeway (I-105) between Bellflower Boulevard and the I-605 Freeway during the morning and afternoon peak hours based on the criteria in the LA County Congestion Management Program (CMP).	signal coordination system that the City may ultimately install at this location. **Mitigation Measure 3.9-2:** Provide an Additional Northbound Through Lane on Lakewood Boulevard at the Lakewood/Bellflower Intersection, as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location. **Mitigation Measure 3.9-3:** Provide an Additional Northbound and Southbound Through Lane on Lakewood Boulevard at the Lakewood/Stewart & Gray Intersection , as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location. **Mitigation Measure 3.9-4:** Provide an Additional Westbound-to-Southbound Left-Turn Lane on Imperial Highway at the Lakewood/Imperial Intersection , as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location. **Mitigation Measure 3.9-5:** Provide an Eastbound-to-Southbound Right-Turn Lane on Imperial Highway at the Imperial/Bellflower Intersection , as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system	

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Resource	Impact Description	Recommended Mitigation Measure	Residual Impact
		that the City may ultimately install at this location. **Mitigation Measure 3.9-6:** Provide a Southbound-to-westbound Right-Turn Lane on Bellflower Boulevard at the Bellflower/Stewart and Gray Intersection , as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location. **Mitigation Measure 3.9-7:** Prepare a Phased Mitigation Plan to link the specific mitigation measures (Measures 3.9-1 through 3.9-6) with the various levels and/or combinations of development that are anticipated for the development , as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at these locations.	

1.0 Introduction

1.1 Overview of the Proposed Project

The proposed project consists of a Specific Plan, rezoning, and other discretionary approvals for the redevelopment of a 160-acre property located at 12214 Lakewood Boulevard, Assessor's Parcel Number (APN) 6256-004-900, in the City of Downey, California, bounded on the west by Lakewood Boulevard and Clark Avenue, on the east by Bellflower Boulevard, on the north by Stewart & Gray Road, and on the south by Imperial Highway. The project site currently contains the vacant buildings formerly operated by North American Rockwell and the Boeing Company which manufactured and supported components of manned space flight programs, including the Apollo and Space Shuttle programs, under the direction of the National Aeronautics and Space Administration (NASA). Most of the 124 vacant NASA structures on-site would be demolished to allow for a maximum of approximately 3.7 million square feet (msf) of development (of which 3.1 msf would generate traffic) by two applicants in six distinct land areas. The improvements proposed for each area are described below.

Area I

Downey Landing, LLC Area I encompasses slightly more than 34 acres and occupies the northern portion of the project site. A planned retail shopping center would occupy this area, and would be oriented toward Lakewood Boulevard and Stewart & Gray Road. The other street bordering Area I is Bellflower Boulevard. The center will feature both inline stores and freestanding buildings. Together, the center's buildings will provide a maximum of 410,000 square feet (sq. ft.), plus parking.

Area II

Downey Landing, LLC Area IIA would total up to 19 acres and occupy the western central portion of the site, fronting on Lakewood Boulevard. The development proposal involves either reusing current buildings for motion picture studio and production space or other adaptive reuse, or demolishing the majority of the building in favor of approximately 444,500 sq. ft. of technology and business park uses. Parking would be provided to serve these anticipated uses. The latter option would generate the highest traffic counts and is therefore the option examined in the EIR, to provide a conservative environmental analysis.

Downey Landing, LLC Area IIB would total up to 21 acres and would occupy the central portion of the site. The development proposal involves either reusing current buildings for motion picture

studio and production space or other adaptive reuse, or demolishing the majority of the building in favor of approximately 243,000 sq. ft. of industrial uses. Parking would be provided to serve these anticipated uses. The latter option would generate the highest traffic counts and is therefore the option examined in the EIR, to provide a conservative environmental analysis.

Downey Landing, LLC Area IIC would total up to 22 acres. Area IIC fronts the intersection of Clark Avenue and Lakewood Boulevard, directly south of Area IIA. It supports an existing building (Building 1) that contains 913,023 sq. ft., which both Rockwell and the Boeing Company used for aerospace manufacturing and testing purposes. The development proposal involves either reusing current buildings for motion picture studio and production space or other adaptive reuse, or demolishing the majority of the building in favor of approximately 384,800 sq. ft. of technology and business park uses. Parking would be provided to serve these anticipated uses. The latter option would generate the highest traffic counts and is therefore the option examined in the EIR, to provide a conservative environmental analysis.

Downey Landing, LLC Area IID would be developed as an office park. It would encompass 28 acres and occupy the eastern central portion of the project site; plans show Area IID would front on Bellflower Boulevard. Planned improvements consist of 2-story office buildings for a combined maximum of 516,200 sq. ft. Open/green space uses will be interspersed throughout the project site, as well. Construction of each phase is anticipated to span 10 months. Area II is currently under temporary use by several motion picture production companies, and if Buildings 1, 9, 11, 14, 39, 288 and 6/290 are kept externally intact and reused, their reoccupancy would occur concurrently with construction of Area I. In the case of demolition of Buildings 1, 9, 11, 14, 39, 288, and 6/290, Areas I would be developed first, Area III second, and Area II last. Construction staging is anticipated to occur on-site.

Area III

Kaiser portion of Area III- According to the development proposal submitted by Kaiser, this portion of the project would develop 1.0 msf of hospital, medical office buildings, and associate uses and .69 msf of structured parking on 30 acres of land. The proposed Kaiser project is a replacement for Kaiser's existing 8-story hospital tower in the City of Bellflower. Proposed improvements include a new 6-story 680,000 square foot hospital building with a planned capacity of 351 beds; new, four-story, 292,700 square feet of medical office buildings, a 27,300-square-foot central plant, and a six-level, 681,550-square-foot parking structure. It should be noted that the hospital building may be up to eight stories, provided that total square footage does not exceed 680,000. Development of a seven- or eight- story hospital building would not induce environmental impacts beyond those of a six-story building. Construction would be phased over a period of about ten years. The specific components of each phase are tentative; however, development would not exceed 1.0 million sq. ft.

for the hospital and medical office building uses and 681,550 sq. ft. parking structure, and phasing variations would not affect the analysis presented in this EIR.

Park/School/Learning Center portion of Area III- The westernmost 13-acre portion of Area III, which abuts Clark Avenue, is being reserved for the Downey Unified School District for use as a school/park/learning center; however, neither the Specific Plan nor this EIR will entitle or provide environmental clearance for development of any school, and the District would be required to initiate a separate environmental process if it chooses to develop the site. A 50,000 sq. ft. learning center may be located on this 13-acre site.

1.2 Purpose of the EIR

This Draft Program Environmental Impact Report (Draft EIR) has been prepared to meet all of the substantive and procedural requirements of the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code Section 21000 *et seq.*), the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 *et seq.*, as amended through January 1, 2001) and the rules, regulations and procedures for implementation of CEQA as adopted by the City of Downey. The City of Downey is the Lead Agency for this project, taking primary responsibility for conducting the environmental review and approving or denying the Specific Plan under consideration.

Before beginning the preparation of an EIR, the lead agency must decide which specific issues should be evaluated in the document. CEQA and the CEQA Guidelines mandate various steps that lead agencies must take to define the scope and contents of an EIR, and also give lead agencies discretion to use additional "scoping" methods. For this project, the primary tool used to determine the scope of this DEIR was the Initial Study.

As allowed by Section 15063 of the CEQA Guidelines, the Initial Study may be used to simplify preparation of an EIR by narrowing the scope of the issues to be evaluated. Therefore, the Initial Study may be used to:

- Focus the EIR on environmental effects determined to be significant;
- Identify effects that are not significant;
- Explain why potentially significant effects were determined not to be significant; and
- Identify whether a program EIR, tiering, or other process can be used for the environmental analysis.

Under the statute, EIRs should focus their discussion on potentially significant impacts, and may limit discussion of other impacts to a brief explanation of why the impacts are not potentially significant. Under the Guidelines, environmental effects that were dismissed in an initial study need

not be discussed in the EIR unless the agency later receives information that is inconsistent with the findings of the initial study. This process results in a focused, or limited-topic EIR, such as this document.

This EIR has been prepared to identify any potentially significant environmental impacts associated with the implementation of the proposed project, as well as appropriate and feasible mitigation measures or project alternatives that would minimize or eliminate these impacts. According to PRC Section 21081, the Lead Agency must make specific Findings of Fact ("Findings") before approving the Final EIR, when the Draft EIR identifies significant environmental impacts that may result from a project. The purpose of the Findings is to establish the link between the contents of the Final EIR and the action of the Lead Agency with regards to approval or rejection of the project. Prior to approval of a project, one of three findings must be made:

> (1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
> (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
> (3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

Additionally, according to PRC Section 21081.6, for projects in which significant impacts will be avoided by mitigation measures, the Lead Agency must include in its Findings a mitigation monitoring program ("MMP"). The purpose of the MMP is to ensure compliance with required mitigation during implementation of the project.

However, environmental impacts may not always be mitigated to a level considered less than significant: such impacts are considered significant and unavoidable. If a public agency approves a project that would result in significant and unavoidable environmental impacts, the agency shall state, in writing, the specific reasons for approving the project, based on information contained within the Final EIR, as well as any other information in the public record. The resulting document is called a Statement of Overriding Considerations, and serves to clearly state the proposed project's benefits when weighed against its unavoidable environmental risks. The public agency prepares the Statement of Overriding Considerations, if required, after completion of the Final EIR, but before project approval according to CEQA Guidelines Sections 15091 and 15093. As further guidance, in *Citizens of Goleta Valley v. Board of Supervisors of Santa Barbara County* (1990, 52 Cal.3d 553), the California Supreme Court stated that:

> the wisdom of approving any development project, a delicate task which requires a balancing of interest, is necessarily left to the sound discretion of the local officials and their

> constituents who are responsible for such decisions. The law as we interpret and apply it simply requires that those decisions be informed, and therefore balanced.

Therefore, this document is intended to serve as an informational document, as stated in Section 15121(a) of the CEQA Guidelines:

> An EIR is an informational document which will inform public agency decisionmakers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency.

Furthermore, this EIR will constitute the primary source of environmental information for the lead, responsible, and trustee agencies to consider when exercising any permitting authority or approval power directly related to implementation of the proposed project.

1.3 Definition of a Program Environmental Impact Report

A Program EIR, as defined within Section 15168 of the CEQA Guidelines, is an EIR which:

> may be prepared on a series of actions that can be characterized as one large project and are related either (1) Geographically, (2) As logical parts in the chain of contemplated actions, (3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

The use of a Program EIR enables a Lead Agency to examine the overall effects of a proposed course of action that is far-reaching, yet related in some fashion. Program EIRs contain less detail than typical development project EIRs because the level of detail in the impact analysis can only reflect the level of detail in the program description itself. There is no requirement that a particular level of specificity be provided in such a document; instead, Section 15151 of the CEQA Guidelines states that an EIR (regardless of the type):

> should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and good faith effort at full disclosure.

As stated in Section 15168(b) of the CEQA Guidelines, the use of a Program EIR can provide the following advantages: (1) Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action; (2) Ensure consideration of cumulative impacts that might otherwise be missed in a case-by-case analysis; (3) Avoid duplication of basic policy considerations; (4) Allow the Lead Agency to consider broad policy alternatives and program-wide mitigation measures when the agency has greater flexibility to deal with basic problems or cumulative impacts; and (5) Allow reduction in paperwork.

The degree of specificity provided in a programmatic environmental analysis can vary. The critical factor is that each known or anticipated individual project component is evaluated within a Program EIR and/or through the completion of subsequent environmental analysis which discloses all environmental consequences associated with program implementation.

1.4 Scope of the EIR

This Draft EIR addresses the potential environmental effects of the proposed project. The scope of the Draft EIR includes issues identified by the City of Downey during the preparation of the Initial Study (IS) and Notice of Preparation (NOP) for the proposed project and comment letters received during the IS/NOP review period. The IS/NOP and comment letters received during the NOP review period are included in Appendix A of this Draft EIR. Based on this information, the Lead Agency has determined that implementation of the proposed project may result in potentially significant impacts. Chapter 3.0 discusses the following environmental issues:

- Aesthetics;
- Air Quality;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Population and Housing;
- Public Services and Utilities; and
- Transportation and Circulation.

In accordance with Section 15063(c)(3)(B) of the State CEQA Guidelines, the IS/NOP (Appendix A) assists in the preparation of an EIR by identifying effects determined not to be significant, as determined by a brief environmental analysis, supported by evidence. The IS/NOP determined that the following effects are not significant, and this Draft EIR does not discuss them further:

- Agricultural Resources;
- Biological Resources;
- Cultural Resources;
- Geology and Soils; and
- Mineral Resources.

1.5 Environmental Review Process

As a first step in complying with the procedural requirements of CEQA, the City prepared an IS to determine whether any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment and, if so, to narrow the focus (or scope) of the environmental analysis. For this project, the IS indicated that an EIR would be the appropriate type of environmental document to address potential environmental impacts resulting from project planning, implementation, and operation.

After completion of the IS, the City filed an NOP with the California Governor's Office of Planning and Research as an indication that an EIR would be prepared. In turn, the first IS/NOP, which address only the impacts anticipated from the Downey Landing, LLC portion of the project, was distributed for a 30-day public review period, which began on March 20, 2001 and ended on April 19, 2001. Subsequently, the project was amended to include the Kaiser portion of the project, and the IS/NOP was revised and recirculated from June 18, 2001 to July 19, 2001. The purpose of the public review periods was to solicit comments on the scope and content of the environmental analysis to be included in the Draft EIR. The City received comment letters on the IS/NOPs from the following agencies and individuals:

- Governor's Office of Planning and Research
- Southern California Gas Company
- County Sanitation Districts of Los Angeles County
- California Department of Toxic Substances Control
- Southern California Association of Governments
- Metropolitan Transportation Authority
- California Native American Heritage Commission
- South Coast Air Quality Management District
- County of Los Angeles Department of Public Works
- California Division of Mines and Geology

The IS/NOPs and their respective comment letters are included in Appendices A and B of this Draft EIR.

During the preparation of the Draft EIR, agencies, organizations, and persons who the City believed may have an interest in this project were specifically contacted. Information, data, and observations from these contacts are included in the Draft EIR. Agencies or interested persons who did not respond during the public review period of the IS/NOP will have an opportunity to comment during the public review period of the Draft EIR, as well as at subsequent hearings on the project.

1.6 Intended Use of the EIR

As previously mentioned, this Draft EIR is intended to provide the Lead Agency, interested public agencies, and the public with information which enables them to intelligently consider the environmental consequences of the proposed action. EIRs not only identify significant or potentially significant environmental effects, but also identify ways in which those impacts can be reduced to less-than-significant levels, whether through the imposition of mitigation measures or through the implementation of specific alternatives to the project. In a practical sense, EIRs function as a technique for fact-finding, allowing an applicant, concerned citizens, and agency staff an opportunity to collectively review and evaluate baseline conditions and project impacts through a process of full disclosure.

To gain the most value from this report, certain key points should be kept in mind:

- This report should be used as a tool to give the reader an overview of the possible ramifications of the proposed project. It is designed to be an "early warning system" with regard to potential environmental impacts.
- A specific environmental impact is not necessarily irreversible or permanent. Most impacts, particularly in urban, more developed areas, can be wholly or partially mitigated by incorporating changes recommended in this report during the design and construction phases of project development.

1.7 Required Approvals

This Draft EIR will be used in connection with permits and other discretionary approvals necessary for implementation of the proposed project. The proposed project may require the following discretionary approvals by the City of Downey:

1.7.1 Requested Approvals

- Adoption of the Downey Landing Specific Plan, No. SP-01-1.
- Rezoning of the Specific Plan Area.

- Approval of subdivision maps and uses normally requiring conditional use permits should be clearly approved as part of the Specific Plan (i.e. hospital use) and should not be required to obtain as separate entitlement. Such approval should be clearly stated in the Specific Plan.
- Approval of Development Agreements. The City will enter into Development Agreements with Downey Landing, LLC and Kaiser Permanente. The enabling legislation for Development Agreements is provided for in Section 65864 and 65865 of the California Government Code. The development agreements will define the specific nature and improvements of the proposed project, specifies permitted uses, density of development, intensity of uses, maximum heights, parking, landscaping, signing and other standards, terms and conditions necessary to promote the orderly development of the project. The City Council must approve the Development Agreements.

1.7.2 Other Agencies Whose Approval is Required

In addition to the lead agency, there are also local, state, and federal responsible agencies who have discretionary or appellate authority over specific aspects of the proposed project. The responsible agencies will also rely on this Draft EIR when acting on those aspects of the project that require their approval. The following approvals are anticipated:

- ***California Regional Water Quality Control Board, Los Angeles Region.*** National Pollutant Discharge Elimination System (NPDES) general construction permit.
- ***South Coast Air Quality Management District.*** Operating permits for utility air pollutant sources, i.e. boilers and generators, and operating permits for ethylene oxide sterilizer and abaters.
- ***Office of Statewide Health Planning and Development.*** Building Permits for Hospital.

2.0 Project Description

2.1 Project Location

The City of Downey, which is in southeastern Los Angeles County, is an urbanized community located about 12 miles southeast of downtown Los Angeles. The city is bounded by the San Gabriel River on the east, Telegraph Road on the north, the Rio Hondo River on the west, and Gardendale Street and Foster Road on the south. Cities bordering Downey include: Pico Rivera on the north, Santa Fe Springs on the northeast, Norwalk on the east, Bellflower and Paramount on the south, South Gate on the west and the City of Commerce on the northwest. Figure 2-1 shows the location of Downey within Los Angeles County.

The street address for the project site is 12214 Lakewood Boulevard, and County Assessors Parcel Number for the project site is 6256-004-900. The approximately triangular project site is located in the southeastern portion of the City of Downey, and as illustrated by Figure 2-1, lies approximately 1 ¼ miles west of the San Gabriel River Freeway (Interstate 605), about 2 ½ miles south of the Santa Ana Freeway (I-5), and about ¼ mile north of the Glenn Anderson Freeway and Transit Way (I-105). The San Gabriel River is located within ¾ mile of the site to the east. Lakewood Boulevard and Clark Avenue border the project site on the west, Imperial Highway provides the southern border, Stewart & Gray Road is to the north, and Bellflower Boulevard provides the eastern boundary.

2.2 Site Characteristics

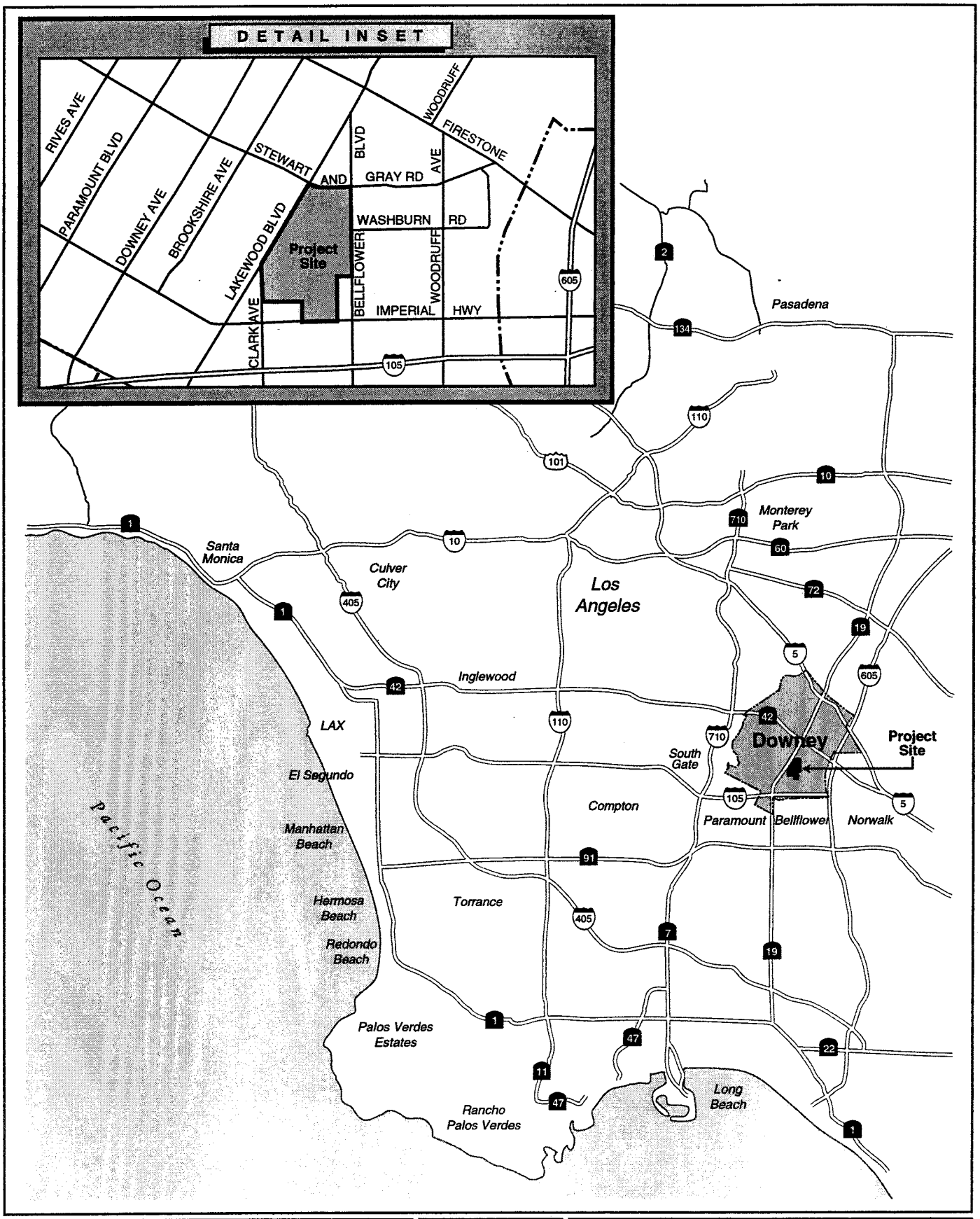
Table 2-1 summarizes the characteristics of the project site. The text following the table describes these characteristics in more detail.

2.2.1 Topography

The project site is relatively flat. Elevations range from 93 feet above mean sea level (MSL) to 104 feet above MSL, which creates a gentle southerly slope of about 17 feet per mile (SCS 1998, 2). The entire site has previously been graded.

2.2.2 Site Cover

The majority of the project site is developed with urban uses, and is impermeable. Small areas in the eastern portion of the site (Area II) are permeable.



0 1 2 4 Scale In Miles

SOURCE: EIP Associates

10552-00

EIP ASSOCIATES

FIGURE **2-1**

Regional Location

City of Downey

TABLE 2-1
SUMMARY OF PROJECT SITE CHARACTERISTICS

Address	12214 Lakewood Boulevard
Assessors Parcel Number(s):	6256-004-900
Number of Lots:	6 (per NASA)
Gross Acreage:	160 acres
General Plan Designation:	Mixed-Use
Existing Land Use(s):	Primarily vacant industrial buildings, some motion picture production
Proposed Land Use(s):	Retail, office, technology and business park, hospital, and medical office
Existing Zoning:	General Manufacturing (M2) with Parking Buffer (P-B) at site edges
Proposed Zoning:	Specific Plan
Utilities/Providers:	Fire: Downey Fire Department
	Police: Downey Police Department
	Electricity: Southern California Edison
	Natural Gas: Southern California Gas Company
	Water: City of Downey
	Sewer: Los Angeles County Sanitation Districts, City of Downey
	Reclaimed Water: Central Basin Municipal Water District
	Storm Drain: City of Downey
	Telephone: Verizon Telephone
	Cable Television: MediaOne Cable Television

Source: EIP Associates 2001

2.2.3 Surrounding and On-Site Land Use

Existing, on-site land uses comprise:

- Vacant NASA buildings (though Building 1 and some others are used occasionally for motion picture production);
- Vacant, undeveloped lots; and
- Vacant parking uses.

The site contains some 124 buildings, structures, and other built features (Earth Tech 1999, 4-1). Building 1 is the most prominent of these, and encompasses about 913,023 sq. ft.sq. ft.. Due to its size and configuration, Building 1 is sometimes used for motion picture production, as are Buildings 9, 11, 14, 39 288, and 6/290.

Nineteen of the structures on-site—structures 1, 6, 10, 11, 25, 36, 39, 41, 42, 108, 120, 123, 125, 126, 127, 128/674/676 (1 structure), 130, 288, and 290—were determined by Earthtech (1999, see Figure 4-1B) to be potentially eligible to the National Register of Historic Places (NRHP), and the California State Office of Historic Preservation (SHPO) concurred. Buildings 1 and 6/290 were determined to be the principal historical resources of the site, and are potentially eligible on an individual basis,

while the remaining structures have potential collective significance. However, as described in the Revised Initial Study for the project (Appendix B of the EIR), consultation with SHPO culminated in a Memorandum of Agreement (MOA) that identifies necessary measures to resolve the potential adverse effects of project implementation on historic structures on-site.

Surrounding land uses include:

- Low-, Low/Medium-, and Medium-Density Residential uses to the north and northeast, across Stewart & Gray Road and Bellflower Boulevard;
- Neighborhood Commercial, Medium-Density Residential, and School uses to the west, across Lakewood Boulevard;
- General Commercial uses to the west, between Clark Avenue and Lakewood Boulevard;
- Medium-Density Residential uses west of Clark Avenue, south of Imperial Highway;
- Medium-Density Residential, Commercial Manufacturing, Independence Park, a Public Works yard, and Neighborhood Commercial uses to the east, across Bellflower Boulevard;
- Kaiser Permanente medical offices, adjacent to the project site's southeast boundary; and
- Los Angeles County office and education complexes, a Kaiser Permanente maintenance complex, and General Commercial uses to the south of the project site, across Imperial Highway.

2.2.4 Land Use Diagram and Zoning Designations

The entire project site is designated in the General Plan Land Use Diagram as Mixed-use, which allows commercial and manufacturing uses, or a combination of them. Hospitals and medical facilities are commercial uses, or are otherwise consistent with "combination of commercial/manufacturing uses." The zoning designation for the project site is General Manufacturing (M2), with Parking Buffer (P-B) on the perimeter of the site along Clark Avenue, Imperial Highway, and Stewart & Gray Road.

2.3 Project Objectives

The objectives of the City of Downey (the Lead Agency) and the project applicants for the project are as follows:

- Develop a land use plan for a currently underutilized site, which at build-out will result in the development of a distinctive mixed-use project (i.e., retail center, television/film production facilities, business park, museum/learning center, and hospital and medical office facility) that is consistent with the goals and policies of the City's General Plan.

- Create employment opportunities that will replace the jobs that were lost with the closing of the NASA facility, with respect to both quantity and quality.
- Develop a specific plan that will ensure project compatibility with neighboring land uses through the use of land use controls and design guidelines, while providing for both employment and shopping opportunities.
- Increase and diversify the number of retail merchandise opportunities in the community for the purpose of capturing those Downey residents who are shopping elsewhere so as to reduce the City's leakage of sales tax revenue.
- Provide for the development of additional retail businesses so as to enlarge the City's retail trade area and in turn strengthen its economic base.
- Enhance the visual character of the project site, which in turn will help to strengthen the image of the community.
- Replace the project site's existing zoning districts with a mixed-use specific plan that recognizes the site's unique features and location advantages, provides for its orderly development, and attracts high-quality retailers, businesses, and technology companies.
- Provide public improvements to serve the project site and thereby ensure an improved environmental quality for onsite businesses and employees.
- Develop a built environment that reflects a high level of concern for architectural and urban design principles through a Specific Plan.
- Attract businesses that generate positive net revenues for the community to help support local services.
- Highlight the use of some of the site's existing buildings with the advantages they offer as locations for film and television production.
- Diversify and strengthen the City's economic base by attracting base-type businesses.
- Preserve that portion of Building 1 that has been designated historical.
- Prepare a specific plan that recognizes the history that occurred at the project site involving the development of NASA's Apollo and Space Shuttle programs.
- Develop a specific plan whose land use components are internally linked for pedestrian and vehicular travel.
- Replace the functionally outmoded Kaiser Bellflower hospital with new structures that meet current life safety, fire and seismic requirements for health care facilities.
- Continue to provide health care in Kaiser owned facilities to Kaiser members served by the Bellflower facility during the replacement of the Kaiser Bellflower hospital.

- Provide a consolidated and centralized medical center location for Kaiser members in the Downey/Bellflower community to receive medical care.
- Offer state-of-the-art medical care in facilities to be constructed and designed to optimize the quality of patient care in the new millennium.

2.4 Project History

The project site has been in substantially continuous use since construction of the initial facilities in 1929. The use of the site evolved over its lifetime, and included aircraft manufacturing and assembly; testing and operation of the first low-level nuclear reactor in California; invention, testing and patenting of a chemical milling process; research, production and assembly of early American rockets and missiles; design, production, assembly, and testing of equipment associated with space and moon landing programs; and design, development, manufacturing, assembly, and support for the Space Shuttle program. Ownership of the facilities on-site has shifted from Vultee to Consolidated to North American to the United States Air Force (USAF) and to NASA. North American Aviation operated the plant for the USAF, while North American Rockwell and, later, Boeing operated the plant during NASA's ownership. In 1998, as a result of restructuring within Boeing North American, the Downey NASA Industrial Plant was determined to be "excess to the company's needs," and was, therefore, also considered to be excess to the government's needs and available for disposal by Spring 2001 (NASA 2000). The City of Downey has arranged to purchase Parcels 1 and 2 of the NASA plant from the California State Lands Commission, who is acquiring the excess property from the General Services Administration (GSA). Parcels 3, 4, 5 and 6 of the plant have already been purchased by the City, and conveyance of Parcels 1 and 2 to the City is anticipated to occur in Spring/Summer 2002. Through a competitive bidding process, the City also entered into a negotiation process with the Ezralow Company and with Kaiser to develop the site. The development entity has since changed from the Ezralow Company to "Downey Landing, LLC" and will be referred to by the new name throughout this document. Pursuant to this negotiation process, Downey Landing, LLC, Kaiser, and the City have retained a consultant to prepare a Specific Plan to guide development of the site into a mixed-use commercial, technology and business park complex, as well as a hospital and medical office complex. As further described below, the Specific Plan is the project that this EIR analyzes, pursuant to CEQA.

2.5 Description of the Proposed Project

2.5.1 Project Characteristics

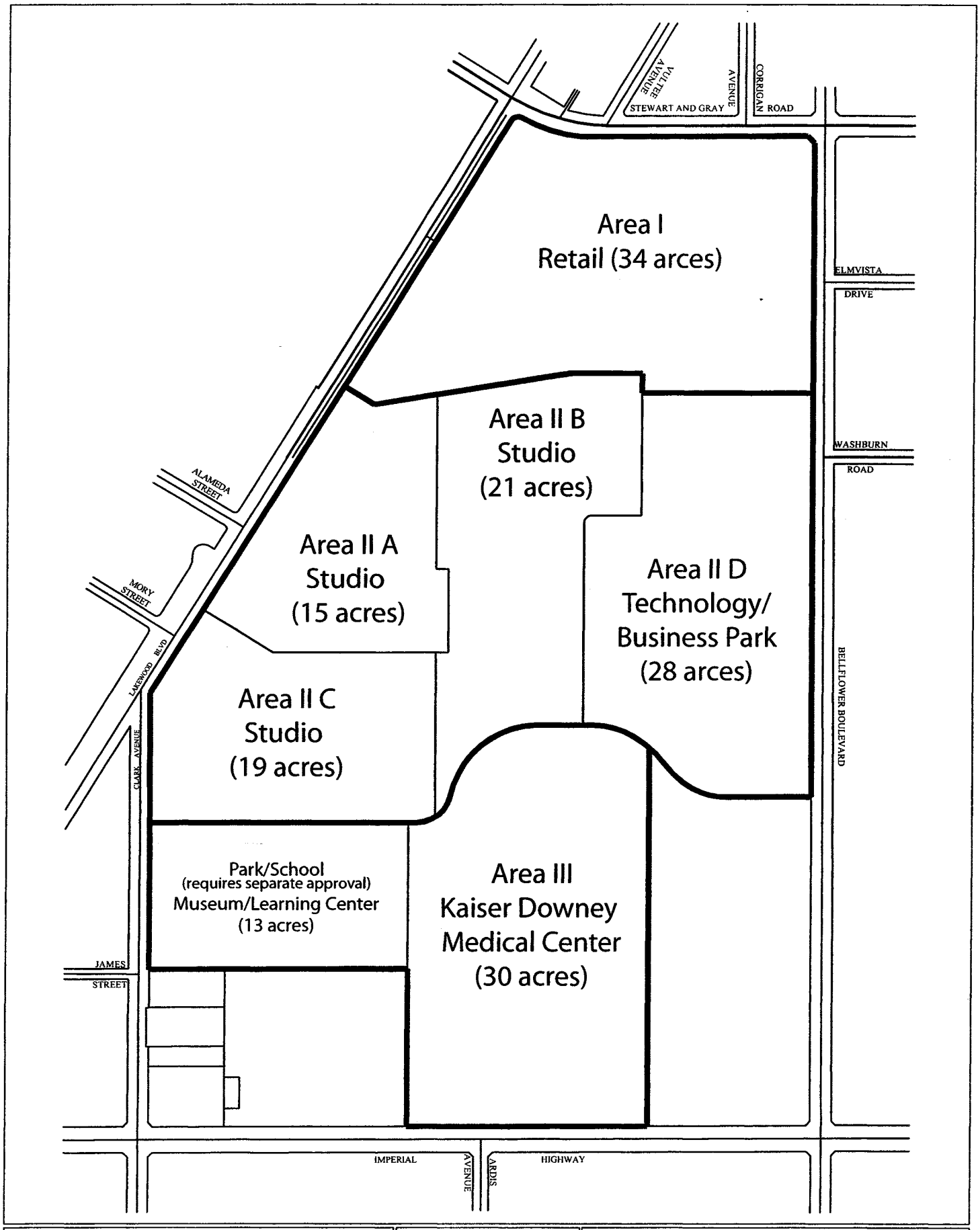
The proposed project consists of a Specific Plan, rezoning, development agreements, and other discretionary approvals for a mixed-use development proposal that is planned for the 160-acre former NASA site in Downey at the address listed above. Land uses planned for development include commercial retail, technology and business park, motion picture production, hospital, and medical office uses. Together, the project's buildings will total a maximum of approximately 3.7

million sq. ft. of floor area (of which 3.1 million sq. ft. would generate traffic) in four distinct planning areas. As discussed above, eight buildings in Downey Landing, LLC Area II (see below) could potentially be reused, which would represent a higher amount of building area but with a less-intensive use, and would substantially reduce the amount of new development. The anticipated maximum square footage values of new improvements proposed for each area are summarized in Table 2-2 below, and are described further in the text following the table. The maximum values were determined by a preliminary traffic analysis to potentially result in the greatest traffic (and therefore air quality and noise) impacts, and were evaluated in the EIR to provide a conservative analysis. Figure 2-2A shows the development areas under Option 1, and Figure 2-2B shows the development areas under Option 2.

TABLE 2-2
PROPOSED USES AND MAXIMUM BUILDABLE AREA
(BY PLANNING AREA)

Features	Planning Area I	Planning Area IIA	Planning Area IIB	Planning Area IIC	Planning Area IID	Planning Area III	TOTAL
Total Acreage	34.00 acres	up to 19 acres	up to 21 acres	up to 21 acres	28 acres	43 acres (including 13 acre Park/ School)	**160 acres**
Buildable Area*	410,000 sq. ft.	up to 444,500 sq. ft.	up to 421,549 sq. ft.	up to 384,800 sq. ft.	516,200 sq. ft.	1,000,000 sq. ft. (building) 681,550 sq. ft. (parking structure) 50,000 sq. ft. Learning Center (potential)	**3,100,000 sq. ft.**
General Proposed Uses	Commercial /Retail	Technology and Business Park, Studio	Industrial/ Studio	Technology and Business Park	Technology and Business Park	Hospital, Medical Office, Central Plant, Parking Structure, potential Learning Center	
Floor to Area Ratio (FAR)	.27	.49	.43	.50	.44	.45	**.43**
Parking Spaces	2,114	up to 920	up to 850	up to 1113	1,600	up to 2,431	**up to 8,630**

Source: City of Downey 2001
* Buildable Area does not include on-site roadways and other infrastructure, including parking structures.
* The Masterplan has two options with different configurations of planning areas. Throughout the EIR, "Total Acreage" and "Buildable Area" represent the higher of the two configurations. Therefore, EIR site totals add up to greater than actual site totals.



Not to Scale

NORTH

10552-00

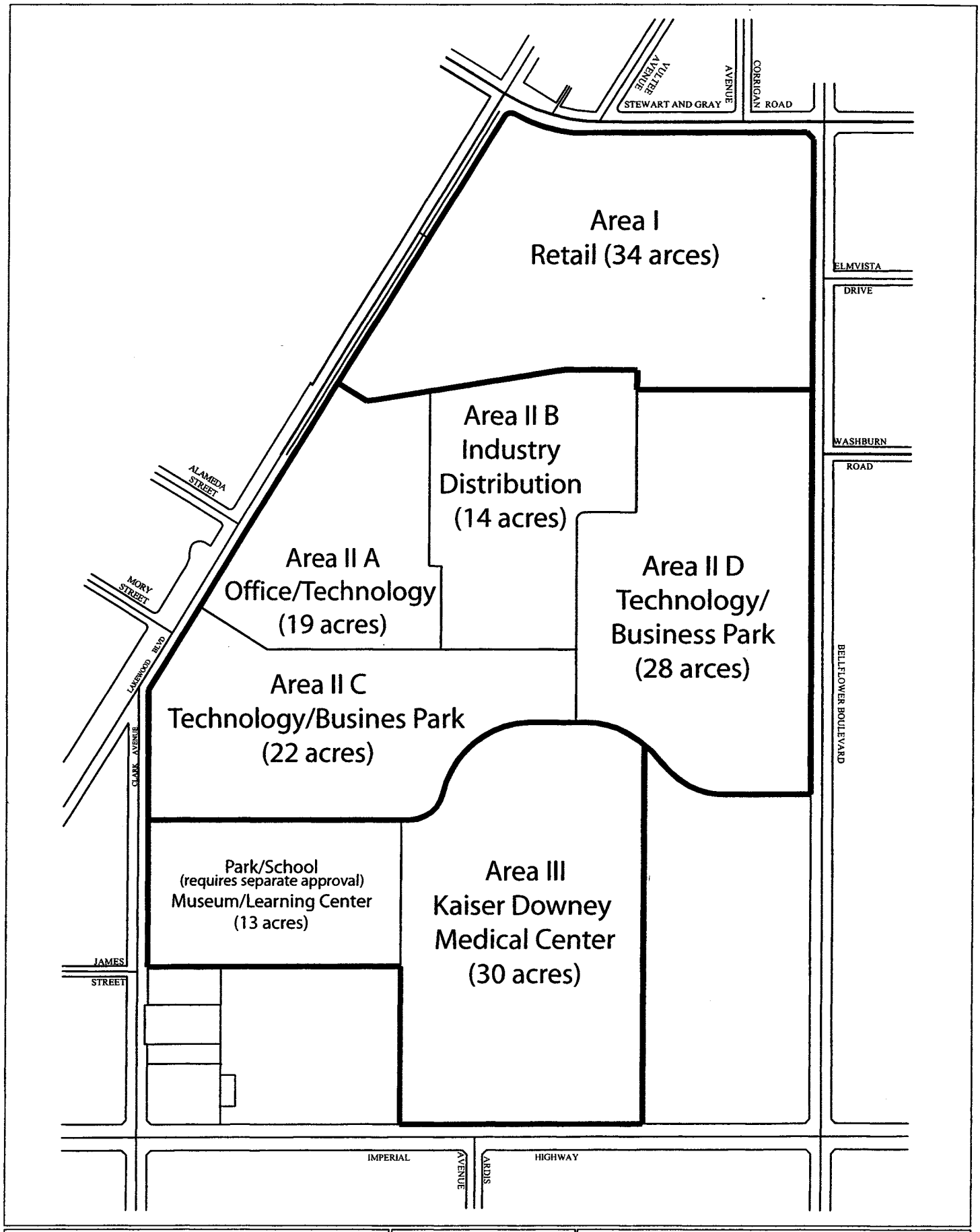
SOURCE: Bastien and Associates, INC

EIP ASSOCIATES

FIGURE **2-2A**

Proposed Development Areas, Option 1

City of Downey



Not to Scale

NORTH

10552-00

SOURCE: Bastien and Associates, INC

EIP ASSOCIATES

FIGURE **2-2B**

Proposed Development Areas, Option 2

City of Downey

Area I

Downey Landing, LLC Area I encompasses slightly more than 34 acres and occupies the northern portion of the project site. A planned retail shopping center would occupy this area, and would be oriented toward Lakewood Boulevard and Stewart & Gray Road. The other street bordering Area I is Bellflower Boulevard. The center will feature both inline stores and freestanding buildings. Together, the center's buildings will provide a maximum of 410,000 square feet (sq. ft.), plus parking.

Area II

Downey Landing, LLC Area IIA would total up to 19 acres and occupy the western central portion of the site, fronting on Lakewood Boulevard. The development proposal involves either reusing current buildings for motion picture studio and production space or other adaptive reuse, or demolishing the majority of the building in favor of approximately 444,500 sq. ft. of technology and business park uses. Parking would be provided to serve these anticipated uses. The latter option would generate the highest traffic counts and is therefore the option examined in the EIR, to provide a conservative environmental analysis.

Downey Landing, LLC Area IIB would total up to 21 acres and would occupy the central portion of the site. The development proposal involves either reusing current buildings for motion picture studio and production space or other adaptive reuse, or demolishing the majority of the building in favor of approximately 243,000 sq. ft. of industrial uses. Parking would be provided to serve these anticipated uses. The latter option would generate the highest traffic counts and is therefore the option examined in the EIR, to provide a conservative environmental analysis.

Downey Landing, LLC Area IIC would total up to 22 acres. Area IIC fronts the intersection of Clark Avenue and Lakewood Boulevard, directly south of Area IIA. It supports an existing building (Building 1) that contains 913,023 sq. ft., which both Rockwell and the Boeing Company used for aerospace manufacturing and testing purposes. The development proposal involves either reusing current buildings for motion picture studio and production space or other adaptive reuse, or demolishing the majority of the building in favor of approximately 384,800 sq. ft. of technology and business park uses. Parking would be provided to serve these anticipated uses. The latter option would generate the highest traffic counts and is therefore the option examined in the EIR, to provide a conservative environmental analysis.

Downey Landing, LLC Area IID would be developed as an office park. It would encompass 28 acres and occupy the eastern central portion of the project site; plans show Area IID would front on Bellflower Boulevard. Planned improvements consist of 2-story office buildings for a combined maximum of 516,200 sq. ft. Open/green space uses will be interspersed throughout the project site,

as well. Construction of each phase is anticipated to span 10 months. Area II is currently under temporary use by several motion picture production companies, and if Buildings 1, 9, 11, 14, 39, 288 and 6/290 are kept externally intact and reused, their reoccupancy would occur concurrently with construction of Area I. In the case of demolition of Buildings 1, 9, 11, 14, 39, 288, and 6/290, Areas I would be developed first, Area III second, and Area II last. Construction staging is anticipated to occur on-site.

Area III

Kaiser portion of Area III- According to the development proposal submitted by Kaiser, this portion of the project would develop 1.0 msf of hospital, medical office buildings, and associate uses and .69 msf of structured parking on 30 acres of land. The proposed Kaiser project is a replacement for Kaiser's existing 8-story hospital tower in the City of Bellflower. Proposed improvements include a new 6-story 680,000 square foot hospital building with a planned capacity of 351 beds; new, four-story, 292,700 square feet of medical office buildings, a 27,300-square-foot central plant, and a six-level, 681,550-square-foot parking structure. It should be noted that the hospital building may be up to eight stories, provided that total square footage does not exceed 680,000. Development of a seven- or eight- story hospital building would not induce environmental impacts beyond those of a six-story building. Construction would be phased over a period of about ten years. The specific components of each phase are tentative; however, development would not exceed 1.0 msf for the hospital and medical office building uses and 681,550 sq. ft. parking structure, and phasing variations would not affect the analysis presented in this EIR.

Park/School/Learning Center portion of Area III- The westernmost 13-acre portion of Area III, which abuts Clark Avenue, is being reserved for the Downey Unified School District for use as a school/park/learning center; however, neither the Specific Plan nor this EIR will entitle or provide environmental clearance for development of any school, and the District would be required to initiate a separate environmental process if it chooses to develop the site. A 50,000 sq. ft. learning center may be located on this 13-acre site.

2.5.2 Project Schedule and Construction Phasing

Downey Landing, LLC

Construction of the Downey Landing, LLC portion of the project would proceed in approximate numeric order by area. Demolition of structures in Planning Area I would begin in Spring/Summer 2002, after Certification of the EIR and adoption of the Specific Plan. Construction of Area I is anticipated to span ten months, and the commercial uses therein are anticipated to open to the public in 2003.

Area II is currently under temporary use by several motion picture production companies, and if Building 1 is kept externally intact and reused (Option 1), improvements could occur concurrently

with construction of Area I. If the majority of Building 1 is demolished (Option 2), then construction of Area II would likely be completed in increments, commencing mid-2004. Under Option 2, completion of Area II is anticipated to be completed and ready for occupancy within four to six years of the commencement of construction. Staging for all phases of construction is anticipated to occur on-site.

Kaiser

The Kaiser portion of the project would also be constructed in several phases. The first phase, which Kaiser plans to complete around mid-2004, would consist of one of the medical office buildings and surface parking spaces to support it. Commencing on or before December 2006, Kaiser would construct the hospital, the second medical office building, the central plant, and the parking structure, which is anticipated to be completed and ready for occupancy within four years of the commencement of construction. Kaiser also may develop, at its option, additional hospital capacity and further office uses. Note that the current phasing scheme is tentative; however, the combination and progression of uses developed would not exceed 1.0 million sq. ft. (excluding the parking structure), and would not materially affect the analysis of the Kaiser project in this EIR.

2.5.3 Requested Approvals

Implementation of the proposed project would require the following discretionary approvals by the agencies listed below. This EIR would be used by these agencies as a basis for such approvals.

City of Downey

- Adoption of Specific Plan No. SP-01-1
- Approval of the Specific Plan design guidelines by the Design Review Board.

Regional Water Quality Control Board

- National Pollutant Discharge Elimination System (NPDES) general construction permit.

California Division of Mines and Geology

- Construction Permit (Kaiser only).

2.6 Cumulative Scenario

As stated in Section 15130(b) of the CEQA Guidelines, the following elements are necessary for an adequate discussion of significant cumulative impacts:

- A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or

- A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

As described above, it is anticipated that the proposed project would be completed by mid-2006. For the purposes of further refining the cumulative impact analysis in this EIR, the "cumulative context" for the proposed project includes the existing, previously approved, and reasonably foreseeable future projects within the geographical area that would contribute to the particular cumulative impact. These projects are listed in Table 2-3 below.

TABLE 2-3
RELATED PROJECTS

Project Name	City	Sq.Ft.	Type of Uses	Address	Nearest Intersection
Rancho Los Amigos Business Park	Downey	1,483,932	Light Industrial		Imperial / Erickson
Tract No. 53325	Downey		21 lot Single Family Subdivision	11706-11732 Rives Ave.	Rives/St. G. Road
Tract No. 53220	Downey		17 lot Single Family Subdivision	7043 – 7048 Dinwiddie	Dinwiddie/ Firestone
	Downey	83,000	Self Storage	9641 Imperial Hwy.	
Proposed Plans	Santa Fe Springs	6,848	Industrial		S.E. Corner of Telegraph and Bloomfield
Proposed Plans	Santa Fe Springs	6,909	Industrial		S.E. Corner of Telegraph and Bloomfield
Proposed Plans	Santa Fe Springs	7,118	Industrial		S.E. Corner of Telegraph and Bloomfield
Proposed Plans	Santa Fe Springs	147,233	Industrial		S.E. Corner of Telegraph and Bloomfield
Proposed Plans	Santa Fe Springs	218,671	Industrial		Parcel E. of Bloomfield, Between Park and Telegraph
Proposed Plans	Santa Fe Springs	36,299	Industrial		N. of Telegraph, S. of Romandel, E. of Railroad Tracks, W. of Freeman
Proposed Plans	Santa Fe Springs	32,696	Industrial		N. of Telegraph, S. of Romandel, E. of Railroad Tracks, W. of Freeman
Proposed Plans	Santa Fe Springs	71,639	Industrial		N. of Telegraph, S. of Romandel, E. of Railroad Tracks, W. of Freeman
Proposed Plans	Santa Fe Springs	4,796	Industrial		N. of Telegraph, S. of Romandel, E. of Railroad Tracks, W. of Freeman
Proposed Plans	Santa Fe Springs	20,299	Industrial		N. of Telegraph, S. of Romandel, E. of Railroad

TABLE 2-3
RELATED PROJECTS

Project Name	City	Sq.Ft.	Type of Uses	Address	Nearest Inter-section
					Tracks, W. of Freeman
Proposed Plans	Santa Fe Springs	22,499	Industrial		N. of Telegraph, S. of Romandel, E. of Railroad Tracks, W. of Freeman
Proposed Plans	Santa Fe Springs	22,747	Industrial		N. of Telegraph, S. of Romandel, E. of Railroad Tracks, W. of Freeman
Proposed Future Possibility	Santa Fe Springs	1,587,237	Various		N. of Telegraph, Between Santa Fe Springs Road and Greenleaf, S. of Barton
Rockview Farms	South Gate	48,000	Agricultural	9845 Miller Way	Southern and Garfield Avenue
Blue Diamond Materials/ Sulley Miller	South Gate		Industrial	5625 Southern Avenue	Southern and Garfield Avenue
Gonzales Nissan	South Gate	32,300	Commercial	5849 Firestone Blvd	Firestone and Garfield Avenue
Target Center	South Gate	15,200	Commercial	5704 Firestone Blvd	Firestone and Garfield Avenue
El Paseo Center	South Gate	300,000	Commercial/ Retail	8600 Garfield Avenue	Firestone and Garfield Avenue
Marquez and Marquez Foods	South Gate	42,511	Commercial	11803 Paramount Blvd	Paramount and Gardendale
Los Angeles County Office of Education	South Gate		Institutional	13050 Paramount Blvd	Paramount and Gardendale
Ameron Site Development Project	South Gate	300,000 – 400,000	Office Space	4635 Firestone Blvd	Atlantic Ave. and Firestone Blvd.
Smiser Trust Distribution Center	South Gate	54,000	Industrial	8610 Atlantic Avenue	Atlantic Avenue and Firestone Blvd.
Los Angeles USD Maintenance Facility	South Gate		Institutional	5115 Southern Ave	Atlantic Ave. and Southern Ave.
L.A.U.S.D Area District Offices	South Gate	45,000	Institutional	2560 Tweedy Blvd	Tweedy Blvd and Alameda St.
L.A.U.S.D District Offices	South Gate		Institutional		Tweedy Blvd and Alameda St.
L.A.U.S.D. (3 new campuses)	South Gate		Institutional	9800 Pinehurst 3221 Tweedy 9621 Long	

TABLE 2-3
RELATED PROJECTS

Project Name	City	Sq.Ft.	Type of Uses	Address	Nearest Inter-section
				Beach Blvd	
East Los Angeles College	South Gate	100,000	Institutional	2340 Firestone Blvd	Firestone and Alameda
L.A.U.S.D. Adult School	South Gate	20,000	Institutional	2561 Firestone Blvd	Santa Fe and Firestone Blvd
Del Taco	South Gate	2,500	Restaurant	2920 Firestone Blvd	Long Beach Blvd. and Firestone
South Gate Senior Village	South Gate	20,000	Residential		Tweedy Blvd and California Ave.

3.0 Introduction to the Environmental Analysis

This chapter describes the existing environmental resources at the project site and adjacent locations, analyzes potential impacts on those resources due to the proposed project, and identifies mitigation measures that could avoid or reduce the magnitude of any significant impacts. The evaluation of effects is presented on a resource-by-resource basis in Section 3.1 through Section 3.9. Each technical section is divided into four subsections: Introduction; Existing Conditions; Regulatory Framework; Thresholds of Significance; Impacts; Cumulative Impacts, and Mitigation Measures. Each of these subsections is described below.

Introduction

The introduction provides an overview of the analysis within each section.

Existing Conditions

The existing conditions in each technical section includes information about the physical environmental conditions in the vicinity of the project (as they exist at the time the notice of preparation is published) that are relevant to that particular environmental issue area. This establishes a baseline against which to compare the effects of the proposed project.

Regulatory Framework

A summary of relevant local and regional plans and policies is provided.

Thresholds of Significance

This section defines the type, amount, or extent of impact that is considered a significant adverse change in the environment. Some thresholds are quantitative (e.g., air quality, traffic, noise), while others are qualitative (e.g., visual quality). The thresholds are intended to assist the reader in understanding why the EIR reaches a conclusion that an impact is significant or less than significant.

Impacts

This section describes the potential environmental impact(s) of the project (listed separately) and, based upon the Thresholds of Significance, concludes whether the project impact would be significant or less than significant. When a conclusion of a significant impact is reached, this subsection may include feasible mitigation measures that could reduce the impact of the project to a less than significant level. If mitigation measures are included, the section concludes with a

statement regarding whether the impact, following implementation of the mitigation measure(s), would remain significant, or would be reduced to a less than significant level.

Cumulative Impacts

This section describes cumulative impacts to which the project contributes. The summary of cumulative impacts is based upon related projects and projected regional growth in the surrounding area (the Gateway Cities).

Mitigation Measures

This section describes feasible mitigation measures that would substantially reduce an identified impact, as described above under Impacts.

3.1 Aesthetics/Lighting

3.1.1 Introduction

The Initial Study prepared for this project (which is included as Appendix A of this document) determined that effects on scenic vistas, scenic resources, and visual character resulting from implementation of the proposed project would be less than significant. Heights of the proposed project's building are acceptable per the Downey Landing Specific Plan height requirements. Therefore, this section considers the potential effects of project-related increases in light levels, particularly nighttime light levels, and glare of the structures proposed under the project and the surrounding residential uses to the north, across Stewart & Gray Road, other neighborhood residential on the west side of Lakewood Boulevard and west side of Clark, and to the east, across Bellflower Boulevard. The lighting impacts will be assessed separately for the Downey Landing, LLC and Kaiser Foundation Hospital proposals. The context for both assessments is the current interim use of the site since discontinuation of Boeing operations in 1993; since that time, portions of the site have been utilized as motion picture sound and production facilities. This temporary industrial usage has required little or no nighttime lighting on the northern portion of the site, adjacent to the residential neighborhood north of Stewart & Gray Road. This evaluation is informed by site visits by EIP Associates personnel in February and March 2001.

3.1.2 Existing Conditions

The City Of Downey

The City of Downey can be characterized as a developed urban environment located within a subregion known as the Gateway Cities. The existing, exterior nighttime lighting environment in the City is provided primarily by streetlights, exterior structure lighting, parking lot lighting, illuminated signage, and vehicle headlights.

The Project Site

Few sources of nighttime lighting internal to the project site currently exist. While portions of Buildings 1, 288, and 6/290 are currently used for motion picture production, most of this activity occurs during daylight hours, with the exception of an active motion picture set in a portion of the existing parking lot in proposed Area II (the central portion of the site). Additionally, most production activities occur indoors and produce little exterior lighting that could spill onto surrounding properties.

No nighttime activity now occurs in the northern portion of the project site (proposed Area I). Additionally, the northern portion of the site is unlit. The most prominent source of nighttime light

in the vicinity of the project is street lighting on Lakewood and Bellflower Boulevards, Imperial Highway, and Stewart & Gray Road and Clark Avenue.

3.1.3 Regulatory Framework

City of Downey General Plan Design Chapter

The purpose of the General Plan Design Chapter is to "create a strong visual image by improving the quality of design in Downey." The Chapter provides standards, policies, and programs to retain and strengthen the visual image of the community by promoting urban design. The following policies and programs in the Design Chapter are applicable to the proposed project.

Policy 8.1.1

The City shall require new developments and major renovations to have design "links."

Program 8.1.1.1

Require new developments and major renovations, including parcels smaller than 10,000 sq. ft., to use "design links" such as hardscape, lighting, landscaping, color, signing, and common building materials to visually link properties.

Consistency

The proposed Specific Plan will include color and plant palettes and detailed design guidelines for structures on the project site. Building exterior lighting standards are also proposed. Additionally, the Specific Plan includes a landscaped pedestrian parkway to link the areas within the site. The proposed project would, therefore, be consistent with Program 8.1.1.1 of the Design Chapter.

City of Downey Municipal Code

Section 9144.06(g)

Subsection (g) specifies that no operation, activity, or lighting fixture shall create illumination which exceeds five-tenths (.5) foot-candles at any point on the lot lines of the use.

Section 9152.18

Subsection (b) specifies that outdoor lighting shall be arranged so as not to direct light on any street or abutting property, and that exposed bulbs are not permitted. Subsection (d) requires approval of lighting intensities by the City Traffic Engineer and City Planner. Subsection (f) forbids, in commercial and manufacturing zones, lighting structures over five feet in height within 20 feet of a public right-of-way (except for car dealerships).

Compliance

The project will prevent to the fullest extent possible the direction of light off-site and light spillage onto nearby residential properties. The project will further utilize non-exposed bulbs and obtain approval of all lighting intensities as required in the Municipal Code. The Downey Landing Specific Plan incorporates the requirements of the Downey Municipal Code as to outdoor lighting. Therefore, the project will therefore comply with the provisions of Sections 9152.18 and 9144.06 of the Downey Municipal Code and their specified subsections.

3.1.4 Thresholds Of Significance

The proposed project will have a significant visual impact if it would introduce a new source of substantial light or glare that could affect sensitive uses in the project vicinity.

3.1.5 Impacts

Less Than Significant Impacts

The Kaiser portion of the project would introduce three primary sources of light: building exterior lighting, parking lot lighting, and vehicle headlights. Ingress and egress from the Kaiser facility would be on Imperial Highway and off of new roads; the entrance would not be situated across from residences and no vehicle headlights would be directed onto residential property or other sensitive uses. Uses across Imperial Highway from the proposed Kaiser facility are commercial and industrial only and include no residential uses. Multifamily residential uses are sited only at the north end of Bellflower Boulevard on the east side, and are not in the immediate vicinity of the proposed Kaiser facility. The lighting provisions of Section 9152 of the Downey Municipal Code would prevent the direction of light off-site, particularly with respect to lighting fixtures that would be used in the parking areas of the Kaiser facility, and would reduce glare impacts resulting from light spillage onto nearby uses. Therefore, the impacts of vehicle headlights on residences or other sensitive uses and the impacts of building exterior and parking lot lighting as a result of the proposed Kaiser project are **less than significant.**

Potentially Significant Impacts

Implementation of the proposed project would not result in any potentially significant aesthetics/lighting impacts.

Significant, Unavoidable Impacts

Impact 3.1-1: **The proposed Downey Landing, LLC project would introduce a substantial source of nighttime light and glare that could affect sensitive uses in the project vicinity.**

The proposed project would introduce three primary sources of light: building exterior lighting, parking lot lighting, and vehicle headlights. Development proposed in Areas IIA, IIB, IIC, and IID of the project site consists primarily of business park uses, as well as parking for these uses. The project would include lighting for building exteriors and parking lots. However, nighttime lighting in these areas would occur at relatively low levels, and walls and landscaping along the perimeter of the site would provide a buffer between on- and off-site uses, preventing significant amounts of spillage of light onto adjacent properties. Additionally, the walls and landscaping would help shield adjacent uses from direct illumination by the headlights of circulating vehicles on-site, with the exception of gaps at the entry points along Lakewood Boulevard and Bellflower Boulevard. Adjacent uses near the currently proposed entry points along Clark Avenue and consist of commercial and industrial uses, which are not considered sensitive to increases in nighttime light levels, and residential uses on the west side of Clark. However, entry points along Lakewood Boulevard and Bellflower Boulevard could direct vehicle headlights toward multiple-family residential uses, which are considered sensitive to increases in nighttime light levels, and residential uses on the west side of Clark. Although the uses proposed in Areas IIA, IIB, IIC, and IID are anticipated to see the greatest use during normal business hours, and as a result, are not anticipated to generate substantial nighttime activity and vehicular traffic, headlights could still illuminate multiple-family residences along the west side of Lakewood Boulevard and along the east side of Bellflower Boulevard. Additionally, project-related increases in traffic could potentially increase ambient light levels on Lakewood Boulevard during early nighttime hours.

In addition, the proposed project would substantially increase lighting levels in Area I, the northernmost portion of the project site. This is due primarily to the longer normal operating hours for restaurants and retail commercial uses than for the uses proposed in Areas IIA, IIB, IIC, IID, and III. These longer hours of operation would necessitate higher-intensity nighttime lighting for safety purposes. Additionally, full or nearly full overnight

illumination of the site is provided to deter vandalism and other illegal activity on the project site. Consequently, ambient light levels in Area I would be substantially increased under the proposed Downey Landing, LLC project.

Light and glare from vehicle headlights in Area I would also be more pronounced than in Areas II and III because of the later operating hours of the restaurant and commercial retail uses. Landscaping along the northern boundary is proposed to help diffuse this light, as well as an approximately three-foot earthen berm wall along the northern perimeter of Area I, a six-foot wall on the eastern perimeter, and landscaping along the western perimeter. These design features would reduce direct illumination by circulating traffic in the parking areas of the residential uses across Stewart & Gray Road, Bellflower Boulevard, and Lakewood Boulevard. However, direct illumination, by vehicle headlights, of single-family residential uses would still occur at entry and exit points along Stewart & Gray Road, and of multiple-family residential uses along Lakewood Boulevard. Further, the uses proposed for Area I generate the majority of the project-related traffic, and could indirectly increase ambient light levels on surrounding streets by increases in nighttime travel at store and restaurant closing times, which would in turn increase the exposure of residential uses to light impacts. These impacts would be considered significant.

The lighting provisions in Section 9152 of the Downey Municipal Court would prevent the direction of light off-site, particularly with respect to the lighting fixtures that would be used in the parking areas of Area I, and would reduce light spillage onto nearby residential uses. However, Downey Landing, LLC plans full-intensity overnight lighting of Area I for the security reasons described above. Therefore, no feasible measures could reduce the substantial increase in ambient lighting on the project site, and the resulting impact on sensitive uses along Stewart & Gray Road, Lakewood Boulevard, and Bellflower Boulevard.

Additionally, no mitigation measures are available that would significantly reduce the potential for the direction of vehicle headlights onto residential uses along Stewart & Gray Road, Lakewood Boulevard, and Bellflower Boulevard. Consequently, light impacts anticipated to result from the

proposed Downey Landing, LLC project would remain **significant and unavoidable.**

Impact 3.1-2: **The proposed Kaiser project would introduce a substantial source of nighttime light into the project vicinity.**

As with the proposed Downey Landing, LLC project, the proposed Kaiser project would introduce three primary sources of light: building exterior lighting, parking lot lighting, and vehicle headlights. Development proposed on the 30-acre project site consists of approximately 1.0 msf of hospital, medical office buildings, and a central plant, a 0.69 msf, six-level parking structure, and surface parking for these uses. The project would include lighting for building exteriors and parking lots. Due to the nature of the activities of a hospital facility, substantial nighttime lighting is expected to occur.

The first phases of the project would consist of new construction consisting of 97,500 ft. sq. of medical office buildings and surface parking lots. Due to the building heights, spillage of light onto adjacent commercial and industrial properties would be unavoidable. The multifamily residential uses on Bellflower Boulevard are sited at the north end of Bellflower, and are not in the immediate vicinity of the proposed Kaiser facility. Although the medical office uses in this area are anticipated to see the greatest use during normal business hours, and as a result are not anticipated to generate substantial nighttime activity and vehicular traffic, the hospital facility would be expected to see utilization at all hours, though diminished at night. Project-related increases in traffic could potentially increase ambient light levels on Bellflower Boulevard and Imperial Highway at all hours. Additionally, full or nearly full overnight illumination of the site would be provided due to the nature of the operation of the Kaiser Hospital. Consequently, ambient light levels would be substantially increased in the project site, but would not be anticipated to affect the multifamily residential uses at the north end of Bellflower Boulevard.

Light and glare from vehicle headlights in the area of the Kaiser Hospital and medical facilities would contribute to the overall light and glare produced along Bellflower Boulevard and Imperial Highway. However, a portion of this light and glare would be produced from the eastern portions of the Downey Landing, LLC project areas. Based on traffic studies and estimated

number of vehicle trips during PM hours, Kaiser's share of contribution to increased glare and ambient light from vehicle headlights would be approximately 42.9% from the Kaiser facility (1,722 peak PM vehicle trips for Kaiser versus up to 2,949 peak PM vehicle trips for Downey Landing, LLC).

The lighting provisions of Section 9152 of the Downey Municipal Code would prevent the direction of light off-site, particularly with respect to lighting fixtures that would be used in the parking areas of the Kaiser facility, and would reduce glare impacts resulting from light spillage onto nearby uses.

No mitigation measures are available that would significantly reduce the potential for increased glare and light from vehicle headlights onto commercial and industrial uses along Bellflower Boulevard and Imperial Highway, as well as the multifamily residential properties at the north end of Bellflower Boulevard. Consequently, light and glare impacts anticipated to result from the proposed project would remain **significant and unavoidable.**

3.1.6 Cumulative Impacts

Impact 3.1-3: **The proposed project would contribute to the exposure of residential areas in the City to increased nighttime light and glare intensities.**

For the purposes of this analysis, cumulative impacts are evaluated on a City-wide level, since increases in ambient light levels are generally a localized, neighborhood effect. The proposed project constitutes a substantial portion of the proposed development within the City, and would, therefore, represent a cumulatively considerable contribution to light and glare impacts to residential uses within the City. This is a significant impact. As described above in Impacts 3.1-1 and 3.1-2, provisions of the City of Downey Municipal Code would reduce these impacts, but not to a less-than-significant level. This cumulative impact would, therefore, be considered **significant and unavoidable.**

3.1.7 Mitigation

No feasible mitigation measures would reduce light and glare impacts to less-than-significant levels: These impacts would remain significant and unavoidable.

3.2 Air Quality

3.2.1 Introduction

This section addresses the air quality setting and impacts related to the construction and operation of the proposed project. Air pollutants are defined, and the framework of federal, state, regional, and local air quality requirements is described in Section 3.2.2 (Regulatory Framework). Section 3.2.3 (Existing Conditions) provides descriptions of the climate and meteorology, and an overview of the region's air quality characteristics and existing air quality in the project area, including the region's attainment/non-attainment status. This section also presents an analysis of the project's impact on ambient air quality on a regional and local basis. Air quality calculation data is provided in Appendix C of this document.

3.2.2 Regulatory Framework

For purposes of providing necessary background information defining regulated pollutants and ambient air quality standards, the regulatory framework discussion in this chapter of the EIR precedes the existing conditions discussion.

Ambient Air Quality Standards

National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) represent the upper limits on airborne concentrations that are recommended to protect all aspects of the public health and welfare, with a reasonable margin of safety. At the federal level, the federal Clean Air Act requires the U.S. Environmental Protection Agency (U.S. EPA) to establish NAAQS and designate areas that are either attaining or violating the standards. The NAAQS are divided into primary standards and secondary standards. Primary standards are designed to protect the public health, and secondary standards are intended to protect the public welfare from effects such as visibility reduction, soiling, nuisance, and other forms of damage.

In California, the task of air quality management and regulation has been legislatively granted to the California Air Resources Board (ARB), which oversees air districts at the county or regional level. The ARB establishes CAAQS and designates the attainment status of each area in the state with the standards. These federal and state standards are shown in Table 3.2-1.

Criteria Pollutants

Pollutants for which a NAAQS has been established are known as criteria pollutants, and include ozone, carbon monoxide (CO), nitrogen dioxides (NO_2), sulfur dioxide (SO_2), particulate matter

(PM), and lead. Primary pollutants are emitted directly from a source (e.g., an automobile) into the atmosphere. Ozone and sulfate particulates are examples of secondary pollutants that are formed by atmospheric chemical and photochemical reactions. Reactive organic compounds (ROC), including volatile organic compounds (VOC), are also regulated as precursors to ozone formation.

TABLE 3.2-1
STATE AND FEDERAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standard[1,3]	Federal Standard[2] Primary[3,4]	Federal Standard[2] Secondary[3,5]
Ozone	1-hour	0.09 ppm (180μg/m^3)	0.12 ppm (235 μg/m^3)	Same as Primary
	8-hour	---	0.08 ppm (160 μg/m^3)	Same as Primary
Carbon Monoxide	1-hour	20.0 ppm (23 mg/m)	35 ppm (40 mg/m^3)	---
	8-hour	9.0 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)	---
Nitrogen Dioxide	1-hour	0.25 ppm (470 μg/m^3)	---	---
	Annual Avg	---	0.053 ppm (100 μg/m^3)	0.053 ppm (100 μg/m^3)
PM_{10}	24-hour	50 μg/m^3	150 μg/m^3	Same as Primary
	Ann Geo Mn	30 μg/m^3	---	---
	Ann Arith Mn	---	50 μg/m^3	Same as Primary
$PM_{2.5}$	24-hour	---	65 μg/m^3	Same as Primary
	Ann Arith Mn	---	15 μg/m^3	Same as Primary
Sulfur Dioxide	1-hour	0.25 ppm (655 μg/m^3)	---	---
	3-hour	---	---	0.5 ppm (1,300 μg/m^3)
	24-hour	0.04 ppm (105 μg/m^3)	0.14 ppm (365 μg/m^3)	---
	Ann Arith Mn	---	0.03 ppm (80 μg/m^3)	---
Sulfates	24-hour	25 μg/m^3	---	---
Lead	30-day Avg	1.5 μg/m^3	---	---
	Calendar Qtr	---	1.5 μg/m^3	Same as Primary
Hydrogen Sulfide	1-hour	0.03 ppm (42 μg/m^3)	---	---
Visibility Reducing Particles	8-hour observation	Extinction coefficient of 0.23 per kilometer[6]	---	---

Notes:

-- No standard; ppm = parts per million; μg/m^3 = microgram per cubic meter; mg/m^3 = milligrams per cubic meter

1. California standards for ozone, CO, SO_2, NO_2, and PM_{10} and visibility reducing particles are values that are not to be exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. In addition, Section 70200.5 lists vinyl chloride under standards for hazardous substances.
2. The form of the national standards (i.e., how the standard is applied) varies from pollutant to pollutant. For further information, 40 CFR Part 50 includes the relevant form for each federal standard.
3. Concentration expressed first in units in which it as promulgated. Equivalent units given in parenthesis are based upon reference temperature of 25°C and a reference pressure of 760 mm of mercury. All measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume or micromoles of pollutant per mole of gas.
4. Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the U.S. EPA.
5. Secondary Standards: The levels of air quality necessary, to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after the implementation plan is approved by U.S. EPA.
6. Prevailing visibility is defined as the greatest visibility, which is attained or surpassed around at least half of the horizon circle, but not necessarily in continuous sectors. Visibility standard expressed in terms of extinction due to particles when the relative humidity is less than 70 percent.

The criteria pollutants most relevant to air quality planning and regulation in the air basin include ozone, nitrogen dioxide, suspended particulate matter (e.g., PM_{10} and $PM_{2.5}$ - particles less than 10 microns in diameter, and 2.5 microns in diameter, respectively), and carbon monoxide.

Air Quality Management Planning Requirements

The ARB is responsible for the coordination and administration of both state and federal air pollution control programs within California. In this capacity, the ARB undertakes research, sets state ambient air quality standards, establishes emission standards for motor vehicles, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. The ARB also oversees each air basin in the state; Downey is located within the South Coast Air Basin, under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

The South Coast Air Basin has a history of recorded air quality violations and is an area where both state and federal air quality standards are exceeded (a discussion of air quality conditions follows). For areas not in attainment with federal standards, the federal Clean Air Act requires preparation of a state implementation plan (SIP) that demonstrates the means to attain the standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs. The California SIP is comprised of plans developed at the regional or local level. Plan components to be incorporated within the SIP must each be individually reviewed and approved by the U.S. EPA. For areas not in attainment with state standards, the California Clean Air Act requires triennial preparation of an Air Quality Management Plan (AQMP). The air quality management plans are prepared by the SCAQMD with technical and policy inputs from the U.S. EPA, the ARB, and the Southern California Association of Governments.

Southern California Association of Governments (SCAG)

SCAG is responsible for developing transportation, land use, and energy conservation measures that affect air quality. SCAG's Regional Comprehensive Plan and Guide (RCPG) provides growth forecasts that are used in the development of air quality-related land use and transportation control strategies by the SCAQMD. The RCPG is a framework for decision-making for local governments, assisting them in meeting federal and state mandates for growth management, mobility, and environmental standards, while maintaining consistency with regional goals regarding growth and changes through the year 2015, and beyond. Policies within the RCPG include consideration of air quality, land use, transportation, and economic relationships by all levels of government.

South Coast Air Quality Management District (SCAQMD)

The SCAQMD manages the efforts to achieve and maintain air quality standards in the air basin. The SCAQMD has the responsibility of preparing the air quality management plans that outline control strategies and programs designed to bring the South Coast Air Basin into attainment with the standards. SCAG and the SCAQMD have statutory responsibility for implementation and monitoring of strategies contained in the AQMP. The SCAQMD maintains primary responsibility

for the control of air emissions from stationary sources, while reserving an oversight role for the ARB. The SCAQMD is also responsible for the issuance of air permits, inspection of stationary sources, monitoring of ambient air quality, and planning activities, such as modeling and maintenance of the emission inventory. The SCAQMD is jointly responsible with SCAG for developing transportation control measures necessary to achieve the state ambient air quality standards.

Past Air Quality Planning Efforts

The 1990 amendments to the federal CAA require that ozone nonattainment areas submit revisions to the SIP that show how each airshed will re-establish attainment. In response, the 1991 Air Quality Management Plan (AQMP) was modified/adopted and submitted in 1991 as the South Coast Air Basin portion of the SIP. The 1991 SIP submittal estimated that an 85 percent basin-wide reduction in volatile organic compound (VOC) emissions and a 59 percent reduction in oxides of nitrogen (NOx), between 1990 to 2010, was needed to meet federal clean air standards. About 40 percent of these reductions were to come from pollution control programs existing at the time. The rest were to come from new rules, technologies, or other reduction programs. The California Clean Air Act requires an update of the AQMP every three years.

1997 AQMP

The *1997 AQMP*, as amended, outlines emission control strategies and programs that are designed to bring the South Coast Air Basin into attainment or maintain existing attainment with the state and federal ozone, carbon monoxide, nitrogen dioxide, and particulate matter standards. Components of the 1997 plan update include:

- Demonstration of attainment plan for ozone, CO, and PM_{10};
- Base year 1993 emissions inventories of VOC, NOx, CO, SOx, and PM_{10};
- Emissions budgets of the inventoried compounds for future years;
- An updated pollution control strategy; and
- Contingency measures if the plan, as presently proposed, fails to meet stated timetables.

The AQMP is jointly developed by SCAQMD in cooperation with SCAG, and the 1997 version was adopted by the SCAQMD in November 1996. In 1999, amendments were adopted to enhance and expand the control measures of the AQMP. According to the *1997 AQMP*, as amended, attainment of all federal health standards would occur no later than the year 2000 for CO, the year 2006 for PM_{10}, and the year 2010 for ozone. Compliance with state standards for ozone and PM_{10} would not be achieved until after the year 2010. Both the federal and state standards for nitrogen dioxide were met before publication of the *1997 AQMP*.

Control measures of the AQMP focus on adoption of new regulations or enhancement of existing regulations for stationary sources and implementation/facilitation of advanced transportation technologies (i.e., telecommunication, zero emission and alternative-fueled vehicles and infrastructure, and both capital and non-capital transportation improvements). Capital improvements consist of high occupancy vehicle (HOV) lanes, transit improvements, traffic flow improvements, park and ride and intermodal facilities, and urban freeway, bicycle and pedestrian facilities. Non-capital improvements consist of rideshare matching and transportation demand management activities derived from the congestion management program.

City of Downey

The City of Downey has the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, Downey is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. Downey is also responsible for the implementation of transportation control measures as outlined in the AQMP. An example of such a measure is synchronized traffic signals.

3.2.3 Existing Conditions

Existing Regional Air Quality

Throughout the South Coast Air Basin, ozone is probably the pollutant of greatest concern. No single source accounts for most of the emissions of the ozone precursors NOx and VOC, and the many sources are spread throughout the air basin. Ozone levels have varied widely at monitoring stations throughout the basin, depending on location and time of year, but the highest levels are generally recorded at stations in the interior valleys during warm, stable periods in summer and autumn. Particulate matter is also a pollutant of concern throughout the basin. The entire South Coast Air Basin is designated as a federal-level nonattainment area for ozone (extreme), CO, and PM_{10}, but the basin has recently improved from nonattainment to attainment with the NAAQS for NO_2. The air basin is a state-level nonattainment area for ozone, CO (Los Angeles County only), and PM_{10}.

In an effort to monitor the various concentrations of air pollutants throughout the South Coast Air Basin, the SCAQMD has divided the region into 27 source receptor areas (SRAs) in which 31 monitoring stations operate. The City of Downey is located within SRA 5, which encompasses the Whittier/Pico Rivera area. However, ambient air quality is no longer monitored within SRA 5. The area that is most representative of the air quality within SRA 5 is SRA 4, which encompasses South Coastal Los Angeles County. Table 3.2-2 provides background data on the ambient air quality conditions within SRA 4 through the period of 1997 to 1999.

TABLE 3.2-2
SUMMARY OF AMBIENT AIR QUALITY DATA IN SOUTH COASTAL LOS ANGELES COUNTY

Pollutant	1997	1998	1999
	Ozone		
Highest 1-hour	0.10 ppm	0.12 ppm	0.13 ppm
>0.12 ppm (exceeds NAAQS)	No	No	Yes (1 day)
>0.09 ppm (exceeds CAAQS)	Yes (1 day)	Yes (2 days)	Yes (3 days)
Highest 8-hour	0.07 ppm	0.08 ppm	0.08 ppm
>0.08 ppm (exceeds NAAQS)	No	No	No
	Carbon Monoxide (CO)		
Highest 1-hour	9.0 ppm	8.0 ppm	7.0 ppm
>35 ppm (1-hour NAAQS)	No	No	No
>20 ppm (1-hour CAAQS)	No	No	No
Highest 8-hour	6.7 ppm	6.6 ppm	5.4 ppm
>=9.5 ppm (8-hour NAAQS)	No	No	No
>9.0 ppm (8-hour CAAQS)	No	No	No
	Particulates (PM_{10})		
Highest 24-hour	87 $\mu g/m^3$	69 $\mu g/m^3$	79 $\mu g/m^3$
>150 $\mu g/m^3$ (24-hour NAAQS)	No	No	No
>50 $\mu g/m^3$ (24-hour CAAQS)	Yes (10 days)	Yes (6 days)	Yes (13 days)

Legend:
Source: Air Quality Management District, 2001. http://www.aqmd.gov/smog.

On-road motor vehicles account for a large portion of the ozone precursors and CO emissions within the South Coast Air Basin. Large proportions of PM_{10} emissions are attributed to construction activities and airborne dust from paved and unpaved roads due to vehicle travel. Therefore, control of motor vehicle emissions and construction activities is a major component of the regional air quality attainment plan. Industry and other stationary sources and activities make up the remainder of the man-made emissions.

Existing Local Air Quality

A mix of land uses such as residential, senior housing, and commercial are located in the vicinity of the project site. Local emissions sources include: stationary activities, such as space and water heating, landscape maintenance, and consumer products, and mobile sources—primarily automobile and truck traffic.

Motor vehicles are the primary source of pollutants within the project vicinity. Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed CAAQS for CO are termed CO "hotspots." Section 9.4 of the SCAQMD's *CEQA Air Quality Handbook* identifies CO as a localized problem requiring additional analysis when a project is likely to subject sensitive receptors to CO hotspots.

The SCAQMD recommends the use of CALINE4, a dispersion model for predicting CO concentrations, as the preferred method of estimating pollutant concentrations at sensitive receptors

near congested roadways and intersections. For each intersection analyzed, CALINE4 adds roadway-specific CO emissions calculated from peak hour turning volumes to ambient CO air concentrations. For this analysis, CO concentrations were calculated based on a simplified CALINE4 screening procedure developed by the Bay Area Air Quality Management District. The simplified model is intended as a screening analysis, which identifies a potential CO hotspot. If a hotspot is identified, the complete CALINE4 model is utilized to determine the CO concentrations at sensitive locations in the vicinity of the intersections in question. This methodology assumes worst-case conditions and provides a screening of maximum, worst-case, CO concentrations.

Maximum CO concentrations were calculated for peak hour traffic volumes at the five intersections in the project vicinity that experience the most congestion and would be most impacted by the proposed project (as assessed in Section 3.9). The results of these calculations are presented in Tables 3.2-3A and 3.2-3B for representative receptors located 50, 100, and 300 feet from each roadway. As shown, existing CO concentrations near these intersections do no exceed identified ambient air quality standards.

TABLE 3.2-3A
SUMMARY OF EXISTING LOCALIZED CO ANALYSIS (1-HOUR)

	1-Hour CO Concentrations (ppm)		
Intersection	**50 Feet from Roadway Edge**	**100 Feet from Roadway Edge**	**300 Feet from Roadway Edge**
Lakewood Blvd. at Firestone Blvd.	10.3	8.9	7.1
Lakewood Blvd. at Bellflower Blvd.	7.8	7.0	6.0
Lakewood Blvd. at Stewart & Gray Rd.	7.5	6.9	6.0
Lakewood Blvd. at Imperial Hwy.	9.0	8.0	6.6
Bellflower Blvd. at Imperial Hwy.	8.9	7.9	6.6
1-Hour Ambient Air Quality Standard	20.0	20.0	20.0

Source: EIP Associates, 2001.

TABLE 3.2-3B
SUMMARY OF EXISTING LOCALIZED CO ANALYSIS (8-HOUR)

	8-Hour CO Concentrations (ppm)		
Intersection	**50 Feet from Roadway Edge**	**100 Feet from Roadway Edge**	**300 Feet from Roadway Edge**
Lakewood Blvd. at Firestone Blvd.	7.9	6.9	5.6
Lakewood Blvd. at Bellflower Blvd.	6.1	5.6	4.9
Lakewood Blvd. at Stewart & Gray Rd.	5.9	5.5	4.9
Lakewood Blvd. at Imperial Hwy.	7.0	6.3	5.3
Bellflower Blvd. at Imperial Hwy.	6.9	6.2	5.3
8-Hour Ambient Air Quality Standard	9.0	9.0	9.0

Source: EIP Associates, 2001.

Existing Site Emissions

The project site contains some 124 buildings, structures, and other built features. The largest of these buildings along with three smaller buildings are sometimes used for motion picture production. Emissions are generated on a daily basis by landscape maintenance equipment, set production (such as paints), and automobile trips to and from the site.

3.2.4 Thresholds Of Significance

The South Coast Air Quality Management District recommends evaluating projects in terms of the following air pollution thresholds (Chapter 6, CEQA Air Quality Handbook, SCAQMD, 1993). The proposed project would be considered significant if implementation of the project would result in one or more of the following:

- Daily construction-related emissions exceeding any of the thresholds in Table 3.2-4;
- Daily operation-related emissions exceeding any of the thresholds in Table 3.2-4;
- Daily operation-related emissions cause the state 1-hr or 8-hr CO standard to be exceeded; or
- Operation-related emissions cause an exceedance of any additional screening criteria.

TABLE 3.2-4
SCAQMD THRESHOLDS OF SIGNIFICANCE
FOR CONSTRUCTION AND OPERATIONAL EMISSIONS

Pollutant	ROC	NOx	CO	PM_{10}	SOx
Construction Emissions (lb/day)	75	100	550	150	150
Operational Emissions (lb/day)	55	55	550	150	150

Source: SCAQMD, CEQA Air Quality Handbook, 1993. Chapter 6, Determination the Air Quality Significance of a Project.

The additional screening criteria recommended by the SCAQMD are discussed below. The screening criteria identify projects that would be inconsistent with growth projections or air quality plans, create objectionable odors, or emit hazardous emissions or emissions of toxic air contaminants. These criteria will be used in conjunction with the above thresholds to determine if the proposed project would have a significant air quality impact. The Initial Study prepared for this project found no potential impacts related to emissions of odors.

3.2.5 Impacts

Less Than Significant Impacts

Increased Localized CO Concentrations

As was done to assess existing CO concentrations, the simplified CALINE4 screening procedure was used to predict future CO concentrations at the study intersections in the project area in 2006 when

the project is expected to be completed. The results of air emissions modeling for the project study area are shown in Tables 3.2-5A and 3.2-5B. As shown, future CO concentrations near these intersections would not exceed identified ambient air quality standards when the project site is fully occupied and operational. Therefore, CO hotspots are not predicted to exist near these intersections in the future and the contribution of project traffic-related CO at these intersections would not be considered significant.

TABLE 3.2-5A
SUMMARY OF FUTURE LOCALIZED CO ANALYSIS (1-HOUR)

	1-Hour CO Concentrations (ppm)		
Intersection	**50 Feet from Roadway Edge**	**100 Feet from Roadway Edge**	**300 Feet from Roadway Edge**
Lakewood Blvd. at Firestone Blvd.	9.4	8.2	6.8
Lakewood Blvd. at Bellflower Blvd.	8.5	7.6	6.3
Lakewood Blvd. at Stewart & Gray Rd.	8.3	7.4	6.3
Lakewood Blvd. at Imperial Hwy.	8.9	7.9	6.5
Bellflower Blvd. at Imperial Hwy.	8.6	7.7	6.5
1-Hour Ambient Air Quality Standard	20.0	20.0	20.0

Source: EIP Associates, 2001.

TABLE 3.2-5B
SUMMARY OF FUTURE LOCALIZED CO ANALYSIS (8-HOUR)

	8-Hour CO Concentrations (ppm)		
Intersection	**50 Feet from Roadway Edge**	**100 Feet from Roadway Edge**	**300 Feet from Roadway Edge**
Lakewood Blvd. at Firestone Blvd.	7.2	6.4	5.4
Lakewood Blvd. at Bellflower Blvd.	6.6	6.0	5.1
Lakewood Blvd. at Stewart & Gray Rd.	6.4	5.8	5.0
Lakewood Blvd. at Imperial Hwy.	6.9	6.2	5.2
Bellflower Blvd. at Imperial Hwy.	6.7	6.0	5.2
8-Hour Ambient Air Quality Standard	9.0	9.0	9.0

Source: EIP Associates, 2001

Consistency with Air Quality and Growth Projection Plans

The 1997 AQMP, discussed previously, has been prepared to accommodate growth, to reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, to return clean air to the region, and to minimize the impact on the economy. Projects which are considered to be consistent with the AQMP do not interfere with attainment because this growth is included in the projections utilized in the formulation of the AQMP. Therefore, projects, uses, and activities that are consistent with the applicable assumptions used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended thresholds.

Projects that are consistent with the projections of employment and population forecasts identified in the Growth Management Chapter of the RCPG are considered consistent with the AQMP growth projections. This is because the Growth Management Chapter forms the basis of the land use and transportation control portions of the AQMP. As discussed in Section 3.7 Population and Housing, the proposed project is consistent with the projected growth in jobs in the Gateway Cities Subregion, which anticipates the provision of 59,600 jobs in the subregion from 2000 to 2005. Therefore, the project would be consistent with AQMP attainment forecasts.

Another measurement tool in determining consistency with the AQMP is to determine how a project accommodates the expected increase in population or employment. Generally, if a project is planned in a way that results in the minimization of vehicle miles traveled (VMT) both within the project and the community in which it is located, and consequently the minimization of air pollutant emissions, that project is consistent with the AQMP.

The project includes a mix of land uses that allow employees to remain on-site while they walk to get food or shop. The commercial uses would also serve existing residents in the local vicinity. This means that employees and local residents could walk or ride bicycles to, from, or within the site, and the distance that people would otherwise need to drive would be reduced. This is consistent with the goals of the AQMP for reducing the emissions associated with new development.

Kaiser also implements an aggressive transportation demand management (TDM) program at all of its medical center campuses. The program includes special parking for carpools, subsidies for public transportation, ride-sharing programs, and incentives for using the aforementioned forms of alternative transportation, including also walking or bicycling to work. This program is also consistent with AQMP goals for reducing emissions at large employment centers.

Release of Toxic Air Contaminants

Toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed land uses within the Downey Landing, LLC project. Only common forms of hazardous or toxic substances typically used, stored, or sold in conjunction with retail, office, and film making activities would be present in small quantities. Most uses of such substances would occur indoors. Based on the common uses expected on the site, no significant impacts are expected to occur in association with the Downey Landing, LLC project.

As discussed in Section 3.3 Hazards and Hazardous Materials, the Central Supply department within the Kaiser project would provide for sterilization of medical instruments and equipment, using a highly toxic gas, ethylene oxide (Eto). Eto is a strictly regulated gas, controlled by the State and local air quality management districts. The Eto units in the proposed hospital would be enclosed in a specialized room away from the main corridors and patient rooms, and equipped with

sensors to detect any escape of Eto into the work room. The Eto units would release the spent gas into vents which are equipped with chemical scrubbers that reduce the concentration of Eto to non-toxic levels. The state requires that facilities utilizing 25-600 pounds per year of Eto maintain a 99% emission control rate. For facilities using greater than 600 lbs per year, an emission control of 99.9 % must be maintained. Compliance with these regulations would reduce the potential impact of this gas to less than significant levels.

Potentially Significant Impacts

Implementation of the proposed project would not result in any potentially significant air quality impacts.

Significant, Unavoidable Impacts

Impact 3.2-1: Daily Demolition and Construction Emissions

Construction activities are expected to occur in phases over a five-year period. Three basic types of activities would be expected to occur and cause emissions during construction. First, existing structures on the site would be demolished and existing parking surfaces cleared. Following demolition, the site would be prepared (graded) to accommodate the building foundations and parking areas. The buildings would then be constructed and readied for use.

Because of the construction time-frame, overlapping of building phases, and the normal day-to-day variability in construction activities, it is difficult, if not impossible, to precisely quantify the daily or quarterly emissions associated with each phase of the proposed construction activities. Table 3.2-6, nonetheless, identifies daily emissions associated with typical equipment for the different construction phases planned for the project. These calculations also assume that appropriate dust control measures would be implemented during each phase of the project as required by SCAQMD Rule 403 - Fugitive Dust.

TABLE 3.2-6
ESTIMATED DAILY CONSTRUCTION EMISSIONS

Construction Activity	Peak Day Emission per Activity (lb/day)				
	CO	ROC	NOx	SOx	PM_{10}
Demolition:	87.6	19.2	163.2	18.0	29.5
Site Preparation:	72.5	16.4	199.8	26.1	147.1
Construction:	64.5	66.3	165.0	9.8	31.5
Significance Thresholds for Peak Daily Emissions	**550.0**	**75.0**	**100.0**	**150.0**	**150.0**

Source: EIP Associates, February 2001.

Maximum daily emissions occur during site preparation periods when several pieces of heavy-duty equipment would move earth materials around on the site. During construction activities involving on-site use of heavy equipment, emissions generated by this equipment would exceed SCAQMD significance thresholds for NOx. Because emissions of NOx would exceed the SCAQMD thresholds, a significant impact would occur.

Implementation of the identified mitigation (Mitigation Measures 3.2-1 and 3.2-2) would reduce the impacts of construction-related emissions of NOx and PM_{10}, but not to levels that would be considered less than significant, and impacts resulting from construction-related emissions would remain significant and unavoidable.

Impact 3.2-2: **Daily Operational Emissions**

Operational emissions would be generated by both stationary and mobile sources as a result of normal day-to-day activities on the project site after occupation. Stationary area source emissions would be generated by the consumption of natural gas for space and water heating devices, and the operation of landscape maintenance equipment. Mobile emissions would be generated by the motor vehicles traveling to and from the project site. A central plant within the Kaiser development would utilize natural gas for the operation of boilers to heat building space and water for that development. The emissions generated by the central plant would be subject to the separate permit requirements of the SCAQMD, as well as the development approval requested of the City of Downey as assessed in this EIR.

The analysis of daily operational emissions has been prepared utilizing the URBEMIS7G computer model recommended by the SCAQMD. The results

of these calculations are presented in Table 3.2-7 for the Downey Landing, LLC Development, Table 3.2.8 for the Kaiser Development, and Table 3.2-9 for the combined Projects. These tables show that the daily emissions generated by each individual development, as well as the project as a whole, would exceed SCAQMD thresholds for ROG, NOx, CO, and PM_{10}. Although air quality calculations are based on a previous site plan, the revised site plan would not change impacts.

TABLE 3.2-7
SUMMARY OF DAILY OPERATIONAL EMISSIONS – DOWNEY LANDING, LLC DEVELOPMENT

Operational Activity	ROC (lb/day)	NOx (lb/day)	CO (lb/day)	PM_{10} (lb/day)
Water and Space Heating Sources	1.1	14.5	5.8	0.0
Landscape Maintenance Sources	0.6	0.0	4.0	0.0
Vehicular Sources	239.0	309.0	1,674.5	164.4
Total Operational Emissions	240.7	323.5	1,684.2	164.5
Significance Threshold	55.0	55.0	550.0	150.0

Notes: Estimates are results of modeling using the California Air Resources Board's URBEMIS7G computer program. Numbers may not add exactly in the table due to rounding in the computer model.
Source: EIP Associates, 2001.

TABLE 3.2-8
SUMMARY OF DAILY OPERATIONAL EMISSIONS – KAISER DEVELOPMENT

Operational Activity	ROC (lb/day)	NOx (lb/day)	CO (lb/day)	PM_{10} (lb/day)
Central Plant (water and space heating)	0.5	6.7	2.7	0.0
Landscape Maintenance Sources	0.2	0.0	1.6	0.0
Vehicular Sources	190.7	287.5	1,492.4	164.4
Total Operational Emissions	191.4	294.2	1,496.6	164.5
Significance Threshold	55.0	55.0	550.0	150.0

Notes: Estimates are results of modeling using the California Air Resources Board's URBEMIS7G computer program. Numbers may not add exactly in the table due to rounding in the computer model.
Source: EIP Associates, 2001.

TABLE 3.2-9
SUMMARY OF DAILY OPERATIONAL EMISSIONS – COMBINED DOWNEY LANDING, LLC AND KAISER DEVELOPMENTS

Operational Activity	ROC (lb/day)	NOx (lb/day)	CO (lb/day)	PM_{10} (lb/day)
Water and Space Heating Sources	1.5	21.1	8.5	0.0
Landscape Maintenance Sources	0.8	0.0	5.5	0.0
Vehicular Sources	402.8	553.3	2,938.5	305.1
Total Operational Emissions	405.0	574.5	2,951.7	305.2
Significance Threshold	55.0	55.0	550.0	150.0

Notes: Estimates are results of modeling using the California Air Resources Board's URBEMIS7G computer program. Numbers may not add exactly in the table due to rounding in the computer model.
Source: EIP Associates, 2001.

Implementation of the identified mitigation (Mitigation Measures 3.2-3 through 3.2-11) would reduce the impacts of each pollutant, but not to levels that would be considered less than significant, and impacts resulting from the operation of the project would remain significant and unavoidable.

3.1.6 Cumulative Impacts

The SCAQMD's *CEQA Air Quality Handbook* identifies three possible methods to determine the cumulative significance of land use projects. The method employed for this analysis is that the project shows a one percent per year reduction in project emissions of ROC, NO_x, CO, and PM_{10}. This method differs from the methodology used in other sections of this EIR in which all foreseeable future development within a given service boundary or geographical area is predicted and their impacts measured. The SCAQMD has not identified thresholds to which the total emissions of all cumulative development can be compared. Instead, the SCAQMD's methods are based on performance standards and emission reduction targets necessary to attain the air quality standards identified in the AQMP. According to the *CEQA Air Quality Handbook,* projects which are consistent with the AQMP performance standards and emission reduction targets should be considered less-than-significant unless there is other pertinent information to the contrary. The performance standard that is applicable to this project is a minimum one percent reduction per year in emissions. Table 3.2-10 shows the reduction in daily emissions that would be provided by the mitigation measures recommended later in this EIR section. As shown, the reduction of each pollutant type ranges from 6.3 to 7.2 percent. Based on this, the project would meet the performance standard for annual emissions reductions and would not be considered cumulatively significant.

TABLE 3.2-10
AIR QUALITY MITIGATION MEASURE EFFECTIVENESS

Development Condition	ROC (lb/day)	NOx (lb/day)	CO (lb/day)	PM_{10} (lb/day)
Unmitigated Daily Operational Emissions	432.1	617.7	3,180.9	328.9
Mitigated Daily Operational Emissions	405.0	574.5	2,951.7	305.2
Total Reduction (lb/day)	27.1	43.3	229.2	23.8
Total Reduction (percent)	6.3%	7.0%	7.2%	7.2%

Notes: Estimates are results of modeling using the California Air Resources Board's URBEMIS7G computer program.
Source: EIP Associates, 2001.

3.2.7 Mitigation

Mitigation Measure 3.2-1: Develop and implement a construction management plan, as approved by the City of Downey, which includes the following measures recommended by the SCAQMD, or equivalently effective measures approved by the SCAQMD:

- Configure construction parking to minimize traffic interference.
- Provide temporary traffic controls during all phases of construction activities to maintain traffic flow (e.g., flag person).
- Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the degree practicable.
- Re-route construction trucks away from congested streets.
- Consolidate truck deliveries when possible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.
- Maintain equipment and vehicle engines in good condition and in proper tune as per manufacturers' specifications and per SCAQMD rules, to minimize exhaust emissions.
- Suspend use of all construction equipment operations during second stage smog alerts. Contact the SCAQMD at 800/242-4022 for daily forecasts.

- Use methanol- or natural gas-powered mobile equipment and pile drivers instead of diesel if readily available at competitive prices.

- Use propane- or butane-powered on-site mobile equipment instead of gasoline if readily available at competitive prices.

Mitigation Measure 3.2-2: Implement all rules and regulations by the Governing Board of the SCAQMD which are applicable to the development of the project (such as Rule 402 – Nuisance and Rule 403 – Fugitive Dust) and which are in effect at the time of development. The following measures are currently recommended to implement Rule 403 – Fugitive Dust. These measures have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation.

- Apply approved non-toxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas inactive for four days or more).

- Replace ground cover in disturbed areas as quickly as possible.

- Enclose, cover, water twice daily, or apply approved soil binders to exposed piles (i.e., gravel, sand, and dirt) according to manufacturers' specifications.

- Water active grading sites at least twice daily.

- Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.

- All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code.

- Sweep streets at the end of the day if visible soil material is carried over to adjacent roads (recommend water sweepers using reclaimed water if readily available).
- Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.
- Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces.
- Enforce traffic speed limits of 15 miles per hour or less on all unpaved roads.

Mitigation Measure 3.2-3: All new structures constructed on the Downey Landing, LLC project site shall utilize solar or low emission water heaters to reduce natural gas consumption and emissions.

Mitigation Measure 3.2-4: All new structures constructed on the site shall have wall and attic insulation that exceeds current Title 24 requirements by at least five (5) percent.

Mitigation Measure 3.2-5: The site plans developed for the project shall incorporate transit shelters and benches at appropriate locations along the site perimeter. The transit stops shall include route signs and displays.

Mitigation Measure 3.2-6: The site plans developed for the project shall incorporate street lighting that illuminates pedestrian pathways.

Mitigation Measure 3.2-7: The landscape plans developed for the project shall identify the location of shade trees to shade on-site sidewalks.

Mitigation Measure 3.2-8: The site plans developed for the project shall incorporate street furniture along on-site pedestrian pathways.

Mitigation Measure 3.2-9: The site plans developed for the project shall incorporate pedestrian safety designs and infrastructure at street/driveway crossings.

Mitigation Measure 3.2-10: The site plans developed for the project shall incorporate secure bicycle parking features.

Mitigation Measure 3.2-11: The site plans developed for the non-commercial areas of the project shall designate preferential parking spaces for carpool/vanpool parking.

3.3 Hazards and Hazardous Materials

3.3.1 Introduction

The Initial Study prepared for this project (which is included as Appendix A of this document) determined that project-related impacts regarding hazards and hazardous materials associated with the proposed hospital and medical office uses could be potentially significant. Therefore, this section considers the potential effects of project-related increases in the risk of exposure of persons to soil contaminants. The information included in this section has been compiled from a Soil Investigation Report prepared by SCS Engineers for the City of Downey in 1998, an Environmental Assessment (EA) prepared for the project site by NASA in 2000, a Phase I Environmental Site Assessment prepared by Law/Crandall for Kaiser Permanente, and a Human Health Risk Assessment prepared by Kaiser Permanente: each of these documents is hereby incorporated by reference in its entirety. Some information has also been obtained from consultation with involved parties. Full bibliographic entries to reports cited in this section are provided in Chapter 7.0 (References) of this EIR.

3.3.2 Existing Conditions

Existing and Surrounding Land Uses

Existing, on-site land uses comprise:

- Vacant NASA/Rockwell/Boeing buildings (though Building One and some others are used occasionally for motion picture production);
- Vacant, undeveloped lots; and
- Vacant parking uses.

The site contains some 124 buildings, structures, and other built features (Earth Tech 1999, 4-1). Building One is the most prominent of these, and encompasses about 913,023 sq. ft. Due to its size and configuration, Building One is sometimes used for motion picture production, as are Buildings 11, 14, 39, 288, and 6/290.

Surrounding land uses include:

- Low-, Low/Medium-, and Medium-Density Residential uses to the north and northeast, across Stewart & Gray Road and Bellflower Boulevard;
- Neighborhood Commercial, Medium-Density Residential, and School uses to the west, across Lakewood Boulevard;

- General Commercial uses to the west, between Clark Avenue and Lakewood Boulevard;
- Medium-Density Residential uses west of Clark Avenue, south of Imperial Highway;
- Medium-Density Residential, Commercial Manufacturing, Independence Park, a Public Works yard, and Neighborhood Commercial uses to the east, across Bellflower Boulevard;
- Kaiser Permanente medical offices, adjacent to the project site's southeast boundary; and
- Los Angeles County office and education complexes, a Kaiser Permanente maintenance complex, and General Commercial uses to the south of the project site, across Imperial Highway.

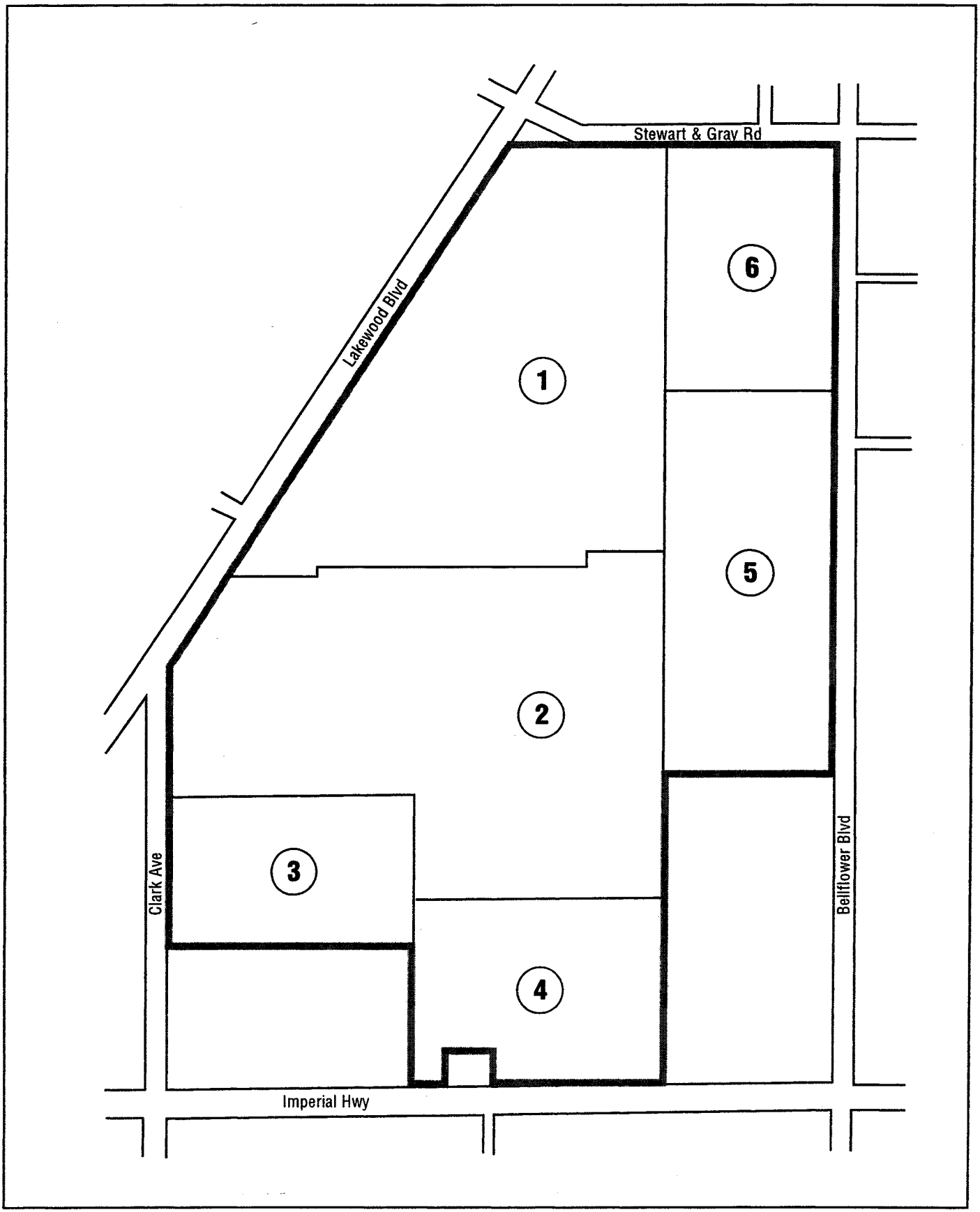
Background of Previous Investigations

Areas of the site have been used for aerospace manufacturing and related activities since 1929. The facilities were operated by a succession of organizations, including Vultee, North American, the U.S. Air Force, and NASA. Figure 3.3-1 shows the parcel configuration and numbers employed for the purposes of those investigations summarized in this section.

An EA prepared by NASA (2000) stated that manufacturing and associated activities on Parcels 1 and 2 either generated or involved the use of sump waste, process solution, oil/coolant, debris, paint/thinner, and sulfuric acid. At the time of closure, all hazardous wastes associated with plant operations will have been collected from all designated accumulation areas on-site, and disposed off-site at a permitted facility.

The *Soil Investigation Report* prepared by SCS Engineers in 1998 presented testing results for parcels 3, 4, 5, and 6, which encompass about 67 acres of the project site. The principal activities conducted on each of these parcels are summarized below:

- **Parcel 3**: Materials storage, automobile parking and aircraft runway. Fuel underground storage tanks (USTs) were located on an adjacent parcel.
- **Parcel 4**: Material storage, dumpster storage, above ground propane and other tanks, fuel UST, mechanical test facilities, and aircraft runway.
- **Parcel 5**: Machining and other industrial processes, sumps, fuel UST, hazardous and other waste storage, hazardous materials storage, aircraft runway and helicopter landing, and possible waste disposal to ground. A fuel UST is located on an adjacent parcel.
- **Parcel 6**: Automobile parking, aircraft runway and helicopter landing, possible waste disposal to ground surface. A fuel UST, industrial processes, sumps, degreasing, plating and other industrial processes, and hazardous materials storage occurred on an adjacent parcel.



0 500 1,000 2,000
Scale In Feet

N

SOURCE: Stevens/Garland Associates

10552-00

EIP ASSOCIATES

Downey NASA Site - Conveyed Parcels

FIGURE **3.3-1**

City of Downey

The activities known to occur on-site, and the materials employed, as well as on adjacent parcels, the classes of chemicals that were determined to be of potential environmental concern included the following:

- Volatile Organic Compounds (VOCs),
- Heavy (trace) materials,
- Petroleum hydrocarbons, and
- Polychlorinated biphenyls (PCBs).

Based on historical data, other chemicals of lower environmental concern, including nitrogen and phosphorus compounds, may have the potential to occur on certain portions of the site (SCS 1998).

Historical Uses of Surrounding Properties

According to Law/Crandall (2001, p. 19), Foster-Wheeler's study of historical uses surrounding the site identified areas of potential environmental concern. These included a possible waste ditch formerly identified in the northwest portion of Parcel 5; aircraft activities associated with the former runways; previous activities (ground stains and soil piles) on the southwest portion of Parcel 5, and a possible subsurface drainage line that ended at a concrete culvert on Parcel 5.

Known and Potential Contamination Sites on the Project Site

The following discussion is based on descriptions of sites investigated as part of NASA's site remediation effort, as well as the Phase I ESA prepared by Law/Crandall in 2001.

Parcel 1

Chemical Contamination

Soil samples from 12 borings contained detectable concentrations of volatile organic compounds (VOCs). Borings that reached groundwater also yielded detectable concentrations of VOCs. However, with the exception of two locations, (near Buildings 25 and 244), VOC concentrations did not exceed their respective Preliminary Remediation Goals (PRGs) established by the EPA for residential and industrial soils. Studies also suggested that shallow soils across the area are affected by low concentrations of chlorinated solvents, such as methylene chloride, acetone, and tetracholoroethene (PCE). In another area east of Building 277, VOC concentrations were below the PRGs, but exceeded the Soil Cleanup Screening Level (SCSL) for PCE (NASA 2000). The sumps in Buildings 244 and 277 are therefore considered to contribute to the PCE concentrations in the groundwater.

Groundwater samples from Parcels 1 and 2 also exhibited detectable concentrations of trichloroethene (TCE), which exceed Maximum Contaminant Levels of the California Primary Drinking Water Standards. Although first water-bearing zone is not used for drinking water, the California Water Code considers the shallow groundwater to have a beneficial use. Based on the absence of TCE in shallow soil samples on the site, and upon the presumed groundwater gradient (i.e., flow towards the south/southwest), the TCE likely originates from an off-site, upgradient source north of Stewart & Gray Road. The California Regional Water Quality Control Board (CRWQCB) has identified an isolated contaminated plume of TCE in the groundwater on Parcel 2; however, the source of this contaminant has not been identified.

A 1942 drawing indicated that eight USTs beneath Building 25 contained stored wastewater, paint, mineral spirits, and other hydrocarbons. Building 25 was used at the time for painting and solvent storage, and later for miscellaneous equipment storage. The eight USTs were all identified and removed, and soil samples were obtained and tested according to the guidance of the Los Angeles County Department of Public Works Environmental Office. A final report that was submitted recommended closure with no further action. This site was referred by Los Angeles County to the RWQCB, as lead agency for the facility. Site closure is pending correspondence from the RWQCB (Hickens 2001, pers. comm.).

Building 244 was used for chemical mill operations in the late 1950s and early 1960s. Numerous above-ground chemical processing tanks were located in this area, and overflow from these tanks may have been discharged to a floor ditch that ultimately drained into a sump. Soils adjacent to a sump inside of Building 244 contained elevated concentrations of VOCs: the distribution of soils had been partially determined at the time of the authorship of the 2000 EA (NASA), and at the time of preparation of the EIR, a work plan had been approved by the Regional Water Quality Control Board (RWQCB). A soil vapor extraction (SVE) program has been in operation for approximately six months.

Elevated concentrations of VOCs have been identified adjacent to a sump east of Building 277. The sump received overflow from chemical processing operations in Buildings 276 and 277. According to NASA's EA (2000, p. 3-15), a work plan for additional assessment had been submitted to and approved by the RWQCB. NASA's Johnson Space Center (JSC) staff are presently reviewing the final report for this effort and will make a recommendation to the RWQCB for no further action.

Radiation Contamination

The northeastern portion of Building 1, where the loading dock is now located, once housed a 4-watt nuclear reactor, which was used by the Atomic Energy Research Department of North American Aviation from 1948 to 1955. In December of 1955, all work was moved to Canoga Park under a new division (Atomics International) of North American Aviation. The reactor

was moved in 1956, and available information from the 1950s indicated that the facility was not left in a contaminated condition. All isotopes stored on-site after this period were disposed of in the early 1990s. Because information regarding these early activities is highly incomplete, Boeing agreed that a Radiation Safety Survey be conducted for the project site. The study, which was completed in March 2001, was designed to demonstrate compliance with applicable regulatory release criteria by measuring the residual radioactivity from radiological operations on the site during the period described above. Detailed data for each measurement are available in the appendix of the report. The report is on file and available for review at the City of Downey Planning Department.

The survey included 464 total alpha and beta surface contamination instrument measurements and 460 removable wipe samples. All measurements and wipe samples demonstrated compliance with appropriate regulatory cleanup standards (DCGLs). None of the net values obtained from the measurements and wipe samples exceeded the DCGLs, even without subtraction of background radiation values, and the majority of the measurements and samples did not even exceed the minimum detectable activity of the instruments or counters.

The survey also included 464 surface gamma exposure rate measurements, all of which were within the measured background range. All gamma spectrometry of soil, paint, concrete, and water samples yielded no evidence of man-made contamination, and indicated that regulatory clean-up standards promulgated by the Department of Energy, Nuclear Regulatory Commission, and California Department of Health Services were met. The area is therefore suitable for release for "unrestricted use" with no radiological restrictions.

Parcel 2

Samples from soils borings and groundwater penetration borings contained detectable concentrations of VOCs. As of August 2001, TEC and tetrachloroethene (PCE) were detected in groundwater beneath Parcel 2. TCE ranged in concentration from 26micrograms per liter (µg/l) to 170 µg/l. PCE ranged in concentration from 8.4 µg/l to 16 µg/l. The concentrations of both PCE and TCE exceeded the State of California Department of Health Services Maximum Contaminant Levels (MCLs) of 5µg/l for these compounds; however, the groundwater monitoring wells located upgradient from Parcel 1 (which is also upgradient from Parcel 2) indicate PCE concentrations ranging from <7.5 µg/l to 14 µg/l. TCE concentrations in the upgradient monitoring wells ranged from 120 µg/l to 1,200 µg/l. The VOC levels in the soil sample did not exceed the PRGs of the EPA or the RWQCB SCSLs, but groundwater penetration samples near Buildings 6 and 290 contained detectable VOC concentrations that likely resulted from the use of solventsboth an above- and a below-ground storage tank are located near and within Building 289, respectively. The UST was

used for emergency spill containment. No obvious signs of spill were observed near the above-ground storage tank (AST).

Parcel 3

Borings drilled in the former storage area on this parcel did not yield significant soil pollutant impacts (SCS 1998).

Parcel 4

Soils samples collected in the northwestern portion of Parcel 4, near the UST, yielded only low concentrations of fuel hydrocarbons. PCE was detected at concentrations ranging from 6 g/kg to 402 g/kg, and TCE was detected at concentrations ranging from 7 to 113 g/kg. Although other areas that were not sampled may have had greater impacts, SCS's 1998 investigation and previous investigations by Earthtech (1996) suggest that no significant contamination has occurred. In the southeastern portion of this parcel, no impacts were detected either. However, sampling detected soil and groundwater contamination in the southern portion of the parcel, adjacent to the Spartan Chemical facility.

Parcel 5

Sampling indicated VOC and PCE impacts in the northern portion of Parcel 5, and TCE impacts near Building 255 (a hazardous waste storage facility). According to Law/Crandall (2001), three USTs (numbers 8, 9, and 20, according to Foster-Wheeler 1996) were once present, but were removed and given clearance by the Los Angeles County Department of Public Works (LACDPW). Additionally, fuel lines that connected USTs 8 and 9 are documented to have conveyed JP-4 jet fuel, and have been capped and abandoned in place. A UST is also in use near Building 249: Law/Crandall observed Air Quality Management District (AQMD) permits for operation of an emergency diesel generator and a 550-gallon diesel UST. Building 260 was described by Foster-Wheeler (1999) as an underground pneumatic test cell that used freon.

Building 230/237 (adjoining structures) included nine 55-gallon drums that had leaked a dark, tar-like substance onto the concrete floor. The spill was limited to the immediate vicinity of the drums. The material was unknown; however, the area of Building 237 (former machining operations) exhibited no significant contaminant levels.

Building 235 was used for hazardous materials storage. Storage and containment areas were observed, and the concrete in some areas had been corroded. Law/Crandall also observed a linear trench drain associated with a clarifier or sump adjacent to the building, as well as a sump pit, covered with steel plates, in a canopy-covered area adjacent to the structure. Additionally, Foster-

Wheeler (1999) reported that some buildings—but primarily Building 235—were used for hazardous materials storage.

In addition to the structures and associated USTs, three large dumpsters on the project site in Parcel 5 were filled with miscellaneous construction debris that was removed from buildings on the project site.

Parcel 6

TCE was detected in the southeastern and northwestern portions of this parcel. Some of this contamination may be related to groundwater contamination. Borings in the southwestern portion of this parcel yielded no evidence of soil contamination.

The SCS report (1998) reported that, taken as a whole, shallow soil surveys and soil sample analyses indicate only minor impacts to soils above the groundwater table in Parcels 3, 4, 5, and 6. This statement is based upon the relatively low observed concentrations of VOCs during the soil vapor survey, and low to undetectable VOC levels in soil samples. Additionally, the higher concentrations of TCE were detected in the 40-foot range, near the groundwater saturation level. Both of these observations suggest that TCE and possibly other VOCs at that depth resulted from migration through groundwater, possibly from an off-site, upgradient source. However, the following areas may have been affected by impacts originating from near the surface:

- The northern portion of Parcel 4, PCE and 1,1,1 TCA were found in 20-foot-deep soils at somewhat higher concentrations than elsewhere on the site.
- Low concentrations of TCE were detected at depths of 15 and 20 feet near Building 235. The higher concentrations of TCE at 40 feet are probably related to groundwater contamination.
- Detection of PCE in the northern portion of Parcel 5 may indicate that a surface spill occurred. No PCE was detected at 15 feet, which may indicate limited migration of the pollutant.
- Detection of TCE in southeast and northwest Parcel 6 may indicate a contamination source other than groundwater in this location.

Electrical Transformers

Electrical equipment was observed in or near four structures in Parcel 5: Buildings 201, 237, 231, and near 260/289. Building 201 included former electrical substations 202 and 203, and although soils were previously affected by PCBs, the area was reportedly remediated (Law/Crandall 2001, p.14). Building 237 housed former substation 204. Building 231 included an inactive transformer that was labeled "No PCBs". Finally, a fenced enclosure near Buildings 260 and 289 includes electrical panels associated with a Southern California Edison electrical transfer substation. The substation was used

to distribute electricity to the entire site, and the City and Applicants anticipate continued use of the substation during project operation.

Asbestos

Renovation or demolition of buildings with asbestos-containing material (ACM) can potentially release asbestos fibers into the air (NASA 2000). ACM includes materials such as pipe and boiler insulation, acoustical ceilings, sprayed-on fireproofing, and other soundproofing or insulation. NASA policy during its ownership of the project site consisted of managing ACM in place, and ACM is removed only when a potential exists for a release of asbestos that could affect human health or the environment (NASA 2000, p. 3-16).

NASA contracted for an asbestos survey in 1986 of structures on the project site. The survey identified ACM in Buildings 1, 3, 4, 6, 9, 11, 14, 41, 56, 61, 119, 128, 229, 239, 244, 246, 276, 286, 287, 288, 289, 290, 299, 305, and 999 (NASA 2000, pp. 3-16, 3-17).

Lead-Based Paint

NASA has conducted no specific studies with regard to lead-based paint, because no "high-priority" facilities (housing, elementary schools) are present on-site. However, many of the buildings on-site were constructed prior to 1978 and are therefore considered likely to contain lead-based paint.

Previous and Current Remediation Activities

Previous Remediation Activities

In addition to previous removals and remediation discussed above, work plans for remediation of contaminated sites and removal of USTs on Parcels 3, 4, 5, and 6 have been submitted to and approved by the RWQCB. However, remediation activities on these parcels have been completed to a level sufficient to allow the safe development of commercial or industrial uses only, according to NASA's studies: conveyance of the land to the City of Downey included deed restrictions that limit development to only these general types of uses. Other uses are possible only if the City and/or the developer of such uses provides for remediation of the site to a sufficient level, according to appropriate regulatory standards, that development of such uses would not constitute a significant impact with respect to the exposure of persons to hazardous materials. Hospital and medical office uses are permitted under the industrial uses allowed by the deed restriction. However, the increased building heights on the project site due to Kaiser's proposal may require deeper excavation for foundations, which may reach depths at which groundwater could be encountered. The City, in order to exercise an appropriate level of caution, has required Kaiser to undertake additional investigations, and Kaiser may be required to implement further remediation, based on the recommendations of the most recent studies, in order to develop its portion of the project.

A site reconnaissance by Law/Crandall (2001) for Kaiser yielded observations of concrete patches marked with spray paint with the designation "ESV," followed by the respective building number and boring number. The locations thus appear to have been subsurface borings, but none of the locations correspond to the test locations in studies reviewed by Law/Crandall, and Law/Crandall is attempting to locate a report that summarizes the findings of those borings.

Current and Ongoing Remediation Activities

The RWQCB-LA has required additional characterization of groundwater beneath Parcel 2 to more fully assess the extent of the VOCs. Parcel 2 did not require remediation to reach the level of acceptable use described above for Parcels 3, 4, 5, and 6. Parcel 1, however, contains a soil vapor extraction (SVE) unit for the removal of PCE from the soil surrounding the sump at Building 244. This remediation work plan has been approved by, and is being executed under the supervision of, the Los Angeles RWQCB. Remediation efforts are expected to continue for up to 18 months to achieve acceptable safety levels for commercial and industrial uses; however, the RWQCB has indicated that construction may occur during the time that the SVE facility is in operation with no adverse effects. Under authority of the federal CERCLA statute, 42 USC 9620 (120(h)(3)), the U.S. Government obtained an "operating properly and successfully" determination for the soil remediation system from the U.S. EPA, and a letter from the RWQCB concurring with the transfer of Parcels 1 and 2 (Hickens 2001, pers. comm.).

3.3.3 Regulatory Framework

Regulatory Agencies

The following local, state, and federal requirements regulate the proper storage, management, and disposal of hazardous materials that would be routinely used by Kaiser on the project site.

The management of hazardous materials[1] is regulated by various federal, state, and local agencies. Federal and state agencies include the U.S. Environmental Protection Agency (U.S. EPA), U.S. Department of Transportation (DOT), California Environmental Protection Agency (CAL EPA), CAL EPA Division of Toxic Substances Control (DTSC), California State Water Resources Control Board (SWRCB), Regional Water Quality Control Board (RWQCB), South Coast Air Quality Management District (SCAQMD), and the California Highway Patrol. Local agencies include the Los Angeles County Health Department (LACHD) and the City of Downey Fire Department. Table 3.3-1 lists the

[1] California's hazardous materials laws define a hazardous material as:

> ...any material that because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, radioactive materials, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment (California Health and Safety Code, §25,501).

federal, state, and local regulatory agencies that oversee hazardous materials handling and hazardous waste management, and the statutes and regulations they administer.

Medical waste management is regulated under the Medical Waste Management Act which is enforced locally by the LACHD. The Act regulates the generation, hauling, treatment, containment, and storage of medical waste.

Permits

Operating permits are required for the treatment of medical waste, the operation of underground and aboveground fuel storage tanks, treatment of hazardous waste, and toxic air emissions. The permits required for hospital operation related to hazardous materials include:

South Coast Air Quality Management District

- Operating permits for utility sources, i.e. boilers and generators.
- Operating permits for ethylene oxide sterilizers and abaters.

Environmental Protection Agency

- Hazardous Waste Generator Number
- Extremely Hazardous Waste Permits (DTSC)

Los Angeles County Health Department

- Biohazardous Waste Generator Registration
- Biohazardous Waste Treatment Permit
- Underground Storage Tanks Permits

TABLE 3.3-1
SUMMARY OF HAZARDOUS MATERIALS REGULATIONS

Regulatory Agency	Applicable Codes and Regulations
Dept. of Transportation	Hazardous Materials Transportation Act – Code of Federal Regulations (CFR) 49
Environmental Protection Agency	Federal Water Pollution Control Act Clean Air Act Resource Conservation & Recovery Act (RCRA) Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) Superfund Amendments & [WHAT] Act
Occupational Safety & Health Administration	Occupational Safety and Health Act & CFR 29
State Agencies	
Dept. of Toxic Substances Control	California Code of Regulations (CCR) Titles 17, 19, and 22
Dept. of Industrial Relations (CAL-OSHA)	California Occupational Safety & Health Act, CCR Title 8

TABLE 3.3-1
SUMMARY OF HAZARDOUS MATERIALS REGULATIONS

Regulatory Agency	Applicable Codes and Regulations
State Water Resources Control Board & Regional Water Quality Board	Porter-Cologne Water Quality Control Act Underground Storage Tank Law
Health & Welfare Agency	Safe Drinking Water & Toxic Enforcement Act
Air Resources Board & Air Pollution Control District	Air Resources Act
Office of Emergency Services	Hazardous Materials Release Response Plans/Inventory Law Acutely Hazardous Materials Law
Dept. of Fish & Game	Fish & Game Code
Dept. of Food & Agriculture	Food & Agriculture Code
State Fire Marshal	Uniform Fire Code, CCR Title 19
County of Los Angeles	
Los Angeles County Health Department	Hazardous Materials Management Plan Medical Waste Management Act Underground Storage Tank Ordinance
City of Downey	
City of Downey	Fire Code Toxic Gas Ordinance

Source: Davis J. Powers & Associates, Inc. November, 1993.

City of Downey General Plan Safety Element

The intent of the General Plan Safety Chapter is to "reduce loss of life, injuries, and damage to property resulting from natural and man-induced hazards." The Chapter provides standards, policies, and programs to promote the safety of the community. However, no policies and programs in the Safety Chapter apply to the proposed project.

3.3.4 Thresholds Of Significance

The proposed project will have a significant impact if it would expose people or the environment to hazardous materials or substances, or to a significant health risk associated with the storage, use, transportation or disposal of hazardous waste on the site.

3.3.5 Impacts

Less Than Significant Impacts

Use, Transportation, Storage, and Disposal of Hazardous Materials for the Downey Landing, LLC Project

Implementation of the proposed Downey Landing, LLC project is not anticipated to involve the routine use, storage, transportation, or disposal of hazardous substances. Therefore, the potential risk associated with upset and the resulting release of hazardous substances into the environment is

considered very low, and would, therefore, be considered a less-than-significant impact for the Downey Landing, LLC portion of the project.

Potentially Significant Impacts

Implementation of the proposed project would result in the following potentially significant impacts related to hazards and hazardous materials.

Impact 3.3-1: **Construction of the proposed project could expose workers to previously undetected pockets of contaminated soils.**

During grading and excavation for the proposed project, previously undiscovered pockets of soils that contain significant levels of hazardous substances could be exposed, and could expose the workers to unacceptable levels of risk to their health. This would constitute a **potentially significant impact**. However, the conveyance agreements currently being formulated by the City, NASA, State Lands Commission, and the Federal General Services Administration will include measures for the evaluation and, if necessary, remediation of any contaminated soils that may be exposed during grading and excavation activities on the project site. Because these measures have not yet reached their final form, Mitigation Measures 3.3-1 and 3.3-2 are proposed, and their implementation would reduce this potential impact to a less-than-significant level.

Impact 3.3-2: **Demolition and/or renovation of existing structures on the project site could expose workers and the environment to asbestos-containing materials (ACM).**

As described above in Section 3.3.2, an asbestos survey conducted by NASA in 1986 identified 25 existing structures on the project site that contain ACM, including Buildings 1, 11, 14, 39, 288, and 6/290, which are proposed for reuse under Option 1 for the Downey Landing, LLC portion of the project. Demolition or modification of all or portions of the 25 structures identified could result in the release of fibers into the air, where they could be inhaled directly, or become impregnated in clothing and equipment, resulting in potential secondary exposure to construction workers and other individuals. Either method of exposure could subject people associated with both the Downey Landing, LLC and Kaiser projects to an unacceptable health risk associated with the release of ACM. This would constitute a **potentially significant impact**. However, implementation of Mitigation Measure 3.3-1 would reduce this potential impact to a less-than-significant level.

Impact 3.3-3: **Demolition and/or renovation of existing structures on the project site could expose workers and the environment to lead-based paint waste and residues.**

As described above in Section 3.3.2, the majority of the structures on the project site were constructed prior to 1978, and may therefore contain lead-based paint. Demolition or modification of all or portions of the existing structures on-site could result in the spread of airborne lead particles or other contaminated debris, which would result in an increased exposure of construction workers and possibly other individuals to lead. This would constitute a **potentially significant impact**. However, implementation of Mitigation Measure 3.3-1 would reduce this potential impact to a less-than-significant level.

Impact 3.3-4: **Construction of the proposed Kaiser project could expose individuals to an increased health risk associated with exposure to contaminated soils.**

As described above in Section 3.3.2, potential soil contaminants may be present on Parcel 5, where the Kaiser project is proposed to be constructed, as a result of the use, storage, and disposal of hazardous materials by previous uses. The Phase I ESA prepared by Law/Crandall (2001, p. 33) concluded that, based on the findings of the assessment, further investigation may be warranted to assess the potential for impacted soil and groundwater on Parcel 5 in the specific locations at which evidence of contamination was observed. Based on this assessment, the potential for impacted soil and groundwater must be considered a potentially significant risk to human health during construction activities, and therefore, a **potentially significant impact**. However, implementation of Mitigation Measure 3.3-3 would reduce this impact to a less-than-significant level.

Impact 3.3-5: **Operation of the proposed Kaiser project could expose individuals to an increased health risk associated with the use, storage, transportation, and disposal of hazardous substances**

The proposed Kaiser Bellflower Replacement Medical Center will use and store a variety of hazardous materials which will produce hazardous wastes on the Project site. In comparison to many industrial facilities, however, the proposed Kaiser facility will generate relatively small quantities of hazardous waste, which will be handled and disposed of in accordance with Kaiser's internal policies and procedures and state and federal law.

Hazardous materials pose a risk to worker and public health whenever these substances are used or stored. The risk to human health and the environment posed by hazardous materials is determined by the probability of exposure and the potential severity of harm resulting from such exposure, measured against the beneficial value from the particular use. Potential exposure of the public or the environment to hazardous materials could result from the Project from the following activities: (1) the improper handling or use of hazardous materials during hospital operations, (2) failure of storage containment systems, (3) improper disposal methods, (4) transportation accidents, and (5) fire, explosion or other emergencies.

The types and varieties of hazardous waste Kaiser produces are significant enough to require compliance with hazardous waste regulations, some of which are listed below.

Basic compliance requirements for hazardous waste generators include:

- Responsibility to characterize wastes
- Obtaining an EPA identification number
- Managing hazardous waste on-site in compliance with the DTSC regulations
- Obtaining hazardous waste treatment permits as necessary
- Selecting appropriate off-site treatment and disposal facilities
- Preparing hazardous wastes for shipment
- Making reasonable efforts to minimize waste generation
- Conducting an annual chemical inventory under federal and State requirements

Hazardous materials will be utilized in the following departments at the proposed Kaiser facility:

Central Supply

The Central Supply department would provide for sterilization of medical instruments and equipment, using a highly toxic gas, ethylene oxide (Eto). The Eto units in the proposed hospital would be enclosed in a specialized room away from the main corridors and patient rooms, and equipped with sensors to detect any escape of Eto into the work room. The Eto units would

release the spent gas into vents which are equipped with chemical scrubbers that reduce the concentration of Eto to non-toxic levels. Eto is a strictly regulated gas, controlled by the State and local air quality management districts. The state requires that facilities utilizing 25-600 pounds per year of Eto maintain a 99% emission control rate. For facilities using greater than 600 lbs per year, an emission control of 99.9 % must be maintained.

Laboratories

The hospital laboratory would use certain hazardous materials. These materials include alcohols, xylenes, formaldehydes, stains and reagents. Acids are also used in the lab, including nitric acid, hydrochloric acid and glacial acetic acid. Bases also include sodium hydroxide and ammonium hydroxide. These materials are generally stored in small quantities, according to legal regulations.

Central Plant, Engineering

The Central Plant would contain one or more underground tanks to store diesel fuel. These underground tanks would be monitored by a detection system to indicate any leakage. In addition, other flammable, combustible and volatile materials would be used to operate and maintain engineering equipment throughout the hospital, and for facilities such as fuel-driven generators, oil-containing electrical transformers, cooling tower treatment chemicals, and potable and distilled water treatment systems.

Other Departments

Hazardous materials include formaldehyde, flammable liquids, paints, solvents, pesticides and detergents which would be in other departments. Photographic developer and fixer would also be used in radiology and ophthalmology for developing X-rays and other film. The used photographic developer would be recycled for silver content by Kaiser.

Kaiser Procedures Regarding Hazardous Waste

Kaiser Permanente has developed many internal procedures to minimize waste, prevent pollution, and conserve natural resources, governed by Kaiser's national Environmental Stewardship Council. In California, Kaiser's operations leaders sponsor efforts to minimize solid, bio-hazardous, and chemical wastes. The average performance for reducing bio-hazardous (regulated medical) waste for KP medical centers is 30%, a significant

reduction in the volume and toxicity of waste streams. Chemical wastes are minimized through programs to centralize and standardize the use of hazardous chemicals, to use less hazardous alternatives when appropriate, to recycle chemical wastes such as xylene and alcohol when possible, and to dispose of wastes in an environmentally responsible manner. Kaiser attempts to reduce, reuse, and recycle all waste streams wherever feasible, limiting significant impacts on the public and the environment, and minimize off-specification/expired shelf-life chemicals and pharmaceutical hazardous wastes with "just-in-time" programs through cooperative efforts with vendors to return short shelf-life items.

Kaiser Permanente employees responsible for the handling of hazardous wastes are trained in accordance with the standards set forth in the *Kaiser Permanente California Hazardous Waste Guidance Manual,* which is hereby incorporated by reference in its entirety, and which is attached to the Human Health Risk Assessment prepared by Kaiser. This guidance document is designed to help Kaiser Permanente employees who are involved in the management of hazardous waste understand and comply with California hazardous waste requirements relevant to the positions in which they are employed. Sample forms, procedures, and plans are included in the Guidance Manual.

Kaiser Permanente also has an aggressive audit program. Kaiser's National Environmental, Health and Safety (NEH&S) Audit Program is a governance tool used to assess and communicate environmental, health and safety compliance status with the ultimate purposes of assuring management that Kaiser's waste management and treatment program maximizes the impact on its employee, members, the public and the environment. The audit program will evaluate the compliance programs and the environmental health and safety management systems of the proposed Kaiser facility.

The Hazardous Waste audit protocol will evaluate the Kaiser facility's program for completeness with the current regulatory and environmental compliance obligations. Topics audited in the Hazardous Waste program include an evaluation of program management procedures, employee training and knowledge, records retention, waste storage area management and security, waste classification, waste handling, waste containerization and labeling, transporter and disposal site selection and management and waste activities reporting.

The Medical Waste audit protocol evaluates the Kaiser facility's program for proper management of infectious, biohazardous and chemotherapy drug related wastes. The audit protocol evaluates proper usage of solid waste and medical wastes ("red bag") containers, proper disposal of trace and bulk quantities of chemotherapy wastes and employee knowledge.

The audit scope is standardized, which allows for all audits to be conducted in a consistent manner and the audit results are quantified to allow for benchmarking. The audit results are reported annually to the Kaiser Permanente Board of Directors.

Although the use of hazardous materials and the disposal of hazardous waste at the project site represents a **potentially significant impact**, the impact would be reduced to a less than significant level by the implementation of Kaiser's standard internal procedures, as documented in the Hazardous Materials Business Plan adopted by Kaiser, as well as by conformance with existing Federal, State and local requirements regulating hazardous materials and waste on the project site.

Significant, Unavoidable Impacts

The proposed project would not result in any significant, unavoidable impacts related to hazards or hazardous materials.

3.3.6 Cumulative Impacts

For the purposes of this analysis, cumulative impacts are evaluated on a City-wide level, since exposure of contaminated soils or the potential localized release of asbestos or lead-based paint waste are likely to remain contained.

Construction activities associated with the proposed project could expose workers to lead-based paint, ACM, and undetected pockets of contaminated soils; however, as described above in Section 3.3.5, Mitigation Measures 3.3-1 and 3.3-2 require compliance with applicable procedures to minimize exposure to and release of these materials. Because the possible risks associated with construction activities would be minimized (i.e., reduced to a less-than-significant level), the project's contribution to risks associated with the construction-related release of or exposure to hazardous materials would not be cumulatively considerable, and this cumulative impact would be less than significant.

The proposed Kaiser project would routinely use and transport hazardous substances and would generate chemical and biological waste. However, as described above in Section 3.3.3, the Kaiser

facility would be regulated by federal, State, and local agencies, and would be required to comply with all applicable provisions of the statutes and regulations listed in Table 3.3-1. Additionally, as described in Section 3.3.5, Mitigation Measure 3.3-1 would reduce risks associated with operation activities to less-than-significant levels. Therefore, despite the site of the project, the project's contribution to an increased risk of construction-related and operational hazards would not be cumulatively considerable, and would therefore be less than significant.

3.3.7 Mitigation

The following mitigation measures have been proposed to avoid or lessen, to the extent feasible, the significant impacts identified above in Sections 3.3.5.

Mitigation Measure 3.3-1: **Compliance with applicable plans and policies.**

The Applicant and the City shall comply with all applicable Federal, State and local plans and policies regarding hazardous substances use, transportation, and disposal, as well as contaminant remediation, including, but not limited to the applicable provisions of the Toxic Substances Control Act (TSCA), the Asbestos Hazard Emergency Response Act (AHERA), the California Health and Safety Code, the California Hazardous Waste Control Law, and other applicable provisions of the California Code of Regulations (CCR), as well as applicable regulations promulgated by the U.S. and California Occupational Safety and Health Administrations (OSHA) and Environmental Protection Agency (EPA).

Mitigation Measure 3.3-2: **Formulation of a procedure to be implemented in the event of discovery of previously unknown pockets of contaminated soils.**

Prior to issuance of a grading permit, the City of Downey shall, in consultation with and with the approval of the RWQCB, formulate a plan to be implemented in the event that grading or excavation activities during construction expose potentially contaminated soils (e.g., soils that exhibit staining or odors). At a minimum, the plan shall identify the RWQCB as a responsible agency, and shall include the following specific points:

- A qualified construction monitor shall be designated and shall be present on-site during grading and excavation activity.

- The construction monitor shall be responsible for identifying pockets of potentially contaminated soils, and, upon identification of potential contaminants, for implementing the procedures outlined in the plan.
- All work in the vicinity of the affected area shall cease.
- The Los Angeles RWQCB shall be contacted.
- The appropriate California Health and Safety Code procedures shall be followed.

The plan shall also identify a procedure for sampling, testing, and remediation, as appropriate, of contaminated soils, and for obtaining the concurrence of and necessary clearance from the RWQCB, before construction activities can resume. The plan shall also provide for the preventative procedures for the protection of construction workers during work in areas where contaminated soils have previously been discovered.

Mitigation Measure 3.3-3: **Preparation of a Phase II Environmental Site Assessment for the Proposed Kaiser project site.**

Prior to issuance of a grading permit, Kaiser shall retain a qualified consultant to prepare a Phase II Environmental Site Assessment (ESA), for review and approval by the City Planning Department or its qualified designee, and shall demonstrate, to the City's satisfaction, that Kaiser has implemented all applicable recommendations of the Phase II ESA.

3.4 Hydrology and Water Quality

3.4.1 Introduction

The purpose of this section is to describe the drainage impacts of the proposed projects. Information for site drainage conditions, runoff quantities, and hydrologic design are taken from the "Hydrology Report" prepared by MCE Consultants, dated April 19, 2001, found in Appendix F.

3.4.2 Existing Conditions

General Characteristics

The project site, known as the Rockwell/Boeing NASA property, is approximately 160 acres in area. The topography is very flat, having less than a 0.5 percent slope from the north end of the site at Stewart & Gray Road to the south end at Imperial Highway. The site contains several existing buildings associated with the previous use by Rockwell and Boeing, including a 913,023 square foot building. The remainder of the site is paved with asphalt or concrete, and for a relatively minor portion of landscape.

Surface Drainage Characteristics

Area Wide Drainage

The project site is located within the Los Angeles-San Gabriel Hydrologic Unit as defined by the California Regional Water Quality Control Board, Los Angeles Region (4), and is tributary to the San Gabriel River. Generally, on-site storm runoff follows site topography southerly and westerly. The project site is drained by an existing system of underground storm drains that collect the onsite runoff and carry it southward either through the site or westerly to Lakewood and Clark then southerly into Imperial Highway. From Imperial Highway the existing storm drain system converges and continues southerly along Ardis Avenue, eventually entering the San Gabriel River.

The Water Quality Control Plan for the Los Angeles Region (4) addresses water quality objectives for both surface and groundwater. The surface water sources in and around the project site are minor and are not identified in the Basin Plan for specific water quality objectives or for beneficial uses. Water quality discharge requirements meeting area wide surface water use objectives are established as permit requirements by the RWQCB and the SUSMP during permitting for construction and operations of proposed development projects.

Site Drainage Patterns

For the purpose of the hydrology analysis, the existing watershed has been analyzed using the available information provided by the City of Downey. This information includes on-site storm drain facilities including piping size and location, off-site storm drain facilities indicating piping size and location, and the Site Plan for the Storm Water Pollution Prevention Plan (SWPPP), illustrating the watershed boundaries and collection points. The on-site topography for the project has also been provided by the City with limited contour information (at 2-foot intervals). The runoff paths and slopes, storm drain slopes, collection points and sub-areas of the watershed are estimated from this information.

Utilizing this information, the subject site is divided into 8 watershed sub-areas, lettered A through H, separated according to the point at which the storm water runoff exits the site. The Hydrology Map (Existing Conditions) in Appendix F, Hydrology Report, shows the general topography of the site as well as these drainage sub-areas.

Sub-area A drains the most northeastern portion of the site and is tributary to an existing storm drain lateral from Bellflower Boulevard. This paved area includes approximately 9.7 acres.

Sub-area B includes a portion of the site that is just southerly of Sub-area A. This paved sub-area also drains to Bellflower via an existing onsite storm drain lateral and is approximately 3.2 acres in area.

Sub-area C includes the most northwesterly portion of the site and is tributary to the storm drain in Lakewood Boulevard. This area contains 27.6 acres of small and large buildings, paving, and a small portion of landscape area next to Lakewood.

Sub-area D is the largest sub-area of the site and contains the middle and southerly portion of the site. The total area is 59.1 acres, incorporating almost 45% of the total runoff area. This sub-area drains southerly to Imperial Highway via an existing on-site storm drain system that collects the surface runoff through a series of collection inlets. This area consists mostly of buildings and paving, with a small percentage of area landscaped.

Sub-area E includes approximately 21.7 acres along the westerly middle portion of the site and drains to Clark Avenue via an existing onsite storm drain lateral. Sub-areas F and G contain approximately 6.0 acres and also drain to Clark Avenue via existing onsite storm drain laterals. Sub-areas E, F and G are also mostly paved, with few buildings.

Sub-area H is the most southwesterly portion of the site. This area drains to Imperial Highway where the runoff is collected into the existing storm drain line in Imperial. This area contains 7.1 acres of mostly pavement.

Regional Flooding

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), the project is located in a special study area. On May 24, 2001, FEMA changed the site's flood zone designation to X, which distinguishes this area as either of the following:

- An area of 500-year flood; an area of 100-year flood with average depths of less than one foot; and an area protected by levees from 100-year flood; or
- An area determined to be outside the 500-year flood plain.

This change was confirmed by FEMA on January 11, 2002. It has been determined that the project site lies within the 500-year flood plain (Brian Ragland, Downey Public Works, July 2001).

Surface Water Quality

Surface water quality in urban areas is affected by various point- and non-point-source pollutants. Point-source pollutants are those emitted at a specific point, such as a pipe, while non-point source pollutants are typically generated by less confined sources, such as streets, building sites or agricultural areas. The drainage facilities within the City of Downey receive runoff from a variety of non-point sources. As a general rule, point-source pollutants are more easily monitored; thus, pollutant discharge standards are more easily enforced, while non-point-source pollutants, such as those found in runoff, are more difficult to identify. Even though non-point-source pollutants are difficult to monitor, they are important contributors to surface water quality, especially in urban areas.

Constituents of runoff water, and their concentrations, vary with surrounding land uses, topography and amount of impervious cover, as well as intensity and frequency of irrigation or rainfall. Runoff may typically contain oil, grease, and metals accumulated on streets, as well as pesticides, herbicides, particulate matter, nutrients, animal wastes and other oxygen-demanding substances from landscaped and agricultural areas. Concentrations of pollutants in runoff generated during the dry season by landscape irrigation and street washing (dry-weather runoff) are typically lower than concentrations found in wet-weather runoff (runoff generated by precipitation during the wet season). The highest pollutant concentrations are found in stormwater runoff generated at the beginning of the wet season, during the so-called "first-flush". Approximately 90 percent of total accumulated pollutants are removed within the first 0.5 inch of rainfall, with street surfaces as the primary source of pollution in urban areas (EPA, 1999).

Groundwater

According to the Initial Study for this project, approximately 90% of the City of Downey's water supply is pumped from the Central Groundwater Basin. These groundwater levels are maintained

by the Water Replenishment District of Southern California. The remainder of the water supply for the City is purchased from the Metropolitan Water District (MWD).

3.4.3 Regulatory Framework

There are no policies with the City's General Plan that directly address hydrology.

3.4.4 Thresholds of Significance

For purposes of the following impact analysis, the proposed project may be deemed to have significant impacts associated with hydrology or water quality if it will:

- Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems.
- Cause or expose people and property to substantial flooding, erosion, or siltation.
- Substantially degrade surface water quality.
- Cause substantial interference with groundwater recharge or direction and rate of groundwater flow or causes substantial deterioration of groundwater quality.

3.4.5 Impacts

Note that an updated site plan was produced for the project area on February 8, 2002. Since the total acreage and buildable area under the new scenarios remain the same as the August 2, 2001 site plan, the impact to surface drainage would remain the same.

Impact on Drainage Patterns

The proposed project will demolish most of the existing buildings and paved areas of the site, and construct new buildings, parking lots, and landscape islands. Implementation of the project would alter the existing drainage patterns plus the rate and amount of surface runoff generated from the site. The proposed site drainage patterns affect the area that is tributary to the existing storm drain system in Imperial Highway and Bellflower Boulevard. The runoff from the proposed development will be collected by a system of catch basins, gutters, and drains, discharging off-site to the existing off-site storm drain system.

The proposed development is modeled largely in parallel with the existing system. The general watershed areas and collection points or exit points from the site for a proposed condition model the existing condition. It is anticipated that the proposed development will construct new on-site storm drain facilities rather than try to utilize any existing on-site facilities.

The proposed development should generally follow the existing site's drainage scheme of capturing the runoff at several locations discharging to an on-site storm drain and connecting to the existing

storm drain system in the surrounding streets. The locations of the existing and proposed storm drains are shown on Figures 3.4-1 and 3.4-2.

Impact of Phasing the Development

As previously discussed, the site drainage is collected within several distinctive sub-areas. Because the proposed drainage patterns are expected to generally follow the existing drainage patterns, phasing for the development of the project should not adversely affect the drainage patterns of the existing site, provided that the proposed and existing drainage sub-areas remain compatible and any new construction's storm runoff is contained wholly within its limits and is directed offsite by its own storm drain system. Likewise, any new construction should make provisions that it does not interfere with any existing storm drain system required to drain existing areas left in place. If, for instance, the northerly portion of the project was developed first, this should affect portions of existing sub-areas A, B and C only. Existing sub-areas D through G should effectively continue to drain the existing property since they have their own storm drain system.

Comparison of Existing and Proposed Flows

A 25-year hydrology analysis was completed for the site for an existing condition and proposed condition. The existing and proposed conditions were analyzed in order to document the changes in the storm water runoff that the proposed development will incur on the site. A summary of the hydrologic analysis is included in Table 3.4-1.

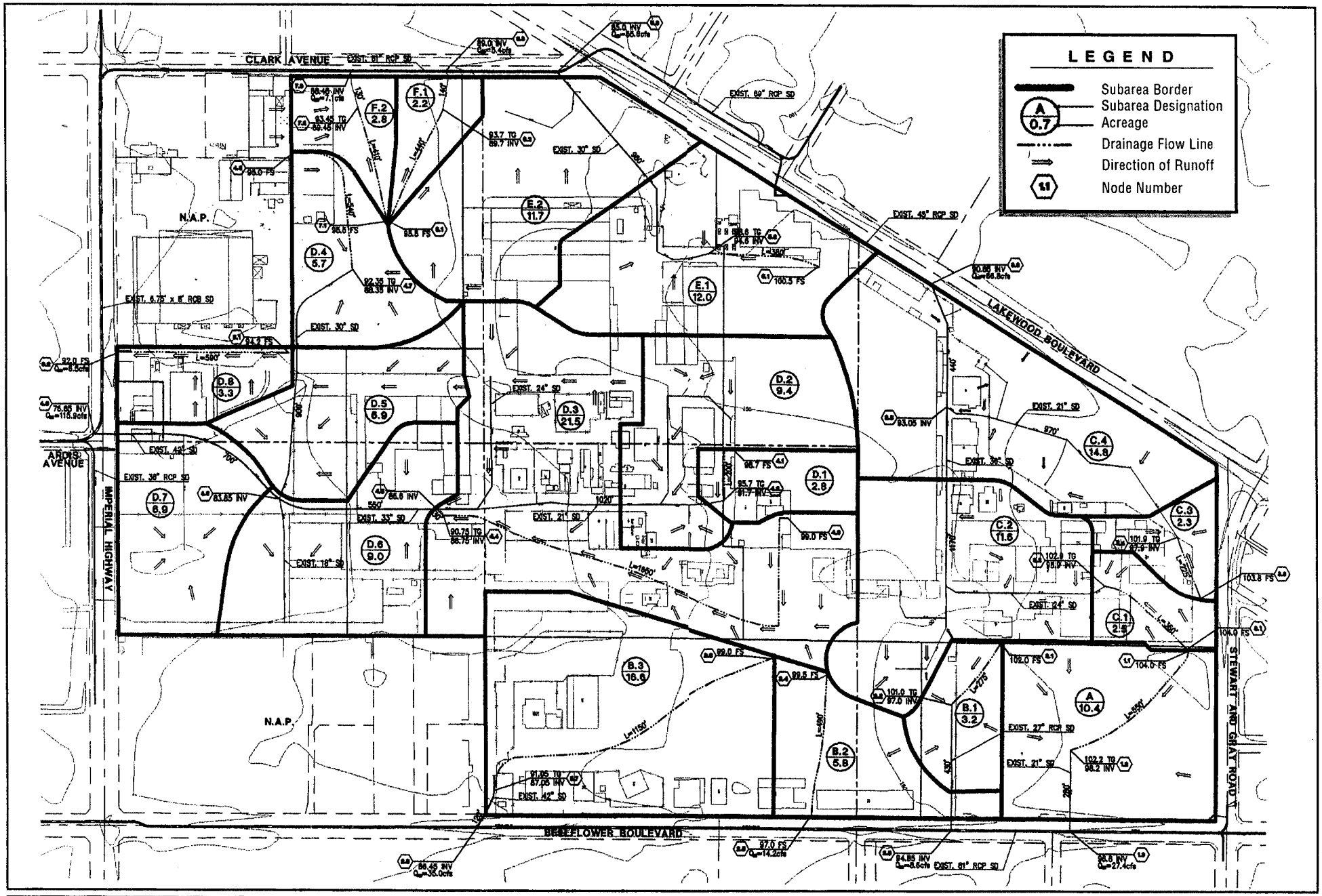
The Hydrology analysis indicates the total flow contributing to the existing storm drain along Bellflower Boulevard will increase approximately 4.4 cfs (30.6 cfs to 35 cfs). This increase can be attributed to the increase in area for sub-area B of approximately 4.9 acres. The total flow contributing to the existing storm drain along Ardis Avenue, downstream of Imperial Highway and the project site, will increase approximately 15 cfs (248 cfs to 263 cfs).

Less Than Significant Impacts

Regional Flooding Impacts/Erosion or Siltation

Project improvements will not alter the regional flooding potential of the area. As previously stated, this project is located in a special study area, FEMA flood zone designation X. The hydrology analysis shows that storm water flows can be effectively conveyed to existing storm water facilities. Consequently, the proposed project will not result in the exposure of people or property to regional flooding.

The proposed project will consist of a highly impermeable site with proposed buildings and parking lots covering most of the site. Since the project will consist of a predominately impervious surface, as per the existing condition, no changes are expected to result in erosion of siltation on- or off-site.



0 120 240 480 Scale In Feet

10552-00

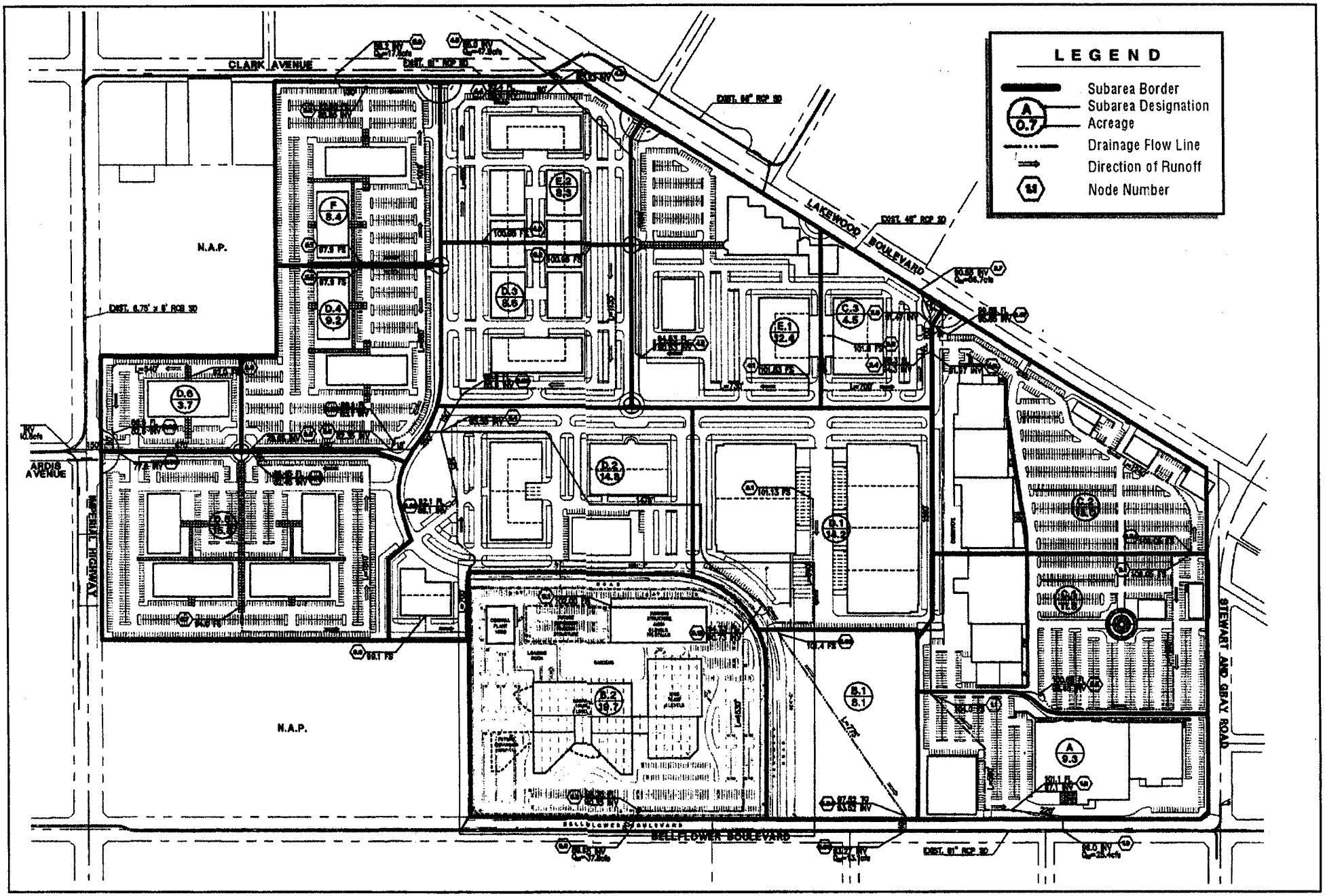
EIP ASSOCIATES

FIGURE 3.4-1

Existing Hydrology

City of Downey

SOURCE: MCE Consultants



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EIP ASSOCIATES

FIGURE 3.4-2

Proposed Hydrology, August 2, 2001 Site Plan

SOURCE: MCE Consultants

City of Downey

Groundwater Impacts

The prior use (i.e., NASA-Boeing) contributed an insignificant amount to groundwater recharge due to the very high percentage of impermeable surface. Consequently, the proposed project, since it will substantially duplicate the percentage of impermeable surfaces, will have a less than significant impact relative to groundwater recharge.

Potentially Significant Impacts

Surface Drainage

Impact 3.4-1: **The calculated increase in runoff for the entire site due to construction of the project is approximately 20.2 cfs (278.0 cfs to 298.2 cfs), which is about 7.5% (see Table 3.4-1 below). Most of this increase can be attributed to the increase in impervious surfaces from the existing site of approximately 8 acres (134 acres to 142 acres), or an increase of almost 6%.**

TABLE 3.4-1
SUMMARY OF EXISTING AND PROPOSED HYDROLOGY

Destination of Flows	Existing	Proposed	Difference
Q exiting site @ exist. Storm drain in Bellflower (sub-areas A + B)	30.6 cfs	35.0 cfs	+ 4.4 cfs
Q exiting site @ exist. Storm drain in Lakewood (sub-area C)	57.7 cfs	56.7 cfs	- 1.0 cfs
Q exiting site @ exist. Storm drain in Imperial (sub-areas D + H)	123.8 cfs	141.0 cfs (Sub-area D only)	+ 17.2 cfs
Q exiting site @ exist. Storm drain in N'ly Clark (sub-area E)	50.8 cfs	47.9 cfs	- 2.9 cfs
Q exiting site @ exist. Storm drain in S'ly Clark (sub-areas F + G)	15.1 cfs	17.6 cfs (Sub-area F only)	+ 2.5 cfs
Q total (all sub-areas)	*278.0 cfs*	*298.2 cfs*	*+20.2 cfs*

Source: MCE Consultants, Hydrology Report, dated April 19, 2001.

The City of Downey does not have a Master Plan of Drainage of the City. The estimated additional 20.2 cfs generated by the cannot, therefore, be analyzed against the existing flows carried by the existing storm drain system to determine their capability to carry the additional runoff without a significant engineering effort.

Any increase in runoff may have the potential to result in localized adverse flooding impact. This potential impact can be mitigated by installation of on-site retention basins or percolation basins to reduce on-site discharge to the previous conditions. Furthermore, analysis of the actual proposed storm drain system, when designed, may show little, if any additional runoff, resulting from a more detailed analysis.

The proposed project should not expose people or property downstream to substantial flooding. The impact can be mitigated with the proposed drainage improvements.

With implementation of Mitigation Measures 3.4-1 and 3.4-4, Impact 3.4-1 to surface water drainage will be reduced to a less than significant level.

Surface Water Quality Impacts

Impact 3.4-2: **Grading and construction activities on the project site have the potential to result in short-term adverse water quality impacts. These activities may increase erosion and contribute sediment to surface waters. Additionally, improper handling of construction materials and/or equipment may result in accidental spills that could adversely affect water quality.**

When the project is rough graded, the potential for mud and discharge from the site will substantially increase during a rainstorm. This amount of silt can be calculated based on potential sediment yield, acreage, and slope. Desilting basins can be sized to retain this sediment and detailed on the erosion control plan as part of the grading permit. The contractor should install these facilities during rough grade of the site. Phasing of the project can also lessen the effect of construction-related discharge from the site by allowing for substantially less disturbed area to be exposed to storm runoff.

Since the proposed project will involve the disturbance of five or more acres, it will be subject to the provisions of the National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activity. Under this permit, the developer will be required to eliminate or reduce non-storm water discharges and to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must emphasize Best Management Practices (BMPs) to identify and reduce sediment and other pollutants in storm water discharges, both during and after construction. The Developer will retain a Civil Engineer or Environmental Engineer to select applicable BMPs and compile the SWPPP based on final site characteristics, runoff potential, and project design needs. Typical measures that have been proven feasible and are commonly required are listed as Mitigation Measures 3.4-2 and 3.4-3. These measures will reduce Impact 3.4-2 to a less than significant level.

Long-term Impacts

Impact 3.4-3: **The proposed project has the potential to result in long-term adverse impacts to water quality due to the addition of pollutants typical of urban runoff. Additional automobile traffic generated from the proposed use of the site, as compared to the current use, could result in an increased incremental concentration of urban contaminants in storm runoff.**

There are no numerical water quality standards that apply to storm water or "non-point source" pollution. That is, current federal and state standards apply to "point source pollution." However, the impacts of urban runoff are now well understood and federal municipal storm water regulations require that pollutants in storm water be reduced to the maximum extent practicable. Also, to be in compliance with the provisions of the National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activity, the Los Angeles County Department of Public Works (LACDPW) has adopted their own Development Planning Model Program in the form of the Standard Urban Stormwater Mitigation Plan (SUSMP). Among other requirements, the SUSMP requires that development projects, including those greater than 100,000 sq. ft. in commercial space or parking lots greater than 5,000 sq. ft., both criteria met by the proposed project, implement measures that:

- Effectively prohibit non-storm water discharges,
- Reduce the discharge of pollutants from storm water conveyance systems to the Maximum Extent Practicable.

As part of the reduction of pollutants, the SUSMP requires the treatment or infiltration of storm water runoff based upon volume. This may be accomplished by implementing structural treatment control BMPs specific to the kinds of pollutants that may occur with the development. Implementing effective BMPs would mitigate water quality impacts from storm water runoff during construction and post-construction.

The City of Downey has requirements for the treatment of the storm runoff per the SUSMP. These requirements will include providing treatment and collection of the volume of runoff produced from a 0.75-inch storm event over the entire site, prior to its discharge to the off-site storm water system, and controlling the peak flow discharge from the site. To accomplish these requirements, solutions could include detention basins with infiltration or "storm 'ceptors" (filtering devices). The City will also require a CDS

(proprietary manufacturer) unit to treat floating debris prior to discharge of runoff offsite. Catch basin inserts are not allowed in the City of Downey.

With implementation of Mitigation Measures 3.4-2 and 3.4-3, Impact 3.4-3 associated with long-term deterioration of surface water quality will be reduced to a less than significant level.

3.4.6 Cumulative Impacts

The scope of the cumulative analysis for the drainage impacts is limited at this point to site specific impacts and the ability of the project to mitigate these impacts. As discussed earlier, the City's Water Master Plan is not available at this time. However, the project's impact upon the City's water system and demand will be mitigated to a less than significant level by Mitigation Measure 3.4-1.

The scope of the cumulative analysis for water quality impacts is governed by the SUSMPS adopted by City ordinance. The project's contribution to water quality impacts can be mitigated to a less than significant level. Therefore, water quality impacts from a cumulative perspective can also be mitigated to a less than significant level.

3.4.7 Mitigation

Mitigation measures below provide typical requirements to be implemented and included in the construction and post-construction portions of the SWPPP and SUSMP.

Mitigation Measure 3.4-1: Prior to issuance of a grading permit, a final grading plan, final drainage plan, and final hydrologic/hydraulic analysis shall be submitted to the City of Downey for review and approval. Final design of the project storm drain system shall be consistent with the recommendations of the final hydrologic/hydraulic analysis and in conformance with the requirements of the City of Downey.

Mitigation Measure 3.4-2: Prior to the issuance of grading permits for each phase, the applicant shall submit and obtain approval of construction drainage and erosion control plans for each phase of grading. The control measures contained in the plan shall be approved by the City of Downey prior to any construction activities. The plans shall serve as the basis for the construction portion of the SWPPP and shall include the applicable measures such as the following:

- Diversion of offsite runoff away from the construction site;
- Prompt revegetation of proposed landscaped areas;
- Perimeter sandbagging or temporary basins to trap sediment;

- Regular sprinkling of exposed soils during construction phases;
- Installation of a minor retention basin(s) to alleviate discharge of increase flows;
- Specifications for construction waste handling and disposal; and,
- Erosion control measures maintained .throughout the construction period.

Mitigation Measure 3.4-3: Prior to the issuance of a grading permit, the project applicants shall file a Notice of Intent (NOI) with the State and comply with the requirements of the NPDES General Construction Permit, including the preparation of a SWPPP and a SUSMP incorporating BMPs for construction and post-construction control of runoff. The SWPPP and SUSMP shall be prepared by a Civil or Environmental Engineer for review and approval by the City of Downey. The plans shall reduce the discharge of pollutants to the maximum extent practical using management practices, control techniques and systems, design and engineering methods, and such other provisions that are appropriate. The plans shall include applicable post-construction measures such as the following:

- Control of impervious area runoff, including installation of detention basins, retention areas, filtering devices, energy dissipaters, pervious drainage systems, porous pavement alternatives;
- Implement regular sweeping of impervious surfaces such as parking lots and entry drives;
- Use of efficient irrigation practices;
- Provision of infiltration trenches and basins;
- Linings for urban runoff conveyance channels;
- Vegetated swales and strips;
- Protection of slopes and channels;
- Landscape design such as xeriscape or other design minimizing use of fertilizers;
- Minimize storm water runoff through site design; and,
- Minimize outdoor storage, including trash container areas.

Mitigation Measure 3.4-4: Prior to the issuance of building permits for the project, the project applicants shall implement conditions of the City of Downey regarding storm drainage improvements that shall include, but not be limited to:

- Construct the necessary storm drainage improvements (including detention basins if needed) to handle increased flows and provide BMPs.

3.5 Land Use and Planning

3.5.1 Introduction

This section provides information on the existing land use characteristics of the project site and adjacent areas. The Land Use section of the Initial Study (Appendix A) determined that the proposed project would result in less than significant land use impacts. The proposed project would not physically divide an established community, nor would it conflict with any applicable habitat conservation plan or natural community conservation plan. This section of the EIR will focus on conformity between the specific plan and development agreements, and the goals and policies of the Mixed Use Land Use category in the General Plan, as well as the project's consistency with other applicable plans and policies.

3.5.2 Existing Conditions

The City of Downey, which is in southeastern Los Angeles County, is an urbanized community located about 12 miles southeast of downtown Los Angeles. The project site is located at 12214 Lakewood Boulevard, in the southeastern portion of the City, and lies approximately 1 ¼ miles west of the San Gabriel River Freeway (I-605), about 2 ½ miles south of the Santa Ana Freeway (I-5), about ¼ mile north of the Glenn Anderson Freeway and Transit Way (I-105), and about 5 miles from the Long Beach Freeway (I-710). The San Gabriel River flows within ¾ mile of the site to the east. As illustrated in Figure **2-1**, 2-2A, and 2-2B, Lakewood Boulevard and Clark Avenue border the project site on the west, Imperial Highway provides the southern border, Stewart & Gray Road lies to the north, and Bellflower Boulevard provides the eastern boundary.

The project site contains temporarily occupied structures and vacant land. Existing, on-site land uses comprise:

- Vacant NASA buildings (though Building 1, 9, 11, 288 and 290 are used occasionally for motion picture production);
- Vacant, undeveloped lots; and
- Vacant parking uses.

The site contains some 124 buildings, structures, and other built features (Earth Tech 1999, 4-1). Building 1 is the most prominent of these, and encompasses about 913,023 sq. ft.. Due to its size and configuration, Building 1 is sometimes used for motion picture production, as are Buildings 9, 11, 14, 39, 288, and 290.

The entire project site is designated in the General Plan Land Use Diagram as Mixed Use, which allows a combination of commercial/manufacturing uses. The zoning designation for the project site is General Manufacturing (M2), with Parking Buffer (P-B) on the perimeter of the site along Clark Avenue, Imperial Highway, and Stewart & Gray Road.

The project site has been in substantially continuous use since construction of the initial facilities in 1929. The use of the site evolved over its lifetime, and included aircraft manufacturing and assembly; testing and operation of the first low-level nuclear reactor in California; invention, testing and patenting of a chemical milling processes; research, production and assembly of early American rockets and missiles; design, production, assembly, and testing of equipment associated with space and moon landing programs; and design, development, manufacturing, assembly and support for the Space Shuttle program. Ownership of the facilities on-site has shifted from Vultee to Consolidated to North American to USAF and to NASA. North American Aviation operated the plant for USAF, while North American Rockwell and later Boeing operated the plant during NASA ownership. In 1998, as a result of restructuring within Boeing North American, the NASA industrial plant was determined to be "excess to the company's needs," and was, therefore, also considered to be excess to the government's needs and available for disposal by Spring 2001 (NASA 2000). Through the General Services Administration (GSA), the City of Downey arranged, and purchased parcels 3, 4, 5 and 6 from NASA. Conveyance of parcels 1 and 2 to the City from the State Lands Commission is anticipated to occur in Spring or Summer 2002. The City entered into a negotiation process with Downey Landing, LLC to develop the site, and the proposed Specific Plan evaluated in this EIR is being prepared to guide development of the site into a mixed-use project, with commercial, technology and business park, hospital, and medical office uses.

3.5.2 Regulatory Framework

City of Downey General Plan Land Use Element

The Land Use Chapter is often perceived as the most representative portion of a General Plan. The Chapter designates the future use or reuse of the land within a given jurisdiction, and contains goals, policies, and programs to guide land use and reuse. The Chapter also contains the Land Use Diagram, a general guide to land use distribution, which is then interpreted through specific plans (such as the proposed project) and the zoning map. Relevant policies of the Land Use Chapter are analyzed below with respect to the project's consistency with them. Generally, relevant programs under particular policies are evaluated, and the project's consistency or inconsistency with the programs equates to consistency or inconsistency with the policy that the program supports.

<u>Policy 1.2.1</u>

The City shall strive to retain the relative balance of land uses.

Program 1.2.1.1

Retain the balance between single family residential, multi-family residential, commercial, industrial, schools and open space.

Consistency with Program 1.2.1.1

The City's Land Use Diagram designates the project site as Mixed Use, which allows combinations of commercial and manufacturing uses. The proposed project consists of a mix of commercial retail, technology and business park, light industrial, hospital and medical office, and ancillary uses. These uses are consistent with the project site's General Plan designation. Land uses within the City were considered to be balanced at the time of the General Plan Land Use Chapter update in 1992 (City 1992, page I-7), and to the extent that the General Plan Land Use Chapter and Land Use Diagram were formulated to retain this balance of land uses, the proposed project's consistency with the site's land use designation constitutes consistency with this policy and this program. The proposed project would, therefore, be consistent with Program 1.2.1.1.

Program 1.2.1.3

Promote land uses within Downey that diversify the tax base.

Consistency

The proposed project includes a mix of uses that were selected to be responsive to specific market demand, including configuration of uses for motion picture and television production—uses not currently found in Downey except on a temporary basis. The proposed project therefore has the potential to introduce a new source of tax revenue for the City, and would, therefore, represent a potential diversification of the City's tax base. The proposed project is consistent with Program 1.2.1.3.

Policy 1.3.1

The City shall encourage quality construction of development as properties recycle.

Program 1.3.1.2

Adopt Floor-area ratios (FAR) to determine building intensity.

The floor area ratio range for mixed use is 0.6 to 4.0.

The General Plan sets quantitative development intensity targets for the NASA site, with the caveat that these figures are conceptual only and actual numbers will be determined by a specific plan (such as the proposed project).

Consistency

Pursuant to the above-listed information, a Specific Plan is being prepared for the proposed project site. Development targets listed above have been taken into consideration during preparation of the Specific Plan. The FAR for the proposed project would be 0.43. The City has determined that this reduced FAR is acceptable for the proposed uses and would not be inconsistent with the General Plan.

Policy 1.3.2

The City shall encourage adaptive re-use of older structures.

Program 1.3.2.1

Encourage preservation and renovation of older structures.

Consistency

The proposed project could result in the demolition of the majority of the existing structures on the project site. The proposed Specific Plan includes a development option that would preserve Buildings 1, 6, 9, 11, 14, 39, 288 and 290. These structures would be re-used for motion picture production, commercial, industrial, or public uses. As discussed in the Initial Study for the project (Appendix A), an MOA among NASA, GSA, SHPO and the City identifies necessary measures to resolve the potential adverse effects of project implementation on historic structures on the project site, and encourages preservation and renovation of older structures. Preservation of the historic portion of Building 1 will occur, irrespective of which option is implemented. The proposed project is, therefore, consistent with Program 1.3.2.1.

Policy 1.3.3

The City shall create areas for mixed land uses.

Program 1.3.3.1

Designate areas for mixed land uses, with residential/commercial or commercial/manufacturing.

Consistency

The proposed project site has been designated for mixed use in the City General Plan. The project proposes a mix of commercial, business park uses, and hospital and medical office on site, consistent with this designation. The Specific Plan would include a retail shopping center within Area I, either a motion picture studio and production space as well as technology and business park uses in Area

II and up to 1,000,000 sq. ft. of hospital and medical office use in the Kaiser portion of the site. The proposed project is, therefore, consistent with Program 1.3.1.1.

Policy 1.6.1

The City shall monitor, review and comment on regional plans, as they refer to the City's General Plan.

Program 1.6.1.2

Examine and promote land uses that encourage telecommuting, thus reducing VMT (Vehicle Miles Traveled) as required by the air quality plan.

Consistency

The proposed project proposes substantial area of business park development, ranging from 600,000 to 1,500,000 sq. ft. of this development. Office development includes the types of businesses that would allow telecommuting, in contrast to pure retail uses that would require personnel on-site. The proposed project is, therefore, consistent with Program 1.6.1.2.

Program 1.6.2.3

Recognize the economic competitiveness between communities and consider land use decisions based on that competitiveness.

Consistency

The project proposes re-use of a 160-acre parcel with commercial, technology and business park, and hospital uses. As discussed above, proposed re-use would attract retail, office, flex-tech, and motion picture studio and production uses. This mix of uses was selected to respond to specific market and business demand, and to attract different types of businesses into the City to diversify the City's tax base. Additionally, the proposed Kaiser project is a replacement for a facility currently located in another city. The proposed project is, therefore, consistent with Program 1.6.2.3.

Allowable Uses – Mixed Use

Commercial/Manufacturing – This category includes commercial and manufacturing uses and is intended to accommodate both, such as a business park. The floor area ratio range is 0.6 to 4.0.

Mixed Use – This category includes residential/commercial uses and commercial/manufacturing uses.

The proposed project includes an FAR of 0.43. This ratio is below the permitted range of 0.6 to 4.0.

Southern California Association of Governments

SCAG's Regional Comprehensive Plan and Guide (RCPG) is a major tool for coordinating regional planning. SCAG's RCPG policies related to land use that are applicable to the proposed project are listed below, and the consistency of the proposed project with these policies is provided. Applicable policies identified by SCAG personnel include the following.

Policy 3.05

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

Consistency

The proposed Specific Plan explores re-use of existing structures, including all or a portion of Buildings 1, 6, 9, 11, 14, 39, 288 and 290. Potential reuse of all or a portion of these structures would result in re-use of potentially over 1 million sq. ft. of existing development. An electrical substation is currently located on site. The substation in combination with the electrical system infrastructure could be reused by the proposed project. Much of the remaining infrastructure, however, including water, sewer, and other utility lines may be obsolete and could require replacement. Nonetheless, the proposed project is, therefore, consistent with Policy 3.0.5.

Policy 3.09

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

Consistency

The proposed project would reuse existing infrastructure where feasible and reduce associated costs. An electrical substation is currently located on site. The substation in combination with the electrical system infrastructure would be reused by the proposed project. Much of the remaining infrastructure, including water, sewer, and other utility lines may be obsolete and could require replacement. The proposed project is, therefore, consistent with Policy 3.0.9.

Policy 3.10

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

Consistency

The lead agency has committed to processing of permits for the proposed project along the most rapid schedule practicable. The proposed project is, therefore, consistent with Policy 3.0.10.

Policy 3.12

Encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike. In addition, Kaiser's Kaiserider program will assist in reducing the number of auto trips and vehicle miles traveled.

Consistency

The proposed project is located in proximity to major transit routes. The site is bounded on the west by Lakewood Boulevard (State Route 19) and Imperial Highway to the south. It is 1¼ miles west of I-605, 2½ miles south of I-5 and ¼ mile north of the Glenn Anderson Freeway and Green Line transitway. Proximity to these major transit routes encourages use of transit. The proposed project is, therefore, consistent with Policy 3.12.

Policy 3.13

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

Policy 3.14

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

Policy 3.16

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

Consistency

The project proposes redevelopment of a 160-acre parcel formerly used for a combination of manufacturing, research, and aerospace activities and located along a major transit route. The majority of the project site is currently vacant and subject to temporary use. The proposed in-fill and redevelopment project would develop the site with up to 3.7 million sq. ft. of new commercial, retail, industrial, technology/business park, parking structure, and hospital and medical office uses and

would increase the existing density of development. The site is located within the City of Downey, a largely developed area. As discussed immediately above, the site is located in proximity and is accessible to major transit routes. The proposed project is, therefore, consistent with Policies 3.13, 3.14, and 3.16.

Policy 3.18

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

Consistency

The project site's zoning allows general manufacturing; has a history of intensive manufacturing, research, and aerospace activities; and has been altered from its original condition through grading, paving, and development. In addition, the site is along major transit routes in the area. The proposed project considers re-use of eight existing buildings on the site. Therefore, the proposed project is situated in a location least likely to cause environmental impacts. The proposed project is, therefore, consistent with Policy 3.18.

3.5.3 Thresholds of Significance

The proposed project would have a significant impact on land use if it would:

- Cause a change in land use that would result in a conflict with adopted City plans and policies that could create a significant environmental effect.

3.5.4 Impacts

Less Than Significant Impacts

As discussed in section 3.5.3, the proposed project would be consistent with the City's General Plan Land Use Chapter and with SCAG's Regional Comprehensive Plan and Guide. Therefore, impacts would be less than significant.

Potentially Significant Impacts

Implementation of the proposed project would not result in any potentially significant land use impacts.

Significant Unavoidable Impacts

Implementation of the proposed project would not result in any significant unavoidable land use impacts.

3.5.6 Cumulative Impacts

The proposed project would not result in any inconsistencies with adopted plans and policies. Therefore, it would have a less than significant contribution to cumulative land use impacts.

3.5.7 Mitigation

Because impacts would be less than significant, no mitigation measures would be required.

3.6 Noise

3.6.1 Introduction

This section focuses on the effects of noise that would be generated by the proposed project on nearby noise sensitive land uses. Section 3.3.2 (Existing Conditions) provides a description of general noise principles. The discussion of noise sources, sensitive receptors, and noise levels associated with the project and adjacent land uses are also provided in Section 3.3.2. Section 3.3.3 describes the regulatory framework for environmental noise, and Sections 3.3.4 through 3.3.7 evaluate the project-related noise impacts from construction and operation. The noise measurements collected on-site, and in the vicinity of the project site, are included as Appendix D of this Draft EIR.

3.6.2 Existing Conditions

Fundamentals of Noise

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale – dBA - provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise, on the other hand, is typically defined as unwanted sound. A typical noise environment consists of a base of steady "background" noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway. Table 3.6-1 lists noise levels for common events in the environment and industry.

TABLE 3.6-1
TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY

Noise Source (Distance)	Average Sound Level in dBA	Subjective Impression
Civil Defense Siren (100')	130	Pain Threshold
Jet Takeoff (200')	120	
Rock Music Concert (50')	110	
Pile Driver (50')	100	Very Loud
Ambulance Siren (100')	90	
Pneumatic Drill (50')	80	
Freeway (100')	70	Moderately Loud
Vacuum Cleaner (10')	60	
Light Traffic (100')	50	
Large Transformer (200')	40	Quiet
Soft Whisper (5')	30-0	Threshold of Hearing

Source: Arnold Peterson and Ervin Gross, 1963

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq}, the equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

- CNEL, the Community Noise Equivalent Level, is a 24-hour average L_{eq} with a 10 dBA "penalty" added to noise during the hours of 10:00 p.m. to 7:00 a.m., and an additional 5 dBA penalty during the hours of 7:00 p.m. to 10:00 p.m. to account for noise sensitivity in the evening and nighttime.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day, night, or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. Noise levels greater than 85 dBA can cause temporary or permanent hearing loss. Examples of low daytime levels are isolated natural settings can provide noise levels as low as 20 dBA, and quiet suburban residential streets can provide noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate level noise environments are urban residential or semi-commercial areas - typically 55-60 dBA - and commercial locations - typically 60 dBA. People may consider louder environments adverse, but most will accept the higher levels associated with more noisy urban residential or residential-commercial areas -60-75 dBA - or dense

urban or industrial areas - 65-80 dBA. Generally, a difference of 3 dBA over 24-hours is a barely-perceptible increase to most people. A 5 dBA increase is readily noticeable, while a difference of 10 dBA would be perceived as a doubling of loudness.

Noise levels from a particular source generally decline as distance to the receptor increases. Other factors such as the weather and reflecting or shielding also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA. Noise from stationary or point sources is reduced by about 6 dBA for every doubling of distance. Noise levels may also be reduced by intervening structures—generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10dBA. The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 dBA with closed windows. The exterior-to-interior reduction of newer homes is generally 30 dBA or more.

Existing Noise Conditions

Noise Sources

The Noise Chapter of the Downey General Plan reports that noise in Downey is primarily caused by automobile and truck traffic. Trains, airplanes and helicopters are also a source of noise in Downey. Commercial and industrial operations also generate noise from stationary or point sources.

Sensitive Receptors

Certain types of land uses are considered to be more sensitive than others to higher noise levels. In Downey, examples of sensitive receptors include residences of all types, hospitals, rest homes, convalescent hospitals, places of worship, libraries, and schools. Sensitive receptors in the vicinity of the project site include single and multi-family residential uses, schools, and senior care facilities.

Existing Noise Levels

On-Site Noise Levels

The project site contains some 124 buildings, structures, and other built features. The largest of these buildings along with three smaller buildings are sometimes used for motion picture production. Noise levels are generated on a daily basis by landscape maintenance equipment and human activity within the site. Additional noise is generated by motor picture production activities. Depending on the production, sources of noise could include peoples voices, loudspeakers, mechanical equipment, and even staged explosions. However, the primary source of noise at the project site is vehicular traffic on the adjacent roadways. The average daily noise levels associated with these roadways are presented in Table 3.6-2.

TABLE 3.6-2 EXISTING ON-SITE NOISE LEVELS				
		Distance to Noise Contour		
Segment/Description	**CNEL at 100 Feet**	**70 CNEL**	**65 CNEL**	**60 CNEL**
Lakewood Blvd., between Stewart & Gray and Alameda	66.1	40	128	404
Lakewood Blvd. between Alameda and Clark	66.4	43	137	433
Imperial Hwy., between Clark and Bellflower	66.8	48	151	476
Bellflower Blvd. between Stewart & Gray and Washburn	64.5	29	90	285
Bellflower Blvd. between Washburn and Imperial	64.5	29	90	285
Stewart & Gray Rd., between Lakewood and Bellflower	64.1	26	81.	258
Clark Ave., between Lakewood and Imperial	58.7	--	--	74

Note: Distances are in feet from roadway centerline, using Caltrans Traffic Noise Analysis Protocol, October 1998.
-- Noise contour is located within the roadway lanes.
Source: EIP Associates, 2001.

Off-Site Noise Levels

Noise levels associated with vehicular traffic were calculated for the roadway links in the project vicinity that have noise sensitive uses facing the roadways. The average daily noise levels along these roadway segments are presented in Table 3.6-3.

TABLE 3.6-3 EXISTING OFF-SITE NOISE LEVELS		
Segment/Description	**Noise Sensitive Uses**	**CNEL at 100 Feet**
Lakewood Blvd., between Firestone and Bellflower	Residential	66.9
Lakewood Blvd., between Bellflower and Stewart & Gray	Residential	65.5
Lakewood Blvd., between Stewart & Gray and Alameda	Residential & Senior Care	66.1
Lakewood Blvd., between Alameda and Clark	Residential	66.4
Lakewood Blvd., between Clark and Imperial	Residential and School	66.6
Bellflower Blvd., between Lakewood and Stewart & Gray	Residential	62.3
Bellflower Blvd. between Stewart & Gray and Washburn	Residential	64.5
Stewart & Gray Rd., west of Lakewood	Residential	63.5
Stewart & Gray Rd., between Lakewood and Bellflower	Residential	64.1
Stewart & Gray Rd., east of Bellflower	Residential	63.8
Imperial Hwy., between Bellflower and Woodruff	Residential	66.7
Clark Ave., between Bellflower and Imperial	Residential	58.7

Note: Distances are in feet from roadway centerline, using Caltrans Traffic Noise Analysis Protocol, October 1998.
Source: EIP Associates, 2001.

3.6.3 Regulatory Framework

The Noise Control Act of 1972 assigns the U.S. EPA the responsibility of developing regulations to adequately control environmental noise such that it does not endanger the population's health and welfare. The EPA established the Office of Noise Abatement and Control, but in 1981, funding for the office was removed. Similarly, the California Department of Health Services' once operated an Office of Noise Control that has since been disbanded. As such, environmental noise protection is usually a local government responsibility.

State of California

California encourages each local government entity to perform noise studies and implement a noise element as part of their general plan. The Office of Noise Control at the California Department of Health Services published guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The Department of Health guidelines indicate that residential land uses and other noise sensitive receptors generally should locate in areas where exterior ambient noise levels do not exceed approximately 70 dBA CNEL. Exterior noise levels of 60 CNEL and lower are considered to be "normally acceptable" for single family, duplex, and mobile homes involving traditional construction without any special noise insulation requirements. Exterior noise levels up to 70 dBA CNEL are considered to be "conditionally acceptable" for residential use where the proposed uses may be conditioned to include noise insulation features. Application of this guideline to development projects is not mandated by the Department of Health, but the Department recommends consideration of the guidelines in jurisdictions' general plans.

Title 24 of the California Code of Regulations (California Noise Insulation Standards, California State Building Code [Part 2, Title 24, CCR]) establishes standards governing interior noise levels that apply to all new (post-1974) multifamily residential units (hotels, motels, apartments, condominiums, and other attached dwellings) in California. These standards require that acoustical studies be performed prior to construction at residential building locations where the existing exterior noise levels exceed 60 dBA CNEL. Such acoustical studies are required to establish a design that will limit maximum noise levels to 45 dBA CNEL in any habitable room.

City of Downey Noise Chapter of the General Plan

The Noise Chapter of the Downey General Plan is a program for establishing and maintaining various land uses in relationship to the levels of noise found in the City. The Chapter identifies goals, policies, and programs to address noise issues. The following policies and programs in the Noise Chapter are applicable to the proposed project.

<u>Policy 6.1.1</u>

The City shall require noise reduction measures in all new construction where necessary.

<u>Program 6.1.1.2</u>

Require the preparation and submittal of acoustical reports by a recognized acoustical engineer for noise sensitive land use developments that will be located in areas with an exterior noise level greater than 60 dBA CNEL. These reports shall identify appropriate noise mitigation measures to address the noise impacts.

Consistency

Of all the proposed uses at the project site, only the Kaiser hospital is considered a noise sensitive land use. This EIR section assesses noise impacts on this hospital facility and existing noise sensitive uses in the vicinity of the project site. It also identifies measures to mitigate noise impacts. The proposed project would, therefore, be consistent with Program 6.1.1.2 of the Noise Chapter.

Land use compatibility guidelines of the Noise Chapter are similar to the California Department of Health guidelines. According to the Noise Chapter, noise sensitive uses are "normally acceptable" in a noise environment under 60 dBA CNEL. Over 60 dBA CNEL, noise sensitive uses would be acceptable with appropriate mitigation or insulation features. Office and commercial uses would be "normally acceptable" in a noise environment up to 70 dBA CNEL, and office and commercial uses with modern architectural features (such as closed windows and a mechanical system for full-time ventilation), such as the proposed uses, would be acceptable in a noise environment up to 77.5 dBA CNEL. Industrial uses would be "normally acceptable" in a noise environment up to 75 dBA CNEL, or 80 dBA CNEL with appropriate insulation features.

City of Downey Noise Ordinance

The City has adopted noise standards as part of the Downey Municipal Code (Chapter 6, Unnecessary Noise). Construction noise is limited by the ordinance to between the hours of 7:00 A.M. to 10:00 P.M. Standards of the ordinance also include nuisance criteria and maximum permissible noise levels for noise sources not operating in a public right-of-way. These noise standards, shown in Table 3.6-4, apply to all sources of noise other than roadway traffic noise.

TABLE 3.6-4
DOWNEY MUNICIPAL CODE MAXIMUM PERMISSIBLE NOISE LEVELS

Land Use	7:00 A.M. to 10:00 P.M.	10:00 P.M. to 7:00 A.M.
Residential	55 dBA L_{eq}	45 dBA L_{eq}
Commercial	55 dBA L_{eq}	55 dBA L_{eq}
Manufacturing	55 dBA L_{eq}	55 dBA L_{eq}

Source: Noise Chapter of the Downey General Plan, p. VI-15.

3.6.4 Thresholds Of Significance

Based on the Noise Element of the General Plan and the City's Noise Ordinance, noise impacts are considered significant if one or more of the following conditions would result from implementation of the proposed project:

- Generate noise levels that would conflict with the Noise Chapter of the Downey General Plan or violate the Noise Ordinance standards;

- Cause an increase of 3 dBA or more at noise sensitive locations where the resulting exterior level would exceed 60 dBA CNEL. This 3 dBA increase would represent a perceptible increase to an environment with conditions that are already louder than normally acceptable.

- Cause an increase of 5 dBA or more at noise sensitive locations where the resulting level would be less than 60 dBA CNEL. This 5 dBA increase would represent a readily perceptible increase in the existing noise environment.

Any increase in noise that is less than 3 dBA would not represent a perceptible increase and would not be significant.

3.6.5 Impacts

The proposed project would result in the generation of short-term construction-related noise during the project build-out phases. During project occupation and operation, increased traffic and other activity associated with the new uses would cause increased noise. The compatibility of the proposed uses with the existing noise environment is also addressed.

Less Than Significant Impacts

Land Use Compatibility of New Uses

Future noise levels at the project site would continue to be dominated by vehicular traffic on the adjacent roadways. The future average daily noise levels associated with these roadways are presented in Table 3.6-5. Based on the identified noise contour distances, the Kaiser hospital building would be exposed to exterior noise levels that exceed 60 dBA CNEL. However, the exterior-to-interior reduction of new hospitals with closed windows and mechanical systems for full-time ventilation is generally 30 dBA or more. Therefore, the interior noise levels would be below 45 dBA CNEL, which is the City's standard for noise sensitive uses. None of the other proposed uses would be exposed to noise levels that exceed 75 dBA CNEL. Because the proposed uses would include standard architectural features (such as closed windows and a mechanical system for full-time ventilation) that would provide noise insulation for occupants of the uses, the proposed uses would be acceptable in the future noise environment. This impact would be less than significant.

TABLE 3.6-5 FUTURE (2006) ON-SITE NOISE LEVELS				
		Distance to Noise Contour		
Segment/Description	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL
Lakewood Blvd., between Stewart & Gray and Alameda	67.3	54	171	540
Lakewood Blvd. between Alameda and Clark	67.6	57	182	574
Imperial Hwy., between Clark and Ardis	68.0	63	199	631
Imperial Hwy., between Ardis and Bellflower	67.6	58	184	581
Bellflower Blvd. between Stewart & Gray and Washburn	66.9	49	156	492
Bellflower Blvd. between Washburn and Imperial	66.9	49	154	487
Stewart & Gray Rd., between Lakewood and Bellflower	65.3	34	106	337
Clark Ave., between Lakewood and Imperial	60.2	--	33	104

Note: Distances are in feet from roadway centerline, using Caltrans Traffic Noise Analysis Protocol, October 1998.
-- Noise contour is located within the roadway lanes.
Source: EIP Associates, 2001.

Noise Increases at Off-Site Locations

Noise sensitive locations in the project vicinity would experience increased noise caused by project traffic and other activities associated with occupation and operation of the development. The increases in noise levels along the study-area roadway segments are identified in Table 3.6-6 for the Downey Landing, LLC project, Table 3.6-7 for the Kaiser project, and Table 3.6-8 for the combined projects. Based on this information, the proposed Downey Landing, LLC project would increase local noise levels by 0.2 to 0.9 dBA CNEL. This would be a less than significant impact. The Kaiser project would increase local noise levels by 0.1 to 1.2 dBA CNEL, which would be less than significant. The combined projects would increase local noise levels by 0.3 to 1.9 dBA CNEL. As with the individual projects, these increases would be less than significant. Noise level calculations are based on a previous site plan. Although noise level increases may be slightly different for the revised site plan, impacts would not change.

TABLE 3.6-6
FUTURE (2006) OFF-SITE NOISE LEVELS WITH DOWNEY LANDING, LLC PROJECT

		Noise Levels in dBA CNEL		
Segment/Description	**Noise Sensitive Uses**	**Future w/o Downey Landing, LLC Project**	**Future with Downey Landing, LLC Project**	**Increase in Noise**
Lakewood Blvd., between Firestone and Bellflower	Residential	67.3	67.6	0.3
Lakewood Blvd., between Bellflower and Stewart & Gray	Residential	65.9	66.1	0.2
Lakewood Blvd., between Stewart & Gray and Alameda	Residential and Senior Facilities	66.5	67.3	0.8
Lakewood Blvd., between Alameda and Clark	Residential	66.8	67.5	0.7
Lakewood Blvd., between Clark and Imperial	Residential and School	67.1	67.7	0.6
Bellflower Blvd., between Lakewood and Stewart & Gray	Residential	62.7	63.0	0.3
Bellflower Blvd. between Stewart & Gray and Washburn	Residential	65.0	65.9	0.9
Stewart & Gray Rd., west of Lakewood	Residential	63.9	64.3	0.4
Stewart & Gray Rd., between Lakewood and Bellflower	Residential	64.5	64.8	0.3
Stewart & Gray Rd., east of Bellflower	Residential	64.2	64.8	0.6
Imperial Hwy., between Bellflower and Woodruff	Residential	67.1	67.4	0.3
Clark Ave., between Lakewood and Imperial	Residential	59.1	59.9	0.8

Note: Distances are in feet from roadway centerline, using Caltrans Traffic Noise Analysis Protocol, October 1998.
Source: EIP Associates, 2001.

TABLE 3.6-7
FUTURE (2006) OFF-SITE NOISE LEVELS WITH KAISER PROJECT

		Noise Levels in dBA CNEL		
Segment/Description	**Noise Sensitive Uses**	**Future w/o Kaiser Project**	**Future with Kaiser Project**	**Increase in Noise**
Lakewood Blvd., between Firestone and Bellflower	Residential	67.3	67.5	0.2
Lakewood Blvd., between Bellflower and Stewart & Gray	Residential	65.9	66.0	0.1
Lakewood Blvd., between Stewart & Gray and Alameda	Residential and Senior Facilities	66.5	66.5	0.0
Lakewood Blvd., between Alameda and Clark	Residential	66.8	66.9	0.1
Lakewood Blvd., between Clark and Imperial	Residential and School	67.1	67.1	0.0
Bellflower Blvd., between Lakewood and Stewart & Gray	Residential	62.7	63.4	0.7
Bellflower Blvd. between Stewart & Gray and Washburn	Residential	65.0	66.2	1.2
Stewart & Gray Rd., west of Lakewood	Residential	63.9	64.3	0.4
Stewart & Gray Rd., between Lakewood and Bellflower	Residential	64.5	65.0	0.5
Stewart & Gray Rd., east of Bellflower	Residential	64.2	64.8	0.6
Imperial Hwy., between Bellflower and Woodruff	Residential	67.1	67.4	0.3
Clark Ave., between Lakewood and Imperial	Residential	59.1	59.4	0.3

Note: Distances are in feet from roadway centerline, using Caltrans Traffic Noise Analysis Protocol, October 1998.
Source: EIP Associates, 2001.

TABLE 3.6-8 FUTURE (2006) OFF-SITE NOISE LEVELS WITH COMBINED PROJECTS				
		Noise Levels in dBA CNEL		
Segment/Description	Noise Sensitive Uses	Future w/o Projects	Future with Projects	Increase in Noise
Lakewood Blvd., between Firestone and Bellflower	Residential	67.3	67.8	0.5
Lakewood Blvd., between Bellflower and Stewart & Gray	Residential	65.9	66.2	0.3
Lakewood Blvd., between Stewart & Gray and Alameda	Residential and Senior Facilities	66.5	67.3	0.8
Lakewood Blvd., between Alameda and Clark	Residential	66.8	67.6	0.8
Lakewood Blvd., between Clark and Imperial	Residential and School	67.1	67.7	0.6
Bellflower Blvd., between Lakewood and Stewart & Gray	Residential	62.7	63.7	1.0
Bellflower Blvd. between Stewart & Gray and Washburn	Residential	65.0	66.9	1.9
Stewart & Gray Rd., west of Lakewood	Residential	63.9	64.7	0.8
Stewart & Gray Rd., between Lakewood and Bellflower	Residential	64.5	65.3	0.8
Stewart & Gray Rd., east of Bellflower	Residential	64.2	65.3	1.1
Imperial Hwy., between Bellflower and Woodruff	Residential	67.1	67.7	0.6
Clark Ave., between Lakewood and Imperial	Residential	59.1	60.2	1.1

Note: Distances are in feet from roadway centerline, using Caltrans Traffic Noise Analysis Protocol, October 1998.
Source: EIP Associates, 2001.

Potentially Significant Impacts

Construction Noise Levels

Project development would occur over a five-year period and would primarily include demolition of existing structures, site preparation (grading and excavation), and construction of internal roadways, driveways, and structures, as well as utility infrastructure installation. These activities typically involve the use of heavy equipment, such as scrapers, tractors, loaders, concrete mixers, cranes, etc. Trucks would be used to deliver equipment and building materials and to haul away waste materials. Smaller equipment, such as jack hammers, pneumatic tools, saws, and hammers would also be used throughout the site during the construction phases. This equipment would generate both steady state and episodic noise that would be heard both on and off the project site.

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment and typical construction activities. These data are presented in Figure 3.6-9 Typical Outdoor Construction Noise Levels. Noise levels generated by heavy equipment can range from approximately 68 dBA to noise levels in excess of 100 dBA when measured at 50 feet. However, these noise levels would diminish rapidly

with distance from the construction site at a rate of approximately 6.0 dBA per doubling of distance. For example, a noise level of 68 dBA measured at 50 feet from the noise source to the receptor would reduce to 62 dBA at 100 feet from the source to the receptor, and further reduce by another 6.0 dBA to 56 dBA at 200 feet from the source to the receptor.

TABLE 3.6-9
TYPICAL OUTDOOR CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Levels at 50 feet (dBA L_{eq})	Noise Levels at 50 feet with Mufflers (dBA L_{eq})
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.

Noise levels generated during the construction phases would primarily affect the occupants of on-site uses constructed in the earlier development phases (including existing uses). Any locations within the residential areas (primarily to the north, east, and west) that would have an uninterrupted line of site to the construction noise sources could be exposed to construction noise levels that could on some days exceed the land use compatibility guidelines for noise incorporated in the City's General Plan. Noise level calculations are based on a previous site plan. Although noise level increases may be slightly different for the revised site plan, impacts would not change.

Because the construction activities could cause the land use compatibility guidelines to be exceeded intermittently during the anticipated five years of development at existing off-site and future on-site uses, construction noise impacts are considered potentially significant without mitigation. In order to reduce the potential impacts associated with construction activities, the Noise Ordinance restricts construction work to between the hours of 7:00 A.M. and 10:00 P.M. each day. Implementation of **Mitigation Measure 3.6-1** would be necessary to reduce project construction noise to less than significant levels.

Studio Noise Sources

As discussed previously, a portion of the project site is sometimes used for motion picture production. Depending on the production, sources of noise could include peoples voices, loudspeakers, mechanical equipment, and even staged explosions. Given the variable nature of these types of noise, it is not possible to predict noise levels at locations around the site. It is possible that they could exceed the City's adopted Municipal Code noise standards at the Kaiser hospital and nearby residential properties. The Downey Landing Specific Plan allows City staff to waive these standards for individual productions, subject to their approval, when plans are submitted that identify the sources of noise, hours of noise generation, and a program to notify the hospital and

nearby residential units of the types of noise and hours of noise generation. This review and approval procedure would reduce the potential impacts of movie production noise to less than significant levels.

Significant, Unavoidable Impacts

None.

3.2.6 Cumulative Impacts

Construction noise would create an intermittent impact on the noise environment that would be short-term occurring only through the duration of the construction phases. Because the duration of the construction noise impact would be limited to the duration of the construction phases, no cumulative impacts would occur.

Cumulative noise level impacts would primarily occur as a result of increased traffic on the study-area roadway segments. Table 3.6-10 identifies the increases in noise levels that would occur from existing levels to the future conditions with the project. As shown, future traffic volumes would not substantially increase noise levels in the project vicinity. Cumulative noise levels caused by the project would not cause a significant impact.

TABLE 3.6-10 FUTURE (2006) OFF-SITE NOISE LEVELS WITH CUMULATIVE PROJECTS				
		Noise Levels in dBA CNEL		
Segment/Description	Noise Sensitive Uses	Existing Nose Levels	Future with Projects	Increase in Noise
Lakewood Blvd., between Firestone and Bellflower	Residential	66.9	67.8	0.9
Lakewood Blvd., between Bellflower and Stewart & Gray	Residential	65.5	66.2	0.7
Lakewood Blvd., between Stewart & Gray and Alameda	Residential and Senior Facilities	66.1	67.3	1.2
Lakewood Blvd., between Alameda and Clark	Residential	66.4	67.6	1.2
Lakewood Blvd., between Clark and Imperial	Residential and School	66.6	67.7	1.1
Bellflower Blvd., between Lakewood and Stewart & Gray	Residential	62.3	63.7	1.4
Bellflower Blvd. between Stewart & Gray and Washburn	Residential	64.5	66.9	2.4
Stewart & Gray Rd., west of Lakewood	Residential	63.5	64.7	1.2
Stewart & Gray Rd., between Lakewood and Bellflower	Residential	64.1	65.3	1.2
Stewart & Gray Rd., east of Bellflower	Residential	63.8	65.3	1.5
Imperial Hwy., between Bellflower and Woodruff	Residential	66.7	67.7	1.0
Clark Ave., between Lakewood and Imperial	Residential	58.7	60.2	1.5

Note: Distances are in feet from roadway centerline, using Caltrans Traffic Noise Analysis Protocol, October 1998.
Source: EIP Associates, 2001.

3.6.7 Mitigation

Mitigation Measure 3.6-1: The project developer shall incorporate the following best management practices for noise control of demolition and construction activities into the construction documents to be implemented by all project contractors:

- Maximize the physical separation between noise generators and noise receptors. Such separation includes, but is not limited to, the following measures: provide enclosures for stationary equipment and barriers around particularly noisy areas on the site or around the entire site; use shields, impervious fences, or other physical sound barriers, to inhibit the transmission of noise to sensitive receptors; and position stationary equipment to minimize noise impacts on the community;

- Require that all construction equipment engines be properly tuned and muffled according to manufacturers' specifications;

- Select haul routes for the removal of excavation materials and transport of building materials in conjunction with the City of Downey such that noise-sensitive (e.g., residential) areas are avoided as much as possible; and

- Neighbors within 500 feet of construction areas shall be notified of the construction schedule in writing, prior to construction. The project sponsor shall designate a "disturbance coordinator" who shall be responsible for responding to any local complaints regarding construction noise. The coordinator (who may be an employee of the developer or general contractor) shall determine the cause of the complaint and shall require that reasonable measures warranted to correct the problem be implemented. A telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site fence and on the notification sent to neighbors adjacent to the site.

- Construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m. with no construction allowed on Sunday.

3.7 Population and Housing

3.7.1 Introduction

This section provides baseline data on the existing population and housing characteristics of the City, including an overview of Downey population and housing growth trends. The Population and Housing section of the Initial Study (Appendix A) determined that the proposed project would result in less than significant population and housing impacts, with the exception of the potential for the creation of an unmet demand for housing within the City. Consequently, the impact analysis provided in this Draft EIR examines only that possible effect.

The data used in this section was obtained from various sources, including the United States Bureau of the Census (Census), the Southern California Association of Governments (SCAG), and the City of Downey General Plan Housing Chapter. Note that the City is currently updating the General Plan Housing Element.

3.7.2 Existing Conditions

Population Growth Trends

As illustrated in Table 3.7-1, the City's population increased during the last 30 years by about 21.3%. Although the population of Downey declined from 1970 to 1980, this decline was uncharacteristic, according to the City's General Plan Housing Chapter, and can be attributed to out-migration (adult children moving to search for employment and affordable housing) and the removal of over 340 homes and apartments for construction of the Century Freeway (I-105). After the 1970s, growth once again commenced at average rates ranging from one half of one percent per year to about two percent per year.

As also shown, from 1990 to 2000, Downey's estimated population increased by nine percent, from 91,444 to 99,900, according to SCAG's projections. However, using population figures from Census 2000, the actual population increase was 17.4%.

TABLE 3.7-1
POPULATION GROWTH AND PROJECTED GROWTH
CITY OF DOWNEY (1980-2020)

Year	Population	Period Increase (%)	Avg. Annual Growth (persons per year)	Avg. Annual Growth Rate (%)
1970[1]	88,445	N/A	N/A	N/A
1980[1]	82,581	-6.6	-1,173	-1.3
1990[1]	91,444	10.7	1,773	2.2
2000 (actual)[1]	107,323	17.4	2,024	2.1
2000 (projected)[2]	(99,900)	9.2	1,691	1.8
2005 (projected)[2]	(102,900)	3.0	600	0.6
2010 (projected)[2]	(105,900)	2.9	600	0.6
2015 (projected)[2]	(108,800)	2.7	580	0.6
2020 (projected)[2]	(113,200)	4.0	880	0.8

Sources: 1. US Census Bureau
2. Southern California Association of Governments

Table 3.7-2 below provides a comparison between Downey's projected growth within the Gateway Cities Subregion from 2000 to 2020. As shown in the table, the five-year increases in Downey are very similar to those of the Gateway Cities as a group. Additionally, average annual growth rates are projected to be similar, as well, with a maximum variation of less than one quarter of one percent between the five-year periods. However, note that the actual 2000 population, as computed by the Census Bureau, already exceeds SCAG's projected population for the year 2010. While growth could continue in the City at rates similar to those projected by SCAG, the raw projections for the City cannot directly be used.

TABLE 3.7-2
COMPARISON OF PROJECTED POPULATION GROWTH
DOWNEY AND GATEWAY CITIES SUBREGION (2000-2020)

	Period Increase (%)		Average Annual Growth Rate (%)	
Year	Downey	GC Subregion	Downey	CG Subregion
2000 (projected)	2.78	N/A	0.56	N/A
2005 (projected)	3.00	3.01	0.60	0.61
2010 (projected)	2.92	2.20	0.58	0.44
2015 (projected)	2.74	3.58	0.55	0.72
2020 (projected)	4.04	4.09	0.81	0.82

Source: Southern California Association of Governments

Household Size

A household is defined by the U.S. Census as a group of people who occupy a housing unit. A household differs from a dwelling unit in that the number of dwelling units includes vacant units. It is important to note that not all of the population lives in households; a portion live in group quarters, such as board and care facilities, while others are homeless.

Small households (1-2 persons per household) traditionally reside in units with 0-2 bedrooms, while family households (3-4 persons per household) normally reside in units with 3-4 bedrooms. Large households (5 or more persons per household) reside in units with 4 or more bedrooms. However, the number of units in relation to the household size may also reflect preference and economics. Thus, many small households prefer, and obtain, larger units. Conversely, some large families live in small units for purely economic reasons.

As seen in Table 3.7-3, the City had 34,302 households, with a household population of 89,485 in 1990. By 2000, the number of households had only grown to 34,612, an increase of 0.9%. During the same period, the household population grew to 105,364, representing an increase of about 18%.

Average household size fluctuates due to many factors. From 1990 to 2000, the average household size increased from 2.71 persons per household (pph) to 3.01 pph. Although Downey's average household size has increased, it is in proportion with the average household size for Los Angeles County as a whole (2.907 pph), and is less than the incorporated areas of the County (3.347 pph).

TABLE 3.7-3
HOUSEHOLD SIZE (1990 AND 2000)

Year	Total City Household Population[1]	% Change in City Household Pop. Per Year (avg.)	Total Number of Households[2]	% Change in Total Number of Households	Household Size (pph)[3]
1990	89,485	-	34,302	-	2.71
2000[4]	105,364	1.8%	34,612	0.9%	3.01

[1] Household Population = Total Population – Population living in Group Quarters or Homeless
[2] Number of Households = Number of Occupied Housing Units
[3] Household Size = Household Population / Number of Households
[4] Household population estimated, based on U.S. Census 2000 data, and same group quarter population as 1990.

Source: US Census Bureau

Housing Growth Trends

A city's housing market is driven by supply and demand. Many factors influence this market, including population growth, income, housing cost, and housing locations. However, age distribution is a key market characteristic because housing demand within the market is influenced by the housing preference of certain age groups. Due to limited income, the majority of the young

adult population (20-34 years old) tends to occupy apartments, low to moderate cost condominiums, and smaller single family units. The 35-65 year-old group provides the market for moderate to high cost apartments and condominiums and larger single family units because, on average, people of this age group have higher incomes and larger household sizes. For the elderly population (65 years of age and up), housing demands are similar to young adults, but also include group quarters and mobile homes as housing options.

Vacancy Rate

The vacancy rates and affordability of the housing stock are also key elements in the balance between supply and demand in the City's housing market. High vacancy rates usually indicate low demand and/or high prices in the housing market. Conversely, low vacancy rates usually indicate high demand and/or low prices in the housing market. However, vacancy rates are not the sole indicator of market conditions. They must be viewed in the context of all the characteristics of the local and regional market and economy.

Vacancy rates which indicate a "market balance" (a condition where rates indicate a reasonable level of vacancy) generally range from 1% to 3% for single family units, and from 3% to 5% for multi-family units. In 1990 and 2000, the City's vacancy rates were high for single-family units and moderate for multiple-family units at 3.76%. Note, however, that the City's current General Plan Housing Chapter (page III-59) indicates a desire, pursuant to the Regional Housing Needs Assessment (RHNA) for the City, to increase the vacancy rate from its level at that time of 1.8% to 3.2%. The RHNA model predicted that 507 new housing units would be necessary to achieve this vacancy rate; however, the Draft 2000-2005 Housing Element Update for the City includes a revised RHNA allocation of 482. While the City has only constructed about 457 units, the City has exceeded its target vacancy rate. Further, the Draft 2000-2005 Housing Element Update (page 4-4) shows that with the 638 potential housing units (for this 5-year planning horizon), the City has no remaining RHNA need.

Total vacancy rates include vacant units that are not available for rent or sale. This includes units that are rented for occasional purposes; units that have been rented or sold, but have not yet been occupied as of the date of the census; and units being held for repairs/modernization or for personal reasons of the owner (e.g., probate). Ultimately, these units should not be included in the vacancy rate because they are not on the market, and are not available for rental or purchase. In addition, the vacant rental units should include both assisted and unassisted living units, as well as units available only to senior citizens.

Table 3.7-4 shows the tenure of owner-occupied housing units versus renter-occupied housing units for the City. As shown by 1990 census data, about 48% of the housing stock was renter-occupied, while about 52% of the Downey housing stock was owner-occupied. A more recent figure is not

available at this time: the Draft Housing Element Update has incorporated these figures. However, due to the slight increase in single family home construction over the past ten years in Downey, it is assumed that the percentages have increased slightly.

TABLE 3.7-4
TENURE – RENTER VERSUS OWNER (1990)

	Renter Occupied	Owner Occupied
Total Housing Units	15,689	17,324

Source: 1990 U.S. Census, City of Downey 2001

State law requires jurisdictions to provide for their share of regional housing needs. Normally, as part of the RHNA, SCAG estimates five-year housing needs for cities within its region. The most recent data must take certain planning considerations into account, according to Section 65584 of the Government Code, and are based on population growth forecasts from the 1998-2005 Regional Transportation Plan for the 1998-2005 period. Table 3.7-5 shows the information for this period.

TABLE 3.7-5
RHNA 5-YEAR HOUSING UNIT GROWTH NEEDS FOR THE CITY OF DOWNEY (2001)

Income	Initial Allocation	Final Allocation	Percent of RHNA
Household Growth	373 Units	373 Units	53%
Vacancy Need	33 Units	33 Units	-5%
Replacement Need	300 Units	76 Units	+42%
Total	***706 Units***	***482 Units***	***100%***

Sources: SCAG 2001; City of Downey 2001

The recent population, household, and employment (employment generated from businesses located within Downey) forecasts provided in Table 3.7-6 for the City and Gateway Cities Subregion were prepared by SCAG in April 1998. As stated above, the population estimates are low. Additionally, the 1999 closure of the industrial complex on the project site represented a loss of approximately 3,200 jobs (ERA 1999); however, the City assumed re-use and development of the site in the General Plan Land Use and Housing Elements, and as stated in Section 3.5 (Land Use and Planning), the General Plan assumed a maximum development intensity that is substantially greater than what is proposed under the Downey Landing Specific Plan.

TABLE 3.7-6
SCAG POPULATION, HOUSING, AND EMPLOYMENT ESTIMATES

	2000	2005	2010	2015	2020
		Gateway Cities Subregion			
Population	2,086,500	2,149,700	2,196,900	2,275,500	2,368,600
Housing	597,400	606,600	620,100	636,600	669,900
Employment	879,300	938,900	1,017,700	1,063,300	1,110,400
		City of Downey			
Population	99,900	102,900	105,100	108,800	113,200
Housing	33,700	33,900	34,200	34,600	35,400
Employment	51,500	54,700	58,900	61,400	64,400

Source: SCAG, 2001

Table 3.7-8 provides the number of workers per family in 1990. More current data is not available at this time; however, this data is useful as a proxy for workers per household for the purpose of showing general housing and employment trends.

TABLE 3.7-7
WORKERS PER FAMILY IN DOWNEY (1989)

Workers Per Family	Number of Families	Percentage of Total Families
None	2,889	12%
1	7,022	30%
2	10,294	43%
3	3,495	15%
Total	*23,700*	*100%*

Source: U.S. Census Bureau, 1990

3.7.3 Regulatory Framework

City of Downey General Plan Land Use Chapter

The Land Use Chapter is often perceived as the most representative portion of a General Plan. The Chapter designates the future use or reuse of the land within a given jurisdiction, and contains goals, policies, and programs toward this end. The Chapter also contains the Land Use Diagram, a general guide to land use distribution, which is then interpreted through specific plans (such as the proposed project) and the zoning map. Relevant policies of the Land Use Chapter are analyzed below with respect to the project's consistency with them. Generally, relevant programs under particular policies are evaluated, and the project's consistency or inconsistency with the programs equates to consistency or inconsistency with the policy that the program supports.

Policy 1.2.1

The City shall strive to retain the relative balance of land uses.

Program 1.2.1.1

Retain the balance between single family residential, multi-family residential, commercial, industrial, schools and open space.

Consistency with Program 1.2.1.1

The City's Land Use Diagram designates the project site as Mixed Use, which allows combinations of commercial and manufacturing uses. The proposed project consists of a mix of commercial retail, technology and business park, hospital and medical office, and light industrial uses. These uses are consistent with the project site's General Plan designation. Land uses within the City were considered to be balanced at the time of the General Plan Land Use Chapter Update in 1992 (City 1992, page I-7), and to the extent that the General Plan Land Use Chapter and Land Use Diagram were formulated to retain this balance of land uses, the proposed project's consistency with the site's land use designation constitutes consistency with this policy and this program. The proposed project would, therefore, be consistent with Program 1.2.1.1.

Program 1.2.1.3

Promote land uses within Downey that diversify the tax base.

Consistency

The proposed project includes a mix of retail commercial, technology and business park, hospital and medical offices, and light industrial uses that were selected to be responsive to specific market demand, including configuration of uses for motion picture and television production—uses not currently found in Downey except on a temporary basis. The proposed project has the potential to introduce a new and lucrative source of tax revenue for the City, and would, therefore, represent a potential diversification of the City's tax base. The proposed project is consistent with Program 1.2.1.3.

City of Downey General Plan Housing Chapter

The General Plan Housing Chapter does not contain policies related to population or housing that are applicable to the proposed project.

Southern California Association of Governments

SCAG's Regional Comprehensive Plan and Guide (RCPG) and RHNA are major tools for coordinating regional planning and housing development strategies in southern California. State Housing Law mandates that local governments, through Councils of Governments, identify existing and future housing needs in a RHNA. SCAG RCPG policies related to population and housing that are applicable to the proposed project are listed below, and the consistency of the proposed project with these policies is provided. Applicable policies identified by SCAG personnel include the following.

Policy 3.01

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

Consistency with Policy 3.01

SCAG's projections show that room exists for additional employment opportunities, while still maintaining a balance with existing housing. Table 3.7-6 shows a prediction by SCAG that employment outstrips housing by about 1.5:1 (employment divided by housing); however, using assumptions gleaned from Table 3.7-7, 23,700 families (used here as a proxy for households) would include 38,095 workers, for a worker-to-household ratio of over 1.6:1 (this is achieved by multiplying the number of families by the number of workers per family, then dividing by the number of families, to produce an average ratio of workers per family). This ratio may, in fact, be slightly higher, because as shown in Table 3.7-3, the number of persons per household has increased in the last ten years. However, the age distribution of this increase cannot be determined from available data.

In addition to SCAG's projections for the City, the proposed project is consistent with the projected growth in jobs in the Gateway Cities Subregion, which as shown in Table 3.7-6, anticipates the provision of 59,600 jobs in the subregion from 2000 to 2005. As stated in SCAG's policy, these figures reflect local plans and policies, including the City's General Plan. The proposed project is, therefore, consistent with the assumptions in SCAG's housing and employment estimates for the City and subregion, which predict that the City and the subregion will eventually become jobs-rich.

Further, SCAG's population forecasts for the City of Downey are significantly (about 8%) lower than the actual Census 2000 counts: as described above, the Census counts exceed SCAG's projected population for the City at 2010, and closely approach SCAG's 2015 projection for the City. Also, SCAG's employment projections do not account for the loss of 2,200 to 3,200 jobs in the City, within the last two years, as a result of the closure of the former facility on the project site (ERA 1999).

SCAG's population and employment projections, therefore, understate the need for additional jobs within the City. This impression is underscored by the City's stated primary objectives for the proposed project (refer to Section 2.3 of this Draft EIR), which emphasize the creation, recapture, and diversity of quality employment opportunities within the City. Additionally, page III-59 of the City's General Plan Housing Chapter states that Downey is in close proximity to employment centers, such as Santa Fe Springs, Commerce, Pico Rivera, and Bellflower, that employ many Downey residents. This is particularly relevant to the Kaiser project, part of which includes the replacement of an existing facility in a neighboring city. Consequently, the proposed project represents an opportunity to capture these employees within the City of Downey, thereby decreasing new housing demand, which would further contribute to the maintenance of a balance between jobs and housing within the City.

As described above, the City has considered SCAG's forecasts in its planning with respect to the proposed project; therefore the project is consistent with Policy 3.01.

3.7.4 Thresholds of Significance

The proposed project would have a significant impact on population and housing if it would cause a change in population density, distribution, growth rate, or demand for housing that is significantly above what is forecast in adopted City plans and policies.

3.7.5 Impacts

Less Than Significant Impacts

Impact 3.7-1: **The proposed project would not create a demand for housing units that is significantly above what is projected for in adopted City plans and policies.**

Based on conservative employment generation rates for the uses proposed (an average of one employee per 300 gross sq. ft.), the Downey Landing, LLC project, at approximately 2.1 million sq. ft., would generate just about 7,100 jobs, in total, in about the following distribution:

- Area I: 900 employees (1 employee/550 sq. ft. for retail, 1/885 sq. ft. for large-format retail, and 1/175 sq. ft. for restaurant uses);
- Area IIA: 1,778 employees (an average of 1/250 sq. ft. for office uses); and
- Area IIB: 810 employees (an average of 1/300 sq. ft. for office and light industrial uses); and

- Area IIC: 1,539 employees (an average of 1/250 sq. ft. for office and uses); and
- Area IID: 2064 employees (an average of 1/250 sq. ft. for office uses)
- sq. ft.

These jobs would range in quality from minimum-wage employment opportunities, to creative and professional motion picture or television production-related employment. The current balance between housing and employment in the City of Downey, the higher-than-estimated potential demand for employment discussed above (an average of 1.6 workers per household, versus the predicted 1.5), potential future increases in employment demand as household size increases, and the vacancy rate of 3.76 percent, suggests that additional employment opportunities within the City are desirable and could be accommodated.

The proposed Kaiser portion of the project is a replacement facility for the current Bellflower location. Although the Kaiser portion of the project would employ approximately 2,437 people, it is assumed that many current employees would commute to the proposed facility, and therefore, will not create additional housing demands. In addition, the proposed project is consistent with development in the City, and was accounted for in the General Plan. In response to the 2000 Census, the Housing Element is currently in the process of being updated, and will reflect development and housing need projections based on implementation of the proposed project. All employees anticipated with the proposed project would not necessarily reside within the City of Downey, though the percentage cannot be predicted. The proposed project would not introduce growth that was not accounted for in the General Plan Land Use and Housing chapter, and therefore would not result in unforeseen housing demands.

As a result of the demand for housing being accounted for in the general plan, implementation of the proposed project would not create a direct demand for housing that is above projected needs, and any need for housing could be accommodated by existing or proposed housing units. Therefore, impacts resulting from a demand for housing would be **less than significant**.

Potentially Significant Impacts

Implementation of the proposed project would not result in any potentially significant population or housing impacts.

Significant Unavoidable Impacts

Implementation of the proposed project would not result in any significant unavoidable population or housing impacts.

3.7.6 Cumulative Impacts

The Cumulative Project List, as seen in Table 2-3 of this Draft EIR, identifies 4,853,934 sq. ft. of approved, pending, under construction, or foreseeable commercial and industrial uses within the area, not including the project site. In addition to those projects, SCAG projects the construction of 9,200 housing units in the Gateway Cities Subregion between 2000 and 2005 (see Table 3.7-6). In the foreseeable future, housing and employment opportunities are anticipated to become and then remain unbalanced, and in the short term, the proposed project, which consists of approximately 3.1 million sq. ft. of employment generating uses, represents about 36% of anticipated development in the subregion. However, as stated above in Sections 3.7-2 and 3.7-5, the General Plan Housing Element for the City of Downey, in both its previous and current draft incarnations, anticipated the development of the project site, as stated in the General Plan Land Use Chapter, at an intensity greater than that which is currently proposed. Consequently, the housing projections in the Housing Element consider the proposed project, and project housing needs accordingly. Further, as stated in the project objectives, a goal of the proposed project is to attract employees to the City of Downey, and to recover jobs lost by the closure of the NASA facility on the project site. It is anticipated that many of the employees would come from within the Gateway Cities Subregion, particularly in the case of the Kaiser portion of the project, which is a replacement for a similar facility in a neighboring city (Bellflower). Therefore, the proposed project would not generate a demand for housing above that which has been anticipated in applicable plans and policies. The project's contribution to population and housing impacts in the Gateway Cities Subregion would, therefore, not be considered cumulatively considerable, and would be less than significant.

3.7.7 Mitigation

The analysis determined that no significant population and housing impacts would result from the proposed project. Therefore, no mitigation measures are necessary.

3.8 Public Services and Utilities

3.8.1 Introduction

Public services include law enforcement, fire protection, schools, and solid waste collection; utilities include the provision of water, electricity, gas, reclaimed water, storm drains, and disposal of wastewater. Agencies providing these public services and utilities were contacted by the City as part of the scoping process for this EIR to obtain information regarding available service levels and current or anticipated constraints to the proposed development. Various public utilities, services, and facilities would need to be provided to the project site to support the development. The Initial Study prepared for this project (Appendix A) concluded that potential impacts to library, cable television, and telephone service would be less than significant, and would not warrant further evaluation.

This section provides a discussion of the existing public services and utilities available to the project, and the potential project demands placed on those public services. Section 3.8.2 contains information on the existing conditions within the project area, including descriptions of staffing levels, equipment, and response times of emergency services providers; information on local school capacities, and their overcrowding status; parks and recreation facilities; and other public services, utilities, and facilities existing within, or available to, the project area.

3.8.2 Existing Conditions

Schools

Three schools, all within the Downey Unified School District, currently serve the project area.

- Gauldin Elementary – design capacity 660, current enrollment 831 (126%)
- East Middle School – design capacity 1,144, current enrollment 1,226 (107%)
- Downey High School – design capacity 2,800, current enrollment 3,112 (111%)

Currently, overcrowding at the elementary level ranges from 4 to 26% over design capacity at seven out of fourteen of the District's schools. The enrollments are monitored closely and based upon growth patterns; relocatable buildings are leased or purchased for sites based upon enrollment vs. maximum capacity. Growth in Downey has continued over the past ten years and increased student enrollment at the elementary level has expanded to include the middle and high school levels, creating overcrowding at these sites as well. Of four middle schools, one is currently operating at 20% over design capacity; the others are filled to capacity. Of the two high schools, one is operating at near design capacity and the other is currently 11% over design capacity.

Natural population growth has been affecting the increased enrollment at the elementary level for the past ten years. As population growth continues, enrollments continue to grow district-wide, presenting many sites with overcrowding situations. This trend is predicted to continue, presenting not only problems with overcrowding at specific sites, but also land availability for placing relocatable classrooms at sites. No surplus school sites are available to accommodate new schools.

Fire

There are four City of Downey fire stations (see Table 3.8-1) and additional support provided by Los Angeles County Fire Station #98 in Bellflower. The Downey stations house four engines, one ladder truck, two paramedic rescue squads, one civilian ambulance squad, and one USAR (Urban Search and Rescue) vehicle. The Downey Fire Department (DFD) responded to 7,530 emergencies in 2000. Of the total, 2,062 calls were for fire or hazardous condition-related incidents, 4,776 were emergency medical responses, and 692 were mutual aid responses. Department suppression and rescue training is facilitated by a centrally located, in-city training tower, as well as a closed cable television network, which allows classes, meetings, or training films to be broadcast into any fire station within the City.

Standard structure fire response in the project area is from stations #1 and #2 as well as Los Angeles County Fire Department Station #98, with three fire engines, one ladder truck, one paramedic rescue ambulance, and one battalion commander, totaling a minimum of 16 personnel. Each engine company has a minimum staffing of three personnel: one captain, one engineer, and one firefighter. The ladder truck has a minimum staffing of four personnel: one captain, one engineer, and two firefighters. The rescue ambulance has a minimum of two personnel, both certified paramedics. The command vehicle is staffed by one battalion chief. The initial response from stations #1 and #2 is backed up by Downey Fire Stations #3 and #4, with preset mutual aid responses from the Fire Departments of Compton, Montebello, Santa Fe Springs, Vernon, and Los Angeles County. All DFD personnel are "Haz Mat first responder" certified, specially trained to handle toxic, flammable, or other hazardous materials.

The DFD focuses its resource pool and training in six budgeted programs: administration, fire suppression, emergency medical response and basic life support, joint fire communications, fire prevention/arson, and emergency preparedness. Management structure within the organization includes the Fire Chief, Assistant Fire Chief, three Battalion Chiefs, sixteen Captains, and a Deputy Fire Marshal/Hazardous Materials Specialist. The Department has a total of 69 firefighters and rescue personnel to cover an area of 12.8 square miles. Minimum staffing requirement for fire suppression is 21 firefighters.

Table 3.8-1
City of Downey Fire Department

Station Number	Address	Apparatus
Station #1	12222 Paramount Boulevard	1 engine; 1 ladder truck; 1 paramedic rescue; 1 battalion commander
Station #2	9556 Imperial Highway	1 engine
Station #3	9900 Paramount Boulevard	1 engine; 1 civilian ambulance
Station #4	9340 Florence Avenue	1 engine; 1 paramedic rescue
L.A. County Station #98	9814 Maplewood Avenue, Bellflower	1 engine

Source: City of Downey Fire Department, July 2, 2001

Police

The Downey Police Department (DPD) is located near the center of the City at 10911 Brookshire Avenue. The department is comprised of 182 total employees, which includes 115 sworn officers. This staff includes three Captains, six Lieutenants, 14 Sergeants, 24 Detectives, seven motorcycle officers, four administrative officers, and the remainder assigned to patrol. While predetermined patrol routes do not exist, the City of Downey officers patrol all of the areas of the City that are accessible to them. To provide balanced enforcement, the City has been divided into quadrants, and at least one officer is assigned to each area. In addition, Downey patrol officers are supplemented by traffic enforcement officers and detective personnel.

Wastewater

The project site is within the jurisdictional boundaries of Sanitation Districts of Los Angeles County, District No. 2. Two City of Downey 8-inch sanitary sewer lines collect wastewater from north and east of the proposed site and carry the flow southerly down Bellflower Boulevard. At Elm Vista, the two eight inch lines, and one eight inch line that collects flows from the area directly to the east, are combined into one eight inch line which continues to flow south to Washburn Road. At Washburn Road, the eight-inch line that collects flows from the area directly to the east are combined into one ten inch line that continues to flow south. One thousand feet south of Washburn Road, an eight-inch line that collects flows from the area on the west side of Bellflower Blvd., approximately eight hundred feet north of Imperial Highway, connects to the ten-inch line. The ten-inch line continues to flow south to Imperial Highway where eight-inch lines from the east and west side of the street are combined into one twelve-inch line that continues to flow south to Adoree. At this point, the twelve-inch line connects to the twenty-four inch County-owned Foster Road Trunk Sewer.

There are two eight-inch sewer lines in Imperial Highway. The first begins 750 feet east of Ardis Avenue and flows 550 feet to the east to the twelve–inch sewer line in Bellflower Blvd. The second begins 600 feet west of Ardis Avenue and flows 700 feet to the west to the twenty-one inch Downey-Bellflower Trunk Sewer in Clark Avenue.

Under Lakewood Boulevard, the westerly border of the site, there is a 21-inch sewer, called the Downey-Bellflower Trunk Sewer. This line begins north of the project site, continues adjacent to the site southerly along Lakewood Boulevard and southerly along Clark Avenue. A 15-inch Downey-Bellflower Relief Trunk Sewer, which collects wastewater from the area west of Clark Avenue, is located in Imperial Highway at Clark Avenue and connects to the 21-inch main trunk sewer at that point. The Downey-Bellflower Trunk Sewer collects wastewater from areas north, east, and west of the project site, including wastewater generated from the existing site. Wastewater is treated by either the Joint Water Pollution Control Plant in the City of Carson or the Los Coyotes Water Reclamation Plant in Cerritos. The County Sanitation Districts dispose of the effluent and solids from this 21-inch Trunk Sewer in compliance with the requirements set by the California Regional Water Quality Control Board. Although the City has a wastewater system adjacent to the site within Bellflower Boulevard, analysis of the existing on-site wastewater systems shows that the site wastewater drains southerly and westerly through a series of on-site wastewater lines to the 21-inch Trunk Sewer that lies within Lakewood Boulevard and Clark Avenue. This on-site system currently connects to the trunk sewer in Lakewood and Clark in as many as 12 separate locations.

Storm Drains

For a detailed discussion of the drainage patterns and storm drain system in the area, please refer to Section 3.4, Hydrology. In brief, proposed site drainage patterns affect the area that is tributary to the existing storm drain system in Imperial Highway and Bellflower Boulevard. The runoff from the proposed development will be collected by a system of catch basins, gutters, and drains, discharging off-site to the existing off-site storm drain system. The proposed development is modeled largely in parallel with the existing system. The general watershed areas and collection points or exit points from the site for a proposed condition model the existing condition. It is anticipated that the proposed development will construct new on-site storm drain facilities rather than try to utilize any existing on-site facilities. The proposed development should generally follow the existing site's drainage scheme of capturing the runoff at several locations discharging to an on-site storm drain and connecting to the existing storm drain system in the surrounding streets. The locations of the existing and proposed storm drains are shown in Figures 3.4-1 and 3.4-2.

Water

Domestic Water

The City of Downey uses groundwater to provide 100% of its potable water needs. The City's Water Division operates 21 groundwater wells, which pump the groundwater from the Central Groundwater Basin. Groundwater levels are maintained by the Central Basin Watermaster and the Water Replenishment District of Southern California. The City both owns and leases groundwater pumping rights, which allow the City to pump water from the Central Basin. Three connections to the Metropolitan Water District of California's (MWD) Feeder Main can be opened in an emergency to provide a backup supply of potable water.

MWD's 79-inch water main runs along the northeastern and northern boundary of the project site under Bellflower Boulevard and Stewart & Gray Road. The City of Downey's water system connects to this main line near the intersection of Lakewood Boulevard and Stewart & Gray Road. The City's water system includes a 16-inch water main in Stewart & Gray Road, 12-inch water line in Bellflower Boulevard, 6-inch and 10-inch water lines in Lakewood Boulevard, and 12-inch and 16-inch water lines in Imperial Highway. The City recently constructed a 20-inch domestic water transmission main in Lakewood Boulevard.

The on-site water system connects to the City of Downey public system on Stewart & Gray Road, Lakewood Boulevard, , and Bellflower Boulevard.

Reclaimed Water

The Central Basin Municipal Water District (CBMWD) supplies reclaimed water to portions of the City of Downey, and owns the infrastructure that carries the reclaimed water. CBMWD has two eight inch reclaimed water lines near the project site. The first line terminates on the east-side of Independence Park, just to the southeast of the project site. The second line is located on the southwest side of the project site and terminates just south of the intersection of Lakewood Blvd. and Clark Avenue, at the intersection of Lakewood Blvd. and Donovan Street. The site does not have any reclaimed water service connections at this time.

Fire Service Water

The site's existing fire system is connected to the City of Downey's public domestic water system. The project site has an existing network of water lines that serve the buildings and connect to the City of Downey water systems in Lakewood Boulevard, Bellflower Boulevard and Imperial Highway Currently a 20-inch water line lies under Lakewood Boulevard, a 12-inch line under Bellflower Boulevard, and 8-inch to 10-inch lines under Imperial Highway. The onsite fire service system utilizes pump houses on-site to lift the on-site water pressure in the event that it drops below effective fire-fighting levels. The underground fire looped system is augmented by power pumps. However, both the on-site pumps and the power pumps are currently inoperational. The fire water service system lines have small "spiderweb cracks" that reduce the reliability of the system.

Solid Waste

Solid waste disposal service for the City of Downey is provided by the Calsan Disposal Company. The project area is serviced by the Downey Area Recycling and Transfer Station, F.R. Bowerman Landfill, and Puente Hills Landfill. The Downey Area Recycling Center (DART) is permitted for 5,000 tons per day (TPD), FR Bowerman Landfill is permitted for 8,500 TPD and the Puente Hills Landfill is permitted for 13,200 TPD.

Hazardous Waste

Hazardous waste disposal service for the current Kaiser Bellflower facility (used as a baseline for expected generation by the replacement Kaiser facility) is provided by either Thomas Gray & Associates, Inc., or Evergreen. The Kaiser Bellflower Hospital facility currently produces less than 220 pounds (0.11 tons) per month of hazardous waste, which consists of mercury, waste oil, reagents, and bulk chemotherapy products, and is considered a small hazardous waste generator. All hazardous waste handled by Thomas Gray & Associates is transported and disposed of out of state. Waste oil handled by Evergreen is transported to its Newark refinery, where it is recycled and processed.

Biohazardous waste produced by the Kaiser Bellflower facility is picked up by Steri-Cycle. Sharps are autoclaved at the Steri-Cycle facility and are then disposed of in area landfills. Waste to be incinerated, such as pharmaceutical, pathological, and trace biohazardous waste, is picked up by Steri-Cycle and transported to Chandler, Arizona. Kaiser also has an autoclave on site for sterilization of bandages and suction canisters, which are then picked up by Steri-Cycle and taken to area landfills. Total biohazardous waste produced by Kaiser Bellflower is approximately 10 tons per month.

Electricity

The primary electricity provider for the City of Downey is Southern California Edison. The site is currently served by a primary feeder line to a client-owned sub-station. Five 12,000-volt electrical lines feed into the site, two located in Lakewood Boulevard, two in Imperial Highway, and one in Bellflower Boulevard. Southern California Edison has provided a will-serve letter dated June 27, 2001, stating its readiness to install electrical distribution facilities within the proposed project.

Gas

The primary natural gas supplier for the City of Downey is the Southern California Gas Company. The site is serviced by 2-inch to 8-inch gas lines in Bellflower Boulevard, Imperial Highway, Stewart & Gray Road, Lakewood Boulevard, and Clark Avenue.

3.8.3 Regulatory Framework

City of Downey General Plan

Public service and utility improvements are constructed in accordance with plans and specifications meeting the approval of the City Engineer. All expanded utility lines are required to be constructed in coordination with service providers to ensure adequate and safe public infrastructure and public services for City residents. The cost of necessary utility infrastructure expansion is the responsibility of the applicants. The proposed project is expected to be consistent with the applicable General Plan Goals.

Southern California Association of Governments (SCAG)

The Southern California Association of Governments is the designated Municipal Planning Organization (MPO) that oversees regional planning in the Southern California Area. In its Comprehensive Regional Plans and Guide, it sets forth policies with respect to land use and transportation planning, and growth projections, among other regional issues. Specific relevant policies include:

Policy 3.05

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

Compliance

The proposed project is a redevelopment project, and will expand the existing utility and service infrastructure from the project site, where possible, as well as from the surrounding areas. Development of any type within the project site boundary would require the expansion of utility infrastructure. The project proposes commercial and business park, hospital, and medical office development, which is consistent with the site's designated Mixed-Use General Plan category. Therefore, the proposed project is consistent with this SCAG policy.

Policy 3.09

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

Compliance

The proposed project represents redevelopment of a previously utilized site rather than new development, which minimizes cost of infrastructure and public service delivery. The cost of any necessary utility infrastructure expansion is the responsibility of the applicants. Therefore, the proposed project is consistent with this SCAG policy.

3.8.4 Thresholds of Significance

In general, project impacts on public services would be considered significant if project impacts exceed the capacity of existing or planned infrastructure or public service facilities. The criteria used for analysis of proposed project impacts to public services and utilities are listed below. The proposed project would have a significant impact if it would:

Schools

- Cause significant project-induced increase in population of school-age children in a public school district, contributing to an existing over-capacity problem.

Fire and Police Protection

- Require additional emergency response personnel and/or equipment to maintain acceptable levels of service, or if project-related development results in increased response times of service providers to a degree that would adversely impact public health and safety; or
- Interfere with emergency response or evacuation plans.

Storm Drains

- Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems.

Water

- Conflict with water conservation and supply requirements imposed by State and local agencies;
- Cause the substantial and adverse depletion of existing services of domestic water;
- Cause a water supply to be drawn from a groundwater basin that is overdrawn in relation to demand and historical levels; or
- Cause the construction of new water facilities beyond those already planned.

Wastewater

- Cause an increase in wastewater treatment that reaches or exceeds the current capacity or causes a reduction in the level of service, thereby requiring substantial expansion or development of new facilities; or
- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Solid Waste

- Conflict with State and local requirements relating to source reduction, recycling, litter control, and solid waste handling; or
- Construction- or operation-related solid waste exceeds available capacities of landfills servicing the project area on a long-term basis.

Hazardous Waste

- Conflict with State and local requirements relating to source reduction and hazardous waste handling; or
- Operational-related hazardous waste exceeds available capacities of landfills servicing the project area on a long-term basis.

Other Services

- Conflict with applicable legal requirements relating to utilities; or
- Cause demand for utilities to exceed available capacity without providing expanded or additional facilities.

3.8.5 Impacts

Less Than Significant Impacts

Fire

The Downey City Fire Department has indicated that it has sufficient facilities and staff to accommodate the needs of the proposed projects. The 2000 census established the population of Downey at approximately 110,500 persons. The Downey Fire Department employs 69 uniformed personnel with a minimum daily suppression staffing of 21. Considering the station locations, the population density, and call volume, the Fire Department considers this an acceptable level of staffing.

The Downey Fire Department is staffed and equipped to handle a wide variety of emergencies, including structural fires, emergency medical calls, vehicle extrications, confined space rescue, urban search and rescue, swift water rescue, and other special emergencies that may arise. The Fire Department also has a mutual aid agreement with Santa Fe Springs and Vernon Fire Departments for a Hazardous Materials Response Team.

There is no one specific standard for evaluating acceptable service levels. The Downey Fire Department has been given a class 2 rating by the Insurance Services Office (ISO). The ISO collects information on a community's public fire protection and analyzes the data using the Fire Suppressing Rating Schedule (FSRS). They then assign a Public Protection Classification from 1 to 10. Class 1 represents the best public protection, and Class 10 indicates less than the minimum recognized protection. These ratings are used to set fire insurance premiums for residential and commercial properties.

The threshold standard for one engine company is 2,500 responses per year. Based on 1999 and 2000 data, the Downey Fire Department is well below this threshold level of service. Due to the current

on-site movie industry uses, additional Fire Department personnel have already been trained in pyrotechnics and specific fire suppression techniques, and the existing service ability is considered adequate to meet future needs of the proposed projects. Response times are approximately 4-6 minutes and are not expected to increase due to the proposed project. Actual driving time in the City is 3-4 minutes. The proposed project is located in close proximity to the first-in fire station, which will guarantee response times well below these averages.

The new Kaiser facility will increase the capacity for emergency care in the area. Kaiser proposes to build a hospital tower of up to eight stories, two four-story office buildings, and a six-story parking structure, which will require adequate water flow to the site and ladder trucks to respond to emergencies.

The Downey Fire Department currently has plans for expansion of the headquarters station facilities at 12222 Paramount Boulevard, expanding the emergency operations center. Plans are underway for remodel of fire station #3 at 9900 Paramount Boulevard as well. The Downey Fire Department has indicated that its equipment is sufficient to respond to the needs of the proposed project and therefore this impact is considered **less than significant.**

Solid Waste

According to the California Integrated Waste Management Board (CIWMB), a standard generation rate of 1 ton per person per year is used to estimate the quantity of solid waste expected under operation of the project. For commercial and business office uses, 9 persons per acre were assumed. 1,260 tons per year will be generated for Areas IIA, IIB, IIC, and IID and 74 tons will be generated per year for Area I. Approximately 874 tons of solid waste will be generated per year for the Kaiser facilities based on data from an established Kaiser Hospital site of similar size. The project would generate:

- Retail -- 74.8 tons per year (Downey Landing, LLC)
- Commercial / business park—1,260 tons per year (Downey Landing, LLC); 874 tons per year (Kaiser)

Total solid waste produced by the proposed projects is 2,209 tons per year. Existing permitted capacities for the landfills that service the proposed site total 26,700 tons per day. 2,209 tons per year equates to approximately 6 tons of solid waste from the proposed projects per day. The estimated waste generation is not anticipated to significantly impact solid waste services, although solid waste disposal is a significant regional issue, with the area's landfills expected to reach capacity in the near future, and this impact is considered **less than significant** on a project-specific level. However, implementation of mitigation measure 3.8-10 will further reduce the significance of this impact.

Hazardous Waste

The proposed Kaiser facility is anticipated to generate generic types of hazardous waste streams: medical (biohazardous) waste, radiological waste, and chemical waste. Average projected tonnage of hazardous and biohazardous waste based on data collected from the Kaiser Bellflower facility is 0.33 tons per day. Approximately 0.07 pounds of waste per day, including waste oil, mercury, and lab reagents, is generated by Kaiser Bellflower. Waste oil is recycled and refined by the designated hazardous waste handler. The remaining hazardous waste is transported out of state. Of the total biohazardous waste produced by Kaiser Bellflower per day, approximately 0.14 tons is disposed of by incineration out of state, not in local landfills. The remaining approximately 0.19 tons per day is treated and disposed of in local landfills. The addition of 0.19 tons per day into local landfills represents only .0007% of the total permitted daily capacity of the landfills. Therefore, this impact is **less than significant** on a project-specific level.

Wastewater

The project impacts on the capacity of the existing wastewater system are based upon correspondence with Ms. Ruth Frazen at the Sanitation District's Financial Planning and Property Management Section.

Since the site is currently under-utilized, implementation of the project may alter the amount of wastewater flow generated from the site. The proposed project is expected to connect directly to the 21-inch Downey-Bellflower Trunk Sewer. Since the existing parcel of land has been owned until recently by the federal government, the Sanitation District does not have any connection fee or other history to research historical flows from the site.

According to planning data supplied by the Sanitation District, it is estimated that the proposed project will generate wastewater flows as follows:

- Commercial and business park uses produce an average wastewater flow of 0.84 gallons per day per square foot (based on average loadings for restaurants, shopping centers, office buildings, warehousing uses, stores, and light industrial uses: Please refer to Table 3.8-2). The Downey Landing, LLC portion of the project (Areas I, II, and III) would be anticipated to produce a wastewater flow of approximately 450,990 gallons per day (0.45 mgd).

- The Kaiser medical office buildings and hospital facility would be anticipated to produce a wastewater flow of 242,000 gallons per day (.242 mgd).

The 21-inch trunk sewer has a design capacity of 3.4 to 4.7 mgd along the frontage of the project site. When last measured in 1993, when the site was in operation as a manufacturing facility, the actual sewer peak flow was 2.6 mgd. The 15-inch Downey-Bellflower Relief Trunk Sewer, which collects

wastewater from the west side of Clark Avenue, located in Imperial Highway at Clark Avenue connects to the 21-inch main trunk sewer and has a design capacity of 1.3 mgd. Wastewater flows from the Downey-Bellflower Trunk Sewer enter the Relief Trunk Sewer at Imperial Highway and Clark Avenue. Flow measured in 1998 at this entry point was 0.4 mgd. Total anticipated wastewater flow from the site is 0.70 mgd and there is adequate capacity remaining in both trunk sewers to handle the anticipated wastewater flows from the proposed project.

Within Imperial Highway there is an existing 8-inch sewer line that, according to the City, does not fully serve the frontage of the proposed Kaiser site. Since the proposed sewer line from the Kaiser site will be a 12-inch line, it is anticipated that a new line of at least 12-inch diameter will need to be constructed along Imperial Highway westerly from the proposed point of connection for the Kaiser site to the existing 21-inch Downey-Bellflower Trunk Sewer.

As stated in Section 3.8-2, the wastewater generated from this site will be treated by either the Joint Water Pollution Control Plant (JWPCP) located in the City of Carson or the Los Coyotes Water Reclamation Plant (WRP) located in the City of Cerritos. The JWPCP design capacity is 385 mgd and is currently processing an average flow of 324.5 mgd (84% of capacity). The Los Coyotes Plant's design capacity is 37.5 mgd and the facility currently processes an average flow of 34.7 mgd (92.5% of capacity).

TABLE 3.8-2
AVERAGE LOADINGS FOR VARIOUS LAND USE CATEGORIES

Description of Land Use	*Flow (Gallons per day)/1,000 sq. ft.*	*COD[1] (Pounds per day)/1,000 sq.ft.*	*Suspended Solids (Pounds per day)/1,000 sq.ft.*
Shopping Center	325	3.00	1.17
Office Building	200	0.86	0.45
Professional Building	300	1.29	0.68
Restaurant	1,000	16.68	5.00
Indoor Theater	125	0.54	0.28
Financial Institution	100	0.43	0.23
Wholesale Outlet	100	0.43	0.23
Warehousing	25	0.23	0.09
Open Storage	25	0.23	0.09

[1] Chemical Oxygen Demand
Source: County Sanitation Districts of Los Angeles, Loadings for Each Class of Land Use, Table 1.

TABLE 3.8-3
SUMMARY OF PROPOSED SEWER FLOW DEMANDS

Type of Use (Building Area)	*Proposed Sewer Flow Demands*
Downey Landing, LLC Area 1—Shopping Center/Retail (410,000 sq. ft.)	133,250 gpd
Downey Landing, LLC Area IIA—. Office/Flex Tech (444,500 sq.ft.)	88,900gpd
Downey Landing, LLC Area IIB — Office (243,000 sq. ft.)	48,640 gpd
Downey Landing, LLC Area IIC – Office (384,800 sq. ft. ,)	76,960 gpd
Downey Landing, LLC Area IID – Office (516,200 sq. ft.)	103,240 gpd
Area III- Kaiser Medical Buildings and Central Plant (292,700 + 27,300 sq. ft.),	87,810 gpd
Area III- Kaiser Hospital Tower (680,000 sq. ft.)	109,417 gpd
Area III- Museum/Learning Center (50,000 sq.ft.)	5,000 gpd
Outflow total (all areas)	**653,217 gpd (.653217 mgd)**

Source: County Sanitation Districts of Los Angeles County, Loadings for Each Class of Land Use, Table 1.

Based on these data, the existing infrastructure, operating at less than maximum capacity, could accommodate the anticipated wastewater flow from the proposed project. The additional demands of 0.65 mgd represents 1.2% of the remaining treatment facility capacity. Therefore, the proposed project would not be anticipated to exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board or require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities and the impact is considered **less than significant.** The implementation of Mitigation Measure 3.8-2 will further reduce the significance of this impact.

Potentially Significant Impacts

Domestic Water

Project impacts on the capacity of the City domestic water system are based upon correspondence with Mr. Ralph Ewers at the City of Downey Building and Safety Department, along with Mr. Desi Alvarez and Mr. Brian Ragland of the City of Downey Public Works Department.

Impact 3.8-1: **The proposed project could result in a potentially significant impact to the City's domestic water system.**

It is anticipated that the proposed project will generate additional demands for water as compared to the existing under-utilized site. Preliminary site utility requirements studies have indicated that for the Kaiser project, a 10-inch pipe will be required with a capacity of 1,580 gallons per minute. The City is currently reviewing the proposed master site plan and assisting with a determination of the projected domestic water demands for the Downey Landing, LLC portion of the site.

The City's summertime demand is nearing 95% of the production capacity of the groundwater production facilities (personal communication from Brian Ragland, Principal Civil Engineer, Public Works). More expensive MWD water is available in the event groundwater production is insufficient to meet total system demand. Acceptable service levels for the potable water system include meeting the maximum summertime demand and any additional demand for fire protection needs. The City has stated that additional long-term (yearly) demand resulting from the proposed development exceed current groundwater, imported, and reclaimed water capacity, the additional demand could be met by exercising a combination of four primary options:

- Lease additional groundwater rights each year,
- Purchase additional groundwater rights on a one-time basis,
- Purchase additional MWD water from CBMWD each year,
- Utilize reclaimed water at the development to offset all or a portion of new potable demand.

The City has stated that should this development require additional infrastructure the following must occur:

- Construction of new water wells and potable water infrastructure,
- Construction of additional MWD supply structures,
- Construction of new reclaimed water infrastructure.

The City has stated that in order to meet the peak summer and fire flow demands generated by this development, the following must occur:

- Construction of new water well(s) and potable water infrastructure.

- .

The proposed project may require additional infrastructure to meet domestic water demand and therefore this impact is potentially significant. However, the implementation of Mitigation Measures 3.8-1, 3.8-2, 3.8-3, and 3.8-4 will mitigate Impact 3.8-1 to the City's domestic water system to **a less-than-significant** level.

Reclaimed Water

Project impacts on the capacity of the reclaimed water system servicing the City are based upon correspondence with Mr. Desi Alvarez and Mr. Brian Ragland of the City of Downey Public Works Department, as well as with Lucy McGovern of the Central Basin Municipal Water District.

Impact 3.8-2: **The proposed project will have a significant impact on the infrastructure of the reclaimed water system serving the City of Downey.**

The proposed project will generate additional demands for reclaimed water, since the existing site presently does not have any reclaimed water service available to it. It will be necessary to extend the existing reclaimed water line(s) to the site for landscaping and possible gray water uses inside and outside of the buildings, and possibly at Kaiser's Central Plant. Lines adjacent to the proposed site currently exist in Foster Road, Bellflower Boulevard, and in Lakewood Boulevard just south of the Lakewood and Clark intersection at Donovan Street. The Central Basin Municipal Water District (CBMWD) is responsible for construction and maintenance, and owns the reclaimed water infrastructure up to the water meter. Any extension of the reclaimed water lines should be discussed with the City and CBMWD.

Anticipated reclaimed water usage demand rates for landscaping can be estimated by type of coverage, area of coverage, and precipitation data for the site location. As a general rule, coverage area for landscaping for commercial/office projects is 10% of land area. Based upon a 160-acre site,

and therefore 16 acres of landscaped area, the site will generate a reclaimed water demand load for landscape of approximately 41 acre-feet per year (2.5 acre-feet per acre of landscape).

The Central Municipal Water Basin has indicated that currently supply of reclaimed water exceeds demand. Therefore, increased demand by the proposed project for reclaimed water would have a less-than-significant impact on the City's reclaimed water supply. However, as the site is not currently served by reclaimed water lines, additional infrastructure is required to provide reclaimed water to the site, which is a potentially significant impact. The implementation of Mitigation Measures 3.8-5 to 3.8-7 will mitigate Impact 3.8-2 to the Central Basin Municipal Water District's reclaimed water system and the City's reclaimed water service and availability to a **less-than-significant** level.

Fire Service Water

Project impacts on the capacity of the City reclaimed water system are based upon correspondence with Mr. Desi Alvarez and Mr. Brian Ragland of the City of Downey Public Works Department, as well as Deputy Fire Marshal Robert Rowe of the Downey Fire Department.

Impact 3.8-3: **It is anticipated that the proposed project will generate additional demands for fire service water as compared to the existing under-utilized site.**

Project impacts on the capacity of the City water system to handle the on-site fire service are based upon correspondence with Deputy Fire Marshal Robert Rowe of the City of Downey Fire Department and Mr. Desi Alvarez and Brian Ragland of the City of Downey Public Works Department.

The City Fire Department has reviewed the existing conditions of the project to ascertain the ability of the existing system to maintain sufficient coverage for the current usage of the site. Currently a 20-inch water line lies under Lakewood Boulevard, a 12-inch line under Bellflower Boulevard, and 8-inch to 10-inch lines under Imperial Highway. Further fire flow testing specific to the site is required to determine the adequacy of the water flow and pressure to the project site.

Based upon initial review of the current conditions and age of the existing private system, the Fire Department recommends that the on-site system be abandoned. The underground fire looped system augmented by power pumps is old and there are potential underground leaks. The proposed water

system should be designed utilizing existing pressure flows available to the site from adjacent streets

As the existing on-site fire system is inadequate to accommodate the fire water demand for the proposed project, this impact is potentially significant. The implementation of Mitigation Measures 3.8-8 to 3.8-9 will mitigate on-site fire service Impact 3.8-3 to the City's water system and the Downey Fire Department to a less-than-significant level. These mitigation measures will ensure that all onsite fire service water will be interconnected with available City water sources around the project site.

Electricity

Impact 3.8-4: **It is anticipated that the proposed project will generate additional demands for electricity as compared to the existing under-utilized site.**

Under current conditions, the site is potentially served by five 12,000-volt electrical lines. Build-out of the proposed project will generate increased demands for electricity. Table 3.8-4 summarizes average electricity usage for various uses per square foot per day.

Table 3.8-4
Average Electricity Demand

Use	kV/ Sq. ft.	Proposed # sq. ft.	Anticipated demand (kV-amps/day)	Project applicant
Large office building (>30,000 sq.ft.)	.005	516,200 292 ,700	5,603 1,464	Downey Landing, LLC Kaiser
Large commercial/retail	.0145	410,000	5,945	Downey Landing, LLC
Small commercial /restaurant	.0205	50,000	1,025	Downey Landing, LLC
Hospital	.007	680,000	4,760	Kaiser
Parking structure/warehouse	.001	600,000	600	Kaiser
Light industrial/sound stage	.010	1,120,530 27,300	11,205 273	Downey Landing, LLC Kaiser
Total		***3,696,730***	***30,875***	

Source: Southern California Edison, 2001

For the purpose of providing a conservative analysis, the electricity demand calculations assumed buildout of Option 1, as reuse of current buildings for studio production would require more energy than Option 2, which proposes more business and technology park uses. The proposed projects (Downey Landing, LLC and Kaiser) will each demand greater than 500 kV-amps per day based on total square footage. The Downey Landing, LLC portion of the project (Areas I, IIA, IIB, IIC, and IID) will conservatively demand greater than 23,778, kV-amps per day of electricity. Preliminary utility requirement studies have indicated that two separate 66 kV utility company services, each served from separate utility company substations and from separate routes, will be required for the Kaiser portion of the project, which is expected to demand approximately 7,097 kV-amps per day. Specific locations of these substations must be determined.

The proposed project would require installation of additional infrastructure to provide for the electricity demands of the project, which is a potentially significant impact. In addition, in view of the current California energy crisis, additional electricity demands from the proposed project create a potentially significant impact. However, the implementation of mitigation measure 3.8-10 by each applicant will mitigate Impact 3.8-4 to the Edison electrical system to a **less-than-significant level**.

<u>Gas</u>

Impact 3.8-5: **It is anticipated that the proposed project will generate an increased demand for natural gas.**

The site is served by 8-inch gas lines on Imperial Highway, 4-inch gas lines on Lakewood Boulevard and Clark Street, and 2-inch lines on Stewart & Gray Road, Bellflower Boulevard, and peripheral streets. Adequacy of the existing infrastructure for the proposed project will depend on consumption data per land use. Estimates of gas usage for non-residential projects are developed on an individual basis by the Gas Company. The proposed project's increased demand for natural gas is a potentially significant impact. The implementation of mitigation measure 3.8-11 will reduce the impact of increased natural gas use as a result of the proposed project to a **less-than-significant level.**

Schools

Impact 3.8-6: **It is anticipated that the proposed project will generate an additional demand for schools that are already overcrowded.**

A project of the magnitude proposed would affect existing overcrowding at the various school sites serving the Downey area. The completed project would generate greater economic opportunities in the City, thereby attracting new residents to Downey. Many of the retail and smaller businesses tend to attract younger employees, who are within the national average (ages 20-35) of starting families or with school-age children.

Natural population growth in the Southern California area has been affecting increased enrollments at the elementary level for the past ten years. As population growth continues and students progress to the middle and high school sites, enrollments continue to grow district-wide, increasing overcrowding situations. This trend is predicted to continue, presenting not only problems with overcrowding at specific sites, but also land availability for placing relocatable classrooms at sites.

The Downey School District is currently in the process of evaluating and/or implementing major modernization projects and future growth needs are being considered. School and park uses are prohibited without further environmental review and clearance, but the City is prepared to reserve an eight-acre parcel for school and park uses, subject to attainment of necessary approvals through a separate planning and environmental review process.

The Downey School District currently has a policy of allowing children of persons employed in the City of Downey to attend District schools on a permit basis, as space permits. Due to the current overcrowding at District schools, issuance of inter-district attendance permits will likely be severly restricted.

Further, as discussed in Section 3.7 (Population and Housing), the proposed project would not create a demand for housing units that cannot be met by existing or planned residential development, and would not create a demand for housing that is significantly above what is projected for in adopted City plans and policies. Based on conservative employment generation rates for the uses proposed, the project would generate approximately 7,100 jobs for the Downey Landing, LLC development and approximately 2,437 employees for the Kaiser facility. However, the proposed Kaiser portion of the project is

a replacement facility for the current Bellflower location, and it is assumed that current employees would commute to the proposed facility, and therefore, will not create additional housing demands, and are unlikely, given the proximity of Bellflower to Downey, to move school-age children to schools in Downey. The future use of the existing Kaiser Bellflower facility remains unknown until approximately 2008, when the replacement facility is expected to be substantially completed.

In addition, the proposed project is consistent with planned development in the City, and was assumed in the General Plan Land Use and Housing Chapters. In response to the 2000 Census, the City is revising the Housing Chapter and the revised Chapter will also reflect development and housing need projections based on implementation of the proposed project. All employees anticipated with the proposed project would not necessarily reside within the City of Downey, though the percentage cannot be predicted. The proposed project would not introduce growth that was not accounted for in the General Plan Land Use and Housing Chapters, and therefore would not result in unforeseen housing demands, which would in turn result in increased demands for schools. With the implementation of mitigation measure 3.8-12, this impact would be reduced to a **less-than-significant** level.

Police

Impact 3.8-7: **It is anticipated that the proposed project will generate an additional demand for police protection.**

The Downey Police Department, which has one centrally located station, has divided the City into flexible quadrants (based on daily staffing levels) assigned at least one officer and patrolled by officers on a continual basis. There are no specialized programs in place that would specifically impact the project site. Downey patrol officers are supplemented by traffic enforcement officers and detective personnel. The Downey Police Department is staffed with 115 sworn officers, creating a service ratio of 1.07 officers per thousand residents. While this personnel-to-population ratio would likely be considered somewhat low for the industry as a whole, the Downey Police Department has indicated that it currently provides satisfactory and adequate levels of service. Response times to 9-1-1 calls are expected to be less than two minutes.

Despite the anticipated inclusion of on-site private security for the proposed project, both during construction and operation, increased demand on the Downey Police Department for protection and crime prevention services is anticipated as a result of the size of the proposed project. The Downey Police Department has indicated that its resources are limited and the proposed project could result in a potentially substantial impact to police services by increasing the service burden placed on the DPD. Implementation of Mitigation Measures 3.8-13 and 3.8-14 is anticipated to reduce the impacts of the proposed project to a **less-than-significant** level.

Storm Drains

Please see Section 3.4, Hydrology, for a detailed discussion of the potentially significant impact of the proposed project on storm drains.

Significant Unavoidable Impacts

There are no significant unavoidable impacts anticipated to result from the proposed project.

3.8.6 Cumulative Impacts

Infrastructure capacity for utilities and other public services is a regional problem due to recent and projected population increases in the Southern California area. This population increase creates additional demand for public services, which may already be at or near capacity. It has been determined that, with implementation of recommended mitigation measures, all project-specific impacts to public services can be reduced to a less-than-significant level. The Lead Agency has consequently determined that the contribution of the proposed project to cumulative public services impacts in the Los Angeles County Southeast Subregion (Gateway Cities Subregion) would be less than cumulatively considerable.

Schools

The proposed project is anticipated to result in a slight overall increase in resident population in the City of Downey, and would impact schools in the Downey Unified School District. However, these impacts would be mitigated to a less-than-significant level. Further, as stated in Section 3.7 (Population and Housing), this increase does not exceed what was assumed in the General Plan. Further, as stated in Chapter 2 (Project Description) and in Section 3.7, the proposed project is intended partially as a replacement facility (Kaiser), and also to recapture jobs lost with the closure of the NASA site, and out-migration of employment in general. Lastly, the City proposes to offer to the Downey Unified School District, on a first-refusal basis, a portion of the project site upon which to build a new elementary school, pending a separate environmental review process and oversight by appropriate agencies. Therefore, when considered in conjunction with the total

approved/pending major development projects in the City, the proposed project would not make a cumulatively considerable contribution to school overcrowding in the region.

Wastewater

The proposed project could result in a potentially significant impact to the City and County Sanitation District's wastewater system. Based on current data, the anticipated wastewater flow from the proposed project can be adequately handled by the existing conveyance infrastructure. Additionally, the proposed project should not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, nor require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities. The project's demand is within previously anticipated growth projections. The proposed project would make a less-than-significant contribution to the cumulative impacts on wastewater capacity and wastewater treatment capacity in the Gateway Cities Subregion. **Water**

The proposed project could result in a potentially significant impact to the City's domestic water system. It will also have a significant impact on the existing reclaimed water system in the City of Downey; however, the impact on the reclaimed water system is not demand-related, but infrastructure-related, and the proposed mitigation measures for the project would provide for the infrastructure necessary to serve the project site.

It is anticipated that with implementation of mitigation measures as outlined below, the project-specific impact on the City's domestic water system, as well as the Central Basin Municipal Water District's reclaimed water system, will be reduced to a less-than-significant level. Further, with the proposed use of reclaimed water for landscape irrigation and possibly other non-potable uses, the proposed project would substantially reduce its water usage. The project would, therefore, not make an incremental contribution to the cumulative impacts on domestic water in the Gateway Cities Subregion.

Solid Waste

The estimated solid waste generation by the proposed projects is anticipated to result in an overall increase in the amount of solid waste for Downey and Los Angeles County, resulting in cumulative impacts. Implementation of Mitigation Measure 3.8-11 is recommended to reduce the volume of solid waste that is transported to the local landfills, which will reduce this impact to a less-than-significant level on a project level. Employers shall implement recycling programs and install appropriate trash compactors to reduce the amount of solid waste going to landfills. The service provider has indicated that current landfill capacity is adequate to accommodate the proposed projects' solid waste disposal needs. The proposed project would make a less-than-significant contribution to the cumulative impacts on the capacity of area landfills.

Hazardous Waste

The proposed Kaiser hospital facility will generate hazardous and infectious waste in the course of its normal operations. This hazardous waste will be disposed of per federal, state, and local regulations. However, generation of hazardous waste is anticipated to have a long-term cumulative impact on capacity of disposal sites. Hazardous waste is treated by hazardous waste handlers and either incinerated or disposed of in area landfills. The hazardous waste service provider anticipates that landfill capacity is adequate to meet projected demands. The proposed project would make a less-than-significant contribution to the cumulative impacts on the capacity of area landfills.

Electricity

The proposed project will create an ongoing demand for increased electricity during operations. This is a potentially significant impact given the severity of the current electricity crisis in California. Since the shortage of electricity is most likely short-term, the proposed project is anticipated to make a less-than-significant contribution to the cumulative impacts on electricity demand.

Gas

The proposed project will create an ongoing demand for increased natural gas during operations. The service provider anticipates that, with implementation of Mitigation Measure 3.8-11, gas supply and infrastructure are adequate to meet projected demands and that no foreseeable short- or long-term cumulative impacts to natural gas are anticipated as a result of the proposed project.

Fire Protection Services

Since the anticipated call load could be absorbed by the existing system, the proposed projects would not themselves create an immediate cumulative impact on fire protection, emergency response, or transport services. However, the Downey Fire Department anticipates that this project, in combination with the continued growth of Downey, would eventually result in need for additional personnel, equipment, and facilities in order to accommodate both day-to-day service demands and large-scale emergencies such as earthquakes, even assuming the project's fair share of citywide mitigation measures and funding requirements. The project's contribution to this eventual need would be less than significant.

Police Services

The Downey Police Department (DPD) does anticipate that significant cumulative impacts on their ability to provide an acceptable level of service to the City in the long term would occur with the proposed project, in conjunction with the continued growth of the City of Downey as a whole. The DPD has indicated that this project, in conjunction with the inevitable growth of Downey, would require the eventual need for additional personnel and equipment to accommodate current response

3.9 Transportation and Traffic

3.9.1 Introduction

This section provides a summary of the results of a traffic impact analysis that was conducted for the project by Stevens-Garland Associates. The methodology for the traffic study, in general, was to 1) establish the existing baseline traffic conditions at the potentially affected intersections in the study area, 2) develop future baseline traffic conditions by considering the results of regional growth and the cumulative traffic impacts of other development projects in the area, 3) estimate the level of additional traffic that would be generated by the proposed project, 4) conduct a comparative analysis of traffic conditions with and without the project, 5) assess the parking impacts, and 6) identify potential mitigation measures.

The intersection analysis is based on weekday peak hour traffic conditions at 20 intersections in the project vicinity. The analysis of the access/circulation system is based on a review of the proposed site plan in context with the existing layout of the local street network.

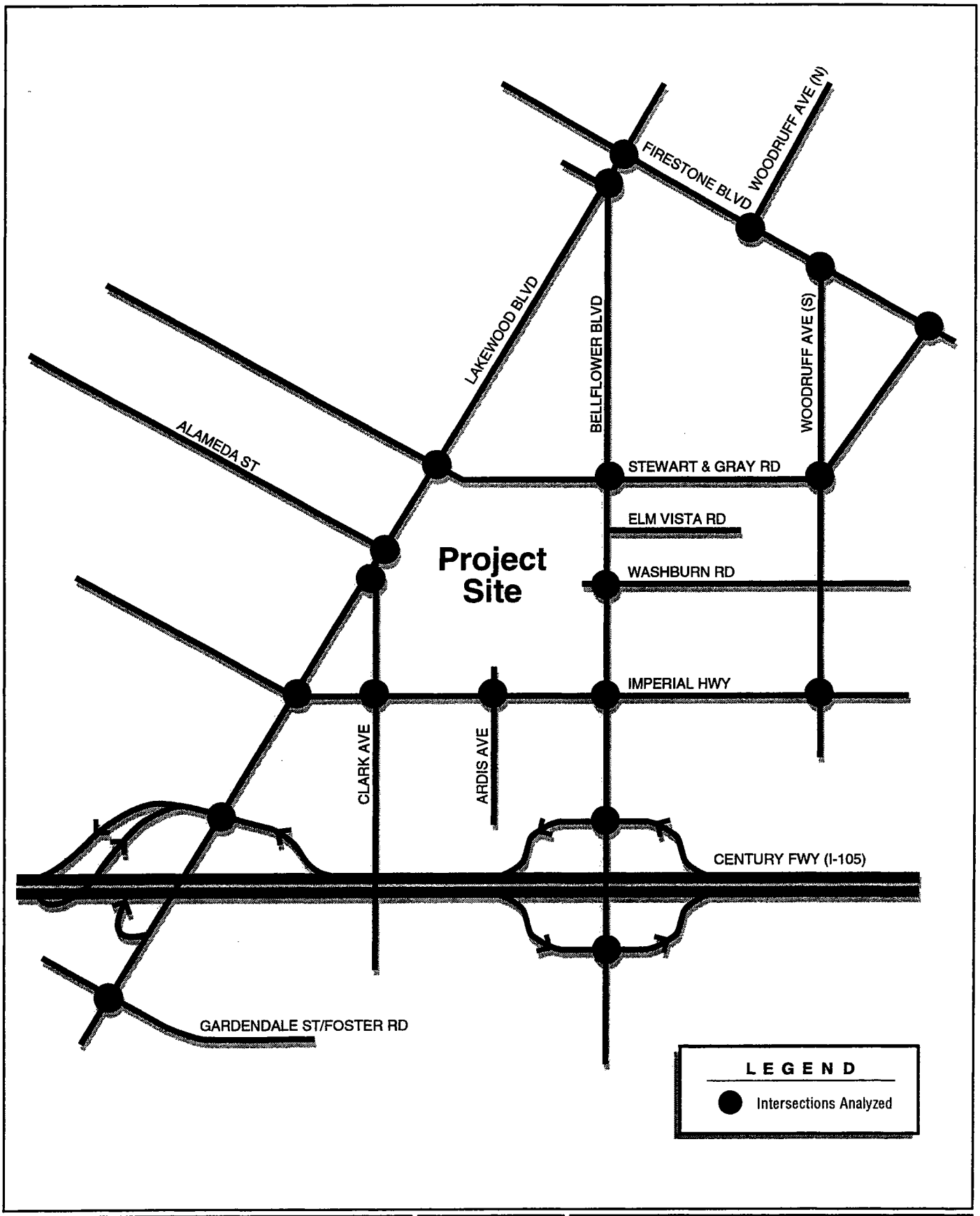
3.9.2 Existing Conditions

The street network in the project vicinity, the existing traffic volumes, and the levels of service at the affected study area intersections are described below. The study area street network and the location of the intersections that were analyzed are illustrated on Figure 3.9-1.

Street Network

Regional access to the project area is provided by the Century Freeway (I-105), which is located approximately one-quarter mile south of the project site, the San Gabriel River Freeway (I-605), which is located approximately one mile east of the project site, and the Santa Ana Freeway (I-5), which is located approximately two miles northeast of the project site. Within the project vicinity, the Century Freeway has interchanges at Lakewood Boulevard and Bellflower Boulevard, the I-605 Freeway has interchanges at Imperial Highway and Firestone Boulevard, and the Santa Ana Freeway has an interchange at Lakewood Boulevard.

The streets that provide direct access to the project site are Lakewood Boulevard, Stewart & Gray Road, Bellflower Boulevard, Imperial Highway, and Clark Avenue. Lakewood Boulevard is a four lane north-south arterial street that abuts the northwest side of the project site. Stewart & Gray Road is a four lane east-west street that abuts the north side of the project site. Bellflower Boulevard is a four lane north-south arterial street that abuts the east side of the project site. Imperial Highway is a six lane east-west arterial street that abuts the south side of



Not to Scale

SOURCE: Stevens/Garland Associates

10552-00

EIP ASSOCIATES

Study Area Roadway Network

FIGURE **3.9-1**

City of Downey

the project site. Clark Avenue is a four lane north-south street that abuts the west side of the project site.

Other streets that serve as access routes to the project area are Firestone Boulevard, Woodruff Avenue, Washburn Road, Alameda Street, and Ardis Avenue. The number of travel lanes and the speed limits on the study area roadways are shown in Table 3.9-1.

TABLE 3.9-1
TRAVEL LANES AND SPEED LIMITS ON STUDY AREA ROADWAYS

Roadway/Segment	# of Lanes	Speed Limit
Lakewood Boulevard	4/(6 with peak period restrictions)	40
Stewart & Gray Road	4	35 west of Lakewood 40 east of Lakewood
Bellflower Boulevard	4	40
Imperial Highway	6	40
Clark Avenue	4	35
Firestone Boulevard	6	35 west of Lakewood 40 east of Lakewood
Woodruff Avenue	4	35 north of Firestone 40 south of Firestone
Washburn Road	2	25
Alameda Street	2	25
Ardis Avenue	4	25

Twenty intersections in the project vicinity have been analyzed for this traffic study. All of these intersections are signalized except for the intersection of Bellflower Boulevard and Washburn Road, which has a stop sign on Washburn Road. The Firestone/Lakewood intersection is a designated monitoring location for the Los Angeles County Congestion Management Program (CMP). The intersections that were evaluated are listed below.

- Lakewood Boulevard at Firestone Boulevard
- Lakewood Boulevard at Bellflower Boulevard
- Lakewood Boulevard at Stewart & Gray Road
- Lakewood Boulevard at Alameda Street
- Lakewood Boulevard at Clark Avenue
- Lakewood Boulevard at Imperial Highway
- Lakewood Boulevard at I-105 on/off ramps
- Lakewood Boulevard at Gardendale Street/Foster Road
- Bellflower Boulevard at Stewart & Gray Road
- Bellflower Boulevard at Washburn Road
- Bellflower Boulevard at Imperial Highway
- Bellflower Boulevard at I-105 westbound on/off ramps

- Bellflower Boulevard at 1-105 eastbound on/off ramps
- Imperial Highway at Clark Avenue
- Imperial Highway at Ardis Avenue
- Firestone Boulevard at Woodruff Avenue (East)
- Firestone Boulevard at Woodruff Avenue (West)
- Firestone Boulevard at Stewart & Gray Road
- Woodruff Avenue at Stewart & Gray Road
- Woodruff Avenue at Imperial Highway

Existing Traffic Volumes

The morning and afternoon peak period traffic volumes at 14 of the 20 study area intersections were counted on Tuesday and Wednesday, March 20 and 21, 2001. Manual turning movement counts were taken at 15-minute intervals from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m. The peak hour traffic volumes at each intersection were then determined by calculating the highest one-hour interval of traffic flow during each time period. Traffic counts for two of the intersections, Firestone at Woodruff east and Firestone at Woodruff west, were obtained from a traffic study that was conducted for the Sears Auto Center and reflect counts that were taken in January 2001. Traffic counts for four of the intersections; Lakewood/Gardendale, Firestone/Stewart & Gray, Woodruff/Stewart & Gray, and Woodruff/Imperial; were taken on Wednesday, June 27, 2001. The peak hour traffic volumes and turning movements at each of the study area intersections are shown in the Appendix.

Intersection Levels of Service

To quantify the existing traffic conditions, the study area intersections were analyzed to determine their operating conditions during the weekday morning and afternoon peak periods. Based on the peak hour traffic volumes, the turning movement counts, and the existing number of lanes at each intersection, the intersection capacity utilization (ICU) values and levels of service (LOS) have been determined at each intersection.

The ICU value is a measure of an intersection's traffic volumes as compared to the theoretical capacity of the intersection. Level of service is a qualitative indicator of an intersection's operating conditions, which is used to represent various degrees of congestion and delay. It is measured from LOS A (excellent conditions) to LOS F (extreme congestion), with LOS A through D typically considered to be acceptable. The relationship between ICU values and levels of service and a brief description of each level of service are shown in Table 3.9-2.

TABLE 3.9-2
RELATIONSHIP BETWEEN ICU VALUES AND LEVELS OF SERVICE

ICU Value	Level of Service	Traffic Conditions
0 to 0.600	A	EXCELLENT - Little or No Congestion or Delays
>0.600 to 0.700	B	VERY GOOD - Occasional Congestion & Delays
>0.700 to 0.800	C	GOOD - Moderate Congestion & Delays
>0.800 to 0.900	D	FAIR - Substantial Congestion & Delays
>0.900 to 1.000	E	POOR - Excessive Congestion & Delays
>1.00	F	FAILURE - Extreme Congestion & Delays

The existing ICU values and levels of service at the 20 study area intersections are summarized on Table 3.9-3.

TABLE 3.9-3
EXISTING INTERSECTION LEVELS OF SERVICE

Intersection	ICU Value & Level of Service	
	AM Peak Hour	PM Peak Hour
Lakewood/Firestone	1.050 – F	1.141 - F
Lakewood/Bellflower	0.819 – D	0.734 - C
Lakewood/Stewart & Gray	0.872 – D	0.847 - D
Lakewood/Alameda	0.588 – A	0.616 - B
Lakewood/Clark	0.703 – C	0.659 - B
Lakewood/Imperial	0.775 – C	0.937 - E
Lakewood/I-105 Ramps	0.716 – C	0.714 - C
Lakewood/Gardendale-Foster	0.648 - B	0.662 – B
Bellflower/Stewart & Gray	0.672 – B	0.609 – B
Bellflower/Washburn	0.666 – B	0.441 – A
Bellflower/Imperial	0.909 - E	0.828 – D
Bellflower/I-105 WB	0.581 - A	0.494 – A
Bellflower/I-105 EB	0.631 - B	0.481 – A
Imperial/Clark	0.656 - B	0.684 – B
Imperial/Ardis	0.488 - A	0.509 – A
Firestone/Woodruff (W)	0.703 - C	0.681 – B
Firestone/Woodruff (E)	0.653 - B	0.738 – C
Firestone/Stewart & Gray	0.724 – C	0.731 – C
Woodruff/Stewart & Gray	0.612 – B	0.637 – B
Woodruff/Imperial	0.711 - C	0.743 – C

3.9.3 Regulatory Framework and Consistency

Southern California Association of Governments

Regional Transportation Plan (RTP)

The RTP has goals, objectives, policies, and actions pertinent to the proposed project. The RTP links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations. The following policies were identified by SCAG as relevant to the proposed project.

Policy 4.01

Transportation investments shall be based on SCAG's adopted Regional Performance Indicators, which include mobility, accessibility, environmental concerns, reliability, safety, access for livable communities, equity among population groups, and cost-effectiveness.

Consistency

The project is consistent with this policy because it has been designed to have an access and circulation system that enhances mobility, safety and accessibility in context with the surrounding street network and because a program of mitigation measures would be implemented at locations that would be significantly impacted.

Policy 4.02

Transportation investments shall mitigate environmental impacts to an acceptable level.

Consistency

The project is consistent with this policy because there would be an obligation to improve the transportation infrastructure at any location projected to operate at unacceptable conditions at which the project would result in a significant impact.

Policy 4.04

Transportation control measures shall be a priority.

Consistency

The project is consistent with this policy because appropriate traffic control measures have been incorporated into the design of the site's access and circulation system.

Policy 4.16

Maintaining and operating the existing transportation system will be a priority over expanding capacity.

Consistency

The project is consistent with this policy because the proposed development has been designed to utilize the existing roadway system to the maximum extent possible relative to local and regional access.

City of Downey

General Plan Circulation Element

The purpose of the General Plan Circulation Element is to provide a strategy for developing a transportation system that is consistent with the anticipated land use projections within the General Plan area. The following policies and programs were identified as relevant to the proposed project.

Policy 2.1.1

The City shall promote traffic safety by improving the level of service on major streets, where possible.

Program 2.1.1.1

The City shall maintain intersection service levels of major streets at "E" or better, excepting those intersections currently operating at Level of Service "F".

Consistency

The project is consistent with this program because mitigation measures have been proposed that would improve the level of service at any intersection projected to operate at LOS E or F that would be significantly impacted by the project.

Program 2.1.2.2

Support the use of non-vehicle improvements to reduce peak-hour congestion and to reduce vehicle miles traveled.

Consistency

The project is consistent with this program because the diverse mix of uses within the development and the provision of internal linkages throughout the site would encourage internal vehicle and pedestrian trips among the project components, which would thereby reduce peak hour congestion and vehicle miles traveled.

Program 2.1.1.4

Pursue implementation of development fees to require new developments and expansions of existing developments to pay the cost of circulation improvements needed to serve them.

Consistency

The project is consistent with this program because the project applicant would be required to either implement the circulation improvements needed to mitigate the project's significant traffic impacts or to contribute to a fair-share funding program that would be used to implement improvements at the affected locations.

Policy 2.2.1

The City shall pursue the standard for transportation corridors within the City that correlate with land use demands.

Program 2.2.1.1

The City shall identify and concentrate land uses with high traffic generation near major transportation corridors and public transit facilities.

Consistency

The project is consistent with this program because the project would be located adjacent to several major arterial roadways and within a half-mile of the Century Freeway (I-105).

Policy 2.7.1

The City shall encourage walking and bicycling as attractive alternatives to vehicular transportation.

Program 2.7.1.1

The City shall establish bicycle trails and pedestrian walkways within the proximity of compatible residential, commercial and industrial areas, and link them with other open space and recreational areas.

Consistency

The project is consistent with this program because the Specific Plan area is being designed to have internal pedestrian/bicycle linkages to provide the opportunity for employees and patrons to access and travel within the site via modes other than the automobile.

3.9.4 Thresholds of Significance

Based on the City of Downey criteria, the proposed project would have a significant traffic impact if it would:

- Increase the ICU value by 0.02 or more at an intersection operating at LOS E or F, or
- Result in a decrease from LOS A, B, C, or D to LOS E or F at an affected intersection.

For intersections at the end of the I-105 freeway ramps, which are operated by Caltrans, the criteria state that the project would have a significant impact if it would increase the ICU value by 0.02 at an intersection operating at LOS F.

The project would have a significant parking impact if the number of spaces provided for the project were less than the number of spaces required to accommodate the anticipated demands of the proposed uses.

The project would have a significant impact relative to site access and circulation if the project would result in circulation conflicts, a substantial disruption to existing circulation patterns, and/or a substantial increase in safety risk.

3.9.5 Impacts

The following sections summarize the analysis of the project's impacts on study area traffic conditions. First is a discussion of project-generated traffic volumes. This is followed by a description of the future baseline traffic conditions without the project. Then an analysis is presented of the project's impacts on intersection levels of service at the affected study area intersections. The impacts are evaluated individually as well as combined for the Downey Landing, LLC commercial/retail/office development and the Kaiser development. The anticipated traffic and parking impacts during construction are also addressed.

Project-Generated Traffic

The volume of traffic expected to be generated by the proposed development was determined in order to estimate the impacts of the project on the study area streets and intersections. Table 3.9-4 shows the estimated volumes of project-generated traffic for an average day and for the morning and afternoon peak hours for each of the two project scenarios for the Downey Landing, LLC commercial development. Option 1 represents the scenario where the existing Building 1 is included in the project as motion picture studio and production space. Option 2 represents the scenario where Building 1 is mostly demolished and replaced with technology/business park/research and development (R&D) uses.

The trip generation rates for each land use (vehicle trips per 1,000 sq. ft. of gross floor area) represent the average rates cited in the Institute of Transportation Engineers *Trip Generation* manual (6th Edition, 1997), with the following exceptions. The trip levels for the office, retail, and technology/R&D uses were estimated by using the fitted curve equations from the *Trip Generation* manual, as shown below. The trip rates used for the motion picture studio and production space were developed from empirical data collected at existing studios. The traffic volumes used for the park/open space component represent an estimate of patronage from outside users; i.e., people who are not on-site for any of the other uses.

Retail	AM Peak Hour	$Ln(T) = 0.596\ Ln(X) + 2.329$
	PM Peak Hour	$Ln(T) = 0.660\ Ln(X) + 3.403$
	Average Daily	$Ln(T) = 0.643\ Ln(X) + 3.654$
Office	AM Peak Hour	$Ln(T) = 0.797\ Ln(X) + 1.558$
	PM Peak Hour	$T = 1.121\ (X) + 79.295$
	Average Daily	$Ln(T) = 0.768\ Ln(X) + 3.654$
R & D	AM Peak Hour	$Ln(T) = 0.875\ Ln(X) + 0.883$
	PM Peak Hour	$Ln(T) = 0.832\ Ln(X) + 1.060$
	Average Daily	$Ln(T) = 0.824\ Ln(X) + 3.135$

Where: T = number of vehicle trips
X = floor area in 1,000 sq. ft.
Ln = natural logarithm

Table 3.9-4 indicates that Option 1 (with Building 1 as studio/production space) would generate an estimated 1,450 vehicle trips during the morning peak hour (1,170 in and 280 out), 2,290 trips during the afternoon peak hour (770 in and 1,520 out), and 22,600 trips throughout a 24-hour day. Option 2 (without Building 1) would generate an estimated 2,040 trips during the morning

peak hour (1,660 in and 380 out), 2,680 trips during the afternoon peak hour (800 in and 1,880 out), and 23,860 trips throughout a 24-hour day. As Option 2 has the higher trip generation estimates during the peak periods, the traffic impact analysis is based on this development scenario. These traffic volumes reflect the assumption that an estimated 25 percent of the traffic generated by the retail center would be comprised of passby trips; i.e., motorists who are already traveling on the street network who decide to stop at the center while passing by the site. It has also been assumed that about 5 percent of the traffic during the AM peak hour and 10 percent of the PM peak hour and daily traffic would be comprised of internal trips among the various land uses within the site.

The trip generation characteristics for the proposed Kaiser development are shown in Table 3.9-6. The trip generation rates represent the average rates from the *Trip Generation* manual. As shown, the medical complex is projected to generate 1,397 vehicle trips during the morning peak hour (1,070 in and 327 out), 1,722 trips during the afternoon peak hour (445 in and 1,277 out), and 22,450 trips throughout a 24-hour day.

Updated Project Site Plan Analysis

On February 8, 2002 an updated site plan was produced for the project area and new trip generation analysis (Tables 3.9-5, 3.9-7, and 3.9-8) has been conducted for the FEIR to determine if the trip generation characteristics of the land use mix most recently proposed for the Downey Landings project would be comparable to the scenario that was evaluated in the DEIR. Table 3.9-5 compares the volumes of site-generated traffic for the DEIR scenario, the newly proposed Option 1, and the newly proposed Option 2. Table 3.9-7 shows the updated traffic generation for the Kaiser portion of the site. While there were two options presented in the DEIR, Option 2 was evaluated in detail because it had the higher traffic generation characteristics. As shown in Table 3.9-5 and 3.9-8, the newly proposed options would generate traffic volumes that are approximately equal to or slightly less than the scenario that was evaluated in the DEIR. The traffic impacts identified in the DEIR would, therefore, be applicable to the new scenarios and the new scenarios would not result in any additional traffic impacts. The traffic volumes in Table 3.9-8 represent the sum of all components of the Specific Plan project, including the Downey Landing LLC, the Kaiser component, the studio/production component (for Option 1), and/or the technology/R & D component (for Option 2).

TABLE 3.9-4
PROJECT GENERATED TRAFFIC– DOWNEY LANDING, LLC DEVELOPMENT--
AUGUST 2, 2001 SITE PLAN

Land Use	AM Peak Hour			PM Peak Hour			Daily Traffic
	Total	In	Out	Total	In	Out	
TRIP GENERATION RATES (PER 1,000 SQ. FT.)							
Retail	0.90	61%	39%	3.89	48%	52%	41.19
Studio/Production	0.42	84%	16%	0.52	22%	78%	5.98
Museum/Learning Center	1.32	66%	34%	1.75	34%	66%	22.88
Office	1.30	88%	12%	1.25	17%	83%	8.76
Technology/R & D	1.02	83%	17%	0.91	15%	85%	6.85
Park/Open Space (total)	30	20	10	50	20	30	400
OPTION 1 – WITH BUILDING 1							
AREA I							
Retail (410,000 sq. ft.)	370	226	144	1,593	765	828	16,890
With 25% Passby Reduction	278	170	108	1,195	574	621	12,670
AREA II							
Studio/Production (883,550 sf)	371	312	59	459	101	358	5,280
Museum/Lrn Ctr (50,000 sf)	66	44	22	88	30	58	1,140
Park/Open Space	30	20	10	50	20	30	400
AREA III							
Office (600,000 sq. ft.)	778	685	93	752	128	624	5,620
Total Traffic Generated	1,523	1,231	292	2,544	853	1,691	25,110
With Internal Trip Reduction (5% AM, 10% PM & Daily)	1,450	1,170	280	2,290	770	1,520	22,600
OPTION 2 – WITHOUT BUILDING 1							
AREA I							
Retail (410,000 sq. ft.)	370	226	144	1,593	765	828	16,890
With 25% Passby Reduction	278	170	108	1,195	574	621	12,670
AREA II							
Technology/R & D (975,000sf)	997	828	169	886	133	753	6,680
Museum/Lrn Ctr (50,000 sf)	66	44	22	88	30	58	1,140
Park/Open Space	30	20	10	50	20	30	400
AREA III							
Office (600,000 sq. ft.)	778	685	93	752	128	624	5,620
Total Traffic Generated	2,149	1,747	402	2,971	885	2,086	26,510
With Internal Trip Reduction (5% AM, 10% PM & Daily)	2,040	1,660	380	2,680	800	1,880	23,860

TABLE 3.9-5
PROJECT GENERATED TRAFFIC – DOWNEY LANDING LLC
REVISED SITE PLAN FEBRUARY 8, 2002

Land Use	AM Peak Hour			PM Peak Hour			Daily Traffic
	Total	In	Out	Total	In	Out	
TRIP GENERATION RATES (PER 1,000 SQ. FT.)							
Retail	0.90	61%	39%	3.89	48%	52%	41.19
Studio/Production	0.42	84%	16%	0.52	22%	78%	5.98
Museum/Community Center	1.32	66%	34%	1.75	34%	66%	22.88
Office	1.34	88%	12%	1.27	17%	83%	9.07
Technology/R & D	1.01	83%	17%	0.89	15%	85%	6.73
Park/Open Space (total)	30	20	10	50	20	30	400
OPTION 1 – WITH BUILDING 1							
AREA I							
Retail (410,000 sq. ft.)	370	226	144	1,593	765	828	16,890
With 25% Passby Reduction	278	170	108	1,195	574	621	12,670
AREA II							
Studio/Production (1,120,530)	471	396	75	583	128	455	6,700
Museum/Com Ctr (50,000 sf)	66	44	22	88	30	58	1,140
Park/Open Space	30	20	10	50	20	30	400
AREA III							
Office (516,200 sq. ft.)	690	607	83	658	112	546	4,680
Total Traffic Generated	1,535	1,237	298	2,574	864	1,710	25,590
With Internal Trip Reduction (5% AM, 10% PM & Daily)	1,458	1,175	283	2,317	778	1,539	23,030
OPTION 2 – WITHOUT BUILDING 1							
AREA I							
Retail (410,000 sq. ft.)	370	226	144	1,593	765	828	16,890
With 25% Passby Reduction	278	170	108	1,195	574	621	12,670
AREA II							
Technology/R & D (1,072,300)	1,084	900	184	958	144	814	7,220
Museum/Com Ctr (50,000 sf)	66	44	22	88	30	58	1,140
Park/Open Space	30	20	10	50	20	30	400
AREA III							
Office (516,200 sq. ft.)	690	607	83	658	112	546	4,680
Total Traffic Generated	2,148	1,741	407	2,949	880	2,069	26,110
With Internal Trip Reduction (5% AM, 10% PM & Daily)	2,041	1,654	387	2,654	792	1,862	23,500

TABLE 3.9-6
PROJECT GENERATED TRAFFIC – KAISER DEVELOPMENT--AUGUST 2, 2001 SITE PLAN

Land Use	AM Peak Hour			PM Peak Hour			Daily Traffic
	Total	In	Out	Total	In	Out	
TRIP GENERATION RATES (PER 1,000 SQ. FT.)							
Hospital	0.97	73%	27%	0.92	24%	76%	16.78
Medical Office Building	2.43	80%	20%	3.66	27%	73%	36.13
GENERATED TRAFFIC VOLUMES							
Hospital (707,300 sf)	686	501	185	651	156	495	11,870
MOB (292,700 sf)	711	569	142	1,071	289	782	10,580
Total Traffic	1,397	1,070	327	1,722	445	1,277	22,450

TABLE 3.9-7
PROJECT GENERATED TRAFFIC – KAISER DEVELOPMENT -FEBRUARY 5, 2002 SITE PLAN

Land Use	AM Peak Hour			PM Peak Hour			Daily Traffic
	Total	In	Out	Total	In	Out	
TRIP GENERATION RATES (PER 1,000 SQ. FT.)							
Hospital + Central Plant	0.97	73%	27%	0.92	24%	76%	16.78
Medical Office Building	2.43	80%	20%	3.66	27%	73%	36.13
GENERATED TRAFFIC VOLUMES							
Hospital (707,300 sf)	686	501	185	651	156	495	11,870
MOB (292,700 sf)	711	569	142	1,071	289	782	10,580
Total Traffic	1,397	1,070	327	1,722	445	1,277	22,450

Table 3.9-8
TRAFFIC GENERATION COMPARISON
DEIR (AUGUST 2, 2001) SCENARIO VS. NEW PROPOSALS (FEBRUARY 8, 2002)

Land Use Scenario	Site-Generated Traffic Volumes		
	AM Peak Hour	PM Peak Hour	Daily Traffic
DEIR Option 2	3,440	4,400	46,310
New Option 1	2,860	4,040	45,480
New Option 2	3,440	4,370	45,950

To quantify the project-related increase in traffic on each street segment and at each intersection in the study area, the project-generated traffic volumes shown in Tables 3.9-4 and 3.9-5 were geographically distributed onto the street network. The geographical distribution assumptions are based on existing travel patterns and the anticipated distribution of customers and employees that would be using the proposed development. The geographical distribution of project generated traffic assumed for the analysis is as follows:

Century Freeway to/from the west	15%
Century Freeway to/from the east	10%
Imperial Highway west of Lakewood Blvd.	10%
Imperial Highway east of Bellflower Blvd.	10%
Stewart & Gray Road west of Lakewood Blvd.	10%
Stewart & Gray Road east of Bellflower Blvd.	10%
Lakewood Boulevard south of Century Freeway	5%
Lakewood Boulevard north of Firestone Blvd.	5%
Firestone Boulevard west of Lakewood Blvd.	5%
Clark Avenue south of Century Freeway	5%
Bellflower Boulevard south of Century Freeway	5%
Washburn Road east of Bellflower Blvd.	2.5%
Woodruff Avenue north of Firestone Blvd.	2.5 %
Alameda Street west of Lakewood Blvd.	2.5%
Ardis Avenue south of Imperial Highway	2.5%

Future Baseline Conditions Without Project

The future baseline traffic conditions without the project were projected by considering the effects of regional growth and the cumulative increase in traffic volumes that would be generated by other development projects proposed in the project area. To estimate the future baseline traffic volumes, the existing traffic volumes were multiplied by a factor of 1.10. The target year for the completion of the Downey Landing, LLC commercial development is 2006, while the target year for the completion of the Kaiser development is 2008. The typical growth rate used in Downey is one percent per year, which would result in an expansion factor of 1.05 for the year 2006 and 1.07 for the year 2008. An overall growth factor of 1.10 is used to ensure that the forecasts are conservatively high and to account for the cumulative effects of other projects in Downey and adjacent jurisdictions, regardless of which target year is assumed.

The future traffic volumes and levels of service that were developed from these cumulative traffic projections were used as the baseline scenario for the traffic impact analysis, as presented in the following sections.

Traffic Impact Analysis

The results of the traffic impact analyses for the Downey Landing, LLC development and the Kaiser development are summarized below. The findings are presented for each individual development project and for the two projects combined.

Downey Landing, LLC Development

An analysis of traffic impacts for the Downey Landing, LLC development was conducted by quantifying the before and after traffic volumes, then determining the ICU values and levels of service at the study area intersections for the "without project" and "with project" scenarios. The before-and-after ICU values and levels of service at each of the intersections in the study area are summarized in Table 3.9-9 for the morning peak hour and in Table 3.9-10 for the afternoon peak hour. The tables show the existing traffic conditions, the future baseline traffic conditions without the project, and the final traffic conditions with the addition of the project-generated traffic. The "Project Impact" column of numbers in Tables 3.9-9 and 3.9-10 indicates the change in ICU values associated with the Downey Landing, LLC project. The final column indicates if the intersection would be significantly impacted by the proposed project based on the significance criteria outlined above.

The intersection of Lakewood Boulevard and Firestone Boulevard, for example, would operate at an ICU value of 1.050 and LOS F for existing conditions, at an ICU value of 1.145 and LOS F for the future without project scenario, and at an ICU value of 1.183 and LOS F with the project during the morning peak hour (Table 3.9-9). The proposed project would change the V/C ratio by an increment of 0.038, which represents a significant impact.

Based on the significance criteria cited previously, the project would have a significant impact at five out of the 20 study area intersections during the morning peak period and at four of these intersections during the afternoon peak period. The Lakewood/Firestone, Lakewood/Stewart & Gray, Lakewood/Imperial, and Bellflower/Imperial intersections would be significantly impacted during the morning and afternoon peak periods, while the Lakewood/Bellflower intersection would be significantly impacted only during the morning peak period by the Downey Landing, LLC development.

TABLE 3.9-9
PROJECT IMPACT ON INTERSECTION LEVELS OF SERVICE
DOWNEY LANDING, LLC DEVELOPMENT - AM PEAK HOUR

Intersection	ICU Value – Level of Service				
	Existing Conditions	Future w/o Project	With Project	Project Impact	Significant Impact
Lakewood/Firestone	1.050 – F	1.145 – F	1.183 - F	0.038	Yes
Lakewood/Bellflower	0.819 – D	0.891 – D	0.947 - E	0.056	Yes
Lakewood/Stewart & Gray	0.872 – D	0.949 – E	1.044 - F	0.095	Yes
Lakewood/Alameda	0.588 – A	0.636 – B	0.690 - B	0.054	No
Lakewood/Clark	0.703 – C	0.763 – C	0.886 - D	0.123	No
Lakewood/Imperial	0.775 – C	0.843 – D	0.946 - F	0.103	Yes
Lakewood/I-105 Ramps	0.716 – C	0.777 – C	0.893 - D	0.116	No
Lakewood/Gardendale	0.648 – B	0.703 - C	0.724 - C	0.021	No
Bellflower/Stewart & Gray	0.672 – B	0.729 – C	0.852 - D	0.123	No
Bellflower/Washburn	0.666 – B	0.722 - C	0.801 - D	0.079	No
Bellflower/Imperial	0.909 – E	0.990 - E	1.018 - F	0.028	Yes
Bellflower/I-105 WB	0.581 – A	0.629 - B	0.658 - B	0.029	No
Bellflower/I-105 EB	0.631 – B	0.684 - B	0.730 - C	0.046	No
Imperial/Clark	0.656 – B	0.712 - C	0.757 - C	0.045	No
Imperial/Ardis	0.488 – A	0.526 - A	0.638 - B	0.112	No
Firestone/Woodruff (W)	0.703 – C	0.763 - C	0.778 - C	0.015	No
Firestone/Woodruff (E)	0.653 – B	0.708 - C	0.712 - C	0.004	No
Firestone/Stewart & Gray	0.724 – C	0.786 – C	0.809 – D	0.023	No
Woodruff/Stewart & Gray	0.613 – B	0.663 – B	0.690 – B	0.026	No
Woodruff/Imperial	0.711 - C	0.772 – C	0.823 - D	0.051	No

TABLE 3.9-10
PROJECT IMPACT ON INTERSECTION LEVELS OF SERVICE
DOWNEY LANDING, LLC DEVELOPMENT – PM PEAK HOUR

Intersection	ICU Value – Level of Service				
	Existing Conditions	Future w/o Project	With Project	Project Impact	Significant Impact
Lakewood/Firestone	1.141 - F	1.244 – F	1.273 – F	0.029	Yes
Lakewood/Bellflower	0.734 - C	0.798 – C	0.848 - D	0.050	No
Lakewood/Stewart & Gray	0.847 - D	0.922 – E	1.042 - F	0.120	Yes
Lakewood/Alameda	0.616 - B	0.667 – B	0.771 - C	0.104	No
Lakewood/Clark	0.659 - B	0.715 – C	0.847 - D	0.132	No
Lakewood/Imperial	0.937 - E	1.021 – F	1.183 - F	0.162	Yes
Lakewood/I-105 Ramps	0.714 - C	0.776 – C	0.884 - D	0.108	No
Lakewood/Gardendale	0.662 – B	0.719 - C	0.746 - C	0.027	No
Bellflower/Stewart & Gray	0.609 – B	0.660 – B	0.743 - C	0.083	No
Bellflower/Washburn	0.441 - A	0.475 – A	0.615 - B	0.140	No
Bellflower/Imperial	0.828 - D	0.901 – E	1.024 - F	0.123	Yes
Bellflower/I-105 WB	0.494 - A	0.533 – A	0.600 - B	0.067	No
Bellflower/I-105 EB	0.481 - A	0.519 - A	0.595 - A	0.076	No
Imperial/Clark	0.684 - B	0.743 - C	0.781 - C	0.038	No
Imperial/Ardis	0.509 - A	0.550 - A	0.742 - C	0.192	No
Firestone/Woodruff (W)	0.681 - B	0.739 - C	0.756 - C	0.017	No
Firestone/Woodruff (E)	0.738 - C	0.801 - D	0.816 - D	0.015	No
Firestone/Stewart & Gray	0.680 – B	0.737 – C	0.814 – D	0.077	No
Woodruff/Stewart & Gray	0.637 – B	0.691 - B	0.752 – C	0.061	No
Woodruff/Imperial	0.743 - C	0.807 - D	0.855 - D	0.048	No

Kaiser Development

An analysis of traffic impacts for the Kaiser development was conducted by quantifying the before and after traffic volumes, ICU values, and levels of service at the study area intersections for the "without project" and "with project" scenarios. The before-and-after ICU values and levels of service at each of the intersections in the study area are summarized in Table 3.9-11 for the morning peak hour and in Table 3.9-12 for the afternoon peak hour. The tables show the existing traffic conditions, the future baseline traffic conditions without the project, and the final traffic conditions with the addition of the project-generated traffic. The last column of numbers in Tables 3.9-11 and 3.9-12 indicates the change in ICU values associated with the Kaiser project. The "Significant Impact" column indicates if the intersection would be significantly impacted by the proposed project based on the significance criteria cited previously.

Based on the significance criteria, the project would have a significant impact at four out of the 20 study area intersections during the morning peak period and at two intersections during the afternoon peak period. The Bellflower/Imperial intersection would be significantly impacted during the morning and afternoon peak periods, the Lakewood/Firestone, Lakewood/Bellflower, and Lakewood/Stewart & Gray intersections would be significantly impacted only during the morning peak period, and the Lakewood/Imperial intersection would be significantly impacted only during the afternoon peak period by the Kaiser development.

TABLE 3.9-11
PROJECT IMPACT ON INTERSECTION LEVELS OF SERVICE
KAISER DEVELOPMENT - AM PEAK HOUR

Intersection	ICU Value – Level of Service				
	Existing Conditions	Future w/o Project	With Project	Project Impact	Significant Impact
Lakewood/Firestone	1.050 – F	1.145 – F	1.171 - F	0.026	Yes
Lakewood/Bellflower	0.819 – D	0.891 – D	0.958 - E	0.067	Yes
Lakewood/Stewart & Gray	0.872 – D	0.949 – E	0.982 – E	0.033	Yes
Lakewood/Alameda	0.588 – A	0.636 – B	0.652 - B	0.016	No
Lakewood/Clark	0.703 – C	0.763 – C	0.775 – C	0.012	No
Lakewood/Imperial	0.775 – C	0.843 – D	0.887 – D	0.044	No
Lakewood/I-105 Ramps	0.716 – C	0.777 – C	0.798 – C	0.021	No
Lakewood/Gardendale	0.648 – B	0.703 - C	0.718 - C	0.015	No
Bellflower/Stewart & Gray	0.672 – B	0.729 – C	0.851 - D	0.122	No
Bellflower/Washburn	0.666 – B	0.722 – C	0.791 – C	0.069	No
Bellflower/Imperial	0.909 – E	0.990 – E	1.117 - F	0.127	Yes
Bellflower/I-105 WB	0.581 – A	0.629 – B	0.675 - B	0.046	No
Bellflower/I-105 EB	0.631 – B	0.684 – B	0.739 - C	0.055	No
Imperial/Clark	0.656 – B	0.712 – C	0.766 - C	0.054	No
Imperial/Ardis	0.488 – A	0.526 – A	0.713 – C	0.187	No
Firestone/Woodruff (W)	0.703 – C	0.763 – C	0.773 - C	0.010	No
Firestone/Woodruff (E)	0.653 – B	0.708 – C	0.710 - C	0.002	No
Firestone/Stewart & Gray	0.724 – C	0.786 – C	0.816 – D	0.030	No
Woodruff/Stewart & Gray	0.613 – B	0.664 – B	0.685 – B	0.021	No
Woodruff/Imperial	0.711 – C	0.772 – C	0.804 – D	0.032	No

TABLE 3.9-12
PROJECT IMPACT ON INTERSECTION LEVELS OF SERVICE
KAISER DEVELOPMENT - PM PEAK HOUR

Intersection	ICU Value – Level of Service				
	Existing Conditions	Future w/o Project	With Project	Project Impact	Significant Impact
Lakewood/Firestone	1.141 - F	1.244 – F	1.263 – F	0.019	No
Lakewood/Bellflower	0.734 - C	0.798 – C	0.826 - D	0.028	No
Lakewood/Stewart & Gray	0.847 - D	0.922 – E	0.936 – E	0.014	No
Lakewood/Alameda	0.616 - B	0.667 – B	0.694 – B	0.027	No
Lakewood/Clark	0.659 - B	0.715 – C	0.732 – C	0.017	No
Lakewood/Imperial	0.937 - E	1.021 – F	1.110 - F	0.089	Yes
Lakewood/I-105 Ramps	0.714 - C	0.776 – C	0.803 - D	0.027	No
Lakewood/Gardendale	0.662 - B	0.719 – C	0.735 - C	0.016	No
Bellflower/Stewart & Gray	0.609 - B	0.660 – B	0.768 - C	0.105	No
Bellflower/Washburn	0.441 - A	0.475 – A	0.629 - B	0.154	No
Bellflower/Imperial	0.828 - D	0.901 – E	1.016 - F	0.115	Yes
Bellflower/I-105 WB	0.494 - A	0.533 – A	0.609 – B	0.076	No
Bellflower/I-105 EB	0.481 - A	0.519 – A	0.613 – B	0.094	No
Imperial/Clark	0.684 - B	0.743 – C	0.809 – D	0.066	No
Imperial/Ardis	0.509 - A	0.550 – A	0.700 – C	0.150	No
Firestone/Woodruff (W)	0.681 - B	0.739 – C	0.748 - C	0.009	No
Firestone/Woodruff (E)	0.680 - B	0.737 – C	0.747 - C	0.010	No
Firestone/Stewart & Gray	0.731 – C	0.794 – C	0.847 – D	0.053	No
Woodruff/Stewart & Gray	0.637 – B	0.691 – B	0.740 – C	0.049	No
Woodruff/Imperial	0.743 – C	0.807 – D	0.843 – D	0.036	No

Combined Downey Landing, LLC & Kaiser Developments

An analysis of traffic impacts for the combined Downey Landing, LLC and Kaiser developments was conducted by quantifying the before and after traffic volumes, ICU values, and levels of service at the study area intersections for the "without project" and "with project" scenarios. The before-and-after ICU values and levels of service at each of the intersections in the study area are summarized in Table 3.9-13 for the morning peak hour and in Table 3.9-14 for the afternoon peak hour. The tables show the existing traffic conditions, the future baseline traffic conditions without the project, and the final traffic conditions with the addition of the project-generated traffic for the entire Specific Plan development. The "Project Impact" column of numbers in Tables 3.9-13 and 3.9-14 indicates the change in ICU values associated with the combined Downey Landing, LLC and Kaiser projects. The final column indicates if the

intersection would be significantly impacted by the proposed project based on the significance criteria cited previously.

Based on the significance criteria, the project would have a significant impact at six out of the 20 study area intersections during the morning peak period and at four of these intersections during the afternoon peak period. The Lakewood/Firestone, Lakewood/Stewart & Gray, Lakewood/Imperial, and Bellflower/Imperial intersections would be significantly impacted during the morning and afternoon peak periods, while the Lakewood/Bellflower and Bellflower/Stewart & Gray intersections would be significantly impacted only during the morning peak period.

TABLE 3.9-13
PROJECT IMPACT ON INTERSECTION LEVELS OF SERVICE
COMBINED DOWNEY LANDING, LLC & KAISER DEVELOPMENTS - AM PEAK HOUR

Intersection	ICU Value – Level of Service				
	Existing Conditions	Future w/o Project	With Project	Project Impact	Significant Impact
Lakewood/Firestone	1.050 – F	1.145 – F	1.209 – F	0.064	Yes
Lakewood/Bellflower	0.819 – D	0.891 – D	1.014 – F	0.123	Yes
Lakewood/Stewart & Gray	0.872 – D	0.949 – E	1.077 – F	0.128	Yes
Lakewood/Alameda	0.588 – A	0.636 – B	0.706 – C	0.070	No
Lakewood/Clark	0.703 – C	0.763 – C	0.898 – D	0.135	No
Lakewood/Imperial	0.775 – C	0.843 – D	0.990 – E	0.147	Yes
Lakewood/I-105 Ramps	0.716 – C	0.777 – C	0.914 – E	0.137	No
Lakewood/Gardendale	0.648 - B	0.703 - C	0.739 – C	0.036	No
Bellflower/Stewart & Gray	0.672 – B	0.729 – C	0.974 – E	0.245	Yes
Bellflower/Washburn	0.666 – B	0.722 – C	0.870 – D	0.148	No
Bellflower/Imperial	0.909 – E	0.990 – E	1.145 – F	0.155	Yes
Bellflower/I-105 WB	0.581 – A	0.629 – B	0.704 – C	0.075	No
Bellflower/I-105 EB	0.631 – B	0.684 – B	0.785 – C	0.101	No
Imperial/Clark	0.656 – B	0.712 – C	0.811 – D	0.099	No
Imperial/Ardis	0.488 – A	0.526 – A	0.825 – D	0.299	No
Firestone/Woodruff (W)	0.703 – C	0.763 – C	0.788 – C	0.025	No
Firestone/Woodruff (E)	0.653 – B	0.708 – C	0.714 – C	0.006	No
Firestone/Stewart & Gray	0.724 – C	0.786 – C	0.839 – D	0.053	No
Woodruff/Stewart & Gray	0.613 – B	0.664 – B	0.711 – C	0.047	No
Woodruff/Imperial	0.711 – C	0.772 – C	0.855 – D	0.083	No

TABLE 3.9-14
PROJECT IMPACT ON INTERSECTION LEVELS OF SERVICE
COMBINED DOWNEY LANDING, LLC & KAISER DEVELOPMENTS - PM PEAK HOUR

Intersection	ICU Value – Level of Service				
	Existing Conditions	Future w/o Project	With Project	Project Impact	Significant Impact
Lakewood/Firestone	1.141 – F	1.244 – F	1.293 – F	0.049	Yes
Lakewood/Bellflower	0.734 – C	0.798 – C	0.876 - D	0.078	No
Lakewood/Stewart & Gray	0.847 – D	0.922 – E	1.056 - F	0.134	Yes
Lakewood/Alameda	0.616 – B	0.667 – B	0.798 - C	0.131	No
Lakewood/Clark	0.659 – B	0.715 – C	0.864 - D	0.149	No
Lakewood/Imperial	0.937 – E	1.021 – F	1.272 - F	0.251	Yes
Lakewood/I-105 Ramps	0.714 – C	0.776 – C	0.911 – E	0.135	No
Lakewood/Gardendale	0.662 – B	0.719 – C	0.762 - C	0.043	No
Bellflower/Stewart & Gray	0.609 – B	0.660 – B	0.851 - D	0.191	No
Bellflower/Washburn	0.441 - A	0.475 – A	0.769 - C	0.294	No
Bellflower/Imperial	0.828 - D	0.901 – E	1.139 - F	0.238	Yes
Bellflower/I-105 WB	0.494 - A	0.533 – A	0.676 - B	0.143	No
Bellflower/I-105 EB	0.481 - A	0.519 - A	0.689 - B	0.170	No
Imperial/Clark	0.684 - B	0.743 - C	0.847 – D	0.104	No
Imperial/Ardis	0.509 - A	0.550 - A	0.892 – D	0.342	No
Firestone/Woodruff (W)	0.681 - B	0.739 - C	0.765 - C	0.026	No
Firestone/Woodruff (E)	0.738 - C	0.801 - D	0.826 - D	0.025	No
Firestone/Stewart & Gray	0.680 – B	0.737 – C	0.867 – D	0.130	No
Woodruff/Stewart & Gray	0.637 – B	0.691 – B	0.801 – D	0.110	No
Woodruff/Imperial	0.743 - C	0.807 – D	0.891 – D	0.084	No

Congestion Management Program (CMP) Analysis

An analysis was conducted to determine if the project would have a significant impact at the nearest CMP freeway monitoring station, which is the I-105 Freeway between Bellflower Boulevard and the I-605 Freeway. The Los Angeles County CMP indicates that a project would have a significant freeway impact if the demand/capacity (D/C) ratio increases by 0.02 or more on a facility operating at LOS F. The impacts of the Downey Landing, LLC development on I-105 at this CMP monitoring location are summarized on Table 3.9-15 for the AM and PM peak hours. The peak hour traffic volume, demand/capacity ratio, and level of service are shown for the existing conditions, future year without project, and future year with project scenarios. The analysis indicates that the Downey Landing, LLC project would have a significant impact at this freeway location according to the CMP guidelines as the locations that operate at LOS F have a project impact greater than 0.02 during the morning peak hour in the westbound direction and during the afternoon peak hour in the eastbound direction.

TABLE 3.9-15
PROJECT IMPACTS AT CMP FREEWAY MONITORING STATION
DOWNEY LANDING, LLC DEVELOPMENT

I-105 Freeway Segment Bellflower to I-605	AM Peak Hour			PM Peak Hour		
	Volume	D/C	LOS	Volume	D/C	LOS
Eastbound (Capacity of 8,000 vehicles/hour)						
Existing Conditions	5,392	0.674	C	11,680	1.460	F(3)
Future Without Project	5,930	0.741	C	12,850	1.606	F(3)
Future With Project	5,968	0.746	C	13,038	1.630	F(3)
Increase in D/C Ratio		0.005			0.024	
Westbound (Capacity of 8,000 vehicles/hour)						
Existing Conditions	10,080	1.260	F(1)	4,598	0.575	C
Future Without Project	11,090	1.386	F(2)	5,060	0.633	C
Future With Project	11,256	1.407	F(2)	5,140	0.643	C
Increase in D/C Ratio		0.021			0.010	

The relationship between D/C ratio and level of service for freeways is as follows:

D/C Ratio	LOS
0.00 - 0.35	A
>0.35 - 0.54	B
>0.54 - 0.77	C
>0.77 - 0.93	D
>0.93 - 1.00	E
>1.00 - 1.25	F(0)
>1.25 - 0.35	F(1)
>1.35 - 1.45	F(2)
>1.45	F(3)

The impacts of the Kaiser development on I-105 at this CMP monitoring location are summarized on Table 3.9-16 for the AM and PM peak hours. The analysis indicates that the Kaiser project would have a significant impact at this freeway location according to the CMP guidelines as the locations that operate at LOS F have a project impact greater than 0.02 during the morning peak hour in the westbound direction and during the afternoon peak hour in the eastbound direction.

TABLE 3.9-16
PROJECT IMPACTS AT CMP FREEWAY MONITORING STATION - KAISER DEVELOPMENT

I-105 Freeway Segment Bellflower to I-605	AM Peak Hour			PM Peak Hour		
	Volume	D/C	LOS	Volume	D/C	LOS
Eastbound (Capacity of 8,000 vehicles/hour)						
Existing Conditions	5,392	0.674	C	11,680	1.460	F(3)
Future Without Project	5,930	0.741	C	12,850	1.606	F(3)
Future With Project	5,963	0.745	C	12,978	1.622	F(3)
Increase in D/C Ratio		0.004			0.016	
Westbound (Capacity of 8,000 vehicles/hour)						
Existing Conditions	10,080	1.260	F(1)	4,598	0.575	C
Future Without Project	11,090	1.386	F(2)	5,060	0.633	C
Future With Project	11,197	1.400	F(2)	5,105	0.638	C
Increase in D/C Ratio		0.014			0.005	

The impacts of the combined Downey Landing, LLC and Kaiser developments on I-105 at the CMP monitoring location are summarized on Table 3.9-17 for the AM and PM peak hours. The analysis indicates that the combined projects would have a significant impact at this freeway location according to the CMP guidelines as the locations that operate at LOS F have a project impact greater than 0.02 during the morning peak hour in the westbound direction and during the afternoon peak hour in the eastbound direction.

TABLE 3.9-17
PROJECT IMPACTS AT CMP FREEWAY MONITORING STATION - COMBINED DEVELOPMENTS

I-105 Freeway Segment Bellflower to I-605	AM Peak Hour			PM Peak Hour		
	Volume	D/C	LOS	Volume	D/C	LOS
Eastbound (Capacity of 8,000 vehicles/hour)						
Existing Conditions	5,392	0.674	C	11,680	1.460	F(3)
Future Without Project	5,930	0.741	C	12,850	1.606	F(3)
Future With Project	6,001	0.750	C	13,166	1.646	F(3)
Increase in D/C Ratio		0.009			0.040	
Westbound (Capacity of 8,000 vehicles/hour)						
Existing Conditions	10,080	1.260	F(1)	4,598	0.575	C
Future Without Project	11,090	1.386	F(2)	5,060	0.633	C
Future With Project	11,363	1.420	F(2)	5,185	0.648	C
Increase in D/C Ratio		0.034			0.015	

Construction Impacts

Construction of the proposed project is expected to be staged over a period of several years. The construction activities would generate varying levels of truck and automobile traffic throughout the duration of the construction phase. The construction-related traffic is generated by construction workers traveling to and from the site as well as trucks hauling material to and from the site. It is estimated that the construction activities would generate up to 400 worker-trips and an estimated 50 to 100 trucks per day to deliver construction material and remove demolition material from the site.

Parking Impacts

The proposed parking facilities at the Downey Landing, LLC and Kaiser developments would meet or exceed the City of Downey parking requirements, and parking during the construction activities would be accommodated on site. There would, therefore, be no significant parking impacts associated with the project.

Potentially Significant Impacts

Implementation of the proposed project would result in the following potentially significant impacts:

Impact 3.9-1: Traffic generated by the proposed project would result in an increase of 0.02 or greater in the ICU value for intersections that are projected to operate at Level of Service E or F.

Table 3.9-18 is a summary of the project's significant impacts at the affected study area intersections. The ICU values and levels of service for these intersections are shown in Tables 3.9-9 through 3.9-14. Implementation of Mitigation Measures 3.9-1 through 3.9-6 would reduce these impacts to a less than significant level.

TABLE 3.9-18
SUMMARY OF SIGNIFICANT IMPACTS AT INTERSECTIONS

Intersection	Downey Landing, LLC		Kaiser		Combined	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Lakewood/Firestone	X	X	X		X	X
Lakewood/Bellflower	X		X		X	
Lakewood/Stewart& Gray	X	X	X		X	X
Lakewood/Imperial	X	X		X	X	X
Bellflower/Stewart & Gray					X	
Bellflower/Imperial	X	X	X	X	X	X

Impact 3.9-2: Traffic generated by the proposed project would result in a significant impact on the Century Freeway (I-105) between Bellflower Boulevard and the I-605 Freeway during the morning and afternoon peak hours based on the criteria in the LA County Congestion Management Program (CMP).

The project would result in a significant impact at this CMP freeway monitoring location because it would result in an increase in the demand/capacity ratio of 0.02 or greater during the peak period times when the freeway is operating at level of service F. The traffic volumes, D/C ratios, and levels of service are shown in Table 3.9-15 through 3.9-17. No mitigation measure is recommended for this freeway impact.

Significant Unavoidable Impacts

The Congestion Management Program (CMP) impact on the Century Freeway (I-105) during the morning and afternoon peak periods would be significant unavoidable traffic impacts that are anticipated to result from the proposed project. There are no feasible project-related mitigation measures available for this impact.

3.9.6 Cumulative Impacts

As the traffic analysis presented above includes the cumulative impacts of general area-wide growth and traffic that would be generated by other proposed development projects in the study vicinity, the overall cumulative impacts and the proposed project's contribution to the cumulative impacts have been addressed and quantified. The traffic, parking, and truck-related

impacts during construction could potentially be exacerbated by the cumulative effects of other construction projects in the area if the construction schedules were to overlap.

3.9.7 Mitigation

The following measures are proposed to mitigate the project's traffic impacts. It should be clarified, however, that these improvements would be required to mitigate the total cumulative impacts of the entire development project, which includes the Downey Landing, LLC and Kaiser components. These mitigation measures, as described, would not necessarily be required to mitigate partial development of the project site. For example, if the commercial component of the Downey Landing, LLC development were to be completed as an initial phase, only a subset of the overall mitigation program would be required. Similarly, if the Downey Landing, LLC commercial property and the medical office building at the Kaiser site were to be developed as the initial phase, a different subset of the overall mitigation plan would be required. As it is very likely that the project would be developed in phases, which cannot accurately be specified at this time, it shall also be required that a mitigation plan will be prepared to link the specific mitigation measures with the various levels and/or combinations of development. This phased mitigation plan has been included as Mitigation Measure 3.9-7.

It should also be clarified that the mitigation measures described below are based on preliminary observations at each affected location. A detailed design of these proposed improvements has not been conducted to determine if they are feasible relative to such issues as right-of-way availability and other physical constraints. If any of the proposed mitigation measures are deemed to be infeasible during the design phase, it would be acceptable to substitute the physical improvement with a requirement that the project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at the affected location. The proportional share of the cost that would be applied to each project component would be established by the City based on a formula that would identify the relative impacts of each participating project. It should also be clarified that an alternative intersection improvement may be substituted for any of the mitigation measures outlined below if the alternative would adequately mitigate the identified project impacts, as determined by the City of Downey.

Mitigation Measure 3.9-1: Provide a Second Northbound-to-Westbound Left-Turn Lane on Lakewood Boulevard at the Lakewood/Firestone Intersection, -OR- Provide Right-Turn Lanes in the Northbound, Southbound, and Eastbound Directions and Double Left-Turn Lanes in the Eastbound and Westbound Directions, as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall

contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location.

Mitigation Measure 3.9-2: Provide an Additional Northbound Through Lane on Lakewood Boulevard at the Lakewood/Bellflower Intersection, as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location.

Mitigation Measure 3.9-3: Provide an Additional Northbound and Southbound Through Lane on Lakewood Boulevard at the Lakewood/Stewart & Gray Intersection, as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location.

Mitigation Measure 3.9-4: Provide an Additional Westbound-to-Southbound Left-Turn Lane on Imperial Highway at the Lakewood/Imperial Intersection, as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location.

Mitigation Measure 3.9-5: Provide an Eastbound-to-Southbound Right-Turn Lane on Imperial Highway at the Imperial/Bellflower Intersection, as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program

administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location.

Mitigation Measure 3.9-6: Provide a Southbound-to-westbound Right-Turn Lane on Bellflower Boulevard at the Bellflower/Stewart & Gray Intersection, as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location.

Mitigation Measure 3.9-7: Prepare a Phased Mitigation Plan to link the specific mitigation measures (Measures 3.9-1 through 3.9-6) with the various levels and/or combinations of development that are anticipated for the development, as feasible within existing right-of-way. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at these locations.

4.0 Alternatives to the Proposed Project

4.1 Introduction

Section 15126.6(a) of the CEQA Guidelines requires that an EIR describe a range of reasonable alternatives to the project, or to the location of the project, that could feasibly attain the basic objectives of the project. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR should also evaluate the comparative merits of the alternatives. This chapter sets forth alternatives to the proposed project and evaluates them, as required by CEQA.

Key provisions of the CEQA Guidelines relating to the alternatives analysis are summarized below:

- The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

- One of the alternatives analyzed must be the "no project" alternative. The "no project" analysis shall discuss the existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

- The range of alternatives required in an EIR is governed by a "rule of reason"; therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.

- The EIR should identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination.

- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.

- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

Rationale for Selecting Potentially Feasible Alternatives

Since the CEQA Guidelines require that an EIR state why an alternative is being rejected, a preliminary rationale for rejecting an alternative is presented, where applicable, in this EIR. If the City ultimately rejects any, or all alternatives, the rationale for the rejection will be presented in the findings that are required to be made before the City certifies the EIR and takes action on the project. If an alternative would cause any significant effects in addition to those that would be caused by the project, the significant effects of the alternative must be discussed, although in less detail than the significant effects of the project.

The alternatives may include no project, a different type of project, modification of the proposed project, or suitable alternative project sites. However, the range of alternatives discussed in an EIR is governed by a "rule of reason" which CEQA Guidelines Section 15126.6(f) defines as setting forth:

> only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making.

Among the factors that may be taken into account when addressing the feasibility of alternatives (as described in CEQA Section 15126.6(f)(1)) are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site. An EIR need not consider an alternative whose effects could not be reasonably identified, whose implementation is remote or speculative, and that would not achieve the basic project objectives.

For purposes of this analysis, the project alternatives are evaluated to determine the extent to which they attain the basic project objectives, while significantly lessening any significant effects of the project. The objectives of the City of Downey (the Lead Agency) and the project applicants for the project are as follows:

- Develop a land use plan for a currently underutilized site, which at build-out will result in the development of a distinctive mixed-use project (i.e., retail center, television/film production facilities, business park, museum/learning center, and hospital and medical office facility) that is consistent with the goals and policies of the City's General Plan.
- Create employment opportunities that will replace the jobs that were lost with the closing of the NASA facility, with respect to both quantity and quality.

- Develop a specific plan that will ensure project compatibility with neighboring land uses through the use of land use controls and design guidelines, while providing for both employment and shopping opportunities.
- Increase and diversify the number of retail merchandise opportunities in the community for the purpose of capturing those Downey residents who are shopping elsewhere so as to reduce the City's leakage of sales tax revenue.
- Provide for the development of additional retail businesses so as to enlarge the City's retail trade area and in turn strengthen its economic base.
- Enhance the visual character of the project site, which in turn will help to strengthen the image of the community.
- Replace the project site's existing zoning districts with a mixed-use specific plan that recognizes the site's unique features and location advantages, provides for its orderly development, and attracts high-quality retailers, businesses, and technology companies.
- Provide public improvements to serve the project site and thereby ensure an improved environmental quality for onsite businesses and employees.
- Develop a built environment that reflects a high level of concern for architectural and urban design principles through a Specific Plan.
- Attract businesses that generate positive net revenues for the community to help support local services.
- Highlight the use of some of the site's existing buildings with the advantages they offer as locations for film and television production.
- Diversify and strengthen the City's economic base by attracting base-type businesses.
- Preserve that portion of Building 1 that has been designated historical.
- Prepare a specific plan that recognizes the history that occurred at the project site involving the development of NASA's Apollo and Space Shuttle programs.
- Develop a specific plan whose land use components are internally linked for pedestrian and vehicular travel.
- Replace the functionally outmoded Kaiser Bellflower hospital with new structures that meet current life safety, fire and seismic requirements for health care facilities.
- Continue to provide health care in Kaiser owned facilities to Kaiser members served by the Bellflower facility during the replacement of the Kaiser Bellflower hospital.
- Provide a consolidated and centralized medical center location for Kaiser members in the Downey/Bellflower community to receive medical care.

- Offer state-of-the-art medical care in facilities to be constructed and designed to optimize the quality of patient care in the new millennium.

The EIR has found the following potential adverse effects of the proposed project are either less than significant, or capable of mitigation to a less-than-significant level:

- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Utilities

The proposed project has been found to cause significant unavoidable impacts in the following areas:

- Aesthetics
- Air Quality
- Traffic and Circulation

The Lead Agency selected the alternative below for a variety of reasons; however, the goal for evaluating the alternative is to identify ways to mitigate or avoid the significant environmental effects identified above resulting from the proposed project. This EIR analyzes the following feasible alternative:

- No Project/No Development

In summary, the purpose of this section is to discuss this feasible alternative and to evaluate its ability to reduce or avoid significant or adverse impacts. Please refer to the individual Environmental Analysis sections of the EIR, as well as the Executive Summary, for a detailed discussion of the levels of significance in each issue area for the proposed project.

4.2 No Project/No Development Alternative

Description

In addition to alternative development scenarios, Section 15126.6(e) of the CEQA Guidelines requires the analyses of a "no project" alternative. This "no project" analysis must discuss the existing condition of the project site, as well as what would be reasonably expected to occur in the foreseeable future if the project were not to be approved. The "no project" alternative represents the *status quo*, or maintaining the project site in its current state, which is predominantly unoccupied except for interim movie industry uses of a portion of the site for production and sound stage activities. No new environmental effects would directly result from the selection of this alternative.

Maintenance of the project site in the present state would allow the site to continue in its current, predominantly abandoned state. Because the site would not be developed, any significant and adverse environmental impacts directly or cumulatively associated with the proposed project would be avoided.

Attainment of Project Objectives

This alternative would not meet the basic project objectives outlined above. Vacancy would not constitute the highest and best use of the site, which is zoned for General Manufacturing; no increased employment opportunities would be created; no additional retail merchandise shopping opportunities would be created to serve the residents of Downey and strengthen the City's economic base; the visual character of the site would not be enhanced; businesses that generate positive net revenues for the community would not be attracted to the area; and no development regulations for the site would result.

4.3 Alternatives Found to Be Infeasible

Reduced Scale Alternative

Description

This alternative proposes to reduce the scale of the proposed project in order to reduce environmental impacts associated with the proposed project. This alternative would be most useful in minimizing significant unavoidable traffic and associated air quality impacts from the proposed project.

Attainment of Project Objectives

Implementation of this alternative would not meet the basic project objectives outlined above. Project applicant Downey Landing, LLC has indicated that due to purchase and lease prices, it is economically infeasible to reduce the project size and still support the project by potential revenues. Downey Landing, LLC has stated that it has met the minimum amount of development square footage to obtain a critical mass of building for the size of the site.

With a reduced alternative, it would be economically infeasible for project applicant Kaiser to construct a substantial enough hospital facility to accommodate the needs of its membership, and none of Kaiser's project objectives would be met by this alternative.

Alternative Site

According to the CEQA Guidelines, two major provisions are necessary for an adequate alternative site analysis—feasibility and location. The EIR should consider alternate project locations if a

significant project impact could be avoided or substantially lessened by moving the project to an alternative site.

The project sponsor Kaiser considered and rejected several alternatives that all involved the closing of Kaiser's Bellflower Hospital and contracting for inpatient services at nearby community hospitals. These alternatives are listed below, together with the factors that made them infeasible:

BELLFLOWER AREA						
Hospital	**Owner**	**Available Beds**	**OR's**	**Birthing**	**Capacity**	**Feasibility**
St. Francis	*CHW*	No response to request for information (RFI)	No response to RFI	No response to RFI	No response to RFI	Prior attempt to partner with CHW not viable. Capacity issue.
Downey Commu-nity	Indepen-dent	167	11	4329	Insufficient capacity to meet Kaiser Permanente (KP) demand	Required construction to support KP demand
Lakewood Regional	Tenet	124	8	2331	Insufficient capacity to meet KP demand	Required construction to support KP demand

HARBOR CITY AREA						
Hospital	**Owner**	**Available Beds**	**OR's**	**Birthing**	**Capacity**	**Feasibility**
Long Beach Commu-nity	CHW	260	10	5256	Insufficient capacity to meet KP demand except Pediatrics	Issue on location of hospital
St. Mary Medical Center	CHW	276	15	4672	Insufficient capacity to meet KP demand	Facility did not supply long range capacity. Used KP assumption based on historical trends
Long Beach Commu-nity & St. Mary's	CHW	536	25	9928	Capacity available to meet KP demand	Issue on location of hospitals.
San Pedro Peninsula	Indepen-dent	98	7	4672	Insufficient capacity to meet KP demand	
Little Company of Mary		198	9	3504	Insufficient capacity to meet KP demand	

HARBOR CITY AREA						
Hospital	**Owner**	**Available Beds**	**OR's**	**Birthing**	**Capacity**	**Feasibility**
Long Beach Memorial		473	30	11,680	Insufficient capacity to meet KP demand	Contract negotiations difficult
Torrance Memorial	No response to RFI	No response to RFI	No response to RFI	No response to RFI	No response to RFI	

Source: Kaiser Permanente, Office of General Counsel, Indrajit Obeysekere, July 2001

Kaiser has searched for sites sufficiently large (20 to 30 acres) to locate a medical center for several years. Due to the condition of its existing Bellflower Hospital and the need to provide seismically safe and modern facilities to its members, Kaiser could not continue its search. During the past 5 years, Kaiser considered the following adequately sized sites. However, most of them were determined not to be in the appropriate geographic location, after Kaiser extensively studied driving distances, zip codes and travel routes:

1. 2740-2750 Lomita Blvd., Torrance (24 acres available for lease or sale). This site was rejected because of its lack of proximity to Kaiser's membership and was determined to be geographically infeasible.

2. 19800 Van Ness Avenue, Torrance (49 acres site available for lease or sale). This site was rejected because of its lack of proximity to Kaiser's membership and was determined to be geographically infeasible.

3. Northrop Site at Crenshaw 105 (28 acres site available for lease or sale). This site was rejected because of its lack of proximity to Kaiser's membership and was determined to be geographically infeasible.

4. 100 East Sepulveda Boulevard, Carson. (32 acres site available for lease or sale). This site was rejected because of its lack of proximity to Kaiser's membership and was determined to be geographically infeasible.

5. Norwalk School District site (30 acres for lease or sale). The seller was unwilling to sell.

6. City of Norwalk (50 acres leased to tank farm). The City refuses to negotiate issues surround a reversionary interest, making this choice infeasible.

7. Tweedy & Kest Streets, Southgate (40 acres site available for lease or sale). This site was rejected because of its lack of proximity to Kaiser's membership and was determined to be geographically infeasible and not configured appropriately for Kaiser's needs.

All of the above alternatives were rejected as infeasible because of the factors enumerated, including location, planning code and zoning limitations, size constraints, site configuration, economic factors, and lack of operational synergy with Kaiser's other facilities.

The proposed project is unique by virtue of its location and existing uses. It is a 160-acre, primarily vacant site. There is no other location of this size within the City. In addition, if an alternative site were available, many of the same significant environmental impacts associated with the proposed project site would potentially occur at an alternate site (e.g., impacts on aesthetics, air quality, and traffic). Therefore, a discussion of an alternative site would not be feasible, nor would it meet the "rule of reason" under CEQA. This alternative was eliminated from further consideration in this EIR.

No Project/Less Intense/Reasonable Foreseeable Use Alternative

This alternative discusses potential impacts associated with build-out of the project site under the existing zoning and General Plan for the site. Under this alternative, development would reflect and expand the movie industry uses currently on site or encourage other new businesses to move into the existing buildings. This alternative would be useful in reducing traffic, noise, and air quality impacts from the proposed project. While the impacts of this alternative would be less than with the proposed project, the alternative does not meet project objectives and was therefore eliminated from further consideration.

4.4 Summary of Project Alternatives

A summary of the identified feasible project alternative, and a comparison of environmental impacts relative to the proposed project, is presented in Table 4-1.

TABLE 4-1

SUMMARY OF PROJECT ALTERNATIVE

Issue Area	No Project/No Development
Aesthetics	-1
Air Quality	-1
Noise	-1
Hazards and Hazardous Materials	-1
Hydrology and Water Quality	-1
Land Use and Planning	-1
Public Services and Utilities	-1
Population and Housing	-1
Traffic and Circulation	-1
TOTAL	-9

+1: Impacts are greater than those created by the proposed project
-1: Impacts are less than those created by the proposed project
0: Impacts are the same as those created by the proposed project

Source: EIP Associates

4.5 Environmentally Superior Alternative

The No Project/No Development option most significantly lessens all environmental impacts associated with the proposed project, and would be considered the environmentally superior alternative. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the "no project" alternative is identified as environmentally superior, the EIR shall also identify an environmentally superior alternative among the other alternatives. The No Project/Less Intense/Reasonably Foreseeable Use option also lessens the environmental impacts associated with the proposed project, but does not meet basic project objectives. Therefore, although the other alternatives could reduce the environmental impacts of the proposed project, the other alternatives would not achieve basic project objectives.

5.0 Long-Term Implications of the Proposed Project

5.1 Growth-Inducing Impacts

Section 15126 of the State CEQA Guidelines requires that this section discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly in the surrounding environment. Growth-inducing impacts are caused by those characteristics of a project that tend to foster or encourage population and/or economic growth. Inducements to growth include the generation of construction and permanent employment opportunities in the support sector of the economy. The proposed project could result in the following types of growth-inducing impacts: 1) the creation of short-term employment opportunities associated with construction of the project; and 2) the increase in long-term employment opportunities associated with new jobs generated by the proposed project.

Construction

The proposed project would create short-term construction employment in the City of Downey. As described in Section 2.0 (Project Description), the overall project has two components and would be constructed in several phases: the Downey Landing, L.L.C. project would be constructed in three phases and the Kaiser project in three phases. Construction workers are expected to be available in the local area, and it is assumed that a portion of the workers would be involved in all project construction phases, thereby decreasing the total size of the construction workforce. Construction-related activities would therefore have a negligible impact on population and housing resources. In addition, the creation of service and construction jobs would create opportunities for unemployed workers, which is considered a growth-inducing impact.

Projected Employment

Based on conservative employment generation rates for the uses proposed (an average of one employee per 300 gross square feet), the Downey Landing, LLC project, at approximately 2.1 million square feet (s.f.), would generate just about 7,100 jobs, in total, in about the following distribution:

- Area I: 900 employees (1 employee/550 s.f. for retail, 1/885 s.f. for large-format retail, and 1/175 s.f. for restaurant uses);
- Area IIA: 1,778 employees (an average of 1/250 s.f. for office uses); and

- Area IIB: 810 employees (an average of 1/300 s.f. for office and light industrial uses); and
- Area IIC: 1,539 employees (an average of 1/250 s.f. for office and uses); and
- Area IID: 2064 employees (an average of 1/250 s.f. for office uses)
-

The proposed Kaiser project (Area IV) is anticipated to generate an overall employee population of approximately 2,437 persons:

- Medical Office Buildings: 732 employees (1 employee/250 s.f. for office use)
- Central Plant: 5 employees
- Hospital Tower: 1,700 employees (2.5/1,000 s.f. for medical facility use)

Housing Demand

While approximately 9,537 new employees are expected at the proposed project, the number that will ultimately reside in Downey cannot accurately be predicted. Because a portion of Kaiser's proposed facility is a replacement for a facility in a neighboring jurisdiction, it is expected that fewer employees would relocate their residences. Further, as described in Section 3.7-5 (Population and Housing: Impacts), the City's current General Plan Housing Chapter assumed development of the project site at a greater intensity than what the project proposes, and computed housing needs and growth accordingly. These projections were, in turn, incorporated into SCAG's Regional Comprehensive Plan and Guide and Regional Housing Needs Assessment. Therefore, although the proposed project would create a demand for housing, this need was anticipated by the existing plans and policies of the City of Downey.

5.2 Summary of Cumulative Impacts

CEQA Guidelines Section 15130(a) states that, "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in [CEQA Guidelines] Section 15065(c)." This discussion, as stated in CEQA Guidelines Section 15130(b), "should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute, rather than the attributes of other projects which do not contribute to the cumulative impact."

In accordance with CEQA Guidelines Section 15130(b)(1)(B), the cumulative impact analysis for the proposed project is derived from a list of pending, approved, and reasonably foreseeable projects within the City of Downey, and other Cities within the Gateway Cities Subregion. This EIR also addresses cumulative traffic effects based on land use data and development projections included in the Los Angeles County CMP as well as other local and regional impact considerations.

For most issue areas, the geographic area affected by the cumulative impact analysis is the City of Downey, with the following exceptions:

- Aesthetics: The project site and adjacent residential uses;
- Traffic: Regional (per the Los Angeles County Congestion Management Plan);
- Population and Housing: Gateway Cities Subregion.

The proposed project will result in the **cumulatively considerable impacts** listed below, by issue area.

Aesthetics

The proposed project would contribute to the exposure of City residents to increased nighttime light and glare intensities.

Transportation and Traffic

Traffic generated by the proposed project would result in a significant unavoidable adverse impact on the Century Freeway (I-105) between Bellflower Boulevard and the I-605 Freeway during the morning and afternoon peak hours based on the criteria in the LA County Congestion Management Program (CMP).

The cumulative impacts of general area-wide growth and traffic that would be generated by other proposed development projects in the study vicinity and the proposed project's contribution to the cumulative impacts have been addressed in Section 3.9.5. The traffic, parking, and truck-related impacts during construction could potentially be exacerbated by the cumulative effects of other construction projects in the area if the construction schedules were to overlap. The expanded Kaiser facilities will result in an increase the amount of traffic on Bellflower Boulevard, Imperial Highway, and surrounding arterials, which will exacerbate the cumulative effects of traffic as a result of the proposed project.

5.3 Significant, Irreversible Environmental Changes

Section 15126.2(c) of the State CEQA Guidelines requires a discussion of any significant irreversible environmental changes, which would be caused by the proposed project. Specifically, Section 15126.2(c) states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The construction and implementation of the proposed project will entail the commitment of energy and human resources. This commitment of energy, personnel, and building materials will be commensurate with that of other retail centers, business park development projects, hospitals, and medical office buildings of similar magnitude. Manpower will also be committed for the construction of buildings and the upgrading and maintenance of public facilities necessary to support the new development.

Ongoing maintenance and operation of the project will entail a further commitment of energy resources in the form of petroleum products (diesel fuel and gasoline), natural gas, and electricity. Long-term impacts would also result from an increases in nighttime light levels, air pollutant and noise emissions from the project, vehicular traffic, public services use, and infrastructure needs. This commitment of resources will be a long-term obligation in view of the fact that, practically speaking, it is impossible to return the land to its original condition once it has been developed, and the likelihood of such a return is almost zero. In summary, implementation of the proposed project would involve the following irreversible environmental changes to existing on-site natural resources:

- Commitment of energy and water resources as a result of the operation and maintenance of the proposed development; and
- Alteration of the existing character of the site.

However, the significant irreversible environmental changes are consistent with the City's intended uses for the site, as demonstrated in the City of Downey's General Plan designation for the site.

5.4 Significant, Unavoidable Adverse Impacts

According to the CEQA Guidelines Section 15126.2(b),

> Significant Environmental Effects Which Cannot Be Avoided if the Proposed Project is Implemented. Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.

Environmental impacts associated with implementation of a project may not always be mitigated to a level considered less than significant. In such cases, a Statement of Overriding Considerations must be prepared prior to approval of the project, and in accordance with CEQA Guidelines Sections 15091 and 15093. Because implementation of the proposed project would create significant, unavoidable impacts to air quality, aesthetics, and transportation/traffic, as further described, a Statement of Overriding Considerations will be prepared to describe the specific reasons for approving the project based on information contained within the Final EIR, as well as any other information in the public record.

The following are significant, unavoidable adverse impacts that would result from project implementation. A detailed discussion of each of the impacts can be found in Chapter 3 (Environmental Analysis), under the appropriate issue area sections.

3.1 Aesthetics

The proposed project would introduce a substantial source of nighttime light into the project vicinity.

3.2 Air Quality

Impacts resulting from daily demolition and construction emissions as well as daily operational emissions would be significant and unavoidable.

3.9 Transportation and Traffic

Traffic generated by the proposed project would result in a significant unavoidable adverse impact on the Century Freeway (I-105) between Bellflower Boulevard and the I-605 Freeway during the morning and afternoon peak hours based on the criteria in the LA County Congestion Management Program (CMP).

6.0 Organizations and Persons Consulted/ List of EIR Preparers

6.1 Organizations and Persons Consulted

The following organizations and persons were contacted for information during the preparation of this EIR:

TABLE 6-1
ORGANIZATIONS AND PERSONS CONSULTED

Name	Agency/Organization
Michelle Afonin	Calsan
Desi Alvarez, Public Works Director	City of Downey
Alfred Aquado	Southern California Edison
Nancy Burke	Kaiser
William Davis, Business Development Manager	City of Downey
Scott Dinovitz, Project Manager	Woodland Construction Company
Mark Dryer, Captain	Downey Police Department
Greg Even	Los Angeles County Department of Public Works
Steven G. Fox, Program Manager, Regional Planning	Los Angeles Metropolitan Transportation Authority
Ruth Frazen, Engineering Technician	County of Los Angeles, Sanitation District
Darrell George, Economic Development Director	City of Downey
Douglas Gray, President	Downey Landing, LLC (formerly) Ezralow Retail Properties
Thomas Gray	Thomas Gray and Associates, Inc.
Jim Herrington	Kaiser
David Hickens	NASA, Johnson Space Center
Harlan R. Jeche, Unit Chief	California Department of Toxic Substances Control
Kris Keas, Technical Supervisor	Southern California Gas Company
Anthony M. La, P.E., Principal Civil Engineer/ City Traffic Eningeer	City of Downey
Frank McDonnell, Water Quality Technician	City of Downey
Lucy McGovern	Central Basin Municipal Water District
Scott Morgan, Project Analyst, State Clearinghouse	Governor's Office of Planning and Research
Don Morris	General Telephone Company
Indrajit Obeysekere, Attorney	Kaiser
Terry Pruitt, Lieutenant	Downey Police Department
Brian Raglund, Principal Civil Engineer	City of Downey
David Rodriguez, Contract Planner	City of Downey
Robert Rowe, Deputy Fire Marshall	Downey Fire Department
Thomas Ruby, Attorney	Morrison and Forrester
Mark Ruffner	Evergreen
Mark Schoeman, AIA	HMC Architects
Mark Sellheim, Principal Planner	City of Downey
Laura J. Simonek, Principal Environmental Specialist	Metropolitan Water District of Southern California
Jeffery M. Smith, AICP, Senior Planner	Southern California Association of Governments

TABLE 6-1
ORGANIZATIONS AND PERSONS CONSULTED

Name	Agency/Organization
Steve Smith, Ph.D., Program Supervisor, CEQA Section	South Coast Air Quality Management District
Paula Stayshak	Kaiser Bellflower EBS
Ed Stewart	Clayton Group
Dr. Edward Sussman	Downey Unified School District
Tony Vasquez, Public Works Supervisor II	City of Downey
Robert Warth	Southern California Gas Company
Craig Williamson, Senior Architect	Bastian and Associates
Rob Wood, Associate Governmental Program Analyst	Native American Heritage Commission
Ron Yoshiki, City Planner	City of Downey

6.2 List of EIR Preparers

This EIR was prepared by EIP Associates, under contract to the City Downey. Because no one individual can be an expert in all of the environmental analysis presented in this EIR, an interdisciplinary team, consisting of technicians and experts in various issue areas, was required to prepare and complete this study. Assisting EIP Associates in this task were Stevens-Garland Associates, MCE Consulting Engineers, City of Downey staff members, and the Project Applicant. The following specific organizations, agencies, and persons were directly involved in the preparation of this EIR.

TABLE 6-2: LIST OF EIR PREPARERS

Name	Role
EIR Consultant: EIP Associates	
Wendy Katagi	EIR Project Manager
Neill Brower	EIR Deputy Project Manager
Rhett Beavers	Specific Plan Project Manager
Michael Brown	Noise and Air Specialist
Alison Rondone	Section Author
Christy Loper	Environmental Planner
Kelsey Bennett	Environmental Planner
Susan Zagrodny	Section Author
Joel Miller	Production Coordinator
John Spranza	Associate Manager
Scott Wirtz	Environmental Planner
EIR Subconsultants: Stevens-Garland Associates	
Richard Garland, P.E.	Traffic Engineer
EIR Subconsultants: MCE Consulting Engineers	
Tom Carcelli, P.E.	Hydrology and Infrastructure Technical Report Author
Richard Moore, P.E.	Hydrology and Infrastructure Technical Report Author

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APPENDICES TO FINAL EIR

APPENDIX A

First Initial Study/Notice Of Preparation and Notice of Preparation Comment Letters

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j. Inundation by seiche, tsunami, or mudflow?				X
9. LAND USE AND PLANNING. Would the project:				
a. Physically divide an established community?				X
b. Conflict with any applicable land use plan, policy, or regulation of 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?		X		
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
10. MINERAL RESOURCES. Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
11. NOISE. Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?		X		
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X		

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e. For a project located within an airport land use plan 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?				X
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?				X
12. 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)?		X		
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
13. PUBLIC SERVICES.				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:			X	
1) Fire protection?		X		
2) Police protection?		X		

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
3) Schools?		X		
4) Parks?				X
5) Other public facilities?				X
14. 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 facility would occur or be accelerated?				X
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?				X
15. 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)?		X		
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?		X		
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e. Result in inadequate emergency access?				X
f. Result in inadequate parking capacity?				X

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
16. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?		X		
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		X		
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?		X		
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?		X		
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?		X		
g. Comply with federal, state, and local statutes and regulations related to solid waste?		X		
17. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

4.0 DISCUSSION OF ENVIRONMENTAL EVALUATION

This section analyzes the potential environmental impacts which may result from the proposed project. For the evaluation of potential impacts, the questions in the Initial Study Checklist (Section 3) are stated and answers are provided according to the analysis undertaken as part of the Initial Study. They include:

1. *No Impact*. Future development arising from the project's implementation will not have any measurable environmental impact on the environment and no additional analysis is required.

2. *Less Than Significant Impact*. The development associated with project implementation will have the potential to impact the environment; these impacts, however, will be less than the levels or thresholds that are considered significant and no additional analysis is required.

3. *Potentially Significant Impact Unless Mitigated*. The development will have the potential to generate impacts which will have a significant effect on the environment; however, mitigation measures will be effective in reducing the impacts to levels that are less than significant.

4. *Potentially Significant Impact*. Future implementation will have impacts that are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

The following is a discussion of potential project impacts as identified in the Initial Study. Explanations are provided for each item.

4.1 AESTHETICS. *Would the project:*

a) *Have a substantial adverse effect on a scenic vista?*

No Impact. The City's General Plan does not designate any adjoining or nearby roadways as scenic highways. As a consequence, project implementation will not impact a scenic vista.

b) *Substantially damage scenic resources, including, but not limited to trees, rock outcroppings and historic buildings within a state scenic highway?*

No Impact. The project site is roughly bounded by Lakewood Boulevard, Clark Avenue, Imperial Highway, Bellflower Boulevard and Stewart & Gray Road; and none of these roadways have been designated state scenic highways. Moreover, no scenic resources, including trees, rock outcroppings are located onsite. The project site is completely developed; improvements consist of buildings while the rest is covered with parking lots. As such, the site does not feature any scenic resources.

Some of the buildings, however, may possess historic value given the aerospace history and the events that occurred there. As such, the EIR will prepare an analysis in accordance with the procedures of the office of the State Historical Preservation Officer to assess the historical value of the buildings.

c) *Substantially degrade the existing visual character or quality of the site and its surroundings?*

No Impact. The project site is entirely developed with either buildings or expansive asphalt parking areas; the site's improvements were built a number of years ago and occupied by aerospace firms such as of Rockwell International and the Boeing Company. They used the buildings for testing, designing and manufacturing purposes for such space programs as the Apollo and Shuttle programs. Given their age, the buildings' exteriors have a very dated appearance and the onsite improvements are nonconforming from the standpoint they do not meet today's development standards.

In light of the improvements dated and obsolete conditions, project implementation is not expected to degrade the site's visual character. Instead, the proposed project represents a marked improvement. Moreover, the City's Design Review Board will insure the project's various components are attractive and compatible with the improvements occupying neighboring properties. The Board will approve as part of the specific plan each component's architecture, colors and materials, as well as its landscape and irrigation plans.

d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

Potentially Significant Impact. As noted above, Rockwell and more recently the Boeing Company carried out their operations at the project site. Currently, however, the facilities are either vacant or under temporary use. Given that they are irregularly occupied, project development will produce new light sources, such as buildings' exterior signs, reactivated parking lot lights, and the headlights from on-site vehicle traffic.

However, the following sections of the Downey Municipal Code would regulate lighting in the following ways:

- Section 9152.18(b) of the Downey Municipal Code specifies that outdoor lighting shall be arranged so as not to direct light on any street or abutting property, and that exposed bulbs are not permitted.
- Section 9152.18(d) requires approval of lighting intensities by the City Traffic Engineer and City Planner.
- Section 9152.18(f) forbids, in commercial and manufacturing zones, lighting over five feet in height within 20 feet of a public right-of way.

In addition to lighting requirements, the Section 9152.20(d) of the Municipal Code regulates walls and fences for the perimeters of commercial and manufacturing uses, with required minimum and maximum wall heights depending upon the type of neighboring use. Finally, all development of the project site under the proposed Specific Plan would be subject to the review and approval of the City's Design Review Board. This additional review would ensure that the intensity and containment of on-site lighting is sensitive to the uses adjacent to the project site.

Nevertheless, the substantial anticipated increase in ambient light levels in the northern portion of the project site could result in a significant impact to the residential uses north of Stewart and Gray Road, west of Lakewood Boulevard, and east of Bellflower Boulevard.

4.2 ***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 farmland.*

Would the project:

a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact. The project site is completely developed and is part of the city's urban setting. It is not under cultivation nor are the its surrounding properties being cultivated. Therefore, project implementation will not result in the conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland).

b) *Conflict with existing zoning for agricultural use, or a Williamson act contract?*

No Impact. Project development will not conflict with zoning for agricultural use or a Williamson Act Contract. The project site is zoned General Manufacturing (M-2) and this category is designed to accommodate general manufacturing activities.

c) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use?*

No Impact. As previously stated, the subject site is not used for agricultural production; furthermore, agricultural operations do not occur on any of the neighboring properties. Thus, developing the proposed master-planned project will not result in any changes to the environment that involve converting farmland to a non-agricultural use.

4.3 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?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). The project site is within the South Coast Air Basin; the basin has been designated a non-attainment area by the federal Environmental Protection Agency with its failure to meet federal ambient air quality standards. The clean air plan for the basin is the 1997 Air Quality Management Plan (AQMP). The South Coast Air Quality Management District prepared and adopted the AQMP and it's the district's responsibility to bring the basin into compliance with the plan's provisions.

Project implementation involves developing slightly more than 1.9 million square feet of building floor area. Given its substantial scope, coupled with the fact that its proposed floor area amount triggers the need for an air impact study according to the District's Air Quality Handbook, the EIR shall include a comprehensive air quality analysis. The analysis will assess both the projects' short- and long- term impacts on air quality.

Short- term impacts are those that will occur while the project is under construction. Examples include emissions from construction-related vehicles and fugitive dust from grading activities. Long-term impacts are those that would be emitted after the project is built; in other words, emissions from its day-to-day operations. For example, the emissions from project-generated traffic. Another source will be the emissions from the fossil-fuel fired power plants generating the project's electricity.

The EIR will at a minimum assess:

- Identify the existing air quality environment of the project site in the local and regional context.
- Describe the short-term air quality impacts associated with construction activities anticipated to accompany project development.
- Identify and quantify long-term air quality impacts resulting from project-generated traffic and offsite power generation.
- Assess the proposed project's consistency with the 1997 South Coast Air Quality Management Plan and the Air Districts' 1993 Air Quality Handbook.
- Identify mitigation measures necessary to reduce short- and long –term air quality impacts to a level of insignificance, and recommend measures necessary to bring the project into compliance with the 1997 AQMP.

b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Potentially Significant Unless Mitigated. Please see response to Item 4.3.a)

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)?*

Potentially Significant Unless Mitigated. Please see response to Item 4.2.a).

d) *Expose sensitive receptors to substantial pollutant concentrations?*

Potentially Significant Unless Mitigated. Please see response to Item 4.2. a).

e) *Create objectionable odors affecting a substantial number of people?*

No Impact. Multiple-use projects such as the applicant's development proposal that feature retail and office components characteristically do not create objectionable odors.

4.4 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, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No Impact. As identified above, the project site totals 140 acres; it is improved entirely with buildings and expansive asphalt covered parking lots. Therefore, as the site's existing improvements indicate, no species inhabit it.

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No Impact. The project site is void of riparian corridors or riparian habitat or any other kind of sensitive natural communities; so project implementation will not impact any natural communities.

c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact. No wetlands as defined by Section 404 of the Clean Water Act exist onsite. Thus, project implementation would not result in any impacts in this regard.

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?*

No Impact. Project implementation will not interfere with the movement of any native resident or migratory fish or wildlife species. Nor will it interfere with any kind of established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, since none exist onsite or in the vicinity of the project site.

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

No Impact. As noted previously, the project site is developed and is part of the city's built environment. Project implementation will not conflict with any of the City's policies or ordinances protecting biological resources, such as the Conservation Chapter's tree preservation policy. As noted above, the site does not feature any biological resources.

f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?*

No Impact. The project site is not under the jurisdiction of an adopted Habitat Conservation Plan, Natural Community Plan or other habitat conservation plan and no draft plan exists or is proposed. Thus, implementing the project will not result in impacts in this regard.

4.5 CULTURAL RESOURCES. *Would the project:*

a) *Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?*

Less Than Significant Impact. As a federal agency and as the property owner of the project site, NASA was required under Section 106 of the National Historic Preservation Act (NHPA) to evaluate the potential effects of its transfer of title of the project site to the City of Downey, upon on-site structures that are older than 50 years, or that may have been associated with significant events in the past. This required study includes an evaluation of the buildings' historical significance and potential eligibility to the National Register of Historic Places.

The *Final Historic Buildings and Structures Inventory and Evaluation* was prepared for NASA by Earthtech (2000) for the purposes described above and determined, based on a review of historical literature (e.g. text, maps, and photographs), interviews with individuals having knowledge of the property's/plant's history, and physical inspection and evaluation of the entire plant and its associated properties, that a complex of nineteen of the structures and features on the project site, identified as property numbers 1, 6, 290, 10, 11, 25, 36, 39, 41, 42, 108, 120, 123, 125, 126, 127, 128, 130, 288, and 290, is potentially eligible to the National Register of Historic Places. Additionally, properties 1 and 6/290 are potentially eligible to the National Register based on their individual merit as principal historic resources of the property.

The determinations of potential eligibility are based on the buildings' age and association with aviation/aerospace history. Direct associations of the facilities on the project site include the plant's standing as one of the first aircraft manufacturing facilities in the United States; the significance of the property with respect to World War II aircraft manufacture; testing and operation of the first low-level nuclear reactor in the United States; testing and patenting of the chemical milling process; research, production, or assembly of the first American rockets and missiles; design, production, assembly, and testing of the equipment and materials to put man in space and on the moon (particularly the Apollo space program); and design, production, testing, and support for the American Space Shuttle Orbiter Program.

Support of these aircraft and activities has been continuous since the plant was originally constructed in 1929, and has progressed with the concepts and technology of the changing times. The Earthtech (2000) evaluation acknowledges that some structures are more directly associated with some of the activities than others; however, all have contributed to or supported the broad historical context of the associations described above. Older structures of the earliest construction have supported the plant through its entire continuum of activity, while later buildings support and contribute to the overall theme, and provide a historic and aesthetic linkage to the entire plant.

The California State Office of Historic Preservation (SHPO) concurred with the findings of the Earthtech (2000) evaluation. Consequently, the project's potential effects on some of these structures (i.e., demolition), were regarded as adverse effects, pursuant to Section 106 of the National Historic Preservation Act. These effects would also constitute a significant impact under Section 15064.5 of the State CEQA Guidelines (the California Code of Regulations). To "resolve" or "mitigate" this impact (terms used in Section 106 of the NHPA and in the State CEQA Guidelines, respectively), NASA will enter into a Memorandum of Understanding (MOA) with the City of Downey, the General Services Administration (GSA) and SHPO.

The provisions of the MOA include the following:

- Preservation in-place by the City or its successors or assigns of a particular segment of Building 1, known in the MOA as "Building 1 Portion." Building 1 Portion includes the original wing constructed by E.M. Smith in 1929 and the engineering addition designed by Gordon Kaufmann and constructed between 1938 and 1942, including the terrazzo insignia of Consolidated Vultee Aircraft Corporation in the rotunda of the Kaufmann-designed wing. Preservation, rehabilitation, and maintenance of Building 1 Portion shall occur in accordance with the recommended approaches in "The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings" (National Park Service 1992). These Standards and Guidelines are considered to be the professional standard for such undertakings.
- If the remainder of Building 1 (other than Building 1 Portion above) is to be altered not in conformance with the Standards and Guidelines described above, or is to be demolished, the remainder of the interior and exterior of the building shall be recorded in accordance with Level I Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) guidelines to create a permanent record of the building's history and condition in its original setting. The same requirements shall apply to Buildings 6, 10, 11, 25, 36, 39, 41, 42, 108, 120, 123, 125, 126, 127, 128, 130, 288 and 290 if any portion of these buildings is to be altered not in conformance with the Standards and Guidelines, or if any portion of these buildings is to be demolished, except that Level II HABS/HAER documentation is required, and shall include streetscapes, grids, layouts, and overall views of the contributing property as a whole.
- Preservation of the brick-lined concrete walkway panels in front of Building 290 (the Apollo astronauts' signatures), and integration of the features into the City's design for the reuse of the project site in such a way as to make it readily accessible to the interested public during reasonable days and hours. The concrete panels may be relocated (on-site).
- Incorporation into development of the project site/property an interpretive display of photographs highlighting the significant events and persons associated with the

project site. The display must be made readily accessible to the interested public during reasonable days and hours.

- The restrictions and limitations described above shall run with the land of the project site/property.
- Prior to the transfer of title of the property from NASA to the City, NASA must transfer to the City all known historical documents, records, photographs found in or on the property or in NASA files to facilitate development and reuse of the property, and for required documentation. Copies of this information shall be made available to SHPO, the Historical Society, the Foundation, and appropriate archives designated by GSA.
- The City shall, in cooperation with NASA, develop an education program to foster awareness of the property and its impact on the City and on the American aeronautics and aerospace industries.

The MOA also includes provisions for dispute resolution and public objection. Also, in the event that the provisions of the MOA are violated, the MOA states that the federal government may institute a suit to require restoration of the property or to collect damages resulting from the breach of the requirements of the MOA. Additionally, GSA must provide SHPO an opportunity to comment on the transfer document for the property, including the reuse plan, and shall take SHPO's comments into account to the fullest reasonable extent.

As of the time of preparation of this Initial Study, the MOA had been put into its final form, and had already been executed by GSA and SHPO. The MOA remains to be executed by NASA and the City, but both parties have agreed to the provisions in the MOA, and execution by both parties is expected to occur during the public review period of this Initial Study. Therefore, the following mitigation measure is hereby incorporated into this Initial Study to ensure that potential impacts to historical resources are reduced to a less-than-significant level:

Mitigation Measure IS-1: The City shall execute the Memorandum of Agreement Among the National Aeronautics and Space Administration, The General Services Administration, and California State Historic Preservation Officer, and the City of Downey Regarding Disposal of a Portion of the NASA Industrial Plant, Downey, Los Angeles County, California.

b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?*

No Impact. The project site is improved and is part of the built urban environment; there are no archaeological resources onsite as defined by CEQA Guideline Section 15064.5. Therefore, project implementation will not cause a substantial adverse change in the significance of an archaeological or unique paleontological resource.

c) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

No Impact. Please refer to Item 4.5 b).

d) *Disturb any human remains, including those interred outside of formal cemeteries?*

No Impact. Onsite improvements consist of buildings and paved parking lots. Given the improvements, the site is not expected to contain any human remains.

4.6 GEOLOGY AND SOILS. *Would the project:*

a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

1) *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 the Division of Mines and Geology Special Publication 42.*

No Impact. There are no known faults underlying the City, according to the Safety Chapter of the General Plan. As such, surface rupture is not considered to be a potential problem within Downey.

2) *Strong seismic ground shaking?*

Less Than Significant Impact. Like the rest of southern California, the project site is susceptible to ground shaking with the occurrence of a seismic event. However, no significant seismic hazards exist onsite that suggest it is exposed to more potential damage from seismic events than the surrounding area. Further, no severe geological hazards or constraints have been found onsite that would preclude project development. Although the most important implication of seismic safety is building design, no special seismic design requirements other than adhering to seismic protection standards for new construction are indicated. Adherence to the seismic requirements of the latest Uniform Building Code will provide specific standards for buildings to withstand ground shaking within an acceptable level of risk.

3) *Seismic-related ground failure, including liquefaction?*

Less Than Significant Impact. In February, 1999, the California Division of Mines and Geology released a seismic hazard zone map showing all areas within Downey may be subject to liquefaction hazards. As required by state law, the project developer shall submit a geotechnical report to the Building & Safety Division during the project's construction plan check stage to identify the extent of the potential hazard. Based on the report's recommendations, measures will be advanced to lessen the liquefaction hazard.

4) *Landslides?*

No Impact. The project site and surrounding properties are fairly level; there are no hills or slopes nearby. With this topography, project implementation will not expose people or structures to potential adverse effects involving landslides.

b) *Result in substantial soil erosion or the loss of topsoil?*

No Impact. The site's soil will be exposed and susceptible to erosion during the project's various construction stages. This potential impact will be significantly reduced, however, by implementing the City's standard erosion-control practices. Other than during the construction stages, project development will not result in any soil erosion or

the possible loss of topsoil. As the project's plans show, project development will result in nearly the entire site covered with impermeable surfaces (i.e., buildings, parking structures and paved parking areas), which will preclude 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?*

Less Than Significant Impact. Please refer to Item 3.6. a.3).

d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?*

No Impact. All of the soil types in Downey can be compacted so they do not hinder site development. By adhering to accepted soils engineering and grading practices, the risk of settlement should be mitigated. Areas of compressible soil can be developed by replacing it with suitable fill and compacting it to meet load bearing specifications, using special foundation construction or a combination of these techniques. Although the characteristic soil associations have a low shrink-swell potential, where soils are thick and well developed, expansive soil should be suspected. If areas of expansive soil are identified, appropriate grading plans and foundation designs will be incorporated into the project's design.

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?*

No Impact. Site soils are capable of supporting a sewer network. As noted, the affected site is presently developed and sewers served the former use. Similarly, sewers will be the method use to carry the proposed project's wastewater.

4.7 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?*

No Impact. Due to the nature and characteristics of the project's planned uses (i.e., retail, office and research and development), their daily operations do not involve transporting, using or disposing of hazardous materials.

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?*

No Impact. Day-to-day activities at the site will not involve the use of hazardous materials. Thus, project implementation is not expected to create a significant hazard to the public or the environment in this regard.

c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

No Impact. Due to the nature and characteristics of the project's activities, their day-to-day operations will not involve the use of hazardous or acutely hazardous materials. No impacts are anticipated in this regard.

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?*

No Impact. The project site is not included on a list of sites containing hazardous materials, and will not result in a significant hazard to the public or to the environment.

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?*

No Impact. The affected site is not within the boundaries of an adopted airport land use plan nor is it within two miles of a public airport. Therefore, project implementation will not create a safety hazard to project employees or store customers nor will it pose a safety hazard for the people living and working in the area.

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?

No Impact. The proposed project site is not within the vicinity of a private airstrip so developing it will not result in a safety hazard in this regard for people residing nearby or for those employed at businesses nearby.

g) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

No Impact. According to Exhibit V-6 in the Safety Chapter of the General Plan, evacuation routes frame the project site. Lakewood Boulevard and Imperial Highway are designated primary routes, while Bellflower Boulevard and Stewart & Gray Road are listed as secondary routes. The project is not of the scope or magnitude, however, to interfere with the planned responses of the community's emergency plan. Similarly, it is not characteristic of the project's uses to block evacuation routes.

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?*

No Impact. The project site is improved and located within a fully developed urban setting. Therefore, project implementation will not expose people or structures to loss, injury or death involving wildland fires.

4.8 HYDROLOGY AND WATER QUALITY. *Would the project:*

a) *Violate any water quality standards or waste discharge requirements?*

No Impact. Project implementation solely involves converting a portion of a building from one use to another. As such, implementation will not violate a water quality standard nor will it violate a waster discharge requirement.

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 well would drop to a level which would not support existing land uses or planned uses for which permits have been granted?)*

Potentially Significant Unless Mitigated (Potential Impact will be analyzed in the EIR). Approximately 90% of the water consumed in the City of Downey is pumped from the Central Groundwater Basin. Groundwater levels are maintained by the Water Replenishment District of Southern California. The City purchases the rest of its water supply from the Metropolitan Water District (MWD). As these figures indicate, the city consumes more water than its allotted pumping allocation; and consequently depends on MWD to supplement the water supply.

Considering the project's magnitude, coupled with knowing the city uses more groundwater than its allocated, the EIR shall assess the project's impacts on the city's water supply. It will identify the daily amount of water the project's activities are anticipated to consume and compare that to supply. The EIR will also advance mitigation measures if the potential impacts are determined to be significant.

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?*

No Impact. Project implementation may alter the site's present-day drainage patterns; however, any changes are not expected to result in erosion or siltation on-or offsite. As noted previously; project development entails developing the site with impermeable surfaces such as buildings, parking areas and parking structures. As a consequence, the site's soils will be covered and therefore not susceptible to erosion.

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?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). Development as noted previously may alter the site's existing drainage pattern. And the new pattern could result in an increase in the amount of surface runoff that enters the offsite storm drain network that currently serves the site. In the event of this potential effect, the EIR will at a minimum:

- Identify and quantify the site's current drainage patterns and water flows within and adjacent to it.
- Identify the capability of the affected storm drain network to accommodate the changed water flows.

- Recommend mitigation measures if necessary to reduce potential adverse impacts to a level of insignificance.

e) *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). Please refer to item 4.8.d.

f) *Otherwise substantially degrade water quality?*

No Impact. Due to the nature and scope of the proposed project, its implementation will not degrade water quality.

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?*

No Impact. The proposed project does not involve the development of dwelling units.

h) *Place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

No Impact. The project site is within special flood hazard area (SFHA) Zone A99. Zone A99 is an area that's in the process of being restored to provide protection to structures from the base flood or a greater level of protection. The Federal Emergency Management Agency changed the site's flood zone designation to Zone A99 on September 1, 2000. With the new designation, the project site and the rest of the community is in a special flood hazard area protected from the anticipated base flood. It is protected by the Los Angeles County Drainage Area project, which is a federally sponsored flood control project now under construction.

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?*

No Impact. Please refer to Item 4.8.h).

j) *Inundation by seiche, tsunami, or mudflow?*

No Impact. No significant water features have been identified in the project area. Thus, the project site is not anticipated to experience any impacts from inundation resulting from seiches, tsunamis or mudflows.

4.9 LAND USE AND PLANNING. *Would the project:*

a) *Physically divide an established community?*

No Impact. Project implementation and operation will not physically divide any part of an established community. Instead, it involves converting a former aerospace facility, now largely vacant except for some temporary uses, into a multiple-use development

consisting of a shopping center and office park. Development will not encroach into any neighboring sites.

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 or mitigating an environmental effect?*

Less Than Significant. The project is consistent with the site's existing general plan category. However, one of the project's planned land use components is inconsistent with the site's existing zoning classification. That is, while the site's General Manufacturing (M-2) zone does permit office and research and development uses, it does not permit retail uses (i.e., the shopping center). Nonetheless, the M-2 zone was not imposed on the site for the purpose of avoiding or mitigating an environmental effect. Rather, it best reflected the improvements that have occupied the site since the 1940s: airplane manufacturing and aerospace companies.

To address the land use/zoning conflict, the application includes the preparation of a specific plan that's being designed to recognize the project's proposed uses. Moreover, the specific plan is designed to replace the site's existing zoning classifications. The specific plan will be a regulatory specific plan containing development standards, permitted and conditionally permitted land uses and maximum building intensities.

With respect to the General Plan, the site maintains the "Mixed Use" land use category. Its general plan category was changed from Manufacturing to "Mixed Use" in 1992 as part of the most recent General Plan Update. The "Mixed Use" category was designed to accommodate either commercial or manufacturing uses, or a combination of the two on the same site. And the project's proposed uses are grouped within these categories. In addition, the project's proposed floor area ratio (FAR) falls within the range that's permitted by the "Mixed Use" category. The EIR's analysis will focus on conformity between the specific plan and the goals and policies of the "Mixed Use" category.

There are also regional plans adopted by regulatory agencies that encompass the project site. Plans include: 1) the L. A. County Metropolitan Transportation Authority's Congestion Management Program; 2) and the South Coast Air Quality Management District's (SCAQMD) 1997 Air Quality Management Plan. As part of the environmental assessment, the EIR will analyze the nature and extent of the specific plan's potential impacts on these plans. For example, project-generated traffic may adversely impact the roadway network serving the development; and some sections of this network are also part of the CMP highway network. The EIR's assessment will analyze the project's traffic impacts on the CMP network. Additionally, the EIR will employ the land use analysis methodology advanced in the1997 Congestion Management Program to prepare the traffic impact analysis.

Potential air quality impacts from project activities are forecasted to exceed the established "thresholds of significance" as defined in the SCAQMD's 1993 CEQA Air Quality Handbook. The environmental document will assess the extent of the project's impacts on air quality, relative to the 1997 Air Quality Management Plan. The EIR will also suggest measures to reduce forecasted emissions from project activities to a level of insignificance.

c) *Conflict with any applicable habitat conservation plan or natural community conservation plan?*

No Impact. As stated in Response 4.4.f), the project will not conflict with a habitat conservation plan or natural community conservation plan. Neither of these kinds of plans have been imposed on the site or neighboring properties.

4.10 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 residents of the state?*

No Impact. The site does not feature any known mineral resources.

b) *Result in the loss of availability of a locally-important mineral resource recovery sitedelineated on a local general plan, specific plan or other land use plan?*

No Impact. The project site is part of a fully developed urban setting. Improvements occupying neighboring properties include a variety of uses, such as apartment complexes, single-family residences and senior health care facilities. The project site has not been delineated as a mineral resource recovery site in the City's General Plan or any other kind of land use plan. No significant impacts are anticipated in this regard.

4.11 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?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). Project implementation will generate both short- and long-term noise impacts. Short-term effects are the impacts generated by the project's construction-related activities; while project-generated traffic and onsite project activities will produce the long-term noise impacts.

And since the site's facilities are unoccupied, the proposed activities will generate substantially more traffic compared to the current inactivity. As a consequence, noise levels more than likely will increase along the roadways that serve the project site. The extent of the additional vehicular noise generated will be assessed in the EIR's noise analysis. The analysis will determine whether noise levels will exceed city standards, and whether they will expose people to levels above accepted thresholds.

In preparing the noise impact analysis, the EIR will, at a minimum:

- Identify existing noise levels generated onsite and future noise levels forecasted to be generated by project activities and the additional vehicle trips associated with the proposed project.
- Discuss short- and long-term noise impacts based on compliance with the noise levels permitted in the City's Noise Ordinance and General Plan Noise Chapter.
- Discuss the anticipated effects on surrounding sensitive noise receptors, specifically the residential uses and senior health care facilities in the vicinity of the project site.

- Recommend mitigation measures necessary to reduce all identified noise impacts to a level of insignificance.

b) *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). Please refer to the response in Item 4.11. a).

c) *A substantial permanent increase in ambient noise levels in the project vicinity above levels without the project?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). Please refer to the response in Item 4.11.a).

d) *A substantial temporary or periodic increase in ambient noise levels in the project above levels without the project?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). Refer to Response 4.11.a).

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?*

No Impact. The proposed project site is not located within an airport land use plan nor is it located within two miles of a public airport; as such, project development and operation will not expose people residing or working in the project area to excessive noise levels in this regard.

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?*

No Impact. The project site is not located near a private airstrip.

4.12 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)?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). Project implementation may create a demand for housing given the project's scale and the employment opportunities its different components will create. The project's components include a shopping center and a office park. The EIR will, at a minimum:

- Identify the project's impacts on the City's jobs/housing balance.
- Identify the number of employment opportunities the project will create.
- Recommend mitigation measures if necessary to reduce all population-related impacts to a level of insignificance.

b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

No Impact. Project implementation will not displace dwelling units since no housing exist onsite.

c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Impact. Project implementation will not displace people. Facilities occupying the 140-acre site are largely vacant, with portions of the site under temporary use, and have been so for the last few years. For a number years, Rockwell International, and more recently the Boeing Company, occupied the site. However, Boeing relocated a few years ago and the site has been vacant, with portions under temporary use, ever since.

4.13 PUBLIC SERVICES.

a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*

1-2) *Fire and Police Protection*

Potentially Significant Unless Mitigated (Potential impacts will be analyzed in the EIR) .

Project implementation will require the provision of both fire and police protection. The extent project's impacts on these providers is uncertain, however. The EIR will, at a minimum.

- Identify the departments' existing staffing and resource levels.
- Identify to what extent project implementation will impact both departments.
- Recommend mitigation measures necessary to reduce the impacts to levels of insignificance.

3) *Schools?*

Potentially Significant Unless Mitigated. (Potential impacts will be analyzed in the EIR). As noted above, the project is expected to create a number of employment opportunities. State legislation allows parents to enroll their children in the public schools in the vicinity of their place of employment. In light of the possibility future employees choose this educational option, the EIR needs to assess the potential impacts on the affected public school district (i.e., Downey Unified School District) and the public schools in the vicinity of the project site. If the EIR concludes that the impact will be significant, it will suggest mitigation measures to reduce the impact to an insignificant level.

In addition, the EIR will assess the likelihood of the project's future employees relocating near the project site and the potential impact this would have on nearby pubic schools.

4) *Parks?*

No Impact. Project implementation is not expected to impact nearby parks. The project's future employees and the shopping center's customers are not anticipated to impact these facilities. A point also worth noting regarding this matter is that a 2.45-acre park will be developed as part of Area III, as well as with a possible aerospace museum and/or community building of up to 50,000 square feet. Overall, the project would have a beneficial impact upon the City's parks and open space system.

5) *Other public facilities?*

No Impact. *Project implementation is not anticipated to* impact the City's other public facilities, such that the need would arise for new or physically altered facilities.

4.14 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 facility would occur or be accelerated?*

No Impact. Given that the proposed project involves developing a shopping center and office park, its development and operation is not expected to impact any nearby existing recreational facilities.

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?*

No Impact. As noted previously, one of the improvements planned for a Area III is a 2.45-acre park that will be developed in conjunction with a community building and aerospace museum. However, developing and operating the park is not anticipated to adversely impact the environment. Implementation will involve converting an existing parking lot into the planned park, and would constitute a beneficial impact to the City's parks and open space system.

4.15 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)?*

Potentially Significant Unless Mitigated (Potential impacts will be analyzed in the EIR). Initial estimates show the project's retail and office components will generate a substantial number of vehicle trips per day. As a consequence, project-generated traffic may adversely impact the roadway network, as well as the signalized and unsignalized intersections that serve the project site. Therefore, the EIR will analyze the project's potential traffic impacts. The traffic impact study shall assess the impacts of the development by analyzing trip generation, parking generation, trip distribution, intersection levels of service, access, on- and off-site circulation, operation analysis

(queuing, signal warrant, etc.) and examine the effects of the recommended mitigation measures.

The analysis shall employ the procedures described in the "Guidelines for Congestion Management Program Transportation Impact Analysis" and as detailed below. The City's Traffic Engineer shall determine the applicability of any assumptions incorporated in the study. Furthermore, before the selected consultant begins to prepare the Traffic Impact Study, he/she will meet with City staff to clearly establish the study's Scope of Work and define the required tasks.

Study Conditions

The study shall use current traffic volumes to assess the existing conditions. Turning movement counts and 24-hour machine traffic counts shall be conducted to sufficiently analyze the project's anticipated impacts. It shall identify all traffic impacts under the following conditions.

- Existing conditions;
- Future conditions without the project;
- Future conditions, plus proposed project; and
- Future conditions, plus proposed project with mitigation measures.

Future conditions shall be the project's opening year. The weekday AM and PM peak periods will be analyzed. The AM peak period is 7:00 AM to 9:00 AM. The PM peak period is 4:00 PM to 6:00 PM. The specific AM and PM peak hours shall be identified in the study.

Trip Generation

The study shall identify the number of daily and peak hour trips the project's proposed uses are anticipated to generate, using the most recent Institute of Traffic Engineers (ITE) Trip Generation Manual.

Parking Generation

The study shall identify the peak parking demand of each of the project's three areas and their proposed uses. On-street parking shall not be considered. The parking analysis should also consider development phasing.

Trip Distribution

The study shall provide a distribution plan for project's anticipated vehicle trips. The distribution assignments will be subject to the approval by the City's Traffic Engineer.

Level of Service: Signalized Intersections

The Study shall assess the proposed project's anticipated traffic impacts (Level of Service, queuing, delay, etc.) on the following signalized intersections:

- Lakewood Blvd./ Imperial Hwy.
- Imperial Hwy./ Clark Ave.

- Lakewood Blvd./ Firestone Blvd.
- Woodruff Ave.(E)/ Firestone Blvd.
- Woodruff Ave.(W)/ Firestone Blvd.
- Imperial Hwy./ Bellflower Blvd.
- Imperial Hwy./ Ardis Ave.
- Bellflower Blvd./Washburn Rd.
- Bellflower Blvd./ Stewart & Gray Rd.
- Lakewood Blvd./ Bellflower Blvd.
- Lakewood Blvd./ Stewart & Gray Rd.
- Lakewood Blvd./ Alameda St.
- Lakewood Blvd./ Clark Ave.
- Bellflower Blvd./ I-105 Freeway
- Lakewood Blvd/ I-105 Freeway
- All major project driveways
- Four additional locations to be determined by the City's Traffic Engineer, based on project traffic assignment

The study may assume the installation of a new traffic signal at Bellflower Boulevard and Washburn Road as part of the project. The anticipated traffic impacts at this intersection shall be analyzed accordingly.

The assessment will identify the project's anticipated traffic impacts on the level of service (LOS) at each intersection, during weekday AM and PM peak commuting hours. For this assessment, employ the Intersection Capacity Utilization (ICU)methodology.

The ICU factors are as follows: 1) Assume 1,600 vehicles per hour capacity for through and left turn lanes; 2) Right turn volume can be eliminated for free-right conditions or reduced based on volume evaluation; 3) NO adjustments for right turns on red; and 4) Assume a clearance factor of 0.10.

A significant adverse traffic impact is defined as a project that: 1) adds 2% or more traffic to an intersection operating at an ICU value of LOS E or F; or 2) a decrease in LOS from A, B, C , or D to E, or F. The impacts shall be compared against traffic conditions without the proposed project.

If the analysis shows the proposed project will significantly impact an intersection, the study will identify the most cost effective measures to reduce the impacts to an acceptable level of insignificance (Future conditions without project). The Study will also indicate the operating conditions before and after applying the mitigation measure. The operation evaluation should include queuing analysis, left-turn warrant, weaving, etc.

Level of Service: Unsignalized Intersections

The Study will also assess the anticipated traffic impacts on the unsignalized intersections near the project site during AM and PM peak commuting hours. In particular, the Study shall evaluate intersection capacity, delay, LOS, and sign warrants. Unsignalized intersections to be studied are:

- Stewart & Gray Rd./ Corrigan Ave.
- Stewart & Gray Rd./ Vultee Ave.

- Bellflower Blvd./ Rockwell Gate 53
- Bellflower Blvd./ Elm Vista St.

The study shall utilize the Highway Capacity Manual method for unsignalized intersections. A significant adverse traffic impact is defined as a project that 1) adds 2% or more to delay at an intersection operating at LOS E or F or a decrease in an intersection LOS to E or F. It shall assume the removal of the traffic signal at Bellflower Boulevard and Rockwell Gate 53 as part of the project.

Circulation

The Study shall evaluate whether the project-generated traffic would have a significant adverse effect to the traffic flow on the surrounding roadways that serve the project site: Stewart & Gray Road, Bellflower Boulevard, Imperial Highway, Clark Avenue and Lakewood Boulevard. The evaluation should focus on AM and PM peak commuting hours. It shall also identify the most cost-effective measures to reduce any significant impact to an acceptable level of insignificance (operating conditions without the project).

The Study shall evaluate the new public roadways proposed in the project. In particular, it shall consider traffic from the remaining buildings diverted to the new roadways, truck circulation and loading requirements. If traffic impacts are found to be significant, the Study shall identify the most cost-effective measures to reduce adverse impacts to insignificance. The new streets must be designed to provide access to both the project buildings and existing buildings adjacent to the Project, discourage through traffic, and minimize impacts to the existing street system. The study shall evaluate on-site circulation in conjunction with off-site circulation in order to develop a comprehensive circulation plan that promotes safe access and efficient circulation, as well as mitigates adverse traffic impacts on surrounding streets.

The Study shall include the following topics:

Executive Summary/Mitigation Measures
Site Plan/Vicinity Map
Future Conditions
Project Traffic
Parking/Circulation
Appendix/Data
Introduction/Project Description
Existing Conditions
Methodology
Future, Plus Project Conditions
Mitigation of Significant Impacts

b) *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency (CMA) for designated roads or highways?*

Potentially Significant Unless Mitigated (Potential impacts will be analyzed in the EIR). Please refer to the response for Item 4.15.a).

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?*

No Impact. The proposed project will not affect air traffic patterns nor will not result in an increase in air traffic levels.

d) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

No Impact. Project implementation may result in the need to make roadway and intersection improvements. The nature and extent of future impacts along with any recommended mitigation measures will be determined as part of the traffic analysis. None of these improvements are anticipated to create or substantially increase hazards, and all necessary improvements would be subject to the approval of the City Traffic Engineer.

e) *Result in inadequate emergency access?*

No Impact. All project facilities will be accessible to fire department personnel, fire-fighting equipment and police department personnel. All development under the proposed specific plan would be required to conform with all applicable provisions of the Uniform Fire Code, and would also be subject to review and approval by the City Fire Department.

f) *Result in inadequate parking capacity?*

No Impact. The project's uses (i.e., principally retail and office uses) will comply with the applicable parking requirements.

g) *Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?*

No Impact. Project implementation will not conflict with adopted policies, plans, or programs supporting alternative transportation modes.

4.16 UTILITIES AND SERVICE SYSTEMS. Would the project:

Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Potentially Significant Unless Mitigated (Potential Impacts will be assessed in the EIR). Project development and operation is expected to place added demand on the wastewater treatment facilities that service the project site. However it's uncertain as to the extent of the impact. The EIR will:

- Assess the existing capacity of the applicable wastewater treatment facilities.
- Identify the extent of the project's impacts.
- Identify mitigation measures necessary to reduce all impacts to a level of insignificance.

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?

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). Please refer to the response in Item 4.16.a).

c) *Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). Project development will impact the stormwater drainage facilities that serve the project site. However, it's uncertain as to the extent of the impact. The EIR will:

- Identify the current capacity of the storm drain network that serves the project site;
- Identify to what extent project implementation will impact the network;
- Identify mitigation measures necessary to reduce all impacts to a level of insignificance.

d-g) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). Project development will require the provision of certain public services and utilities including but not limited to water supplies, wastewater treatment and solid waste disposal. The adequate supply of these public services and the ability of the providers to deliver these utilities and services to the project site is uncertain.

The EIR to be prepared for the proposed project will, at a minimum:

- Assess the adequacy of the supply of services and utilities to be delivered to the project site.
- Identify impacts which might result from the provision of services and utilities to the project site.
- Identify mitigation measures necessary to reduce all identified public service and utility impacts to a level of insignificance.

f) *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?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). Please refer to response for Item 4.16 d-g.

g) *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR. Please refer to response for Item 4.16 d-g.

h) *Comply with federal, state, and local statutes and regulations related to solid waste?*

Potentially Significant Unless Mitigated (Potential Impact will be assessed in the EIR). *Pleas refer to the response for Item 4.16 d-g.*

5.0 FINDINGS OF SIGNIFICANCE

The following findings have been made regarding the mandatory findings of significance set forth in Section 15065 of the CEQA Guidelines, based on the results of this environmental assessment.

a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

Less Than Significant Impact. Implementation of the proposed project could result in the demolition or substantial modification of structures that have been determined to be potentially eligible to the National Register of Historic Places. However, as discussed above in Section 4.5 (a), this effect has already been resolved with the SHPO, and a mitigation plan has already been formulated to the satisfaction of SHPO, NASA, GSA, and the City of Downey. No further analysis of this issue is required in the EIR.

b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

Potentially Significant Unless Mitigation Incorporated (Potential Impact will be assessed in the EIR). The analysis in the EIR of each issue area identified above (refer to the responses to items 1-16) as potentially significant will include an analysis of the project's potential cumulative effect with respect to the relevant issue area.

c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Potentially Significant Unless Mitigation Incorporated (Potential Impact will be assessed in the EIR). Refer to the responses to items 1-16, above.

P:\10519-00 Downey\IS-NOP\Initial Study Working Copy.doc

South Coast
Air Quality Management District
21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 · http://www.aqmd.gov

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MAR 30 2001
PLANNING

March 23, 2001

Mr. Mark Sellheim
Principal Planner
City of Downey
Community and Economic Development Dept.
11111 Brookshire Avenue
Downey, CA 90241-7016

Dear Mr. Sellheim:

Notice of Preparation of an Environmental Impact Report
Former Rockwell/Boeing Site Specific Plan

The South Coast Air Quality Management District (AQMD) appreciates the opportunity to comment on the above-mentioned document. The AQMD's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the Draft Environmental Impact Report (EIR).

Air Quality Analysis
The AQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The AQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the AQMD's Subscription Services Department by calling (909) 396-3720.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction and operations should be considered. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the evaluation. An analysis of all toxic air contaminant impacts due to the

decommissioning or use of equipment potentially generating such air pollutants should also be included.

Mitigation Measures
In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures be utilized during project construction and operation to minimize or eliminate significant adverse air quality impacts. To assist the Lead Agency with identifying possible mitigation measures for the project, please refer to Chapter 11 of the AQMD CEQA Air Quality Handbook for sample air quality mitigation measures. Additionally, AQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook contain numerous measures for controlling construction-related emissions that should be considered for use as CEQA mitigation if not otherwise required. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed.

Data Sources
AQMD rules and relevant air quality reports and data are available by calling the AQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the AQMD's World Wide Web Homepage (http://www.aqmd.gov).

The AQMD is willing to work with the Lead Agency to ensure that project-related emissions are accurately identified, categorized, and evaluated. Please call Dr. Charles Blankson, Transportation Specialist, CEQA Section, at (909) 396-3304 if you have any questions regarding this letter.

Sincerely,

Steve Smith

Steve Smith, Ph.D.
Program Supervisor, CEQA Section
Planning, Rule Development and Area Sources

SS:CB:li

LAC010321-08LI
Control Number

Metropolitan
Transportation
Authority

One Gateway Plaza
Los Angeles, CA
90012-2952

March 27, 2001

Mr. Mark Sellheim
Community and Economic Devel. Dept.
City of Downey
11111 Brookshire Avenue
Downey, CA 90241-7016

RECEIVED
MAR 30 2001
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Dear Mr. Sellheim:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for the Former Rockwell / Boeing Site Specific Plan. This letter conveys recommendations from the Los Angeles County Metropolitan Transportation Authority (LACMTA) concerning issues that are germane to our agency's statutory responsibilities in relation to the proposed project.

A Traffic Impact Analysis (TIA), with both highway and freeway, and transit components, is required under the State of California Congestion Management Program (CMP) statute. The CMP TIA Guidelines are published in the "1997 Congestion Management Program for Los Angeles County", Appendix D. The geographic area examined in the TIA must include the following, at a minimum:

1. all CMP arterial monitoring intersections, including monitored freeway on/off-ramp intersections, where the proposed project will add 50 or more trips during either the a.m. or p.m. weekday peak hour (of adjacent street traffic); and
2. mainline freeway-monitoring locations where the project will add 150 or more trips, in either direction, during either the a.m. or p.m. weekday peak hour.

Among the required steps for the analysis of development-related impacts to transit are:

1. evidence that the affected transit operators received the NOP for the Draft EIR;
2. a summary of the existing transit services in the area;
3. estimated project trip generation and mode assignment for both morning and evening peak periods;
4. documentation on the assumptions/analyses used to determine the number of percentage of trips assigned to transit;
5. information on facilities and/or programs that will be incorporated in to the development plan that will encourage public transit usage and transportation demand management (TDM) policies and programs; and

6. an analysis of the expected project impacts on current and future transit services along with proposed project mitigation.

The MTA looks forward to reviewing the Draft EIR. If you have any questions regarding this response, please call me at 213-922-2238 or email at foxs@mta.net. Please send the Draft EIR to the following address:

LACMTA
One Gateway Plaza
Attn: Steve Fox
Regional Planning, 99-23-2
Los Angeles, CA 90012-2952

Sincerely,

S. Fox

Stephen G. Fox
Program Manager, Regional Planning

Document Details Report
State Clearinghouse Data Base

SCH# 2001031096
Project Title Former Rockwell/Boeing Site Specific Plan
Lead Agency Downey, City of

Type NOP Notice of Preparation

Description Specific plan for a multiple-use development on the 140-acre former Rockwell/Boeing site in Downey. Proposed land use include a shopping center, offices, plus buildings designed to accommodate research and development activities. Together, the project's buildings will total a maximum of ~2.1 million square feet of floor area in three distinct land use areas.
Area I. Area I encompasses slightly more than 33 acres and occupies the northern portion of the project site. A planned retail shopping center will occupy this area, and will be oriented toward Lakewood Boulevard. Other streets bordering Area I include Stewart & Gray Road and and Bellflower Boulevard. the center will feature both inline stores and freestanding buildings. Together, the center's building will provide a maximum of 410,000 square feet, plus parking.
Area II. Will total ~63 acres. It supports an existing that contains 883,550 square feet, which both Rockwell and the Boeing Company used for aerospace manufacturing and testing purposes. The development proposal involves either reusing a portion of the building for motion picture studio and production.

Lead Agency Contact

Name Mark Sellheim
Agency City of Downey Economic and Community Development Department
Phone 562/904-7154 **Fax**
email
Address 11111 Brookshire Avenue
City Downey **State** CA **Zip** 90241-7016

Project Location

County Los Angeles
City Downey
Region
Cross Streets Lakewood Boulevard/SR-19/Stewart and Gray Road
Parcel No. 6256-004-900
Township 3S **Range** 12W **Section** **Base** S. Gate

Proximity to:

Highways SR-19
Airports
Railways UPRR
Waterways San Gabriel River
Schools
Land Use Mixed Use (includes commercial and industrial uses)

Project Issues Aesthetic/Visual; Air Quality; Flood Plain/Flooding; Drainage/Absorption; Job Generation; Housing; Noise; Schools/Universities; Sewer Capacity; Solid Waste; Traffic/Circulation; Water Quality; Water Supply; Growth Inducing; Cumulative Effects; Landuse

Reviewing Agencies Resources Agency; Department of Conservation; Department of Parks and Recreation; Department of Fish and Game, Region 5; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; Caltrans, District 7; California Highway Patrol; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 4

Date Received 03/21/2001 **Start of Review** 03/21/2001 **End of Review** 04/19/2001

Note: Blanks in data fields result from insufficient information provided by lead agency.

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

Gray Davis
GOVERNOR

Steve Nissen
DIRECTOR

Notice of Preparation

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MAR 26 2001
PLANNING

March 21, 2001

To: Reviewing Agencies

Re: Former Rockwell/Boeing Site Specific Plan
SCH# 2001021096

Attached for your review and comment is the Notice of Preparation (NOP) for the Former Rockwell/Boeing Site Specific Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Mark Sellheim
City of Downey Economic and Community Development Department
11111 Brookshire Avenue
Downey, CA 90241-7016

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

for

Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-445-0613 FAX 916-323-3018 WWW.OPR.CA.GOV/CLEARINGHOUSE.HTML

OP Distribution List

County: Los Angeles SCH# 2001031096

sources Agenc,

- Resources Agency
  Nadell Gayou
- Dept. of Boating & Waterways
  Bill Curry
- California Coastal Commission
  Elizabeth A. Fuchs
- Dept. of Conservation
  Ken Trott
- Dept. of Forestry & Fire Protection
  Allen Robertson
- Office of Historic Preservation
  Hans Kreutzberg
- Dept of Parks & Recreation
  Resource Mgmt. Division
- Reclamation Board
  Pam Bruner
- S.F. Bay Conservation & Dev't. Comm.
  Steve McAdam
- Resources Agency
  Nadell Gayou
  Dept. of Water Resources

alth & Welfare

- Health & Welfare
  Wayne Hubbard
  Dept. of Health/Drinking Water

od & Agriculture

- Food & Agriculture
  Tad Bell
  Dept. of Food and Agriculture

Fish and Game

- ☐ Dept. of Fish & Game
  Joe Vincenty
  Environmental Services Division
- ☐ Dept. of Fish & Game
  Donald Koch
  Region 1
- ☐ Dept. of Fish & Game
  Banky Curtis
  Region 2
- ☐ Dept. of Fish & Game
  Brian Hunter
  Region 3
- ☐ Dept. of Fish & Game
  William Laudermilk
  Region 4
- ☒ Dept. of Fish & Game
  Sandy Peterson
  Region 5, Habitat Conservation Program
- ☐ Dept. of Fish & Game
  Gabrina Gatchel
  Region 6, Habitat Conservation Program
- ☐ Dept. of Fish & Game
  Tammy Allen
  Region 6, Inyo/Mono, Habitat Conservation Program
- ☐ Dept. of Fish & Game
  DeWayne Johnston
  Marine Region

Independent Commissions

- ☐ California Energy Commission
  Environmental Office
- ■ Native American Heritage Comm.
  Debbie Treadway
- ■ Public Utilities Commission
  Andrew Barnsdale
- ■ State Lands Commission
  Betty Silva
- ☐ Governor's Office of Planning & Research
  State Clearinghouse Planner

- ☐ Colorado River Board
  Gerald R. Zimmerman
- ☐ Tahoe Regional Planning Agency (TRPA)
  Lyn Barnett
- ☐ Office of Emergency Services
  John Rowden, Manager
- ☐ Delta Protection Commission
  Debby Eddy
- ☐ Santa Monica Mountains Conservancy
  Paul Edelman

Dept. of Transportation

- ☐ Dept. of Transportation
  IGR/Planning
  District 1
- ☐ Dept. of Transportation
  Vicki Roe
  Local, Development Review,
  District 2
- ☐ Dept. of Transportation
  Jeff Pulverman
  District 3
- ☐ Dept. of Transportation
  Jean Finney
  District 4
- ☐ Dept. of Transportation
  Lawrence Newland
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  District 10
- ☐ Dept. of Transportation
  Lou Salazar
  District 11
- ☐ Dept. of Transportation
  Aileen Kennedy
  District 12

Business, Trans & Housing

- ☐ Housing & Community Development
  Cathy Creswell
  Housing Policy Division
- ☐ Caltrans - Division of Aeronautics
  Sandy Hesnard
- ■ California Highway Patrol
  Lt. Dennis Brunette
  Office of Special Projects
- ☐ Dept. of Transportation
  Ron Helgeson
  Caltrans - Planning
- ☐ Dept. of General Services
  Robert Sleppy
  Environmental Services Section

Air Resources Board

- ☐ Airport Projects
  Jim Lerner
- ☐ Transportation Projects
  Ann Geraghty
- ☐ Industrial Projects
  Mike Tollstrup

- ☐ California Integrated Waste Management Board
  Sue O'Leary
- ☐ State Water Resources Control Board
  Diane Edwards
  Division of Clean Water Programs

- ☐ State Water Reso : Control Board
  Greg Frantz
  Division of Water Quality
- ☐ State Water Resouces Control Board
  Mike Falkenstein
  Division of Water Rights
- ■ Dept. of Toxic Substances Control
  CEQA Tracking Center

Regional Water Quality Control Board (RWQCB)

- ☐ RWQCB
  Cathleen Hudson
  North Coast Region (1)
- ☐ RWQCB
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- ☐ RWQCB
  Central Coast Region (3)
- ■ RWQCB
  Jonathan Bishop
  Los Angeles Region (4)
- ☐ RWQCB
  Central Valley Region (5)
  - ☐ RWQCB
    Central Valley Region (5)
    Fresno Branch Office
  - ☐ RWQCB
    Central Valley Region (5)
    Redding Branch Office
- ☐ RWQCB
  Lahontan Region (6)
  - ☐ RWQCB
    Lahontan Region (6)
    Victorville Branch Office
- ☐ RWQCB
  Colorado River Basin Region (7)
- ☐ RWQCB
  Santa Ana Region (8)
- ☐ RWQCB
  San Diego Region (9)

The Gas Company

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APR 0 2 2001

PLANNING

Orange Coast Region

March 28, 2001

City of Downey
Community & Economic Development Dept.
11111 Brookshire Avenue
Downey, Ca 90241-7016

Southern California Gas Company
Mailing Address:
Box 3334
Anaheim, CA
92803-3334

Attention: Mark Selheim

Subject: Notice Of Preparation of a Draft E.I.R. Former Rockwell/Boeing Site

This letter is not to be interpreted as a contractual commitment to serve the proposed project but only as an information service. Its intent is to notify you that the Southern California Gas Company has facilities in the area where the above named project is proposed. Gas service to the project could be served by an existing main without any significant impact on the environment. The service would be in accordance with the company's policies and extension rules on file with the California Public Utilities Commission at the time contractual arrangements are made.

The availability of natural gas service, as set forth in this letter, is based upon present conditions of gas supply and regulatory policies. As a public utility, the Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. We can also be affected by actions of gas supply or the condition under which service is available, gas service will be provided in accordance with revised conditions.

Estimates of gas usage for non-residential projects are developed on an individual basis and are obtained from the Commercial-Industrial Market Services Staff by calling (800) 427-2000. We have developed several programs which are available upon request to provide assistance in selecting the most energy efficient appliances or systems for a particular project. If you desire further information on any of our energy conservation programs, please contact this office for assistance.

Sincerely,

Kris Keas
Technical Supervisor

KK/mm
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circomm.doc

STATE OF CALIFORNIA Gray Davis, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

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PLANNING

March 28, 2001

Mark Sellheim
City of Downey Economic and Community Development Department
11111 Brookshire Avenue
Downey, CA 90241-7016

RE: SCH# 20010110796– Former Rockwell/Boeing Site Specific Plan

Dear Mr. Sellheim:

The Native American Heritage Commission has reviewed the above mentioned NOP. To adequately protect archaeological resources from project-related impacts, the Commission recommends the following:

✓ Provisions for accidental discovery of archeological resources:
- Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should include provisions for accidentally discovered archeological resources during construction per California Environmental Quality Act (CEQA) §15064.5 (f).

✓ Provisions for discovery of Native American human remains
- Health and Safety Code §7050.5, CEQA §15064.5 (e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery and should be included in all environmental documents.

If you have any questions, please contact me at (916) 653-4040.

Sincerely,

Rob Wood
Associate Governmental Program Analyst

CC: State Clearinghouse

The Gas Company™

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APR 02 2001

PLANNING

Orange Coast Region

March 28, 2001

City of Downey
Community & Economic Development Dept.
11111 Brookshire Avenue
Downey, Ca 90241-7016

Southern California
Gas Company
Mailing Address:
Box 3334
Anaheim, CA
92803-3334

Attention: Mark Selheim

Subject: Notice Of Preparation of a Draft E.I.R. Former Rockwell/Boeing Site

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The availability of natural gas service, as set forth in this letter, is based upon present conditions of gas supply and regulatory policies. As a public utility, the Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. We can also be affected by actions of gas supply or the condition under which service is available, gas service will be provided in accordance with revised conditions.

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Sincerely,

Kris Keas
Technical Supervisor

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STATE OF CALIFORNIA Gray Davis, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

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APR 02 2001
PLANNING

March 28, 2001

Mark Sellheim
City of Downey Economic and Community Development Department
11111 Brookshire Avenue
Downey, CA 90241-7016

RE: SCH# 20010110796– Former Rockwell/Boeing Site Specific Plan

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✓ Provisions for discovery of Native American human remains
- Health and Safety Code §7050.5, CEQA §15064.5 (e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery and should be included in all environmental documents.

If you have any questions, please contact me at (916) 653-4040.

Sincerely,

Rob Wood
Associate Governmental Program Analyst

CC: State Clearinghouse

WATER RECLAMATION
SOLID WASTE MANAGEMENT

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

JAMES F. STAHL
Chief Engineer and General Manager

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APR 05 2001
PLANNING

April 3, 2001

File No: 02-00.04-00

Mr. Mark Sellheim, Principal Planner
City of Downey
Community and Economic Development Dept.
11111 Brookshire Avenue
P.O. Box 7016
Downey, CA 90241-7016

Dear Mr. Sellheim:

Former Rockwell/Boeing Site Specific Plan

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on March 22, 2001. The proposed development is located within the jurisdictional boundaries of District No. 2. We offer the following comments regarding sewerage service:

1. Wastewater generated within the project boundaries may discharge to local sewers not maintained by the Districts for conveyance to the Districts' Downey-Bellflower Trunk Sewer, located in Lakewood Boulevard from Stewart and Gray Road to Clark Avenue and continuing south in Clark Avenue to Imperial Highway, or may discharge directly to the Districts' trunk sewer. This 21-inch diameter trunk sewer has a design capacity of 3.3-4.7 million gallons per day (mgd) and conveyed a peak flow of 2.6 mgd when last measured in 1993. A direct connection to a Districts' trunk sewer requires a Trunk Sewer Connection Permit, issued by the Districts. For information regarding the permit, please contact the Public Counter at extension 1205.

2. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant (JWPCP) located in the City of Carson or the Los Coyotes Water Reclamation Plant (WRP) located in the City of Cerritos. The JWPCP has a design capacity of 385 mgd and currently processes an average flow of 334 mgd. The Los Coyotes WRP has a design capacity of 37.5 mgd and currently processes an average flow of 34.6 mgd.

3. The expected average wastewater flow from the project site is 282,625 gallons per day.

4. Individual developments associated with the proposed project may require a Districts' permit for Industrial Wastewater Discharge. Project developers should contact the Districts' Industrial Waste Section at extension 2900, in order to reach a determination on this matter. If this permit is necessary, project developers will be required to forward a copy of final plans for the proposed development(s) to the Districts for review and approval before beginning project construction.

5. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or **increasing the existing strength and/or quantity of wastewater attributable to a particular parcel or operation already connected.** This connection fee is required to construct an incremental expansion of the Sewerage System to accommodate the proposed project which will mitigate the impact of this project on the present Sewerage System. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

6. In order for the Districts to conform with the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into the Air Quality Management Plan, which is prepared by the South Coast Air Quality Management District in order to improve air quality in the South Coast Air Basin as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner which will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels which are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 699-7411, extension 2717.

Very truly yours,

James F. Stahl

Ruth I. Frazen

Ruth I. Frazen
Engineering Technician
Planning & Property Management Section

RIF:eg

:ODMA\PCDOCS\DMS\416261

MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Office of the General Manager

April 5, 2001

Mr. Mark Sellheim
City of Downey
Community and Economic Development Department
11111 Brookshire Avenue
Downey, California 90241-7016

Dear Mr. Sellheim:

Notice of Preparation of a Draft Environmental Impact Report for the
Former Rockwell/Boeing Site Specific Plan in the City of Downey

The Metropolitan Water District of Southern California (Metropolitan) has received a Notice of Preparation (Notice) of a Draft Environmental Impact Report (EIR) for the Former Rockwell/Boeing Site Specific Plan in the City of Downey. The applicant, The Ezralow Company, proposes a multi-use development for the former Rockwell/Boeing site. Land uses planned for development include a shopping center, offices, plus buildings designed to accommodate research and development activities. This letter contains our response as a potentially affected public agency.

Our review of the Notice indicates that Metropolitan's Lower Feeder runs along the northern boundary of the proposed project and then southerly along Bellflower Boulevard. The enclosed map shows this facility in relation to the proposed project. It will be necessary for the applicant to consider this facility in its project planning.

In order to avoid potential conflicts with Metropolitan's rights-of-way, we request that any preliminary engineering design drawings or improvement plans for any activity in the area of Metropolitan's pipelines and rights-of-way be submitted for our review and written approval. The applicant may obtain detailed prints of drawings of Metropolitan's pipelines and rights-of-way by calling Metropolitan's Substructures Information Line at (213) 217-6564. To assist the applicant in preparing plans that are compatible with Metropolitan's facilities and easements, we have enclosed a copy of the "Guidelines for Developments in the Area of Facilities, Fee Properties, and/or Easements of The Metropolitan Water District of Southern California." Please note that all submitted designs or plans must clearly identify Metropolitan's facilities and rights-of-way.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

We appreciate the opportunity to provide input to your planning process and we look forward to receiving future environmental documentation on this project. If we can be of further assistance, please contact me at (213) 217-6242.

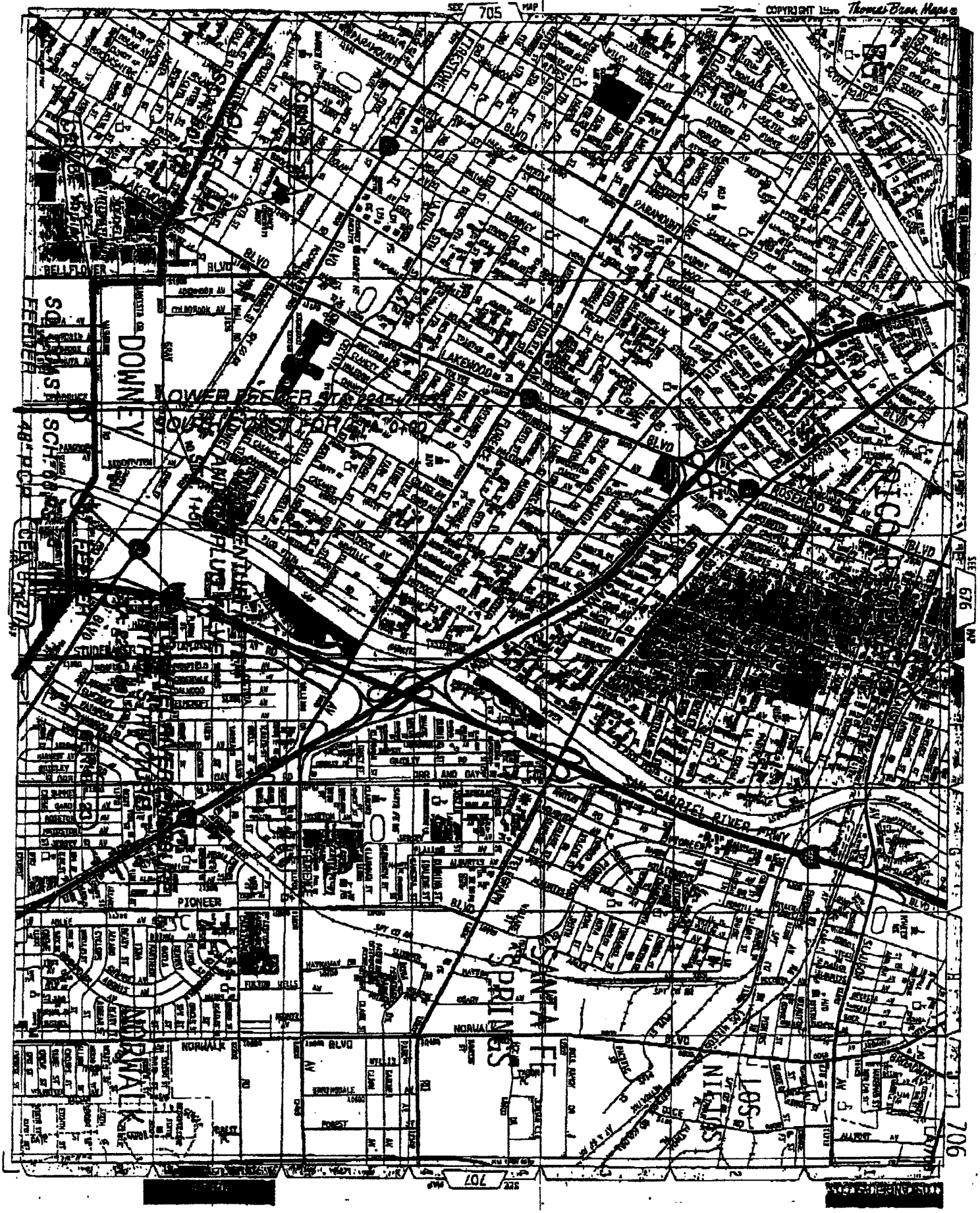
Very truly yours,

Laura J. Simonek

Laura J. Simonek
Principal Environmental Specialist

DTF

Enclosures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SOUTHERN CALIFORNIA

ASSOCIATION of GOVERNMENTS

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San Bernardino County: Jon Mikels, San Bernardino County • Bill Alexander, Rancho Cucamonga • Jim Bagley, Twentynine Palms • David Eshleman, Fontana • Lee Ann Garcia, Grand Terrace • Gwenn Norton-Perry, Chino Hills • Judith Valles, San Bernardino

Ventura County: Jude Mikels, Ventura County • Donna De Paola, San Buenaventura • Glen Becerra, Simi Valley • Toni Young, Port Hueneme

Riverside County Transportation Commission: Robin Lowe, Hemet

Ventura County Transportation Commission: Bill Davis, Simi Valley

April 5, 2001

Mr. Mark Sellheim
Principal Planner
City of Downey
Economic and Community Development Department
11111 Brookshire Avenue
Downey, CA 90241-7016

RE: **Comments on the Notice of Preparation for a Draft Environmental Impact Report for the Former Rockwell/Boeing Site Specific Plan - SCAG No. I 20010140**

Dear Mr. Sellheim:

Thank you for submitting the **Notice of Preparation for a Draft Environmental Impact Report for the Former Rockwell/Boeing Site Specific Plan** to SCAG for review and comment. As areawide clearinghouse for regionally significant projects, SCAG assists cities, counties and other agencies in reviewing projects and plans for consistency with regional plans.

In addition, The California Environmental Quality Act requires that EIRs discuss any inconsistencies between the proposed project and the applicable general plans and **regional plans (Section 15125 [d])**. If there are inconsistencies, an explanation and rationalization for such inconsistencies should be provided.

Policies of SCAG's Regional Comprehensive Plan and Guide and Regional Transportation Plan, which may be applicable to your project, are outlined in the attachment. **We expect the DEIR to specifically cite the appropriate SCAG policies and address the manner in which the Project is consistent with applicable core policies or supportive of applicable ancillary policies. Please use our policy numbers to refer to them in your DEIR. Also, we would encourage you to use a side-by-side comparison of SCAG policies with a discussion of the consistency or support of the policy with the Proposed Project.**

Please provide a minimum of 45 days for SCAG to review the DEIR when this document is available. If you have any questions regarding the attached comments, please contact me at (213) 236-1867. Thank you.

Sincerely,

JEFFREY M. SMITH, AICP
Senior Planner
Intergovernmental Review

Printed on Recycled Paper 559 7/13/01

COMMENTS ON THE PROPOSAL TO DEVELOP A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE FORMER ROCKWELL/BOEING SITE SPECIFIC PLAN SCAG NO. I 20010140

PROJECT DESCRIPTION

The proposed Project considers the development of a Specific Plan for a multi-use development proposal that's planned for the 140-acre, former Rockwell/Boeing site in the City of Downey. Land uses planned for development include a shopping center, offices, plus buildings to accommodate research and development activities. The proposed development will total a maximum of approximately 2.1 million square feet of floor area in three distinct land use areas.

CONSISTENCY WITH REGIONAL COMPREHENSIVE PLAN AND GUIDE POLICIES

The Growth Management Chapter (GMC) of the Regional Comprehensive Plan and Guide (RCPG) contains the following policies that are particularly applicable and should be addressed in the Draft EIR for the Project.

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

Regional Growth Forecasts

The Draft EIR should reflect the most current SCAG forecasts which are the 1998 RTP (April 1998) Population, Household and Employment forecasts for the Gateway Cities Council of Governments (GCCOG) subregion and the City of Downey. These forecasts follow:

GCCOG Subregional Forecasts	2000	2005	2010	2015	2020
Population	2,086,500	2,149,700	2,196,900	2,275,500	2,368,600
Households	597,400	606,600	620,100	636,600	669,900
Employment	879,300	938,900	1,017,700	1,063,300	1,110,400

City of Downey Forecasts	2000	2005	2010	2015	2020
Population	99,900	102,900	105,100	108,800	113,200
Households	33,700	33,900	34,200	34,600	35,400
Employment	51,500	54,700	58,900	61,400	64,400

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

The **Regional Transportation Plan (RTP)** also has goals, objectives, policies and actions pertinent to this proposed project. This RTP links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations. Among the relevant goals, objectives, policies and actions of the RTP are the following:

Core Regional Transportation Plan Policies

4.01 *Transportation investments shall be based on SCAG's adopted Regional Performance Indicators.*

Mobility - Transportation Systems should meet the public need for improved access, and for safe, comfortable, convenient and economical movements of people and goods.

- *Average Work Trip Travel Time in Minutes – 22 minutes*
- *PM Peak Highway Speed – 33 mph*
- *Percent of PM Peak Travel in Delay (All Trips) – 33%*

Accessibility - Transportation Systems should ensure the ease with which opportunities are reached. Transportation and land use measures should be employed to ensure minimal time and cost.

- *Work Opportunities within 25 Minutes – 88%*

Environment - Transportation Systems should sustain development and preservation of the existing system and the environment. (All Trips)

- *Meeting Federal and State Standards – Meet Air Plan Emission Budgets*

Reliability - Reasonable and dependable levels of service by mode. (All Trips)

- *Transit – 63%*
- *Highway – 76%*

Safety - Transportation Systems should provide minimal, risk, accident, death and injury. (All Trips)

- *Fatalities Per Million Passenger Miles – 0.008*
- *Injury Accidents – 0.929*

Livable Communities - Transportation Systems should facilitate Livable Communities in which all residents have access to all opportunities with minimal travel time. (All Trips)

- *Vehicle Trip Reduction – 1.5%*
- *Vehicle Miles Traveled Reduction – 10.0%*

Equity - The benefits of transportation investments should be equitably distributed among all ethnic, age and income groups. (All trips)

- *Low-Income (Household Income $12,000)) Share of Net Benefits – Equitable Distribution of Benefits*

Cost-Effectiveness - Maximize return on transportation investment. (All Trips)

- *Net Present Value – Maximum Return on Transportation Investment*
- *Value of a Dollar Invested – Maximum Return on Transportation Investment*

4.02 Transportation investments shall mitigate environmental impacts to an acceptable level.

4.04 Transportation Control Measures shall be a priority.

4.16 Maintaining and operating the existing transportation system will be a priority over expanding capacity.

GMC POLICIES RELATED TO THE RCPG GOAL TO IMPROVE THE REGIONAL STANDARD OF LIVING

The Growth Management goals to develop urban forms that enable individuals to spend less income on housing cost, that minimize public and private development costs, and that enable firms to be more competitive, strengthen the regional strategic goal to stimulate the regional economy. The evaluation of the proposed project in relation to the following policies would be intended to guide efforts toward achievement of such goals and does not infer regional interference with local land use powers.

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

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

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

GMC POLICIES RELATED TO THE RCPG GOAL TO IMPROVE THE REGIONAL QUALITY OF LIFE

The Growth Management goals to attain mobility and clean air goals and to develop urban forms that enhance quality of life, that accommodate a diversity of life styles, that preserve open space and natural resources, and that are aesthetically pleasing and preserve the character of communities, enhance the regional strategic goal of maintaining the regional quality of life. The evaluation of the proposed project in relation to the following policies would be intended to provide direction for plan implementation, and does not allude to regional mandates.

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

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

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

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

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

3.23 Encourage mitigation measures that reduce noise in certain locations, measures

aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.

GMC POLICIES RELATED TO THE RCPG GOAL TO PROVIDE SOCIAL, POLITICAL, AND CULTURAL EQUITY

The Growth Management Goal to develop urban forms that avoid economic and social polarization promotes the regional strategic goal of minimizing social and geographic disparities and of reaching equity among all segments of society. The evaluation of the proposed project in relation to the policy stated below is intended guide direction for the accomplishment of this goal, and does not infer regional mandates and interference with local land use powers.

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

AIR QUALITY CHAPTER CORE ACTIONS

The **Air Quality Chapter** core actions related to the proposed project includes:

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

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

WATER QUALITY CHAPTER RECOMMENDATIONS AND POLICY OPTIONS

The **Water Quality Chapter** core recommendations and policy options relate to the two water quality goals: to restore and maintain the chemical, physical and biological integrity

of the nation's water; and, to achieve and maintain water quality objectives that are necessary to protect all beneficial uses of all waters.

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

CONCLUSIONS

All feasible measures needed to mitigate any potentially negative regional impacts associated with the proposed project should be implemented and monitored, as required by CEQA.

ENDNOTE

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

Roles and Authorities

SCAG is a ***Joint Powers Agency*** established under California Government Code Section 6502 et seq. Under federal and state law, SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). SCAG's mandated roles and responsibilities include the following:

SCAG is designated by the federal government as the Region's ***Metropolitan Planning Organization*** and mandated to maintain a continuing, cooperative, and comprehensive transportation planning process resulting in a Regional Transportation Plan and a Regional Transportation Improvement Program pursuant to 23 U.S.C. □134(g)-(h), 49 U.S.C. □1607(f)-(g) et seq., 23 C.F.R. □450, and 49 C.F.R. □613. SCAG is also the designated ***Regional Transportation Planning Agency***, and as such is responsible for both preparation of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) under California Government Code Section 65080.

SCAG is responsible for developing the demographic projections and the integrated land use, housing, employment, and transportation programs, measures, and strategies portions of the ***South Coast Air Quality Management Plan***, pursuant to California Health and Safety Code Section 40460(b)-(c). SCAG is also designated under 42 U.S.C. □7504(a) as a ***Co-Lead Agency*** for air quality planning for the Central Coast and Southeast Desert Air Basin District.

SCAG is responsible under the Federal Clean Air Act for determining ***Conformity*** of Projects, Plans and Programs to the Air Plan, pursuant to 42 U.S.C. □7506.

Pursuant to California Government Code Section 65089.2, SCAG is responsible for ***reviewing all Congestion Management Plans (CMPs) for consistency with regional transportation plans*** required by Section 65080 of the Government Code. SCAG must also evaluate the consistency and compatibility of such programs within the region.

SCAG is the authorized regional agency for ***Inter-Governmental Review*** of Programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12,372 (replacing A-95 Review).

SCAG reviews, pursuant to Public Resources Code Sections 21083 and 21087, ***Environmental Impact Reports*** of projects of regional significance for consistency with regional plans [California Environmental Quality Act Guidelines Sections 15206 and 15125(b)].

Pursuant to 33 U.S.C. □1288(a)(2) (Section 208 of the Federal Water Pollution Control Act), SCAG is the authorized ***Areawide Waste Treatment Management Planning Agency***.

SCAG is responsible for preparation of the ***Regional Housing Needs Assessment***, pursuant to California Government Code Section 65584(a).

SCAG is responsible (with the San Diego Association of Governments and the Santa Barbara County/Cities Area Planning Council) for preparing the ***Southern California Hazardous Waste Management Plan*** pursuant to California Health and Safety Code Section 25135.3.

Department of Toxic Substances Control

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Edwin F. Lowry, Director
1011 N. Grandview Avenue
Glendale, California 91201

Gray Davis
Governor

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April 6, 2001

Mr. Mark Sellheim
City of Downey Economic and Community Development Department
11111 Brookshire Avenue
Downey, California 90241-7016

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE FORMER ROCKWELL/BOEING SITE SPECIFIC PLAN (PROJECT), SCH 2001031096

Dear Mr. Sellheim:

The Department of Toxic Substances Control (DTSC) has received your Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) for the above mentioned Project.

Based on the review of the document, the DTSC comments are as follows:

1) The draft EIR needs to identify and determine whether current or historic uses at the Project site have resulted in any release of hazardous wastes/substances at the Project area.

2) The draft EIR needs to identify any known or potentially contaminated site within the proposed Project area. For all identified sites, the draft EIR needs to evaluate whether conditions at the site pose a threat to human health or the environment.

3) The draft EIR should identify the mechanism to initiate any required investigation and/or remediation for any site that may require remediation, and which government agency will provide appropriate regulatory oversight.

4) If during construction of the project, soil contamination is suspected, construction in the area should stop and appropriate Health and Safety procedures should be implemented. If it is determined that contaminated soil exists, the draft EIR should identify how any required investigation and/or remediation will be conducted, and which government agency will provide appropriate regulatory oversight.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at www.dtsc.ca.gov.

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DTSC provides guidance for Preliminary Endangerment Assessment (PEA) preparation and cleanup oversight through the Voluntary Cleanup Program (VCP). For additional information on the VCP or to meet/discuss this matter further, please contact Bob Krug, Project Manager, at (818) 551-2866 or me at (818) 551-2877.

Sincerely,

Harlan R. Jeche

Harlan R. Jeche
Unit Chief
Southern California Cleanup Operations - Glendale Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

Mr. Guenther W. Moskat, Chief
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Department of Toxic Substances Control

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Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

Date: 4-18-01	# Of Pages 5	QUICK FAX OfficeMax
To: Neil Brower		From: David Rodriguez
Co./Dept. EIP		Co./Dept.
Fax: 310-268-8175		Fax: (626) 795-9096
Phone: 310-268-8132		Phone: (626) 304-7891
Note: Pls call w/ any questions		E-Mail:

August 24, 2000

Mr. David Hickens, Chief
Environmental Office
NASA Johnson Space Center
2101 NASA Road 1
Houston, Texas 77058

DRAFT ENVIRONMENTAL ASSESSMENT, MAY 2000 FOR DISPOSAL AND REUSE OF NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA) INDUSTRIAL PLANT IN DOWNEY, CALIFORNIA

Dear Mr. Hickens:

Thank you for responding to my telephone call requesting clarification about investigation and remedial actions being conducted at the National Aeronautics and Space Administration (NASA) Industrial Plant in Downey, California. The Department of Toxic Substances Control (DTSC) received a copy of the Draft Environmental Assessment (EA) for Disposal and Reuse of NASA Industrial Plant above-mentioned document from the State Clearinghouse (#2000064003). Negotiations are in progress concerning possible "early transfer" of NASA property to the City of Downey, that is, transfer of property prior to completion of remediation of environmental contamination. Based upon the EA, NASA has concluded that the disposal and reuse of the remaining 94 acres, also known as Parcels 1 and 2, will have no significant impact resulting from proposed demolition, construction and operation activities. The EA notes, however, that "NASA would have limited, if any, authority over redevelopment of the property after disposal occurs." As discussed below, some aspects of this project may fall within DTSC's areas of responsibility.

Subsequent to our discussion, I spoke with John Geroch of the Regional Water Quality Control Board (RWQCB). Mr. Geroch advised me that the RWQCB became involved in this project several years ago, following investigation into a report by the local water purveyor concerning detection of low-level concentrations of organic solvents, including tetrachloroethene (PCE) in regional groundwater. Based upon RWQCB authority under the California Water Code, they have provided oversight of investigation of the entire NASA facility. The RWQCB is currently overseeing remediation of soil with hazardous

substances contaminants which pose a threat to groundwater, as well as the closure and cleanup of numerous underground storage tanks used for petroleum-related substances at this facility.

DTSC's records indicate that this site was formerly known as Air Force Plant 16. According to Lloyd Godard, Los Angeles District Army Corps of Engineers, this site is listed as Formerly Used Defense Site (FUDS) JO9CA0101, for which bunkers at Building 125 are slated for demolition in 2004. However, based upon the information which you provided, this facility was privatized briefly in the 1950s, then taken over by NASA in 1960. NASA is an independent civilian agency, and the Department of Defense no longer has responsibility for cleanup costs or liability at this facility. Since that time, the facility has been "Government-Owned, Contractor Operated " (GOCO), operated by Firth Rockwell, and Boeing North America. The Plant was declared excess to NASA's needs in 1993. Environmental remediation is currently underway, and is scheduled to be completed by 2003. Subsequent to the passage of special legislation, 68 acres encompassing Parcels 3, 4, 5, and 6 were transferred to the City of Downey in 1996. The City of Downey has also indicated their interest in acquiring the remaining NASA Industrial Plant property, e.g., Parcels 1 and 2. Property transfer is being managed by the U.S. General Services Administration, San Francisco office.

The feasibility of "early transfer", also known as "Covenant Deferral", provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA - 42 U.S.C., Section 9620), Section 120(h)(3)(C) is now being evaluated by all parties. DTSC notes, however, that the previous closures of sumps and tanks were not risk-based; it is also our understanding that no risk assessments for human and ecological health have yet been performed for this property. "Clean-closure" cannot be approved without the support of a human and environmental health risk assessment. The RWQCB will make a determination of the suitability to transfer the property, and will forward a recommendation, as appropriate, to the Governor's office, whose approval is required under CERCLA.

Additionally, it is DTSC's understanding that NASA has proposed that future land use restrictions be placed in the deed, to prohibit uses that may interfere with ongoing remediation or may expose persons or the environment to residual contaminants. If there will be residual hazardous substance contamination remaining onsite, DTSC recommends that a Land Use Covenant be entered into between NASA and either DTSC or the RWQCB, pursuant to California Civil Code Section 1471. Restrictions in the Land Use Covenant will "run with the land", and will bind future owners. In the event that deed restrictions are breached, the Land Use Covenant would provide the state with authority to intervene directly through state courts. Such restrictions should decrease future risks to public health and the environment, and promote long-term permanence and effectiveness of remedies selected to address contamination.

Finally, DTSC notes that the Parks and Recreation Scenario for Future Reuse discussed in the EA indicates that construction of an elementary school on Parcel 2 is being contemplated by the City of Downey. If this reuse plan is approved, DTSC requests that the City of Downey contact DTSC's Schools Unit as soon as possible. On January 1, 2000, two new laws affecting schools became effective, which require that DTSC be involved in the environmental review process for the proposed acquisition and/or construction of school properties utilizing state funding. DTSC's role in the assessment, investigation, and cleanup of proposed schoolsites is to ensure that selected properties are free of contamination, or if the property is contaminated, that it is cleaned up to a level that is protective of the students and faculty who will occupy the new school. Assembly Bill 387 and Senate Bill 162 amended the California Education Code (CEC) sections 17070.50 and 17268, and added sections 17072.13, 17210, 17210.1, 17213.1, 17213.2, and 17213.3. DTSC is required to review and respond to Phase I reports and Preliminary Endangerment Assessments, and has developed specific sampling protocols to assure adequate investigation and cleanup actions. Pursuant to the CEC, all investigations and cleanup actions must be conducted pursuant to Chapter 6.8, Division 20, of the California Health and Safety Code, including requirements for public participtation and compliance with the California Environmental Quality Act (CEQA).

We will share this information with the City of Downey, the U.S. General Services Administration, the RWQCB, the U.S. Army Corps of Engineers, and the U.S. Air Force so that all parties are familiar with the site, and are aware of the possible need for DTSC's future involvement in work to be performed at this location. Please contact me at (714) 484-5433 if you have questions or need further information in this matter.

Sincerely,

Sharon Fair, Chief
Base Closure and Reuse Unit
Southern California Branch
Office of Military Facilities

cc: See next page

cc: Mr. Lloyd E. Godard,
FUDS Project Manager
USACE: Los Angeles District
ATTN: CESPL-PM-M
Lloyd E. Godard
911 Wilshire Boulevard, Suite 15018
Los Angeles, California 90017

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Planning and Environmental Analysis Section
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Mr. Rod Whitten
U.A. Air Force Center for Environmental Excellence
Western Regional Compliance Office
333 Market Street, Suite 625
San Francisco, California 94105

Mr. John Geroch
California Regional Water Quality Control Board
Los Angeles Region
320 West Fourth Street, Suite 200
Los Angeles, California 90013

Mrs. Frances McChesney
Senior Staff Counsel
Office of the Chief Counsel
State Water Quality Control Board
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Sacremento, California 95812

Mr. Darrell George, Director
Community and Economic Development
City of Downey
11111 Brookshire Avenue
Downey, California 90241

cc: Mr. Clark Van Epps
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Mr. Steve Koyasako
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Sacramento, California 95812-0806

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Department of Toxic Substances Control
1011 N. Grandview Avenue
Glendale, California 91201

Ms. Alice Gimeno
FUDS and UXO Liaison
Southern California Branch
Office of Military Facilities
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, California 90630

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

Gray Davis
GOVERNOR

Steve Nissen
DIRECTOR

RECEIVED
JUN 21 2001
PLANNING

Notice of Preparation

June 18, 2001

To: Reviewing Agencies

Re: Downey Landings Specific Plan
SCH# 2001031096

Attached for your review and comment is the Notice of Preparation (NOP) for the Downey Landings Specific Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Mark Sellheim
City of Downey Economic and Community Development Department
11111 Brookshire Avenue
Downey, CA 90241-7016

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-445-0613 FAX 916-323-3018 WWW.OPR.CA.GOV/CLEARINGHOUSE.HTML

Document Details Report
State Clearinghouse Data Base

SCH# 2001031096
Project Title Downey Landings Specific Plan
Lead Agency Downey, City of

Type NOP Notice of Preparation

Description Specific plan for a multiple-use development on the 160-acre former Rockwell/Boeing site in Downey. Proposed land use include a shopping center, offices, plus buildings designed to accommodate research and development activities, and a Kaiser Permanente hospital and medical office facility, with supporting uses. Together, the project's buildings will total a maximum of approximately 3.7 million square feet of floor area in four distinct land use areas.

Lead Agency Contact

Name Mark Sellheim
Agency City of Downey Economic and Community Development Department
Phone 562/904-7154 **Fax**
email
Address 11111 Brookshire Avenue
City Downey **State** CA **Zip** 90241-7016

Project Location

County Los Angeles
City Downey
Region
Cross Streets Lakewood Boulevard/SR-19/Stewart and Gray Road
Parcel No. 6256-004-900
Township 3S **Range** 12W **Section** **Base** S. Gate

Proximity to:

Highways SR-19
Airports
Railways UPRR
Waterways San Gabriel River
Schools
Land Use Mixed Use (includes commercial and industrial uses)

Project Issues Aesthetic/Visual; Air Quality; Flood Plain/Flooding; Drainage/Absorption; Housing; Job Generation; Noise; Public Services; Schools/Universities; Sewer Capacity; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Conservation; Department of Parks and Recreation; Department of Water Resources; Department of Health Services; Department of Fish and Game, Region 5; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; Caltrans, District 7; Caltrans, Division of Aeronautics; California Highway Patrol; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 4

Date Received 06/18/2001 **Start of Review** 06/18/2001 **End of Review** 07/17/2001

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: Los Angeles SCH# 2001031096

Resources Agency

- [x] Resources Agency
  Nadell Gayou
- [ ] Dept. of Boating & Waterways
  Bill Curry
- [ ] California Coastal Commission
  Elizabeth A. Fuchs
- [x] Dept. of Conservation
  Ken Trott
- [ ] Dept. of Forestry & Fire Protection
  Allen Robertson
- [ ] Office of Historic Preservation
  Hans Kreutzberg
- [x] Dept of Parks & Recreation
  Resource Mgmt. Division
- [ ] Reclamation Board
  Pam Bruner
- [ ] S.F. Bay Conservation & Dev't. Comm.
  Steve McAdam
- [x] Resources Agency
  Nadell Gayou
  Dept. of Water Resources

Health & Welfare

- [x] Health & Welfare
  Wayne Hubbard
  Dept. of Health/Drinking Water

Food & Agriculture

- [ ] Food & Agriculture
  Tad Bell
  Dept. of Food and Agriculture

Fish and Game

- [ ] Dept. of Fish & Game
  Scott Flint
  Environmental Services Division
- [ ] Dept. of Fish & Game
  Donald Koch
  Region 1
- [ ] Dept. of Fish & Game
  Banky Curtis
  Region 2
- [ ] Dept. of Fish & Game
  Robert Floerke
  Region 3
- [ ] Dept. of Fish & Game
  William Laudermilk
  Region 4
- [x] Dept. of Fish & Game
  Sandy Peterson
  Region 5, Habitat Conservation Program
- [ ] Dept. of Fish & Game
  Gabrina Gatchel
  Region 6, Habitat Conservation Program
- [ ] Dept. of Fish & Game
  Tammy Allen
  Region 5, Inyo/Mono, Habitat Conservation Program
- [ ] Dept. of Fish & Game
  Tom Napoli
  Marine Region

Independent Commissions

- [ ] California Energy Commission
  Environmental Office
- [x] Native American Heritage Comm.
  Debbie Treadway
- [x] Public Utilities Commission
  Andrew Barnsdale
- [x] State Lands Commission
  Betty Silva
- [ ] Governor's Office of Planning & Research
  State Clearinghouse Planner
- [ ] Colorado River Board
  Gerald R. Zimmerman
- [ ] Tahoe Regional Planning Agency (TRPA)
  Lyn Barnett
- [ ] Office of Emergency Services
  John Rowden, Manager
- [ ] Delta Protection Commission
  Debby Eddy
- [ ] Santa Monica Mountains Conservancy
  Paul Edelman

Dept. of Transportation

- [ ] Dept. of Transportation
  IGR/Planning
  District 1
- [ ] Dept. of Transportation
  Vicki Roe
  Local, Development Review, District 2
- [ ] Dept. of Transportation
  Jeff Pulverman
  District 3
- [ ] Dept. of Transportation
  Jean Finney
  District 4
- [ ] Dept. of Transportation
  Lawrence Newland
  District 5
- [ ] Dept. of Transportation
  Marc Birnbaum
  District 6
- [x] Dept. of Transportation
  Stephen J. Buswell
  District 7
- [ ] Dept. of Transportation
  Mike Sim
  District 8
- [ ] Dept. of Transportation
  Caroline Yee for Kate Walton
  District 9
- [ ] Dept. of Transportation
  Chris Sayre
  District 10
- [ ] Dept. of Transportation
  Lou Salazar
  District 11
- [ ] Dept. of Transportation
  Aileen Kennedy
  District 12

Business, Trans & Housing

- [ ] Housing & Community Development
  Cathy Creswell
  Housing Policy Division
- [x] Caltrans - Division of Aeronautics
  Sandy Hesnard
- [x] California Highway Patrol
  Lt. Dennis Brunette
  Office of Special Projects
- [ ] Dept. of Transportation
  Ron Helgeson
  Caltrans - Planning
- [ ] Dept. of General Services
  Robert Sleppy
  Environmental Services Section

Air Resources Board

- [ ] Airport Projects
  Jim Lerner
- [ ] Transportation Projects
  Ann Geraghty
- [ ] Industrial Projects
  Mike Tollstrup

- [ ] California Integrated Waste Management Board
  Sue O'Leary
- [ ] State Water Resources Control Board
  Diane Edwards
  Division of Clean Water Programs
- [ ] State Water Resources Control Board
  Greg Frantz
  Division of Water Quality
- [ ] State Water Resources Control Board
  Mike Falkenstein
  Division of Water Rights
- [x] Dept. of Toxic Substances Cont
  CEQA Tracking Center

Regional Water Quality Control Board (RWQCB)

- [ ] RWQCB
  Cathleen Hudson
  North Coast Region (1)
- [ ] RWQCB
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] RWQCB
  Central Coast Region (3)
- [x] RWQCB
  Jonathan Bishop
  Los Angeles Region (4)
- [ ] RWQCB
  Central Valley Region (5)
  - [ ] RWQCB
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] RWQCB
    Central Valley Region (5)
    Redding Branch Office
- [ ] RWQCB
  Lahontan Region (6)
  - [ ] RWQCB
    Lahontan Region (6)
    Victorville Branch Office
- [ ] RWQCB
  Colorado River Basin Region (7)
- [ ] RWQCB
  Santa Ana Region (8)
- [ ] RWQCB
  San Diego Region (9)

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JUN 22 2001
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The Gas Company
A Sempra Energy company

Southern California
Gas Company
Orange Coast Region
PO Box 3334
Anaheim, CA 92803-3334

June 19, 2001

City of Downey
Economic and Community Devel. Dept.
11111 Brookshire Avenue
Downey, CA 90241-7016

Attention: Mark Sellheim

Subject: E.I.R. Downey Landings Specific Plan

This letter is not to be interpreted as a contractual commitment to serve the proposed project but only as an information service. Its intent is to notify you that the Southern California Gas Company has facilities in the area where the above named project is proposed. Gas service to the project could be served by an existing main without any significant impact on the environment. The service would be in accordance with the company's policies and extension rules on file with the California Public Utilities Commission at the time contractual arrangements are made.

The availability of natural gas service, as set forth in this letter, is based upon present conditions of gas supply and regulatory policies. As a public utility, the Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. We can also be affected by actions of gas supply or the condition under which service is available, gas service will be provided in accordance with revised conditions.

Estimates of gas usage for non-residential projects are developed on an individual basis and are obtained from the Commercial-Industrial Market Services Staff by calling (800) 427-2000. We have developed several programs which are available upon request to provide assistance in selecting the most energy efficient appliances or systems for a particular project. If you desire further information on any of our energy conservation programs, please contact this office for assistance.

Sincerely,

Kris Keas
Technical Supervisor

kp
eircomm.doc

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

JAMES F. STAHL
Chief Engineer and General Manager

RECEIVED
JUN 29 2001
PLANNING

June 28, 2001

File No: 02-00.04-00

Mr. Mark Sellheim, Principal Planner
City of Downey
Community and Economic Development Dept.
11111 Brookshire Avenue
Downey, CA 90241-7016

Dear Mr. Sellheim:

Downey Landings Specific Plan
(formerly Former Rockwell/Boeing Site Specific Plan)

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on June 18, 2001. The proposed development is located within the jurisdictional boundaries of District No. 2. We offer the following comments regarding sewerage service:

- Previous comments submitted by the Districts in correspondence dated April 3, 2001 (copy enclosed), to your agency, still apply to the subject project with the following updated information.
- The expected average wastewater flow from the project site is 550,477 gallons per day. A copy of the Districts' average wastewater generation factors is enclosed for your information.
- The Joint Water Pollution Control Plant (JWPCP) currently processes an average flow of 334.6 millions gallons per day (mgd). The Los Coyotes Water Reclamation Plant (WRP) currently processes an average flow of 34.7 mgd.
- For additional Industrial Wastewater Discharge Permit information, you may visit the Districts' website at www.lacsd.org under "Industrial Waste."

If you have any questions, please contact the undersigned at (562) 699-7411, extension 2717.

Very truly yours,

James F. Stahl

Ruth I. Frazen

Ruth I. Frazen
Engineering Technician
Planning & Property Management Section

RIF:rf
Enclosures
::ODMA\PCDOCS\DMS\151541\1

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WATER RECLAMATION
SOLID WASTE MANAGEMENT

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

JAMES F. STAHL
Chief Engineer and General Manager

April 3, 2001

File No: 02-00.04-00

Mr. Mark Sellheim, Principal Planner
City of Downey
Community and Economic Development Dept.
11111 Brookshire Avenue
P.O. Box 7016
Downey, CA 90241-7016

Dear Mr. Sellheim:

Former Rockwell/Boeing Site Specific Plan

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on March 22, 2001. The proposed development is located within the jurisdictional boundaries of District No. 2. We offer the following comments regarding sewerage service:

1. Wastewater generated within the project boundaries may discharge to local sewers not maintained by the Districts for conveyance to the Districts' Downey-Bellflower Trunk Sewer, located in Lakewood Boulevard from Stewart and Gray Road to Clark Avenue and continuing south in Clark Avenue to Imperial Highway, or may discharge directly to the Districts' trunk sewer. This 21-inch diameter trunk sewer has a design capacity of 3.3-4.7 million gallons per day (mgd) and conveyed a peak flow of 2.6 mgd when last measured in 1993. A direct connection to a Districts' trunk sewer requires a Trunk Sewer Connection Permit, issued by the Districts. For information regarding the permit, please contact the Public Counter at extension 1205.

2. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant (JWPCP) located in the City of Carson or the Los Coyotes Water Reclamation Plant (WRP) located in the City of Cerritos. The JWPCP has a design capacity of 385 mgd and currently processes an average flow of 334 mgd. The Los Coyotes WRP has a design capacity of 37.5 mgd and currently processes an average flow of 34.6 mgd.

3. The expected average wastewater flow from the project site is 282,625 gallons per day.

4. Individual developments associated with the proposed project may require a Districts' permit for Industrial Wastewater Discharge. Project developers should contact the Districts' Industrial Waste Section at extension 2900, in order to reach a determination on this matter. If this permit is necessary, project developers will be required to forward a copy of final plans for the proposed development(s) to the Districts for review and approval before beginning project construction.

5. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or **increasing the existing strength and/or quantity of wastewater attributable to a particular parcel or operation already connected.** This connection fee is required to construct an incremental expansion of the Sewerage System to accommodate the proposed project which will mitigate the impact of this project on the present Sewerage System. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

6. In order for the Districts to conform with the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into the Air Quality Management Plan, which is prepared by the South Coast Air Quality Management District in order to improve air quality in the South Coast Air Basin as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner which will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels which are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 699-7411, extension 2717.

Very truly yours,

James F. Stahl

Ruth I. Frazen

Ruth I. Frazen
Engineering Technician
Planning & Property Management Section

RIF:eg

:ODMA\PCDOCS\DMS\41620\1

TABLE 1
LOADINGS FOR EACH CLASS OF LAND USE

DESCRIPTION	UNIT OF MEASURE	FLOW (Gallons per Day)	COD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
RESIDENTIAL				
Single Family Home	Parcel	260	1.22	0.59
Duplex	Parcel	312	1.46	0.70
Triplex	Parcel	468	2.19	1.05
Fourplex	Parcel	624	2.92	1.40
Condominiums	Parcel	195	0.92	0.44
Single Family Home (reduced rate)	Parcel	156	0.73	0.35
Five Units or More	No. of Dwlg. Units	156	0.73	0.35
Mobile Home Parks	No. of Spaces	156	0.73	0.35
COMMERCIAL				
Hotel/Motel/Rooming House	Room	125	0.54	0.28
Store	1000 ft^2	100	0.43	0.23
Supermarket	1000 ft^2	150	2.00	1.00
Shopping Center	1000 ft^2	325	3.00	1.17
Regional Mall	1000 ft^2	150	2.10	0.77
Office Building	1000 ft^2	200	0.86	0.45
Professional Building	1000 ft^2	300	1.29	0.68
Restaurant	1000 ft^2	1,000	16.68	5.00
Indoor Theatre	1000 ft^2	125	0.54	0.28
Car Wash				
Tunnel - No Recycling	1000 ft^2	3,700	15.86	8.33
Tunnel - Recycling	1000 ft^2	2,700	11.74	6.16
Wand	1000 ft^2	700	3.00	1.58
Financial Institution	1000 ft^2	100	0.43	0.23
Service Shop	1000 ft^2	100	0.43	0.23
Animal Kennels	1000 ft^2	100	0.43	0.23
Service Station	1000 ft^2	100	0.43	0.23
Auto Sales/Repair	1000 ft^2	100	0.43	0.23
Wholesale Outlet	1000 ft^2	100	0.43	0.23
Nursery/Greenhouse	1000 ft^2	25	0.11	0.06
Manufacturing	1000 ft^2	200	1.86	0.70
Dry Manufacturing	1000 ft^2	25	0.23	0.09
Lumber Yard	1000 ft^2	25	0.23	0.09
Warehousing	1000 ft^2	25	0.23	0.09
Open Storage	1000 ft^2	25	0.23	0.09
Drive-in Theatre	1000 ft^2	20	0.09	0.05

TABLE 1

(continued)

LOADINGS FOR EACH CLASS OF LAND USE

DESCRIPTION	UNIT OF MEASURE	FLOW (Gallons per Day)	COD (Pounds per Day)	SUSPENDED SOLIDS (Pounds per Day)
COMMERCIAL				
Night Club	1000 ft^2	350	1.50	0.79
Bowling/Skating	1000 ft^2	150	1.76	0.55
Club	1000 ft^2	125	0.54	0.27
Auditorium, Amusement	1000 ft^2	350	1.50	0.79
Golf Course, Camp, and Park (Structures and Improvements)	1000 ft^2	100	0.43	0.23
Recreational Vehicle Park	No. of Spaces	55	0.34	0.14
Convalescent Home	Bed	125	0.54	0.28
Laundry	1000 ft^2	3,825	16.40	8.61
Mortuary/Cemetery	1000 ft^2	100	1.33	0.67
Health Spa, Gymnasium				
With Showers	1000 ft^2	600	2.58	1.35
Without Showers	1000 ft^2	300	1.29	0.68
Convention Center, Fairground, Racetrack, Sports Stadium/Arena	Average Daily Attendance	10	0.04	0.02
INSTITUTIONAL				
College/University	Student	20	0.09	0.05
Private School	1000 ft^2	200	0.86	0.45
Church	1000 ft^2	50	0.21	0.11

Department of Toxic Substances Control

Edwin F. Lowry, Director
1001 "I" Street, 25th Floor
P.O. Box 806
Sacramento, California 95812-0806

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

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June 27, 2001

Mark Sellheim
City of Downey Economic and Community Development Department
11111 Brookshire Avenue
Downey, California 90241-7016

Re: Downey Landings Specific Plan

The Department of Toxic Substances Control (DTSC) is in receipt of the environmental document identified above. Based on a preliminary review of this document, we have determined that additional review by our regional office will be required to fully assess any potential hazardous waste related impacts from the proposed project. The regional office and contact person listed below will be responsible for the review of this document in DTSC's role as a Responsible Agency under the California Environmental Quality Act (CEQA) and for providing any necessary comments to your office:

Sayareh Amirebrahimi
Site Mitigation
1011 North Grandview Avenue
Glendale, California 91201

If you have any questions concerning DTSC's involvement in the review of this environmental document, please contact the regional office contact person identified above.

Sincerely,

Kathie Schmeling for

Guenther W. Moskat, Chief
Planning and Environmental Analysis Section

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at www.dtsc.ca.gov.

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SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

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

t (213) 236-1800
f (213) 236-1825

www.scag.ca.gov

Officers: President: Supervisor Jon Mikels, County of San Bernardino • First Vice President: Councilmember Hal Bernson, Los Angeles • Second Vice President: Councilmember Bev Perry, Brea • Immediate Past President: Mayor Pro Tem Ron Bates, Los Alamitos

Imperial County: Hank Kuiper, Imperial County • David Dhillon, El Centro

Los Angeles County: Yvonne Braithwaite Burke, Los Angeles County • Zev Yaroslavsky, Los Angeles County • Harry Baldwin, San Gabriel • Bruce Barrows, Cerritos • George Bass, Bell • Hal Bernson, Los Angeles • Robert Brousch, Rosemead • Laura Chick, Los Angeles • Gene Daniels, Paramount • Jo Anne Darcy, Santa Clarita • Ruth Galanter, Los Angeles • Ray Grabinski, Long Beach • Dev Hendison, Torrance • Mike Hernandez, Los Angeles • Nate Holden, Los Angeles • Sandra Jacobs, El Segundo • Lawrence Kirkley, Inglewood • Keith McCarthy, Downey • Cindy Miscikowski, Los Angeles • Stacey Murphy, Burbank • Pam O'Connor, Santa Monica • Nick Pacheco, Los Angeles • Alex Padilla, Los Angeles • Beatrice Proo, Pico Rivera • Mark Ridley-Thomas, Los Angeles • Richard Riordan, Los Angeles • Karen Rosenthal, Claremont • Marcine Shaw, Compton • Dick Stanford, Azusa • Rudy Svorinich, Los Angeles • Tom Sykes, Walnut • Paul Talbot, Alhambra • Sidney Tyler, Jr., Pasadena • Joel Wachs, Los Angeles • Rita Walters, Los Angeles • Dennis Washburn, Calabasas • Rob Webb, Long Beach

Orange County: Charles Smith, Orange County • Ron Bates, Los Alamitos • Ralph Bauer, Huntington Beach • Art Brown, Buena Park • Lou Bone, Tustin • Elizabeth Cowan, Costa Mesa • Cathryn DeYoung, Laguna Niguel • Richard Dixon, Lake Forest • Alex Duke, La Palma • Shirley McCracken, Anaheim • Bev Perry, Brea • Ted Ridgeway, Newport Beach

Riverside County: Bob Buster, Riverside County • Ron Loveridge, Riverside • Greg Pettis, Cathedral City • Ron Roberts, Temecula • Jan Rudman, Corona • Charles White, Moreno Valley

San Bernardino County: Jon Mikels, San Bernardino County • Bill Alexander, Rancho Cucamonga • David Eshleman, Fontana • Lee Ann Garcia, Grand Terrace • Bob Hunter, Victorville • Gwenn Norton-Perry, Chino Hills • Judith Valles, San Bernardino

Ventura County: Judy Mikels, Ventura County • Glen Becerra, Simi Valley • Donna De Paola, San Buenaventura • Tom Young, Port Hueneme

Riverside County Transportation Commission: Robin Lowe, Hemet

Ventura County Transportation Commission: Bill Davis, Simi Valley

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June 26, 2001

Mr. Mark Sellheim
Principal Planner
City of Downey
Community and Economic Development Department
11111 Brookshire Avenue
Downey, CA 90241-7016

RE: **Comments on the Notice of Preparation for a Draft Environmental Impact Report for the Downey Landings Specific Plan - SCAG No. I 20010332**

Dear Mr. Sellheim:

Thank you for submitting the **Notice of Preparation for a Draft Environmental Impact Report for the Downey Landings Specific Plan** to SCAG for review and comment. As areawide clearinghouse for regionally significant projects, SCAG reviews the consistency of local plans, projects, and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

In addition, The California Environmental Quality Act requires that EIRs discuss any inconsistencies between the proposed project and the applicable general plans and **regional plans (Section 15125 [d])**. If there are inconsistencies, an explanation and rationalization for such inconsistencies should be provided.

Policies of SCAG's Regional Comprehensive Plan and Guide and Regional Transportation Plan, which may be applicable to your project, are outlined in the attachment. **We expect the DEIR to specifically cite the appropriate SCAG policies and address the manner in which the Project is consistent with applicable core policies or supportive of applicable ancillary policies. Please use our policy numbers to refer to them in your DEIR. Also, we would encourage you to use a side-by-side comparison of SCAG policies with a discussion of the consistency or support of the policy with the Proposed Project.**

Please provide a minimum of 45 days for SCAG to review the DEIR when this document is available. If you have any questions regarding the attached comments, please contact me at (213) 236-1867. Thank you.

Sincerely,

JEFFREY M. SMITH, AICP
Senior Planner
Intergovernmental Review

COMMENTS ON THE PROPOSAL TO DEVELOP A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE DOWNEY LANDINGS SPECIFIC PLAN SCAG NO. I 20010332

PROJECT DESCRIPTION

The proposed Project considers the development of a Specific Plan for a multiple-use development and redevelopment proposals for the former Rockwell/Boeing site in the City of Downey. In total, the proposed Project area encompasses 160-acres with a potential for 3.7 million square feet of floor area. Proposed land uses include a shopping center, offices, research and development, hospital and medical facilities, along with other supporting uses. The proposed Project is located at Lakewood Boulevard and Stewart and Gray Roads in the City of Downey.

CONSISTENCY WITH REGIONAL COMPREHENSIVE PLAN AND GUIDE POLICIES

The **Growth Management Chapter (GMC)** of the Regional Comprehensive Plan and Guide (RCPG) contains the following policies that are particularly applicable and should be addressed in the Draft EIR for the Downey Landings Specific Plan.

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

Regional Growth Forecasts

The Draft EIR should reflect the most current SCAG forecasts which are the 2001 RTP (April 2001) Population, Household and Employment forecasts for the Gateway Cities Council of Governments (GCCOG) subregion and the City of Downey. These forecasts follow:

GCCOG Subregional Forecasts	**2000**	**2005**	**2010**	**2015**	**2020**
Population	2,021,497	2,105,832	2,147,761	2,188,992	2,244,951
Households	575,571	583,857	597,965	612,065	626,177
Employment	815,223	860,715	907,739	935,552	960,967

City of Downey Forecasts	2000	2005	2010	2015	2020
Population	100,850	104,824	104,837	104,850	104,866
Households	33,393	33,649	33,688	33,729	33,769
Employment	49,934	52,635	55,430	57,083	58,596

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

The **Regional Transportation Plan (RTP)** also has goals, objectives, policies and actions pertinent to this proposed project. This RTP links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations. Among the relevant goals, objectives, policies and actions of the RTP are the following:

Core Regional Transportation Plan Policies

4.01 *Transportation investments shall be based on SCAG's adopted Regional Performance Indicators.*

Mobility - Transportation Systems should meet the public need for improved access, and for safe, comfortable, convenient, faster and economical movements of people and goods.

- *Average Work Trip Travel Time in Minutes – 25 minutes (Auto)*
- *PM Peak Freeway Travel Speed – 45 minutes (Transit)*
- *PM Peak Non-Freeway Travel Speed*
- *Percent of PM Peak Travel in Delay (Fwy)*
- *Percent of PM Peak Travel in Delay (Non-Fwy)*

Accessibility - Transportation system should ensure the ease with which opportunities are reached. Transportation and land use measures should be employed to ensure minimal time and cost.

- *Work Opportunities within 45 Minutes door to door travel time (Mode Neutral)*
- *Average transit access time*

Environment - Transportation system should sustain development and

preservation of the existing system and the environment. (All Trips)

- *CO, ROG, NOx, PM10, PM2.5 – Meet the applicable SIP Emission Budget and the Transportation Conformity requirements*

Reliability – Transportation system should have reasonable and dependable levels of service by mode. (All Trips)

- *Transit – 63%*
- *Highway – 76%*

Safety - Transportation systems should provide minimal accident, death and injury. (All Trips)

- *Fatalities Per Million Passenger Miles – 0*
- *Injury Accidents – 0*

Equity/Environmental Justice - The benefits of transportation investments should be equitably distributed among all ethnic, age and income groups. (All trips)

- *By Income Groups Share of Net Benefits – Equitable Distribution of Benefits among all Income Quintiles*

Cost-Effectiveness - Maximize return on transportation investment (All Trips). Air Quality, Mobility, Accessibility and Safety

- *Return on Total Investment – Optimize return on Transportation Investments*

4.02 Transportation investments shall mitigate environmental impacts to an acceptable level.

4.04 Transportation Control Measures shall be a priority.

4.06 Implementing transit restructuring, including Smart Shuttles, freight improvements, advanced transportation technologies, airport ground access and traveler information services are RTP priorities.

4.16 Maintaining and operating the existing transportation system will be a priority over expanding capacity.

GMC POLICIES RELATED TO THE RCPG GOAL TO IMPROVE THE REGIONAL STANDARD OF LIVING

The Growth Management goals to develop urban forms that enable individuals to spend less income on housing cost, that minimize public and private development costs, and that enable firms to be more competitive, strengthen the regional strategic goal to

stimulate the regional economy. The evaluation of the proposed project in relation to the following policies would be intended to guide efforts toward achievement of such goals and does not infer regional interference with local land use powers.

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

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

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

GMC POLICIES RELATED TO THE RCPG GOAL TO IMPROVE THE REGIONAL QUALITY OF LIFE

The Growth Management goals to attain mobility and clean air goals and to develop urban forms that enhance quality of life, that accommodate a diversity of life styles, that preserve open space and natural resources, and that are aesthetically pleasing and preserve the character of communities, enhance the regional strategic goal of maintaining the regional quality of life. The evaluation of the proposed project in relation to the following policies would be intended to provide direction for plan implementation, and does not allude to regional mandates.

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

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

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

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

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

redevelopment.

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

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

GMC POLICIES RELATED TO THE RCPG GOAL TO PROVIDE SOCIAL, POLITICAL, AND CULTURAL EQUITY

The Growth Management Goal to develop urban forms that avoid economic and social polarization promotes the regional strategic goal of minimizing social and geographic disparities and of reaching equity among all segments of society. The evaluation of the proposed project in relation to the policy stated below is intended guide direction for the accomplishment of this goal, and does not infer regional mandates and interference with local land use powers.

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

AIR QUALITY CHAPTER CORE ACTIONS

The **Air Quality Chapter** core actions related to the proposed project includes:

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

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

WATER QUALITY CHAPTER RECOMMENDATIONS AND POLICY OPTIONS

The **Water Quality Chapter** core recommendations and policy options relate to the two water quality goals: to restore and maintain the chemical, physical and biological integrity of the nation's water; and, to achieve and maintain water quality objectives that are necessary to protect all beneficial uses of all waters.

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

CONCLUSIONS

All feasible measures needed to mitigate any potentially negative regional impacts associated with the proposed project should be implemented and monitored, as required by CEQA.

ENDNOTE

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

Roles and Authorities

SCAG is a ***Joint Powers Agency*** established under California Government Code Section 6502 et seq. Under federal and state law, SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). SCAG's mandated roles and responsibilities include the following:

SCAG is designated by the federal government as the Region's ***Metropolitan Planning Organization*** and mandated to maintain a continuing, cooperative, and comprehensive transportation planning process resulting in a Regional Transportation Plan and a Regional Transportation Improvement Program pursuant to 23 U.S.C. '134(g)-(h), 49 U.S.C. '1607(f)-(g) et seq., 23 C.F.R. '450, and 49 C.F.R. '613. SCAG is also the designated ***Regional Transportation Planning Agency***, and as such is responsible for both preparation of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) under California Government Code Section 65080.

SCAG is responsible for developing the demographic projections and the integrated land use, housing, employment, and transportation programs, measures, and strategies portions of the ***South Coast Air Quality Management Plan***, pursuant to California Health and Safety Code Section 40460(b)-(c). SCAG is also designated under 42 U.S.C. '7504(a) as a ***Co-Lead Agency*** for air quality planning for the Central Coast and Southeast Desert Air Basin District.

SCAG is responsible under the Federal Clean Air Act for determining ***Conformity*** of Projects, Plans and Programs to the Air Plan, pursuant to 42 U.S.C. '7506.

Pursuant to California Government Code Section 65089.2, SCAG is responsible for ***reviewing all Congestion Management Plans (CMPs) for consistency with regional transportation plans*** required by Section 65080 of the Government Code. SCAG must also evaluate the consistency and compatibility of such programs within the region.

SCAG is the authorized regional agency for ***Inter-Governmental Review*** of Programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12,372 (replacing A-95 Review).

SCAG reviews, pursuant to Public Resources Code Sections 21083 and 21087, ***Environmental Impact Reports*** of projects of regional significance for consistency with regional plans [California Environmental Quality Act Guidelines Sections 15206 and 15125(b)].

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PLANNING

July 2, 2001

Mr. Mark Sellheim, Principal Planner
City of Downey
Community and Economic Development Department
11111 Brookshire Ave.
Downey, CA 90241-7016

Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA
90012-2952

Dear Mr. Sellheim:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for the Downey Landings Specific Plan project. This letter conveys recommendations from the Los Angeles County Metropolitan Transportation Authority (LACMTA) concerning issues that are germane to our agency' s statutory responsibilities in relation to the proposed project.

A Traffic Impact Analysis (TIA), with both highway and freeway, and transit components, is required under the State of California Congestion Management Program (CMP) statute. The CMP TIA Guidelines are published in the "1997 Congestion Management Program for Los Angeles County", Appendix D. The geographic area examined in the TIA must include the following, at a minimum:

1. all CMP arterial monitoring intersections, including monitored freeway on/off-ramp intersections, where the proposed project will add 50 or more trips during either the a.m. or p.m. weekday peak hour (of adjacent street traffic); and
2. mainline freeway-monitoring locations where the project will add 150 or more trips, in either direction, during either the a.m. or p.m. weekday peak hour.

Among the required steps for the analysis of development-related impacts to transit are:

1. evidence that the affected transit operators received the NOP for the Draft EIR;
2. a summary of the existing transit services in the area;
3. estimated project trip generation and mode assignment for both morning and evening peak periods;
4. documentation on the assumptions/analyses used to determine the number of percentage of trips assigned to transit;
5. information on facilities and/or programs that will be incorporated in to the development plan that will encourage

public transit usage and transportation demand management (TDM) policies and programs; and

6. an analysis of the expected project impacts on current and future transit services along with proposed project mitigation.

The MTA looks forward to reviewing the Draft EIR. If you have any questions regarding this response, please call me at 213-922-2238 or email at foxs@mta.net. Please send the Draft EIR to the following address:

LACMTA
One Gateway Plaza
Attn: Steve Fox
Regional Planning, 99-23-2
Los Angeles, CA 90012-2952

Sincerely,

S. Fox

Stephen G. Fox
Program Manager, Regional Planning

STATE OF CALIFORNIA Gray Davis, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

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PLANNING

July 5, 2001

Mark Shellheim
City of Downey Economic and community Development Department
11111 Brookshire Avenue
Downey, CA 90241-7016

RE: SCH# 2001031096 – Downey Landings Specific Plan

Dear Mr. Shellheim:

The Native American Heritage Commission has reviewed the above mentioned NOP. To adequately assess the project-related impact on archaeological resources, the Commission recommends the following actions be required:

- ✓ Contact the appropriate Information Center for a records search. The record search will determine:
  - Whether a part or all of the project area has been previously surveyed for cultural resources.
  - Whether any known cultural resources have already been recorded on or adjacent to the project area.
  - Whether the probability is low, moderate, or high that cultural resources are located within the project area.
  - Whether a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The report containing site significance and mitigation measurers should be submitted immediately to the planning department.
  - The site forms and final written report should be submitted within 3 months after work has been completed to the Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check.
  - A list of appropriate Native American Contacts for consultation concerning the project site and assist in the mitigation measures.
- ✓ Provisions for accidental discovery of archeological resources:
  - Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should include provisions for accidentally discovered archeological resources during construction per California Environmental Quality Act (CEQA) §15064.5 (f).
- ✓ Provisions for discovery of Native American human remains
  - Health and Safety Code §7050.5, CEQA §15064.5 (e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery and should be included in all environmental documents.

If you have any questions, please contact me at (916) 653-4040.

Sincerely,

Rob Wood
Associate Governmental Program Analyst

CC: State Clearinghouse

South Coast
Air Quality Management District
21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 · http://www.aqmd.gov

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June 28, 2001

Mr. Mark Sellheim
Principal Planer
City of Downey
Community and Economic Development Dept.
11111 Brookshire Avenue
Downey, CA 90241-7016

Dear Mr. Sellheim:

Notice of Preparation of an Environmental Impact Report for
Downey Landings Specific Plan

The South Coast Air Quality Management District (AQMD) appreciates the opportunity to comment on the above-mentioned document. The AQMD's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the Draft Environmental Impact Report (EIR).

Air Quality Analysis
The AQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The AQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the AQMD's Subscription Services Department by calling (909) 396-3720.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction and operations should be considered. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the evaluation. An analysis of all toxic air contaminant impacts due to the

decommissioning or use of equipment potentially generating such air pollutants should also be included.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures be utilized during project construction and operation to minimize or eliminate significant adverse air quality impacts. To assist the Lead Agency with identifying possible mitigation measures for the project, please refer to Chapter 11 of the AQMD CEQA Air Quality Handbook for sample air quality mitigation measures. Additionally, AQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook contain numerous measures for controlling construction-related emissions that should be considered for use as CEQA mitigation if not otherwise required. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed.

Data Sources

AQMD rules and relevant air quality reports and data are available by calling the AQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the AQMD's World Wide Web Homepage (http://www.aqmd.gov).

The AQMD is willing to work with the Lead Agency to ensure that project-related emissions are accurately identified, categorized, and evaluated. Please call Dr. Charles Blankson, Transportation Specialist, CEQA Section, at (909) 396-3304 if you have any questions regarding this letter.

Sincerely,

Steve Smith

Steve Smith, Ph.D.
Program Supervisor, CEQA Section
Planning, Rule Development and Area Sources

SS:CB:li

LAC010619-03LI
Control Number

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100

JAMES A. NOYES, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91803-1460

IN REPLY PLEASE REFER TO FILE: WM-4

July 9, 2001

Mr. Mark Sellheim
Principal Planner
City of Downey
Community and Economic Development
Department
11111 Brookshire Avenue
Downey, CA 90241-7016

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Dear Mr. Sellheim:

RESPONSE TO AN INITIAL STUDY FOR DOWNEY LANDINGS SPECIFIC PLAN CITY OF DOWNEY

Thank you for the opportunity to provide comments on the Initial Study for the proposed Downey Landings Specific Plan project. We have reviewed the submittal and offer the following comments:

Land Development (Geology and Soils)

The proposed project will not have significant environmental effects from a geology and soils standpoint. The project is located within a mapped potentially liquefiable area, per the State of California Seismic Hazard Zone Map, South Gate Quadrangle. However, liquefaction analysis is not warranted at this time. Detailed liquefaction analyses, conforming to the requirements of the State of California Division of Mines and Geology, Special Publication 117, must be conducted at the Tentative Map and/or Grading/Building Plans stages.

If you have any questions regarding the above comments, please contact Mr. Amir Alam at (626) 458-3883.

Land Development (Grading and Drainage)

The project may have an impact to the County-maintained facilities in the area. A drainage concept addressing the impact to all County-owned facilities in the area must be submitted for review and approval prior to approval of the environmental documents. Sufficient information must be submitted to Public Works showing the extent of drainage problems and solutions.

The project may also impact water quality and should incorporate permanent post-construction Best Management Practices to mitigate this impact. These plans must be reviewed and approved by Public Works prior to the issuance of any permit.

If you have any questions regarding the above comment, please contact Mr. Perfecto Tobias at (626) 458-4921.

Land Development (Transportation Planning)

The proposed project may impact Stewart and Gray Roads, Bellflower Boulevard, Clark Avenue, secondary highways, and Lakewood Boulevard, Imperial Highway, major highways, on the City of Downey protects the existing right of way for those highways. Since Lakewood Boulevard is State Route 19, we also recommend that Caltrans review the proposed specific plan.

If you have any questions regarding this matter, please contact Mr. Hubert Seto at (626) 458-4349.

If you have any questions regarding the environmental reviewing process of this Department, please contact Ms. Massie Munroe at the address on the first page or at (626) 458-4359.

Very truly yours,

JAMES A. NOYES
Director of Public Works

ROD H. KUBOMOTO
Assistant Deputy Director
Watershed Management Division

MM:sw
C:\DrainageMm\94.wpd

Mark Sellheim

From: Sydnor, Robert [rsydnor@consrv.ca.gov]
Sent: Wednesday, July 18, 2001 12:02 PM
To: 'msellhei@downeyca.org'
Subject: Downey Landing - Notice of Preparation under CEQA

Special Publication 117 - extr... | SCEC Liquefaction Procedures -... | Earthquake Return Periods. CDE... | CDMG Map Sheet 48 - Seismic Sh...

Mr. Mark Sellheim

Principal Planner
City of Downey
11111 Brookshire Avenue
Downey, CA 90241-7016
telephone 562-904-7154

July 18, 2001

Dear Mr. Sellheim:

In follow-up of our telephone conversation, your NOP is mistaken about liquefaction as "less than significant" at this site. The entire project is legally zoned by the California Division of Mines and Geology as an official liquefaction zone. Please convey our

Reference to the South Gate Quadrangle, legally dated March 25, 1999 (not February as your consultants have written on page 24.) This legal map has been officially sent to the Planning Director of the City of Downey two years ago. We also sent you official copies of California Division of Mines and Geology Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California, 74 pages, dated March 1997. Please use and cite this in the Draft EIR as the correct legal document to evaluate liquefaction.

Under California State Law, you are required to cite and use the Seismic Hazards Zones Map if it directly applies to a project. It is a mandatory citation under CEQA (at NOP and Draft EIR phase), and your entire project could be legally defective if not fully disclosed. We recommend that an extract of the map be shown.

The Kaiser Hospital within this project is directly under control permit from the California Office of State Healthwide Planning and Development, OSHPD. The state law that covers this is the California Code of Regulations, Title 24, = 1998 California Building Code. This means that senior structural engineers from OSHPD and (myself) a Senior Engineering Geologist from the California Division of Mines and Geology will be performing the plan-check. This also means that the earthquake ground motion (for hospitals) is much higher than the Design Basis Earthquake ground motion for regular commercial and residential structures in Downey.

On page 24 of the report, it is incorrect to state that SB-1953 regulations will be used for any new hospital construction. Instead, all regular new hospitals are under Chapters 16, 18, and 33 of the 1998 California Building Code. SB-1953 applies only to existing older hospitals and the text is found in Part 1 of Title 24, Chapter 6 within the California Building Standards Administrative Code.

Until there is a CDMG-approved consulting geotechnical report by a California Certified Engineering Geologist and Registered Geotechnical Engineer on this Kaiser hospital site, it is best to not dismiss liquefaction as conveniently trivial.... when it is within a legal liquefaction zone. Therefore we recommend that you consider it to be "Significant unless Mitigated" under CEQA.

In an attached document, we explain the earthquake terms that you should use in the Draft EIR.

Sincerely yours, Robert H. Sydnor

<<Special Publication 117 - extract of title page 3-2001.doc>> <<SCEC Liquefaction Procedures - August 17, 1999.doc>> <<Earthquake Return

Periods, DBE & UBE, June 2001.doc>> <<CDMG Map Sheet 48 - Seismic Shaking Hazard Maps of California.doc>>

Robert H. Sydnor
RG 3267, CPG 4496, CHG 6, CEG 968
Senior Engineering Geologist
Calif. Division of Mines & Geology
801 K Street, Mail Stop 12-32
Sacramento, CA 95814-3531

office telephone: (916) 323-4399
e-mail: RSydnor@consrv.ca.gov

fax: (916) 322-4765
CDMG home page: http://www.consrv.ca.gov/dmg

California Division of Mines & Geology

Special Publication 117

1997 74 pages

Guidelines for Evaluating and Mitigating Seismic Hazards in California

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

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

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

As of May 2001, there are 57 quadrangles legally zoned for seismic hazards. The names of the 7½-minute quadrangles are available at our CDMG website. Note that SP-117 pertains to ground motion, landslides, and liquefaction, but *not* surface faulting. Please refer to CDMG Special Publication 42, 1997 edition, for an index of the 544 official quadrangles that have been legally zoned for active faults by the State Geologist under the ***Alquist-Priolo Earthquake Fault Zoning Act.*** A complete list of all CDMG publications and index of Alquist-Priolo maps is available at our website. Listed below are public information offices of the California Division of Mines & Geology where SP-117 can be purchased:

Southern California Regional Office
Calif. Division of Mines & Geology
655 South Hope Street, Suite 700
Los Angeles, CA 90017-3231
(213) 239-0877

Publications and Information Office
Calif. Division of Mines & Geology
801 K Street, Mail Stop 14-33
Sacramento, CA 95814-3532
(916) 445-5716

Bay Area Regional Office
Calif. Division of Mines & Geology
185 Berry Street, Suite 120
San Francisco, CA 94107-1728
(415) 904-7707

Announcement of Publication in Liquefaction Analysis
May 1999

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

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

63 pages, 8½ × 11 format, softbound, price: $10.00

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

Order from:
Southern California Earthquake Center
Mark Benthien, Outreach Coordinator
University of Southern California
Los Angeles, CA 90089-0742
telephone: (213) 740-5843 fax: (213) 740-0011
e-mail: SCECinfo@usc.edu *homepage:* www.scec.org

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

Robert H. Sydnor, Senior Engineering Geologist
California Division of Mines & Geology
RSydnor@consrv.ca.gov (916) 323-4399

Statistical Return Periods for Ground Motion in Building Codes

June 2001

Design-Basis Earthquake Ground Motion
for Residential & Commercial Construction

10% Chance of Exceedance in 50 Years.
Statistical Return Period ≈ 475 Years.

calculation: 50 years ÷ -ln(1.0 - 0.10) ≈ 475 years.

The peak ground acceleration (PGA) for the Design-Basis Earthquake ground-motion can only be calculated using Probabilistic Seismic Hazard Analysis (PSHA) methods. Deterministic seismology methods should *not* be used.

Reference: 1997 Uniform Building Code §1627, §1629.1, §1631.2

Upper-Bound Earthquake Ground Motion

In California, a more conservative approach applies to
Public Schools, Community Colleges, Hospitals, & Skilled Nursing Facilities

10% Chance of Exceedance in 100 Years.
Statistical Return Period ≈ 949 Years.

calculation: 100 years ÷ -ln(1.0 - 0.10) ≈ 949 years.

The peak ground acceleration (PGA) for the Upper-Bound Earthquake ground-motion can only be calculated using Probabilistic Seismic Hazard Analysis (PSHA) methods. Deterministic seismology methods should *not* be used.

References: 1998 California Building Code §1631A.2.6 and
1998 California Building Standards Administrative Code §7-111

June 12, 2001

Robert H. Sydnor, *Senior Engineering Geologist*
RG 3267, CHG 6, CPG 4496, CEG 968
California Division of Mines & Geology
801 K Street, MS 12-32, Sacramento, CA 95814-3531
(916) 323-4399 RSydnor@consrv.ca.gov

Seismic Shaking Hazard Maps of California

CDMG Map Sheet 48 published July 1, 1999

by Mark D. Petersen, D.J. Beeby, William A. Bryant, T. Cao, Chris H. Cramer, James F. Davis, Michael S. Reichle, George J. Saucedo, S.S. Tan, Gary C. Taylor, T.L. Toppozada, Jerome A. Treiman, and Chris J. Wills; seismologists and engineering geologists, California Division of Mines & Geology.

This new statewide colored map shows the Peak Ground Acceleration for California. The ground motion is calculated for 10 percent chance of exceedance in 50 years, which is the Design Basis Earthquake specified in the 1997 Uniform Building Code; refer to §1627, §1629, and §1631.2.

1997 UBC applies to residential and commercial development which constitute the majority of construction. Note that public schools and hospitals are subject to a *different* code and higher ground motion: Title 24 of California Code of Regulations = the 1998 *California* Building Code. The Upper Bound Earthquake ground motion applies: 10 percent chance of exceedance in 100 years.

CDMG Map Sheet 48 will be useful for regional hazards planning purposes by a wide spectrum of users including: Certified Engineering Geologists, Registered Geotechnical Engineers, Registered Structural Engineers, city and county officials, consulting environmental planners who prepare CEQA documents and Safety Elements of local General Plans, developers and business executives, academia, Realtors®, insurance actuaries, environmentalists, utility managers, disaster preparedness officials, and the general public. The 58 county boundaries are shown for reference and ease of reading. City place-names and highways are not shown so as to keep the map readable.

Map Sheet 48 is not intended for use in site-specific projects. It will serve as a point of departure for the next step in development (a consulting engineering geology or seismology report) whereby the earthquake ground motion at a particular location (latitude & longitude) is reliably calculated using detailed geologic information (*e.g.*, specific geologic mapping and geotechnical boreholes).

This new map supercedes other previous seismic shaking hazard maps that hypothetically modeled the geologic subgrade of the entire state as one slab of soft rock from Oregon to Mexico. The new seismic shaking hazard map correctly models each pixel of geologic subgrade by its shear-wave velocity, *Vs*. The classification is tied to §1636 and Table 16-J of the 1997 Uniform Building Code. For example, sandstone (= Type S_B rock), shale (= Type S_C soft rock), alluvium (= Type S_D stiff soil), and soft bay mud (= Type S_E soft soil) are properly accounted for on a pixel-by-pixel basis for disparate potential of earthquake shaking.

Map Sheet 48 uses the concept of Maximum Magnitude (Mmax) for individual fault segments with the moment magnitude scale (Mw), and appropriate slip-rates (mm/year) for each of the 182 seismogenic faults in California. This is a full probabilistic seismic hazard analysis. Map Sheet 48 supersedes and replaces antiquated seismic hazard maps of the 1970s with insights from recent earthquakes (*e.g.*, 1994 Northridge, 1992 Landers, 1992 Cape Mendocino, and 1989 Loma Prieta). Modern ground-motion attenuation formulas are used (Boore-Joyner-Fumal, 1997; refer to CDMG Open-File Report 96-08, and the January/February 1997 issue of *Seismological Research Letters*, vol. 68, no. 1).

Copies of CDMG Map Sheet 48 may be purchased as a folded map in an envelope for $12, over-the-counter flat for $12, or rolled in a sturdy mailing tube for $17. Prices include state sales tax and U.S. postage. Visa and MasterCard are accepted. Order from our website at: www.consrv.ca.gov/dmg or any of the three Public Information Offices of the California Division of Mines & Geology:

Southern California Regional Office
Calif. Division of Mines & Geology
655 South Hope Street, Suite 700
Los Angeles, CA 90017-3231
(213) 239-0877

Publications and Information Office
Calif. Division of Mines & Geology
801 K Street, Mail Stop 14-33
Sacramento, CA 95814-3532
(916) 445-5716

Bay Area Regional Office
Calif. Division of Mines & Geology
185 Berry Street, Suite 120
San Francisco, CA 94107-1728
(415) 904-7707

Mail to: State Clearinghouse, 1400 Tenth Street, Room 121, Sacramento, CA 95814 – 916/445-0613

Notice of Completion and Environmental Document Transmittal Form

See NOTE below
SCH # _____

1. Project Title: Former Rockwell/Boeing Site Specific Plan
2. Lead Agency: City of Downey, Economic and Community Devel. Dept.
3. Contact Person: Mark Sellheim, Principal Planner
3a. Street Address: 11111 Brookshire Avenue
3b. City: Downey
3c. County: Los Angeles
3d. Zip: 90241-7016
3e. Phone: (562) 904-7154

Project Location

4. County: Los Angeles
4a. City/Community: Downey
4b. Assessor's Parcel No. 6256-004-900
4c. Section: unnamed Twp: 3 S Range: 12 W Base: South Gate
5a. Cross Streets: Lakewood Blvd. (SR-19) and Stewart and Gray Rd.
5b. For Rural, Nearest Community: N/A
6. Within 2 Miles: 6a. State Hwy. # SR-19 (Lakewood Blvd.)
6b. Airports: N/A
6c. Railways: Union Pacific, <2 mi north of the project site
6d. Waterways: San Gabriel River, ¾ mi east of the project site

7. Document Type

CEQA:
- ☒ 01. NOP
- ☐ 02. Early Consultation
- ☐ 03. Negative Declaration
- ☐ 04. Draft EIR
- ☐ 05. Supplement/Subsequent EIR (Prior SCH#_____)
- ☐ 06. Notice of Exemption
- ☐ 07. Notice of Completion
- ☐ 08. Notice of Determination

NEPA:
- ☐ 09. Notice of Intent
- ☐ 10. FONSI
- ☐ 11. Draft EIS
- ☐ 12. Env. Assessment

Other:
- ☐ 13. Joint Document
- ☐ 14. Final Document
- ☐ 15. Other _____

8. Local Action Type
- ☐ 01. General Plan Update
- ☐ 02. New Element
- ☐ 03. General Plan Amendment
- ☐ 04. Master Plan
- ☐ 05. Annexation
- ☒ 06. Specific Plan
- ☐ 07. Community Plan
- ☐ 08. Redevelopment
- ☐ 09. Rezone
- ☐ 10. Land Division (Subdivision, Parcel Map, Tract Map, etc.)
- ☐ 11. Use Permit
- ☐ 12. Waste Management Plan
- ☐ 13. Cancel Agricultural Preserve
- ☐ 14. Other _____

9. Development Type
- ☐ 01. Residential: *Units* _____ *Acres* _____
- ☒ 02. Office: *Sq. Ft.*: 600,000 (max.) *Acres:* N/A *Employees*: N/A
- ☒ 04. Shopping/Commercial: *Sq. Ft.* 410,000 (max.) *Acres:* N/A *Employees:* N/A
- ☐ 05. Water Facilities: *Type* _____ *MGD* _____
- ☐ 06. Transportation: *Type* _____
- ☐ 07. Mining: *Mineral* _____
- ☐ 08. Power: *Type* _____ *Watts* _____
- ☐ 09. Waste Treatment: *Type* _____
- ☐ 10. OCS Related _____
- ☒ 11. Other Public; *Sq Ft.* 50,000 (max.) Office Park; 975,000 Sq. Ft. (max)

10. Total Acres: 140

11. Total Jobs Created: N/A

12. Project Issues Discussed in Document

- ☒ 01. Aesthetic/Visual
- ☐ 02. Agricultural Land
- ☒ 03. Air Quality
- ☐ 04. Archaeological/Historical
- ☐ 05. Coastal Zone
- ☐ 06. Economic
- ☐ 07. Fire Hazard
- ☒ 08. Flooding/Drainage
- ☐ 09. Geologic/Seismic
- ☒ 10. Jobs/Housing Balance
- ☐ 11. Minerals
- ☒ 12. Noise
- ☒ 13. Public Services
- ☒ 14. Schools
- ☐ 15. Septic Systems
- ☒ 16. Sewer Capacity
- ☐ 17. Social
- ☐ 18. Soil Erosion
- ☒ 19. Solid Waste
- ☐ 20. Toxic/Hazardous
- ☒ 21. Traffic/Circulation
- ☐ 22. Vegetation
- ☒ 23. Water Quality
- ☒ 24. Water Supply
- ☐ 25. Wetland/Riparian
- ☐ 26. Wildlife
- ☒ 27. Growth Inducing
- ☒ 28. Incompatible Land use
- ☒ 29. Cumulative Effects
- ☐ 30. Other _____

13. Funding (approx.) Federal $ N/A State $ N/A Total $ N/A

14. Present Land Use and Zoning: Mixed Use (includes commercial and industrial uses)

15. Project Description:

Specific plan for a multiple-use development on the 140-acre former Rockwell/Boeing site in Downey. Proposed land uses include a shopping center, offices, plus buildings designed to accommodate research and development activities. Together, the project's buildings will total a maximum of approximately 2.1 million square feet of floor area in three distinct land use areas.

Area I. Area I encompasses slightly more than 33 acres and occupies the northern portion of the project site. A planned retail shopping center will occupy this area, and will be oriented toward Lakewood Boulevard. Other streets bordering Area I include Stewart & Gray Road and Bellflower Boulevard. The center will feature both inline stores and freestanding buildings. Together, the center's building will provide a maximum of 410,000 square feet, plus parking.

Area II will total approximately 63 acres. It supports an existing building that contains 883,550 square feet, which both Rockwell and the Boeing Company used for aerospace manufacturing and testing purposes. The development proposal involves either reusing a portion of the building for motion picture studio and production

NOTE: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g., from a Notice of Preparation of a previous draft document) please fill it in

space, or demolishing the building altogether in favor of approximately 975,000 square feet of technology/business park uses. The latter option would generate the highest traffic counts and is therefore the option examined in the EIR, to provide a conservative environmental analysis. In addition to technology/business park uses, the easternmost 8-acre portion of Area II, which abuts Bellflower Boulevard, is proposed to include a maximum 50,000-square-foot museum/learning center/community center and a park. Parking would be provided to serve these anticipated uses.

Area III will be developed as an office park. It will encompass 44 acres and occupy the southern portion of the project site; plans show Area III will front on Clark Avenue and Imperial Highway. Planned improvements consist of eleven, 2-story office buildings, ranging in floor area from 49,000 to 70,000 square feet, for a combined maximum of 600,000 square feet.

16. Signature of Lead Agency Representative: _____ **Date:** March 19, 2001

Reviewing Agencies

- ☐ Resources Agency
- ☐ Boating/Waterways
- ☐ Conservation
- ☐ Fish and Game
- ☐ Forestry
- ☐ Colorado River Board
- ☐ Dept. Water Resources
- ☐ Reclamation
- ☐ Parks and Recreation
- ☒ Office of Historic Preservation
- ☐ Native American Heritage Commission
- ☐ S.F. Bay Cons. & Dev't Commission
- ☐ Coastal Commission
- ☐ Energy Commission
- ☐ State Lands Commission
- ☒ Air Resources Board
- ☐ Solid Waste Management Board
- ☐ SWRCB: Sacramento
- ☒ SWRCB: Region # 9
- ☐ Water Rights
- ☒ Water Quality
- ☒ Caltrans District 7
- ☐ Dept. of Transportation Planning
- ☐ Aeronautics
- ☐ California Highway Patrol
- ☐ Housing and Community Development
- ☐ Statewide Health Planning
- ☐ Health
- ☐ Food and Agriculture
- ☐ Public Utilities Commission
- ☐ Public Works
- ☐ Corrections
- ☐ General Services
- ☐ OLA
- ☐ Santa Monica Mountains
- ☐ TRPA
- ☐ OPR – OLGA
- ☐ OPR – Coastal
- ☐ Bureau of Land Management
- ☐ Forest Service
- ☐ Other _____
- ☐ Other _____

For SCH Use Only

Date Received at SCH _____

Date Review Starts _____

Date to Agencies _____

Date to SCH _____

Clearance Date _____

Catalog Number _____

Applicant _____

Consultant _____

Contact _____ Phone _____

Address _____

Notes:

NOTICE OF PREPARATION

To: _____

From: Mark Sellheim, Principal Planner
City of Downey
Community and Economic Development Dept.
11111 Brookshire Avenue
Downey, CA 90241-7016

Subject: **Notice of Preparation of a Draft Environmental Impact Report**

The City of Downey will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (☒ is ☐ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than 45 days after the receipt of this notice.

Please send your response to Mark Sellheim, Principal Planner, at the address shown above. We will need the name of a contact person in your **agency**.

Project Title: Former Rockwell/Boeing Site Specific Plan

Project Applicant, if any: The Ezralow Company

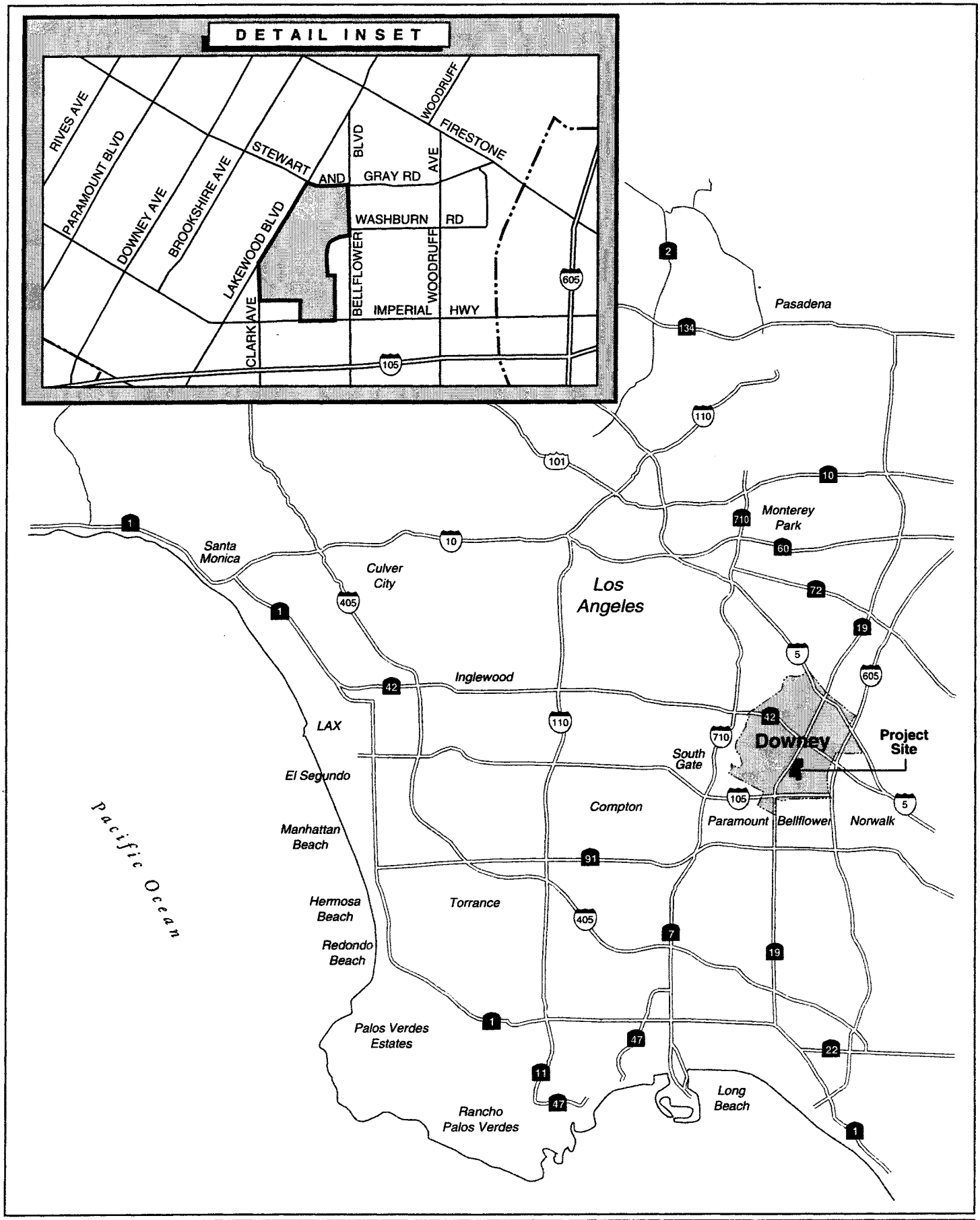
Date: March 19, 2001

Signature _____

Title Principal Planner

Telephone (562) 904-7154

Reference: California Code of Regulations, Title 14, (CEQA Guidelines), Section 15082(a), 15103, 15375.



0 1 2 4 Scale In Miles

SOURCE: EIP Associates

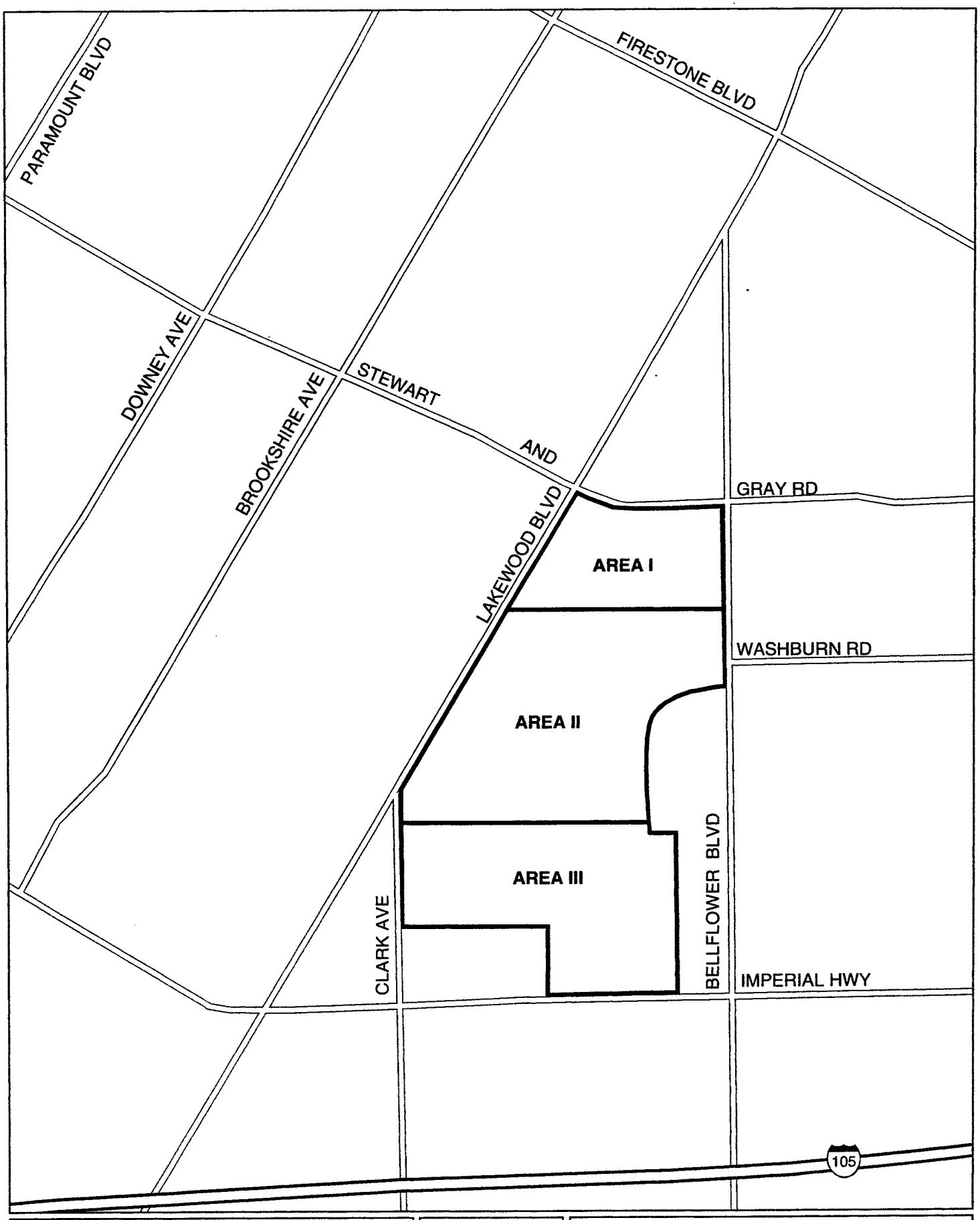
10519-00

EIP

FIGURE 1

Regional Location

City of Downey



Not to Scale

SOURCE: EIP Associates

10519-00

EIP

FIGURE 2

Project Development Areas

City of Downey

INITIAL STUDY

1.0 BACKGROUND

1.1 Project Title:

Specific Plan for the Former 140-acre Rockwell/Boeing Site

1.2 Lead Agency Name and Address:

City of Downey, 11111 Brookshire Avenue, Downey, California, 90241

1.3 Contact person and phone number:

Mr. Mark Sellheim, Principal Planner (562) 904-7158

1.4 Project Location:

The 140-acre site is roughly bounded by the following streets: Lakewood Boulevard (State Route 19) and Clark Avenue on the west, Imperial Highway on the south, Bellflower Boulevard and Stewart & Gray Road on the east and north, respectively.

1.5 Project sponsor's name and address:

The Ezralow Company
23622 Calabasas Road, Suite 100
Calabasas, CA 91302-1549

1.6 General Plan designation:

"Mixed Use". This designation is designed to accommodate both manufacturing and commercial uses.

1.7 Zoning:

General Manufacturing (M-2) and Parking Buffer (P-B)

1.8 Description of Environmental Document and Project:

This Initial Study was prepared in accordance with the California Environmental Quality Act (CEQA) of 1970, as amended and State CEQA Guidelines Section 15063. It's intended to identify the environmental areas project implementation may impact.

The proposed project involves the development of a specific plan that's being prepared for a multiple-use development proposal that's planned for the former Rockwell/Boeing site here in Downey. The project site totals 140 acres. Land uses planned for development include a shopping center, offices, plus buildings designed to accommodate research and development activities. Together, the project's buildings will total a maximum of approximately 2.1 million square feet of floor area. Also, according to the submitted development proposal, the project involves dividing the project site into three distinct land areas. The improvements that will make up each area are described below:

Area I. Area I encompasses slightly more than 33 acres and occupies the northern portion of the project site. A planned retail shopping center will occupy this area, and will be oriented toward Lakewood Boulevard. Other streets bordering Area I include Stewart & Gray Road and Bellflower Boulevard. The center will feature both inline stores and freestanding buildings. Together, the center's building will provide a maximum of 410,000 square feet, plus parking.

Area II will total approximately 63 acres. It supports an existing building (Building One) that contains 883,550 square feet, which both Rockwell and the Boeing Company used for aerospace manufacturing and testing purposes. The development proposal involves either reusing a the building for motion picture studio and production space, or demolishing the majority of the building in favor of approximately 975,000 square feet of technology and business park uses. The latter option would generate the highest traffic counts and is therefore the option examined in the EIR, to provide a conservative environmental analysis. In addition to technology and business park uses, the easternmost 8-acre portion of Area II, which abuts Bellflower Boulevard, is proposed to include a maximum 50,000-square-foot museum/learning center/community center and a park. Parking would be provided to serve these anticipated uses.

Area III will be developed as an office park. It will encompass 44 acres and occupy the southern portion of the project site; plans show Area III will front on Clark Avenue and Imperial Highway. Planned improvements consist of eleven, 2-story office buildings, ranging in floor area from 49,000 to 70,000 square feet, for a combined maximum of 600,000 square feet.

Park/open space/greenspace uses will be interspersed throughout the project site, as well. Construction of each area is anticipated to span 10 months. Area II is currently under temporary use by several motion picture production companies, and if Building One is kept externally intact and reused, the improvements would occur concurrently with construction of Area I. In the case of demolition of Building One, Areas I, II, and III would be developed in approximate numeric order, with some possible overlap. Construction staging is anticipated to occur on-site.

1.9 Environmental Determination

The City of Downey, which is the Lead Agency for this project, has determined that an environmental impact report shall be prepared for the proposed specific plan

1.10 Organization and Content of Initial Study

The Initial Study contains analyses and other supportive evidence by which the Lead Agency can determine whether the approval and implementation of the proposed specific plan will create significant environmental effects. The format and structure of this document reflects the City's Initial Study Checklist (Section 3.0) provided herein. The following outlines the contents of this Initial Study.

1. *Section 1.0, Introduction*, provides the procedural context surrounding the Initial Study's preparation and insight into its composition.
2. *Section 2.0, Project Description,* describes the proposed project.
3. *Section 3.0, Initial Study Checklist* is a form summarizing the contents of the next two sections, particularly with regard to the issue-by-issue

determination of significant impact. It also serves as the document in which the Lead Agency's determination is formally declared and signed.

4. *Section 4.0, Discussion of Environmental Evaluation* describes the environmental effects anticipated to result from implementing the proposed project and the environmental areas the selected consultant will assess in the EIR.
5. *Section 5.0, Mandatory Findings of Significance* provides a discussion of how, or in what way, if any, the development contemplated might adversely impact one of the Checklist's environmental areas.

1.11 Disposition of this Initial Study

As indicated previously, the City of Downey, serving as the Lead Agency, has determined an environmental impact report shall be prepared for the proposed project.
Certain projects or actions undertaken by a Lead Agency may require oversight, approvals, or permits from other public agencies. These agencies are referred to as Responsible Agencies and Trustee Agencies. Pursuant to Sections 15381 and 15386 of the State CEQA Guidelines as amended, responsible agencies and trustee agencies are defined as follows:

> "**Responsible Agency** is a public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For purposes of CEQA, the term "Responsible Agency" includes all public agencies other than the Lead Agency which have discretionary approval over the project."
>
> "**Trustee Agency** is a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the state of California" (such as the California Department of Fish and Game).

2.0 PROJECT DESCRIPTION

2.1 Project Location

Regional Vicinity

The City of Downey, which is in southeastern Los Angeles County, is an urbanized community located about 12 miles southeast of downtown Los Angeles. The city is bounded by the San Gabriel River on the east, Telegraph Road on the north, the Rio Hondo River on the west and Gardendale Street and Foster Road on the south. Cities bordering Downey include: Pico Rivera on the north, Santa Fe Springs on the northeast, Norwalk on the east, Bellflower and Paramount on the south, South Gate on the west and the City of Commerce on the northwest.

The City of Downey contains about 12.8 square miles and its topography is relatively level. The City's elevations range from approximately 90 feet above sea level in the southern part of the community to 140 feet in the northernmost portion. Approximately 63% of the City is developed with residential uses, while both commercial and industrial areas account for about 9% of its land area. Open space accounts for about 9%. The balance is devoted to

schools (5%), public use (3%) or is vacant (2%). Its population was estimated to be 102,103, as of January 1, 2000 by the State of California Department of Finance.

Local Vicinity

The project involves developing a mix generally consisting of Light Industrial, Commercial/Retail, Commercial/Office, and Open Space uses on a 140-acre site. The project site is in the southern part of the City, just southeast of the intersection of the Lakewood Boulevard and Stewart & Gray Road.

Site Conditions

The affected site until recently was part of the Boeing Company's land holdings. It's an irregularly-shaped parcel with a total of 140 acres. The site is designated "Mixed Use" on the General Plan's land use diagram. This category was developed in 1992 as part of the City's General Plan Update. It is intended to accommodate either manufacturing or commercial uses or both activities on the same site.

With respect to zoning, most of the site is zoned General Manufacturing (M-2), except the edges. They are zoned P-B, or Parking Buffer. The P-B zone, as the name implies, is designed to act as a separation between a parcel's activities and the adjoining streets and less intense neighboring land uses. In term of improvements, the P-B zone is intended to accommodate landscaping and parking facilities. The proposed project involves replacing these zoning classifications with a specific plan that will recognize the applicant's development proposal.

3.0 ENVIRONMENTAL CHECKLIST OF POTENTIALLY AFFECTED ISSUES:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that may be significantly impacted as indicated by the checklist on the following pages.

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

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. AESTHETICS. Would the project:				
a. Have a substantial adverse effect on a scenic vista?				X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c. Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	X			
2. 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 farmland. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b. Conflict with existing zoning for agricultural use, or a Williamson act contract?				X
c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X
3. 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?		X		
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
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)?		X		
d. Expose sensitive receptors to substantial pollutant concentrations?		X		
e. Create objectionable odors affecting a substantial number of people?				X
4. BIOLOGICAL RESOURCES. Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
5. CULTURAL RESOURCES. Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines 15064.5?			X	
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines 15064.5?				X
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d. Disturb any human remains, including those interred outside of formal cemeteries?				X
6. GEOLOGY AND SOILS. Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
2) Strong seismic ground shaking?			X	
3) Seismic-related ground failure, including liquefaction?			X	
4) Landslides?				X
b. Result in substantial soil erosion or the loss of topsoil?				X

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
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?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
7. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
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?				X
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?				X

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
8. HYDROLOGY AND WATER QUALITY. Would the project:				
a. Violate any water quality standards or waste discharge requirements?				X
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?		X		
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
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?		X		
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		X		
f. Otherwise substantially degrade water quality?				X
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X

APPENDIX B

Revised Initial Study/Notice of Preparation, Errata Sheet, and Comment Letters

Errata and Additions to the Initial Study

Comments from agencies and the public on the Initial Study/Notice of Preparation have resulted in the following revisions. None of these revisions affects the environmental analysis contained in the Initial Study or the Draft EIR. Deletions are indicated in ~~strikeout~~, and additions are shown in double underlined text.

Page 24 of the Initial Study

Comments from the California Division of Mines and Geology have resulted in the following revisions. Note that these revisions to not alter the findings of the Initial Study/Notice of Preparation, as circulated:

2) *Strong seismic ground shaking?*

Less Than Significant Impact. Like the rest of southern California, the project site is susceptible to ground shaking with the occurrence of a seismic event. However, no significant seismic hazards exist onsite that suggest it is exposed to more potential damage from seismic events than the surrounding area. Further, no severe geological hazards or constraints have been found onsite that would preclude project development. ~~Although the most important implication of seismic safety is building design, no special seismic design requirements other than adhering to seismic protection standards for new construction are indicated.~~ For the Ezralow portion of the project, adherence to the seismic requirements of the latest Uniform Building Code is required and will provide specific standards for buildings to withstand ground shaking within an acceptable level of risk.

The Kaiser Permanente Medical Center will be constructed to meet ~~the Structural Performance Category ("SPC") 5~~ standards established by ~~the State of California under the Alfred E. Alquist Hospital Facilities Seismic Safety Act of 1983 (SB 1953)~~ Title 24 of the California Code of Regulations, the 1998 California Building Code (CBC). As required by California State law, Kaiser will submit a CDMG-approved geotechnical report to the Building & Safety Division and the CDMG for review and approval. Further, Kaiser shall be required to incorporate all applicable measures in the report, as well as those recommended by the approving agencies, into the building plans for the hospital and associated facilities. All plans must be prepared according to Chapters 16, 18, and 33 of the 1998 CBC, and are subject to review and approval by the California Office of State Healthwide Planning and Development (OSHPD) ~~which meets the seismic standards for 2030 established by the State~~. The increased risk in seismic safety represented by the new Kaiser Permanente Medical

Center would ~~therefore~~ be less than significant, assuming compliance with applicable statutes and codes related to seismic construction standards. To ensure that these impacts remain less than significant, Mitigation Measures IS-1, IS-2, and IS-3 are proposed.

Mitigation Measure IS-1: Prior to issuance of a grading permit, Ezralow Retail Properties shall submit to the Building and Safety Division a geotechnical report prepared by a California Certified Engineering Geologist and Registered Geotechnical Engineer. The report shall employ the standard criteria and methods enumerated in CDMG Special Publication 117, "Guidelines for Evaluating and Mitigating Seismic Hazards in California." Ezralow shall be required to demonstrate to the City Planning Department and the Building and Safety Division, implementation of all applicable recommendations of the report into its construction plans.

Mitigation Measure IS-2: Prior to issuance of a grading permit, Kaiser Permanente shall submit, to the Building and Safety Division and to the CDMG, a geotechnical report prepared by a California Certified Engineering Geologist and Registered Geotechnical Engineer. The report shall employ the standard criteria and methods enumerated in CDMG Special Publication 117, "Guidelines for Evaluating and Mitigating Seismic Hazards in California."

Mitigation Measure IS-3: Kaiser Permanente shall incorporate all applicable provisions of Chapters 16, 18, and 33 of the CBC, as well as the recommendations of the geotechnical report and the CDMG, into the construction and site plans for the Kaiser portion of the proposed project. Compliance with the CBC and incorporation of recommended measures shall be demonstrated to the City Planning Department prior to issuance of a grading permit.

3) *Seismic-related ground failure, including liquefaction?*

Less Than Significant Impact. In ~~February~~ March 1999, the California Division of Mines and Geology (CDMG) released a Seismic Hazard Zones map for the South Gate 7.5′ USGS quadrangle, showing that all areas within Downey may be subject to liquefaction ~~hazards~~. As required by Mitigation Measures IS-1 to IS-3 and by State law, the project developers will each submit a geotechnical report to the Building & Safety Division and/or CDMG, as appropriate, prior to ~~during~~ the project's construction plan check stage to identify the ~~extent of~~ appropriate standard engineering measures to reduce the potential hazard. As described above under item 2, State regulations require that the Kaiser Hospital facility obtain a permit from the OSHPD. Applicable controlling provisions of State law are the California Code of Regulations, Title 24, Chapters 16, 18, and 33. As required by California State law, Kaiser will submit a CDMG-approved geotechnical report to the Building & Safety Division and the

CDMG for review and approval. Based on the report's recommendations, measures will be ~~developed and required~~ incorporated into Kaiser's site and construction plans to reduce the liquefaction hazard to a less-than-significant level. Compliance with applicable State statutes and regulations is therefore considered sufficient to ensure that impacts from liquefaction would be less than significant. However, Mitigation Measures IS-1 to IS-3, above, are recommended to ensure that these impacts remain less than significant.

Mail to: State Clearinghouse, 1400 Tenth Street, Room 121, Sacramento, CA 95814 – 916/445-0613

Notice of Completion and Environmental Document Transmittal Form

See NOTE below
SCH # 2001031096

1. Project Title: Downey Landings Specific Plan
2. Lead Agency: City of Downey, Economic and Community Devel. Dept.
3. Contact Person: Mark Sellheim, Principal Planner
3a. Street Address: 11111 Brookshire Avenue
3b. City: Downey
3c. County: Los Angeles
3d. Zip: 90241-7016
3e. Phone: (562) 904-7154

Project Location

4. County: Los Angeles
4a. City/Community: Downey
4b. Assessor's Parcel No. 6256-004-900
4c. Section: unnamed Twp: 3 S Range: 12 W Base: South Gate
5a. Cross Streets: Lakewood Blvd. (SR-19) and Stewart and Gray Rd.
5b. For Rural, Nearest Community: N/A
6. Within 2 Miles: 6a. State Hwy. # SR-19 (Lakewood Blvd.)
6b. Airports: N/A
6c. Railways: Union Pacific, <2 mi north of the project site
6d. Waterways: San Gabriel River, ¾ mi east of the project site

7. Document Type

CEQA:
- ☒ 01. NOP
- ☐ 02. Early Consultation
- ☐ 03. Negative Declaration
- ☐ 04. Draft EIR
- ☐ 05. Supplement/Subsequent EIR (Prior SCH#_____)
- ☐ 06. Notice of Exemption
- ☐ 07. Notice of Completion
- ☐ 08. Notice of Determination

NEPA:
- ☐ 09. Notice of Intent
- ☐ 10. FONSI
- ☐ 11. Draft EIS
- ☐ 12. Env. Assessment

Other:
- ☐ 13. Joint Document
- ☐ 14. Final Document
- ☐ 15. Other _____

8. Local Action Type

- ☐ 01. General Plan Update
- ☐ 02. New Element
- ☐ 03. General Plan Amendment
- ☐ 04. Master Plan
- ☐ 05. Annexation
- ☒ 06. Specific Plan
- ☐ 07. Community Plan
- ☒ 08. Redevelopment
- ☐ 09. Rezone
- ☐ 10. Land Division (Subdivision, Parcel Map, Tract Map, etc.)
- ☐ 11. Use Permit
- ☐ 12. Waste Management Plan
- ☐ 13. Cancel Agricultural Preserve
- ☐ 14. Other _____

9. Development Type

- ☐ 01. Residential: *Units* _____ *Acres* _____
- ☒ 02. Office: *Sq. Ft.:* 600,000 (max.) *Acres:* N/A *Employees*: N/A
- ☒ 04. Shopping/Commercial: *Sq. Ft.* 410,000 (max.) *Acres:* N/A *Employees:* N/A
- ☐ 05. Water Facilities: *Type* _____ *MGD* _____
- ☐ 06. Transportation: *Type* _____
- ☐ 07. Mining: *Mineral* _____
- ☐ 08. Power: *Type* _____ *Watts* _____
- ☐ 09. Waste Treatment: *Type* _____
- ☐ 10. OCS Related _____
- ☒ 11. Other Public; *Sq Ft.* 50,000 (max.)
  Office Park; 975,000 Sq. Ft. (max)
  Hospital: 680,000 sq. ft.(max)
  Medical Office Building: 292,700 sq. ft. (max)
  Parking Structure: 600,000 sq. ft. (max)
  Central Plant (facilities): 27,300 sq. ft.

10. Total Acres: 160

11. Total Jobs Created: N/A

12. Project Issues Discussed in Document

- ☒ 01. Aesthetic/Visual
- ☐ 02. Agricultural Land
- ☒ 03. Air Quality
- ☐ 04. Archaeological/Historical
- ☐ 05. Coastal Zone
- ☐ 06. Economic
- ☐ 07. Fire Hazard
- ☒ 08. Flooding/Drainage
- ☐ 09. Geologic/Seismic
- ☒ 10. Jobs/Housing Balance
- ☐ 11. Minerals
- ☒ 12. Noise
- ☒ 13. Public Services
- ☒ 14. Schools
- ☐ 15. Septic Systems
- ☒ 16. Sewer Capacity
- ☐ 17. Social
- ☐ 18. Soil Erosion
- ☒ 19. Solid Waste
- ☒ 20. Toxic/Hazardous
- ☒ 21. Traffic/Circulation
- ☐ 22. Vegetation
- ☒ 23. Water Quality
- ☒ 24. Water Supply
- ☐ 25. Wetland/Riparian
- ☐ 26. Wildlife
- ☒ 27. Growth Inducing
- ☒ 28. Incompatible Land use
- ☒ 29. Cumulative Effects
- ☐ 30. Other _____

13. Funding (approx.) Federal $ N/A State $ N/A Total $ N/A

14. Present Land Use and Zoning: Mixed Use (includes commercial and industrial uses)

15. Project Description:

Specific plan for a multiple-use development on the 160-acre former Rockwell/Boeing site in Downey. Proposed land uses include a shopping center, offices, buildings designed to accommodate research and development activities, and a Kaiser Permanente hospital and medical office facility, with supporting uses. Together, the project's buildings will total a maximum of approximately 3.7 million square feet of floor area in four distinct land use areas.

Ezralow Proposal

According to the development proposal submitted by Ezralow, the project involves dividing the project site into three distinct land areas. The improvements proposed for each area are described below:

NOTE: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g., from a Notice of Preparation of a previous draft document) please fill it in

Area I encompasses slightly more than 33 acres and occupies the northern portion of the project site. A planned retail shopping center will occupy this area, and will be oriented toward Lakewood Boulevard. Other streets bordering Area I include Stewart & Gray Road and Bellflower Boulevard. The center will feature both inline stores and freestanding buildings. Together, the center's building will provide a maximum of 410,000 square feet, plus parking.

Area II will total approximately 63 acres. It supports an existing building (Building One) that contains 883,550 square feet, which both Rockwell and the Boeing Company used for aerospace manufacturing and testing purposes. The development proposal involves either reusing a the building for motion picture studio and production space, or demolishing the majority of the building in favor of approximately 975,000 square feet of technology and business park uses. The latter option would generate the highest traffic counts and is therefore the option examined in the EIR, to provide a conservative environmental analysis.

Area III will be developed as an office park. It will encompass 44 acres and occupy the southern portion of the project site; plans show Area III will front on Clark Avenue and Imperial Highway. Planned improvements consist of eleven, 2-story office buildings, ranging in floor area from 49,000 to 70,000 square feet, for a combined maximum of 600,000 square feet. A 3 to 5-acre parcel adjacent to the Kaiser portion of the site is proposed to include a maximum 50,000-square-foot museum/learning center/community center and a park. Parking would be provided to serve these anticipated uses.

Open space/greenspace will be interspersed throughout the project site, as well. Construction of each area is anticipated to span 10 months. Area II is currently under temporary use by several motion picture production companies, and if Building One is kept externally intact and reused, the improvements would occur concurrently with construction of Area I. In the case of demolition of Building One, Areas I, II, and III would be developed in approximate numeric order, with some possible overlap. Construction staging is anticipated to occur on-site.

Kaiser Foundation Hospitals Proposal

According to the development proposal submitted by Kaiser, this portion of the project would develop 1.6 msf of buildings and structured parking on 20 acres of partially improved land, consisting of 15 acres of "Parcel 5" and 5 acres of "Parcel 2", adjacent to Area II of the Ezralow portion of the project, fronting on Bellflower Boulevard. Proposed improvements include the replacement of Kaiser's existing 8-story hospital tower in the City of Bellflower with a new 6-story, 600,000-square-foot hospital building with a planned ultimate capacity of 343 beds, the construction of new 4 story, 97,500-square-foot and 185,000 square foot medical office buildings, a 27,300-square-foot central facilities plant, and a 6 level, 775-space parking structure. During Phase 2, the proposed improvements include a 80,000 square foot expansion of the hospital building, an additional 10,200 square feet of office space and an additional 82,000 square-foot, 535-space parking structure. The total square footage of the parking structures (at Phase II build-out) would be 600,000 square feet.

The facilities would be constructed in several phases. The first phase, which Kaiser plans to complete between January 2003 and December 2004, would consist of 282,500 square feet of the medical office building and 1,875 parking spaces, of which 775 shall be in a parking structure and 1100 spaces of surface parking. Commencing on or before December 31, 2006, Kaiser will construct a new 600,000 square foot, 343 bed hospital, which will be completed and ready for occupancy within 4 years of the commencement of construction. Kaiser also may develop, as Phase 2, an additional 80,000 square feet of hospital capacity and a further 10,200 square feet of office use. The phasing of the balance of construction, which may include up to 80,000 additional square feet for the hospital, up to 10,200 square feet for the medical office building.

16. Signature of Lead Agency Representative: _____ **Date:** June 14, 2001

NOTICE OF PREPARATION

To: _____

From: Mark Sellheim, Principal Planner
City of Downey
Community and Economic Development Dept.
11111 Brookshire Avenue
Downey, CA 90241-7016

Subject: Notice of Preparation of a Draft Environmental Impact Report

The City of Downey will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (☒ is ☐ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than ~~45~~ 30 days after the receipt of this notice.

Please send your response to Mark Sellheim, Principal Planner, at the address shown above. We will need the name of a contact person in your **agency**.

Project Title: Downey Landings Specific Plan

Project Applicant, if any: The Ezralow Company, Kaiser Foundation Hospitals

Date: June 14, 2001

Signature _____
Title Principal Planner
Telephone (562) 904-7154

Reference: California Code of Regulations, Title 14, (CEQA Guidelines), Section 15082(a), 15103, 15375.

INITIAL STUDY

1.0 BACKGROUND

1.1 Project Title:

Downey Landings Specific Plan

1.2 Lead Agency Name and Address:

City of Downey, 11111 Brookshire Avenue, Downey, California, 90241

1.3 Contact person and phone number:

Mr. Mark Sellheim, Principal Planner (562) 904-7158

1.4 Project Location:

The 160-acre site is roughly bounded by the following streets: Lakewood Boulevard (State Route 19) and Clark Avenue on the west, Imperial Highway on the south, Bellflower Boulevard and Stewart & Gray Road on the east and north, respectively. Parcel 2 of the site, along Bellflower Boulevard (the easterly portion of the site) will be redeveloped by Kaiser Foundation Hospitals ("KHF"); the remaining portion of the site will be developed by Ezralow Companies ("Ezralow") with a mix of commercial and retail uses.

1.5 Project sponsors' names and addresses:

The Ezralow Company
23622 Calabasas Road, Suite 100
Calabasas, CA 91302-1549

Kaiser Foundation Hospitals
Bellflower Satellite
14371 Clark Avenue
Bellflower, CA 90706
Attn: James Herrington, Project Director
Facilities Design and Construction

1.6 General Plan designation:

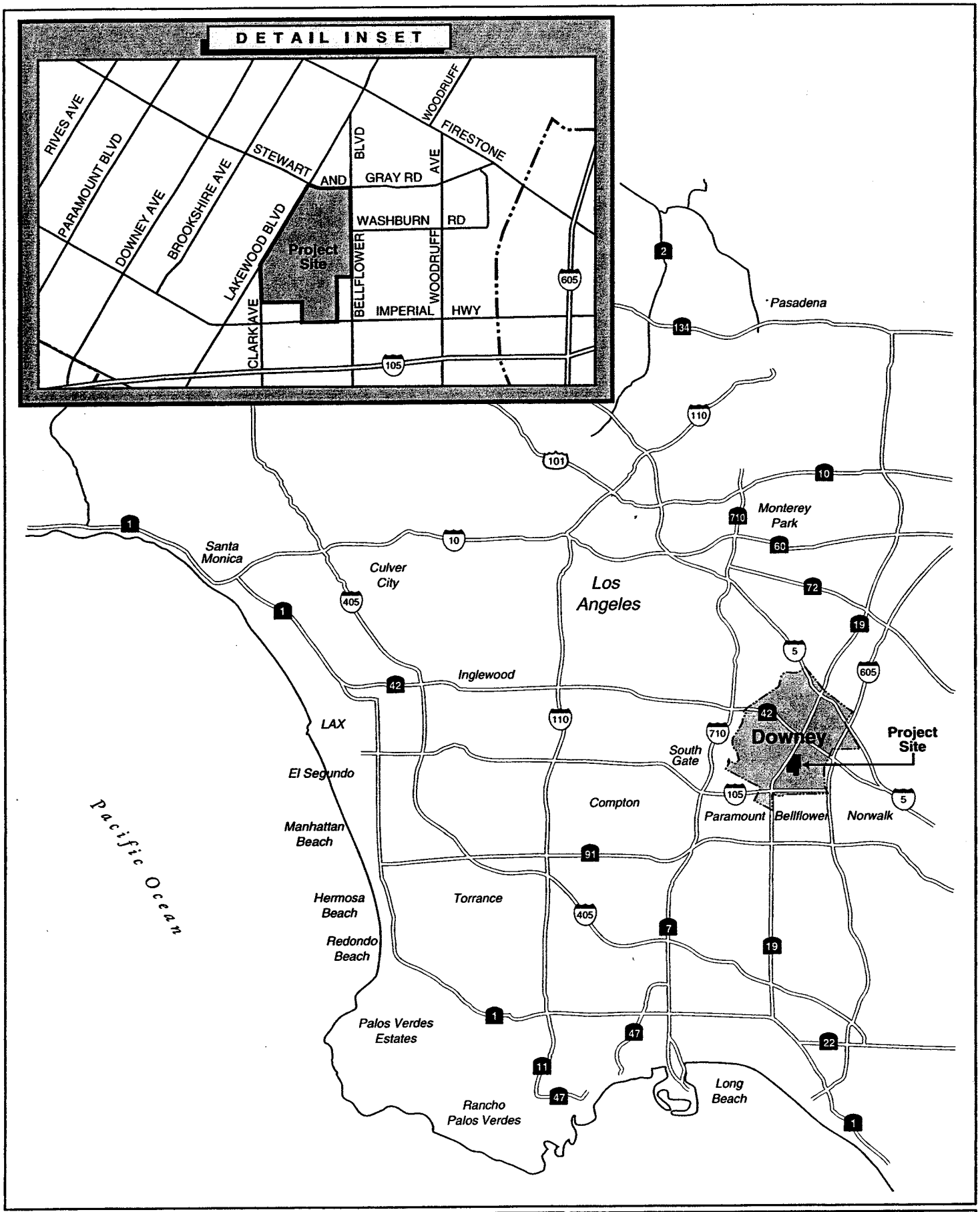
"Mixed Use." This designation is designed to accommodate both manufacturing and commercial uses.

1.7 Zoning:

General Manufacturing (M-2) and Parking Buffer (P-B)

1.8 Description of Environmental Document and Project:

This Initial Study was prepared in accordance with the California Environmental Quality Act (CEQA) of 1970, as amended and State CEQA Guidelines Section 15063. It is



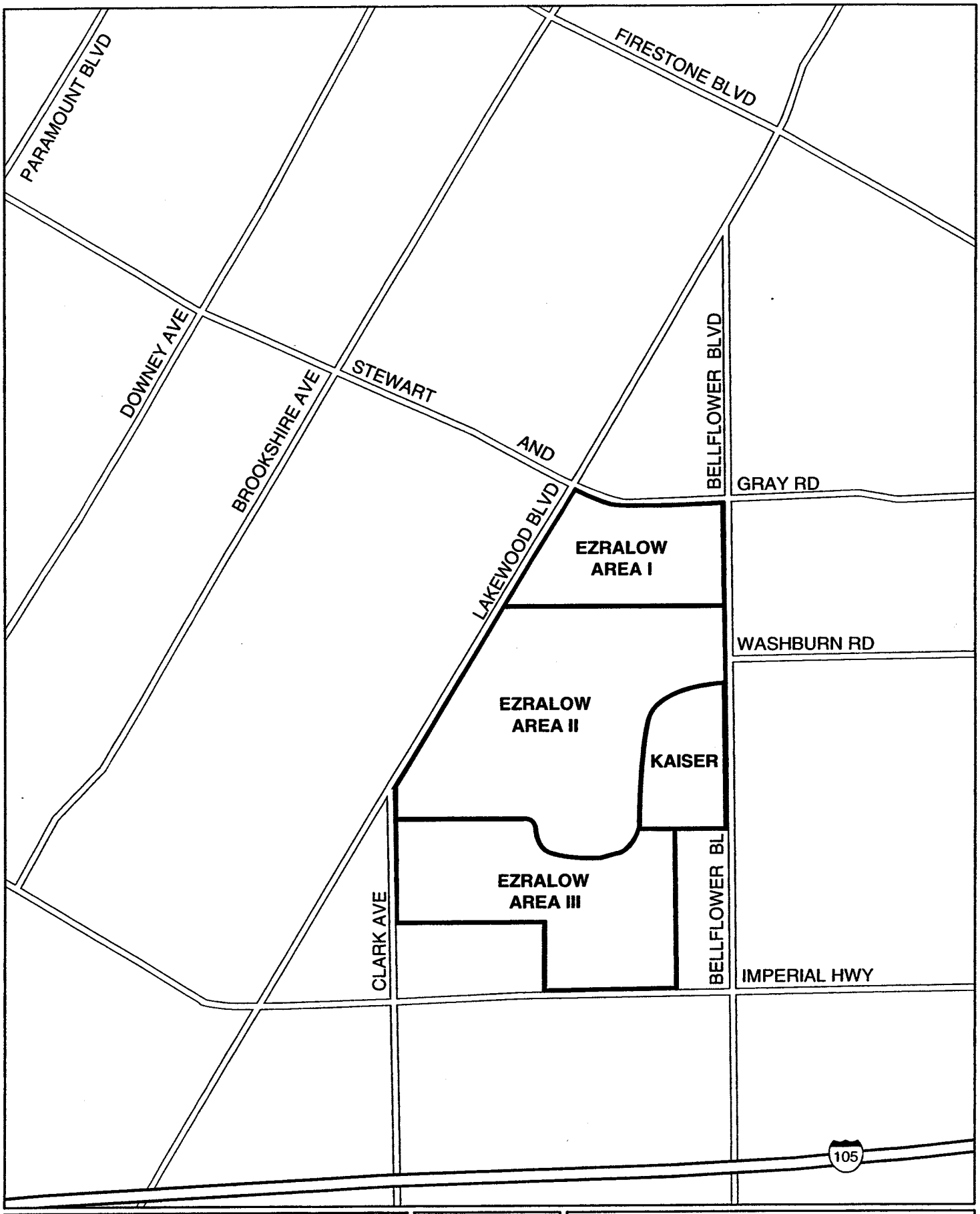
0 1 2 4 Scale In Miles

SOURCE: EIP Associates

FIGURE 1

Regional Location

City of Downey



Not to Scale

N

EIP ASSOCIATES

FIGURE 2

Project Development Areas

City of Downey

SOURCE: EIP Associates

intended to identify the environmental areas that project implementation may significantly affect.

The proposed project involves the development of a specific plan that is being prepared for multiple-use development and redevelopment proposals planned for the former Rockwell/Boeing site in Downey. Since circulation of an Initial Study from March 13, 2001 to April 19, 2001, the project scope has been expanded to include approximately one million square feet (msf) of redevelopment and new construction on portions of Parcels 5 and 2 of the project site by Kaiser Foundation Hospitals (Kaiser), adjacent to Area II of the initially proposed Ezralow project. Land uses planned for development by Kaiser include a new Kaiser hospital, medical office building, and a parking structure. In total, the area to be entitled by the proposed specific plan now encompasses 160 acres developed with approximately 3.7 msf of floor area, compared to 2.1 million square feet, as originally proposed, due to the additional development by Kaiser.

Consequently, the City of Downey, as the Lead Agency for the project, determined that circulation of a revised Initial Study for the project was necessary to provide an opportunity for public comment on the scope of the environmental analysis for the proposed project, as revised.

Ezralow Proposal

According to the development proposal submitted by Ezralow, the project involves dividing the project site into three distinct land areas. The improvements proposed for each area are described below:

Area I encompasses slightly more than 33 acres and occupies the northern portion of the project site. A planned retail shopping center will occupy this area, and will be oriented toward Lakewood Boulevard. Other streets bordering Area I include Stewart & Gray Road and Bellflower Boulevard. The center will feature both inline stores and freestanding buildings. Together, the center's building will provide a maximum of 410,000 square feet, plus parking.

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Required Discretionary Approvals

The Ezralow and Kaiser proposals, hereafter collectively called the project, would require the following discretionary approvals from the City of Downey:

- Approval by the Design Review Board of the Design Review Guidelines.
- Adoption of Specific Plan.
- Adoption of Development Agreements with the Ezralow Company and Kaiser.

In addition to discretionary approvals by the City of Downey, implementation of the proposed project may require discretionary approvals from other State or local agencies. These approvals are discussed below, under "Responsible and Trustee Agencies."

1.9 Environmental Determination

The City of Downey, which is the Lead Agency for this project, has determined that an environmental impact report will be prepared to evaluate the environmental effects of the proposed specific plan.

1.10 Organization and Content of Initial Study

This Initial Study contains analyses and other supportive evidence by which the Lead Agency can determine whether the approval and implementation of the proposed specific plan will create significant environmental effects. The format and structure of this document reflects the City's Initial Study Checklist (Section 3.0) provided herein. The following outlines the contents of this Initial Study.

1. *Section 1.0, Introduction*, provides the procedural context surrounding the Initial Study's preparation and insight into its composition.
2. *Section 2.0, Project Description,* describes the proposed project.
3. *Section 3.0, Initial Study Checklist* is a form summarizing the contents of the next two sections, particularly with regard to the issue-by-issue determination of significant impact. It also serves as the document in which the Lead Agency's determination is formally declared and signed.
4. *Section 4.0, Discussion of Environmental Evaluation* describes the environmental effects anticipated to result from implementing the proposed project and the environmental areas the selected consultant will assess in the EIR.
5. *Section 5.0, Mandatory Findings of Significance,* provides a discussion of how, or in what way, if any, the development contemplated might adversely impact one of the Checklist's environmental areas.

1.11 Disposition of this Initial Study

As indicated previously, the City of Downey, serving as the Lead Agency, has determined an environmental impact report will be prepared for the proposed project. Certain projects or actions undertaken by a Lead Agency may require oversight, approvals, or permits from other public agencies. These agencies are referred to as Responsible Agencies and Trustee Agencies. Pursuant to Sections 15381 and 15386 of the State CEQA Guidelines as amended, responsible agencies and trustee agencies are defined as follows:

> "**Responsible Agency** is a public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For purposes of CEQA, the term "Responsible Agency" includes all public agencies other than the Lead Agency which have discretionary approval over the project."
>
> "**Trustee Agency** is a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the state of California" (such as the California Department of Fish and Game).

Responsible agencies for the proposed project could include the California Department of Transportation (encroachment permit on Lakewood Boulevard [State Route 19]), the California Regional Water Quality Control Board, Los Angeles Region (National Pollutant Discharge Elimination System General Construction Permit), the California Environmental Protection Agency Department of Toxic Substances Control, California Department of Health Services, State Fire Marshal, and the South Coast Air Quality Management District. The State Lands Commission may be a Trustee Agency with jurisdiction over the project.

2.0 PROJECT DESCRIPTION

2.1 Project Location

Regional Vicinity

The City of Downey, which is in southeastern Los Angeles County, is an urbanized community located about 12 miles southeast of downtown Los Angeles. The City is bounded by the San Gabriel River on the east, Telegraph Road on the north, the Rio Hondo River on the west and Gardendale Street and Foster Road on the south. Cities bordering Downey include: Pico Rivera on the north, Santa Fe Springs on the northeast, Norwalk on the east, Bellflower and Paramount on the south, South Gate on the west and the City of Commerce on the northwest.

The City of Downey contains about 12.8 square miles and its topography is relatively level. The City's elevations range from approximately 90 feet above sea level in the southern part of the community to 140 feet in the northernmost portion. Approximately 63% of the City is developed with residential uses, while both commercial and industrial areas account for about 9% of its land area. Open space accounts for about 9%. The balance is devoted to schools (5%), public use (3%) or is vacant (2%). Its population was estimated to be 110,600, as of January 1, 2001 by the State of California Department of Finance.

Local Vicinity

The project involves developing a mix generally consisting of Light Industrial, Commercial/Retail, Commercial/Office, and Open Space uses on a 160-acre site. The project site is in the southern part of the City, just southeast of the intersection of the Lakewood Boulevard and Stewart and Gray Road.

Site Conditions

The affected site until recently was part of the Boeing Company's land holdings. It is an irregularly shaped parcel totaling 160 acres. The site is designated "Mixed Use" on the General Plan's land use diagram. This category was developed in 1992 as part of the City's General Plan Update and is intended to accommodate manufacturing or commercial uses, or both, on the same site.

Most of the site is zoned General Manufacturing (M-2), except for the edges, which are zoned P-B, or Parking Buffer. The P-B zone is intended to accommodate landscaping and parking facilities and, as the name implies, is designed to act as a separation between a parcel's activities and the adjoining streets and less intense neighboring land uses. The proposed project involves replacing these zoning classifications with a specific plan that will recognize the applicants' development proposals.

The impacts arising from the Ezralow project and the Kaiser project will, where feasible, be identified separately in the EIR so that the appropriate mitigation measures can be applied to the corresponding site. It is anticipated that Kaiser will mitigate the impacts arising from its development and Ezralow will be responsible for mitigating its impacts, with the parties

negotiating and sharing in certain impacts that will need to be mitigated together in order to achieve economies of scale and efficiency.

3.0 ENVIRONMENTAL CHECKLIST OF POTENTIALLY AFFECTED ISSUES:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that may be significantly impacted as indicated by the checklist on the following pages.

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

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
1. AESTHETICS. Would the project:				
a. Have a substantial adverse effect on a scenic vista?				X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c. Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	X			
2. 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 farmland. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b. Conflict with existing zoning for agricultural use or a Williamson act contract?				X
c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X
3. 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?	X			
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	X			

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
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 that exceed quantitative thresholds for ozone precursors)?		X		
d. Expose sensitive receptors to substantial pollutant concentrations?		X		
e. Create objectionable odors affecting a substantial number of people?				X
4. BIOLOGICAL RESOURCES. Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES. Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section15064.5?			X	
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section15064.5?				X
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d. Disturb any human remains, including those interred outside of formal cemeteries?				X
6. GEOLOGY AND SOILS. Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
2) Strong seismic ground shaking?			X	
3) Seismic-related ground failure, including liquefaction?			X	
4) Landslides?				X
b. Result in substantial soil erosion or the loss of topsoil?				X
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
7. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X		
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?		X		
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?		X		
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?				X
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?				X
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
8. HYDROLOGY AND WATER QUALITY. Would the project:				
a. Violate any water quality standards or waste discharge requirements?				X
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?		X		
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
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 that would result in flooding on- or off-site?		X		
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		X		
f. Otherwise substantially degrade water quality?				X
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j. Inundation by seiche, tsunami, or mudflow?				X

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
9. LAND USE AND PLANNING. Would the project:				
a. Physically divide an established community?				X
b. Conflict with any applicable land use plan, policy, or regulation of 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?			X	
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
10. MINERAL RESOURCES. Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
11. NOISE. Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?		X		
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e. For a project located within an airport land use plan 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?				X
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?				X

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
12. 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)?		X		
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
13. PUBLIC SERVICES.				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1) Fire protection?		X		
2) Police protection?		X		
3) Schools?		X		
4) Parks?				X
5) Other public facilities?				X
14. 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 facility would occur or be accelerated?				X
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
15. TRANSPORTATION/TRAFFIC. Would the project:				
a. Cause an increase in traffic that 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)?		X		
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?		X		
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e. Result in inadequate emergency access?				X
f. Result in inadequate parking capacity?				X
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
16. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?		X		
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		X		
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		X		
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?		X		

	Potentially Significant Impact	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?		X		
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?		X		
g. Comply with federal, state, and local statutes and regulations related to solid waste?		X		
17. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?		X		

4.0 DISCUSSION OF ENVIRONMENTAL EVALUATION

This section analyzes the potential environmental impacts that may result from the proposed project. For the evaluation of potential impacts, the questions in the Initial Study Checklist (Section 3) are stated and answers are provided according to the analysis undertaken as part of the Initial Study. They include:

1. *No Impact*. Future development arising from the project's implementation will not have any measurable environmental impact on the environment and no additional analysis is required.

2. *Less Than Significant Impact*. The development associated with project implementation will have the potential to impact the environment; these impacts, however, will be less than the levels or thresholds that are considered significant and no additional analysis is required.

3. *Potentially Significant Unless Mitigated*. The development will have the potential to generate impacts that will have a significant effect on the environment; however, mitigation measures will be effective in reducing the impacts to levels that are less than significant.

4. *Potentially Significant Impact*. Future implementation will have impacts that are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

The following is a discussion of potential project impacts as identified in the Initial Study. Explanations are provided for each item.

4.1 AESTHETICS. *Would the project:*

a) *Have a substantial adverse effect on a scenic vista?*

No Impact. The City's General Plan does not désignate any adjoining or nearby roadways as scenic highways. As a consequence, project implementation will not impact a scenic vista.

b) *Substantially damage scenic resources, including, but not limited to trees, rock outcroppings and historic buildings within a state scenic highway?*

No Impact. The project site is roughly bounded by Lakewood Boulevard, Clark Avenue, Imperial Highway, Bellflower Boulevard and Stewart & Gray Road; and none of these roadways have been designated state scenic highways. Moreover, no scenic resources, including trees, rock outcroppings are located onsite. The project site is completely developed; improvements consist of buildings while the rest is covered with parking lots. As such, the site does not feature any scenic resources.

c) *Substantially degrade the existing visual character or quality of the site and its surroundings?*

Potentially Significant. The project site is entirely developed with either buildings or expansive asphalt parking areas; the site's improvements were built a number of years ago and occupied by aerospace firms such as of Rockwell International and the Boeing Company. They used the buildings for testing, designing and manufacturing purposes for such space programs as the Apollo and Shuttle programs. Given their age, the buildings' exteriors have a very dated appearance and the onsite improvements are nonconforming from the standpoint they do not meet today's development standards.

In light of the dated improvements and obsolete conditions, project implementation is not expected to degrade the site's visual character. Instead, the proposed project represents a marked improvement. Moreover, the City's Design Review Board will ensure that the project's various components are attractive and compatible with the improvements occupying neighboring properties. The Board will approve, as part of the specific plan,

design review guidelines for all phases of the proposed project, as well as its landscape and irrigation plans.

However, the height of the proposed hospital structures could result in shadows on nearby residences, which could constitute a significant impact. The EIR will address the issue of shade and shadow.

d) *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?*

Potentially Significant Impact. As noted above, Rockwell and more recently the Boeing Company carried out their operations at the project site. Currently, however, the facilities are either vacant or under temporary use. Given that they are irregularly occupied, project development will introduce new light sources, such as buildings' exterior signs, reactivated and new parking lot lights, and the headlights from on-site vehicle traffic.

Nevertheless, the substantial anticipated increase in ambient light levels in the northern and eastern portions of the project site could result in a significant impact to the residential uses north of Stewart and Gray Road, west of Lakewood Boulevard, and east of Bellflower Boulevard.

4.2 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 farmland.*

Would the project:

a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact. The project site is completely developed and is part of the city's urban setting. It is not under cultivation nor are the its surrounding properties being cultivated. Therefore, project implementation will not result in the conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland).

b) *Conflict with existing zoning for agricultural use or a Williamson act contract?*

No Impact. Project development will not conflict with zoning for agricultural use or a Williamson Act Contract. The project site is zoned General Manufacturing (M-2) and this category is designed to accommodate general manufacturing activities.

c) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use?*

No Impact. As previously stated, the subject site is not used for agricultural production; furthermore, agricultural operations do not occur on any of the neighboring properties.

Thus, developing the proposed master-planned project will not result in any changes to the environment that involve converting farmland to a non-agricultural use.

4.3 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?*

Potentially Significant Unless Mitigated. The project site is within the South Coast Air Basin; the basin has been designated a non-attainment area by the federal Environmental Protection Agency due to its failure to meet federal ambient air quality standards. The clean air plan for the basin is the 1997 Air Quality Management Plan (AQMP). The South Coast Air Quality Management District prepared and adopted the AQMP and it is the District's responsibility to bring the basin into compliance with the plan's provisions.

Project implementation involves developing approximately 3.7 million square feet of building floor area. Given its substantial scope, coupled with the fact that its proposed floor area amount triggers the need for an air impact study according to the District's Air Quality Handbook, the EIR will include a comprehensive air quality analysis. The analysis will assess the project's short- and long- term impacts on air quality.

Short- term impacts are those that will occur while the project is under construction. Examples include emissions from construction-related vehicles and fugitive dust from grading activities. Long-term impacts are those that would be emitted after the project is built; in other words, emissions from its day-to-day operations such as the emissions from project-generated traffic. Other sources could include emissions from fume hoods in hospital laboratory facilities.

The EIR will at a minimum:

- Identify the existing air quality environment of the project site in the local and regional context.
- Describe the short-term air quality impacts associated with construction activities anticipated to accompany project development.
- Identify long-term air quality impacts resulting from project-generated traffic and point source emissions.
- Assess the proposed project's consistency with the 1997 South Coast Air Quality Management Plan and the Air Districts' 1993 Air Quality Handbook.
- Identify mitigation measures necessary to reduce short- and long –term air quality impacts to a level of insignificance, and recommend measures necessary to bring the project into compliance with the 1997 AQMP.

b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Potentially Significant Unless Mitigated. Please see response to Item 4.3.a)

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 that exceed quantitative thresholds for ozone precursors)?

Potentially Significant Unless Mitigated. Please see response to Item 4.3.a).

d) *Expose sensitive receptors to substantial pollutant concentrations?*

Potentially Significant Unless Mitigated. Please see response to Item 4.3. a). Although the project will include a hospital, with potentially sensitive receptors such as children, infirm and elderly, it is not anticipated that any contact or exposure would occur between any sensitive receptor and substantial pollution due to the project design and proposed hazardous material remediation.

e) *Create objectionable odors affecting a substantial number of people?*

No Impact. Multiple-use projects such as the applicants' development proposals that feature hospital, retail, office, and parking components characteristically do not create objectionable odors.

4.4 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, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No Impact. As identified above, the project site totals 160 acres; it is almost entirely improved with buildings and asphalt-covered parking lots. No habitat is present; therefore, as the site's existing improvements indicate, no species inhabit it.

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No Impact. The project site contains no riparian corridors, riparian habitat, or any other sensitive natural community; therefore, project implementation will not impact any natural communities.

c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact. No wetlands as defined by Section 404 of the Clean Water Act exist onsite. Thus, project implementation would not result in any impacts in this regard.

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?*

No Impact. The project proposes to redevelop an urban site surrounded by urban uses. Project implementation will not interfere with the movement of any native resident or

migratory fish or wildlife species. Nor will it interfere with any kind of established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, since none exist onsite or in the vicinity of the project site.

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

No Impact. As noted previously, the project site is developed and is part of the City's built environment. Project implementation will not conflict with any of the City's policies or ordinances protecting biological resources, such as the Conservation Chapter's tree preservation policy. As noted above, the site does not feature any biological resources.

f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?*

No Impact. The project site is not under the jurisdiction of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other habitat conservation plan and no draft plan exists or is proposed. Thus, implementing the project will not result in impacts in this regard.

4.5 CULTURAL RESOURCES. *Would the project:*

a) *Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?*

Less Than Significant Impact. As a federal agency and as the property owner of the project site, NASA was required under Section 106 of the National Historic Preservation Act (NHPA) to evaluate the potential effects of its transfer of title of the project site to the City of Downey, upon on-site structures that are older than 50 years, or that may have been associated with significant events in the past. This required study included an evaluation of the buildings' historical significance and potential eligibility to the National Register of Historic Places.

The *Final Historic Buildings and Structures Inventory and Evaluation* was prepared for NASA by Earthtech (2000) for the purposes described above and determined, based on a review of historical literature (e.g. text, maps, and photographs), interviews with individuals having knowledge of the property's/plant's history, and physical inspection and evaluation of the entire plant and its associated properties, that a complex of nineteen of the structures and features on the project site, identified as property numbers 1, 6, 290, 10, 11, 25, 36, 39, 41, 42, 108, 120, 123, 125, 126, 127, 128, 130, 288, and 290, is potentially eligible to the National Register of Historic Places. Additionally, properties 1 and 6/290 are potentially eligible to the National Register based on their individual merit as principal historic resources of the property.

The determinations of potential eligibility are based on the buildings' age and association with aviation/aerospace history. Direct associations of the facilities on the project site include the plant's standing as one of the first aircraft manufacturing facilities in the United States; the significance of the property with respect to World War II aircraft manufacture; testing and operation of the first low-level nuclear reactor in the United States; testing and patenting of the chemical milling process; research, production, or assembly of the first American rockets and missiles; design, production, assembly, and

testing of the equipment and materials to put man in space and on the moon (particularly the Apollo space program); and design, production, testing, and support for the American Space Shuttle Orbiter Program.

Support of these aircraft and activities has been continuous since the plant was originally constructed in 1929, and has progressed with the concepts and technology of the changing times. The Earthtech (2000) evaluation acknowledges that some structures are more directly associated with some of the activities than others; however, all have contributed to or supported the broad historical context of the associations described above. Older structures of the earliest construction have supported the plant through its entire continuum of activity, while later buildings support and contribute to the overall theme, and provide a historic and aesthetic linkage to the entire plant.

The California State Office of Historic Preservation (SHPO) concurred with the findings of the Earthtech (2000) evaluation. Consequently, the project's potential effects on some of these structures (i.e., demolition) were regarded as adverse effects, pursuant to Section 106 of the National Historic Preservation Act. These effects would also constitute a significant impact under Section 15064.5 of the State CEQA Guidelines (the California Code of Regulations). To "resolve" or "mitigate" this impact (terms used in Section 106 of the NHPA and in the State CEQA Guidelines, respectively), NASA has entered into a Memorandum of Understanding (MOA) with the City of Downey, the General Services Administration (GSA) and SHPO.

The provisions of the MOA include the following:

- Preservation in-place by the City or its successors or assigns of a particular segment of Building 1, known in the MOA as "Building 1 Portion." Building 1 Portion includes the original wing constructed by E.M. Smith in 1929 and the engineering addition designed by Gordon Kaufmann and constructed between 1938 and 1942, including the terrazzo insignia of Consolidated Vultee Aircraft Corporation in the rotunda of the Kaufmann-designed wing. Preservation, rehabilitation, and maintenance of Building 1 Portion will occur in accordance with the recommended approaches in "The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings" (National Park Service 1992). These Standards and Guidelines are considered to be the professional standard for such undertakings.
- If the remainder of Building 1 (other than Building 1 Portion above) is to be altered not in conformance with the Standards and Guidelines described above, or is to be demolished, the remainder of the interior and exterior of the building will be recorded in accordance with Level I Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) guidelines to create a permanent record of the building's history and condition in its original setting. The same requirements will apply to Buildings 6, 10, 11, 25, 36, 39, 41, 42, 108, 120, 123, 125, 126, 127, 128, 130, 288 and 290 if any portion of these buildings is to be altered not in conformance with the Standards and Guidelines, or if any portion of these buildings is to be demolished, except that Level II HABS/HAER documentation is required, and will include streetscapes, grids, layouts, and overall views of the contributing property as a whole.
- Preservation of the brick-lined concrete walkway panels in front of Building 290 (the Apollo astronauts' signatures), and integration of the features into the City's design for the reuse of the project site in such a way as to make it readily accessible to the

interested public during reasonable days and hours. The concrete panels may be relocated (on-site).

- Incorporation into development of the project site/property an interpretive display of photographs highlighting the significant events and persons associated with the project site. The display must be made readily accessible to the interested public during reasonable days and hours.
- The restrictions and limitations described above will run with the land of the project site/property.
- Prior to the transfer of title of the property from NASA to the City, NASA must transfer to the City all known historical documents, records, photographs found in or on the property or in NASA files to facilitate development and reuse of the property, and for required documentation. Copies of this information will be made available to SHPO, the Historical Society, the Foundation, and appropriate archives designated by GSA.
- The City will, in cooperation with NASA, develop an education program to foster awareness of the property and its impact on the City and on the American aeronautics and aerospace industries.

The MOA also includes provisions for dispute resolution and public objection. Also, in the event that the provisions of the MOA are violated, the MOA states that the federal government may institute a suit to require restoration of the property or to collect damages resulting from the breach of the requirements of the MOA. Additionally, GSA must provide SHPO an opportunity to comment on the transfer document for the property, including the reuse plan, and will take SHPO's comments into account to the fullest reasonable extent.

As of the time of preparation of this Initial Study, the MOA had been executed by NASA, GSA, SHPO, and the City. Therefore, potential impacts to historical resources will be reduced to a less-than-significant level.

b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?*

No Impact. The project site is improved, contains extensive subsurface infrastructure, and is part of the built urban environment; there are no known archaeological resources onsite as defined by CEQA Guideline Section 15064.5. Therefore, project implementation will not cause a substantial adverse change in the significance of an archaeological or unique paleontological resource.

c) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

No Impact. Please refer to Item 4.5 b).

d) *Disturb any human remains, including those interred outside of formal cemeteries?*

No Impact. Onsite improvements consist of buildings and paved parking lots. Given the improvements, the site is not expected to contain any human remains. Also, refer to Item 4.5.b).

4.6 GEOLOGY AND SOILS. *Would the project:*

a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

1) *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 the Division of Mines and Geology Special Publication 42.*

No Impact. There are no known faults underlying the City, according to the Safety Chapter of the General Plan. As such, surface rupture is not considered to be a potential impact within Downey.

2) *Strong seismic ground shaking?*

Less Than Significant Impact. Like the rest of southern California, the project site is susceptible to ground shaking with the occurrence of a seismic event. However, no significant seismic hazards exist onsite that suggest it is exposed to more potential damage from seismic events than the surrounding area. Further, no severe geological hazards or constraints have been found onsite that would preclude project development. Although the most important implication of seismic safety is building design, no special seismic design requirements other than adhering to seismic protection standards for new construction are indicated. Adherence to the seismic requirements of the latest Uniform Building Code is required and will provide specific standards for buildings to withstand ground shaking within an acceptable level of risk. The Kaiser Permanente Medical Center will be constructed to meet the Structural Performance Category ("SPC") 5 standards established by the State of California under the Alfred E. Alquist Hospital Facilities Seismic Safety Act of 1983 (SB 1953), which meets the seismic standards for 2030 established by the State. The increased risk in seismic safety represented by the new Kaiser Permanente Medical Center would therefore be less-than-significant.

3) *Seismic-related ground failure, including liquefaction?*

Less Than Significant Impact. In February 1999, the California Division of Mines and Geology released a seismic hazard zone map showing that all areas within Downey may be subject to liquefaction hazards. As required by State law, the project developer will submit a geotechnical report to the Building & Safety Division during the project's construction plan check stage to identify the extent of the potential hazard. Based on the report's recommendations, measures will be developed and required to reduce the liquefaction hazard to a less-than-significant level.

4) *Landslides?*

No Impact. The project site and surrounding properties are level; there are no hills or slopes nearby. With this topography, project implementation will not expose people or structures to potential adverse effects involving landslides.

b) *Result in substantial soil erosion or the loss of topsoil?*

No Impact. The site's soil will be exposed and susceptible to erosion during the project's various construction stages. This potential impact will be significantly reduced, however, by implementing the City's standard erosion-control practices. Other than during the construction stages, project development will not result in any soil erosion or the substantial loss of topsoil. As the project's plans show, project development will result in nearly the entire site being covered with impermeable surfaces (i.e., buildings, parking structures and paved parking areas), which will preclude erosion. Additionally, the project site is already largely developed, and does not contain substantial quantities of topsoil.

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?*

Less Than Significant Impact. Please refer to Item 3.6.a.3).

d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?*

Less Than Significant Impact. All of the soil types in Downey can be compacted to a degree that they do not hinder site development. By adhering to accepted soils engineering and grading practices, the risk of settlement would be mitigated. Areas of compressible soil can be developed by replacement with suitable fill and compaction to meet load bearing specifications, using special foundation construction or a combination of these techniques. Although the characteristic soil associations have a low shrink-swell potential, where soils are thick and well developed, expansive soil should be suspected. If areas of expansive soil are identified, appropriate grading plans and foundation designs will be incorporated into the project's design, and would ensure that this impact remains less than significant.

e) *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

No Impact. Site soils are capable of supporting a sewer network. As noted, the affected site is presently developed and sewers served the former use. Similarly, sewers will be the method used to carry the proposed project's wastewater.

4.7 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?*

Potentially Significant Unless Mitigated. The nature and characteristics of the Ezralow portion of the project's planned uses (i.e., retail, office and research and development) do not involve transporting, using, or disposing hazardous materials during daily operation. The nature and characteristics of the Kaiser's proposal's planned uses necessarily involve transporting, using, or disposing of hazardous materials during daily

operation. These impacts are potentially significant unless mitigated. The EIR will include a hazardous materials assessment and analysis; however, a Human Health Risk Assessment (HHRA) may be required. The analysis will assess the project's short- and long-term impacts on hazardous waste and will, at a minimum:

- Identify the existing hazardous material environment of the project site.
- Describe the short-term hazardous materials impacts, if any, associated with construction activities anticipated to accompany project development.
- Identify and quantify long-term hazardous materials impacts resulting from daily operation of the proposed project.
- Identify mitigation measures necessary to reduce short- and long–term hazardous materials impacts.

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?*

Potentially Significant Unless Mitigated. Day-to-day activities at the hospital site will involve the routine use of hazardous materials such as medical waste, radiological waste and chemical waste. Medical waste includes biologically hazardous waste and is generally described as waste capable of producing infectious disease. Radiological waste refers to waste products contaminated with radioactive material, such as radioactive implants used in nuclear medicine. All radioactive waste would be collected at the source and contained onsite in a lead-lined vault until it is rendered safe for sanitary landfill disposal. Monitoring equipment is routinely used by Kaiser to detect radioactive materials in waste products. Chemical waste includes toxic chemicals such as formaldehyde, xylene, alcohols and reagents. All such wastes would be stored in accordance with law and removed from the site by a licensed hazardous waste hauler and taken to an appropriate facility for disposal. Spent X-ray developer would be collected, labeled and removed by Kaiser's Biomedical Engineering department for recycling. Implementation of existing Federal, State and local requirements regulating hazardous materials and waste at a medical facility would be required. However, the use of hazardous materials at the project site represents a potentially significant impact.

Additionally, the site contains both soil and groundwater contamination: Phase I and II Site Assessments have been prepared for the Ezralow portion of the site by Earthtech—the most recent was completed in September 2000, and soils remediation in Area I is currently in progress under the supervision of Foster-Wheeler. A Phase I site assessment was prepared in April of 2001 by LAW Crandall for Kaiser, and determined that soil and groundwater contamination exist on Parcel 2 (on which the Kaiser facility is proposed), and the report recommended that a Phase II ESA be prepared. No Phase II has yet been prepared or completed for that portion of the project site. Also refer to Item 4.7.a). The General Services Administration of the Federal Government has acknowledged its obligation to remediate the project site to a level that would allow commercial development, at its cost. The potential for groundwater and soil contamination on the site represents a potentially significant impact with would be reduced to a less than significant level by further investigation, and proposed cleanup and remediation of soils and groundwater during the development of the site.

c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Potentially Significant Unless Mitigated. Due to the nature and characteristics of the project's activities, their day-to-day operations will involve the use of hazardous or acutely hazardous materials, and facilities such as fume hoods could emit potentially hazardous materials. Because of the presence of schools within ¼ mile of the project site, and the fact that land on the project site could be offered to the Downey Unified School District (although construction of a school on the project site is not anticipated, and this EIR is not intended to provide environmental review for any school, potentially significant impacts can be anticipated unless mitigated. Also refer to item 4.7.a).

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?*

Potentially Significant Unless Mitigated. The project site is a formerly used defense site (FUDS), and as such is included on a list of sites containing hazardous materials, and may result in a significant hazard to the public or to the environment. The General Services Administration of the Federal Government and the project applicants intend to remediate such impacts in accordance with the guidelines imposed by local, state and federal agencies. The EIR will evaluate this potential impact.

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?*

No Impact. The affected site is not within the boundaries of an adopted airport land use plan nor is it within two miles of a public airport. Therefore, project implementation will not create a safety hazard to project employees or store customers nor will it pose a safety hazard for the people living and working in the area.

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?*

No Impact. The proposed project site is not within the vicinity of a private airstrip, so developing it will not result in a safety hazard in this regard for people residing nearby or for those employed at businesses nearby.

g) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

No Impact. According to Exhibit V-6 in the Safety Chapter of the General Plan, evacuation routes frame the project site. Lakewood Boulevard and Imperial Highway are designated primary routes, while Bellflower Boulevard and Stewart & Gray Road are listed as secondary routes. The project is not of the scope or magnitude, however, to interfere with the planned responses of the community's emergency plan. Similarly, it is not characteristic of the project's uses to block evacuation routes. The presence of the Kaiser Permanente Medical Center is a beneficial impact of the project that will enhance the implementation of an emergency response plan or emergency evacuation plan.

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?*

No Impact. The project site is improved and located within a fully developed urban setting. Therefore, project implementation will not expose people or structures to loss, injury or death involving wildland fires.

4.8 HYDROLOGY AND WATER QUALITY. *Would the project:*

a) *Violate any water quality standards or waste discharge requirements?*

No Impact. Project implementation has the potential to violate a water quality or wastewater discharge requirement; however, assuming the City's full compliance with local, regional, state, and federal water quality and wastewater standards, no impact is anticipated.

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 well would drop to a level which would not support existing land uses or planned uses for which permits have been granted?)*

Potentially Significant Unless Mitigated. Over 90% of the water consumed in the City of Downey is pumped from the Central Groundwater Basin. Groundwater levels are maintained by the Water Replenishment District of Southern California. The City purchases the rest of its water supply from the Metropolitan Water District (MWD). As these figures indicate, the City consumes more water than its allotted pumping allocation; and consequently depends on MWD to supplement the water supply.

Considering the project's magnitude, coupled with the City's current demand for water beyond its allocation, the EIR will assess the project's impacts on the City's water supply. It will identify the daily amount of water the project's activities are anticipated to consume and compare that to supply. The EIR will also propose mitigation measures if the potential impacts are determined to be significant.

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?*

No Impact. Project implementation may alter the site's present-day drainage patterns; however, any changes are not expected to result in erosion or siltation on-or offsite. As noted previously, project development entails developing the site with impermeable surfaces such as buildings, parking areas and parking structures. As a consequence, the site's soils will be covered and therefore not susceptible to erosion.

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 that would result in flooding on- or off-site?*

Potentially Significant Unless Mitigated. Development as noted previously may alter the site's existing drainage pattern. The new pattern could result in an increase in the amount of surface runoff that enters the offsite storm drain network that currently serves the site. In the event of this potential effect, the EIR will at a minimum:

- Identify and quantify the site's current drainage patterns and water flows within and adjacent to it.
- Identify the capability of the affected storm drain network to accommodate the changed water flows.
- Evaluate the quality of these water flows.
- Recommend mitigation measures, if necessary, to reduce potential adverse impacts.

e) *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?*

Potentially Significant Unless Mitigated. Please refer to item 4.8.d).

f) *Otherwise substantially degrade water quality?*

No Impact. Due to the nature and scope of the proposed project, its implementation would not substantially degrade water quality.

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?*

No Impact. The proposed project does not involve the development of dwelling units.

h) *Place within a 100-year flood hazard area structures that would impede or redirect flood flows?*

No Impact. The project site is within special flood hazard area (SFHA) Zone A99. Zone A99 is an area that's in the process of being restored to provide protection to structures from the base flood or a greater level of protection. The Federal Emergency Management Agency changed the site's flood zone designation to Zone A99 on September 1, 2000. With the new designation, the project site and the rest of the community is in a special flood hazard area protected from the anticipated base flood. It is protected by the Los Angeles County Drainage Area project, which is a federally sponsored flood control project now under construction.

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?*

No Impact. Please refer to Item 4.8.h).

j) *Inundation by seiche, tsunami, or mudflow?*

No Impact. No significant water features have been identified in the project area and the project site and surrounding area are both urban in character and devoid of substantial topography. Thus, the project site is not anticipated to experience any impacts from inundation resulting from seiches, tsunamis or mudflows.

4.9 LAND USE AND PLANNING. *Would the project:*

a) *Physically divide an established community?*

No Impact. Project implementation and operation will not physically divide any part of an established community. Instead, it involves converting a former aerospace facility, now largely vacant except for some temporary uses, into a multiple-use development consisting of a shopping center, office park, and hospital/medical center uses. Development will not encroach into any neighboring sites.

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 or mitigating an environmental effect?*

Less Than Significant. The project is consistent with the site's existing general plan category. However, one of the project's planned land use components is inconsistent with the site's existing zoning classification. That is, while the site's General Manufacturing (M-2) zone does permit office and research and development uses, it does not permit retail uses (i.e., the shopping center). Nonetheless, the M-2 zone was not imposed on the site for the purpose of avoiding or mitigating an environmental effect. Rather, it best reflected the improvements that have occupied the site since the 1940s: airplane manufacturing and aerospace companies.

To address the land use/zoning conflict, the application includes the preparation of a specific plan that is being designed to recognize the project's proposed uses. Moreover, the specific plan is designed to replace the site's existing zoning classifications. The specific plan will be a regulatory specific plan containing development standards, permitted and conditionally permitted land uses and maximum building intensities.

With respect to the General Plan, the site maintains the "Mixed Use" land use category. Its general plan category was changed from Manufacturing to "Mixed Use" in 1992 as part of the most recent General Plan Update. The "Mixed Use" category was designed to accommodate either commercial or manufacturing uses, or a combination of the two on the same site. The EIR's analysis will focus on conformity between the specific plan and the goals and policies of the "Mixed Use" category.

There are also regional plans adopted by regulatory agencies that encompass the project site. Plans include: 1) the L. A. County Metropolitan Transportation Authority's Congestion Management Program and 2) the South Coast Air Quality Management District's (SCAQMD) 1997 Air Quality Management Plan. As part of the environmental assessment, the EIR will evaluate the specific plan's consistency with these plans. For example, project-generated traffic may adversely impact the roadway network serving the development; and some sections of this network are also part of the CMP highway network. The EIR's assessment will analyze the project's traffic impacts on the CMP

network. Additionally, the EIR will employ the land use analysis methodology advanced in the1997 Congestion Management Program to prepare the traffic impact analysis.

Potential air quality impacts from project activities are forecasted to exceed the established "thresholds of significance" as defined in the SCAQMD's 1993 CEQA Air Quality Handbook. The environmental document will assess the extent of the project's impacts on air quality, relative to the 1997 Air Quality Management Plan. The EIR will also suggest measures to reduce forecasted emissions from project activities to a level of insignificance.

c) *Conflict with any applicable habitat conservation plan or natural community conservation plan?*

No Impact. As stated in Item 4.4.f), the project will not conflict with a habitat conservation plan or natural community conservation plan. Neither of these kinds of plans has been imposed on the site or neighboring properties.

4.10 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 residents of the state?*

No Impact. The site does not feature any known mineral resources. Further, availability of any such resource would be nonexistent due to the site's current developed nature.

b) *Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

No Impact. The project site is part of a fully developed urban setting. Improvements occupying neighboring properties include a variety of uses, such as apartment complexes, single-family residences, and senior health care facilities. The project site has not been delineated as a mineral resource recovery site in the City's General Plan or any other kind of land use plan. No significant impacts are anticipated in this regard.

4.11 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?*

Potentially Significant Unless Mitigated. Project implementation will generate both short- and long-term noise impacts. Short-term effects are the impacts generated by the project's construction-related activities, while project-generated traffic and onsite project facilities and activities could produce the long-term noise impacts.

Since the site's facilities are unoccupied, the proposed activities will generate substantially more traffic compared to the current inactivity. As a consequence, noise levels more than likely will increase along the roadways that serve the project site. The extent of the additional vehicular and equipment noise generated will be assessed in the EIR's noise analysis, including a qualitative assessment of siren noise from hospital-bound ambulances. The analysis will determine whether noise levels will exceed City standards and whether they will expose people to levels above accepted thresholds.

In preparing the noise impact analysis, the EIR will, at a minimum:

- Identify existing noise levels generated onsite and future noise levels forecasted to be generated by project activities and the additional vehicle trips associated with the proposed project.
- Discuss short- and long-term noise impacts based on compliance with the noise levels permitted in the City's Noise Ordinance and General Plan Noise Chapter.
- Discuss the anticipated effects on surrounding sensitive noise receptors, specifically the residential uses and senior health care facilities in the vicinity of the project site.
- Recommend mitigation measures necessary to reduce all identified noise impacts.

b) *Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?*

Potentially Significant Unless Mitigated. Please refer to the response in Item 4.11. a).

c) *A substantial permanent increase in ambient noise levels in the project vicinity above levels without the project?*

Potentially Significant Unless Mitigated. Please refer to the response in Item 4.11.a).

d) *A substantial temporary or periodic increase in ambient noise levels in the project above levels without the project?*

Potentially Significant Unless Mitigated. Refer to the response in Item 4.11.a).

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?*

No Impact. The proposed project site is not located within an airport land use plan nor is it located within two miles of a public airport; as such, project development and operation will not expose people residing or working in the project area to excessive noise levels in this regard.

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?*

No Impact. The project site is not located near a private airstrip.

4.12 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)?*

Potentially Significant Unless Mitigated. Project implementation may create a demand for housing given the project's scale and the employment opportunities that its different components will create. The project's components include a hospital, medical office building, shopping center and office park. The EIR will, at a minimum:

- Identify the project's impacts on the City's jobs/housing balance.
- Identify the number of employment opportunities the project will create.
- Recommend mitigation measures if necessary to reduce population-related impacts.

The project may result in a significant impact to the jobs/housing balance, unless appropriate mitigation measures are implemented to offset the net added employees. Many of the employees at the Kaiser project will be relocated from Kaiser's existing Bellflower location, hence the net increase in employees from the Kaiser project may be limited.

b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

No Impact. Project implementation will not displace dwelling units since no housing exist onsite.

c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Impact. Project implementation will not displace people. Facilities occupying the majority of the160-acre site are largely vacant, with portions of the site under temporary use, and have been so for the last few years. For a number years, Rockwell International, and more recently the Boeing Company, occupied the site. However, Boeing relocated a few years ago and the majority of the site has been vacant, with portions under temporary use. The Kaiser proposal contemplates the demolition of the existing vacant industrial and manufacturing buildings on the site, hence no housing units will be demolished and thus no replacement housing will be required.

4.13 PUBLIC SERVICES.

a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*

1-2) *Fire and Police Protection*

Potentially Significant Unless Mitigated. Project implementation will require the provision of both fire and police protection. The extent project's impacts on these providers is uncertain, however. The EIR will, at a minimum.

- Identify the departments' existing staffing and resource levels.
- Identify the extent to which project implementation would impact both departments.
- Recommend mitigation measures necessary to reduce the impacts.

3) *Schools?*

Potentially Significant Unless Mitigated. As noted above, the project is expected to create a number of employment opportunities. State legislation allows parents to enroll their children in the public schools in the vicinity of their place of employment. In light of the possibility future employees choose this educational option, the EIR needs to assess the potential impacts on the affected public school district (i.e., Downey Unified School District) and the public schools in the vicinity of the project site. If the EIR concludes that the impact will be significant, it will suggest mitigation measures to reduce the impact to an insignificant level.

In addition, the EIR will assess the likelihood of the project's future employees relocating near the project site and the potential impact this would have on nearby pubic schools.

4) *Parks?*

No Impact. Project implementation is not expected to impact nearby parks. The project's future employees and the shopping center's customers are not anticipated to impact these facilities. A point also worth noting regarding this matter is that a 3- to 5-acre museum/learning center will be developed as part of Area III of the Ezralow portion of the project. Overall, the project would have a beneficial impact upon the City's parks and open space system.

5) *Other public facilities?*

No Impact. Project implementation is not anticipated to impact the City's other public facilities, such that the need would arise for new or physically altered facilities.

4.14 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 facility would occur or be accelerated?*

No Impact. Given that the proposed project involves developing a shopping center and office park, a new, expanded hospital facility and medical office building, its development and operation is not expected to impact any nearby existing recreational facilities.

b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?*

No Impact. As noted previously, one of the improvements planned for Area III of the Ezralow portion of the project is a 3- to 5-acre museum/learning center that will be developed in conjunction with a community building. However, developing and operating the park is not anticipated to adversely impact the environment. Implementation will involve converting an existing parking lot into the planned park, and would constitute a beneficial impact to the City's parks and open space system.

4.15 TRANSPORTATION/TRAFFIC. *Would the project:*

a) *Cause an increase in traffic that 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)?*

Potentially Significant Unless Mitigated. Initial estimates show the project's retail and office components, as well as the hospital and medical office facilities, will generate a substantial number of vehicle trips per day. As a consequence, project-generated traffic may adversely impact the roadway network, as well as the signalized and non-signalized intersections that serve the project site. Therefore, the EIR will analyze the project's potential traffic impacts. The traffic impact study will assess the impacts of the development by analyzing trip generation, parking generation, trip distribution, intersection levels of service, access, on- and off-site circulation, operation analysis (queuing, signal warrant, etc.) and examine the effects of the recommended mitigation measures.

The analysis will employ the procedures described in the "Guidelines for Congestion Management Program Transportation Impact Analysis" and as detailed below. The City's Traffic Engineer will determine the applicability of any assumptions incorporated in the study.

Study Conditions

The study will use current traffic volumes to assess the existing conditions. Turning movement counts and 24-hour machine traffic counts will be conducted to sufficiently analyze the project's anticipated impacts. It will identify all traffic impacts under the following conditions.

- Existing conditions;
- Future conditions without the project;
- Future conditions, plus proposed project; and
- Future conditions, plus proposed project with mitigation measures.

Future conditions will be the project's opening year. The weekday AM and PM peak periods will be analyzed. The AM peak period is 7:00 AM to 9:00 AM. The PM peak period is 4:00 PM to 6:00 PM. The specific AM and PM peak hours will be identified in the study.

Trip Generation

The study will identify the number of daily and peak hour trips the project's proposed uses are anticipated to generate, using the most recent Institute of Traffic Engineers (ITE) Trip Generation Manual. Note that in the case of the Kaiser facility, trip generation will be dictated by the 1 msf of hospital, plant, and medical office uses. The square footage associated with the parking structure is included only to disclose the total site area that will be developed: it does not generate traffic by itself, and will therefore not be included for trip generation purposes.

Parking Generation

The study will identify the peak parking demand of each of the project's four areas and their proposed uses. On-street parking will not be considered. The parking analysis will also consider development phasing.

Trip Distribution

The study will provide a distribution plan for project's anticipated vehicle trips. The distribution assignments will be subject to the approval by the City's Traffic Engineer.

Level of Service: Signalized Intersections

The Study will assess the proposed project's anticipated traffic impacts (Level of Service, queuing, delay, etc.) on the following signalized intersections:

- Lakewood Blvd./ Imperial Hwy.
- Imperial Hwy./ Clark Ave.
- Lakewood Blvd./ Firestone Blvd.
- Woodruff Ave.(E)/ Firestone Blvd.
- Woodruff Ave.(W)/ Firestone Blvd.
- Imperial Hwy./ Bellflower Blvd.
- Imperial Hwy./ Ardis Ave.
- Bellflower Blvd./Washburn Rd.
- Bellflower Blvd./ Stewart and Gray Rd.
- Lakewood Blvd./ Bellflower Blvd.
- Lakewood Blvd./ Stewart and Gray Rd.
- Lakewood Blvd./ Alameda St.
- Lakewood Blvd./ Clark Ave.
- Bellflower Blvd./ I-105 Freeway
- Lakewood Blvd/ I-105 Freeway
- All major project driveways
- Four additional locations to be determined by the City's Traffic Engineer, based on project traffic assignment

The study may assume the installation of a new traffic signal at Bellflower Boulevard and Washburn Road as part of the project. The anticipated traffic impacts at this intersection will be analyzed accordingly.

If the analysis shows the proposed project will significantly impact an intersection, the study will identify the most cost effective measures to reduce the impacts to an acceptable level of insignificance (future conditions without project). The Study will also indicate the operating conditions before and after applying the mitigation measure. The operation evaluation should include queuing analysis, left-turn warrant, weaving, etc.

Level of Service: Non-Signalized Intersections

The Study will also assess the anticipated traffic impacts on the non-signalized intersections near the project site during AM and PM peak commuting hours. In particular, the Study will evaluate intersection capacity, delay, LOS, and sign warrants. Non-signalized intersections to be studied are:

- Stewart and Gray Rd./ Corrigan Ave.
- Stewart and Gray Rd./ Vultee Ave.
- Bellflower Blvd./ Rockwell Gate 53
- Bellflower Blvd./ Elm Vista St.

The study will employ the Highway Capacity Manual method for non-signalized intersections.

Circulation

The Study will evaluate whether the project-generated traffic would have a significant adverse effect on the traffic flow on the surrounding roadways that serve the project site: Stewart and Gray Road, Bellflower Boulevard, Imperial Highway, Clark Avenue and Lakewood Boulevard, and the evaluation will focus on AM and PM peak commuting hours. It will also identify the most cost-effective measures to reduce any significant impact to an acceptable level (operating conditions without the project).

The Study will evaluate the new roadways proposed in the project. In particular, it will consider traffic from the remaining buildings diverted to the new roadways, truck circulation and loading requirements. If traffic impacts are found to be significant, the Study will identify the most cost-effective measures to reduce adverse impacts. The study will evaluate on-site circulation in conjunction with off-site circulation in order to develop a comprehensive circulation plan that promotes safe access and efficient circulation, as well as mitigates adverse traffic impacts on surrounding streets.

b) *Exceed, either individually or cumulatively, a level of service standard established by the County Congestion Management Agency (CMA) for designated roads or highways?*

Potentially Significant Unless Mitigated. Please refer to the response for Item 4.15.a).

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?*

No Impact. The proposed project will not affect air traffic patterns nor will not result in an increase in air traffic levels.

d) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

No Impact. Project implementation may result in the need for roadway and intersection improvements. The nature and extent of future impacts, along with any recommended mitigation measures, will be determined as part of the traffic analysis. None of these improvements is anticipated to create or substantially increase hazards, and all necessary improvements would be subject to the approval of the City Traffic Engineer.

e) *Result in inadequate emergency access?*

No Impact. All project facilities will be accessible to fire department personnel, fire-fighting equipment and police department personnel. All development under the proposed specific plan would be required to conform to all applicable provisions of the

Uniform Fire Code, and would also be subject to review and approval by the City Fire Department.

f) *Result in inadequate parking capacity?*

No Impact. The project's uses (i.e., principally hospital/medical, retail, and office uses) will comply with the applicable parking requirements.

g) *Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?*

No Impact. Project implementation will not conflict with adopted policies, plans, or programs supporting alternative transportation modes.

4.16 UTILITIES AND SERVICE SYSTEMS. Would the project:

a) *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

Potentially Significant Unless Mitigated. Project development and operation is expected to place added demand on the wastewater treatment facilities that service the project site. However, the extent of this effect is uncertain. The EIR will:

- Assess the existing capacity of the applicable wastewater treatment facilities.
- Identify the extent of the project's impacts.
- Identify mitigation measures necessary to reduce identified impacts.

b) *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?*

Potentially Significant Unless Mitigated. Please refer to the response in Item 4.16.a).

c) *Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Potentially Significant Unless Mitigated. Project development will impact the stormwater drainage facilities that serve the project site. However, the extent of this effect is uncertain. The EIR will:

- Identify the current capacity of the storm drain network that serves the project site;
- Identify to what extent project implementation will impact the network;
- Identify mitigation measures necessary to reduce identified impacts.

d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

Potentially Significant Unless Mitigated. Project development will require the provision of certain public services and utilities, including but not limited to, water supplies, wastewater treatment, and solid waste disposal. The adequate supply of these

public services and the ability of the providers to deliver these utilities and services to the project site are uncertain.

The EIR to be prepared for the proposed project will, at a minimum:

- Assess the adequacy of the supply of services and utilities to be delivered to the project site.
- Identify impacts that might result from the provision of services and utilities to the project site.
- Identify mitigation measures necessary to reduce identified public service and utility impacts.

e) *Result in a determination by the wastewater treatment provider that 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?*

Potentially Significant Unless Mitigated. Please refer to response for Item 4.16.d).

f) *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Potentially Significant Unless Mitigated. Please refer to response for Item 4.16.d).

g) *Comply with federal, state, and local statutes and regulations related to solid waste?*

Potentially Significant Unless Mitigated. Please refer to the response for Item 4.16.d).

5.0 FINDINGS OF SIGNIFICANCE

The following findings have been made regarding the mandatory findings of significance set forth in Section 15065 of the CEQA Guidelines, based on the results of this environmental assessment.

a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

Less Than Significant Impact. Implementation of the proposed project could result in the demolition or substantial modification of structures that have been determined to be potentially eligible to the National Register of Historic Places. However, as discussed above in Section 4.5 (a), this effect has already been resolved with the SHPO, and a mitigation plan has already been formulated to the satisfaction of SHPO, NASA, GSA, and the City of Downey. No further analysis of this issue is required in the EIR.

b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

Potentially Significant Unless Mitigated. The analysis in the EIR of each issue area identified above (refer to the responses to items 1-16) as potentially significant will include an analysis of the project's potential cumulative effect with respect to the relevant issue area.

c) *Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?*

Potentially Significant Unless Mitigated. Refer to the responses to items 1-16, above.

6.0 REFERENCES

The following references were used to prepare this Initial Study.

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APPENDIX C
Air Quality Data Sheets

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10552-00
Project Title: Downey Landings Specific Plan Program EIR

Background Information

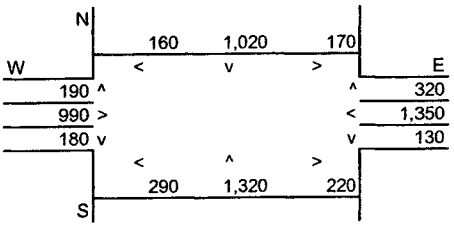
Nearest Air Monitoring Station measuring CO:	Pico Rivera
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	4.3
Persistence Factor:	0.7
Analysis Year:	2001

Roadway Data

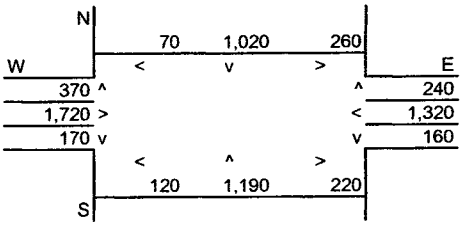
Intersection: Lakewood/Firestone
Analysis Condition: Existing Traffic Volumes

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lakewood Blvd.	At Grade	4	10	10
East-West Roadway:	Firestone Blvd.	At Grade	6	10	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,180	N-S Road:	3,150
E-W Road:	3,180	E-W Road:	3,920

Roadway CO Contributions and Concentrations
Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 50 Feet	A_2 100 Feet	A_3 300 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 50 Feet	100 Feet	300 Feet
A.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	3,180	19.63	3.37	2.37	1.00
East-West Road	2.0	1.7	1.1	3,180	19.63	1.25	1.06	0.69
P.M. Peak Traffic Hour								
North-South Road	2.2	1.7	1.1	3,150	19.63	1.36	1.05	0.68
East-West Road	4.9	3.5	1.6	3,920	19.63	3.77	2.69	1.23

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations
Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
50 Feet from Roadway Edge	9.8	10.3	7.9
100 Feet from Roadway Edge	8.6	8.9	6.9
300 Feet from Roadway Edge	6.9	7.1	5.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10552-00
Project Title: Downey Landings Specific Plan Program EIR

Background Information

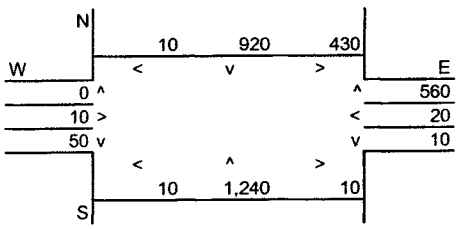
Nearest Air Monitoring Station measuring CO:	Pico Rivera
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	4.3
Persistence Factor:	0.7
Analysis Year:	2001

Roadway Data

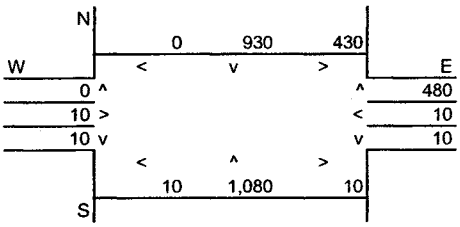
Intersection: Lakewood/Bellflower
Analysis Condition: Existing Traffic Volumes

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lakewood Blvd.	At Grade	4	15	20
East-West Roadway:	Bellflower Blvd.	At Grade	4	15	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,160	N-S Road:	2,920
E-W Road:	1,040	E-W Road:	950

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 50 Feet	A_2 100 Feet	A_3 300 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 50 Feet	100 Feet	300 Feet
A.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	3,160	13.24	2.26	1.59	0.67
East-West Road	2.2	1.7	1.1	1,040	13.24	0.30	0.23	0.15
P.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	2,920	10.04	1.58	1.11	0.47
East-West Road	2.2	1.7	1.1	950	10.04	0.21	0.16	0.10

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
50 Feet from Roadway Edge	7.8	7.0	6.1
100 Feet from Roadway Edge	7.0	6.5	5.6
300 Feet from Roadway Edge	6.0	5.8	4.9

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10552-00
Project Title: Downey Landings Specific Plan Program EIR

Background Information

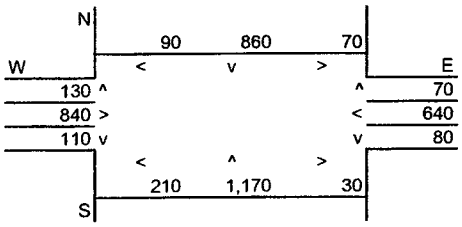
Nearest Air Monitoring Station measuring CO:	Pico Rivera
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	4.3
Persistence Factor:	0.7
Analysis Year:	2001

Roadway Data

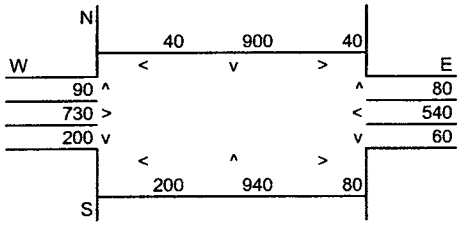
Intersection: Lakewood/Stweart & Gray
Analysis Condition: Existing Traffic Volumes

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lakewood Blvd.	At Grade	4	15	15
East-West Roadway:	Stewart & Gray Rd.	At Grade	4	15	15

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,460	N-S Road:	2,380
E-W Road:	2,020	E-W Road:	1,800

Roadway CO Contributions and Concentrations
Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 50 Feet	A_2 100 Feet	A_3 300 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 50 Feet	100 Feet	300 Feet
A.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	2,460	13.24	1.76	1.24	0.52
East-West Road	2.2	1.7	1.1	2,020	13.24	0.59	0.45	0.29
P.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	2,380	13.24	1.70	1.20	0.50
East-West Road	2.2	1.7	1.1	1,800	13.24	0.52	0.41	0.26

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations
Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
50 Feet from Roadway Edge	7.5	7.4	5.9
100 Feet from Roadway Edge	6.9	6.8	5.5
300 Feet from Roadway Edge	6.0	6.0	4.9

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10552-00
Project Title: Downey Landings Specific Plan Program EIR

Background Information

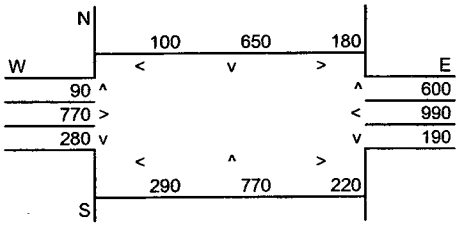
Nearest Air Monitoring Station measuring CO:	Pico Rivera
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	4.3
Persistence Factor:	0.7
Analysis Year:	2001

Roadway Data

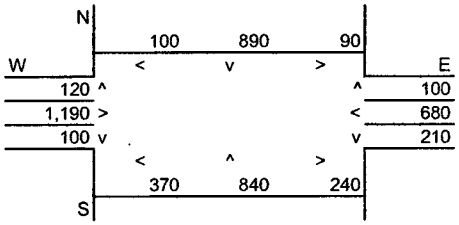
Intersection: Lakewood/Imperial
Analysis Condition: Existing Traffic Volumes

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lakewood Blvd.	At Grade	4	20	10
East-West Roadway:	Imperial Hwy.	At Grade	6	20	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,400	N-S Road:	2,650
E-W Road:	2,950	E-W Road:	2,560

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 50 Feet	A_2 100 Feet	A_3 300 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 50 Feet	100 Feet	300 Feet
A.M. Peak Traffic Hour								
North-South Road	2.2	1.7	1.1	2,400	10.04	0.53	0.41	0.27
East-West Road	4.9	3.5	1.6	2,950	10.04	1.45	1.04	0.47
P.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	2,650	19.63	2.81	1.98	0.83
East-West Road	2.0	1.7	1.1	2,560	19.63	1.01	0.85	0.55

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
50 Feet from Roadway Edge	7.2	9.0	7.0
100 Feet from Roadway Edge	6.6	8.0	6.3
300 Feet from Roadway Edge	5.9	6.6	5.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10552-00
Project Title: Downey Landings Specific Plan Program EIR

Background Information

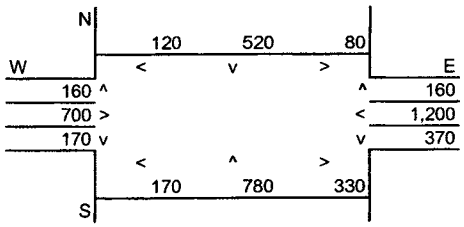
Nearest Air Monitoring Station measuring CO:	Pico Rivera
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	4.3
Persistence Factor:	0.7
Analysis Year:	2001

Roadway Data

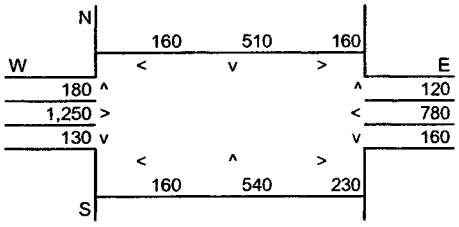
Intersection: Bellflower/Imperial
Analysis Condition: Existing Traffic Volumes

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Bellflower Blvd.	At Grade	4	10	15
East-West Roadway:	Imperial Hwy.	At Grade	6	10	15

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,340	N-S Road:	1,730
E-W Road:	2,840	E-W Road:	2,700

Roadway CO Contributions and Concentrations
Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 50 Feet	A_2 100 Feet	A_3 300 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 50 Feet	100 Feet	300 Feet
A.M. Peak Traffic Hour								
North-South Road	2.2	1.7	1.1	2,340	19.63	1.01	0.78	0.51
East-West Road	4.9	3.5	1.6	2,840	19.63	2.73	1.95	0.89
P.M. Peak Traffic Hour								
North-South Road	2.2	1.7	1.1	1,730	13.24	0.50	0.39	0.25
East-West Road	4.9	3.5	1.6	2,700	13.24	1.75	1.25	0.57

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations
Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
50 Feet from Roadway Edge	8.9	7.5	6.9
100 Feet from Roadway Edge	7.9	6.8	6.2
300 Feet from Roadway Edge	6.6	6.0	5.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10552-00
Project Title: Downey Landings Specific Plan Program EIR

Background Information

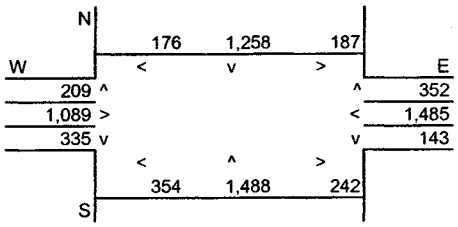
Nearest Air Monitoring Station measuring CO:	Pico Rivera
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	4.3
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

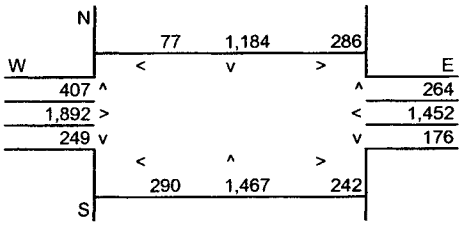
Intersection: Lakewood/Firestone
Analysis Condition: Future Traffic Volumes with Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lakewood Blvd.	At Grade	4	10	10
East-West Roadway:	Firestone Blvd.	At Grade	6	10	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,820	N-S Road:	3,685
E-W Road:	3,648	E-W Road:	4,367

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 50 Feet	A_2 100 Feet	A_3 300 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 50 Feet	100 Feet	300 Feet
A.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	3,820	14.08	2.90	2.04	0.86
East-West Road	2.0	1.7	1.1	3,648	14.08	1.03	0.87	0.57
P.M. Peak Traffic Hour								
North-South Road	2.2	1.7	1.1	3,685	14.08	1.14	0.88	0.57
East-West Road	4.9	3.5	1.6	4,367	14.08	3.01	2.15	0.98

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
50 Feet from Roadway Edge	9.1	9.4	7.2
100 Feet from Roadway Edge	8.1	8.2	6.4
300 Feet from Roadway Edge	6.6	6.8	5.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10552-00
Project Title: Downey Landings Specific Plan Program EIR

Background Information

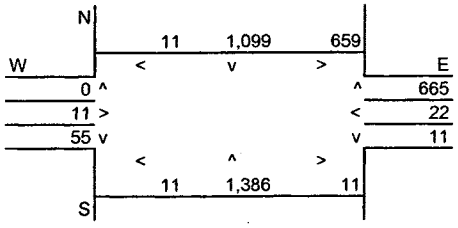
Nearest Air Monitoring Station measuring CO:	Pico Rivera
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	4.3
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

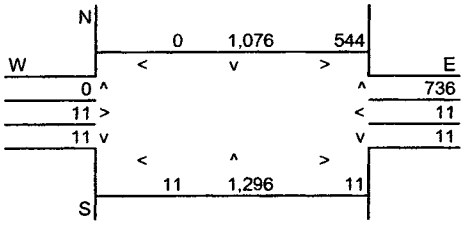
Intersection: Lakewood/Bellflower
Analysis Condition: Future Traffic Volumes with Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lakewood Blvd.	At Grade	4	10	15
East-West Roadway:	Bellflower Blvd.	At Grade	4	10	15

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,820	N-S Road:	3,652
E-W Road:	1,379	E-W Road:	1,324

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 50 Feet	A_2 100 Feet	A_3 300 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 50 Feet	100 Feet	300 Feet
A.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	3,820	14.08	2.90	2.04	0.86
East-West Road	2.2	1.7	1.1	1,379	14.08	0.43	0.33	0.21
P.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	3,652	9.51	1.88	1.32	0.56
East-West Road	2.2	1.7	1.1	1,324	9.51	0.28	0.21	0.14

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
50 Feet from Roadway Edge	8.5	7.4	6.6
100 Feet from Roadway Edge	7.6	6.7	6.0
300 Feet from Roadway Edge	6.3	5.9	5.1

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10552-00
Project Title: Downey Landings Specific Plan Program EIR

Background Information

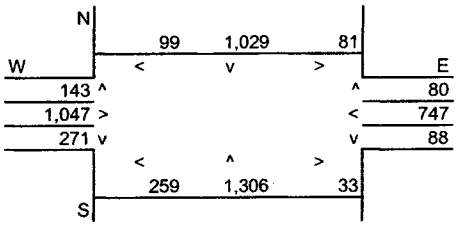
Nearest Air Monitoring Station measuring CO:	Pico Rivera
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	4.3
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

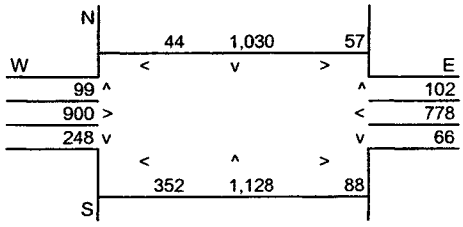
Intersection: Lakewood/Stewart & Gray
Analysis Condition: Future Traffic Volumes with Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lakewood Blvd.	At Grade	4	10	10
East-West Roadway:	Stewart & Gray Rd.	At Grade	4	10	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,986	N-S Road:	2,912
E-W Road:	2,566	E-W Road:	2,421

Roadway CO Contributions and Concentrations
Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 50 Feet	A_2 100 Feet	A_3 300 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 50 Feet	100 Feet	300 Feet
A.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	2,986	14.08	2.27	1.60	0.67
East-West Road	2.2	1.7	1.1	2,566	14.08	0.79	0.61	0.40
P.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	2,912	14.08	2.21	1.56	0.66
East-West Road	2.2	1.7	1.1	2,421	14.08	0.75	0.58	0.37

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations
Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
50 Feet from Roadway Edge	8.3	8.2	6.4
100 Feet from Roadway Edge	7.4	7.3	5.8
300 Feet from Roadway Edge	6.3	6.2	5.0

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10552-00
Project Title: Downey Landings Specific Plan Program EIR

Background Information

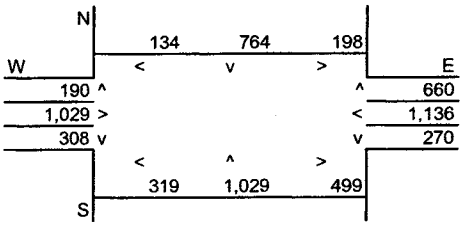
Nearest Air Monitoring Station measuring CO:	Pico Rivera
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	4.3
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

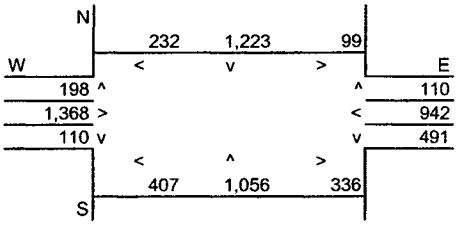
Intersection: Lakewood/Imperial
Analysis Condition: Future Traffic Volumes with Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Lakewood Blvd.	At Grade	4	10	10
East-West Roadway:	Imperial Hwy.	At Grade	6	10	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,189	N-S Road:	3,623
E-W Road:	3,792	E-W Road:	3,346

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 50 Feet	A_2 100 Feet	A_3 300 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 50 Feet	100 Feet	300 Feet
A.M. Peak Traffic Hour								
North-South Road	2.2	1.7	1.1	3,189	14.08	0.99	0.76	0.49
East-West Road	4.9	3.5	1.6	3,792	14.08	2.62	1.87	0.85
P.M. Peak Traffic Hour								
North-South Road	5.4	3.8	1.6	3,623	14.08	2.75	1.94	0.82
East-West Road	2.0	1.7	1.1	3,346	14.08	0.94	0.80	0.52

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
50 Feet from Roadway Edge	8.8	8.9	6.9
100 Feet from Roadway Edge	7.8	7.9	6.2
300 Feet from Roadway Edge	6.5	6.5	5.2

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10552-00
Project Title: Downey Landings Specific Plan Program EIR

Background Information

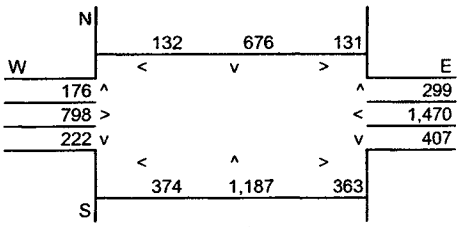
Nearest Air Monitoring Station measuring CO:	Pico Rivera
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	4.3
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

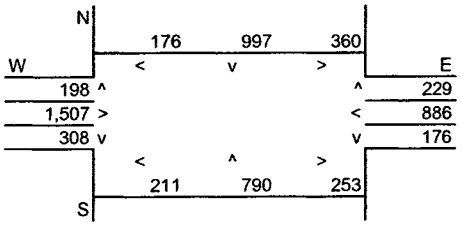
Intersection: Bellflower/Imperial
Analysis Condition: Future Traffic Volumes with Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Bellflower Blvd.	At Grade	4	10	10
East-West Roadway:	Imperial Hwy.	At Grade	6	10	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,229	N-S Road:	2,750
E-W Road:	3,468	E-W Road:	3,411

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 50 Feet	A_2 100 Feet	A_3 300 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 50 Feet	100 Feet	300 Feet
A.M. Peak Traffic Hour								
North-South Road	2.2	1.7	1.1	3,229	14.08	1.00	0.77	0.50
East-West Road	4.9	3.5	1.6	3,468	14.08	2.39	1.71	0.78
P.M. Peak Traffic Hour								
North-South Road	2.2	1.7	1.1	2,750	14.08	0.85	0.66	0.43
East-West Road	4.9	3.5	1.6	3,411	14.08	2.35	1.68	0.77

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
50 Feet from Roadway Edge	8.6	8.4	6.7
100 Feet from Roadway Edge	7.7	7.5	6.0
300 Feet from Roadway Edge	6.5	6.4	5.2

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

CONSTRUCTION EMISSIONS ESTIMATES
DEMOLITION PHASE

Project Number: 10552-00
Project Name: Downey Landings Specific Plan Program EIR

Construction Equipment Emissions
Emissions = F x G x H

	F	G	H									
		Hours/	Emission Factors in Pounds per Hour[1]					Emissions in Pounds per Day				
Equipment Type	Quantity	Day	CO	ROC	NO_x	SO_x	PM_{10}	CO	ROC	NO_x	SO_x	PM_{10}
Fork Lift - 50 Hp	0	8	0.18	0.053	0.441	0	0.031	-	-	-	-	-
Fork Lift - 175 Hp	0	8	0.52	0.17	1.54	0	0.93	-	-	-	-	-
Water Truck	1	4	1.8	0.19	4.17	0.45	0.26	7.2	0.8	16.7	1.8	1.0
Tracked Loader	1	8	0.201	0.095	0.83	0.076	0.059	1.6	0.8	6.6	0.6	0.5
Tracked Tractor	2	8	0.35	0.12	1.26	0.14	0.112	5.6	1.9	20.2	2.2	1.8
Scraper	0	7	1.25	0.27	3.84	0.46	0.41	-	-	-	-	-
Wheeled Dozer	2	8	0.572	0.12	0.713	0.35	0.165	9.2	1.9	11.4	5.6	2.6
Wheeled Loader	3	6	0.572	0.23	1.9	0.182	0.17	10.3	4.1	34.2	3.3	3.1
Wheeled Tractor	0	8	3.58	0.18	1.27	0.09	0.14	-	-	-	-	-
Roller	0	8	0.3	0.065	0.87	0.067	0.05	-	-	-	-	-
Motor Grader	0	8	0.151	0.039	0.713	0.086	0.061	-	-	-	-	-
Miscellaneous	0	8	0.675	0.15	1.7	0.143	0.14	-	-	-	-	-
Crane	1	8	0.75078	0.25026	1.91866	0.16684	0.12513	6.0	2.0	15.3	1.3	1.0
Backhoe	0	3.5	0.572	0.23	1.9	0.17	0.182	-	-	-	-	-
Crushing Equipment	2	8	1.9812	0.29718	2.37744	0.19812	0.14859	31.7	4.8	38.0	3.2	2.4
Subtotal								71.6	16.3	142.5	18.0	12.4

[1] Emission Factors from SCAQMD CEQA Air Quality Handbook (1993), Tables A9-8-A, A9-8-B, A9-8-C, and A9-8-D.

On-Road Vehicle Source Emissions
Emissions = F x G x H x I

	F	G	H	I									
		Trips/	Miles/	Emission Factors in Pounds per 100 Trips per Mile					Emissions in Pounds per Day				
Vehicle Type	Quantity	Vehicle	Trip	CO	ROC	NO_x	SO_x	PM_{10}	CO	ROC	NO_x	SO_x	PM_{10}
Haul Trucks[2]	10	2	50	1.42511	0.22467	1.982379	0	0.012118	14.3	2.2	19.8	0.0	0.1
Construction Employees[3]	22	3.7	10.6	2.2	0.82	1.16	0	0.22	1.8	0.7	0.9	0.0	0.2
Subtotal									16.0	2.9	20.8	0.0	0.3

[2] Emission factors from EMFAC7G (Year 2001, 100% heavy-duty diesel, 90F)
[3] Emission factors from URBEMIS7G (Year 2001, construction worker trips)

Structure Demolition
PM_{10} Emissions = 0.00042 lbs per cubic foot x N / O[4]

	N	O	PM_{10}
	Cubic Feet	Days of	Emissions
Emissions Source	of Bldg.	Demolition	(lbs/day)
Structure Demolition	40000	1	16.8

[4] Emission Factors from SCAQMD CEQA Air Quality Handbook (1993), Table A9-9-H.

Total Demolition Phase Emissions

	Emissions in Pounds per Day				
Emissions Source	CO	ROC	NO_x	SO_x	PM_{10}
Construction Equipment	71.6	16.3	142.5	18.0	12.4
On-Road Vehicles	16.0	2.9	20.8	0.0	0.3
Structure Demolition	-	-	-	-	16.8
Total	87.6	19.2	163.2	18.0	29.5
SCAQMD Threshold	550.0	75.0	100.0	150.0	150.0
Exceeds Threshold?	No	No	Yes	No	No

CONSTRUCTION EMISSIONS ESTIMATES
SITE GRADING PHASE

Project Number: 10552-00
Project Name: Downey Landings Specific Plan Program EIR

Construction Equipment Emissions
Emissions = F x G x H

	F	G	H									
		Hours/	Emission Factors in Pounds per Hour[1]					Emissions in Pounds per Day				
Equipment Type	Quantity	Day	CO	ROC	NO_x	SO_x	PM_{10}	CO	ROC	NO_x	SO_x	PM_{10}
Fork Lift - 50 Hp	0	8	0.18	0.053	0.441	0	0.031	-	-	-	-	-
Fork Lift - 175 Hp	0	8	0.52	0.17	1.54	0	0.93	-	-	-	-	-
Water Truck	2	4	1.8	0.19	4.17	0.45	0.26	14.4	1.5	33.4	3.6	2.1
Tracked Loader	3	8	0.201	0.095	0.83	0.076	0.059	4.8	2.3	19.9	1.8	1.4
Tracked Tractor	2	8	0.35	0.12	1.26	0.14	0.112	5.6	1.9	20.2	2.2	1.8
Scraper	3	7	1.25	0.27	3.84	0.46	0.41	26.3	5.7	80.6	9.7	8.6
Wheeled Dozer	2	8	0.572	0.12	0.713	0.35	0.165	9.2	1.9	11.4	5.6	2.6
Wheeled Loader	0	6	0.572	0.23	1.9	0.182	0.17	-	-	-	-	-
Wheeled Tractor	0	8	3.58	0.18	1.27	0.09	0.14	-	-	-	-	-
Roller	2	8	0.3	0.065	0.87	0.067	0.05	4.8	1.0	13.9	1.1	0.8
Motor Grader	3	8	0.151	0.039	0.713	0.086	0.061	3.6	0.9	17.1	2.1	1.5
Miscellaneous	0	8	0.675	0.15	1.7	0.143	0.14	-	-	-	-	-
Subtotal								68.7	15.3	196.5	26.1	18.8

[1] Emission Factors from SCAQMD CEQA Air Quality Handbook (1993), Tables A9-8-A, A9-8-B, A9-8-C, and A9-8-D.

On-Road Vehicle Source Emissions
Emissions = F x G x H x I

	F	G	H	I									
		Trips/	Miles/	Emission Factors in Pounds per 100 Trips per Mile					Emissions in Pounds per Day				
Vehicle Type	Quantity	Vehicle	Trip	CO	ROC	NO_x	SO_x	PM_{10}	CO	ROC	NO_x	SO_x	PM_{10}
Haul Trucks[2]	1	2	50	1.42511	0.22467	1.982379	0	0.012118	1.4	0.2	2.0	0.0	0.0
Construction Employees[3]	30	3.7	10.6	2.2	0.82	1.16	0	0.22	2.4	0.9	1.3	0.0	0.2
Subtotal									3.9	1.1	3.3	0.0	0.3

[2] Emission factors from EMFAC7G (Year 2001, 100% heavy-duty diesel, 90F)
[3] Emission factors from URBEMIS7G (Year 2001, construction worker trips)

Site Grading
PM_{10} Emissions = (10.0 lbs per day x A) - B[4]

	A	O		PM_{10}
	Acres/	Rule 403 Reduction		Emissions
Emissions Source	Day	%	lbs	(lbs/day)
Site Grading	40	68%	272.0	128.0

[4] Emission Factors from URBEMIS7G (2000).

Total Site Grading Phase Emissions

	Emissions in Pounds per Day				
Emissions Source	CO	ROC	NO_x	SO_x	PM_{10}
Construction Equipment	68.7	15.3	196.5	26.1	18.8
On-Road Vehicles	3.9	1.1	3.3	0.0	0.3
Site Grading	-	-	-	-	128.0
Total	72.5	16.4	199.8	26.1	147.1
SCAQMD Threshold	550.0	75.0	100.0	150.0	150.0
Exceeds Threshold?	No	No	Yes	No	No

CONSTRUCTION EMISSIONS ESTIMATES
CONSTRUCTION PHASE

Project Number: 10552-00
Project Name: Downey Landings Specific Plan Program EIR

Construction Equipment Emissions
Emissions = F x G x H

	F	G	H									
		Hours/	Emission Factors in Pounds per Hour[1]					Emissions in Pounds per Day				
Equipment Type	Quantity	Day	CO	ROC	NO_x	SO_x	PM_{10}	CO	ROC	NO_x	SO_x	PM_{10}
Fork Lift - 50 Hp	2	8	0.18	0.053	0.441	0	0.031	2.9	0.8	7.1	0.0	0.5
Fork Lift - 175 Hp	3	8	0.52	0.17	1.54	0	0.93	12.5	4.1	37.0	0.0	22.3
Water Truck	1	4	1.8	0.19	4.17	0.45	0.26	7.2	0.8	16.7	1.8	1.0
Tracked Loader	0	8	0.201	0.095	0.83	0.076	0.059	-	-	-	-	-
Tracked Tractor	0	8	0.35	0.12	1.26	0.14	0.112	-	-	-	-	-
Scraper	0	7	1.25	0.27	3.84	0.46	0.41	-	-	-	-	-
Wheeled Dozer	0	8	0.572	0.12	0.713	0.35	0.165	-	-	-	-	-
Wheeled Loader	3	6	0.572	0.23	1.9	0.182	0.17	10.3	4.1	34.2	3.3	3.1
Wheeled Tractor	0	8	3.58	0.18	1.27	0.09	0.14	-	-	-	-	-
Roller	2	8	0.3	0.065	0.87	0.067	0.05	4.8	1.0	13.9	1.1	0.8
Motor Grader	0	8	0.151	0.039	0.713	0.086	0.061	-	-	-	-	-
Miscellaneous	0	8	0.675	0.15	1.7	0.143	0.14	-	-	-	-	-
Crane	1	8	0.75078	0.25026	1.91866	0.16684	0.12513	6.0	2.0	15.3	1.3	1.0
Backhoe	2	3.5	0.572	0.23	1.9	0.17	0.182	4.0	1.6	13.3	1.2	1.3
Paving Equipment	1	8	0.675	0.15	1.7	0.143	0.14	5.4	1.2	13.6	1.1	1.1
Subtotal								53.1	15.7	151.1	9.8	31.1

[1] Emission Factors from SCAQMD CEQA Air Quality Handbook (1993), Tables A9-8-A, A9-8-B, A9-8-C, and A9-8-D.

On-Road Vehicle Source Emissions
Emissions = F x G x H x I

	F	G	H	I									
		Trips/	Miles/	Emission Factors in Pounds per 100 Trips per Mile					Emissions in Pounds per Day				
Vehicle Type	Quantity	Vehicle	Trip	CO	ROC	NO_x	SO_x	PM_{10}	CO	ROC	NO_x	SO_x	PM_{10}
Haul Trucks[2]	6	2	50	1.42511	0.22467	1.982379	0	0.012118	8.6	1.3	11.9	0.0	0.1
Construction Employees[3]	35	3.7	10.6	2.2	0.82	1.16	0	0.22	2.8	1.1	1.5	0.0	0.3
Subtotal									11.4	2.4	13.4	0.0	0.4

[2] Emission factors from EMFAC7G (Year 2001, 100% heavy-duty diesel, 90F)
[3] Emission factors from URBEMIS7G (Year 2001, construction worker trips)

Stationary Source Emissions
Emissions = F x G

	F	G					
	Units or	ctors in Pounds per Day			Emissions in Pounds per Day		
Emissions Source	1,000 sf	ROC	NO_x	PM_{10}	ROC	NO_x	PM_{10}
Stationary Sources	4	0.168	0.137	0.008	0.7	0.5	0.0

[4] Emission Factors from URBEMIS7G (2000).

Asphalt Paving
ROC Emissions = 2.62 lbs per acre x A / B[5]

	A	B	ROC
	Acres of	Days of	Emissions
Emissions Source	Paving	Paving	(lbs/day)
Asphalt Paving	0.5	1	1.3

[5] Emission Factors from URBEMIS7G (2000).

Architectural Coatings
ROC Emissions = 0.0185 lbs per square foot x A[6]

	A	
	Surface	ROC
	Area/	Emissions
Emissions Source	Day	(lbs/day)
Architectural Coatings	2500	46.3

[6] Emission Factors from URBEMIS7G (2000).

Total Construction Phase Emissions

	Emissions in Pounds per Day				
Emissions Source	CO	ROC	NO_x	SO_x	PM_{10}
Construction Equipment	53.1	15.7	151.1	9.8	31.1
On-Road Vehicles	11.4	2.4	13.4	0.0	0.4
Stationary Equipment	-	0.7	0.5	-	0.0
Asphalt Paving	-	1.3	-	-	-
Architectural Coatings	-	46.3	-	-	-
Total	64.5	66.3	165.0	9.8	31.5
SCAQMD Threshold	550.0	75.0	100.0	150.0	150.0
Exceeds Threshold?	No	No	Yes	No	No

EXPLANATION OF CHANGES MADE TO DEFAULT SETTINGS IN URBEMIS7G

The following pages include the printed results of the air pollutant emissions modeling for one of the land use components of the proposed project. The air emissions modeling was conducted using the URBEMIS7G for Windows computer program developed for the San Joaquin Valley Unified Air Pollution Control District in May 1998. URBEMIS7G is programmed with EMFAC7G emission factors developed by the California Air Resources Board.

As part of this analysis, changes have been made to several of the default values programmed into URBEMIS7G. These changes were made to more accurately reflect the nature of the proposed land use. Each of these changes are discussed below.

Vehicle Trip Rates

The default vehicle trip rate values were changed to be consistent with the traffic impact analysis prepared for the project.

Vehicle Fleet Mix

URBEMIS7G is programmed with the following state-wide average vehicle fleet mix:

State-Wide Vehicle Type	Total
Automobiles	75.0%
Light Duty Trucks	10.0%
Medium Duty Trucks	3.0%
Light-Heavy Duty Trucks	1.0%
Medium-Heavy Duty Trucks	1.0%
Heavy-Heavy Duty Trucks	5.0%
Urban Buses	2.0%
Motorcycles	3.0%

However, this state-wide average fleet mix is not appropriate for the majority of land use analyses. The project land use assessed in this analysis is identified below along with the total percentage of trucks (medium and heavy) that are expected for this land use. The following vehicle mix was calculated based on the percentage of trucks associated with this land use.

Project Land Use:	Truck %	ADT	Truck #
820 Retail	2.10%	12,670	266
760 Technology/R&D	1.84%	6,680	123
740 Museum/Community Center	1.20%	1,140	14
410 Park	0.44%	400	2
710 Office	1.84%	5,620	103
0		0	0
0		0	0
0		0	0
0		0	0
0		0	0
0		0	0
0		0	0
	Project Totals:	26,510	508
	Project Truck %:	1.92%	

Vehicle Type	Total
Automobiles	81.74%
Light Duty Trucks	10.90%
Medium Duty Trucks	0.57%
Light-Heavy Duty Trucks	0.19%
Medium-Heavy Duty Trucks	0.19%
Heavy-Heavy Duty Trucks	0.96%
Urban Buses	2.18%
Motorcycles	3.27%

URBEMIS 7G For Windows 5.1.0

File Name: C:\Program Files\URBEMIS 7G For Windows\Projects\NASAEzralow.urb
Project Name: Downey Landings Specific Plan Program EIR - Ezralow Project
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SOX
TOTALS(lbs/day,unmitigated)	1.63	14.50	9.74	0.04	0.00
TOTALS (lbs/day, mitigated)	1.53	14.50	9.22	0.04	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	239.04	309.03	1,674.50	164.43
TOTALS (ppd, mitigated)	224.61	286.79	1,554.50	152.68

URBEMIS 7G For Windows 5.1.0

File Name: C:\Program Files\URBEMIS 7G For Windows\Projects\NASAEzralow.urb
Project Name: Downey Landings Specific Plan Program EIR - Ezralow Project
Project Location: South Coast Air Basin (Los Angeles area)

DETAIL REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	PM10	SOX
Natural Gas	1.05	14.47	5.79	0.03	-
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.58	0.03	3.95	0.01	0.00
Consumer Prdcts	0.00	-	-	-	-
TOTALS(lbs/day,unmitigated)	1.63	14.50	9.74	0.04	0.00

AREA SOURCE EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10	SOX
Natural Gas	0.95	14.47	5.27	0.02	-
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.58	0.03	3.95	0.01	0.00
Consumer Prdcts	0.00	-	-	-	-
TOTALS (lbs/day, mitigated)	1.53	14.50	9.22	0.04	0.00

Area Source Mitigation Measures

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	PM10
Museaum/Community Center	8.55	12.61	63.91	6.91
Park/Open Space	2.20	3.20	17.28	1.60
Regnl shop. center < 5700	100.70	135.14	736.47	67.73
Technology/R&D	71.45	85.55	460.84	47.54
Office park	56.14	72.54	396.00	40.66
TOTAL EMISSIONS (lbs/day)	239.04	309.03	1,674.50	164.43

Includes correction for passby trips.
Includes the following double counting adjustment for internal trips:
Residential trips: 0.00 % reduction. Nonresidential trips: 0.00 % reduction.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Museaum/Community Center	22.88 trips / 1000 sq. ft.	50.00	1,144.00
Park/Open Space	400.00 trips / area	1.00	400.00
Regnl shop. center < 5700	41.19 trips / 1000 sq. ft.	410.00	16,887.90
Technology/R&D	6.85 trips / 1000 sq. ft.	975.00	6,678.75
Office park	8.76 trips / 1000 sq. ft.	600.00	5,256.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Duty Autos	81.74	1.16	98.58	0.26
Light Duty Trucks	10.90	0.13	99.54	0.33
Medium Duty Trucks	0.57	1.44	98.56	-
Lite-Heavy Duty Trucks	0.19	19.56	40.00	40.44
Med.-Heavy Duty Trucks	0.19	19.56	40.00	40.44
Heavy-Heavy Trucks	0.96	-	-	100.00
Urban Buses	2.18	-	-	100.00
Motorcycles	3.27	100.00% all fuels		

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Museaum/Community Center	2.0	1.0	97.0
Park/Open Space	0.0	0.0	100.0
Regnl shop. center < 570000 sf	2.0	1.0	97.0
Technology/R&D	35.0	17.5	47.5
Office park	48.0	24.0	28.0

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	PM10
Museaum/Community Center	7.94	11.60	58.78	6.35
Park/Open Space	2.02	2.94	15.87	1.47
Regnl shop. center < 5700	93.24	124.27	677.36	62.29
Technology/R&D	68.00	79.92	430.73	44.41
Office park	53.41	68.07	371.75	38.15
TOTAL EMISSIONS (lbs/day)	224.61	286.79	1,554.50	152.68

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Museaum/Community Center	22.88 trips / 1000 sq. ft.	50.00	1,144.00
Park/Open Space	400.00 trips / area	1.00	400.00
Regnl shop. center < 5700	41.19 trips / 1000 sq. ft.	410.00	16,887.90
Technology/R&D	6.85 trips / 1000 sq. ft.	975.00	6,678.75
Office park	8.76 trips / 1000 sq. ft.	600.00	5,256.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Duty Autos	81.74	1.16	98.58	0.26
Light Duty Trucks	10.90	0.13	99.54	0.33
Medium Duty Trucks	0.57	1.44	98.56	-
Lite-Heavy Duty Trucks	0.19	19.56	40.00	40.44
Med.-Heavy Duty Trucks	0.19	19.56	40.00	40.44
Heavy-Heavy Trucks	0.96	-	-	100.00
Urban Buses	2.18	-	-	100.00
Motorcycles	3.27	100.00% all fuels		

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Museaum/Community Center	2.0	1.0	97.0
Park/Open Space	0.0	0.0	100.0
Regnl shop. center < 570000 sf	2.0	1.0	97.0
Technology/R&D	35.0	17.5	47.5
Office park	48.0	24.0	28.0

ENVIRONMENTAL FACTORS APPLICABLE TO THE PROJECT

Pedestrian Environment

2.0	Side Walks/Paths: Most Destinations Covered
0.5	Street Trees Provide Shade: Some Coverage
3.0	Pedestrian Circulation Access: Most Destinations
1.0	Visually Interesting Uses: Some Uses within Walking Distance
1.0	Street System Enhances Safety: Some Streets
1.0	Pedestrian Safety from Crime: Moderate Degree of Safety
0.5	Visually Interesting Walking Routes: Minor Level

9.0 <- Pedestrian Environmental Credit
9.0 /19 = 0.5 <- Pedestrian Effectiveness Factor

Transit Service

20.0 Transit Service: 15-30 Minute Bus within 1/4 Mile

20.0 <- Transit Effectiveness Credit
9.0 <- Pedestrian Factor
29.0 <-Total
29.0 /110 = 0.3 <-Transit Effectiveness Factor

Bicycle Environment

1.0	Interconnected Bikeways: Low Coverage
1.0	Bike Routes Provide Paved Shoulders: Few Routes
0.5	Safe Vehicle Speed Limits: Few Destinations
0.0	Safe School Routes: No Schools
1.0	Uses w/in Cycling Distance: Some Uses
1.0	Bike Parking Ordinance: Requires Unprotected Bike Racks

4.5 <- Bike Environmental Credit
4.5 /20 = 0.2 <- Bike Effectiveness Factor

MITIGATION MEASURES SELECTED FOR THIS PROJECT
(All mitigation measures are printed, even if
the selected land uses do not constitute a mixed use.)

Transit Infrastructure Measures

% Trips Reduced	Measure
15.0	Credit for Existing or Planned Community Transit Service
15.0 <- Totals	

Pedestrian Enhancing Infrastructure Measures (Residential)

% Trips Reduced	Measure
2.0	Credit for Surrounding Pedestrian Environment
2.0 <- Totals	

Pedestrian Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced	Measure
2.0	Credit for Surrounding Pedestrian Environment
1.0	Provide Wide Sidewalks and Onsite Pedestrian Facilities
1.0	Project Uses Parking Structures/Small Dispersed Lots
0.5	Provide Street Lighting
0.5	Project Provides Shade Trees to Shade Sidewalks
0.5	Project Provides Street Art and/or Street Furniture
0.5	Provide Pedestrian Safety Designs/Infrastructure at Crossings
6.0 <- Totals	

Bicycle Enhancing Infratructure Measures (Residential)

% Trips Reduced	Measure
7.0	Credit for Surrounding Bicycle Environment
7.0 <- Totals	

Bike Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced	Measure
5.0	Credit for Surrounding Area Bike Environment
1.0	Provide Securre Bicycle Parking
6.0 <- Totals	

Operational Measures (Applying to Commute Trips)

% Trips Reduced	Measure
1.5	Preferential Carpool/Vanpool Parking
1.0	Employee Rideshare Incentive Program
2.5 <- Totals	

Operational Measures (Applying to Employee Non-Commute Trips)

% Trips Reduced	Measure
0.0 <- Totals	

Operational Measures (Applying to Customer Trips)

% Trips Reduced	Measure
0.0 <- Totals	

Measures Reducing VMT (Non-Residential)

VMT Reduced	Measure

0.0 <- Totals

Measures Reducing VMT (Residential)

VMT Reduced	Measure
0.0	<- Totals

Total Percentage Trip Reduction
with Environmental Factors and Mitigation Measures

Travel Mode	Home-Work Trips	Home-Shop Trips	Home-Other Trips
Pedestrian	0.10	0.42	0.42
Transit	3.95	0.87	1.07
Bicycle	1.58	1.58	1.58
Totals	0.00	0.00	0.00

Travel Mode	Work Trips	Employee Trips	Customer Trips
Pedestrian	0.31	2.84	2.84
Transit	3.95	0.08	3.95
Bicycle	1.35	1.35	1.35
Other	0.44	0.00	0.00
Totals	0.00	0.00	0.00

Changes made to the default values for Area

The wood stove option switch changed from on to off.
The fireplcase option switch changed from on to off.
Mitigation measure Central Water Heater: Cmrcl Space Heat.
has been changed from off to on.
Mitigation measure Increase Insulation Beyond Title 24: Cmrcl Space Heat.
has been changed from off to on.
Changes made to the default values for Operations

The double counting option switch changed from off to on.
The light duty auto percentage changed from 75.0 to 81.74.
The light duty truck percentage changed from 10.0 to 10.9.
The medium duty truck percentage changed from 3.0 to 0.57.
The light heavy duty truck percentage changed from 1.0 to 0.19.
The medium heavy duty truck percentage changed from 1.0 to 0.19.
The heavy heavy duty truck percentage changed from 5.0 to 0.96.
The urban bus percentage changed from 2.0 to 2.18.
The motorcycle percentage changed from 3.0 to 3.27.
The operational emission year changed from 2000 to 2005.
The double counting option changed from 1 to 0.
The travel mode environment settings changed from both to: non-residential
The default/nodefault travel setting changed from nodefault to: nodefault
Side Walks/Paths: No Sidewalks
changed to: Side Walks/Paths: Most Destinations Covered
Street Trees Provide Shade: No Coverage
changed to:Street Trees Provide Shade: Some Coverage
Pedestrian Circulation Access: No Destinations
changed to:Pedestrian Circulation Access: Most Destinations
Visually Interesting Uses: No Uses Within Walking Distance
changed to:Visually Interesting Uses: Some Uses within Walking Distance
Street System Enhances Safety: No Streets
changed to: Street System Enhances Safety: Some Streets
Pedestrian Safety from Crime: No Degree of Safety
changed to:Pedestrian Safety from Crime: Moderate Degree of Safety
Visually Interesting Walking Routes: No Visual Interest
changed to:Visually Interesting Walking Routes: Minor Level
Transit Service: Dial-A-Ride or No Transit Service
changed to: Transit Service: 15-30 Minute Bus within 1/4 Mile
Interconnected Bikeways: No Bikeway Coverage
changed to: Interconnected Bikeways: Low Coverage
Bike Routes Provide Paved Shoulders: No Routes
changed to:Bike Routes Provide Paved Shoulders: Few Routes
Safe Vehicle Speed Limits: No Routes Provided
changed to:Safe Vehicle Speed Limits: Few Destinations
Uses w/in Cycling Distance: No Uses w/in Cycling Distance
changed to:Uses w/in Cycling Distance: Some Uses
Bike Parking Ordinance: No Ordinance or Unenforceable
changed to:Bike Parking Ordinance: Requires Unprotected Bike Racks
Mitigation measure Provide Wide Sidewalks and Onsite Pedestrian Facilities:1
has been changed from off to on.
Mitigation measure Project Uses Parking Structures/Small Dispersed Lots:1
has been changed from off to on.
Mitigation measure Provide Street Lighting:0.5
has been changed from off to on.
Mitigation measure Project Provides Shade Trees to Shade Sidewalks:0.5
has been changed from off to on.
Mitigation measure Project Provides Street Art and/or Street Furniture:0.5
has been changed from off to on.
Mitigation measure Provide Pedestrian Safety Designs/Infrastructure at Crossings:0.5

has been changed from off to on.
Mitigation measure Provide Securre Bicycle Parking:1
has been changed from off to on.
Mitigation measure Preferential Carpool/Vanpool Parking:1.5
has been changed from off to on.
Mitigation measure Employee Rideshare Incentive Program:1
has been changed from off to on.
Mitigation measuremitop5: Park and Ride Lots
has been changed from on to off.

EXPLANATION OF CHANGES MADE TO DEFAULT SETTINGS IN URBEMIS7G

The following pages include the printed results of the air pollutant emissions modeling for one of the land use components of the proposed project. The air emissions modeling was conducted using the URBEMIS7G for Windows computer program developed for the San Joaquin Valley Unified Air Pollution Control District in May 1998. URBEMIS7G is programmed with EMFAC7G emission factors developed by the California Air Resources Board.

As part of this analysis, changes have been made to several of the default values programmed into URBEMIS7G. These changes were made to more accurately reflect the nature of the proposed land use. Each of these changes are discussed below.

Vehicle Trip Rates

The default vehicle trip rate values were changed to be consistent with the traffic impact analysis prepared for the project.

Vehicle Fleet Mix

URBEMIS7G is programmed with the following state-wide average vehicle fleet mix:

State-Wide Vehicle Type	Total
Automobiles	75.0%
Light Duty Trucks	10.0%
Medium Duty Trucks	3.0%
Light-Heavy Duty Trucks	1.0%
Medium-Heavy Duty Trucks	1.0%
Heavy-Heavy Duty Trucks	5.0%
Urban Buses	2.0%
Motorcycles	3.0%

However, this state-wide average fleet mix is not appropriate for the majority of land use analyses. The project land use assessed in this analysis is identified below along with the total percentage of trucks (medium and heavy) that are expected for this land use. The following vehicle mix was calculated based on the percentage of trucks associated with this land use.

Project Land Use:	Truck %	ADT	Truck #
610 Hospital	1.84%	11,870	218
720 Medical Office Bldg.	1.20%	10,580	127
0		0	0
0		0	0
0		0	0
0		0	0
0		0	0
0		0	0
0		0	0
0		0	0
0		0	0
0		0	0
	Project Totals:	22,450	345
	Project Truck %:	1.54%	

Vehicle Type	Total
Automobiles	82.05%
Light Duty Trucks	10.94%
Medium Duty Trucks	0.46%
Light-Heavy Duty Trucks	0.15%
Medium-Heavy Duty Trucks	0.15%
Heavy-Heavy Duty Trucks	0.77%
Urban Buses	2.19%
Motorcycles	3.28%

URBEMIS 7G For Windows 5.1.0

File Name: C:\Program Files\URBEMIS 7G For Windows\Projects\NASAKaiser.urb
Project Name: Downey Landings Specific Plan Program EIR - Kaiser Project
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SOX
TOTALS(lbs/day,unmitigated)	0.72	6.68	4.25	0.02	0.00
TOTALS (lbs/day, mitigated)	0.67	6.68	4.01	0.02	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10
TOTALS (ppd, unmitigated)	190.71	287.50	1,492.39	164.43
TOTALS (ppd, mitigated)	178.20	266.49	1,383.97	152.44

URBEMIS 7G For Windows 5.1.0

File Name: C:\Program Files\URBEMIS 7G For Windows\Projects\NASAKaiser.urb
Project Name: Downey Landings Specific Plan Program EIR - Kaiser Project
Project Location: South Coast Air Basin (Los Angeles area)

DETAIL REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	PM10	SOX
Natural Gas	0.48	6.67	2.67	0.01	-
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.23	0.01	1.58	0.01	0.00
Consumer Prdcts	0.00	-	-	-	-
TOTALS(lbs/day,unmitigated)	0.72	6.68	4.25	0.02	0.00

AREA SOURCE EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10	SOX
Natural Gas	0.44	6.67	2.43	0.01	-
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.23	0.01	1.58	0.01	0.00
Consumer Prdcts	0.00	-	-	-	-
TOTALS (lbs/day, mitigated)	0.67	6.68	4.01	0.02	0.00

Area Source Mitigation Measures

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	PM10
Medical office building	81.30	126.71	649.10	71.85
Hospital	109.41	160.79	843.29	92.58
TOTAL EMISSIONS (lbs/day)	190.71	287.50	1,492.39	164.43

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Medical office building	36.13 trips / 1000 sq. ft.	292.70	10,575.25
Hospital	16.78 trips / 1000 sq. ft.	707.30	11,868.49

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Duty Autos	82.05	1.16	98.58	0.26
Light Duty Trucks	10.94	0.13	99.54	0.33
Medium Duty Trucks	0.46	1.44	98.56	-
Lite-Heavy Duty Trucks	0.16	19.56	40.00	40.44
Med.-Heavy Duty Trucks	0.16	19.56	40.00	40.44
Heavy-Heavy Trucks	0.77	-	-	100.00
Urban Buses	2.19	-	-	100.00
Motorcycles	3.28	100.00% all fuels		

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Medical office building	7.0	3.5	89.5
Hospital	25.0	12.5	62.5

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	PM10
Medical office building	75.43	116.87	598.85	66.28
Hospital	102.77	149.62	785.12	86.16
TOTAL EMISSIONS (lbs/day)	178.20	266.49	1,383.97	152.44

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Medical office building	36.13 trips / 1000 sq. ft.	292.70	10,575.25
Hospital	16.78 trips / 1000 sq. ft.	707.30	11,868.49

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Duty Autos	82.05	1.16	98.58	0.26
Light Duty Trucks	10.94	0.13	99.54	0.33
Medium Duty Trucks	0.46	1.44	98.56	-
Lite-Heavy Duty Trucks	0.16	19.56	40.00	40.44
Med.-Heavy Duty Trucks	0.16	19.56	40.00	40.44
Heavy-Heavy Trucks	0.77	-	-	100.00
Urban Buses	2.19	-	-	100.00
Motorcycles	3.28	100.00% all fuels		

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Medical office building	7.0	3.5	89.5
Hospital	25.0	12.5	62.5

ENVIRONMENTAL FACTORS APPLICABLE TO THE PROJECT

Pedestrian Environment

2.0	Side Walks/Paths: Most Destinations Covered
0.5	Street Trees Provide Shade: Some Coverage
3.0	Pedestrian Circulation Access: Most Destinations
1.0	Visually Interesting Uses: Some Uses within Walking Distance
1.0	Street System Enhances Safety: Some Streets
1.0	Pedestrian Safety from Crime: Moderate Degree of Safety
0.5	Visually Interesting Walking Routes: Minor Level

9.0 <- Pedestrian Environmental Credit
9.0 /19 = 0.5 <- Pedestrian Effectiveness Factor

Transit Service

20.0 Transit Service: 15-30 Minute Bus within 1/4 Mile

20.0 <- Transit Effectiveness Credit
9.0 <- Pedestrian Factor
29.0 <-Total
29.0 /110 = 0.3 <-Transit Effectiveness Factor

Bicycle Environment

1.0	Interconnected Bikeways: Low Coverage
1.0	Bike Routes Provide Paved Shoulders: Few Routes
0.5	Safe Vehicle Speed Limits: Few Destinations
0.0	Safe School Routes: No Schools
1.0	Uses w/in Cycling Distance: Some Uses
1.0	Bike Parking Ordinance: Requires Unprotected Bike Racks

4.5 <- Bike Environmental Credit
4.5 /20 = 0.2 <- Bike Effectiveness Factor

MITIGATION MEASURES SELECTED FOR THIS PROJECT
(All mitigation measures are printed, even if
the selected land uses do not constitute a mixed use.)

Transit Infrastructure Measures

% Trips Reduced	Measure
15.0	Credit for Existing or Planned Community Transit Service
15.0 <- Totals	

Pedestrian Enhancing Infrastructure Measures (Residential)

% Trips Reduced	Measure
2.0	Credit for Surrounding Pedestrian Environment
2.0 <- Totals	

Pedestrian Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced	Measure
2.0	Credit for Surrounding Pedestrian Environment
1.0	Provide Wide Sidewalks and Onsite Pedestrian Facilities
1.0	Project Uses Parking Structures/Small Dispersed Lots
0.5	Provide Street Lighting
0.5	Project Provides Shade Trees to Shade Sidewalks
0.5	Project Provides Street Art and/or Street Furniture
0.5	Provide Pedestrian Safety Designs/Infrastructure at Crossings
6.0 <- Totals	

Bicycle Enhancing Infratructure Measures (Residential)

% Trips Reduced	Measure
7.0	Credit for Surrounding Bicycle Environment
7.0 <- Totals	

Bike Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced	Measure
5.0	Credit for Surrounding Area Bike Environment
1.0	Provide Securre Bicycle Parking
6.0 <- Totals	

Operational Measures (Applying to Commute Trips)

% Trips Reduced	Measure
1.5	Preferential Carpool/Vanpool Parking
1.0	Employee Rideshare Incentive Program
2.5 <- Totals	

Operational Measures (Applying to Employee Non-Commute Trips)

% Trips Reduced	Measure
0.0 <- Totals	

Operational Measures (Applying to Customer Trips)

% Trips Reduced	Measure
0.0 <- Totals	

Measures Reducing VMT (Non-Residential)

VMT Reduced	Measure

0.0 <- Totals

Measures Reducing VMT (Residential)

VMT Reduced	Measure
0.0	<- Totals

Total Percentage Trip Reduction
with Environmental Factors and Mitigation Measures

Travel Mode	Home-Work Trips	Home-Shop Trips	Home-Other Trips
Pedestrian	0.10	0.42	0.42
Transit	3.95	0.87	1.07
Bicycle	1.58	1.58	1.58
Totals	0.00	0.00	0.00
Travel Mode	Work Trips	Employee Trips	Customer Trips
Pedestrian	0.31	2.84	2.84
Transit	3.95	0.08	3.95
Bicycle	1.35	1.35	1.35
Other	0.40	0.00	0.00
Totals	0.00	0.00	0.00

Changes made to the default values for Area

The wood stove option switch changed from on to off.
The fireplcase option switch changed from on to off.
Mitigation measure Central Water Heater: Cmrcl Space Heat.
has been changed from off to on.
Mitigation measure Increase Insulation Beyond Title 24: Cmrcl Space Heat.
has been changed from off to on.
Changes made to the default values for Operations

The pass by trips option switch changed from on to off.
The light duty auto percentage changed from 75.0 to 82.05.
The light duty truck percentage changed from 10.0 to 10.94.
The medium duty truck percentage changed from 3.0 to 0.46.
The light heavy duty truck percentage changed from 1.0 to 0.155.
The medium heavy duty truck percentage changed from 1.0 to 0.155.
The heavy heavy duty truck percentage changed from 5.0 to 0.77.
The urban bus percentage changed from 2.0 to 2.19.
The motorcycle percentage changed from 3.0 to 3.28.
The operational emission year changed from 2000 to 2005.
The travel mode environment settings changed from both to: non-residential
The default/nodefault travel setting changed from nodefault to: nodefault
Side Walks/Paths: No Sidewalks
changed to: Side Walks/Paths: Most Destinations Covered
Street Trees Provide Shade: No Coverage
changed to:Street Trees Provide Shade: Some Coverage
Pedestrian Circulation Access: No Destinations
changed to:Pedestrian Circulation Access: Most Destinations
Visually Interesting Uses: No Uses Within Walking Distance
changed to:Visually Interesting Uses: Some Uses within Walking Distance
Street System Enhances Safety: No Streets
changed to: Street System Enhances Safety: Some Streets
Pedestrian Safety from Crime: No Degree of Safety
changed to:Pedestrian Safety from Crime: Moderate Degree of Safety
Visually Interesting Walking Routes: No Visual Interest
changed to:Visually Interesting Walking Routes: Minor Level
Transit Service: Dial-A-Ride or No Transit Service
changed to: Transit Service: 15-30 Minute Bus within 1/4 Mile
Interconnected Bikeways: No Bikeway Coverage
changed to: Interconnected Bikeways: Low Coverage
Bike Routes Provide Paved Shoulders: No Routes
changed to:Bike Routes Provide Paved Shoulders: Few Routes
Safe Vehicle Speed Limits: No Routes Provided
changed to:Safe Vehicle Speed Limits: Few Destinations
Uses w/in Cycling Distance: No Uses w/in Cycling Distance
changed to:Uses w/in Cycling Distance: Some Uses
Bike Parking Ordinance: No Ordinance or Unenforceable
changed to:Bike Parking Ordinance: Requires Unprotected Bike Racks
Mitigation measure Provide Wide Sidewalks and Onsite Pedestrian Facilities:1
has been changed from off to on.
Mitigation measure Project Uses Parking Structures/Small Dispersed Lots:1
has been changed from off to on.
Mitigation measure Provide Street Lighting:0.5
has been changed from off to on.
Mitigation measure Project Provides Shade Trees to Shade Sidewalks:0.5
has been changed from off to on.
Mitigation measure Project Provides Street Art and/or Street Furniture:0.5
has been changed from off to on.
Mitigation measure Provide Pedestrian Safety Designs/Infrastructure at Crossings:0.5
has been changed from off to on.

Mitigation measure Provide Securre Bicycle Parking:1
has been changed from off to on.
Mitigation measure Preferential Carpool/Vanpool Parking:1.5
has been changed from off to on.
Mitigation measure Employee Rideshare Incentive Program:1
has been changed from off to on.
Mitigation measuremitop5: Park and Ride Lots
has been changed from on to off.

APPENDIX D
Noise Data Sheets

ON-SITE TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 10552-00
Project Name: Downey Landings Specific Plan Program EIR

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Stevens Garland - fax dated July 13, 2001

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition Roadway Name Roadway Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix Medium Trucks	Heavy Trucks	Distance from Centerline of Roadway CNEL at 100 Feet	Distance to Contour 70 CNEL	65 CNEL	60 CNEL
Existing Traffic Volumes											
Lakewood Boulevard											
S&G to Alameda	4	0	27,900	40	0	1.8%	0.7%	66.1	40	128	404
Alameda to Clark	4	0	29,900	40	0	1.8%	0.7%	66.4	43	137	433
Imperial Highway											
Clark to Ardis	6	0	31,900	40	0	1.8%	0.7%	66.8	48	151	476
Ardis to Bellflower	6	0	31,900	40	0	1.8%	0.7%	66.8	48	151	476
Bellflower Boulevard											
S&G to Washburn	4	0	19,700	40	0	1.8%	0.7%	64.5	29	90	285
Washburn to Imperial	4	0	19,700	40	0	1.8%	0.7%	64.5	29	90	285
Stewart & Gray Road											
Lakewood to Bellflower	4	0	17,800	40	0	1.8%	0.7%	64.1	26	81	258
Clark Avenue											
Lakewood to Imperial	4	0	7,000	35	0	1.8%	0.7%	58.7	-	-	74
Future (2006) Traffic Volumes with Projects											
Lakewood Boulevard											
S&G to Alameda	4	0	37,350	40	0	1.8%	0.7%	67.3	54	171	540
Alameda to Clark	4	0	39,670	40	0	1.8%	0.7%	67.6	57	182	574
Imperial Highway											
Clark to Ardis	6	0	42,270	40	0	1.8%	0.7%	68.0	63	199	631
Ardis to Bellflower	6	0	38,910	40	0	1.8%	0.7%	67.6	58	184	581
Bellflower Boulevard											
S&G to Washburn	4	0	34,010	40	0	1.8%	0.7%	66.9	49	156	492
Washburn to Imperial	4	0	33,660	40	0	1.8%	0.7%	66.9	49	154	487
Stewart & Gray Road											
Lakewood to Bellflower	4	0	23,270	40	0	1.8%	0.7%	65.3	34	106	337
Clark Avenue											
Lakewood to Imperial	4	0	9,770	35	0	1.8%	0.7%	60.2	-	33	104

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway lanes.

OFF-SITE TRAFFIC NOISE LEVELS

Project Number: 10552-00
Project Name: Downey Landings Specific Plan Program EIR

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Analysis Scenario(s): 24-Hour CNEL
Source of Traffic Volumes: Stevens Garland - fax dated July 13, 2001

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Traffic Noise Levels

Analysis Condition Roadway Name Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor'	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	Peak Hour dB(A) L_{eq}	24-Hour dB(A) CNEL
Existing Traffic Volumes													
Lakewood Boulevard													
Firestone to Bellflower	Residential	4	0	0	33,600	40	100	0	0	1.8%	0.7%	0.0	66.9
Bellflower to S&G	Residential	4	0	0	24,300	40	100	0	0	1.8%	0.7%	0.0	65.5
S&G to Alameda	Residential & Senior	4	0	0	27,900	40	100	0	0	1.8%	0.7%	0.0	66.1
Alameda to Clark	Residential	4	0	0	29,900	40	100	0	0	1.8%	0.7%	0.0	66.4
Clark to Imperial	Residential & School	4	0	0	31,900	40	100	0	0	1.8%	0.7%	0.0	66.6
Bellflower Boulevard													
Lakewood to S&G	Residential	4	0	0	11,700	40	100	0	0	1.8%	0.7%	0.0	62.3
S&G to Washburn	Residential	4	0	0	19,700	40	100	0	0	1.8%	0.7%	0.0	64.5
Stewart & Gray Road													
west of Lakewood	Residential	4	0	0	20,900	35	100	0	0	1.8%	0.7%	0.0	63.5
Lakewood to Bellflower	Residential	4	0	0	17,800	40	100	0	0	1.8%	0.7%	0.0	64.1
east of Bellflower	Residential	4	0	0	16,500	40	100	0	0	1.8%	0.7%	0.0	63.8
Imperial Highway													
east of Bellflower	Residential	6	0	0	31,400	40	100	0	0	1.8%	0.7%	0.0	66.7
Clark Avenue													
Lakewood to Imperial	Residential	4	0	0	7,000	35	100	0	0	1.8%	0.7%	0.0	58.7
Future (2006) Traffic Volumes without Projects													
Lakewood Boulevard													
Firestone to Bellflower	Residential	4	0	0	37,000	40	100	0	0	1.8%	0.7%	0.0	67.3
Bellflower to S&G	Residential	4	0	0	26,700	40	100	0	0	1.8%	0.7%	0.0	65.9
S&G to Alameda	Residential	4	0	0	30,700	40	100	0	0	1.8%	0.7%	0.0	66.5
Alameda to Clark	Residential	4	0	0	32,900	40	100	0	0	1.8%	0.7%	0.0	66.8
Clark to Imperial	Residential & School	4	0	0	35,100	40	100	0	0	1.8%	0.7%	0.0	67.1
Bellflower Boulevard													
Lakewood to S&G	Residential	4	0	0	12,900	40	100	0	0	1.8%	0.7%	0.0	62.7
S&G to Washburn	Residential	4	0	0	21,700	40	100	0	0	1.8%	0.7%	0.0	65.0
Stewart & gray Road													
west of Lakewood	Residential	4	0	0	23,000	35	100	0	0	1.8%	0.7%	0.0	63.9
Lakewood to Bellflower	Residential	4	0	0	19,600	40	100	0	0	1.8%	0.7%	0.0	64.5
east of Bellflower	Residential	4	0	0	18,200	40	100	0	0	1.8%	0.7%	0.0	64.2
Imperial Highway													
east of Bellflower	Residential	6	0	0	34,500	40	100	0	0	1.8%	0.7%	0.0	67.1
Clark Avenue													
Lakewood to Imperial	Residential	4	0	0	7,700	35	100	0	0	1.8%	0.7%	0.0	59.1
Future (2006) Traffic Volumes with Ezralow Project													
Lakewood Boulevard													
Firestone to Bellflower	Residential	4	0	0	39,390	40	100	0	0	1.8%	0.7%	0.0	67.6
Bellflower to S&G	Residential	4	0	0	28,170	40	100	0	0	1.8%	0.7%	0.0	66.1
S&G to Alameda	Residential	4	0	0	36,850	40	100	0	0	1.8%	0.7%	0.0	67.3
Alameda to Clark	Residential	4	0	0	39,070	40	100	0	0	1.8%	0.7%	0.0	67.5
Clark to Imperial	Residential & School	4	0	0	40,390	40	100	0	0	1.8%	0.7%	0.0	67.7
Bellflower Boulevard													
Lakewood to S&G	Residential	4	0	0	13,800	40	100	0	0	1.8%	0.7%	0.0	63.0
S&G to Washburn	Residential	4	0	0	26,710	40	100	0	0	1.8%	0.7%	0.0	65.9
Stewart & gray Road													
west of Lakewood	Residential	4	0	0	25,390	35	100	0	0	1.8%	0.7%	0.0	64.3
Lakewood to Bellflower	Residential	4	0	0	21,020	40	100	0	0	1.8%	0.7%	0.0	64.8
east of Bellflower	Residential	4	0	0	20,870	40	100	0	0	1.8%	0.7%	0.0	64.8
Imperial Highway													
east of Bellflower	Residential	6	0	0	36,890	40	100	0	0	1.8%	0.7%	0.0	67.4
Clark Avenue													

Lakewood to Imperial	Residential	4	0	0	9,210	35	100	0	0	1.8%	0.7%	0.0	59.9
Future (2006) Traffic Volumes with Kaiser Project													
Lakewood Boulevard													
Firestone to Bellflower	Residential	4	0	0	39,250	40	100	0	0	1.8%	0.7%	0.0	67.5
Bellflower to S&G	Residential	4	0	0	27,200	40	100	0	0	1.8%	0.7%	0.0	66.0
S&G to Alameda	Residential	4	0	0	31,200	40	100	0	0	1.8%	0.7%	0.0	66.5
Alameda to Clark	Residential	4	0	0	33,500	40	100	0	0	1.8%	0.7%	0.0	66.9
Clark to Imperial	Residential & School	4	0	0	35,600	40	100	0	0	1.8%	0.7%	0.0	67.1
Bellflower Boulevard													
Lakewood to S&G	Residential	4	0	0	15,150	40	100	0	0	1.8%	0.7%	0.0	63.4
S&G to Washburn	Residential	4	0	0	29,000	40	100	0	0	1.8%	0.7%	0.0	66.2
Stewart & gray Road													
west of Lakewood	Residential	4	0	0	25,250	35	100	0	0	1.8%	0.7%	0.0	64.3
Lakewood to Bellflower	Residential	4	0	0	21,850	40	100	0	0	1.8%	0.7%	0.0	65.0
east of Bellflower	Residential	4	0	0	21,010	40	100	0	0	1.8%	0.7%	0.0	64.8
Imperial Highway													
east of Bellflower	Residential	6	0	0	36,750	40	100	0	0	1.8%	0.7%	0.0	67.4
Clark Avenue													
Lakewood to Imperial	Residential	4	0	0	8,260	35	100	0	0	1.8%	0.7%	0.0	59.4
Future (2006) Traffic Volumes with Ezralow and Kaiser Projects													
Lakewood Boulevard													
Firestone to Bellflower	Residential	4	0	0	41,640	40	100	0	0	1.8%	0.7%	0.0	67.8
Bellflower to S&G	Residential	4	0	0	28,670	40	100	0	0	1.8%	0.7%	0.0	66.2
S&G to Alameda	Residential	4	0	0	37,350	40	100	0	0	1.8%	0.7%	0.0	67.3
Alameda to Clark	Residential	4	0	0	39,670	40	100	0	0	1.8%	0.7%	0.0	67.6
Clark to Imperial	Residential & School	4	0	0	40,890	40	100	0	0	1.8%	0.7%	0.0	67.7
Bellflower Boulevard													
Lakewood to S&G	Residential	4	0	0	16,050	40	100	0	0	1.8%	0.7%	0.0	63.7
S&G to Washburn	Residential	4	0	0	34,010	40	100	0	0	1.8%	0.7%	0.0	66.9
Stewart & gray Road													
west of Lakewood	Residential	4	0	0	27,640	35	100	0	0	1.8%	0.7%	0.0	64.7
Lakewood to Bellflower	Residential	4	0	0	23,270	40	100	0	0	1.8%	0.7%	0.0	65.3
east of Bellflower	Residential	4	0	0	23,680	40	100	0	0	1.8%	0.7%	0.0	65.3
Imperial Highway													
east of Bellflower	Residential	6	0	0	39,140	40	100	0	0	1.8%	0.7%	0.0	67.7
Clark Avenue													
Lakewood to Imperial	Residential	4	0	0	9,770	35	100	0	0	1.8%	0.7%	0.0	60.2

[1] Distance is from the centerline of the roadway segment to the receptor location.

APPENDIX E

Human Health Risk Assessment

KAISER PERMANENTE DOWNEY MEDICAL CENTER
HEALTH RISK ASSESSMENT

A. INTRODUCTION--HAZARDOUS WASTE AND PUBLIC SAFETY.

The proposed Kaiser Permanente Downey Medical Center will use and store a variety of hazardous materials which will produce hazardous wastes on the Project site. In comparison to many industrial facilities, however, the Kaiser Permanente Downey Medical Center will generate relatively small quantities of hazardous waste, which will be handled and disposed of in accordance with Kaiser's internal policies and procedures and state and federal law.

Hazardous materials pose a risk to worker and public health whenever these substances are used or stored. The risk to human health and the environment posed by hazardous materials is determined by the probability of exposure and the potential severity of harm resulting from such exposure, measured against the beneficial value from the particular use. Potential exposure of the public or the environment to hazardous materials could result from the Project from the following activities: (1) the improper handling or use of hazardous materials during hospital operations, (2) failure of storage containment systems, (3) improper disposal methods, (4) transportation accidents, and (5) fire, explosion or other emergencies.

The types and varieties of hazardous waste Kaiser produces are significant enough to require compliance with hazardous waste regulations, some of which are listed below.

Basic compliance requirements for hazardous waste generators include:

- Responsibility to characterize wastes
- Obtaining an EPA identification number
- Managing hazardous waste on-site in compliance with the DTSC regulations
- Obtaining hazardous waste treatment permits as necessary
- Selecting appropriate off-site treatment and disposal facilities
- Preparing hazardous wastes for shipment
- Making reasonable efforts to minimize waste generation

The cornerstone of Kaiser's hazardous waste management program is the ability of facility personnel to properly identify all wastes that are generated, treated, stored, or disposed. Once identified, a "*Hazardous Waste Determination*" of each wastestream is required by law. Hazardous waste determinations are made:

(1) Through detailed chemical and physical analysis of a representative sample of the wastestream; and/or

(2) Through the application of process and material knowledge (which normally includes

review of the Material Safety Data Sheet (MSDS) using existing published or documented waste analysis data or studies conducted on hazardous wastes generated by similar processes).

Infectious and biohazardous waste is identified and managed by Kaiser employees in accordance with its Infectious/Biohazardous Waste Management Program attached hereto as Appendix *

B. DEFINITION OF HAZARDOUS WASTE

A "waste" is any "discarded" hazardous material of any form that is characteristically hazardous (i.e., toxic, reactive, ignitable, or corrosive) or listed in 40 CFR 261 and has not been excluded by federal regulations from classification as a hazardous waste. For purposes of this analysis, "discarded" includes materials which are (1) recycled or (2) relinquished (i.e., thrown away, burned/incinerated, or stored before throwing away). To determine if a "waste" is a "hazardous waste", generators are obligated to determine if the waste is (1) *listed* or (2) *characteristic*. "*Listed wastes*" are wastes that contain specific chemicals known to be hazardous. "*Characteristic wastes*" are wastes with a known hazardous property. As the state's regulations were amended in 1991 to include all federally listed hazardous wastes, it is generally not necessary to consult EPA Regulations when making hazardous waste determinations.

Listed Wastes

"Listed" wastes are contained 22 CCR 66261.30 - 66261.34 and 66261.126, included here as Appendix 2A. Note that there are four lists of hazardous waste, each designated by a different letter: K-wastes, F-wastes, P-wastes, and U-wastes.

- K-wastes: K-wastes are generated from specific production processes and hence are called "hazardous wastes from specific sources". An example of a K-waste is K073, "chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using anodes in chlorine production." There are few, if any, K-wastes currently being generated in hospitals, labs, or other health care facilities.

- F-wastes: F-wastes do not include a description of the production process generating the waste. For this reason, F-wastes are considered wastes from "non-specific sources". An example of an F-waste frequently associated with medical facilities is F003 which includes a number of spent halogenated solvents such as xylene, acetone, and methanol.

- P-and U-wastes: P- and U-listed wastes refer to particular commercial chemical products, off-specification species of those products (i.e., a bad batch), and container and spill residues thereof. P-listed wastes are often called "acutely hazardous wastes". Examples of P- and U-wastes that may be generated at Kaiser Permanente include P042 (epinephrine) and U122 (formaldehyde).

- Appendix X wastes: This subdivision sets forth a list of chemicals which create a presumption that a waste is a hazardous waste. If a waste consists of or contains a chemical listed in this subdivision, the waste is not a hazardous waste pursuant to the procedures set

forth in section 66262.11. The hazardous characteristics which serve as a basis for listing the chemicals are indicated in the list as follows: (X) toxic, (C) corrosive. (I) ignitable and (R) reactive.

Two items of note about P- and U-listed wastes:

(1) They are only applicable to the listed chemical product in an essentially *pure form* or where the chemical product is the *sole active ingredient*; and

(2) They are only applicable when the chemicals are unused products.

With respect to (2) above, the used chemical is necessarily a non-hazardous waste. For example, it may exhibit any one or more of the hazardous waste characteristics described below.

Characteristic Wastes

In addition to the four lists of hazardous wastes described above, California classifies a waste as hazardous if it exhibits any one or more of the following "characteristics": ignitability, corrosivity, reactivity or toxicity. A detailed description of each of these characteristics is contained in 22 CCR 66261.20 - 66261.24.

- Toxicity: A waste exhibits the toxicity characteristic if it exceeds specified concentrations of certain metals and organic compounds or stated criteria in several biological tests;

- Reactivity: Reactive wastes are unstable and capable of readily undergoing violent change, often in the presence of water. Few standard test measures exist for this characteristic;

- Ignitability: Ignitable is generally associated with wastes having a flash point of less than 140 degrees Fahrenheit, ignitable compressed gases, and certain oxidizers; and

- Corrosivity: Corrosive wastes exhibit a pH ≤ 2 or ≥ 12.5 or corrode steel at a specified rate.

Materials which are not considered hazardous waste:

The following materials are not considered hazardous waste and are therefore not subject to hazardous waste generator requirements.

- Samples of waste which are collected for the sole purpose of testing to determine characteristics or composition.

- Chlorofluorocarbons that are removed from cooling systems and are reclaimed for reuse. (1)

- Materials which are not reclaimed prior to being used or reused:

- as an ingredient in an industrial process;
- as a safe and effective substitute for commercial products, or;
- as a substitute for raw material feedstock in the original processes from which it was generated. (1)

■ A material which would not be classified as a federal hazardous waste and is recycled and used at the site where the material was generated. (1)

■ A material which is a "product" and has been processed from a hazardous waste and:
  1. Does not contain constituents other than those for which the material is being recycled which renders it hazardous, and;
  2. The product is used, or distributed or sold for use, in a manner for which the product is commonly used. (1)

■ A fuel which is removed from a fuel tank, is either contaminated with water or by nonhazardous debris of not more than 2% by weight, and is transferred to, and processed into a fuel. (1)

(1) In order for the recyclable materials described above to be excluded from classification as a waste:

1. Containers or tanks containing the materials must be labeled, marked, and placarded in accordance with generator requirements but use the words "Excluded Recyclable Material" instead of "Hazardous Waste."
2. The business location must maintain a business plan meeting the requirements of section 25504 of the health and safety code (including emergency response plans).
3. The material shall be stored and handled in accordance with all local ordinances and codes.

B. TYPES OF HAZARDOUS WASTE STREAMS

The proposed Downey Medical Center will generate several generic types of hazardous waste streams: medical (biohazardous) waste, radiological waste, and hazardous chemical waste.

Medical Waste.

Medical waste includes biologically hazardous waste is generally defined as waste capable of producing infectious disease and includes human blood, blood products, and body fluids, pathological waste, sharps waste, waste cultures and stocks, and certain mixed wastes. Medical waste generated on the Project site refers to the following materials: (1) infectious waste that can be sterilized onsite such as used bandages and contaminated paper, (2) "special" waste which cannot be rendered non-hazardous by sterilization, including human or animal surgery specimens, tissues, or body parts removed during surgery, autopsy, or other medical procedures., chemotherapy residuals on gloves, tubing, and syringes, and pathology tissues containing formaldehyde; and (3) "sharps waste", which is any discarded medical device that was used in patient care, medical research, or an industrial laboratory and is capable of puncturing or cutting

the skin, such as needles; syringes with needles attached; trocars; pipettes; scalpel blades; blood vials; broken or unbroken glassware that has been in contact with infectious agents, including serum culture bottles, slides, and cover slips, and (4) waste cultures and stocks, which are wastes from the production of bacteria, viruses, spores, discarded live and attenuated vaccines used in human health care or research, and culture dishes and devices used to transfer, inoculate, and mix cultures.. All infectious and "special" medical wastes on the site would be collected at the source, placed in labeled red bags and transported in leakproof containers to a secure holding area. Contaminated needle sharps would be collected at the source in sealed, labeled hard shell containers.

A steam sterilizer unit would be provided at the proposed medical center to disinfect infectious waste (i.e., contaminated paper, used bandages, etc.). The sterilization process consists of steam sterilizing the infectious waste at 250 degrees Fahrenheit for 45 minutes. Once the waste has been processed, it is no longer infectious and is disposed of as general waste in a landfill. Steam for the process condenses into sterile water, which is cooled then discharged into the sanitary sewer system. The special medical wastes that cannot be sterilized and the contaminated sharps would be removed from the site by a licensed bio-hazardous waste hauler and taken to an appropriate facility for incineration. These materials would be contained onsite in a locked and monitored holding area while awaiting removal.

Radiological Waste

Radiological waste refers to waste products contaminated by radiological material. These radioactive waste materials consist primarily of radioactive implants used in nuclear medicine that have been removed from a patient's body. All radioactive waste would be collected at the source and contained in a lead-lined vault until it has decayed (reached its half-life) and is rendered safe for sanitary landfill disposal. Monitoring equipment would be used to detect radioactive materials in waste products.

Chemical Waste

Chemical hazardous waste includes toxic chemicals such as formaldehyde, xylene, alcohols and reagents. Waste amounts of toxic chemicals generated at the site would be collected, labeled and stored in a specialized hazardous waste storage area for a maximum of 90 days. All hazardous chemical waste would be removed from the site by a licensed hazardous waste hauler and taken to an appropriate facility for disposal (i.e, neutralization, incineration, etc.). Spent X-ray developer would be collected, labeled and removed by Kaiser for recycling.

The use of hazardous materials on the project site could pose a potential risk to staff and patrons of the hospital, the surrounding community and the immediate environment. Impacts could result from the handling, storage, transport and disposal of hazardous materials on the site. In assessing the risks associated with hazardous wastes, the level of risk is determined in part by the acceptability of the activity relative to its perceived benefits. The proposed Kaiser Permanente Downey Medical Center would be required to comply with all federal, state and local regulations pertaining to the use, storage, disposal and transport of hazardous materials on the site.

Appropriate internal Kaiser safeguards and monitoring and audit systems will be implemented by Kaiser to minimize the risks associated with the use of hazardous materials on the Project site.

Mixed Waste.
Mixed Waste is a mixture of infectious/biohazardous waste and other wastes. Mixed waste is infectious/biohazardous waste, except that (a) a mixture of infectious/biohazardous waste and hazardous waste is hazardous waste and (b) a mixture of infectious/biohazardous waste and radioactive waste is radioactive waste.

C. USE OF HAZARDOUS MATERIALS AT THE KAISER PERMANENTE DOWNEY MEDICAL CENTER.

Hazardous materials will be utilized in the following departments at the proposed Kaiser Permanente Downey Medical Center:

Central Supply

The Central Supply department would provide for sterilization of medical instruments and equipment, using a highly toxic gas, ethylene oxide (Eto). The Eto units in the proposed hospital would be enclosed in a specialized room away from the main corridors and patient rooms, and equipped with sensors to detect any escape of Eto into the work room. The Eto units would release the spent gas into vents which are equipped with chemical scrubbers that reduce the concentration of Eto to non-toxic levels. Eto is a strictly regulated gas, controlled by the State and local air quality management districts. The state requires that facilities utilizing 25-600 pounds per year of Eto maintain a 99% emission control rate. For facilities using greater than 600 lbs per year, an emission control of 99.9 percent must be maintained.

Laboratories

The hospital laboratory would use certain hazardous materials. These materials include alcohols, xylenes, formaldehydes, stains and reagents. Acids are also used in the lab, including nitric acid, hydorcholoric acid and glacial acetic acid. Bases also inclue sodium hydrozide and ammonium hydroxide. These materials are generally stored in small qualities, according to legal regulations.

Central Plant, Engineering.

The Central Plan would contain one or more underground tanks to store diesel fuel. These underground tanks would be monitored by a detection system to indicate any leakage. In addition, other flammable, combustible and volatile materials would be used to operate and maintain engineering equipment throughout the hospital.

Other Departments:
Hazardous materials include formaldehyde, flammable liquids, paints, solvents, pesticides and detergents which would be in other departments. Photographic developer and fixer would also

be used in radiology and ophthalmology for developing X-rays and other film. The used photographic developer would be recycled for silver content by Kaiser.

D. DEFINITION OF SIGNIFICANT IMPACTS

Kaiser Permanente has developed many internal procedures to minimize waste, prevent pollution, and conserve natural resources, governed by Kaiser's national Environmental Stewardship Council. In California, Kaiser's operations leaders sponsor efforts to minimize solid, bio-hazardous, and chemical wastes. The average performance for reducing bio-hazardous (regulated medical) waste for KP medical centers is 30%, a significant reduction in the volume and toxicity of waste streams. Chemical wastes are minimized through programs to centralize and standardize the use of hazardous chemicals, to use less hazardous alternatives when appropriate, to recycle chemical wastes such as xylene and alcohol when possible, and to dispose of wastes in an environmentally responsible manner. Kaiser attempts to reduce, reuse, and recycle all waste streams wherever feasible, limiting significant impacts on the public and the environment.

Kaiser Permanete employees responsible for the handling of hazardous wastes are trained in accordance with the standards set forth in the Kaiser Permanente California Hazardous Waste Guidance Manual attached hereto as Appendix *. This guidance document is designed to help Kaiser Permanente employees who are involved in the management of hazardous waste understand and comply with California hazardous waste requirements relevant to the positions in which they are employed. Sample forms, procedures, and plans are included in the Guidance Manual.

Kaiser Permanente also has an aggressive audit program. Kaiser's National Environmental, Health and Safety (NEH&S) Audit Program is a governance tool used to assess and communicate environmental, health and safety compliance status with the ultimate purposes of assuring management that Kaiser's waste management and treatment program maximizes the impact on its employee, members, the public and the environment. The audit program will evaluate the compliance programs and the environmental health and safety management systems of the Kaiser Permanente Downey Medical Center.

The Hazardous Waste audit protocol will evaluate the Kaiser Permanente Downey Medical Center's program for completeness with the current regulatory and environmental compliance obligations. Topics audited in the Hazardous Waste program include an evaluation of program management procedures, employee training and knowledge, records retention, waste storage area management and security, waste classification, waste handling, waste containerization and labeling, transporter and disposal site selection and management and waste activities reporting.

The Medical Waste audit protocol evaluates the Kaiser Permanente Downey Medical Center's program for proper management of infectious, biohazardous and chemotherapy drug related wastes. The audit protocol evaluates proper usage of solid waste and medical wastes (redbag) containers, proper disposal of trace and bulk quantities of chemotherapy wastes and employee knowledge.

The audit scope is standardized, which allows for all audits to be conducted in a consistent manner and the audit results are quantified to allow for benchmarking. The audit results are reported annually to the Kaiser Permanente Board of Directors.

For the purposes of this EIR, a hazardous waste impact is considered material and significant if it would expose staff, patients, visitors or neighboring residents to a significant health risk associated with the storage, use, transportation or disposal of hazardous waste on the site.

The use of hazardous materials and the disposal of hazardous waste at the project site represents a potentially significant impact which would be reduced to a less than significant level by the implementation of Kaiser's internal procedures described herein, and conformance with existing Federal, State and local requirements regulating hazardous materials and waste on the Project site.

Appendix *

Kaiser Permanente Infectious/ Biohazardous Waste Management Program

I. PURPOSE:

These guidelines outline the program elements of an infectious/ biohazardous waste management program, including federal regulatory requirements. State and local requirements for infectious/biohazardous waste programs should be reviewed for applicability and incorporated, as necessary.

II. COVERAGE:

All Kaiser Permanente employees and physicians who handle, manage, or dispose of infectious/ biohazardous waste.

III. DEFINITIONS:

Germ Theory: Disease transmission theories, including an understanding of the distinction between the health risks associated with infectious/ biohazardous waste management and the concept of Universal Precautions. *See* Rutala and Mayhall, "SHEA Position Paper: Medical Waste" (Jan. 1992) and APIC, "Why Infection Control?," which are attached to these Guidelines as Exhibits 1 and 2.

Hazardous waste: A waste that is characteristically hazardous (i.e., toxic, reactive, ignitable, or corrosive) or listed in 40 CFR 261 and has not been excluded by federal regulations from classification as a hazardous waste.

Human blood, blood products, body fluids: Discarded free-flowing human blood and blood products (e.g., plasma, serum), any free-flowing body secretion containing blood components (e.g., pleural, peritoneal, amniotic fluids), and any other fluid visibly contaminated with blood. (Note: Human excretions (e.g., urine, stool) are specifically excluded because they have accepted means of disposal.)

Infectious/Biohazardous Waste: Waste that includes human blood, blood products, and body fluids, pathological waste, sharps waste, waste cultures and stocks, and certain mixed wastes.

Mixed waste: A mixture of infectious/biohazardous waste and other wastes. Mixed waste is infectious/biohazardous waste, except that (a) a mixture of infectious/biohazardous waste and hazardous waste is hazardous waste and (b) a mixture of infectious/biohazardous waste and radioactive waste is radioactive waste.

Pathological waste: Human or animal surgery specimens, tissues, or body parts removed during surgery, autopsy, or other medical procedures.

Sharps waste: Any discarded medical device that was used in patient care, medical research, or an industrial laboratory and is capable of puncturing or cutting the skin. Examples include: needles; syringes with needles attached; trocars; pipettes; scalpel blades; blood vials; broken or unbroken glassware that has been in contact with infectious agents, including serum culture bottles, slides, and cover slips.

Waste cultures and stocks: Wastes from the production of bacteria, viruses, spores, discarded live and attenuated vaccines used in human health care or research, and culture dishes and devices used to transfer, inoculate, and mix cultures.

IV. GUIDELINES:

The following program elements outline federal regulatory requirements for infectious/biohazardous waste management programs, including federal OSHA's Bloodborne Pathogen Standard (29 C.F.R. section 1910.1030) and DOT's applicable Hazardous Materials Regulations (49 C.F.R. sections 173.134(b)(3), 173.197(a)), and sound management practices:

1. **Procedures and plans**:
   a) Service Area(s)/Local Market(s) should consider developing a written program which formally describes the procedures, plans, and requirements related to the following:

      - Roles and responsibilities;
      - Containment and storage of infectious/biohazardous waste;
      - Lifting and handling waste materials;
      - Conducting infectious/biohazardous waste self audits;
      - Infectious/biohazardous tracking form management, as applicable;
      - On-site/off-site treatment and disposal methods, as applicable;
      - Infectious/biohazardous waste labeling, and packaging;
      - Spill management of infectious/biohazardous waste;
      - Infectious/biohazardous waste management training;
      - Exchange of information with contractors and contractor employees; and
      - Permit application and management, as applicable.

2. **Roles and responsibilities:**
   a) Roles and responsibilities relative to implementing and maintaining an infectious/ biohazardous waste program should be understood by affected employees, including facility administration, clinical department supervisors, employees, and all relevant departments.

   b) Roles and responsibilities relative to contractor compliance with infectious/biohazardous waste program requirements should be clearly defined and understood by relevant management and contractors. (See your local EH&S professional for a copy of KP's sample policy and procedure on contractor safety.)

3. **Operations Elements:**

a) *Labeling*

Employees involved in the generation of infectious/biohazardous waste must be provided, where necessary, with appropriately labeled containers for storage and disposal of infectious/biohazardous waste. These containers must meet the following requirements:

- Warning labels affixed to containers of infectious/biohazardous waste must include the biohazard symbol with the word "BIOHAZARD";
- Labels must be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color; and
- Labels must be affixed as close as feasible to the container by string, wire, adhesive or other method that prevents their loss and unintentional removal.

- Red bags or red containers may be substituted for labels.

Individual containers of infectious/biohazardous waste that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirements.

b) *Packaging*

Appropriate packaging must be provided for infectious/biohazardous waste. Infectious/biohazardous waste must be placed in appropriate containers which meet the following requirements:

Sharps containers

- Closeable
- Puncture resistant
- Leakproof on sides and bottom

Other infectious/biohazardous waste containers

- Closeable
- Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping
- Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport or shipping

Containers used for off-site shipment

- Rigid
- Leak resistant
- Impervious to moisture

Containers used for off-site shipment, continued:

- Of sufficient strength to prevent tearing or bursting under normal conditions of use and handling
- Sealed to prevent leakage during transport
- Puncture resistant for sharps and sharps with residual fluids
- Break-resistant and tightly lidded or stopped for fluids in quantities greater than 20 cubic centimeters

Appendix *

Kaiser Permanente California Hazardous Waste Guidance Manual

Western
Service Hub
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California Hazardous Waste Guidance Manual

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Service Hub

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This manual represents the collaborative efforts of:

The National Environmental, Health, and Safety Department,

Program Office Legal Department,

and

The Western Environmental, Health and Safety Service Hub

This document is not a replacement for current U.S. Environmental Protection Agency (EPA) or state regulations. Be sure to contact Barry Foose of the Western Environmental Health and Safety Service Hub, at 626-564-3256, or 8-338-3256, for further assistance.

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About This Manual

This guidance document is designed to help Kaiser Permanente employees who are involved in the management of hazardous waste understand and comply with California hazardous waste requirements relevant to the positions in which they are employed. Sample forms, procedures, and plans are included to further reduce the time and effort spent in understanding the applicable requirements.

The information presented here may be used as a starting point for facilities to develop compliance programs with hazardous waste management requirements or as reference material to an already well-defined and mature waste program. Specific guidance document objectives include:

- Facilitating the hazardous waste identification process by providing simple tools for waste characterization and a comprehensive data base of common hazardous wastes that may be generated in your facility.

- Assisting the facility in obtaining an U.S. EPA or state hazardous waste Identification Number, if applicable.

- Describing requirements for managing hazardous waste on site, including compliance with accumulation and storage standards, release prevention and contingency planning, inspection, training, recordkeeping, and reporting requirements.

- Providing instruction for compliance with state and federal (DOT) requirements for manifesting hazardous waste off-site.

While the text is numbered and ordered in a logical fashion (i.e., waste determination comes before obtaining an EPA identification number, etc.), both chapters and appendices can be referenced as "stand-alone" items to meet your specific program needs. Nevertheless, the recommended approach to use this guidance document is as follows:

- First, read the introductory material in Chapter 1. Chapter 1 and this section ("About This Manual") will briefly explain the basic state hazardous waste management requirements and direct the reader to specific information of interest in the handbook.

- Second, review Chapter Two and the criteria for determining whether hazardous wastes are being generated at your facility. Follow the step-by-step approach presented there to make hazardous waste determinations for your facility.

- Third, review Chapter Three to determine hazardous waste exclusions and exceptions that may be applicable to your facility.

- Fourth, review Chapter Four if you need a state or federal hazardous waste Identification Number for a facility and have not yet acquired one.

- Fifth, study your facility's approach to managing its hazardous waste on-site and make sure that you are following the requirements specified in Chapter Five. This includes shipping accumulated wastes off-site within specific time limits and understanding accumulation rules. Review your containers, labels, and accumulation areas to make sure they comply with the standards. You may need an emergency response plan and training program.

- Sixth, if your facility is treating hazardous waste on-site, it must have a treatment permit. Review Chapter Six for "tiered permitting" treatment requirements.

- Seventh, follow the instructions in Chapter Seven for completing hazardous waste manifests and land disposal restriction notifications, as well as meeting Department of Transportation and Biennial Reporting requirements.

- Eighth, review the summary of waste minimization requirements described in Chapter Eight.

- Ninth, review the recordkeeping and reporting summary presented in Chapter Nine to ensure all hazardous waste administrative requirements are being met.

- And lastly, review the self-audit checklist in Chapter Ten to facilitate management of your hazardous waste program.

Note that Chapter Eleven is reserved for future use. It is intended to be used by the Region to maintain notes and program updates relative to hazardous waste.

Glossary of Key Terms

Accumulation: The short term storage of hazardous waste by generators. Accumulation may either occur at the point of generation or in a designated, remote accumulation area.

Acutely Hazardous Waste: Hazardous wastes which appear on EPA's "P-list".

CFR: Code of Federal Regulations

Characteristic Waste: A waste that demonstrates one or more of the following hazardous waste characteristics: Toxicity, Reactivity, Ignitability, Corrosivity.

Container: Any device that is portable and in which a material can be stored, handled, treated, transported, recycled, or disposed.

Contingency Plan: A document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste which could threaten human health or the environment.

Corrosivity: Corrosive wastes exhibit a pH ≤ 2 or ≥ 12.5 or corrode steel at a specified rate.

Disposal: The discharge, deposit, injection, dumping, spilling, leaking, or placing of any hazardous waste into or on any land or water so that such waste may enter the environment or be emitted into the air or discharged into any waters.

DOT: Department of Transportation

EPA: Environmental Protection Agency.

EPA Identification Number: The number assigned by EPA to each generator, transporter, and TSDF (Treatment, Storage, and Disposal Facility.)

Extremely Hazardous Wastes: Wastes which are particularly hazardous by virtue of their toxicity or reactivity with water. Special handling and other regulatory requirements apply. Extremely hazardous wastes are designated with an asterisk in Appendix X of 22 CCR 66261.126 or may be identified by criteria found in 22 CCR 66261.110 and 66261.113. An example of an extremely hazardous waste at Kaiser Permanente is mercuric chloride.

Facility: All contiguous land and structures used for treatment, storing, or disposing of hazardous waste. In this text, sometimes used in place of "generator".

Federal or RCRA Hazardous Waste: A hazardous waste which has not been excluded from federal regulation and exhibits a characteristic as defined in 40 CFR 261, Subpart C or is "listed" in 40 CFR 261, Subpart D.

Generator: Any person (which includes any individual, trust, firm, corporation, partnership, or association, among others) whose act or process produces hazardous waste.

Hazardous Waste: For the purposes of this document, a waste which is listed in 22 CCR66261.31 et.seq. or is characteristically hazardous, and has not been excluded from classification as a hazardous waste.

Ignitability: Ignitable is generally associated with wastes having a flash point of less than 140 degrees Fahrenheit, ignitable compressed gases, and certain oxidizers.

Incompatible Materials: Materials and or wastes which, when mixed, have harmful consequences (fire, explosion, heat, off-gassing, etc.).

LC_{50} or Lethal Concentration: The concentration of a material which is expected to kill 50 percent of a group of test animals when administered as a single exposure.

LD_{50} or Lethal Dose: The dose which is required to produce death in 50 percent of the exposed species.

LDR Land Disposal Restrictions: EPA imposed restrictions to prevent activities that involve placing untreated waste in or on the land if a better treatment or immobilization alternative exists.

Listed Hazardous Wastes: Hazardous wastes which have been assigned a specific EPA Hazardous Waste Number and appear in 40 CFR 261 as well as 22 CCR 66261.31 *et.seq.*

Manifest: A multi-copy shipping document (DOHS 8022/) designed to ensure that shipments of hazardous waste can be tracked from their point-of-generation to their final destination.

Operator: The person responsible for overall operation of a facility.

Owner: The person who owns a facility or part of a facility.

POTW, Publicly Owned Treatment Works: Any device or system used in the treatment of municipal sewage or industrial wastes of a liquid nature which is owned by a State or municipality. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW.

RCRA: Resource Conservation and Recovery Act: Passed in 1976, this Act directed the EPA to develop and implement a program to protect human health and the environment from improper hazardous waste management practices.

Reactivity: Reactive wastes are unstable and capable of readily undergoing violent change, often in the presence of water. Few standard test measures exist for this characteristic.

Recycled: A material which is used, re-used, or reclaimed (processed to recover a usable product, or regenerated).

Release: Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing, of any chemical substance, including hazardous waste, into the environment.

Satellite Accumulation: Point-of-generation accumulation of hazardous waste under the direct control of the operator is commonly called "satellite accumulation".

Soluble Threshold Limit Concentration (STLC): A regulatory level established by California regulators for persistent and bioaccumulative toxic substances as defined in 22 CCR 66261.24(a)(2). STLC analysis utilizes an extraction method called the Waste Extraction Test (WET) which closely approximates the TCLP.

Special Wastes: Hazardous wastes which meet certain criteria which allow it to be managed or disposed in a manner less stringent than other hazardous wastes. The criteria a waste must meet to qualify as a special waste are contained in 22 CCR 66261.122.

Storage: The holding of hazardous waste for longer periods of time than allowed for accumulation, at the end of which the hazardous waste is treated, disposed, or stored elsewhere.

Surplus Material: "Surplus Material" is raw material or commercial product obtained by a person who intended to use or sell it, but who no longer needs it, and who transfers ownership of it to another person for use in a manner for which the material is commonly used. Recycled surplus material is not subject to regulation as a hazardous waste.

Scrap Metal: "Scrap Metal" includes manufactured, solid metal objects and products as well as metal workings (cuttings, shavings, etc.) and solid metal residues of metal production. Recycled scrap metal is not subject to regulation as a hazardous waste.

Tank: A stationary receptacle designed to contain an accumulation of hazardous waste, which is constructed primarily of non-earthen materials.

Tiered Permitting: A non-federally mandated, streamlined permitting process, for treating hazardous waste.

Total Threshold Limit Concentration (TTLC): A regulatory level established by California regulators for persistent and bioaccumulative toxic substances as defined in 22 CCR 66261.24(a)(2). The TTLC method (atomic absorption for metals and organic spectroscopy for organics) should be performed before the STLC analysis as it is less expensive and will help identify those species which should be subsequently examined for STLC.

Toxicity: A waste exhibits the toxicity characteristic if it exceeds specified concentrations of certain metals and organic compounds or stated criteria in several biological tests.

Toxicity Characteristic Leaching Procedure (TCLP): A test method used by EPA to determine if an extract of a waste contains any toxic metals or organic substances in excess of those concentrations listed in Table 1 of 22 CCR 66261.24(a)(i).

Treatment: Any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste.

TSDF: Treatment, Storage, and Disposal Facility: A RCRA permitted facility, that conducts treatment, storage, or disposal of hazardous waste as each term is defined above.

Waste: A discarded material, of any form, that is not specifically excluded from Regulation. For the purposes of this text, "discarded" includes materials which are (1) recycled or (2) relinquished (i.e., thrown away, burned/incinerated, or stored before throwing away).

Chapter 1. Regulation of Hazardous Waste

In 1976, Congress passed the Resource Conservation and Recovery Act (RCRA) which directed the Environmental Protection Agency (EPA) to develop and implement a program to protect human health and the environment from improper hazardous waste management practices. The program is designed to control the management of hazardous waste from generation to disposal (commonly called "cradle-to-grave" responsibility). Key program elements include waste identification, accumulation, transportation, storage, treatment, and disposal.

In 1992, California received formal authorization to implement most RCRA provisions after many years of interim authority. California has merged its RCRA authority into ongoing implementation of the state's Hazardous Waste Control Law (HWCL), which was initially adopted in 1972 and modified repeatedly in the intervening two decades.

The California Department of Toxic Substances (DTSC) is the state's lead agency in implementing HWCL and RCRA provisions, but allows county health departments to implement many HWCL provisions.

In comparison to many industrial facilities, Kaiser Permanente generates relatively small quantities of hazardous wastes. Nevertheless, the types and varieties of waste we produce are significant enough to require compliance with hazardous waste regulations, some of which are listed below.

Basic compliance requirements for hazardous waste generators include:

- Responsibility to characterize wastes
- Obtaining an EPA identification number
- Managing hazardous waste on-site in compliance with the DTSC regulations
- Obtaining hazardous waste treatment permits as necessary
- Selecting appropriate off-site treatment and disposal facilities
- Preparing hazardous wastes for shipment
- Making reasonable efforts to minimize waste generation

More specific hazardous waste generator requirements are outlined in Figure 1.1.

Figure 1.1 Summary of Hazardous Waste Generator Requirements

- Determine and record which of the facility's wastes are "hazardous waste"
- Obtain an EPA Identification Number for hazardous waste generators
- Accumulate no more than 55 gallons of hazardous waste (or one quart of acutely hazardous waste or extremely hazardous waste) at or near the point-of- generation. Observe prescribed satellite accumulation area requirements.
- Store waste on-site for 90 days or less and adhere to the following requirements:
  1. Observe prescribed container & tank requirements.
  2. Observe prescribed preparedness and prevention requirements.
  3. Observe prescribed Contingency Plan requirements.
  4. Observe prescribed personnel training requirements.
  5. Observe prescribed land disposal requirements.
  6. Observe prescribed security requirements.
- Observe permitting requirements for hazardous waste treatment activities.
- Prepare a manifest (DOHS 8022/CAD058236591) and land disposal notification for hazardous waste that is transported off-site.
- Observe packaging, labeling, marking, and placarding requirements as prescribed by DOT regulations.
- Offer hazardous waste only to transporters and T.S.D.F.s with EPA Identification numbers.
- Complete recordkeeping and reporting requirements to include Biennial Report.

The remainder of this guidance document is designed to assist Kaiser Permanente employees involved in the management of hazardous waste to understand and comply with California hazardous waste requirements relevant to the positions in which they are employed. While the text is numbered and ordered in a logical fashion (i.e., waste determination comes before obtaining an EPA Identification Number etc.), both chapters and appendices can be referenced as "stand-alone" items to meet your specific program needs. For further assistance regarding hazardous waste management, contact your Regional EH&S Department.

Chapter 2. Hazardous Waste Determinations

This Chapter provides a comprehensive overview of how to determine which wastes generated at your facility are regulated by state and federal hazardous waste standards. First, an overview of wastestream determinations and a description of the two fundamental types of hazardous waste ("listed" and "characteristic") are presented. Then a model is introduced to facilitate the hazardous waste identification process.

Overview

The cornerstone of any hazardous waste management program is the ability of facility personnel to properly identify all wastes that are generated, treated, stored, or disposed. Once identified, a "*Hazardous Waste Determination*" of each wastestream is required by law. Hazardous waste determinations are made:

(3)	Through detailed chemical and physical analysis of a representative sample of the wastestream; and/or
(4)	Through the application of process and material knowledge (which normally includes review of the Material Safety Data Sheet (MSDS) using existing published or documented waste analysis data or studies conducted on hazardous wastes generated by similar processes).

What is a Hazardous Waste?

A "waste" is any "discarded" material of any form that is not specifically excluded from regulation. For our purposes, "discarded" includes materials which are (1) recycled or (2) relinquished (i.e., thrown away, burned/incinerated, or stored before throwing away).

To determine if a "waste" is a "hazardous waste", generators are obligated to determine if the waste is (1) *listed* or (2) *characteristic*. "*Listed wastes*" are wastes that contain specific chemicals known to be hazardous. "*Characteristic wastes*" are wastes with a known hazardous property.

As the state's regulations were amended in 1991 to include all federally listed hazardous wastes, it is generally not necessary to consult EPA Regulations when making hazardous waste determinations.

Listed Wastes

"Listed" wastes are contained 22 CCR 66261.30 - 66261.34 and 66261.126, included here as Appendix 2A. Note that there are four lists of hazardous waste, each designated by a different letter: K-wastes, F-wastes, P-wastes, and U-wastes.

- K-wastes: K-wastes are generated from specific production processes and hence are called "hazardous wastes from specific sources". An example of a K-waste is K073, "chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using anodes in chlorine production." Now that's specific! There are few, if any, K-wastes currently being generated in hospitals, labs, or other health care facilities.

- F-wastes: F-wastes do not include a description of the production process generating the waste. For this reason, F-wastes are considered wastes from "non-specific sources". An example of an F-waste frequently associated with medical facilities is F003 which includes a number of spent halogenated solvents such as xylene, acetone, and methanol.

- P-and U-wastes: P- and U-listed wastes refer to particular commercial chemical products, off-specification species of those products (i.e., a bad batch!), and container and spill residues thereof. P-listed wastes are often called "acutely hazardous wastes". Examples of P- and U-wastes that may be generated at Kaiser Permanente include P042 (epinephrine) and U122 (formaldehyde).
- Appendix X wastes: This subdivision sets forth a list of chemicals which create a presumption that a waste is a hazardous waste. If a waste consists of or contains a chemical listed in this subdivision, the waste is not a hazardous waste pursuant to the procedures set forth in section 66262.11. The hazardous characteristics which serve as a basis for listing the chemicals are indicated in the list as follows: (X) toxic, (C) corrosive. (I) ignitable and (R) reactive. A chemical denoted with an asterisk is presumed to be an extremely hazardous waste unless it does not exhibit any of the criteria set forth in section 66261.110 and section 66261.113. Trademark chemical names are indicated by all capital letters.

Two items of note about P- and U-listed wastes:

(1) They are only applicable to the listed chemical product in an essentially *pure form* or where the chemical product is the *sole active ingredient*; and

(2) They are only applicable when the chemicals are unused products.

With respect to note (2) above, this is not to say that the used chemical is necessarily a non-hazardous waste! For example, it may exhibit any one or more of the hazardous waste characteristics described next.

Characteristic Wastes

In addition to the four lists of hazardous wastes described above, California classifies a waste as hazardous if it exhibits any one or more of the following "characteristics": ignitability, corrosivity, reactivity or toxicity. The **T-R-I-C**-k to remember these characteristics is the **T**oxicity, **R**eactivity, **I**gnitability, and **C**orrosivity mnemonic (T-R-I-C)! A detailed description of each of these characteristics is contained in 22 CCR 66261.20 - 66261.24.

- Toxicity: A waste exhibits the toxicity characteristic if it exceeds specified concentrations of certain metals and organic compounds or stated criteria in several biological tests;

- Reactivity: Reactive wastes are unstable and capable of readily undergoing violent change, often in the presence of water. Few standard test measures exist for this characteristic;

- Ignitability: Ignitable is generally associated with wastes having a flash point of less than 140 degrees Fahrenheit, ignitable compressed gases, and certain oxidizers; and

- Corrosivity: Corrosive wastes exhibit a pH ≤ 2 or ≥ 12.5 or corrode steel at a specified rate.

The logic diagrams presented in Appendix 2B (Worksheets to Identify Hazardous Waste) can be used to determine whether a particular waste is characteristically hazardous. Note that sampling and analysis of wastes is not required if there is sufficient knowledge of the materials or processes used in the generation of the waste. However, when it is apparent that a detailed analysis of the chemical and physical characteristics of a waste is required, the "Sampling and Analytical Considerations" shown in Appendix 2C may be helpful.

What Are Extremely Hazardous Wastes and Special Wastes?

To paraphrase a quote from Animal Farm by George Orwell, "While all hazardous wastes are created equally, some are created "more equal" than others!" Specifically, certain hazardous wastes are considered "extremely hazardous" wastes because of their acute toxicity or under certain conditions, their water reactivity. More restrictive manifesting and disposal requirements apply for these wastes. Other wastes qualify for disposal in a landfill which may not necessarily meet the construction standards imposed upon hazardous waste landfills. This type of waste is called a "special waste".

A description and summary of requirements that apply to "extremely hazardous and "special wastes" are provided in Section 5.8.

Hazardous Waste Identification Model

Now that the two basic classifications of hazardous waste have been described ("listed" and "characteristic") and it is clear that the generator has a regulatory responsibility to determine whether the waste it generates is hazardous, a process model for identifying hazardous wastes is needed.

Review the logic diagram provided in Figure 2.1 for a systematic approach to hazardous waste identification. Then, read through the next six steps to complete the process. To simplify the model, variances, exclusions, and similar exceptions to waste determinations are not included. Guidance relative to some of these issues is presented in other areas of this document. For further clarification, work with the Regional Environmental Health and Safety (EH&S) department.

Hazardous Waste Identification Step 1

Start the hazardous waste identification process by identifying waste generating departments. This may be accomplished by conducting a facility tour, interviewing area managers, and conducting a records review (purchasing records/ Material Safety Data Sheets/ Hazard Communication Plans/ hazardous waste manifests/ biennial EPA hazardous waste reports). Typical Waste generating departments at Kaiser Permanente may include laboratories, pharmacies, Engineering, Construction Service, and radiology.

Hazardous Waste Identification Step 2

Next, observe waste generating processes within each department or area and gain an understanding of the "goes-ins" and the "goes-outs"; a process diagram complete with material balance may be helpful in this step. The "goes-outs" are the products of interest - these are the wastes.

Hazardous Waste Identification Step 3

Once the waste is identified, determine if it is listed or is a mixture of a listed waste and a non-hazardous waste.

For mixtures of a listed waste and a non-hazardous waste, if the hazardous portion of the waste is listed in the regulations solely because it is ignitable, corrosive, or reactive, **AND** the resultant mixture no longer demonstrates any of these characteristics, the mixture might not be considered a hazardous waste (Note: wastes that are listed solely because they are characteristic will have an

"(I)", "(R)", or "(C)" following their name in 22 CCR 66261.31 et.seq.). An example of a waste listed solely because it is ignitable is acetone (U002).

For mixtures of a characteristic waste and a non-hazardous waste, go to Step 4.

Hazardous Waste Identification Step 4

Determine if the waste exhibits a characteristic. As described earlier, the logic diagrams in Appendix 2B can be used to help determine whether a particular waste is characteristically hazardous. If sampling and analysis is required, the Waste Analysis Worksheet, in Appendix 2C, may be helpful in devising a strategy that minimizes analytical cost but ensures proper identification of the waste.

Hazardous Waste Identification Step 5

Evaluate if the waste meets the criteria for being "extremely hazardous" or alternatively, if it may qualify for relaxed management requirements by obtaining approval as a "special waste".

Hazardous Waste Identification Step 6

Once you have made your determination, keep records to demonstrate that your actions have met regulatory requirements. (NOTE: Hazardous waste generators are required to keep records of any test results, waste analyses, or other determinations for at least three years from the date that the waste was last sent off-site to a treatment, storage, or disposal facility. Establish a system to demonstrate compliance with this requirement!).

At this point, you should know what wastes your facility generates, and for each waste, have arrived at one of three conclusions:

- Your waste is not a hazardous waste
- Your waste is a hazardous waste
- You aren't sure

If you are uncertain about a waste determination, please ask the Regional EH&S department for assistance! To get you started, a database of common wastestream determinations is included in Appendix 2D.

Summary of Chapter 2

In summary, whether a waste is considered hazardous or not primarily depends on if it is *"listed"* or demonstrates any one or more so-called *"characteristics"*.

Listed Hazardous Wastes	Characteristic Hazardous Wastes
K-listed	**T**oxicity
F-listed	**R**eactivity
P-listed	**I**gnitability
U-listed	**C**orrosivity

Hazardous waste generators are required by law to make this determination. Once hazardous waste determinations are made, your job is just beginning! The next step is to verify compliance with the regulatory requirements described throughout the remainder of this document.

Chapter 3. Hazardous Waste Exclusions and Recycling Exemptions

Some materials are expressly excluded from the definition of "hazardous waste." Other materials have relaxed or less restrictive compliance requirements associated with them. This section provides a summary of hazardous waste exclusions and special requirements which may be applicable to Kaiser Permanente operations in California. Reviewing this material prior to Chapter 5 ("Managing Hazardous Waste On-Site") will facilitate understanding of what requirements are applicable to what wastestreams.

Materials which are not considered hazardous waste:

The following materials are not considered hazardous waste and are therefore not subject to hazardous waste generator requirements.

- Samples of waste which are collected for the sole purpose of testing to determine characteristics or composition.

- Chlorofluorocarbons that are removed from cooling systems and are reclaimed for reuse. (1)

- Materials which are not reclaimed prior to being used or reused:
  - as an ingredient in an industrial process;
  - as a safe and effective substitute for commercial products, or;
  - as a substitute for raw material feedstock in the original processes from which it was generated. (1)

- A material which would not be classified as a federal hazardous waste and is recycled and used at the site where the material was generated. (1)

- A material which is a "product" and has been processed from a hazardous waste and:
  1. Does not contain constituents other than those for which the material is being recycled which renders it hazardous, and;
  3. The product is used, or distributed or sold for use, in a manner for which the product is commonly used. (1)

- A fuel which is removed from a fuel tank, is either contaminated with water or by nonhazardous debris of not more than 2% by weight, and is transferred to, and processed into a fuel. (1)

(2) In order for the recyclable materials described above to be excluded from classification as a waste:

4. Containers or tanks containing the materials must be labeled, marked, and placarded in accordance with generator requirements but use the words "Excluded Recyclable Material" instead of "Hazardous Waste."
5. The business location must maintain a business plan meeting the requirements of section 25504 of the health and safety code (including emergency response plans).
6. The material shall be stored and handled in accordance with all local ordinances and codes.

Special Rules for Certain Recyclable Materials

All other recyclable materials are subject to applicable requirements for hazardous waste generators, except as specified below:

- Surplus Material: "Surplus Material" is raw material or commercial product obtained by a person who intended to use or sell it, but who no longer needs it, and who transfers ownership of it to another person for use in a manner for which the material is commonly used. Recycled surplus material is not subject to regulation as a hazardous waste.

- Scrap metal: "Scrap Metal" includes manufactured, solid metal objects and products as well as metal workings (cuttings, shavings, etc.) and solid metal residues of metal production. Recycled scrap metal is not subject to regulation as a hazardous waste.

- Used Oil Filters: Used oil filters which are drained free of flowing liquid and transferred off-site for the purpose of metal reclamation are not regulated as hazardous waste.

- Waste Elemental Mercury:
  Up to 10 lbs of which is a non-RCRA hazardous waste, may be stored on-site without a storage permit. All other applicable hazardous waste requirements apply.

- Spent Lead-Acid Storage Batteries:
  A person who generates or stores less than 10 lead-acid storage batteries per year, and who transfers or intends to transfer them to a battery recycler or storage facility is exempt from hazardous waste generator requirements with the exception of manifesting these wastes.

- Fluorescent Light Ballasts which contain PCBs:
  Up to two 55 gallon drums of fluorescent light ballasts which contain PCBs may be transported off-site at any one time without regard to hazardous waste generator requirements with the exception of manifesting.

- Fluorescent Light Tubes:
  If the waste is not regulated as federal hazardous waste (i.e., waste passes the federal Toxicity Characteristic Leaching Procedure (TCLP) for mercury or the generator facility produces less than 100 kg of hazardous waste per month), the generator may dispose up to 25 tubes at any one time in a day. If more than 25 tubes are to be disposed at any one time in a day, the tubes must be managed as a hazardous waste.

- Used Oil: Waste lubricating oil is covered by the requirements for hazardous waste handling with the exception that the hauler may complete both the generator's and the haulers sections of the manifest using the hauler's name and EPA Identification Number. *Note: Used oil which passes certain purity requirements may be treated as a non-hazardous waste.*

Recordkeeping / Reporting

Any person who claims an exclusion or exemption must maintain adequate records to demonstrate that there is a known market or disposition for the material and that the requirements of the exemption/exclusion are met.

Chapter 4. Obtaining an EPA Identification Number

What Is An EPA Identification Number and Who Needs One?

The Environmental Protection Agency (EPA) identification number is a twelve-character number used by EPA and the states as part of a national data base on hazardous waste activities. In California, no generator may treat, store, dispose, transport, or offer for transportation, hazardous waste without an identification number.

How Many Identification Numbers Should a Facility Have?

There should be one hazardous waste identification number for all processes and areas which are under the control of the same owner/operator and are on "contiguous" properties. For example, if Kaiser Permanente owns two adjacent parcels of land, each of which has a building from which hazardous waste is generated, both parcels are considered one "facility", and therefore should have one EPA identification number.

Facilities that generate more than 100 kg per calendar month of RCRA hazardous haste (or 1 kg of acutely hazardous waste and any amount of non-RCRA hazardous waste) will receive a federal identification number. The prefix for this number is "CAD", "CA" or "CAT." Facilities that generate only non-RCRA hazardous waste and/or those which generate under 100 kilograms per calendar month of a RCRA hazardous waste, will receive a state identification number. The prefix for this number is "CAL".

How Does a Facility Obtain an EPA Identification Number?

Call or write The Department of Toxic Substances Control at (916) 324-1781 or 1-800-618-6942 and ask for a copy of EPA Form 8700-12, "Notification Of Hazardous Waste Activity." You will be sent a booklet containing the form and instructions for filling it out. Appendix 4A provides a sample copy of a completed identification form to show you the kind of information required.

Fill in the form with the same kinds of information shown in the Appendix; the information covers your business site and your hazardous wastes.

To complete Item IX of the form, you need to identify your hazardous waste by federal and/or state waste codes. Note that federal hazardous waste codes can be found in 40 CFR 261, Subparts C and D. State hazardous waste codes can be found on the back of California's hazardous waste manifest (see Chapter 7) or Appendix XII of 22 CCR 261.126.

Make sure your form is filled out completely and correctly and sign the certification in Item X. Facilities that generate more than 100 kg per calendar month of RCRA hazardous waste submit their form to the US EPA Regional Office. Facilities that generate California-only hazardous waste or less than 100 kg of RCRA hazardous waste in any calendar month, submit their form to the DTSC. Identification numbers are generally received within eight weeks of request. Use this number on all hazardous waste shipping papers and other hazardous waste documentation where required.

Chapter 5. Managing Hazardous Waste On-Site

Once it has been determined that the facility generates a hazardous waste, a number of complicated and rigorously enforced on-site storage and handling requirements apply.

This Chapter will describe these on-site handling requirements for hazardous wastes, including the following elements:

Section 5.1: Satellite accumulation area requirements
Section 5.2: Accumulation area requirements
Section 5.3: Container and tank management
Section 5.4: Hazardous waste self-inspections
Section 5.5: Preparedness and prevention responsibilities
Section 5.6: Contingency planning
Section 5.7: Personnel training requirements
Section 5.8: Special Wastes and Extremely Hazardous Wastes

Introduction

The central issue driving hazardous waste on-site management requirements is short term storage.

Due to the concern about hazardous wastes being stored improperly and sometimes abandoned on-site, there are very strict rules about how much waste generators can accumulate, where it can be accumulated, and for how long. For example, because generators accumulate hazardous waste on-site, the DTSC mandates compliance with the following requirements:

- Container and tank management standards

- Inspection requirements
- Personnel training
- Preparedness and Prevention
- Contingency planning

Since accumulation of hazardous waste by generators prompts so many of the other management requirements, it is appropriate to begin this chapter by reviewing the definition of accumulation:

Accumulation:	*The short term storage of hazardous waste by generators. Accumulation may either occur at the point of generation or in a designated, remote accumulation area. Point of generation accumulation is commonly called "satellite accumulation." Remote accumulation areas will simply be referred to as "accumulation areas."*

The main differences between a satellite accumulation point and an accumulation area are the volume and the length of time wastes may be accumulated. At a satellite accumulation point, up to 55 gallons of hazardous waste may be accumulated up to one year. At an accumulation area, larger volumes of waste may be accumulated in tanks or containers for a fixed period of time.

Long term storage of hazardous waste requires a special permit and incurs a host of specific design and operational requirements which are more stringent than those governing accumulation areas. Permitted storage areas are not needed for the types and quantities of wastes generated at Kaiser Permanente.

Throughout the remainder of this chapter "accumulation" will be used to refer to short-term, non-permitted storage. Long term storage (or "storage") requirements are outside the scope of this work and will not be further discussed.

Section 5.1 Satellite Accumulation Areas

Satellite accumulation allows generators to store up to 55 gallons of hazardous waste, 1-quart of acutely hazardous waste (i.e., the P-list), or 1 quart of extremely hazardous waste in containers at or near the point of generation, provided:

Satellite Accumulation Requirements

- The area is under the control of the operator generating the waste.
- The containers are in good condition.
- The containers are compatible with the waste.
- The containers are kept closed except when adding or removing waste.
- The containers are labeled or marked with the words "Hazardous Waste" and the following information:
  - Composition and physical state of the waste
  - Statement or statements which call attention to the particular hazardous properties of the waste (e.g., "Flammable," "Corrosive")
  - Name and address of person producing the waste
  - Initial date of waste accumulation
- The total amount of waste at each satellite accumulation point does not exceed 55-gallons (or the 1-quart accumulation limit).
- The waste is not held onsite for more than one year from the initial date of accumulation, or 90 days from the date the quantity limitations described above are reached, whichever occurs first.
- The initial date of waste accumulation is clearly marked and visible for inspection on each container used for accumulation of hazardous waste.

Once the 55-gallon (or 1-quart of acutely or extremely hazardous waste) limit is exceeded at the satellite accumulation point, the container holding the excess waste must be marked with the date the excess began accumulating. This container must then be moved within 3-days to an accumulation area or to a permitted treatment, storage, or disposal facility.

Examples of how to comply with satellite accumulation area container labeling requirements are shown in Figures 5.1A & 5.1B. Marking directly on the container with indelible ink would also be appropriate.

[See following pages for Figures 5.1A and 5.1B Container Labels]

Figure 5.1A Container Label

Describe contents so that it is clear which waste is supposed to be placed here.

Figure 5.1B Container Label

Once the 55 gallon limit is exceeded, the container holding the excess waste must be marked with the date the excess began accumulating.

Section 5.2 Accumulation Areas - A Summary of Requirements

As described in Section 5.1, satellite accumulation rules allow generators to store up to 55 gallons of hazardous waste or 1-quart of acutely or extremely hazardous waste, in containers at or near the point of generation. This section describes requirements relative to accumulating hazardous waste on-site in a designated accumulation area.

One of the more limiting restrictions that apply to accumulation areas is the length of time a generator may accumulate hazardous waste on site. In California, a facility may accumulate hazardous waste on-site for 90 days or less without a permit. For generators of less than 100 kg of hazardous waste during any calendar month (or one kilogram of extremely hazardous waste), the 90 day period begins on the date the generator has exceeded any of the thresholds described above. For generators of more than 100 kg of hazardous waste during any calendar month, the 90 day period begins on the first date on which any amount of hazardous waste begins to accumulate during that month.

Other requirements associated with accumulation areas are outlined below.

Requirements for Accumulating Hazardous Waste

- Comply with container and tank management requirements including formal inspections (Sections 5.3 and 5.4).
- Observe preparedness and prevention requirements (Section 5.5).
- Comply with Contingency Planning requirements (Section 5.6).
- Observe personnel training requirements (Section 5.7).
- Label each container and tank used for on-site accumulation of hazardous waste with the words "Hazardous Waste" and the following information (see Figure 5.2):
  - Composition and physical state of the waste
  - Statement or statements which call attention to the particular hazardous properties of the waste
  - Name and address of the person producing the waste
- Clearly mark and make visible for inspection the date upon which each period of accumulation begins.
- Close the facility in a manner which minimizes the need for further maintenance and controls, minimizes, or eliminates post-closure escape or hazardous waste.

Note: A generator who accumulates more than 5,000 U.S. gallons or 95,000 pounds of hazardous waste is subject to stringent hazardous waste permit requirements.

Figure 5.2 Sample Hazardous Waste Label

Section 5.3 Container & Tank Management Requirements

Generators who place hazardous waste in on-site accumulation areas must comply with a host of requirements for container and tank management. *A description of container and tank inspection requirements, including sample inspection forms, is provided in Section 5.4.*

Container Management Requirements

A container is any device that is portable and in which a material can be stored, handled, treated, transported, recycled, or disposed. Containers accumulating hazardous waste are managed in accordance with the following standards:

- ✓ While being accumulated on-site, each container is labeled or marked with the words "Hazardous Waste" and the date upon which each period of accumulation begins is clearly marked and visible for inspection.
- ✓ Containers are in good condition and non-leaking.
- ✓ Containers are compatible with wastes being stored.
- ✓ Containers are kept closed except when adding or removing waste.
- ✓ Containers are managed to avoid rupture.
- ✓ Incompatible wastes are segregated by a berm, dike, wall or other device (see Appendix 5A for a description of incompatible).
- ✓ Incompatible wastes are not placed in the same container.
- ✓ Ignitable or reactive wastes are kept at least 50 feet from the property line.
- ✓ Areas where containers are stored are inspected at least weekly (Inspection requirements and forms are provided in Section 5.4).

Tank Management Requirements

A tank is a stationary receptacle, designed to contain an accumulation of hazardous waste and is constructed primarily of non-earthen materials. Tanks accumulating hazardous wastes are managed in accordance with the following standards:

- ✓ Tanks are labeled or marked clearly with the words, "Hazardous Waste" and the date upon which each period of accumulation begins is clearly marked and visible for inspection. Note that the accumulation start date for tanks is the date that the first amount of waste is added to the tank.

Additionally;

- ✓ Tanks installed before July 1986 which do not yet have secondary containment meeting the requirements of 22 CFR 66265.193 (outlined later) must undergo an integrity assessment performed by an independent, qualified, professional engineer.

- ✓ Tanks installed after July 1986 must conform to specific design and installation standards. This includes the owner or operator obtaining a written assessment reviewed and certified by an independent, qualified, professional engineer, attesting that the system has sufficient structural integrity and is acceptable for the transferring, storing, or treating of hazardous waste.

- ✓ Secondary containment systems must be designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water or surface water. They must also be capable of detecting and collecting releases until the material is removed. These requirements apply for all new (post 7/86) tank systems prior to their being put into service. They also apply to existing systems on a phased-in compliance schedule pursuant to 22 CCR 66265.193.

- ✓ The owner or operator must use appropriate controls and practices (e.g. level sensing devices, high level alarms, sufficient freeboard) to prevent spills and overflows and ensure the system is operated in a fashion that does not threaten human health or the environment.

- ✓ Ignitable or reactive waste must not be placed in a tank system unless the system is used solely for emergencies, the waste is stored or treated in such a way that it is protected from incompatible materials, or the waste no longer meets the definition of ignitable or reactive (due to mixing, treating, etc.) immediately before or after it is placed in the tank.

- ✓ The system must be inspected at least once each operating day.

- ✓ At closure of a tank system, all waste residues, contaminated containment system components, contaminated soils, and structures and equipment with waste shall be removed or decontaminated in accordance with Department approved closure plan.

Section 5.4 Hazardous Waste Self Inspections

General Requirements

Hazardous waste tank areas *must be inspected daily* and container accumulation areas *must be inspected weekly*. While formal inspection of satellite accumulation areas is not required, it is nevertheless a good management practice.

The purpose of these inspections is to identify malfunctions and deteriorations, operator errors, and spills or leaks which may be causing, or may lead to a release of hazardous waste to the environment or a threat to human health.

Hazardous waste safety and emergency equipment, monitoring equipment, and security devices that are important to preventing, detecting, or responding to environmental or human health hazards must also be inspected. The frequency of these inspections is left to the generator but should be based on the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected between inspections.

Any deterioration or malfunction which the inspection reveals must be remedied on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

Recordkeeping

A written inspection schedule must be established and maintained at the facility. Additionally, inspections must be recorded on an inspection log or similar form and maintained for three years from the date of inspection. These records MUST include the date and time of the inspection, the name of the inspector, an annotation of the observations made, and the date and nature of any repairs or other remedial actions.

One example of a weekly accumulation area inspection log is shown in Figure 5.4.1 "Weekly Accumulation Inspection Log." An example of a daily tank inspection log is shown in Figure 5.4.2 "Daily Tank Accumulation Inspection Log".

Figure 5.4.1 Weekly Container Accumulation Area Inspection Log

Location: _____ Organization: _____

Inspected By: _____ Date: _____ Time: _____

Signature of Inspector: _____ Supervisor Review: _____

Hazardous Waste Containers			
Container Condition & Marking		Yes	No
	Are all containers closed?		
	Are all containers in good condition?		
	Is there no evidence of container leaks or spills?		
	Are grounding wires attached to flammable waste drums?		
	Are labels clearly visible & legible?		
	Are labels marked with the words "hazardous waste," an accumulation start date, the name and address of generator, the hazardous properties of the waste, and waste composition and physical state?		
	Are all drums less than 90 days old? (See Note 1 below)		
If any of these questions were marked no, please comment:			
Describe actions taken to correct situation (See Note 2 below):			
Accumulation Point			
Is the accumulation point free of structural deterioration?			
Is adequate aisle space present between drums to allow unobstructed movement for emergency response?			
Are incompatible wastes separated by means of a dike, berm, wall, or other device?			
Are containers holding ignitable or reactive waste at least 50' from the			

facility's property line?		
Are drip pans, where needed, in place and clean?		
If any of these questions were marked no, please comment:		
Describe actions taken to correct situation (see Note 2 below):		

Emergency Response Equipment			
Telephone	Is it easily accessible in case of emergency?		
	Is it in working order?		
	Is the telephone number of the emergency coordinator posted, as well as the location of nearby fire extinguishers and spill control equipment?		
Spill Control	Is an empty salvage drum near by?		
	Are unused absorbent material or booms available?		
	Is all required personal protective equipment nearby? ☐Gloves ☐Boots ☐Apron ☐Goggles ☐Respirator		
Fire Protection	Is a fire extinguisher or extinguisher system readily accessible?		
	Is the fire extinguisher fully charged?		
	Is the fire extinguisher seal intact?		
If any of these questions were marked no, please comment:			
Describe actions taken to correct situation (see Note 2 below):			

Note 1: Coordinate with the person responsible for off-site shipments to ensure adequate space is available in the area and accumulation time requirements are met.

Note 2: Include the date and nature of any repairs or other remedial actions.

Figure 5.4.1 (cont.) Weekly Container Accumulation Area Inspection Log Instructions

General: There is one hazardous waste container accumulation point at the XYZ facility. This area must be inspected weekly in accordance with the attached checklist. If an item is found to be okay, a check mark should be placed in the appropriate column on the inspection checklist. If a discrepancy is found, the nature of the non-conformance should be noted in the comments section of the checklist and reported immediately to the Safety Officer and the affected Department Manager. Whenever possible, the inspector shall remain in the area until the corrective action has been completed. Completed corrective actions witnessed by the inspector will be signed and dated by the inspector in the comments section of the checksheet. Following the inspection, the inspector shall sign and write the date and time of the inspection on the checklist.

Instructions:

1. Container Condition & Marking: Visually inspect each container, making sure it is closed and in good condition (not bulging, corroded, significantly dented). Ensure grounding wires are attached to flammable waste drums. Observe container and the floor for signs of leakage or spills. Verify that each container has a hazardous waste label with an accumulation start date and the contents of the drum clearly described. Ensure all labels are clearly visible and legible.

2. Accumulation Point Conditions: Ensure the accumulation point floor is free of cracks and holes. Walk between containers to ensure there is adequate aisle space to allow unobstructed movement for emergency response. Ensure drip pans, where needed, are in place and clean.

3. Emergency Response Equipment: While this equipment is not required to be checked weekly, it is sound management practice to inspect this equipment while performing the weekly accumulation point rounds. Check to ensure that spill control and fire protection equipment as described in the facility's contingency plan is in place and good condition.. Verify that a nearby telephone is in place and in working condition and that posted by the phone is the name and telephone number of the emergency coordinator, the fire department, and the location of nearby fire extinguishers and spill control equipment.

Figure 5.4.2 Daily Tank Accumulation Area Inspection Log

Location: _____ Organization: _____

Inspected By: _____ Date: _____ Time: _____

Signature of Inspector: _____ Supervisor Review: _____

Hazardous Waste Containers			
		Yes	No
Operational Requirements	Do the foundation, structural support, seams, and connections appear sturdy and in good condition?		
	Is the secondary containment system capable of detecting and collecting releases?		
	Is piping visible for inspection, free of leaks / corrosion?		
	Is the overfill prevention control (e.g., level sensing device, high level alarm, feed cut-off) operating satisfactorily?		
	Is the general area free of evidence indicating tank leaks or spills?		
	Is tank label clearly visible and legible?		
	Is tank labeled with the words "hazardous waste," an accumulating start date, the name & address of generator, the hazardous properties of the waste, and the waste composition and physical state?		
	Is appropriate spill control equipment available and accessible?		
If any of these questions were marked no, please comment:			
Describe actions taken to correct situation (See Note 2 below):			

Section 5.5 Preparedness and Prevention

Hazardous waste generators must operate and maintain their facility to minimize the possibility of fire, explosion, or release of hazardous waste, which could threaten human health or the environment. Specific requirements relative to these efforts are described in the Department's "Preparedness and Prevention" standards. These standards require specific preventative or proactive measures for protecting environmental, health, and safety. In section 5.6, "Contingency Planning", specific "reactive" measures are described.

Facilities must be equipped with the following equipment:

- ✓ An alarm system or internal communications system for providing immediate emergency instruction to facility personnel;
- ✓ A device for summoning emergency assistance (such as a telephone or two-way radio), immediately available at the scene of operations;
- ✓ Portable fire extinguishers and fire control equipment, spill control equipment, and decontamination equipment, if necessary; and
- ✓ Water at adequate volume and pressure for fire fighting purposes.

Additionally:

- ✓ Facilities must test and maintain the equipment described above on a frequent enough schedule to assure its proper operation;
- ✓ Personnel involved in hazardous waste handling operations must have immediate access to alarms or internal communication devices;
- ✓ Adequate aisle space must be maintained to allow the unobstructed movement of personnel, fire protection equipment, and spill control equipment; and
- ✓ Arrangements with local authorities must be made for the type and amount of service expected in an emergency. Examples include familiarizing the local police, fire and Office of Emergency Services departments with the layout of the facility, hazardous materials and wastes handled, and evacuation routes in an emergency. Other authorities which may need to be contacted include state and local emergency response teams, spill contractors, and local hospitals. Where State or local authorities decline to enter into such arrangements, the facility must document and keep on record this refusal.

Section 5.6 Contingency Plan

Contingency planning is the process of predetermining responses to chance events. The purpose of such plans is to enable responses consistent with overall goals and strategies in preference to responses left purely to chance. Specifically, the plan must be designed to minimize hazards to human health or the environmental from fires, explosions, or any unplanned release of hazardous waste to air, soil, or surface water.

NOTE

Implementation of the Contingency Plan is **not required** for incidental releases of hazardous substances that are limited in quantity and pose no emergency or significant threat to the safety and health of employees in the immediate vicinity of those assigned to clean them up.

If the hazardous substances in a work area are always stored in small quantities, such as a laboratory which handles amounts in pints or less, and the hazardous substances do not pose a significant safety and health threat at that volume, then the risk of having a release that escalates into an emergency, and therefore requiring implementation of the Contingency Plan, may be minimal.

Contingency Plan Requirements

Hazardous waste generators must have a contingency plan for their facility. If the facility already has some other emergency plan or procedures, such as the California Hazardous Materials Business Plan, it need only be amended to incorporate hazardous waste management provisions that are sufficient to comply with requirements of this section.

The provisions of the contingency plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste which could threaten human health or the environment. A copy of the plan and all revisions must be:

- Maintained at the facility; and
- Submitted to all local police and fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.

Content of the Contingency Plan

The contingency plan must describe actions facility personnel take to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden releases of hazardous waste constituents to air, soil, or surface water. Specific contingency plan program elements are described below.

☐ Emergency Assistance Agreements

A description of arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams (as appropriate) to coordinate emergency services. The plan should document the capabilities of each organization as well as present some evidence (such as a signed letter) that the organization has agreed to assist.

Example: "The Stafford Fire Department has been provided a copy of the contingency plan and has been familiarized with the layout of the facility and general operating conditions. They are expected to provide the following services:

- Rescue and emergency services
- Primary fire fighting and spill response services
- Primary emergency authority, to be coordinated with the State Police on the scene.
- Attachment Eight to the Contingency Plan includes a letter of understanding between this facility and the Stafford Fire Department relative to expected services during an emergency".

Note: The plan must include the current telephone numbers of the State Office of Emergency Services.

☐ Emergency Coordinator

The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as "Emergency coordinator". Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility.

Example: "Primary Emergency Coordinator:

Name: Dave Barnes
Office Telephone: (510) 684-5881 Ext. 205

Home Address: 6 Avery St
Glenhurst, CA 94613
Home Telephone (510) 987-4562

Assistant Emergency Coordinator:

Name: John Maxwell
Office Telephone: (510) 684-5881 Ext. 212

Home Address: 9 Jackson Dr
Summitt, CA 94320
Home Telephone (510) 947-9812"

Note that at least one of these coordinators must be on call or at the facility at all times and all coordinators must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities involving hazardous waste at the facility, the location and characteristic of waste handled, the location of all applicable records at the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

☐ Emergency Equipment

The plan must include a list of all required emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarms systems, and decontamination equipment). This list must be kept up to date and include the location and a physical description of each item on the listed, and a brief outline of its capabilities.

One example of how this information might be provided is shown below in Figure 5.5:

Figure 5.5 Safety and Emergency Equipment

Items	Physical Description	Capability	Location
Catch Basin Covers	Rubber, form fitting	Spill Containment	Shipping & Receiving
Absorbent Material	Vermiculite, multi-purpose dry absorbent	Spill Containment & Absorption	See Site Map
Salvage Drums	Plastic, 75 gallon container. Screw top	Over-packing 55 g "leakers"	Accumulation Area
Rubber Boots	Nitrile, steel toe, kneehigh	Foot protection for corrosives & ignitables	Central Storage
Etc.....			

It is the facility's responsibility to evaluate what emergency equipment is necessary to abate emergencies that may be reasonably anticipated to occur at that location. For example, situated near an accumulation area for hazardous waste containers of ignitable waste, the contingency plan may specify a fire extinguisher, overpack drums, spark-proof shovels, bags of granular absorbent, a telephone and an alarm.

☐ Evacuation Plan

The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signals(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous wastes or fires). The plan should also describe who makes the evacuation decision and the decision to re-enter the area or the facility.

☐ Emergency Procedures

The most important part of the contingency plan is a description of the procedures that will be followed for each type of hazardous waste-related emergency situation that may arise on-site. The plan should detail response actions in the event of a release, fire, or explosion in each area with hazardous waste. Emergency procedures should be directed by the emergency coordinator or their designated representative.

Regardless whether the facility has a stand-alone contingency plan or it is incorporated into an already existing document, emergency procedures must include the following:

- ✓ The emergency coordinator's responsibility to identify the character, source, amount, and extent of any released materials and to immediately assess possible hazards to human health or the environment.
- ✓ The mechanisms for notifying facility personnel and where appropriate, state or local agencies, of an imminent or actual emergency situation.
- ✓ Measures taken to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility.
- ✓ A description of actions necessary to prevent or minimize hazards from operations that may have been stopped in response to the emergency.
- ✓ Provisions for containing and disposing of recovered waste.
- ✓ External reporting requirements.

Amendment of Contingency Plan

The contingency plan shall be reviewed and amended whenever:

- ✓ The plan fails in an emergency;
- ✓ The list of emergency coordinators changes;
- ✓ The list of emergency equipment changes;
- ✓ Applicable regulations are revised; or,
- ✓ The facility changes in its construction, operation, or other circumstances in a way that materially increases the potential for releases of hazardous waste or fines, or changes the response necessary in an emergency.

Section 5.7 Hazardous Waste Management Training

The purpose of hazardous waste management training is to ensure that facility personnel are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies. Since Hazard Communication or similar training is generally not of sufficient detail to assure management that their personnel are "thoroughly familiar" with waste handling and emergency procedures, hazardous waste specific training must be implemented.

Who Must Be Trained and How Often?

At Kaiser Permanente, personnel who require training may include (but are not limited to) those persons who perform any of the following tasks:

- Decide which wastes are hazardous waste
- Add hazardous waste into accumulation containers or tanks
- Treat hazardous waste on-site
- Transport hazardous waste internal to the facility
- Offer hazardous waste for off-site transportation
- Respond to spills, fires, or explosions involving hazardous waste (or are otherwise involved in the facility's contingency plan)
- Complete hazardous waste manifests, annual reports, or exception reports
- Operate or work at accumulation points
- Inspect hazardous waste accumulation points

Training must be completed within six months after assignment to the facility or to a new position at the facility. Until that time, untrained personnel must not perform any tasks involving hazardous waste management unless supervised by trained personnel. Affected facility personnel must also take part in an *annual review* of the entire training program.

How Should Training Be Implemented?

Federal Regulations allow training to be conducted on-the-job or in a classroom environment. While both mechanisms have desirable features, neither is recommended as a stand-alone vehicle

for personnel training for all job classifications and types. It is anticipated that KP hazardous waste generators will elect to incorporate selected aspects of each training delivery mechanism into their personnel training program.

Scope of Mandatory Training Requirements

At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures and to perform their duties in a way that ensures the facility's compliance with the regulations. To this end, an example of topics discussed in a facility's hazardous waste management training program might include:

- Regulation of Hazardous Waste
- Organizational Accountability and Management Systems
- Hazardous Waste Identification
- Accumulation Point Operations
- Preparedness and Prevention
- Emergency Procedures, Equipment, and Systems (Contingency Planning & Response)
- Hazardous Waste Manifest and Land Disposal Restrictions
- Tiered permitting requirements
- Recordkeeping and Reporting
- Enforcement and Liability

To ensure that training is focused on the needs and learning objectives of the audience, consider arranging specific training for specific groups (developing a matrix of job classifications and corresponding training requirements would be helpful). For example, some personnel may only become involved in hazardous waste management when they respond to emergencies. Others, like the facility administrator, should have a basic understanding of hazardous waste requirements and potential enforcement and liability issues. A laboratory manager still has other training needs that are related to hazardous waste identification and accumulation point issues. Each requires training so that they will be able to conduct their responsibilities in a manner which complies with the regulations.

Recordkeeping and Documentation

Hazardous waste generators must maintain the following documents and records at their facility:

- ✓ The job title for each position at the facility related to hazardous waste management, and the name of each employee filling each job;
- ✓ A written job description for each position listed above, which must include the requisite skill, education, or other qualifications, and duties of facility personnel assigned to each position;
- ✓ A written description of the type and amount of both introductory and continuing training that will be give to each person filling a position as listed above
- ✓ Records that document that the required training has been give to, and completed by, facility personnel.

Training records on current personnel must be kept until closure of the facility. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Examples of how these records may be organized and how training might be documented are shown below.

Example One - Organization of Training Records

Employee Job Description and Training Information

Job Title: *Safety Officer*

Job Description: *Serves as primary emergency coordinator. Conducts periodic assessments of the hazardous waste management program. Reports to site administrator on the status of the program.*

Requisite Skill, Education, or Qualifications:

Two year college degree or equivalent. Qualifications: Thorough understanding of hazardous materials management. Completion of OSHA 40 hour training.

Training Required: *See Training Matrix (this would describe both the type and amount of initial and on-going training job description would get).*

While generators are required to include the name of each person filling each affected job title, it is much easier to manage this piece of the program (due to turnover) if the names are kept separately from this training description.

Example Two - Documentation of Training Performed

One way to document the training given is to maintain a hazardous waste training record such as that shown below. Regardless of whether on-the-job or classroom training is given, however, the facility should maintain a written outline of the training which describes learning.objectives and course content.

Hazardous Waste Training Record:

Name of Employee:

Hazardous Waste Management Position:

Type of Training:
Training Session On the Job Training

Date Initial Training Received:
Given By:
Signature of Trainee:

Annual Review Session:

Date:	Trainee Initials:	Instructor Initials:	Comments or Remarks

Section 5.8 Extremely Hazardous Wastes and Special Wastes

There are two specific categories of waste that warrant further discussion: "extremely hazardous wastes" and "special wastes". Extremely hazardous wastes are particularly hazardous by virtue of their toxicity or reactivity with water. Special wastes are specifically identified wastes or wastes that meet certain criteria which allows the waste to be managed or disposed in a manner somewhat less stringent than for hazardous wastes.

Extremely Hazardous Wastes

☐ Any waste or material is extremely hazardous if it:

√ Has an acute oral LD_{50} less than or equal to 50 milligrams per kilogram.

√ Has an acute dermal LD_{50} less than or equal to 43 milligrams per kilogram.

√ Has an acute inhalation LC_{50} less than or equal to 100 parts per million as a gas or vapor.

√ Contains any of the substance listed in section 66261.24(a)(7) at a single or combined concentration equal to or exceeding 0.1 percent by weight. An example of a material on this list found at some Kaiser Permanente laboratories is 4-Dimethylaminozobenzene (DAB).

√ Is water-reactive.

√ May result in death, disabling injury, or serious illness because of the carcinogenicity, high acute or chronic toxicity, bioaccumulation properties, or environmental persistence.

√ Contains a substance listed in 22 CCR 66261.113 at a concentration equal to or exceeding its listed total threshold limit concentration. Examples of materials on this list found at some Kaiser Permanente facilities are lindane, mercury, cadmium and lead compounds.

☐ In addition to hazardous waste requirements described elsewhere, extremely hazardous wastes are subject to the following restrictions:

√ Treatment of extremely hazardous waste is excluded from tiered permitting (Chapter 6).

√ An extremely hazardous disposal permit must be applied for at least 15 days prior to the intended date of disposal.

√ A satellite accumulation area can only hold up to one kilogram of hazardous waste before it must be shipped off-site or relocated to a central accumulation area.

√ For generators of less than 100 kilograms per month of hazardous waste or 1 kilogram per month of extremely hazardous waste, the 90 day central accumulation "time-clock" begins on the first day that 100 kilograms of hazardous waste or 1 kilogram of extremely hazardous waste has accumulated.

Special Wastes

☐ A waste is a "special waste" if it:

√ Is specifically listed as a waste which may be classified by the Department as a special waste. The only waste that appears likely to be generated at a Kaiser Permanente facility which fits into this category is "sand from sandblasting". Other potential special wastes are cited in 22 CCR 66261.120.

√ Meets all of the following criteria:

- It is a solid, a water-based sludge, or a water-based slurry
- It is a hazardous waste only because it exceeds the STLC or TTLC
- No soluble extractable constituent which exceeds the STLC, exceeds the TTLC
- No contaminant may exceed the TTLC levels for extremely hazardous wastes
- It is not reactive, ignitable, corrosive, or toxic by the TCLP procedure
- It is not a RCRA hazardous waste
- It does not contain more than 0.1 percent extremely hazardous waste
- It does not contain more than 1.0 percent of materials with characteristics described in 22 CCR 66261.24 (a)(3), (4), or (5)

☐ The generator of a special waste is subject to all generator requirements with the exception that the special waste may be disposed of at a landfill disposal facility which is not operated under a hazardous waste facility permit. (NOTE: The landfill must operate under requirements specified by the Regional Water Quality Control Board and the facility have been granted a variance to dispose special wastes by the Department).

Appendix 5A "Hazardous Waste Compatability"

As described in Sections 5.1 and 5.3.

1. Containers must be made of or lined with materials that are *compatible* with the hazardous waste stored in them;

2. Containers holding a hazardous waste must be separated from other containers which hold *incompatible* materials or wastes by means of a dike, berm, wall, or other device; AND,

3. *Incompatible* wastes must not be placed in the same container.

What does *compatible* or *incompatible* mean?

In its most basic sense, different materials are compatible if they can co-exist in harmony. Relative to RCRA then, "incompatible" means materials and/or wastes which, when mixed, have harmful (or dis-harmonious!) consequences. Examples of what can go wrong when incompatible materials are mixed are shown below.:

When you mix:	You may get:
Strong acids with bases	Generation of intense heat
Strong oxidizing agents (like bleach) with strong acids	Generation of toxic gases (like chlorine)
Combustible and Flammable materials with oxidizing mineral acids	Fire or intense heat
Alcohols with organic acids	Violent polymerization

EPA has published a list of potentially incompatible wastes, waste components, and materials along with the harmful consequences of mixing those materials together. This list, shown on the next two pages, does not include every possible hazardous chemical reaction, but should be used as a guide in packaging and storing these materials. An example of how to read this table is as follows:

> If you mix a Group 2-A waste with a group 2-B waste, a fire or explosion, or generation of hydrogen gas may occur.

Pay close attention to any waste characterization data you receive on material reactivity and compatibility. In addition, review the MSDS for chemical reactivity and incompatibility information. Ensure all personnel who handle and accumulate hazardous wastes can correctly determine the storage compatibility of the wastes they handle.

Chapter 6. On-site Treatment of Hazardous Waste: The Tiered Permitting Program

Any facility in California that treats, stores, or disposes of hazardous waste must obtain a treatment permit. For permitting that is not federally mandated (see Appendix 6A), the state has implemented a streamlined permitting process called "tiered permitting". The purpose of the tiered permitting program is to impose a reasonable level of regulatory requirements given the magnitude of risk involved.

Specifically, there are three tiers of permits that apply to on-site treatment of hazardous waste in California. These tiers, established by Assembly Bill 1772, the "Wright-Polanco-Lempert Hazardous Waste Treatment Permit Reform Act of 1992", are:

- Conditional Exemption {which includes, Conditional Exemption-Small Quantity Treatment (CESQT) and Conditional Exemption-Specified Wastestreams (CESW)}
- Conditional Authorization (CA)
- Permit by Rule (PBR)

☐ Conditionally Exempt - Small Quantity Treatment (CESQT) category is approved for treatment technologies in volumes less than 55 gallon or 500 pounds per month (NOTE: This limit applies to the entire facility). A higher level of permitting or additional permitting disqualifies the generator from this category.

☐ Conditionally Exempt - Specified Waste Stream (CESW) category applies to specified technologies used by certain industries.

☐ Conditionally Authorized (CA) category applies to generally approved technologies in volumes less than 5,000 gallons or 45,000 pounds per month (NOTE: This limit applies to each treatment unit). Certain aqueous waste streams have no limit.

☐ Permit by Rule category applies to generally approved technologies with no volume limit.

The following two sections provide a summary of criteria applicable to treatment under the tiered permitting program and regulatory requirements for each tier. A process for determining if a facility is subject to hazardous waste treatment permitting is then described. Before proceeding, note that recyclable material which is (1) managed in accordance with all applicable requirements for generators of hazardous waste, (2) recycled and used at the same facility at which the material was generated, <u>and</u> (3) recycled within 90 days of its generation is not subject to tiered permitting. An example of this type of operation is the Berkeley Regional Lab distillation unit, which recycles spent xylene and alcohol from waste produced on-site.

Tiered Permitting Applicability

In order to qualify for the tiered permitting program, a treatment operation must meet the following criteria:

- ☐ Treatment is exempt from RCRA permit requirements.
- ☐ Waste is generated on the site where being treated.
- ☐ Waste is not reactive or extremely hazardous.
- ☐ Treatment is carried out in tanks or containers.
- ☐ All air emissions from the treatment process comply with applicable federal, state, and local air discharge requirements.
- ☐ Treatment does not result in a release of hazardous waste into the environment as a means of disposal.
- ☐ And, for "conditionally exempt" units only, the generator is not required to obtain a hazardous waste permit for any other activity at the facility.

Determination of the proper permitting tier is based on factors such as the type of hazardous waste treated, the treatment technology used, the monthly volume treated, and in some cases, the concentration of the waste constituent. Appendix 6B lists these parameters for wastestreams that may be present in the Healthcare setting.

Summary of Regulatory Requirements

The purpose of the tiered permitting program is to impose a reasonable level of regulatory requirements given the magnitude of risk involved. Subsequently, there are increasing regulatory requirements as a facility moves from the conditionally exempt through the permit-by-rule tiers. This section summarizes regulatory requirements for each tier.

Conditionally Exempt Small Quantity Treatment (CESQT) and Conditionally Exempt Specified Waste Stream (CESW)	Conditionally Authorized Facility	Permit-By-Rule
Meet all applicable hazardous waste generator requirements (described throughout this text).	Observe all applicable requirements for CESQT and CESW.	Observe all applicable requirements for CESQT, CESW, and Conditionally Authorized categories.
Properly manage treatment residuals (i.e., the waste that may result from the treatment process must be handled in accordance with state and local law).	Prepare and submit an annual waste minimization certification.	Meet financial assurance requirements for closure and for bodily injury & property damage caused by sudden accidental occurrence.
Prepare and maintain written operating instructions and a record of the dates, concentrations, amounts, and types of waste treated (1).	Conduct an Environmental Assessment (phase one) pursuant to Health & Safety Code 25200.14. Due no later than 1 year after grant to operate.	Maintain a written closure plan.
Prepare and maintain a written inspection schedule and log of inspections conducted.	Maintain container storage area containment standards.	Comply with corrective action requirements from environmental investigations, 22 CCR 67450.7(a).
Remove or decontaminate all waste residues upon closure.		Permanently mark the exterior of each FTU with name of owner/operator, facility I.D. #, and an individual serial number.
Submit annual notification forms and fees.		Maintain waste analysis plan pursuant 66265.13 (b).

(1) Written operating instructions should include:
1. How to operate the treatment unit;
2. How to recognize potential and actual process upsets and respond to them;
3. How to determine if the treatment is efficacious; and
4. How to address the residuals of waste treatment.

Tiered Permitting Evaluation Process

Now that you have an understanding of the regulatory requirements that apply to tiered permitting, as well as the criteria applicable to treatment under each tier, a process by which your facility can determine whether it is subject to hazardous waste treatment permitting is outlined below. Since treatment of hazardous waste at an unpermitted facility is a serious violation of state (and possibly federal) law, the reader should carefully review relevant regulatory requirements before proceeding with any treatment operation.

Step One: Is treatment being conducted?

That is, is the facility using any method, technique, or process, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous or less hazardous, safe to transport, store or dispose of, or amenable for recovery or storage, or reduction in volume?

Step Two: Is the material being treated as a hazardous waste?

Chapter 2 provides a definition for hazardous waste. It is important at this step to determine whether a RCRA waste is involved and whether the waste(s) is extremely hazardous or reactive. Treatment of extremely hazardous or reactive wastes does not qualify for tiered permitting and treatment of RCRA waste can only be performed if the process is exempt from RCRA permitting. See Appendix 6A for a description of processes exempt from RCRA permitting.

Step Three: Is the "hazardous waste" recycled on-site?

As long as materials that would otherwise be hazardous wastes are reused on-site, they are not subject to permitting of their treatment prior to reuse.

Step Four: Is the hazardous waste type and the treatment method eligible for treatment? If so, which tier applies to each treatment unit?

Refer to Appendix 6B for a summary of the types of wastes that are generally associated with the Healthcare industry as well as the allowable treatment methods.

Step Five: Prepare and submit the proper notification forms and fees to the DTSC for each tier.

This must be done no later than 60 days prior to beginning the first treatment. Observe the applicable operating requirements.

Step Six: Submit annual on-site hazardous waste treatment notification forms and fees. Maintain required documentation.

The job's not done 'til the paperwork's finished. Who's the keeper of the keys at your facility?

Chapter 7. Moving Waste Off-Site

This chapter provides the generator with information needed to properly prepare, package, and ship wastes off-site in compliance with hazardous waste and Department of Transportation (DOT) regulations.

Specific issues that will be addressed include:

7.1 Preparing the Hazardous Waste Manifest
7.2 Land Disposal Restriction Requirements
7.3 Department of Transportation Requirements
7.4 Biennial Reporting

Section 7.1 The Hazardous Waste Manifest

The hazardous waste manifest is a multi-copy shipping document designed to ensure that shipments of hazardous waste can be tracked from their point-of -generation to their final destination (a.k.a., "cradle to grave"). Additionally, the manifest provides valuable information which may be used during transportation emergencies. A copy of a completed hazardous waste manifest is shown in Appendix 7A.

The Manifest System

When a waste leaves your facility, all sections of the manifest through the transporter's signature line (Blocks 1 - 17) must be completed. The manifest consists of at least six copies. One copy of the manifest must be kept on file at the facility which generated the waste. In addition, the generator must send one copy of the manifest to the Department and provide the transporter with the remaining copies. The designated Treatment, Storage, or Disposal Facility (TSDF) must send a signed manifest copy back to the generator, so that the generator can be sure that their shipment arrived and was accepted by the designated facility. For wastes that are shipped out of state it is often necessary to send a manifest copy to the state agency in which the waste is being disposed.

Acquisition and Selection of Manifests

You can obtain blank copies of the manifest from several sources. To determine which source you should use, follow this system:

1. If you are shipping out of state and the state to which you are shipping your waste supplies the manifest and requires its use, you must use that manifest form. Contact the hazardous waste management agency of that state, your hauler, or the designated facility you intend to use for manifest forms.

2. If you are shipping in state, or the state to which are shipping your waste does not supply the manifest, use the California Uniform Hazardous Waste Manifest, EPA 8700-22/DTSC 8022A. Contact your hauler or your state hazardous waste agency for blank forms.

Completion of the Manifest

A sample copy of a hazardous waste manifest was shown in Appendix 7A. Instructions for completing the manifest are on the back-side of the Appendix.

Note that there are three basic parts to the manifest. The top portion identifies the organizations that will be handling the waste; the middle portion identifies the shipment; and the bottom portion contains the signatures of the individuals who handled the waste. A generator must designate one facility which is permitted to handle the waste described on the manifest. A generator may also designated on the manifest one alternate facility which is authorized to handle their waste in the event an emergency prevents delivery of the waste to the primary designated facility.

One of the more difficult sections of the manifest to complete for many generators is block 11, "US DOT Description". While a more thorough description of Department of Transportation (DOT) requirements is provided in Section 7.3, the basic description of a hazardous waste must appear in the following sequence:

1. Proper shipping name
2. Hazard class or division number
3. UN/NA number
4. Packing group

This information is found in 49 CFR 172.101. Note that the DOT also requires a 24 hour emergency response telephone number to appear on the manifest. This number is typically placed in block 15.

When the generator signs the certification in ITEM 16, he or she is personally confirming that:

✓ The manifest is complete and accurately describers the shipment;

✓ The shipment is ready for transport; and,

✓ Given the budget, waste management arrangements are the best to reduce the amount and hazardous nature of the wastes at the facility.

Your hazardous waste TSDF will often be the best source for packaging and shipping information for completing the manifest. In fact, many commercial hazardous waste TSDFs will provide you with a copy of manifest items 1 - 15 pre-printed. Determine if your vendor provides this service.

If you are having trouble obtaining, filling out, or using the manifest, ask your hauler, your designated facility, or the Regional EH&S Department for assistance.

Manifest Discrepancies

The facility receiving your hazardous waste manifest must note in block 19 any significant discrepancy between the waste described in blocks 11 - 14 and the waste actually received at the facility. Significant discrepancies in quantity include any variation in "piece-count" such as a discrepancy of one drum in a truckload. Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid or toxic constituents not reported on the manifest.

The EPA or the DTSC may use this information (and any other discrepancies they find) as a basis for issuing you a notice of violation or a fine. For these and other reasons, it is a good idea to have a "second-check" of the manifest done by a trained facility person other than the one who originally completed the manifest.

Recordkeeping and Reporting:

A copy of each manifest signed by the TSDF and returned to the generator must be retained on site for at least three years from the date the waste was accepted by the initial transporter.

A generator who does not receive a copy of the of the manifest with the hand-written signature of the owner or operator of the designated facility within 35 days of shipment must contact the facility to determine the status of the hazardous waste. If a copy of the manifest is not received within 45 days of the date the waste was accepted by the initial transporter, an exception report must be submitted to the Department. The report must include:

- A legible copy of the manifest for which the generator does not have confirmation of delivery; and,

- A cover letter explaining the efforts taken to locate the hazardous waste and the results of those efforts.

One example of how you can manually track the status of your hazardous waste manifest is shown on the next page.

Hazardous Waste Manifest Shipment Log:

Date Shipped\ Transporter	Designated Facility (Name & EPA ID)	Type & Amount of Hazardous Waste	TSDF Copy Due By:	TSDF Copy Received

Section 7.2 Land Disposal Restrictions (LDRs)

Along with the hazardous waste manifest, land disposal restriction forms may have to accompany an off-site shipment of hazardous waste.

The main purpose of land disposal restrictions (LDRs) is to discourage activities that involve placing untreated wastes in or on the land if a better treatment or immobilization alternative exists. Examples of land disposal include landfill, surface impoundment, and injection well.

The EPA has developed treatment standards that either require the use of one or more specified treatment technologies, or require that wastes be treated to meet certain concentration limits for hazardous constituents prior to land disposal. In addition, California has developed restrictions for land-disposal of non-RCRA hazardous waste. The land disposal restriction form notifies the TSDF of the appropriate treatment standards. *Completion of this form is a generator responsibility!*

As a practical matter, most commercial waste management facilities have prepared their own LDR forms that must be used as part of their waste-acceptance procedures. It is recommended that generators work closely with their waste management facilities in completing the LDR form. A complete description of Land Disposal Requirements appears in 22 CCR 66268.

General Compliance Strategy

The fundamental requirements to achieve compliance with the LDR involve the following five steps:

1. Determine if the waste is a hazardous waste and assign it the appropriate hazardous waste code(s) (Section 2).

2. Determine if the waste is a "wastewater" as defined here or a nonwastewater ("Wastewater" is generally defined as a waste containing less than one percent total suspended solids and less than one percent total organic carbon. Note: For the F001 through F005 solvent wastes, the definition of a "wastewater" is slightly different; a wastewater for this purpose is a solvent-water mixture that contains less than one percent total of the solvents listed in F001-F005).

3. Using this information, look up the LDR treatment standards for the applicable waste codes. The complete list of standards is found in 22 CCR 66268.

   (The general methodology in determining LDR treatment standards is to first review the Table entitled "Technology-based Standards by RCRA Waste Code". Waste identified on this table must be treated via the Best Demonstrated Available Technology (BDAT) specified. Then, check "Table CCWE - Constituent Concentration in Waste Extract" and

finally, "Table CCW - Constituent Concentration in Waste." For each waste included on the CCW and CCWE tables, the regulated constituents are listed as well as the treatment level that must be achieved prior to land disposal of that waste).

To facilitate understanding of the treatment standards, some information that appears in the tables described above has been consolidated into the format presented in Appendix 6B. Some common Kaiser Permanente wastes are shown. Be advised that the information presented here is but a very small sample of that appearing in the Regulations.

4. Determine if your waste meets the treatment standards described in the Table. Waste that does not meet the standards must be treated (by the TSDF) prior to land disposal.

5. Prepare and retain all of the paperwork required under the LDR program. This includes completing a notification document that informs the treatment or storage facility in writing of the appropriate treatment standards and any applicable prohibition levels. This notice must include:

   - The EPA Hazardous Waste Number
   - The corresponding treatment standards
   - The manifest number associated with the shipment of waste
   - Waste analysis data, where available.

One example of a completed LDR form is shown in Appendix 7B.

LDR Exercise

What are the LDR requirements that apply to waste xylene generated in the laboratory?

1. Q: Is the waste stream a hazardous waste?
   A: Yes, waste xylene is both listed (F003) and ignitable (D001).

2. Q: Is the waste stream a wastewater or non-wastewater?
   A: The wastestream is a non-wastewater, as defined above (For the F001 through F005 solvent wastes, the definition of a "wastewater" is a solvent-water mixture that contains less than one percent total of the solvents listed in F001-F005.).

3. Q: What are the LDR treatment standards for these waste codes?

A: A review of "Technology-based Standards by RCRA Waste Code" contained in 22 CCR 66268.42 indicates that D001 waste with greater than or equal to 10% total organic carbon must be treated by INCIN (incineration), RORGS (recovery of organics), or FSUBS (fuel substitution). Waste xylene falls into this category.

Additionally, pursuant to "Table CCWE," F003 non-wastewaters containing xylene, must be at a concentration of less than 0.15 mg/l prior to being disposed. Lastly, "Table CCW" is checked and indicates no special requirements.

At this point, the generator would complete the land disposal restriction notification provided it by their commercial waste treatment facility. A copy of the notification is kept on file for at least five years and the original is given to the waste transporter with the appropriate copies of the manifest.

Section 7.3 Department of Transportation Requirements

Hazardous waste regulations refer to Department of Transportation (DOT) for a description of materials, packaging, labeling, marking hazardous waste containers, and placarding vehicles used in the transportation of hazardous waste.

Where to Start?

In order to complete block 11 of the Hazardous Waste Manifest and properly label, package, and mark your waste for transportation, you must first determine the proper DOT description for the hazardous waste. Most of this information can be found in the DOT Hazardous Materials Table. The DOT Hazardous Material Table, located in 49 CFR 172.101, was designed as a guide to assist the shipper and transporter with regulatory compliance. This table is a compilation of materials which the DOT considers hazardous during transportation. It consists of 10 columns describing requirements regarding classification, hazard communication, packaging, vessel storage, and special transportation provisions. The portion of the Hazardous Material Table most applicable to completing the hazardous waste manifest (block 11) is shown on the following page. The reader is encouraged to review the entire table to evaluate the impact of other provisions on their operations.

§172.101 - Hazardous Materials Table					
Symbols (1)	Hazardous Materials descriptions and proper shipping names (2)	Hazard class or Division (3)	Identificatio n Numbers (4)	Packing Group (5)	Label(s) required (if not excepted) (6)

	Acetone	3	UN1090	II	Flammable Liquid

Column One - May contain one or more symbols which restrict the application of the requirements of the remaining portion of the table to a particular mode of transportation. For example, a "W" restricts the application of the DOT requirements to materials offered or intended for transportation by vessel, unless the material is a hazardous waste or a "hazardous substance" as defined by DOT.

Column Two - Lists the proper DOT shipping name for the hazardous materials. To legally ship a hazardous material, it must be identified using one of the names on this table. The shipping name will be used on shipping papers (e.g. the manifest) and on marking the package (the hazardous waste label). Determination of the appropriate name to use can often require a great deal of time searching through the Table. Guidance relative to making this search process easier is described later.
Column Three - Lists the hazard class or division corresponding to the proper shipping name. The DOT uses nine hazard classes to identify hazardous materials. Hazard Class and division definitions are found at 49 CFR Part 173. The hazard classes most commonly associated with KP wastestreams include Class 3 (Flammable and Combustible liquids), Class 8 (Corrosive liquids and solids), and Class 9 (miscellaneous hazardous materials which includes certain hazardous substances and wastes)

Column Four - Lists the identification number assigned to each proper shipping name.
Identification numbers preceded by the letters "UN" are appropriate for international and domestic transportation, while those preceded by "NA" are appropriate for domestic transportation only. The identification numbers with the prefix are used on shipping papers (e.g., the manifest) and on marking the package (the hazardous waste label).

Column Five - Specifies one or more packing groups assigned to a hazardous material corresponding to the proper shipping name and the hazard class. Packing Group numbers represent the degree of danger presented by the material and correspond with packaging requirements for the material.

Packing Group I - Great Hazard
Packing Group II - Medium Hazard
Packing Group III - Minor Hazard

Column Six identifies the hazard warning label(s) required on each package containing the listed material.

The remaining columns (not shown) of the Hazardous Material Table specify codes for special transportation provisions, additional packaging requirements, maximum quantities that may be offered for transportation aboard aircraft and railcar, and vessel storage requirements.

Modifications To Basic Hazardous Material Table Descriptions

There are a number of modifications to the basic descriptions provided in the Hazardous Materials Table that may affect Kaiser Permanente operations. A list of the most common modifications is presented below.

1. If the material is a hazardous substance in an amount that represents reportable quantities in one package (see Appendix A to 49 CFR 172.101), enter the words "RQ" either before or after the proper shipping name.

"RQ, Waste Xylene, 3, UN1307, PG II" or "Waste Xylene, 3, UN 1307, PG II, RQ"

2. The hazard class associated with the material must match the Hazard Class in the Hazard Class Column of the Hazardous Materials Table for the shipping name selected.

3. If more than one DOT Hazard Class applies to the material, determine the primary hazard by referring to the precedence table at 49 CFR 173.2a. The shipping name is determined based on the primary hazard.

4. If no DOT hazard classes apply to the material in question and materials are hazardous waste per Federal Regulations, the materials are Hazard Class 9.

5. If a hazardous material consists of a mixture of a material specifically named by a technical (chemical) name in the Table, it should be named by that technical name with the qualifying word "solution" or "mixture" as appropriate.

6. If a material has a chemical generic proper shipping name listed at 49 CFR 172.203 (k)(3), the technical name of the hazardous material must be entered in parentheses in association with the chemical generic n.o.s. (not otherwise specified) name. For example:

   Corrosive liquids, n.o.s., (sulfuric acid, hydrofluoric acid), 8, UN 1760, PG II

7. If a material has a chemical generic proper shipping name listed at 49 CFR 172.203 (k)(3) and is a mixture or solution of two or more hazardous materials, the technical names of at least two components most predominantly contributing to the hazards of the mixture must be indicated as described above. For example:

   Waste flammable liquids, Corrosive, n.o.s., (ethanol, sodium hydroxide), 8, UN 2920, PG I

8. If the n.o.s. description contains the name of the chemical element or group as part of its name (e.g., "Mercury compounds, solid, n.o.s., 6.1, UN 2025, PG II"), then 6 and 7 above do not apply.

9. If the material is not identified by name in the Table, which is often the case for mixtures or solutions, then the shipper must designate a generic N.O.S. name, which most appropriately describes the material's end use or its primary (see 3. above) DOT Class of Hazard.

   Waste Flammable Liquid, n.o.s., (Acetone, Methyl Ethyl Ketone), 3, UN 1993, PG II

10. If the material is "Hazardous Waste, liquid or solid, n.o.s.", Class 9, the EPA hazardous waste number should be included on the shipping paper in association with the basic description. If the EPA hazardous waste number is included, 6 and 7 above do not apply.

11. The word "waste" should precede the proper shipping name of a hazardous waste, unless it is already part of the proper shipping name. For example:

    "Waste Xylene, 3, UN1307, PG II"

12. When one entry refers to another entry in the Hazardous Materials Table by using the word "see", either proper shipping name in Roman type may be used.

13. Punctuation marks and words in italics in the Hazardous Materials Table are not part of the proper shipping name but may be used in addition to the proper shipping name.

Packaging

Once the DOT description is completed, packages must be selected and prepared for transportation in such a manner as to prevent the release of hazardous materials to the environment. In addition, each package must be compatible to the contents of the package.

The DOT authorizes packaging options for each hazardous material. Authorized packaging options are listed in 49 CFR 173. The specific section of 49 CFR 173 for packaging a particular hazardous material is found by reference in column 8 of the Hazardous Materials Table. Each material as defined by its proper shipping name is also subject to special packaging reliefs, restrictions, and limitations per column 7 of the Table. (see Section 172.102 for an explanation of these provisions.)

Generally, hazardous waste is packaged in non-bulk packaging. By definition, non-bulk packaging is greater than 5 gallons (general limited quantity) and less than 119 gallons (the definition of bulk). Authorized non-bulk packages are referenced per material in column 8b of the 172.101 Hazardous materials Table. Non-bulk packages must meet DOT "performance oriented packaging" standards and tests [49 CFR 178, Subparts L and M], as well as DOT general packaging requirements.

A common package used in transporting hazardous waste is the overpacked drum, otherwise known as the lab pack. To use a lab pack, inside containers:

- cannot leak and must be compatible with the contents;
- must be tightly and securely sealed;
- must meet specifications as defined by any packaging requirements at 49 CFR Parts 173, 178, and 179 for the particular waste; and
- must be surrounded by a sufficient quantity (to absorb contents of all containers) of nonbiodegradable sorbent material that is compatible with the contents of the inner containers.

The outside container:

- must be an open head DOT-specification metal shipping container (see 49 CFR Parts 178 and 179) of no more than 110 gallon capacity;
- must be full after it has been packed; and
- must not contain any incompatible wastes.

Reactive wastes (except for cyanide- and sulfide-bearing reactive wastes) must be treated or rendered non-reactive prior to packaging.

There are exceptions to the above requirements for certain hazard classes (3, 4.1, 4.2, 4.3, 5.1, 6.1, 8, or 9). However, 6.1, PG I materials; 4.2, PG I materials; bromine pentafluoride, bromine trifluoride, chloric acid, and oleum (fuming sulfuric acid) cannot be packaged as outlined below.

The exceptions apply if the waste is transported by highway only and if the following packaging requirements are met:

- The outer packaging must be a UN 1A2 or UN 1B2 metal drum, a UN 1D plywood drum, a UN 1 G fiber drum, or a UN 1H2 plastic drum with PGIII containing only one Hazard Class of material.
- The inner packagings must be either glass (less than 1 gallon), or metal or plastic (less than 5.3 gallons).
- The inner packagings must be surrounded by a chemically compatible absorbent material in sufficient quantity to absorb the total liquid contents.
- The gross weight of the complete package may not exceed 452 lbs.

In addition, 6. and 7. of the "Modifications To Basic Hazardous Material Table Descriptions" do not apply if the above packaging requirements are met, as long as the material in question is not a hazardous substance (49 CFR 172.203(c)) or a poisonous material (49 CFR 172.203(m)).

Marking

Markings are intended to indicate which package contains which hazardous material. Package markings must include the proper shipping name and Identification Number (UN/NA) as they appear in columns 2 and 4 of the 172.101 Hazardous Materials Table. Markings must be durable, in English, and printed on or affixed to the surface of a package, label, or sign. They must be unobscured by labels or other attachments and must be located away from any other markings that could substantially reduce its effectiveness.

The most common marking that generators may be familiar with is the following information that must be displayed on each container of hazardous waste which is 110 gallons or less:

HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

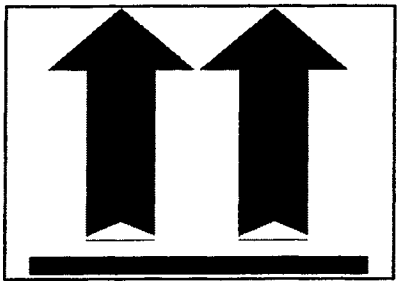
Generator's name and address _____

Manifest Document Number _____

An example of such a marking is shown in Figure 7.3 "Hazardous Waste Label (Marking)".

Figure 7.3 Hazardous Waste Label (Marking)

One additional, special marking requirement, which may apply to Kaiser Permanente operations is in non-bulk combination packages (i.e., lab pack boxes) containing liquid hazardous waste. These must be packed with closures upward and be marked with orientation arrows pointing in the upright direction (except if inner packages are cylinders, liquids contained in manufactured articles [e.g., alcohol or mercury in thermometers] which are leak tight, or if inner packagings are hermetically sealed).



Labeling

Warning labels immediately reflect the hazards of the package. Unless otherwise excepted, all hazardous materials must be labeled with primary (and subsidiary) labels as specified in columns 6 of the Hazardous Materials Table. For each entry, the first label in the column is the primary hazard. The appropriate hazard class must be displayed in the lower corner of a primary hazard label. The label must be on the same surface as and near the proper shipping name marking.

Placarding

Placards reflect the hazards contained within a transport vehicle. Similar to labels in shape, color, and design, placards warn and guide emergency responders in determining the appropriate actions that must be taken in the event of an emergency. The type of placard which must be displayed varies according to the hazard class and the weight of the materials being transported. An example of some common placards is shown in Appendix 7C.

The generator, as well as the transporter, must ensure that the transport vehicle is properly placarded. Due to the complexity of the DOT requirements, and to ensure the transporter's own requirements with these standards, a reputable hazardous waste hauler will usually assist generators with transportation requirements.

Emergency Response Information

The shipping paper must contain an emergency response telephone number entered on the shipping paper in a clearly visible location. The telephone number must apply to each hazardous material entered on the manifest and/or shipping paper and it must be indicated that the telephone number is for emergency response information (for example: emergency contact: xxx-xxx-xxxx)).

The telephone number discussed above must be monitored at all times the hazardous waste is in transportation and must be the number of a person who is knowledgeable of the hazards and characteristics of the hazardous waste being shipped. This person must also have comprehensive emergency response and incident mitigation information for the hazardous waste. The number can be for an operator who can connect the DOT to the knowledgeable person.

Emergency response information related to the hazardous material (see bulleted list below) must be made immediately accessible to drivers of motor vehicles for use in the event of incidents involving such materials. In addition, each operator of a facility where a hazardous material is received, stored or handled during transportation must maintain an MSDS or other document with the following information whenever the hazardous material is present:

- basic description and technical name of the hazardous material;
- immediate hazards to health;
- risks of fire or explosion;
- immediate precautions to be taken in event of an accident or incident;
- immediate methods for handling;
- initial methods for handling spills or leaks in the absence of fire; and
- preliminary first aid measures.

Training Requirements

Per 49 CFR 173.1(b), "it is the duty of each person who offers hazardous materials for transportation [hazmat employer] to instruct each of his officers, agents, and employees having any responsibility for preparing hazardous materials for shipment as to applicable regulations."

Training can be provided by the hazmat employer or other public or private sources; however, the employer must ensure that each of its hazmat employees is tested by appropriate means on covered subjects of:

- general awareness / familiarization training;
- function specific training; and,
- safety training for hazmat employees who handle or transport packagings containing hazardous materials during the course of transportation (packers and warehouse workers) and persons who have the potential for exposure to hazardous materials as a result of a transportation accident (drivers).

A hazmat employee is a person who is employed by a hazmat employer and who in the course of employment directly affects hazardous materials transportation safety. Training for new HAZMAT employees must be completed within 90 days of employment; HAZMAT employees shall receive the training at least once every two

years. If HAZCOM or other training covers the above information, the training does not need to be duplicated.

Training records must be kept for the past two years for each hazmat employee, and kept for 90 days after the end of employment. Records include:

- hazmat employee's name;
- most recent training completion date of training;
- description, copy or location of training materials used;
- name and address of person providing training; and,
- certification that hazmat employee has been trained and tested.

Section 7.4 Biennial Reporting

Generators who ship any hazardous waste off-site to a transfer, storage, or disposal facility must prepare and submit a "Biennial Report" to the Department by March 1 of each even numbered year. The report is submitted on EPA Form 8700-13A/B, and covers the generator's activities during the previous year.

The Biennial Report includes, among others, the following information:

√ The hazardous waste identification number and address of the generator.

√ The calendar year covered by the report.

√ The hazardous waste identification number, name, and address for each off-site treatment, storage, or disposal facility to which waste was shipped during the year.

√ The name and identification number of each transporter used during the reporting year.

√ A description, EPA hazardous waste identification number, California Hazardous Waste Category Number (Appendix XII of 66262.126), DOT hazard class, and quantity of each hazardous waste shipped off-site for shipments to a Treatment, Storage, or Disposal Facility (TSDF).

√ A description of efforts undertaken during the year to reduce the volume and toxicity of waste generated.

√ A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years.

√ The certification signed by the generator or authorized representative.

As can be seen from these requirements, good recordkeeping and tracking practices facilitate the timely completion of an accurate Biennial Report.

Note
A generator who treats, stores, disposes of hazardous waste on-site shall submit an annual report covering these wastes.

Chapter 8. Hazardous Waste Minimization Requirements

Facilities in California which generate greater than 12,000 kilograms of hazardous waste per year (or 5,000 kilograms of waste which is eligible for a certified treatment technology, e.g., formaldehyde treatment with formalex) are subject to State-specific hazardous waste minimization requirements. These requirements are described in the "Hazardous Waste Source Reduction and Management Review Act of 1989" and 22 CCR 67100.1 *et.seq*. The waste minimization requirements apply to major routinely generated hazardous waste streams (i.e., those that make up greater than 5% by weight of the total facility hazardous waste stream); they are in addition to describing waste minimization efforts on biennial reports and certifying on the hazardous waste manifest that there is a program in place to reduce the volume and toxicity of waste generated on site.

The primary purpose of waste minimization is to ensure that hazardous wastes are managed properly through methods such as source reduction and recycling. Clearly, however, waste minimization makes good sense from a business point of view by limiting the short-term cost of disposal and the long-term liability associated with "cradle-to-grave" ownership of hazardous waste. In addition, waste minimization strategies are consistent with Kaiser Permanente's policy of protecting the earth's environment.

What Are The Hazardous Waste Source Reduction and Management Review Act Requirements?

Facilities affected by the Hazardous Waste Source Reduction and Management Review Act must:

- √ Examine their waste generating processes to determine amounts and types of waste generated;
- √ Determine waste minimization procedures to reduce waste generation at the source; and
- √ Develop, and have available for inspection, written documentation addressing waste reduction, including:
  - ☐ A source reduction evaluation review and plan and a plan summary; and

- ☐ A hazardous waste management report and a report summary

On behalf of the Northern California Region, the Regional EHS Department has developed a comprehensive document entitled "*Hazardous Waste Management & Source Reduction Compliance Plans and Reports*." This document describes the processes, operations, and activities that generate hazardous wastes and evaluates source reduction measures that are being implemented at the Medical Facilities. In addition, the document describes the Regional hazardous waste management approach, including details about waste stream characteristics and volumes. This document must be updated every four years.

What Are My Responsibilities at a Facility?

Hazardous waste generators who are required to comply with State waste minimization requirements have the following responsibilities:

1. Recognize that source reduction is important not only to comply with the law, but that it will (a) reduce disposal costs (b) improve employee health and safety (c) reduce chemical product cost (d) mitigate possible adverse effects of chemicals and (e) illustrate our commitment to improving the environment.

2. Be familiar with the Region's waste minimization plans and activities, including program-wide reduction goals. Establish facility specific waste minimization goals.

3. Observe the Regional waste minimization implementation plan as outlined in the Northern California Region's "*Hazardous Waste Management & Source Reduction Compliance Plans and Reports*."

4. Continue to identify, evaluate, and, where appropriate, implement, waste minimization alternatives that make sense at the local level. Share innovative ideas and practices with other Kaiser Permanente facilities.

5. Assist the Region in periodically updating the "Hazardous Waste Management & Source Reduction Compliance Plans and Reports" document.

For a copy of the Region's "*Hazardous Waste Management & Source Reduction Regulatory Compliance Plans and Reports*," contact your Regional EH&S Department.

Chapter 9. Recordkeeping and Reporting

Throughout this handbook, a number of recordkeeping and reporting requirements have been discussed. Appendix 9A is provided as a management tool to summarize and briefly describe the most common hazardous waste administrative requirements relative to recordkeeping and reporting. The Appendix directs the reader to the appropriate Chapter and Section in this handbook for further information and guidance.

A system should be established to ensure compliance with the applicable recordkeeping and reporting requirements. Well-organized maintenance and ready accessibility of these documents facilitates day-to-day environmental management and helps ensure that the need of the Region and the requirements of the department are met.

APPENDIX F
Hydrology Report

MCE CONSULTANTS LLC

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July 2, 2001
JN: 93.01

EIP Associates
12301 Wilshire Blvd., Suite 430
Los Angeles, CA 90025

Attention: Wendy Katagi

Subject: Downey NASA Site
Civil Engineer's Response to City Memo of May 15, 2001 by Desi Alvarez

We have completed our Hydrology and Drainage Section plan check revisions to the above referenced project as well as added the proposed Kaiser site to our analysis. Desi's comments are directed to EIP's draft of the Hydrology section. We have made our revisions to the EIP version. The following is an itemized response list to the comments contained in memo by Desi Alvarez:

Page 3.4-1, Section 3.4.2, General Characteristics

The paragraph has been reworded.

Page 3.4-1, Section 3.4.2, Area Wide Drainage

The paragraph has been revised to include a discussion of the Bellflower storm drains.

Page 3.4-3, Section 3.4.2, Site Drainage Patterns, paragraph 2

Corrected.

Page 3.4-5. Groundwater:

The paragraph has been rephrased per the City's comments.

Page 3.4-5, Section 3.4.3, Regulatory Framework:

The paragraph has been rephrased per the City's comments.

Page 3.4-6, Section 3.4.5, Impacts, Impact on Drainage Patterns:

The paragraph has been revised to include the Lakewood Boulevard and Clark Avenue storm drains.

Page 3.4-6, Section 3.4-5, Impacts, Impact on Drainage Patterns, Paragraph 1 and 3:

The paragraphs have been revised to include a discussion of basins and quality requirements.

Page 3.4-7, Section 3.4.5, Comparison of Existing and Proposed Flows

Bullet 1

The division of the storm drain in Bellflower and Imperial is discussed.

Bullet 2

Percentages have been added.

Bullet 3

This paragraph has been revised. The subareas for the existing and proposed watersheds have been modified to make them more directly comparable.

Page 3.4-8, Groundwater Impacts:

The proposed storm drain system was modeled with a very simple schematic design based upon the information available. The master plan of the proposed storm drain system may contain percolation basins but no information on the on-site storm drain system was available. Under the section for potentially significant impacts and again in the mitigation measures the point is made that percolation/detention basins should be constructed to mitigate any additional runoff from the site. A statement regarding the usage of percolation basins has been added.

Page 3.4-8, Groundwater Impacts:

The paragraph has been revised to include a discussion of the increase in landscaping.

Page 3.4-8, Potentially Significant Impacts, Impact 3.4-1:

This paragraph has been revised. The subareas for the existing and proposed watersheds have been modified to make them more directly comparable.

Page 3.4.8, Table 3.4-1:

The subarea references have been revised for clarity. The existing and proposed subareas have been renumbered for consistency.

Page 3.4-9, First Paragraph:

A discussion regarding the LA County ownership of the existing storm drains has been added.

Section 3.4.5 - General Comment:

There is little information available at the time on the proposed development in regards to the exact percentages of landscaping. The site was modeled as a commercial development, with a standard assumed percentage of landscape of 10%. We have revised some portions of the subareas based upon information that has become available in terms of pervious percentages, such as the park area, along with watershed boundaries.

Page 3.4-11, Impact 3.4-3, second paragraph:

The reference to the number of parking spaces has been added.

Page 3.4-12, first paragraph, first sentence:

The sentence has been revised for clarity.

Page 3.4-12, first paragraph, second sentence:

The sentence has been revised for clarity.

Page 3.4-12, second paragraph:

The CRWQCB reference has been added.

Page 3.4-12, first paragraph:

A TMDL discussion was added to the section.

Page 3.4-13, Section 3.4.6:

The reference corrected to "Storm Water Master Plan." A discussion regarding the LA County ownership of the existing storm drains has been added.

Page 3.4-13, Section 3.4.7, Mitigation:

Mitigation Measure 3.4-2 refers to construction BMPs. Mitigation Measure numbers 3.4-3 & -4 actually refer to post-construction BMPs. The intent is to have the developer obtain approval from the City of Downey for the post-construction BMPs prior to construction.

Page 3.4-15, Mitigation Measure 3.4-3, first bullet:

The reference to percolation basins has been added.

Page 3.4-15, Mitigation Measure 3.4-3, second bullet:

The reference to streets and roadways has been added.

Page 3.4-16, Mitigation Measure 3.4-4, first bullet:

The reference to infiltration and percolation basins has been added.

If you have any questions regarding these issues please do not hesitate to call me at (949) 376-6407.

Sincerely,

MCE CONSULTANTS, LLC

Thomas E. Carcelli

HYDROLOGY REPORT

Prepared for:

THE CITY OF DOWNEY

PROJECT: Downey NASA Site

ADDRESS: Former Rockwell/Boeing
NASA Property
Downey, CA

DATE: June 29, 2001

Prepared by:

MCE CONSULTANTS

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Richard A. Moore, RCE 23971 — 7/02/01 Date

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4.2 Hydrology Map – Proposed Condition

1.0 NARRATIVE

1.1 PURPOSE

The purpose of this study is to determine the drainage impacts in and around the existing Rockwell/Boeing site in the City of Downey that will be created by the proposed construction of a 161-acre multi-use project.

1.2 PROPOSED PROJECT

The proposed project involves construction of a multi-use development that will include a shopping center, offices and buildings for warehouse, distribution, research and development activities. There is also a museum/school and park proposed along with a hospital and medical office building. Parking will be satisfied by surface parking lots located throughout the site.

1.3 SITE DESCRIPTION

The Rockwell/Boeing site is approximately 161-acres. The site is bounded by Imperial Highway to the south, Stewart and Gray Road to the north, Bellflower Boulevard to the east, and Clark Avenue and Lakewood Boulevard to the west. The topography is very flat with the most of the site paved with asphalt or concrete. The site contains numerous existing buildings throughout the site.

1.4 STUDY METHODOLOGY AND ASSUMPTIONS

A 25-year hydrology analysis was completed for the site for the existing conditions and the proposed condition. The existing and proposed conditions were analyzed in order to obtain the necessary flows required to determine the impact the proposed project will have on the existing off-site storm drain system.

The existing watershed is analyzed using the available information provided by the City of Downey. They include on-site storm drain facilities including pipe sizes, off-site storm drain facilities including pipe sizes and location, and the site plan for the Storm Water Pollution Prevention Plan (SWPPP). The City of Downey also provided the on-site topography.

Utilizing this information, the proposed site was divided into watershed subareas separated according to the point at which the storm drain exits the site (see Appendix - Hydrology Map). The flow under the proposed condition at these points was, then, compared to that under the existing condition.

The Rational Method was used for the analysis. The computations were done using the Rational Method Hydrology Computer Program Package by Advanced Engineering Software (aes), Ver. 1.5A, release date 01/01/95.

Because of the information provided was incomplete and insufficient to meet the objective of the study, the following assumptions were made in order to achieve the objective.

- All existing and proposed storm drain pipes are assumed to be RCPs.

- Slope of the existing storm drain is assumed to be the same as that of existing surface.
- Slopes of the existing storm drain lines were, then, rounded to numbers of the increment of 0.25.
- Invert elevations of catch basins (both existing and proposed) are assumed to be 4.0 feet below the top of grate.
- Slopes of the proposed storm drain lines are assumed to be 0.5% minimum (exception of storm drain connecting node 2.2 and 2.5, the slope of 0.3% is used).

1.5 CURRENT DRAINAGE PATTERNS

The existing watershed has been divided into 6 subareas lettered A through F (see Appendix - Hydrology Map - Existing Condition). As previously mentioned, the existing watershed is fully developed. The watershed subareas for the existing condition were therefore modeled as commercial areas.

Subarea A drains the most northeastern portion of the site and is tributary to an existing storm drain lateral from Bellflower Boulevard. This paved area includes approximately 10.4 acres.

Subarea B includes a portion of the site that is southerly of Subarea A. This paved subarea also drains to Bellflower via an existing onsite storm drain laterals and is approximately 25.6 acres in area.

Subarea C includes the most northwesterly portion of the site and is tributary to the storm drain in Lakewood Boulevard. This area contains 31.2 acres of small and large buildings, paving, and a small portion of landscape area next to Lakewood.

Subarea D is the largest subarea of the site and contains the middle and southerly portion of the site. The total area is 65.5 acres, incorporating over 40% of the total runoff area. This subarea drains southerly to Imperial Highway via an existing on-site storm drain system that collects the surface runoff through a series of collection inlets. This area consists mostly of buildings and paving, with a small percentage of area landscaped.

Subarea E includes approximately 23.7 acres along the westerly middle portion of the site and drains to Clark Avenue via an existing onsite storm drain lateral. Subareas F contains approximately 5.0 acres and also drain to Clark Avenue via existing onsite storm drain laterals. Subareas E and F are also mostly paved with few buildings.

Portions of the project designated N.A.P. are not included in the drainage analysis. No development will occur and existing runoff conditions will be maintained on these parcels.

1.6 PROPOSED DRAINAGE PATTERNS

The proposed watershed has also been divided into 6 subareas lettered A through F (see Appendix - Hydrology Map - Proposed Condition) to correspond with the existing pattern. The watershed subareas for the proposed condition were modeled as commercial areas, except for the area B.1, which was modeled as public park.

Subarea A, as in the existing condition, continues to drain to the existing storm drain in Bellflower Boulevard. This subarea will be fully developed as retail buildings and parking lot.

The flow from this area will be picked up by proposed catch basins and carried to the existing 81" storm drain in Bellflower Boulevard. The area includes approximately 9.3 acres.

Subarea B, also as in the existing condition, includes a portion southerly of Subarea A. A portion of this subarea will be developed as either museum/school or public park. The rest of this subarea will be developed as a medical center for Kaiser Permanente. The flow from this subarea will also drain to the existing 81" storm drain in Bellflower Boulevard. The subarea contains approximately 27.8 acres.

Subarea C also contains much of the same portion of the site as in the existing condition. Most of this subarea will be developed as retail buildings and parking lot with small portion being the office building. This subarea will drain via sheet flow to the catch basins, then to the proposed storm drain that runs westerly out to the existing 45" storm drain in Lakewood Boulevard. The subarea was modeled as commercial. The subarea includes approximately 29.3 acres.

Subarea D contains the largest subarea of the site and roughly contains the subareas D & H in the existing condition. The area includes approximately 65.9 acres, and drains southerly to Imperial Highway. The subarea D is divided into six smaller subareas. These six subareas drain via sheet flow to the proposed catch basins. The proposed storm drain that runs southerly out to the existing storm drain in Imperial Highway picking up runoffs from six subareas.

Subarea E & F contain the office buildings and parking lots, and are located in the southwesterly corner of the site. The site contains approximately 20.7 and 8.4 acres, respectively. These subareas, much like the rest of the site, will drain via sheet flow to the proposed catch basins. the catch basins will drain to the existing 81" storm drain in Clark Avenue via proposed storm drain laterals.

Portions of the project designated N.A.P. are not included in the drainage analysis. No development will occur and existing runoff conditions will be maintained on these parcels.

1.8 Summary

1.8.1 Hydrologic Summary Table

Summary of Existing and Proposed Hydrology

	EXIST.	PROP.	DIFF.
Q exiting site @ exist. storm drain in Bellflower (subareas A + B)	85.2 cfs	76.3 cfs	- 8.9 cfs
Q exiting site @ exist. storm drain in Lakewood (subarea C)	66.8 cfs	56.7 cfs	- 10.1 cfs
Q exiting site @ exist. storm drain in Imperial (subareas D)	122.4 cfs	140.8 cfs	+ 18.4 cfs
Q exiting site @ exist. storm drain in N'ly Clark (subarea E)	55.6 cfs	47.9 cfs	- 7.7 cfs
Q exiting site @ exist. storm drain in S'ly Clark (subarea F)	12.5 cfs	17.6 cfs	+ 5.1 cfs
Q total (all subareas)	342.5 cfs	339.3 cfs	- 3.2 cfs

1.8.2 Comparison of Existing and Proposed Flows

A 25-year hydrology analysis was completed for the site for an existing condition and proposed condition. The existing and proposed conditions were analyzed in order to document the changes in the storm water runoff that the proposed development will incur on the site. A summary of the hydrologic analysis is included in Table 1.

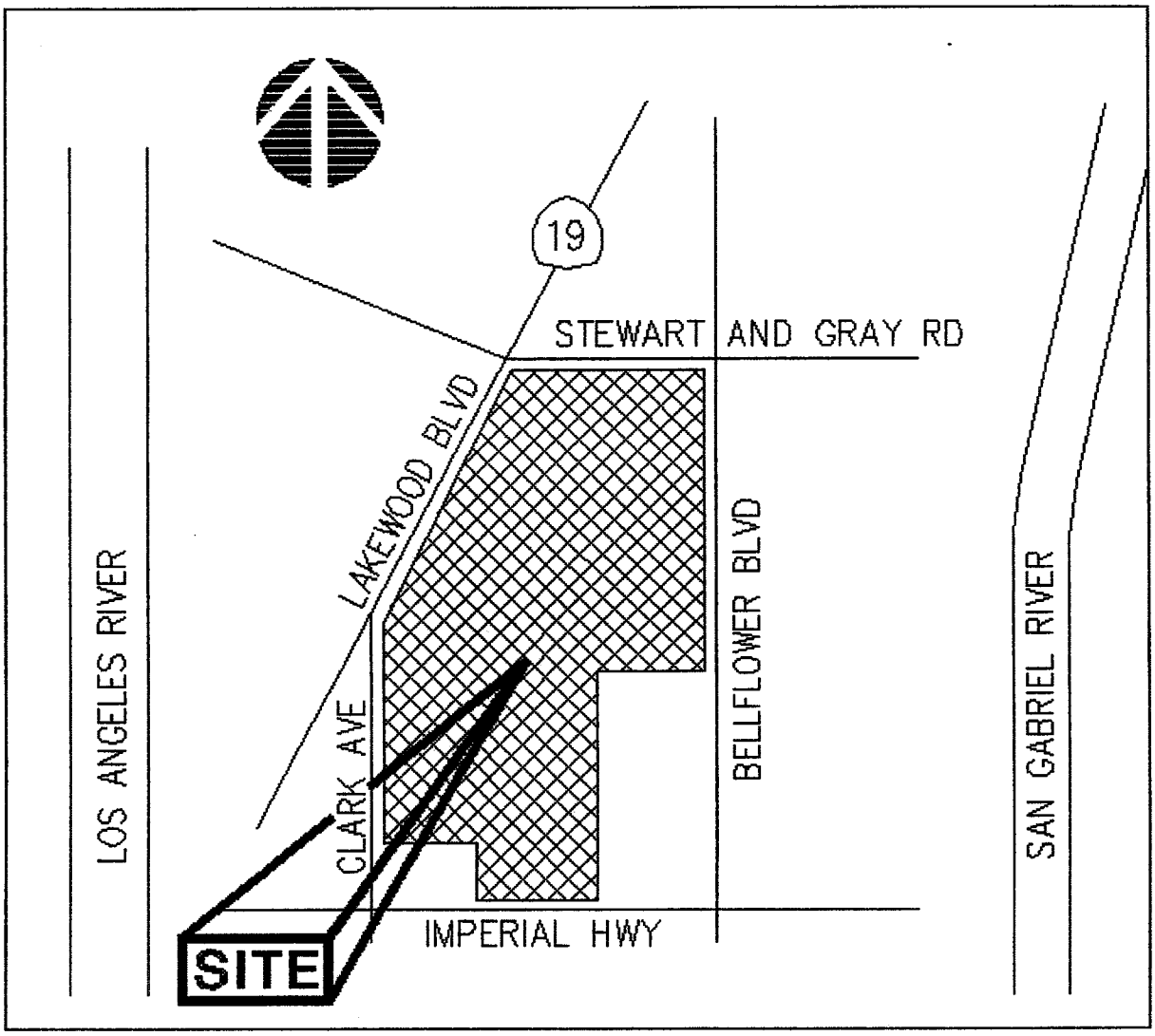
The Hydrology analysis indicates the total flow contributing to the existing storm drain along Bellflower Boulevard will decrease by approximately 10% (85.2 cfs to 76.3 cfs). This decrease can be attributed to the fact that a portion of subarea B will be developed as a public park, thus increasing the pervious area. The total flow contributing to the existing storm drain along Ardis Avenue, downstream of Imperial Highway and the project site, will increase approximately 2% (257.3 cfs to 263.0 cfs). This increase can be attributed to the proposed runoff routing of this subarea, which effectively increases the concentration of flows to one storm drain.

As shown in the above Table, the difference in the runoff for the entire site between existing and proposed conditions is 3.2 cfs or about 0.1%. With an increase in landscape areas and an addition of a public park, the overall pervious area increased under the proposed condition, thus reducing the runoff.

1.9 References

- Site Plan for the Storm Water Pollution Prevention Plan (SWPPP) prepared by Geocon.

2.0 SITE LOCATION MAP



3.0 HYDROLOGY STUDY

3.1 25-YEAR (EXISTING CONDITION)

```
****************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
        (c) Copyright 1983-2001 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2001  License ID 1426

                          Analysis prepared by:

                           MCE CONSULTANTS, LLC
                         1100 S. COAST HWY., #318
                          LAGUNA BEACH, CA 92651
                              (949) 376-6407

 ************************* DESCRIPTION OF STUDY *************************
* 25-YEAR STORM EVENT HYDROLOGY                                          *
* DOWNEY NASA SITE - EXISTING CONDITION                                  *
* JN 93.01                                                               *
 ************************************************************************

  FILE NAME: 9301-E.DAT
  TIME/DATE OF STUDY: 13:59 06/28/2001
============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
============================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   25.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS = 20
   1)   5.000;  4.272
   2)   6.000;  3.800
   3)   7.000;  3.454
   4)   8.000;  3.191
   5)   9.000;  2.987
   6)  10.000;  2.806
   7)  11.000;  2.657
   8)  12.000;  2.534
   9)  13.000;  2.430
  10)  14.000;  2.340
  11)  15.000;  2.256
  12)  16.000;  2.183
  13)  17.000;  2.118
  14)  18.000;  2.060
  15)  20.000;  1.959
  16)  22.000;  1.868
  17)  24.000;  1.792
  18)  26.000;  1.726
  19)  28.000;  1.666
  20)  30.000;  1.614
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
```

```
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

****************************************************************************
  FLOW PROCESS FROM NODE      1.10 TO NODE      1.20 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   550.00
  ELEVATION DATA: UPSTREAM(FEET) =    104.00  DOWNSTREAM(FEET) =    102.20

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   11.913
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.951
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 D       10.40      0.20      0.10    75   11.91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =     27.43
  TOTAL AREA(ACRES) =     10.40   PEAK FLOW RATE(CFS) =     27.43

****************************************************************************
  FLOW PROCESS FROM NODE      1.20 TO NODE      1.30 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    98.20  DOWNSTREAM(FEET) =    96.80
  FLOW LENGTH(FEET) =   280.00   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =  11.41
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     27.43
  PIPE TRAVEL TIME(MIN.) =   0.41    Tc(MIN.) =  12.32
  LONGEST FLOWPATH FROM NODE      1.10 TO NODE      1.30 =   830.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      2.10 TO NODE      2.20 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   275.00
  ELEVATION DATA: UPSTREAM(FEET) =    102.00  DOWNSTREAM(FEET) =    101.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.840
```

```
 *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.020
 SUBAREA Tc AND LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
 COMMERCIAL                  D        3.20      0.20      0.10    75    8.84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
 SUBAREA RUNOFF(CFS) =       8.64
 TOTAL AREA(ACRES) =       3.20   PEAK FLOW RATE(CFS) =      8.64

****************************************************************************
 FLOW PROCESS FROM NODE      2.20 TO NODE      2.30 IS CODE =  41
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    97.00  DOWNSTREAM(FEET) =    94.85
 FLOW LENGTH(FEET) =   430.00   MANNING'S N =  0.013
 DEPTH OF FLOW IN  27.0 INCH PIPE IS  12.1 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =   4.98
 GIVEN PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =       8.64
 PIPE TRAVEL TIME(MIN.) =   1.44    Tc(MIN.) =  10.28
 LONGEST FLOWPATH FROM NODE      2.10 TO NODE      2.30 =   705.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE      2.40 TO NODE      2.50 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   490.00
 ELEVATION DATA: UPSTREAM(FEET) =     99.50  DOWNSTREAM(FEET) =     97.00

 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.409
 *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.745
 SUBAREA Tc AND LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
 COMMERCIAL                  D        5.80      0.20      0.10    75   10.41
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
 SUBAREA RUNOFF(CFS) =      14.22
 TOTAL AREA(ACRES) =       5.80   PEAK FLOW RATE(CFS) =     14.22

****************************************************************************
 FLOW PROCESS FROM NODE      2.60 TO NODE      2.70 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
 INITIAL SUBAREA FLOW-LENGTH(FEET) =  1150.00
 ELEVATION DATA: UPSTREAM(FEET) =     99.00  DOWNSTREAM(FEET) =     91.05

 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   13.779
 *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.360
 SUBAREA Tc AND LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
```

```
COMMERCIAL                    D        16.60      0.20      0.10     75   13.78
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA RUNOFF(CFS) =      34.96
TOTAL AREA(ACRES) =      16.60   PEAK FLOW RATE(CFS) =      34.96

****************************************************************************
FLOW PROCESS FROM NODE      2.70 TO NODE      2.80 IS CODE =  41
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    87.05  DOWNSTREAM(FEET) =    86.45
FLOW LENGTH(FEET) =   120.00   MANNING'S N =  0.013
DEPTH OF FLOW IN  42.0 INCH PIPE IS  21.4 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) =   7.08
GIVEN PIPE DIAMETER(INCH) =  42.00    NUMBER OF PIPES =   1
PIPE-FLOW(CFS) =      34.96
PIPE TRAVEL TIME(MIN.) =   0.28    Tc(MIN.) =  14.06
LONGEST FLOWPATH FROM NODE      2.60 TO NODE      2.80 =  1270.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      3.10 TO NODE      3.20 IS CODE =  21
----------------------------------------------------------------------------
>>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
INITIAL SUBAREA FLOW-LENGTH(FEET) =   360.00
ELEVATION DATA: UPSTREAM(FEET) =    104.00  DOWNSTREAM(FEET) =    102.90

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.195
*  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.777
SUBAREA Tc AND LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
COMMERCIAL                    D        2.50      0.20      0.10     75   10.19
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA RUNOFF(CFS) =       6.20
TOTAL AREA(ACRES) =       2.50   PEAK FLOW RATE(CFS) =       6.20

****************************************************************************
FLOW PROCESS FROM NODE      3.20 TO NODE      3.50 IS CODE =  41
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    98.90  DOWNSTREAM(FEET) =    93.05
FLOW LENGTH(FEET) =  1170.00   MANNING'S N =  0.013
DEPTH OF FLOW IN  36.0 INCH PIPE IS   9.1 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) =   4.45
GIVEN PIPE DIAMETER(INCH) =  36.00    NUMBER OF PIPES =   1
PIPE-FLOW(CFS) =       6.20
PIPE TRAVEL TIME(MIN.) =   4.38    Tc(MIN.) =  14.58
LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.50 =  1530.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      3.50 TO NODE      3.50 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
==============================================================================
  MAINLINE Tc(MIN) =  14.58
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.291
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                  D       11.60      0.20       0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA AREA(ACRES) =   11.60      SUBAREA RUNOFF(CFS) =   23.71
  EFFECTIVE AREA(ACRES) =    14.10   AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =    14.10       PEAK FLOW RATE(CFS) =      28.82

******************************************************************************
  FLOW PROCESS FROM NODE      3.50 TO NODE      3.50 IS CODE =  10
------------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
==============================================================================

******************************************************************************
  FLOW PROCESS FROM NODE      3.30 TO NODE      3.40 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   225.00
  ELEVATION DATA: UPSTREAM(FEET) =    103.80  DOWNSTREAM(FEET) =    101.90

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    6.893
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.491
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                  D        2.30      0.20       0.10    75    6.89
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =       7.18
  TOTAL AREA(ACRES) =       2.30   PEAK FLOW RATE(CFS) =       7.18

******************************************************************************
  FLOW PROCESS FROM NODE      3.40 TO NODE      3.50 IS CODE =  41
------------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    97.90  DOWNSTREAM(FEET) =    93.05
  FLOW LENGTH(FEET) =   970.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  21.0 INCH PIPE IS  12.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   4.75
  GIVEN PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       7.18
  PIPE TRAVEL TIME(MIN.) =   3.41    Tc(MIN.) =  10.30
  LONGEST FLOWPATH FROM NODE      3.30 TO NODE      3.50 =  1195.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE      3.50 TO NODE      3.50 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
```

```
MAINLINE Tc(MIN) =  10.30
*  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.761
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
COMMERCIAL                  D       14.80      0.20       0.10    75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA AREA(ACRES) =   14.80      SUBAREA RUNOFF(CFS) =   36.52
EFFECTIVE AREA(ACRES) =    17.10   AREA-AVERAGED Fm(INCH/HR) =  0.02
AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
TOTAL AREA(ACRES) =    17.10       PEAK FLOW RATE(CFS) =     42.19

****************************************************************************
FLOW PROCESS FROM NODE      3.50 TO NODE      3.50 IS CODE =  11
----------------------------------------------------------------------------
>>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

** MAIN STREAM CONFLUENCE DATA **
 STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
 NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
    1     42.19  10.30    2.761  0.20( 0.02) 0.10    17.1       3.30
LONGEST FLOWPATH FROM NODE      3.30 TO NODE      3.50 =  1195.00 FEET.

** MEMORY BANK #  1 CONFLUENCE DATA **
 STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
 NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
    1     28.82  14.58    2.291  0.20( 0.02) 0.10    14.1       3.10
LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.50 =  1530.00 FEET.

** PEAK FLOW RATE TABLE **
 STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
 NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
    1     66.77  10.30    2.761  0.20( 0.02) 0.10    27.1       3.30
    2     63.78  14.58    2.291  0.20( 0.02) 0.10    31.2       3.10
  TOTAL AREA(ACRES) =     31.20

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE(CFS) =       66.77  Tc(MIN.) =   10.299
EFFECTIVE AREA(ACRES) =     27.06  AREA-AVERAGED Fm(INCH/HR) =  0.02
AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
TOTAL AREA(ACRES) =     31.20
LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.50 =  1530.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      3.50 TO NODE      3.50 IS CODE =  12
----------------------------------------------------------------------------
>>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
FLOW PROCESS FROM NODE      3.50 TO NODE      3.60 IS CODE =  41
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    93.05  DOWNSTREAM(FEET) =    90.85
FLOW LENGTH(FEET) =   440.00   MANNING'S N =  0.013
ASSUME FULL-FLOWING PIPELINE
PIPE-FLOW VELOCITY(FEET/SEC.) =   9.45
```

```
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  36.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      66.77
  PIPE TRAVEL TIME(MIN.) =   0.78    Tc(MIN.) =  11.08
  LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.60 =  1970.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      4.10 TO NODE      4.20 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   200.00
  ELEVATION DATA: UPSTREAM(FEET) =     98.70  DOWNSTREAM(FEET) =     95.70

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.862
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.865
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                  D        2.80      0.20      0.10    75    5.86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =       9.69
  TOTAL AREA(ACRES) =       2.80   PEAK FLOW RATE(CFS) =      9.69

****************************************************************************
  FLOW PROCESS FROM NODE      4.20 TO NODE      4.50 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    91.70  DOWNSTREAM(FEET) =    86.60
  FLOW LENGTH(FEET) =  1020.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  21.0 INCH PIPE IS  15.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.01
  GIVEN PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       9.69
  PIPE TRAVEL TIME(MIN.) =   3.39    Tc(MIN.) =   9.26
  LONGEST FLOWPATH FROM NODE      4.10 TO NODE      4.50 =  1220.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      4.50 TO NODE      4.50 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.26
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.941
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                  D        9.40      0.20      0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA AREA(ACRES) =     9.40      SUBAREA RUNOFF(CFS) =   24.71
  EFFECTIVE AREA(ACRES) =    12.20   AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =    12.20       PEAK FLOW RATE(CFS) =      32.07

****************************************************************************
```

```
  FLOW PROCESS FROM NODE      4.50 TO NODE      4.50 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE      4.30 TO NODE      4.40 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =  1650.00
  ELEVATION DATA: UPSTREAM(FEET) =     99.00  DOWNSTREAM(FEET) =     90.75

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   16.985
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.119
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 D      21.50      0.20       0.10    75   16.99
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =     40.61
  TOTAL AREA(ACRES) =     21.50   PEAK FLOW RATE(CFS) =     40.61

****************************************************************************
  FLOW PROCESS FROM NODE      4.40 TO NODE      4.50 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    86.75  DOWNSTREAM(FEET) =    86.60
  FLOW LENGTH(FEET) =    30.00   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =  22.98
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     40.61
  PIPE TRAVEL TIME(MIN.) =   0.02    Tc(MIN.) =  17.01
  LONGEST FLOWPATH FROM NODE      4.30 TO NODE      4.50 =  1680.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      4.50 TO NODE      4.50 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM     Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
      1     40.61  17.01    2.118  0.20( 0.02) 0.10    21.5        4.30
  LONGEST FLOWPATH FROM NODE      4.30 TO NODE      4.50 =  1680.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM     Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
      1     32.07   9.26    2.941  0.20( 0.02) 0.10    12.2        4.10
  LONGEST FLOWPATH FROM NODE      4.10 TO NODE      4.50 =  1220.00 FEET.

  ** PEAK FLOW RATE TABLE **
```

```
 STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
 NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
    1     62.85   9.26    2.941  0.20( 0.02) 0.10    23.9       4.10
    2     63.65  17.01    2.118  0.20( 0.02) 0.10    33.7       4.30
  TOTAL AREA(ACRES) =     33.70

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE(CFS) =       63.65  Tc(MIN.) =   17.007
EFFECTIVE AREA(ACRES) =     33.70  AREA-AVERAGED Fm(INCH/HR) =  0.02
AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
TOTAL AREA(ACRES) =     33.70
LONGEST FLOWPATH FROM NODE      4.30 TO NODE      4.50 =  1680.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      4.50 TO NODE      4.50 IS CODE =  12
----------------------------------------------------------------------------
>>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
FLOW PROCESS FROM NODE      4.50 TO NODE      4.80 IS CODE =  41
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    86.60  DOWNSTREAM(FEET) =    83.85
FLOW LENGTH(FEET) =   550.00   MANNING'S N =  0.013
ASSUME FULL-FLOWING PIPELINE
PIPE-FLOW VELOCITY(FEET/SEC.) =  10.72
PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
GIVEN PIPE DIAMETER(INCH) =  33.00    NUMBER OF PIPES =   1
PIPE-FLOW(CFS) =     63.65
PIPE TRAVEL TIME(MIN.) =   0.86    Tc(MIN.) =  17.86
LONGEST FLOWPATH FROM NODE      4.30 TO NODE      4.80 =  2230.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      4.80 TO NODE      4.80 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  17.86
*  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.068
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
COMMERCIAL                 D        9.00      0.20       0.10    75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA AREA(ACRES) =    9.00      SUBAREA RUNOFF(CFS) =   16.59
EFFECTIVE AREA(ACRES) =    42.70   AREA-AVERAGED Fm(INCH/HR) =  0.02
AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
TOTAL AREA(ACRES) =    42.70       PEAK FLOW RATE(CFS) =      78.70

** PEAK FLOW RATE TABLE **
 STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
 NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
    1     81.96  10.12    2.788  0.20( 0.02) 0.10    32.9       4.10
    2     78.70  17.86    2.068  0.20( 0.02) 0.10    42.7       4.30
NEW PEAK FLOW DATA ARE:
PEAK FLOW RATE(CFS) =     81.96  Tc(MIN.) =  10.12
AREA-AVERAGED Fm(INCH/HR) =  0.02  AREA-AVERAGED Fp(INCH/HR) =  0.20
```

```
  AREA-AVERAGED Ap =  0.10  EFFECTIVE AREA(ACRES) =     32.90

****************************************************************************
  FLOW PROCESS FROM NODE      4.80 TO NODE      4.80 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE      4.60 TO NODE      4.70 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   540.00
  ELEVATION DATA: UPSTREAM(FEET) =     95.00  DOWNSTREAM(FEET) =     92.35

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.906
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.671
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 D        5.70      0.20      0.10    75   10.91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =     13.60
  TOTAL AREA(ACRES) =      5.70   PEAK FLOW RATE(CFS) =     13.60

****************************************************************************
  FLOW PROCESS FROM NODE      4.70 TO NODE      4.80 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    88.35  DOWNSTREAM(FEET) =    83.85
  FLOW LENGTH(FEET) =   900.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  30.0 INCH PIPE IS  14.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.59
  GIVEN PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     13.60
  PIPE TRAVEL TIME(MIN.) =   2.68    Tc(MIN.) =  13.59
  LONGEST FLOWPATH FROM NODE      4.60 TO NODE      4.80 =  1440.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      4.80 TO NODE      4.80 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.59
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.377
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        6.90      0.20      0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA AREA(ACRES) =    6.90      SUBAREA RUNOFF(CFS) =   14.64
  EFFECTIVE AREA(ACRES) =    12.60   AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =    12.60       PEAK FLOW RATE(CFS) =      26.73
```

```
****************************************************************************
  FLOW PROCESS FROM NODE      4.80 TO NODE      4.80 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER    (CFS)  (MIN.)  (INCH/HR)  (INCH/HR)        (ACRES)    NODE
      1      26.73  13.59     2.377  0.20( 0.02) 0.10    12.6       4.60
  LONGEST FLOWPATH FROM NODE      4.60 TO NODE      4.80 =  1440.00 FEET.

  ** MEMORY BANK # 1 CONFLUENCE DATA **
   STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER    (CFS)  (MIN.)  (INCH/HR)  (INCH/HR)        (ACRES)    NODE
      1      81.96  10.12     2.788  0.20( 0.02) 0.10    32.9       4.10
      2      78.70  17.86     2.068  0.20( 0.02) 0.10    42.7       4.30
  LONGEST FLOWPATH FROM NODE      4.30 TO NODE      4.80 =  2230.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER    (CFS)  (MIN.)  (INCH/HR)  (INCH/HR)        (ACRES)    NODE
      1     105.34  10.12     2.788  0.20( 0.02) 0.10    42.3       4.10
      2     107.23  13.59     2.377  0.20( 0.02) 0.10    49.9       4.60
      3     101.93  17.86     2.068  0.20( 0.02) 0.10    55.3       4.30
    TOTAL AREA(ACRES) =      55.30

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      107.23  Tc(MIN.) =   13.589
  EFFECTIVE AREA(ACRES) =     49.89  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =     55.30
  LONGEST FLOWPATH FROM NODE      4.30 TO NODE      4.80 =  2230.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      4.80 TO NODE      4.80 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE      4.80 TO NODE      4.90 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    83.85  DOWNSTREAM(FEET) =    76.85
  FLOW LENGTH(FEET) =   700.00   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =  11.14
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  42.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    107.23
  PIPE TRAVEL TIME(MIN.) =   1.05    Tc(MIN.) =  14.64
  LONGEST FLOWPATH FROM NODE      4.30 TO NODE      4.90 =  2930.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      4.90 TO NODE      4.90 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
==============================================================================
  MAINLINE Tc(MIN) =  14.64
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.287
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                  D        6.90      0.20       0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA AREA(ACRES) =     6.90      SUBAREA RUNOFF(CFS) =   14.08
  EFFECTIVE AREA(ACRES) =    56.79   AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =    62.20       PEAK FLOW RATE(CFS) =     115.85

******************************************************************************
  FLOW PROCESS FROM NODE      5.10 TO NODE      5.20 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   380.00
  ELEVATION DATA: UPSTREAM(FEET) =    100.50  DOWNSTREAM(FEET) =     98.60

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.440
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.907
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                  D       12.00      0.20       0.10    75    9.44
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =     31.18
  TOTAL AREA(ACRES) =     12.00   PEAK FLOW RATE(CFS) =     31.18

******************************************************************************
  FLOW PROCESS FROM NODE      5.20 TO NODE      5.30 IS CODE =  41
------------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    94.60  DOWNSTREAM(FEET) =    85.00
  FLOW LENGTH(FEET) =   960.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  30.0 INCH PIPE IS  20.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.81
  GIVEN PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     31.18
  PIPE TRAVEL TIME(MIN.) =   1.82    Tc(MIN.) =  11.26
  LONGEST FLOWPATH FROM NODE      5.10 TO NODE      5.30 =  1340.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE      5.30 TO NODE      5.30 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  11.26
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.625
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                  D       11.70      0.20       0.10    75
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA AREA(ACRES) =   11.70      SUBAREA RUNOFF(CFS) =   27.44
  EFFECTIVE AREA(ACRES) =    23.70   AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =    23.70       PEAK FLOW RATE(CFS) =      55.57

****************************************************************************
  FLOW PROCESS FROM NODE      6.10 TO NODE      6.20 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   440.00
  ELEVATION DATA: UPSTREAM(FEET) =     95.50  DOWNSTREAM(FEET) =     93.70

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.421
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.743
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                  D        2.20      0.20      0.10    75   10.42
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =       5.39
  TOTAL AREA(ACRES) =       2.20   PEAK FLOW RATE(CFS) =      5.39

****************************************************************************
  FLOW PROCESS FROM NODE      6.20 TO NODE      6.30 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    89.70  DOWNSTREAM(FEET) =    89.00
  FLOW LENGTH(FEET) =   140.00   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   4.39
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      5.39
  PIPE TRAVEL TIME(MIN.) =   0.53    Tc(MIN.) =  10.95
  LONGEST FLOWPATH FROM NODE      6.10 TO NODE      6.30 =   580.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      7.10 TO NODE      7.20 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   410.00
  ELEVATION DATA: UPSTREAM(FEET) =     95.50  DOWNSTREAM(FEET) =     93.45

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.732
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.855
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                  D        2.80      0.20      0.10    75    9.73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
```

```
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =      7.14
  TOTAL AREA(ACRES) =      2.80   PEAK FLOW RATE(CFS) =      7.14

****************************************************************************
  FLOW PROCESS FROM NODE      7.20 TO NODE      7.30 IS CODE =  41
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING USER-SPECIFIED PIPESIZE (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    89.45  DOWNSTREAM(FEET) =    88.48
  FLOW LENGTH(FEET) =   130.00   MANNING'S N =  0.013
  ASSUME FULL-FLOWING PIPELINE
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.82
  PIPE FLOW VELOCITY = (TOTAL FLOW)/(PIPE CROSS SECTION AREA)
  GIVEN PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      7.14
  PIPE TRAVEL TIME(MIN.) =   0.37    Tc(MIN.) =  10.10
  LONGEST FLOWPATH FROM NODE      7.10 TO NODE      7.30 =   540.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      8.10 TO NODE      8.20 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   980.00
  ELEVATION DATA: UPSTREAM(FEET) =     94.60  DOWNSTREAM(FEET) =     92.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   15.654
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.208
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 D       3.30      0.20       0.10    75   15.65
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =      6.50
  TOTAL AREA(ACRES) =      3.30   PEAK FLOW RATE(CFS) =      6.50

============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

3.2 25-YEAR (PROPOSED CONDITION)

```
****************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                          Analysis prepared by:

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                              (949) 376-6407

 ************************* DESCRIPTION OF STUDY *************************
* 25-YEAR STORM EVENT HYDROLOGY                                          *
* DOWNEY NASA SITE - PROPOSED CONDITION                                  *
* JN 93.01                                                               *
 ************************************************************************

  FILE NAME: 9301-P.DAT
  TIME/DATE OF STUDY: 14:27 06/28/2001
============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
============================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   25.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS = 20
   1)   5.000;  4.272
   2)   6.000;  3.800
   3)   7.000;  3.454
   4)   8.000;  3.191
   5)   9.000;  2.987
   6)  10.000;  2.806
   7)  11.000;  2.657
   8)  12.000;  2.534
   9)  13.000;  2.430
  10)  14.000;  2.340
  11)  15.000;  2.256
  12)  16.000;  2.183
  13)  17.000;  2.118
  14)  18.000;  2.060
  15)  20.000;  1.959
  16)  22.000;  1.868
  17)  24.000;  1.792
  18)  26.000;  1.726
  19)  28.000;  1.666
  20)  30.000;  1.614
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
```

```
 1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

 GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
   1. Relative Flow-Depth =  0.00 FEET
      as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
   2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
 *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
  OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
 *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

****************************************************************************
 FLOW PROCESS FROM NODE      1.10 TO NODE      1.20 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   580.00
 ELEVATION DATA: UPSTREAM(FEET) =    104.00  DOWNSTREAM(FEET) =    101.10

 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   11.180
 *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  3.059
 SUBAREA Tc AND LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
 COMMERCIAL                  D        9.30      0.20      0.10    75   11.18
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
 SUBAREA RUNOFF(CFS) =     25.44
 TOTAL AREA(ACRES) =      9.30   PEAK FLOW RATE(CFS) =     25.44

****************************************************************************
 FLOW PROCESS FROM NODE      1.20 TO NODE      1.30 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    97.10  DOWNSTREAM(FEET) =    96.00
 FLOW LENGTH(FEET) =   220.00   MANNING'S N =  0.013
 DEPTH OF FLOW IN  30.0 INCH PIPE IS  22.8 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =   6.36
 ESTIMATED PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =     25.44
 PIPE TRAVEL TIME(MIN.) =   0.58    Tc(MIN.) =  11.76
 LONGEST FLOWPATH FROM NODE      1.10 TO NODE      1.30 =   800.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE      2.10 TO NODE      2.20 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
 INITIAL SUBAREA FLOW-LENGTH(FEET) =  1080.00
 ELEVATION DATA: UPSTREAM(FEET) =    106.05  DOWNSTREAM(FEET) =    100.65

 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   14.337
 *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.312
 SUBAREA Tc AND LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
```

```
COMMERCIAL                    D        11.80      0.20      0.10     75   14.34
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA RUNOFF(CFS) =      24.34
TOTAL AREA(ACRES) =      11.80   PEAK FLOW RATE(CFS) =      24.34

****************************************************************************
FLOW PROCESS FROM NODE      2.20 TO NODE      2.50 IS CODE =  31
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =     96.65  DOWNSTREAM(FEET) =     91.97
FLOW LENGTH(FEET) =  1560.00   MANNING'S N =  0.013
DEPTH OF FLOW IN  33.0 INCH PIPE IS  24.2 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) =   5.22
ESTIMATED PIPE DIAMETER(INCH) =  33.00    NUMBER OF PIPES =   1
PIPE-FLOW(CFS) =      24.34
PIPE TRAVEL TIME(MIN.) =   4.98    Tc(MIN.) =  19.31
LONGEST FLOWPATH FROM NODE      2.10 TO NODE      2.50 =  2640.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      2.50 TO NODE      2.50 IS CODE =  10
----------------------------------------------------------------------------
>>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
FLOW PROCESS FROM NODE      2.30 TO NODE      2.40 IS CODE =  21
----------------------------------------------------------------------------
>>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
INITIAL SUBAREA FLOW-LENGTH(FEET) =   700.00
ELEVATION DATA: UPSTREAM(FEET) =    101.80  DOWNSTREAM(FEET) =     98.30

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   12.054
*  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.528
SUBAREA Tc AND LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
COMMERCIAL                    D        4.50      0.20      0.10     75   12.05
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA RUNOFF(CFS) =      10.16
TOTAL AREA(ACRES) =       4.50   PEAK FLOW RATE(CFS) =      10.16

****************************************************************************
FLOW PROCESS FROM NODE      2.40 TO NODE      2.50 IS CODE =  31
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =     94.30  DOWNSTREAM(FEET) =     91.97
FLOW LENGTH(FEET) =     30.00   MANNING'S N =  0.013
DEPTH OF FLOW IN  15.0 INCH PIPE IS   8.3 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) =  14.52
ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
PIPE-FLOW(CFS) =      10.16
PIPE TRAVEL TIME(MIN.) =   0.03    Tc(MIN.) =  12.09
```

```
  LONGEST FLOWPATH FROM NODE      2.30 TO NODE      2.50 =   730.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      2.50 TO NODE      2.50 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     10.16  12.09    2.525  0.20( 0.02) 0.10     4.5     . 2.30
  LONGEST FLOWPATH FROM NODE      2.30 TO NODE      2.50 =   730.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     24.34  19.31    1.994  0.20( 0.02) 0.10    11.8       2.10
  LONGEST FLOWPATH FROM NODE      2.10 TO NODE      2.50 =  2640.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     29.49  12.09    2.525  0.20( 0.02) 0.10    11.9       2.30
      2     32.34  19.31    1.994  0.20( 0.02) 0.10    16.3       2.10
    TOTAL AREA(ACRES) =     16.30

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       32.34  Tc(MIN.) =   19.314
  EFFECTIVE AREA(ACRES) =     16.30  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =     16.30
  LONGEST FLOWPATH FROM NODE      2.10 TO NODE      2.50 =  2640.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      2.50 TO NODE      2.60 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    91.97  DOWNSTREAM(FEET) =    91.47
  FLOW LENGTH(FEET) =   100.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  33.0 INCH PIPE IS  24.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.77
  ESTIMATED PIPE DIAMETER(INCH) =  33.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     32.34
  PIPE TRAVEL TIME(MIN.) =   0.25    Tc(MIN.) =  19.56
  LONGEST FLOWPATH FROM NODE      2.10 TO NODE      2.60 =  2740.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      2.60 TO NODE      2.60 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE      2.54 TO NODE      2.57 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
```

```
INITIAL SUBAREA FLOW-LENGTH(FEET) =  1240.00
ELEVATION DATA: UPSTREAM(FEET) =    106.05  DOWNSTREAM(FEET) =     99.85

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   15.151
*  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.245
SUBAREA Tc AND LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
COMMERCIAL                  D       13.00      0.20      0.10    75   15.15
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA RUNOFF(CFS) =     26.03
TOTAL AREA(ACRES) =     13.00   PEAK FLOW RATE(CFS) =     26.03

****************************************************************************
FLOW PROCESS FROM NODE      2.57 TO NODE      2.60 IS CODE =  31
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    95.85  DOWNSTREAM(FEET) =    91.47
FLOW LENGTH(FEET) =    70.00   MANNING'S N =  0.013
DEPTH OF FLOW IN  21.0 INCH PIPE IS  12.9 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) =  16.87
ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
PIPE-FLOW(CFS) =     26.03
PIPE TRAVEL TIME(MIN.) =   0.07    Tc(MIN.) =  15.22
LONGEST FLOWPATH FROM NODE      2.54 TO NODE      2.60 =  1310.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      2.60 TO NODE      2.60 IS CODE =  11
----------------------------------------------------------------------------
>>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

** MAIN STREAM CONFLUENCE DATA **
 STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
 NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
    1     26.03  15.22    2.240  0.20( 0.02) 0.10    13.0       2.54
LONGEST FLOWPATH FROM NODE      2.54 TO NODE      2.60 =  1310.00 FEET.

** MEMORY BANK #  2 CONFLUENCE DATA **
 STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
 NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
    1     29.49  12.34    2.499  0.20( 0.02) 0.10    11.9       2.30
    2     32.34  19.56    1.981  0.20( 0.02) 0.10    16.3       2.10
LONGEST FLOWPATH FROM NODE      2.10 TO NODE      2.60 =  2740.00 FEET.

** PEAK FLOW RATE TABLE **
 STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
 NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
    1     53.05  12.34    2.499  0.20( 0.02) 0.10    22.4       2.30
    2     56.66  15.22    2.240  0.20( 0.02) 0.10    26.6       2.54
    3     55.34  19.56    1.981  0.20( 0.02) 0.10    29.3       2.10
  TOTAL AREA(ACRES) =     29.30

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE(CFS) =       56.66  Tc(MIN.) =   15.220
EFFECTIVE AREA(ACRES) =     26.65  AREA-AVERAGED Fm(INCH/HR) =  0.02
AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
```

```
  TOTAL AREA(ACRES) =      29.30
  LONGEST FLOWPATH FROM NODE      2.10 TO NODE      2.60 =  2740.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      2.60 TO NODE      2.70 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    91.47  DOWNSTREAM(FEET) =    90.85
  FLOW LENGTH(FEET) =   124.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  42.0 INCH PIPE IS  29.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.86
  ESTIMATED PIPE DIAMETER(INCH) =  42.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     56.66
  PIPE TRAVEL TIME(MIN.) =   0.26    Tc(MIN.) =  15.48
  LONGEST FLOWPATH FROM NODE      2.10 TO NODE      2.70 =  2864.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      2.70 TO NODE      2.70 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE      2.70 TO NODE      2.70 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 2 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE      3.03 TO NODE      3.04 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   775.00
  ELEVATION DATA: UPSTREAM(FEET) =    101.40  DOWNSTREAM(FEET) =     97.52

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   19.942
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  1.962
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  PUBLIC PARK                D        8.10      0.20      0.85    75   19.94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA RUNOFF(CFS) =     13.06
  TOTAL AREA(ACRES) =      8.10   PEAK FLOW RATE(CFS) =     13.06

****************************************************************************
  FLOW PROCESS FROM NODE      3.04 TO NODE      3.05 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    93.52  DOWNSTREAM(FEET) =    93.27
  FLOW LENGTH(FEET) =    49.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  17.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.48
```

```
ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
PIPE-FLOW(CFS) =     13.06
PIPE TRAVEL TIME(MIN.) =   0.15    Tc(MIN.) =  20.09
LONGEST FLOWPATH FROM NODE      3.03 TO NODE      3.05 =   824.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      6.10 TO NODE      6.20 IS CODE =  21
----------------------------------------------------------------------------
>>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
INITIAL SUBAREA FLOW-LENGTH(FEET) =  1530.00
ELEVATION DATA: UPSTREAM(FEET) =    102.00  DOWNSTREAM(FEET) =     94.35

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   16.480
*  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.152
SUBAREA Tc AND LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
COMMERCIAL                 D       19.70      0.20      0.10    75   16.48
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA RUNOFF(CFS) =     37.80
TOTAL AREA(ACRES) =     19.70   PEAK FLOW RATE(CFS) =     37.80

****************************************************************************
FLOW PROCESS FROM NODE      6.20 TO NODE      6.30 IS CODE =  31
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    90.35  DOWNSTREAM(FEET) =    89.65
FLOW LENGTH(FEET) =    70.00   MANNING'S N =  0.013
DEPTH OF FLOW IN  30.0 INCH PIPE IS  23.9 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) =   9.03
ESTIMATED PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
PIPE-FLOW(CFS) =     37.80
PIPE TRAVEL TIME(MIN.) =   0.13    Tc(MIN.) =  16.61
LONGEST FLOWPATH FROM NODE      6.10 TO NODE      6.30 =  1600.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      3.10 TO NODE      3.12 IS CODE =  21
----------------------------------------------------------------------------
>>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
INITIAL SUBAREA FLOW-LENGTH(FEET) =   640.00
ELEVATION DATA: UPSTREAM(FEET) =    101.13  DOWNSTREAM(FEET) =     94.73

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.124
*  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.788
SUBAREA Tc AND LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
COMMERCIAL                 D       14.20      0.20      0.10    75   10.12
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA RUNOFF(CFS) =     35.37
TOTAL AREA(ACRES) =     14.20   PEAK FLOW RATE(CFS) =     35.37
```

```
****************************************************************************
  FLOW PROCESS FROM NODE      3.12 TO NODE      3.40 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    90.73  DOWNSTREAM(FEET) =    83.35
  FLOW LENGTH(FEET) =  1475.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  33.0 INCH PIPE IS  26.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.81
  ESTIMATED PIPE DIAMETER(INCH) =  33.00    NUMBER OF PIPES =  1
  PIPE-FLOW(CFS) =     35.37
  PIPE TRAVEL TIME(MIN.) =   3.61    Tc(MIN.) =  13.73
  LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.40 =  2115.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.40 TO NODE      3.40 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE      3.20 TO NODE      3.22 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =  1135.00
  ELEVATION DATA: UPSTREAM(FEET) =    100.95  DOWNSTREAM(FEET) =     89.60

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   12.731
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.458
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                  D        8.60      0.20      0.10    75   12.73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =      18.87
  TOTAL AREA(ACRES) =       8.60   PEAK FLOW RATE(CFS) =     18.87

****************************************************************************
  FLOW PROCESS FROM NODE      3.22 TO NODE      3.40 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    85.60  DOWNSTREAM(FEET) =    83.35
  FLOW LENGTH(FEET) =   150.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  15.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.10
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =  1
  PIPE-FLOW(CFS) =     18.87
  PIPE TRAVEL TIME(MIN.) =   0.27    Tc(MIN.) =  13.01
  LONGEST FLOWPATH FROM NODE      3.20 TO NODE      3.40 =  1285.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.40 TO NODE      3.40 IS CODE =  11
----------------------------------------------------------------------------
```

```
>>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
==============================================================================

** MAIN STREAM CONFLUENCE DATA **
 STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
 NUMBER    (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
    1      18.87  13.01    2.429  0.20( 0.02) 0.10     8.6        3.20
LONGEST FLOWPATH FROM NODE      3.20 TO NODE      3.40 =  1285.00 FEET.

** MEMORY BANK #  1 CONFLUENCE DATA **
 STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
 NUMBER    (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
    1      35.37  13.73    2.364  0.20( 0.02) 0.10    14.2        3.10
LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.40 =  2115.00 FEET.

** PEAK FLOW RATE TABLE **
 STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
 NUMBER    (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
    1      53.30  13.01    2.429  0.20( 0.02) 0.10    22.0        3.20
    2      53.73  13.73    2.364  0.20( 0.02) 0.10    22.8        3.10
  TOTAL AREA(ACRES) =      22.80

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE(CFS) =       53.73  Tc(MIN.) =   13.733
EFFECTIVE AREA(ACRES) =     22.80  AREA-AVERAGED Fm(INCH/HR) =  0.02
AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
TOTAL AREA(ACRES) =     22.80
LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.40 =  2115.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      3.40 TO NODE      3.40 IS CODE =  10
----------------------------------------------------------------------------
>>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<
==============================================================================

****************************************************************************
FLOW PROCESS FROM NODE      3.30 TO NODE      3.32 IS CODE =  21
----------------------------------------------------------------------------
>>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
INITIAL SUBAREA FLOW-LENGTH(FEET) =   700.00
ELEVATION DATA: UPSTREAM(FEET) =     99.10  DOWNSTREAM(FEET) =     92.10

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.493
*  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.732
SUBAREA Tc AND LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
COMMERCIAL                  D       14.70     0.20       0.10    75   10.49
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA RUNOFF(CFS) =     35.89
TOTAL AREA(ACRES) =     14.70   PEAK FLOW RATE(CFS) =     35.89

****************************************************************************
FLOW PROCESS FROM NODE      3.32 TO NODE      3.40 IS CODE =  31
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
```

```
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    88.10  DOWNSTREAM(FEET) =    83.35
  FLOW LENGTH(FEET) =   235.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  27.0 INCH PIPE IS  19.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  11.81
  ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     35.89
  PIPE TRAVEL TIME(MIN.) =   0.33    Tc(MIN.) =  10.82
  LONGEST FLOWPATH FROM NODE      3.30 TO NODE      3.40 =   935.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.40 TO NODE      3.40 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<
==============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER    (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
      1      35.89  10.82    2.683  0.20( 0.02) 0.10    14.7        3.30
  LONGEST FLOWPATH FROM NODE      3.30 TO NODE      3.40 =   935.00 FEET.

  ** MEMORY BANK #  2 CONFLUENCE DATA **
   STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER    (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
      1      53.30  13.01    2.429  0.20( 0.02) 0.10    22.0        3.20
      2      53.73  13.73    2.364  0.20( 0.02) 0.10    22.8        3.10
  LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.40 =  2115.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER    (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
      1      84.92  10.82    2.683  0.20( 0.02) 0.10    33.1        3.30
      2      85.77  13.01    2.429  0.20( 0.02) 0.10    36.7        3.20
      3      85.31  13.73    2.364  0.20( 0.02) 0.10    37.5        3.10
    TOTAL AREA(ACRES) =      37.50

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       85.77  Tc(MIN.) =   13.006
  EFFECTIVE AREA(ACRES) =     36.75  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =     37.50
  LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.40 =  2115.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.40 TO NODE      3.40 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE      3.40 TO NODE      3.40 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 2 <<<<<
==============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE      3.40 TO NODE      3.60 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
```

```
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    83.35  DOWNSTREAM(FEET) =    82.35
  FLOW LENGTH(FEET) =   200.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  48.0 INCH PIPE IS  35.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.67
  ESTIMATED PIPE DIAMETER(INCH) =  48.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     85.77
  PIPE TRAVEL TIME(MIN.) =   0.38    Tc(MIN.) =  13.39
  LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.60 =  2315.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.60 TO NODE      3.60 IS CODE = 10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
==============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE      3.50 TO NODE      3.52 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   880.00
  ELEVATION DATA: UPSTREAM(FEET) =     97.90  DOWNSTREAM(FEET) =     89.10

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   11.499
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.596
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 D       9.20      0.20      0.10    75   11.50
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =     21.33
  TOTAL AREA(ACRES) =      9.20   PEAK FLOW RATE(CFS) =     21.33

****************************************************************************
  FLOW PROCESS FROM NODE      3.52 TO NODE      3.60 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    85.10  DOWNSTREAM(FEET) =    82.35
  FLOW LENGTH(FEET) =    18.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  15.0 INCH PIPE IS  11.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  22.06
  ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     21.33
  PIPE TRAVEL TIME(MIN.) =   0.01    Tc(MIN.) =  11.51
  LONGEST FLOWPATH FROM NODE      3.50 TO NODE      3.60 =   898.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.60 TO NODE      3.60 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
==============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM     Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER   (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
```

```
    1      21.33  11.51    2.594  0.20( 0.02) 0.10      9.2        3.50
LONGEST FLOWPATH FROM NODE       3.50 TO NODE       3.60 =   898.00 FEET.

** MEMORY BANK #  1 CONFLUENCE DATA **
 STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
 NUMBER    (CFS)  (MIN.)  (INCH/HR)  (INCH/HR)        (ACRES)    NODE
    1      84.92  11.21    2.631  0.20( 0.02) 0.10     33.1        3.30
    2      85.77  13.39    2.395  0.20( 0.02) 0.10     36.7        3.20
    3      85.31  14.12    2.330  0.20( 0.02) 0.10     37.5        3.10
LONGEST FLOWPATH FROM NODE       3.10 TO NODE       3.60 =  2315.00 FEET.

** PEAK FLOW RATE TABLE **
 STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
 NUMBER    (CFS)  (MIN.)  (INCH/HR)  (INCH/HR)        (ACRES)    NODE
    1     105.98  11.21    2.631  0.20( 0.02) 0.10     42.0        3.30
    2     106.36  11.51    2.594  0.20( 0.02) 0.10     42.8        3.50
    3     105.45  13.39    2.395  0.20( 0.02) 0.10     45.9        3.20
    4     104.45  14.12    2.330  0.20( 0.02) 0.10     46.7        3.10
  TOTAL AREA(ACRES) =      46.70

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE(CFS) =       106.36  Tc(MIN.) =   11.513
EFFECTIVE AREA(ACRES) =      42.76  AREA-AVERAGED Fm(INCH/HR) =  0.02
AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
TOTAL AREA(ACRES) =      46.70
LONGEST FLOWPATH FROM NODE       3.10 TO NODE       3.60 =  2315.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE       3.60 TO NODE       3.60 IS CODE =  12
----------------------------------------------------------------------------
>>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
FLOW PROCESS FROM NODE       3.60 TO NODE       3.80 IS CODE =  31
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    82.35  DOWNSTREAM(FEET) =    79.95
FLOW LENGTH(FEET) =   480.00   MANNING'S N =  0.013
DEPTH OF FLOW IN  51.0 INCH PIPE IS  39.3 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) =   9.08
ESTIMATED PIPE DIAMETER(INCH) =  51.00    NUMBER OF PIPES =   1
PIPE-FLOW(CFS) =    106.36
PIPE TRAVEL TIME(MIN.) =   0.88    Tc(MIN.) =  12.39
LONGEST FLOWPATH FROM NODE       3.10 TO NODE       3.80 =  2795.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE       3.80 TO NODE       3.80 IS CODE =  10
----------------------------------------------------------------------------
>>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
FLOW PROCESS FROM NODE       3.70 TO NODE       3.72 IS CODE =  21
----------------------------------------------------------------------------
>>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
INITIAL SUBAREA FLOW-LENGTH(FEET) =  1510.00
```

```
ELEVATION DATA: UPSTREAM(FEET) =     94.00  DOWNSTREAM(FEET) =     86.45

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   16.393
*  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.157
SUBAREA Tc AND LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
COMMERCIAL                  D       15.50      0.20      0.10    75   16.39
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA RUNOFF(CFS) =     29.82
TOTAL AREA(ACRES) =     15.50   PEAK FLOW RATE(CFS) =     29.82

****************************************************************************
FLOW PROCESS FROM NODE      3.72 TO NODE      3.80 IS CODE =  31
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    82.45  DOWNSTREAM(FEET) =    79.95
FLOW LENGTH(FEET) =    50.00   MANNING'S N =  0.013
DEPTH OF FLOW IN  21.0 INCH PIPE IS  15.4 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) =  15.79
ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
PIPE-FLOW(CFS) =     29.82
PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =  16.45
LONGEST FLOWPATH FROM NODE      3.70 TO NODE      3.80 =  1560.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      3.80 TO NODE      3.80 IS CODE =  11
----------------------------------------------------------------------------
>>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

** MAIN STREAM CONFLUENCE DATA **
 STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
 NUMBER    (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
    1      29.82  16.45    2.154  0.20( 0.02) 0.10    15.5       3.70
LONGEST FLOWPATH FROM NODE      3.70 TO NODE      3.80 =  1560.00 FEET.

** MEMORY BANK #  1 CONFLUENCE DATA **
 STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
 NUMBER    (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
    1     105.98  12.09    2.524  0.20( 0.02) 0.10    42.0       3.30
    2     106.36  12.39    2.493  0.20( 0.02) 0.10    42.8       3.50
    3     105.45  14.27    2.317  0.20( 0.02) 0.10    45.9       3.20
    4     104.45  15.00    2.256  0.20( 0.02) 0.10    46.7       3.10
LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.80 =  2795.00 FEET.

** PEAK FLOW RATE TABLE **
 STREAM      Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
 NUMBER    (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
    1     131.71  12.09    2.524  0.20( 0.02) 0.10    53.4       3.30
    2     132.40  12.39    2.493  0.20( 0.02) 0.10    54.4       3.50
    3     133.30  14.27    2.317  0.20( 0.02) 0.10    59.4       3.20
    4     132.95  15.00    2.256  0.20( 0.02) 0.10    60.8       3.10
    5     129.51  16.45    2.154  0.20( 0.02) 0.10    62.2       3.70
  TOTAL AREA(ACRES) =     62.20

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
```

```
  PEAK FLOW RATE(CFS) =       133.30  Tc(MIN.) =   14.273
  EFFECTIVE AREA(ACRES) =      59.40  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =      62.20
  LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.80 =  2795.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.80 TO NODE      3.95 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    79.95  DOWNSTREAM(FEET) =    77.60
  FLOW LENGTH(FEET) =   470.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  57.0 INCH PIPE IS  41.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.69
  ESTIMATED PIPE DIAMETER(INCH) =  57.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    133.30
  PIPE TRAVEL TIME(MIN.) =   0.81    Tc(MIN.) =  15.08
  LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.95 =  3265.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.95 TO NODE      3.95 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE      3.90 TO NODE      3.92 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   540.00
  ELEVATION DATA: UPSTREAM(FEET) =     92.00  DOWNSTREAM(FEET) =     86.60

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.459
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.904
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 D       3.70      0.20      0.10    75    9.46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =       9.60
  TOTAL AREA(ACRES) =       3.70   PEAK FLOW RATE(CFS) =       9.60

****************************************************************************
  FLOW PROCESS FROM NODE      3.92 TO NODE      3.95 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    82.60  DOWNSTREAM(FEET) =    77.60
  FLOW LENGTH(FEET) =    50.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   8.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  15.40
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       9.60
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =   9.51
```

```
  LONGEST FLOWPATH FROM NODE      3.90 TO NODE      3.95 =   590.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.95 TO NODE      3.95 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM     Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
      1      9.60   9.51    2.894  0.20( 0.02) 0.10      3.7       3.90
  LONGEST FLOWPATH FROM NODE      3.90 TO NODE      3.95 =   590.00 FEET.

  ** MEMORY BANK #  2 CONFLUENCE DATA **
   STREAM     Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
      1    131.71  12.92    2.438  0.20( 0.02) 0.10     53.4       3.30
      2    132.40  13.20    2.412  0.20( 0.02) 0.10     54.4       3.50
      3    133.30  15.08    2.250  0.20( 0.02) 0.10     59.4       3.20
      4    132.95  15.81    2.197  0.20( 0.02) 0.10     60.8       3.10
      5    129.51  17.27    2.102  0.20( 0.02) 0.10     62.2       3.70
  LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.95 =  3265.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
      1    124.86   9.51    2.894  0.20( 0.02) 0.10     43.0       3.90
      2    139.79  12.92    2.438  0.20( 0.02) 0.10     57.1       3.30
      3    140.39  13.20    2.412  0.20( 0.02) 0.10     58.1       3.50
      4    140.75  15.08    2.250  0.20( 0.02) 0.10     63.1       3.20
      5    140.22  15.81    2.197  0.20( 0.02) 0.10     64.5       3.10
      6    136.47  17.27    2.102  0.20( 0.02) 0.10     65.9       3.70
    TOTAL AREA(ACRES) =     65.90

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      140.75  Tc(MIN.) =   15.081
  EFFECTIVE AREA(ACRES) =     63.10  AREA-AVERAGED Fm(INCH/HR) =  0.02
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =     65.90
  LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.95 =  3265.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.95 TO NODE      3.96 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    77.60  DOWNSTREAM(FEET) =    76.85
  FLOW LENGTH(FEET) =   150.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  57.0 INCH PIPE IS  43.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.76
  ESTIMATED PIPE DIAMETER(INCH) =  57.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    140.75
  PIPE TRAVEL TIME(MIN.) =   0.26    Tc(MIN.) =  15.34
  LONGEST FLOWPATH FROM NODE      3.10 TO NODE      3.96 =  3415.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE      3.96 TO NODE      3.96 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
```

```
==============================================================================

******************************************************************************
  FLOW PROCESS FROM NODE       3.96 TO NODE       3.96 IS CODE =  12
------------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 2 <<<<<
==============================================================================

******************************************************************************
  FLOW PROCESS FROM NODE       4.10 TO NODE       4.20 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    730.00
  ELEVATION DATA: UPSTREAM(FEET) =     101.83  DOWNSTREAM(FEET) =      94.53

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.671
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.706
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA       Fp          Ap      SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                  D       12.40      0.20       0.10    75   10.67
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =      29.98
  TOTAL AREA(ACRES) =      12.40   PEAK FLOW RATE(CFS) =      29.98

******************************************************************************
  FLOW PROCESS FROM NODE       4.20 TO NODE       4.50 IS CODE =  31
------------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =     90.53  DOWNSTREAM(FEET) =     85.23
  FLOW LENGTH(FEET) =  1060.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  33.0 INCH PIPE IS  23.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.70
  ESTIMATED PIPE DIAMETER(INCH) =  33.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      29.98
  PIPE TRAVEL TIME(MIN.) =   2.64    Tc(MIN.) =  13.31
  LONGEST FLOWPATH FROM NODE       4.10 TO NODE       4.50 =  1790.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE       4.50 TO NODE       4.50 IS CODE =  10
------------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
==============================================================================

******************************************************************************
  FLOW PROCESS FROM NODE       4.30 TO NODE       4.40 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =    855.00
  ELEVATION DATA: UPSTREAM(FEET) =     100.95  DOWNSTREAM(FEET) =      92.40

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   11.367
```

```
*  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.612
SUBAREA Tc AND LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
COMMERCIAL                  D       8.30      0.20       0.10    75   11.37
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
SUBAREA RUNOFF(CFS) =      19.36
TOTAL AREA(ACRES) =       8.30   PEAK FLOW RATE(CFS) =     19.36

****************************************************************************
FLOW PROCESS FROM NODE      4.40 TO NODE      4.50 IS CODE =  31
----------------------------------------------------------------------------
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    88.40  DOWNSTREAM(FEET) =    85.23
FLOW LENGTH(FEET) =    90.00   MANNING'S N =  0.013
DEPTH OF FLOW IN  21.0 INCH PIPE IS  12.8 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) =  12.64
ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
PIPE-FLOW(CFS) =      19.36
PIPE TRAVEL TIME(MIN.) =   0.12    Tc(MIN.) =  11.49
LONGEST FLOWPATH FROM NODE      4.30 TO NODE      4.50 =   945.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      4.50 TO NODE      4.50 IS CODE =  11
----------------------------------------------------------------------------
>>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

** MAIN STREAM CONFLUENCE DATA **
 STREAM     Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
 NUMBER   (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
   1      19.36  11.49    2.597  0.20( 0.02) 0.10     8.3        4.30
LONGEST FLOWPATH FROM NODE      4.30 TO NODE      4.50 =   945.00 FEET.

** MEMORY BANK #  1 CONFLUENCE DATA **
 STREAM     Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
 NUMBER   (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
   1      29.98  13.31    2.402  0.20( 0.02) 0.10    12.4        4.10
LONGEST FLOWPATH FROM NODE      4.10 TO NODE      4.50 =  1790.00 FEET.

** PEAK FLOW RATE TABLE **
 STREAM     Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
 NUMBER   (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
   1      47.35  11.49    2.597  0.20( 0.02) 0.10    19.0        4.30
   2      47.87  13.31    2.402  0.20( 0.02) 0.10    20.7        4.10
  TOTAL AREA(ACRES) =     20.70

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE(CFS) =       47.87  Tc(MIN.) =   13.308
EFFECTIVE AREA(ACRES) =     20.70  AREA-AVERAGED Fm(INCH/HR) =  0.02
AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.10
TOTAL AREA(ACRES) =     20.70
LONGEST FLOWPATH FROM NODE      4.10 TO NODE      4.50 =  1790.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE      4.50 TO NODE      4.50 IS CODE =  12
----------------------------------------------------------------------------
>>>>>CLEAR MEMORY BANK # 1 <<<<<
```

```
==============================================================================

******************************************************************************
  FLOW PROCESS FROM NODE      4.50 TO NODE      4.60 IS CODE =  31
------------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    85.23  DOWNSTREAM(FEET) =    85.00
  FLOW LENGTH(FEET) =    45.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  39.0 INCH PIPE IS  27.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.58
  ESTIMATED PIPE DIAMETER(INCH) =  39.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     47.87
  PIPE TRAVEL TIME(MIN.) =   0.10    Tc(MIN.) =  13.41
  LONGEST FLOWPATH FROM NODE      4.10 TO NODE      4.60 =  1835.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE      5.10 TO NODE      5.20 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =  1010.00
  ELEVATION DATA: UPSTREAM(FEET) =     97.90  DOWNSTREAM(FEET) =     92.85

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   13.958
  *  25 YEAR RAINFALL INTENSITY(INCH/HR) =  2.344
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 D       8.40      0.20      0.10    75   13.96
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.10
  SUBAREA RUNOFF(CFS) =     17.57
  TOTAL AREA(ACRES) =      8.40   PEAK FLOW RATE(CFS) =     17.57

******************************************************************************
  FLOW PROCESS FROM NODE      5.20 TO NODE      5.30 IS CODE =  31
------------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    88.85  DOWNSTREAM(FEET) =    88.20
  FLOW LENGTH(FEET) =   130.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  27.0 INCH PIPE IS  19.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.86
  ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     17.57
  PIPE TRAVEL TIME(MIN.) =   0.37    Tc(MIN.) =  14.33
  LONGEST FLOWPATH FROM NODE      5.10 TO NODE      5.30 =  1140.00 FEET.

==============================================================================
==============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

4.0 APPENDIX

4.1 Hydrology Map – Existing Condition

4.2 Hydrology Map – Proposed Condition

APPENDIX G
Traffic Model Output

INTERSECTION

LEVEL OF SERVICE

CALCULATION SHEETS

ICU CALCULATION

N/S Street: Woodruff Avenue
E/W Street: Stewart & Gray Road

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	Lanes	Capa-city	Volume	V/C	Volume	V/C	Volume	V/C
NBL	1	1600	120	0.075	132	0.082	142	0.089
NBT	2	3200	620	0.244*	682	0.268*	708	0.288*
NBR	s	s	160	s	176	s	215	s
SBL	1	1600	60	0.037*	66	0.041*	66	0.041*
SBT	2	3200	580	0.181	638	0.199	645	0.202
SBR	1	1600	40	0.025	44	0.028	68	0.042
EBL	1	1600	60	0.038	66	0.041	119	0.074
EBT	2	3200	620	0.194*	682	0.213*	948	0.296*
EBR	1	1600	120	0.075	132	0.082	143	0.089
WBL	1	1600	100	0.062*	110	0.069*	121	0.076*
WBT	2	3200	360	0.119	396	0.131	500	0.163
WBR	s	s	20	s	22	s	22	s
Sum of Critical Movements				0.537		0.591		0.701
Clearance				0.100		0.100		0.100
Total ICU				0.637		0.691		0.801
Level of Service				B		B		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Woodruff Avenue (East)
E/W Street: Imperial Highway

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	100	0.062	110	0.069	135	0.084*
NBT	2	3200	730	0.228*	803	0.251*	826	0.258
NBR	1	1600	120	0.075	132	0.082	132	0.082
SBL	1	1600	80	0.050*	88	0.055*	88	0.055
SBT	2	3200	660	0.206	726	0.227	769	0.240*
SBR	1	1600	110	0.069	121	0.069	121	0.069
EBL	1	1600	100	0.062	110	0.069	110	0.069
EBT	3	4800	1430	0.315*	1573	0.346*	1826	0.412*
EBR	s	s	80	s	88	s	151	s
WBL	1	1600	80	0.050*	88	0.055*	88	0.055*
WBT	3	4800	830	0.188	913	0.206	1013	0.227
WBR	s	s	70	s	77	s	77	s
Sum of Critical Movements				0.643		0.707		0.791
Clearance				0.100		0.100		0.100
Total ICU				0.743		0.807		0.891
Level of Service				C		D		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Firestone Blvd.

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	290	0.181*	319	0.199*	354	0.221*
NBT	2	3200	1320	0.412	1452	0.454	1488	0.465
NBR	1	1600	220	0.138	242	0.151	242	0.151
SBL	1	1600	170	0.106	187	0.117	187	0.117
SBT	2	3200	1020	0.369*	1122	0.406*	1258	0.448*
SBR	s	s	160	s	176	s	176	s
EBL	1	1600	190	0.119*	209	0.131*	209	0.131*
EBT	3	4800	990	0.244	1089	0.268	1089	0.297
EBR	s	s	180	s	198	s	335	s
WBL	1	1600	130	0.081	143	0.089	143	0.089
WBT	3	4800	1350	0.281*	1485	0.309*	1485	0.309*
WBR	1	1600	320	0.200	352	0.220	352	0.220
Sum of Critical Movements				0.950		1.045		1.109
Clearance				0.100		0.100		0.100
Total ICU				1.050		1.145		1.209
Level of Service				F		F		F

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Bellflower Blvd.

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	Lanes	Capa-city	Volume	V/C	Volume	V/C	Volume	V/C
NBL	1	1600	10	0.006	11	0.007	11	0.007
NBT	2	3200	1290	0.406*	1419	0.447*	1441	0.454*
NBR	s	s	10	s	11	s	11	s
SBL	1	1600	430	0.269*	473	0.296*	659	0.412*
SBT	3	4800	920	0.194	1012	0.213	1099	0.231
SBR	s	s	10	s	11	s	11	s
EBL	0	0	0	0	0	0	0	0
EBT	1	1600	10	0.038*	11	0.041*	11	0.041*
EBR	s	s	50	s	55	s	55	s
WBL	s	s	10	0.006*	11	0.007*	11	0.007*
WBT	1	1600	20	0.019	22	0.021	22	0.021
WBR	2	3200	560	0.175	616	0.192	665	0.208
Sum of Critical Movements				0.719		0.791		0.914
Clearance				0.100		0.100		0.100
Total ICU				0.819		0.891		1.014
Level of Service				D		D		F

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Stewart & Gray Road

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	210	0.131*	231	0.144*	259	0.162*
NBT	2	3200	1170	0.375	1287	0.412	1306	0.418
NBR	s	s	30	s	33	s	33	s
SBL	1	1600	70	0.044	77	0.048	81	0.050
SBT	2	3200	860	0.297*	946	0.327*	1029	0.352*
SBR	s	s	90	s	99	s	99	s
EBL	1	1600	130	0.081	143	0.089	143	0.089
EBT	2	3200	840	0.294*	924	0.323*	1047	0.408*
EBR	s	s	100	s	110	s	260	s
WBL	1	1600	80	0.050*	88	0.055*	88	0.055*
WBT	2	3200	640	0.200	704	0.220	747	0.233
WBR	1	1600	70	0.044	77	0.048	80	0.050
Sum of Critical Movements				0.772		0.849		0.977
Clearance				0.100		0.100		0.100
Total ICU				0.872		0.949		1.077
Level of Service				D		E		F

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Alameda Street

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	Lanes	Capa-city	Volume	V/C	Volume	V/C	Volume	V/C
NBL	1	1600	30	0.019	33	0.021	48	0.030
NBT	2	3200	1320	0.413*	1452	0.454*	1550	0.484*
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	2	3200	1040	0.328	1144	0.361	1405	0.443
SBR	s	s	10	s	11	s	14	s
EBL	1	1600	80	0.050	88	0.055	92	0.058
EBT	0	0	0	0	0	0	0	0
EBR	1	1600	120	0.075*	132	0.082*	196	0.122*
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0
Sum of Critical Movements				0.488		0.536		0.606
Clearance				0.100		0.100		0.100
Total ICU				0.588		0.636		0.706
Level of Service				A		B		C

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Clark Avenue

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	0	0	0	0	0	0	0	0
NBT	2	3200	910	0.291*	1001	0.320*	1274	0.405*
NBR	s	s	20	s	22	s	22	s
SBL	1	1600	280	0.175*	308	0.192*	368	0.230*
SBT	2	3200	900	0.281	990	0.309	1063	0.332
SBR	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	2	3200	440	0.137*	484	0.151*	521	0.163*
Sum of Critical Movements				0.603		0.663		0.798
Clearance				0.100		0.100		0.100
Total ICU				0.703		0.763		0.898
Level of Service				C		C		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Imperial Highway

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	Lanes	Capa-city	Volume	V/C	Volume	V/C	Volume	V/C
NBL	1	1600	290	0.181*	319	0.199*	319	0.199
NBT	3	4800	770	0.206	847	0.227	1029	0.318*
NBR	s	s	220	s	242	s	499	s
SBL	1	1600	180	0.112	198	0.124	198	0.124*
SBT	3	4800	650	0.156*	715	0.172*	764	0.187
SBR	s	s	100	s	110	s	134	s
EBL	1	1600	90	0.056	99	0.062	190	0.119
EBT	3	4800	770	0.219*	847	0.241*	1029	0.279*
EBR	s	s	280	s	308	s	308	s
WBL	1	1600	190	0.119*	209	0.131*	270	0.169*
WBT	3	4800	990	0.219	1089	0.241	1136	0.250
WBR	s	s	60	s	66	s	66	s
Sum of Critical Movements				0.675		0.743		0.890
Clearance				0.100		0.100		0.100
Total ICU				0.775		0.843		0.990
Level of Service				C		D		E

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: I-105 On/Off Ramps

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	2	3200	240	0.075*	264	0.082*	264	0.082*
NBT	2	3200	500	0.156	550	0.172	687	0.215
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	2	3200	840	0.263*	924	0.289*	978	0.306*
SBR	2	3200	340	0.106	374	0.117	429	0.134
EBL	2	3200	590	0.184*	649	0.203*	868	0.271*
EBT	0	0	0	0	0	0	0	0
EBR	1	1600	500	0.312	550	0.344	550	0.344
WBL	2	3200	140	0.044	154	0.048	154	0.048
WBT	0	0	0	0	0	0	0	0
WBR	1	1600	150	0.094*	165	0.103*	248	0.155*
Sum of Critical Movements				0.616		0.677		0.814
Clearance				0.100		0.100		0.100
Total ICU				0.716		0.777		0.914
Level of Service				C		C		E

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Boulevard
E/W Street: Gardendale Street/Foster Road

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	50	0.031*	55	0.034*	55	0.034*
NBT	2	3200	620	0.212	682	0.234	763	0.259
NBR	s	s	60	s	66	s	66	s
SBL	1	1600	50	0.031	55	0.034	62	0.039
SBT	2	3200	740	0.250*	814	0.275*	835	0.284*
SBR	s	s	60	s	66	s	73	s
EBL	1	1600	150	0.094*	165	0.103*	193	0.121*
EBT	2	3200	290	0.112	319	0.124	319	0.124
EBR	s	s	70	s	77	s	77	s
WBL	1	1600	130	0.081	143	0.089	143	0.089
WBT	2	3200	370	0.173*	407	0.191*	407	0.200*
WBR	s	s	185	s	204	s	232	s
Sum of Critical Movements				0.548		0.603		0.639
Clearance				0.100		0.100		0.100
Total ICU				0.648		0.703		0.739
Level of Service				B		C		C

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Bellflower Blvd.
E/W Street: Stewart & Gray Road

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	240	0.150*	264	0.165*	297	0.186*
NBT	2	3200	620	0.234	682	0.258	729	0.292
NBR	s	s	130	s	143	s	207	s
SBL	1	1600	60	0.038	66	0.041	66	0.041
SBT	2	3200	400	0.131*	440	0.144*	622	0.202*
SBR	s	s	20	s	22	s	26	s
EBL	1	1600	10	0.006	11	0.007	13	0.008
EBT	2	3200	710	0.222*	781	0.244*	791	0.247*
EBR	1	1600	270	0.169	297	0.186	404	0.252
WBL	1	1600	110	0.069*	121	0.076*	382	0.239*
WBT	2	3200	490	0.159	539	0.175	555	0.180
WBR	s	s	20	s	22	s	22	s
Sum of Critical Movements				0.572		0.629		0.874
Clearance				0.100		0.100		0.100
Total ICU				0.672		0.729		0.974
Level of Service				B		C		E

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Bellflower Blvd.
E/W Street: Washburn Road

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	0	0	0	0	0	0	0	0
NBT	2	3200	860	0.341*	946	0.375*	1126	0.440*
NBR	s	s	230	s	253	s	283	s
SBL	1	1600	240	0.150*	264	0.165*	267	0.167*
SBT	2	3200	560	0.175	616	0.192	1187	0.371
SBR	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	1	1600	120	0.075*	132	0.082*	261	0.163*
WBT	0	0	0	0	0	0	0	0
WBR	1	1600	130	0.081	143	0.089	147	0.092
Sum of Critical Movements				0.566		0.622		0.770
Clearance				0.100		0.100		0.100
Total ICU				0.666		0.722		0.870
Level of Service				B		C		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Bellflower Blvd.
E/W Street: Imperial Highway

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	170	0.106	187	0.117	374	0.234
NBT	2	3200	780	0.347*	858	0.382*	1187	0.484*
NBR	s	s	330	s	363	s	363	s
SBL	1	1600	80	0.050*	88	0.055*	131	0.082*
SBT	2	3200	520	0.200	572	0.220	676	0.252
SBR	s	s	120	s	132	s	132	s
EBL	1	1600	160	0.100	176	0.110	176	0.110*
EBT	3	4800	700	0.181*	770	0.199*	798	0.212
EBR	s	s	170	s	187	s	222	s
WBL	1	1600	370	0.231*	407	0.254*	407	0.254
WBT	3	4800	1200	0.283	1320	0.312	1470	0.369*
WBR	s	s	160	s	176	s	299	s
Sum of Critical Movements				0.809		0.890		1.045
Clearance				0.100		0.100		0.100
Total ICU				0.909		0.990		1.145
Level of Service				E		E		F

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Bellflower Blvd.
E/W Street: I-105 Westbound On/Off Ramps

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	260	0.162*	286	0.179*	286	0.179*
NBT	2	3200	1010	0.316	1111	0.347	1437	0.449
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	3	4800	770	0.225*	847	0.247*	934	0.276*
SBR	s	s	310	s	341	s	393	s
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	1	1600	190	0.094	209	0.103	209	0.131
WBT	1s	1600	0	0.094	0	0.103	0	0.149
WBR	1	1600	260	0.094*	286	0.103*	476	0.149*
Sum of Critical Movements				0.481		0.529		0.604
Clearance				0.100		0.100		0.100
Total ICU				0.581		0.629		0.704
Level of Service				A		B		C

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Bellflower Blvd.
E/W Street: I-105 Eastbound On/Off Ramps

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	0	0	0	0	0	0	0	0
NBT	3	4800	770	0.200*	847	0.220*	983	0.248*
NBR	s	s	190	s	209	s	209	s
SBL	1	1600	210	0.131*	231	0.144*	283	0.177*
SBT	2	3200	740	0.231	814	0.254	849	0.265
SBR	0	0	0	s	0	0	0	0
EBL	1	1600	510	0.200*	561	0.220*	751	0.260*
EBT	1s	1600	0	0.200	0	0.220	0	0.260
EBR	1	1600	450	0.200	495	0.220	495	0.260
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0
Sum of Critical Movements				0.531		0.584		0.685
Clearance				0.100		0.100		0.100
Total ICU				0.631		0.684		0.785
Level of Service				B		B		C

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Clark Avenue
E/W Street: Imperial Highway

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	190	0.119*	209	0.131*	209	0.131*
NBT	2	3200	280	0.112	308	0.124	354	0.166
NBR	s	s	80	s	88	s	178	s
SBL	1	1600	50	0.031	55	0.034	55	0.034
SBT	2	3200	190	0.069*	209	0.076*	221	0.084*
SBR	s	s	30	s	33	s	47	s
EBL	1	1600	70	0.044	77	0.048	152	0.095
EBT	3	4800	950	0.231*	1045	0.254*	1409	0.330*
EBR	s	s	160	s	176	s	176	s
WBL	1	1600	220	0.137*	242	0.151*	265	0.166*
WBT	3	4800	1050	0.238	1155	0.261	1249	0.281
WBR	s	s	90	s	99	s	99	s
Sum of Critical Movements				0.556		0.612		0.711
Clearance				0.100		0.100		0.100
Total ICU				0.656		0.712		0.811
Level of Service				B		C		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Ardis Avenue
E/W Street: Imperial Highway

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	80	0.050	88	0.055	88	0.055*
NBT	1	1600	5	0.053*	6	0.059*	74	0.101
NBR	s	s	80	s	88	s	88	s
SBL	s/1	s/1600	10	s	11	s	74	0.046
SBT	1	1600	5	0.016*	6	0.017*	24	0.095*
SBR	s	s	10	s	11	s	128	s
EBL	1	1600	10	0.006	11	0.069	465	0.291*
EBT	3	4800	920	0.225*	1012	0.247*	1012	0.247
EBR	s	s	160	s	176	s	176	s
WBL	1	1600	150	0.094*	165	0.103*	165	0.103
WBT	3	4800	1240	0.262	1364	0.289	1364	0.284*
WBR	s/1	s/1600	20	s	22	s	359	0.224
Sum of Critical Movements				0.388		0.426		0.725
Clearance				0.100		0.100		0.100
Total ICU				0.488		0.526		0.825
Level of Service				A		A		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Woodruff Avenue (West)
E/W Street: Firestone Blvd.

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0
NBR	1	1600	0	0	0	0	0	0
SBL	2	3200	370	0.116*	407	0.127*	475	0.148*
SBT	0	0	0	0	0	0	0	0
SBR	1	1600	140	0.088	154	0.096	154	0.096
EBL	1	1600	80	0.050*	88	0.055*	88	0.055*
EBT	3	4800	1010	0.212	1111	0.234	1111	0.234
EBR	s	s	10	s	11	s	11	s
WBL	0	0	0	0	0	0	0	0
WBT	3	4800	1810	0.437*	1991	0.481*	1991	0.485*
WBR	s	s	290	s	319	s	337	s
Sum of Critical Movements				0.603		0.663		0.688
Clearance				0.100		0.100		0.100
Total ICU				0.703		0.763		0.788
Level of Service				C		C		C

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Woodruff Avenue (East)
E/W Street: Firestone Blvd.

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	2	3200	650	0.203*	715	0.223*	733	0.229*
NBT	s	s	0	0	0	0	0	0
NBR	1	1600	160	0.100	176	0.110	176	0.110
SBL	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0
SBR	1	1600	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0
EBT	3	4800	990	0.206*	1089	0.227*	1089	0.227*
EBR	1	1600	380	0.238	418	0.231	486	0.304
WBL	1	1600	230	0.144*	253	0.158*	253	0.158*
WBT	3	4800	1440	0.300	1584	0.330	1584	0.330
WBR	s	s	0	s	0	0	0	0
Sum of Critical Movements				0.553		0.608		0.614
Clearance				0.100		0.100		0.100
Total ICU				0.653		0.708		0.714
Level of Service				B		C		C

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Stewart & Gray Road
E/W Street: Firestone Blvd.

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0
NBR	2	3200	650	0.203*	715	0.223*	784	0.245*
SBL	1	1600	90	0.056	99	0.062	99	0.062
SBT	1	1600	80	0.081*	88	0.089*	116	0.107*
SBR	s	s	50	s	55	s	55	s
EBL	0	0	0	0	0	0	0	0
EBT	3	4800	1020	0.212	1122	0.234	1122	0.234*
EBR	1	1600	150	0.094	165	0.103	233	0.146
WBL	2	3200	250	0.078	275	0.086	489	0.153*
WBT	3	4800	1600	0.340*	1760	0.374*	1760	0.374
WBR	s	s	30	s	33	s	33	s
Sum of Critical Movements				0.624		0.686		0.739
Clearance				0.100		0.100		0.100
Total ICU				0.724		0.786		0.839
Level of Service				C		C		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Woodruff Avenue
E/W Street: Stewart & Gray Road

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	60	0.038	66	0.041	69	0.043
NBT	2	3200	720	0.244*	792	0.268*	798	0.273*
NBR	s	s	60	s	66	s	75	s
SBL	1	1600	30	0.019*	33	0.021*	33	0.021*
SBT	2	3200	570	0.178	627	0.196	653	0.204
SBR	1	1600	30	0.019	33	0.021	75	0.047
EBL	1	1600	30	0.019	33	0.021	45	0.028
EBT	2	3200	700	0.219*	770	0.241*	830	0.259*
EBR	1	1600	120	0.075	132	0.082	134	0.084
WBL	1	1600	50	0.031*	55	0.034*	93	0.058*
WBT	2	3200	500	0.166	550	0.182	782	0.255
WBR	s	s	30	s	33	s	33	s
Sum of Critical Movements				0.513		0.564		0.611
Clearance				0.100		0.100		0.100
Total ICU				0.613		0.664		0.711
Level of Service				B		B		C

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Woodruff Avenue (East)
E/W Street: Imperial Highway

AM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	120	0.075*	132	0.082*	186	0.116*
NBT	2	3200	640	0.200	704	0.220	735	0.230
NBR	1	1600	140	0.088	154	0.096	154	0.096
SBL	1	1600	50	0.031	55	0.034	55	0.034
SBT	2	3200	650	0.203*	715	0.223*	724	0.226*
SBR	1	1600	60	0.038	66	0.041	66	0.041
EBL	1	1600	110	0.069*	121	0.076*	121	0.076*
EBT	3	4800	750	0.188	825	0.206	881	0.221
EBR	s	s	150	s	165	s	180	s
WBL	1	1600	130	0.081	143	0.089	143	0.089
WBT	3	4800	1180	0.264*	1298	0.291*	1517	0.337*
WBR	s	s	90	s	99	s	99	s
Sum of Critical Movements				0.611		0.672		0.755
Clearance				0.100		0.100		0.100
Total ICU				0.711		0.772		0.855
Level of Service				C		C		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Firestone Blvd.

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	Lanes	Capa-city	Volume	V/C	Volume	V/C	Volume	V/C
NBL	1	1600	120	0.075	132	0.082	290	0.181
NBT	2	3200	1190	0.372*	1309	0.409*	1467	0.458*
NBR	1	1600	220	0.138	242	0.151	242	0.151
SBL	1	1600	260	0.163*	286	0.179*	286	0.179*
SBT	2	3200	1020	0.341	1122	0.375	1184	0.394
SBR	s	s	70	s	77	s	77	s
EBL	1	1600	370	0.231*	407	0.254*	407	0.254*
EBT	3	4800	1720	0.394	1892	0.433	1892	0.446
EBR	s	s	170	s	187	s	249	s
WBL	1	1600	160	0.100	176	0.110	176	0.110
WBT	3	4800	1320	0.275*	1452	0.302*	1452	0.302*
WBR	1	1600	240	0.150	264	0.165	264	0.165
Sum of Critical Movements				1.041		1.144		1.193
Clearance				0.100		0.100		0.100
Total ICU				1.141		1.244		1.293
Level of Service				F		F		F

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Bellflower Blvd.

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	Lanes	Capa-city	Volume	V/C	Volume	V/C	Volume	V/C
NBL	1	1600	10	0.006	11	0.007	11	0.007
NBT	2	3200	1080	0.341*	1188	0.375*	1296	0.408*
NBR	s	s	10	s	11	s	11	s
SBL	1	1600	430	0.269*	473	0.295*	544	0.340*
SBT	3	4800	930	0.194	1023	0.213	1076	0.224
SBR	s	s	0	s	0	s	0	s
EBL	0	0	0	0	0	0	0	0
EBT	1	1600	10	0.012*	11	0.014*	11	0.014*
EBR	s	s	10	s	11	s	11	s
WBL	s	s	10	0.012*	11	0.014*	11	0.014*
WBT	1	1600	10	0.012	11	0.014	11	0.014
WBR	2	3200	480	0.150	528	0.165	736	0.230
Sum of Critical Movements				0.634		0.698		0.776
Clearance				0.100		0.100		0.100
Total ICU				0.734		0.798		0.876
Level of Service				C		C		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Stewart & Gray Road

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	200	0.125*	220	0.138*	352	0.220*
NBT	2	3200	940	0.319	1034	0.351	1128	0.380
NBR	s	s	80	s	88	s	88	s
SBL	1	1600	40	0.025	44	0.028	57	0.036
SBT	2	3200	900	0.294*	990	0.323*	1030	0.336*
SBR	s	s	40	s	44	s	44	s
EBL	1	1600	90	0.056	99	0.062	99	0.062
EBT	2	3200	730	0.291*	803	0.320*	900	0.359*
EBR	s	s	200	s	220	s	248	s
WBL	1	1600	60	0.037*	66	0.041*	66	0.041*
WBT	2	3200	540	0.338	594	0.186	778	0.243
WBR	1	1600	80	0.050	88	0.055	102	0.064
Sum of Critical Movements				0.747		0.822		0.956
Clearance				0.100		0.100		0.100
Total ICU				0.847		0.922		1.056
Level of Service				D		E		F

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Alameda Street

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	120	0.075*	132	0.082*	197	0.123*
NBT	2	3200	1200	0.375	1320	0.412	1700	0.531
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	2	3200	1120	0.372*	1232	0.409*	1470	0.488*
SBR	s	s	70	s	77	s	91	s
EBL	1	1600	40	0.025	44	0.028	57	0.036
EBT	0	0	0	0	0	0	0	0
EBR	1	1600	110	0.069*	121	0.076*	139	0.087*
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0
Sum of Critical Movements				0.516		0.567		0.698
Clearance				0.100		0.100		0.100
Total ICU				0.616		0.667		0.798
Level of Service				B		B		C

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Clark Avenue

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	Lanes	Capa-city	Volume	V/C	Volume	V/C	Volume	V/C
NBL	0	0	0	0	0	0	0	0
NBT	2	3200	1040	0.334*	1144	0.368*	1342	0.430*
NBR	s	s	30	s	33	s	33	s
SBL	1	1600	210	0.131*	231	0.144*	291	0.182*
SBT	2	3200	1030	0.322	1133	0.354	1499	0.468
SBR	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	2	3200	300	0.094*	330	0.103*	487	0.152*
Sum of Critical Movements				0.559		0.615		0.764
Clearance				0.100		0.100		0.100
Total ICU				0.659		0.715		0.864
Level of Service				B		C		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: Imperial Highway

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	370	0.231*	407	0.254*	407	0.254*
NBT	3	4800	840	0.225	924	0.248	1056	0.290
NBR	s	s	240	s	264	s	336	s
SBL	1	1600	90	0.056	99	0.062	99	0.062
SBT	3	4800	890	0.206*	979	0.227*	1223	0.303*
SBR	s	s	100	s	110	s	232	s
EBL	1	1600	120	0.075	132	0..082	198	0.124
EBT	3	4800	1190	0.269*	1309	0.296*	1368	0.308*
EBR	s	s	100	s	110	s	110	s
WBL	1	1600	210	0.131*	231	0.144*	491	0.307*
WBT	3	4800	680	0.162	748	0.179	942	0.219
WBR	s	s	100	s	110	s	110	s
Sum of Critical Movements				0.837		0.921		1.172
Clearance				0.100		0.100		0.100
Total ICU				0.937		1.021		1.272
Level of Service				E		F		F

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Blvd.
E/W Street: I-105 On/Off Ramps

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	2	3200	325	0.101*	358	0.112*	358	0.112*
NBT	2	3200	880	0.275	968	0.302	1030	0.322
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	2	3200	870	0.272*	957	0.299*	1209	0.378*
SBR	2	3200	420	0.131	462	0.144	714	0.223
EBL	2	3200	370	0.116*	407	0.127*	509	0.159*
EBT	0	0	0	0	0	0	0	0
EBR	1	1600	340	0.212	374	0.234	374	0.234
WBL	2	3200	240	0.075	264	0.082	264	0.082
WBT	0	0	0	0	0	0	0	0
WBR	1	1600	200	0.125*	220	0.138*	260	0.162*
Sum of Critical Movements				0.614		0.676		0.811
Clearance				0.100		0.100		0.100
Total ICU				0.714		0.776		0.911
Level of Service				C		C		E

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Lakewood Boulevard
E/W Street: Gardendale Street/Foster Road

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	Lanes	Capa-city	Volume	V/C	Volume	V/C	Volume	V/C
NBL	1	1600	110	0.069	121	0.076	121	0.076
NBT	2	3200	880	0.313*	968	0.344*	1006	0.356*
NBR	s	s	120	s	132	s	132	s
SBL	1	1600	90	0.056*	99	0.062*	131	0.082*
SBT	2	3200	590	0.209	649	0.230	743	0.270
SBR	s	s	80	s	88	s	120	s
EBL	1	1600	100	0.062*	110	0.069*	122	0.076*
EBT	2	3200	340	0.125	374	0.138	374	0.138
EBR	s	s	60	s	66	s	66	s
WBL	1	1600	90	0.056	99	0.062	99	0.062
WBT	2	3200	340	0.131*	374	0.144*	374	0.148*
WBR	s	s	80	s	88	s	100	s
Sum of Critical Movements				0.562		0.619		0.662
Clearance				0.100		0.100		0.100
Total ICU				0.662		0.719		0.762
Level of Service				B		C		C

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Bellflower Blvd.
E/W Street: Stewart & Gray Road

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	Lanes	Capa-city	Volume	V/C	Volume	V/C	Volume	V/C
NBL	1	1600	170	0.106*	187	0.117*	341	0.213
NBT	2	3200	460	0.203	506	0.223	700	0.370*
NBR	s	s	190	s	209	s	483	s
SBL	1	1600	30	0.019	33	0.021	33	0.021*
SBT	2	3200	430	0.140*	473	0.155*	531	0.177
SBR	s	s	20	s	22	s	35	s
EBL	1	1600	40	0.025	44	0.028	58	0.036
EBT	2	3200	540	0.169*	594	0.185*	650	0.203*
EBR	1	1600	250	0.156	275	0.172	320	0.200
WBL	1	1600	150	0.094*	165	0.103*	251	0.157*
WBT	2	3200	480	0.319	528	0.175	580	0.192
WBR	s	s	30	s	33	s	33	s
Sum of Critical Movements				0.509		0.560		0.751
Clearance				0.100		0.100		0.100
Total ICU				0.609		0.660		0.851
Level of Service				B		B		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Bellflower Blvd.
E/W Street: Washburn Road

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	0	0	0	0	0	0	0	0
NBT	2	3200	770	0.260*	847	0.285*	1558	0.548*
NBR	s	s	60	s	66	s	196	s
SBL	1	1600	80	0.050*	88	0.055*	102	0.064*
SBT	2	3200	760	0.238	836	0.261	1152	0.360
SBR	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	1	1600	50	0.031*	55	0.035*	91	0.057*
WBT	0	0	0	0	0	0	0	0
WBR	1	1600	80	0.050	88	0.055	101	0.063
Sum of Critical Movements				0.341		0.375		0.669
Clearance				0.100		0.100		0.100
Total ICU				0.441		0.475		0.769
Level of Service				A		A		C

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Bellflower Blvd.
E/W Street: Imperial Highway

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	160	0.100	176	0.110	211	0.132
NBT	2	3200	540	0.241*	594	0.265*	790	0.326*
NBR	s	s	230	s	253	s	253	s
SBL	1	1600	160	0.100*	176	0.110*	360	0.225*
SBT	2	3200	510	0.209	561	0.230	997	0.367
SBR	s	s	160	s	176	s	176	s
EBL	1	1600	180	0.112	198	0.124	198	0.124
EBT	3	4800	1250	0.287*	1375	0.316*	1507	0.378*
EBR	s	s	130	s	143	s	308	s
WBL	1	1600	160	0.100*	176	0.110*	176	0.110*
WBT	3	4800	780	0.188	858	0.206	886	0.232
WBR	s	s	120	s	132	s	229	s
Sum of Critical Movements				0.728		0.801		1.039
Clearance				0.100		0.100		0.100
Total ICU				0.828		0.901		1.139
Level of Service				D		E		F

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Bellflower Blvd.
E/W Street: I-105 Westbound On/Off Ramps

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	Lanes	Capa-city	Volume	V/C	Volume	V/C	Volume	V/C
NBL	1	1600	210	0.131*	231	0.144*	231	0.144*
NBT	2	3200	730	0.228	803	0.251	950	0.297
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	3	4800	600	0.175*	660	0.193*	1040	0.318*
SBR	s	s	240	s	264	s	486	s
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	1	1600	210	0.088	231	0.096	231	0.114
WBT	1s	1600	0	0.088	0	0.096	0	0.114
WBR	1	1600	210	0.088*	231	0.096*	315	0.114*
Sum of Critical Movements				0.394		0.433		0.576
Clearance				0.100		0.100		0.100
Total ICU				0.494		0.533		0.676
Level of Service				A		A		B

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Bellflower Blvd.
E/W Street: I-105 Eastbound On/Off Ramps

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	0	0	0	0	0	0	0	0
NBT	3	4800	640	0.162*	704	0.179*	766	0.192*
NBR	s	s	140	s	154	s	154	s
SBL	1	1600	140	0.088*	154	0.096*	376	0.235*
SBT	2	3200	670	0.209	737	0.230	895	0.280
SBR	0	0	0	0	0	0	0	0
EBL	1	1600	310	0.131*	341	0.144*	426	0.162*
EBT	1s	1600	0	0.131	0	0.144	0	0.162
EBR	1	1600	320	0.131	352	0.144	352	0.162
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0
Sum of Critical Movements				0.381		0.419		0.589
Clearance				0.100		0.100		0.100
Total ICU				0.481		0.519		0.689
Level of Service				A		A		B

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Clark Avenue
E/W Street: Imperial Highway

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	50	0.031	55	0.034	55	0.034
NBT	2	3200	210	0.097*	231	0.106*	264	0.126*
NBR	s	s	100	s	110	s	139	s
SBL	1	1600	90	0.056*	99	0.062*	99	0.062*
SBT	2	3200	130	0.050	143	0.055	204	0.095
SBR	s	s	30	s	33	s	99	s
EBL	1	1600	40	0.025	44	0.028	58	0.036
EBT	3	4800	1340	0.319*	1474	0.351*	1591	0.375*
EBR	s	s	190	s	209	s	209	s
WBL	1	1600	180	0.112*	198	0.124*	295	0.184*
WBT	3	4800	960	0.212	1056	0.234	1443	0.314
WBR	s	s	60	s	66	s	66	s
Sum of Critical Movements				0.584		0.643		0.747
Clearance				0.100		0.100		0.100
Total ICU				0.684		0.743		0.847
Level of Service				B		C		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Ardis Avenue
E/W Street: Imperial Highway

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	1	1600	80	0.050	88	0.055	88	0.055*
NBT	1	1600	5	0.053*	5	0.058*	36	0.078
NBR	s	s	80	s	88	s	88	s
SBL	s/1	s/1600	5	s	5	s	308	0.192
SBT	1	1600	5	0.012*	5	0.013*	84	0.358*
SBR	s	s	10	s	11	s	489	s
EBL	1	1600	10	0.006	11	0.007	157	0.098
EBT	3	4800	1450	0.319*	1595	0.351*	1595	0.351*
EBR	s	s	80	s	88	s	88	s
WBL	1	1600	40	0.025*	44	0.028*	44	0.028*
WBT	3	4800	1090	0.231	1199	0.254	1199	0.250
WBR	s/1	s/1600	20	s	22	s	85	0.053
Sum of Critical Movements				0.409		0.450		0.792
Clearance				0.100		0.100		0.100
Total ICU				0.509		0.550		0.892
Level of Service				A		A		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Woodruff Avenue (West)
E/W Street: Firestone Blvd.

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0
NBR	1	1600	20	0.012*	22	0.014*	22	0.014*
SBL	2	3200	440	0.138*	484	0.151*	515	0.161*
SBT	0	0	0	0	0	0	0	0
SBR	1	1600	20	0.012	22	0.014	22	0.014
EBL	1	1600	130	0.081*	143	0.089*	143	0.089*
EBT	3	4800	1640	0.342	1804	0.376	1804	0.376
EBR	s	s	0	s	0	s	0	s
WBL	1	1600	30	0.019	33	0.021	33	0.021
WBT	3	4800	1340	0.350*	1474	0.385*	1474	0.401*
WBR	s	s	340	s	374	s	453	s
Sum of Critical Movements				0.581		0.639		0.665
Clearance				0.100		0.100		0.100
Total ICU				0.681		0.739		0.765
Level of Service				B		C		C

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Woodruff Avenue (East)
E/W Street: Firestone Blvd.

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	**Lanes**	**Capa-city**	**Volume**	**V/C**	**Volume**	**V/C**	**Volume**	**V/C**
NBL	2	3200	540	0.169*	594	0.186*	673	0.210*
NBT	s	s	0	0	0	0	0	0
NBR	1	1600	140	0.088	154	0.096	154	0.096
SBL	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0
SBR	1	1600	30	0.019*	33	0.020*	33	0.021*
EBL	1	1600	20	0.012	22	0.014	22	0.014
EBT	3	4800	1590	0.331*	1749	0.364*	1749	0.364*
EBR	1	1600	520	0.325	572	0.358	603	0.377
WBL	1	1600	190	0.119*	209	0.131*	209	0.131*
WBT	3	4800	1130	0.238	1243	0.261	1243	0.261
WBR	s	s	10	s	11	s	11	s
Sum of Critical Movements				0.638		0.701		0.726
Clearance				0.100		0.100		0.100
Total ICU				0.738		0.801		0.826
Level of Service				C		D		D

s = Shared Lane *** = Critical Movement**

ICU CALCULATION

N/S Street: Stewart & Gray Road
E/W Street: Firestone Blvd.

PM PEAK HOUR			Existing		2006 Without Project		2006 With Project	
Move-ment	Lanes	Capa-city	Volume	V/C	Volume	V/C	Volume	V/C
NBL	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0
NBR	2	3200	530	0.166*	583	0.182*	888	0.277*
SBL	1	1600	80	0.050	88	0.055	88	0.055
SBT	1	1600	80	0.075*	88	0.082*	100	0.090*
SBR	s	s	40	s	44	s	44	s
EBL	0	0	0	0	0	0	0	0
EBT	3	4800	1430	0.298*	1573	0.328*	1573	0.328*
EBR	1	1600	100	0.062	110	0.069	122	0.076
WBL	2	3200	130	0.041*	143	0.045*	232	0.072*
WBT	3	4800	1240	0.275	1364	0.302	1364	0.302
WBR	s	s	80	s	88	s	88	s
Sum of Critical Movements				0.580		0.637		0.767
Clearance				0.100		0.100		0.100
Total ICU				0.680		0.737		0.867
Level of Service				B		C		D

s = Shared Lane *** = Critical Movement**

APPENDIX H

Draft EIR Comment Letters and Responses to Comments

DOWNEY LANDING SPECIFIC PLAN DRAFT EIR
COMMENT LETTERS AND RESPONSES TO COMMENTS

FEBRUARY 2002

Prepared for:
The City of Downey
11111 Brookshire Avenue
Downey, CA 90241-7016

Prepared by:
EIP Associates
Stevens-Garland Associates
MCE Consulting Engineers

List of Comment Letters for Downey Landing Specific Plan Draft EIR

1) Department of Toxic Substances Control (Harlan R. Jeche)

2) State Clearinghouse Stamped Notice of Completion/Environmental Transmittal Form

3) Ezralow Retail Properties (Douglas Gray)

4) Department of Public Works (James A. Noyes)

5) Metropolitan Water District of Southern California (Laura J. Simonek)

6) The State of California Department of Transportation (Stephen Buswell)

7) Southern California Association of Governments (Jeffrey M. Smith)

8) Kaiser Permanente (Nancy Burke)

9) Linscott, Law & Greenspan, Engineers (Jack M. Greenspan)

10) California State Lands Commission (Marianne Wetzel)

11) Governor's Office of Planning and Rese arch (Terry Roberts)

12) Civic Solutions (Gabriel Elliot)

Department of Toxic Substances Control

Edwin F. Lowry, Director
1011 N. Grandview Avenue
Glendale, California 91201

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Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

August 20, 2001

Mr. Mark Sellheim, Principal Planner
City of Downey Economic and Community Development Department
11111 Brookshire Avenue
Downey, CA 90241-7016

RE: DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE DOWNEY LANDINGS SPECIFIC PLAN, SCH No. 2001031096

Dear Mr. Sellheim:

1-1 The Department of Toxic Substances Control (DTSC) has received the Draft Environmental Impact Report (EIR) for the above mentioned Project.

Based on the review of the document, the DTSC comments are as follows:

1-2 1) The Draft EIR states that soil and groundwater contamination exists onsite. The Draft EIR needs to provide more information about onsite contamination and past hazardous substances activities.

1-3 2) The Draft EIR states that soil and groundwater contamination exists onsite. The Draft EIR needs to identify any known or potentially contaminated site within the proposed Project area. For all identified sites, the Draft EIR needs to evaluate whether conditions at the site pose a threat to human health or the environment.

1-4 3) The Draft EIR needs to be specific in identifying the mechanism to initiate any required investigation and/or remediation for any site that may require remediation, and which government agency will provide appropriate regulatory oversight. If a remediation method is already known, the Draft EIR should address that.

1-5 4) If during construction of the project, soil contamination is suspected, construction in the area should stop and appropriate Health and Safety procedures should be implemented.

DTSC provides guidance for Preliminary Endangerment Assessment (PEA) preparation and cleanup oversight through the Voluntary Cleanup Program (VCP). Also, DTSC is administering the $85 million Urban Cleanup Loan Program (UCLP), which will provides low-interest loans to investigate and cleanup hazardous materials at properties where redevelopment is likely to have a beneficial impact to a community. The program is composed of two main components: low interest loans of up to $100,000 to conduct preliminary endangerment assessments of underutilized properties; and loans of up to $2.5 million for the cleanup or removal of hazardous materials also at underutilized urban properties. These loans are available to developers, businesses, schools, and local governments. 1-6

For additional information on the VCP or UCLP please visit DTSC's web site at www.dtsc.ca.gov. If you would like to meet and discuss this matter further please contact Arman Moheban, Project Manager, at (818) 551-2834 or me at (818) 551-2877.

Sincerely,

Harlan R. Jeche

Harlan R. Jeche
Unit Chief
Southern California Cleanup Operations - Glendale Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

Mr. Guenther W. Moskat, Chief
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mail to: State Clearinghouse, 1400 Tenth Street, Room 121, Sacramento, CA 95814 – 916/445-0613

Notice of Completion and Environmental Document Transmittal Form

See NOTE below
SCH # 2001031096

RECEIVED
AUG - 1 2001
STATE CLEARINGHOUSE

1. Project Title: Downey Landing Specific Plan Environmental Impact Report
2. Lead Agency: City of Downey, Economic and Community Devel. Dept.
3. Contact Person: Mark Seilheim, Principal Planner
3a. Street Address: 11111 Brookshire Avenue
3b. City: Downey
3c. County: Los Angeles
3d. Zip: 90241-7016
3e. Phone: (562) 904-7154

Project Location

4. County: Los Angeles
4a. City/Community: Downey
4b. Assessor's Parcel No. 6256-004-900
4c. Section: unnamed Twp: 3 S Range: 12 W Base: South Gate
5a. Cross Streets: Lakewood Blvd. and Stewart and Gray Rd.
5b. For Rural, Nearest Community: N/A
6. Within 2 Miles: 6a. State Hwy. # N/A
6b. Airports: N/A
6c. Schools: Downey, Warren, Bellflower, Norwalk, Paramount, Santa Fe, St. John Bosco, Pius X, and Continuation High Schools; 6 Middle Schools; 29 Elementary Schools
6d. Railways: Union Pacific. <2 mi north of the project site
6e. Waterways: San Gabriel River, ¾ mi east of the project site

7. Document Type

CEQA:
- ☐ 01. NOP
- ☐ 02. Early Consultation
- ☐ 03. Negative Declaration
- ☒ 04. Draft EIR
- ☐ 05. Supplement/Subsequent EIR (Prior SCH#_____)
- ☐ 06. Notice of Exemption
- ☐ 07. Notice of Completion
- ☐ 08. Notice of Determination

NEPA:
- ☐ 09. Notice of Intent
- ☐ 10. FONSI
- ☐ 11. Draft EIS
- ☐ 12. Env. Assessment

Other:
- ☐ 13. Joint Document
- ☐ 14. Final Document
- ☐ 15. Other _____

8. Local Action Type

- ☐ 01. General Plan Update
- ☐ 02. New Element
- ☐ 03. General Plan Amendment
- ☐ 04. Master Plan
- ☐ 05. Annexation
- ☒ 06. Specific Plan
- ☐ 07. Community Plan
- ☒ 08. Redevelopment
- ☐ 09. Rezone
- ☐ 10. Land Division (Subdivision, Parcel Map, Tract Map, etc.)
- ☐ 11. Use Permit
- ☐ 12. Waste Management Plan
- ☐ 13. Cancel Agricultural Preserve
- ☐ 14. Other _____

9. Development Type

- ☐ 01. Residential: *Units* _____ *Acres* _____
- ☒ 02. Office: *Sq. Ft.:* 600,000 (max.) *Acres:* N/A *Employees:* N/A
- ☒ 04. Shopping/Commercial: *Sq. Ft.* 410,000 (max.) *Acres:* N/A *Employees:* N/A
- ☐ 05. Water Facilities: *Type* _____ *MGD* _____
- ☐ 06. Transportation: *Type* _____
- ☐ 07. Mining: *Mineral* _____
- ☐ 08. Power: *Type* _____ *Watts* _____
- ☐ 09. Waste Treatment: *Type* _____
- ☐ 10. OCS Related _____
- ☒ 11. Other Public: 50,000 Sq. Ft (max); Office Park: 975,000 Sq. Ft. (max); Hospital: 680,000 Sq. Ft.(max); Medical Office Building: 292,700 Sq. Ft. (max); Parking Structure: 600,000 Sq. Ft. (max); Central Plant (facilities): 27,300 Sq. Ft.

10. Total Acres: 160

11. Total Jobs Created: N/A

12. Project Issues Discussed in Document

- ☒ 01. Aesthetic/Visual
- ☐ 02. Agricultural Land
- ☒ 03. Air Quality
- ☐ 04. Archaeological/Historical
- ☐ 05. Coastal Zone
- ☐ 06. Economic
- ☐ 07. Fire Hazard
- ☒ 08. Flooding/Drainage
- ☐ 09. Geologic/Seismic
- ☒ 10. Jobs/Housing Balance
- ☐ 11. Minerals
- ☒ 12. Noise
- ☒ 13. Public Services
- ☒ 14. Schools
- ☐ 15. Septic Systems
- ☒ 16. Sewer Capacity
- ☐ 17. Social
- ☐ 18. Soil Erosion
- ☒ 19. Solid Waste
- ☒ 20. Toxic/Hazardous
- ☒ 21. Traffic/Circulation
- ☐ 22. Vegetation
- ☒ 23. Water Quality
- ☒ 24. Water Supply
- ☐ 25. Wetland/Riparian
- ☐ 26. Wildlife
- ☒ 27. Growth Inducing
- ☒ 28. Incompatible Land use
- ☒ 29. Cumulative Effects
- ☐ 30. Other _____

13. Funding (approx.) Federal $ N/A State $ N/A Total $ N/A

14. Present Land Use and Zoning: Mixed Use (includes commercial and industrial uses)

15. Project Description:

Specific plan for a multiple-use development on the 160-acre former Rockwell/Boeing site in Downey. Proposed land uses include a shopping center, offices, buildings designed to accommodate research and development activities, and a Kaiser Permanente hospital and medical office facility, with supporting uses. Together, the project's buildings will total a maximum of approximately 3.7 million square feet of floor area in four distinct land use areas.

NOTE: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g., from a Notice of Preparation of a previous draft document) please fill it in

ralow Proposal

ralow Area I encompasses slightly more than 34 acres and occupies the northern portion of the project site. A planned retail shopping center will occupy this a, and will be oriented toward Lakewood Boulevard and Stewart & Gray Road. The other street bordering Area I is Bellflower Boulevard. The center will feature th inline stores and freestanding buildings. Together, the center's buildings will provide a maximum of 410,000 square feet, plus parking.

ralow Area II will total approximately 75 acres. It supports an existing building (Building 1) that contains 913,023 square feet, which both Rockwell and the eing Company used for aerospace manufacturing and testing purposes. The development proposal involves either reusing the building (as well as up to seven other uctures) for motion picture studio and production space or other adaptive reuse, or demolishing the majority of the building in favor of approximately 975,000 uare feet of technology and business park uses. Parking would be provided to serve these anticipated uses. The latter option would generate the highest traffic ints and is therefore the option examined in the EIR, to provide a conservative environmental analysis. The easternmost 8-acre portion of Area II, which abuts ilflower Boulevard, is being reserved for the Downey Unified School District for use as a school/park site; however, neither the Specific Plan nor this EIR will itle or provide environmental clearance for development of any school, and the District would be required to initiate a separate environmental process if it chooses develop the site.

ralow Area III will be developed as an office park. It will encompass 32 acres and occupy the southern portion of the project site; plans show Area III will front Clark Avenue and Imperial Highway. Planned improvements consist of 2-story office buildings, ranging in floor area from 49,000 to 70,000 square feet, for a nbined maximum of 600,000 square feet. In addition to technology and business park uses, a portion of Area III, ranging in size from 3 to 5 acres, would include a ximum 50,000-square-foot museum/learning center/community center.

en/green space uses will be interspersed throughout the project site, as well. Construction of each phase is anticipated to span 10 months. Area II is currently ler temporary use by several motion picture production companies, and if Buildings 1, 9, 11, 14, 39, 288 and 6/290 are kept externally intact and reused, their ccupancy would occur concurrently with construction of Area I. In the case of demolition of Buildings 1, 9, 11, 14, 39, 288, and 6/290, Areas I would be veloped first, Area III second, and Area II last. Construction staging is anticipated to occur on-site.

iser Permanente Proposal

iser Area IV According to the development proposal submitted by Kaiser, this portion of the project would develop 1.6 msf of buildings and structured parking 20 acres of land. Fifteen 15 acres of Parcel 5 and five acres of Parcel 2, adjacent to Ezralow Area II and fronting on Bellflower Boulevard. The proposed Kaiser ject is a replacement for Kaiser's existing 8-story hospital tower in the City of Bellflower. Proposed improvements include a new 6-story, 680,000-square-foot spital building with a planned ultimate capacity of 351 beds; new, four-story, 97,500-square-foot and 195,200 square foot medical office buildings, a 27,300-uare-foot central plant, and a six-level, 2,033(+/-) space, 600,000-square-foot parking structure. Construction would be phased over a period of about ten years. e specific components of each phase are tentative; however, development would not exceed 1.6 million square feet, and phasing variations would not affect the alysis presented in this EIR.

Signature of Lead Agency Representative: Mark Sellheim **Date:** July 30, 2001

Reviewing Agencies

- ☐ Resources Agency
- ☐ Boating/Waterways
- ☐ Conservation
- ☐ Fish and Game
- ☐ Forestry
- ☐ Colorado River Board
- ☐ Dept. Water Resources
- ☐ Reclamation
- ☐ Parks and Recreation
- ☒ Office of Historic Preservation
- ☐ Native American Heritage Commission
- ☐ S.F. Bay Cons. & Dev't Commission
- ☐ Coastal Commission
- ☐ Energy Commission
- ☐ State Lands Commission
- ☐ Air Resources Board
- ☐ Solid Waste Management Board
- ☐ SWRCB: Sacramento
- ☒ SWRCB: Region # 9
- ☐ Water Rights
- ☐ Water Quality
- ☐ Caltrans District 7
- ☐ Dept. of Transportation Planning
- ☐ Aeronautics
- ☐ California Highway Patrol
- ☐ Housing and Community Development
- ☒ Statewide Health Planning
- ☐ Health
- ☐ Food and Agriculture
- ☐ Public Utilities Commission
- ☐ Public Works
- ☐ Corrections
- ☐ General Services
- ☐ OLA
- ☐ Santa Monica Mountains
- ☐ TRPA
- ☐ OPR – OLGA
- ☐ OPR – Coastal
- ☐ Bureau of Land Management
- ☐ Forest Service
- ☒ Other: **Department of Toxic Substances Control**
- ☒ Other: **Department of Health Services**
- ☒ Other: **State Fire Marshal**
- ☒ Other: **Division of Mines and Geology**

For SCH Use Only

Date Received at SCH _____

Date Review Starts _____

Date to Agencies _____

Date to SCH _____

Clearance Date _____

Catalog Number _____

Applicant _____

Consultant _____

Contact _____ Phone _____

Address _____

Notes:

EZRALOW
RETAIL
PROPERTIES

15101 Red Hill Avenue, Suite 100
Tustin, California 92780
Telephone: 714-259-7700
Facsimile: 714-259-0155

August 30, 2001

Mr. Mark Sellheim
Principal Planner
City of Downey
11111 Brookshire Avenue
Downey, California 90241-7016

RE: EIR Comments
Downey Landings Specific Plan

Dear Mark:

3-1 In response to the above mentioned EIR, section 3.1 page 5 calls for the developer to build an approximately three foot wall along the northern boundary of Area 1. Our intention is to build an earthen berm and landscape along the northern boundary of Area 1 to help diffuse the lighting.

3-2 Also mitigation measure 3.2-4 should read-wall and attic insulation that meets current title 24 requirements.

3-3 Mitigation measures 3.9-1 thru 3.9-7 should provide for "as feasible without the taking of additional lands."

3-4 Thank you for the opportunity to correct these items.

Sincerely,

Douglas Gray
President

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100

JAMES A. NOYES, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

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PLANNING

IN REPLY PLEASE REFER TO FILE: WM-4

August 27, 2001

Mr. Mark Sellheim
City of Downey
11111 Brookshire Avenue
Downey, CA 90241-7016

Dear Mr. Sellheim:

RESPONSE TO AN ENVIRONMENTAL IMPACT REPORT
DOWNEY LANDING SPECIFIC PLAN
CITY OF DOWNEY

4-1 Thank you for the opportunity to provide comments on an Environmental Impact Report for the proposed Downey Landing Specific Plan project. We have reviewed the submittal and offer the following comments:

Land Development (Transportation Planning)

4-2 The proposed project may impact Lakewood Boulevard which is State Route 19. We recommend that Caltrans review the proposed specific plan.

If you have any questions, please contact Mr. Hubert Seto at (626) 458-4349.

Land Development (Geology and Soils)

4-3 Review of the environmental document indicates that the proposed project will not have significant environmental effects from a geology and soils standpoint, provided the appropriate ordinances and codes are followed. The project is located within a mapped potentially liquefiable area, per the State of California Seismic Hazard Zone Map, South Gate Quadrangle. However, a liquefaction analysis is not warranted at this time. Detailed liquefaction analyses, conforming to the requirements of the State of California Division of Mines and Geology Special Publication 117, must be conducted at the tentative map and/or grading/building plan stages.

If you have any questions, please contact Mr. Amir Alam at (626) 458-3883.

Traffic and Lighting

4-4 We do not believe the proposed project will have any significant impact on County roadways or intersections. No further information is required.

4-5 We recommend the State of California Department of Transportation and adjoining cities review this document for significant impacts/mitigations within their jurisdictions.

If you have any questions, please contact Mr. Keith Hoey at (626) 300-4867.

Watershed Management

4-6 The proposed project should include investigation of watershed management opportunities to maximize capture of local rainfall on the project site, minimize or eliminate incremental flows to the storm drain system, and provide filtering of flows to capture contaminants originating from the project site.

If you have any questions, please contact Ms. Massie Munroe at the address on the first page or at (626) 458-4359.

Very truly yours,

JAMES A. NOYES
Director of Public Works

ROD H. KUBOMOTO
Assistant Deputy Director
Watershed Management Division

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MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Office of the General Manager

RECEIVED
AUG 20 2001
PLANNING

August 2, 2001

Mr. Mark Sellheim
City of Downey
Economic and Community Development Department
11111 Brookshire Avenue
Downey, CA 90241-7016

Dear Mr. Mark Sellheim:

Notice of Completion and
Draft Environmental Impact Report for the Downey Landing Specific Plan

5-1 The Metropolitan Water District of Southern California (Metropolitan) has received a Notice of Completion (Notice) and Draft Environmental Impact Report (DEIR) for the Downey Landing Specific Plan. The applicant, the City of Downey, proposes a Specific Plan, rezoning, and other discretionary approvals for the redevelopment of a 160-acre property located at 12214 Lakewood Boulevard in the City of Downey. Proposed land uses for the development include a shopping center, offices, buildings designed to accommodate research and development activities, and a Kaiser Permanente hospital and medical office facility, with supporting uses. This letter contains our response as a potentially affected public agency.

5-2 Our review of the Notice indicates that Metropolitan's Lower Feeder Pipeline is adjacent to the northern and northeastern boundaries of the proposed project site. Metropolitan requests that the Final EIR evaluates potential impacts and if applicable, proposed mitigation measures, of the proposed plan to Metropolitan's existing facilities that occur adjacent to the plan's boundaries. The enclosed map shows these facilities in relation to the proposed project. It will be necessary for the applicant to consider these facilities in its project planning.

5-3 In order to avoid potential conflicts with Metropolitan's rights-of-way, we request that any preliminary engineering design drawings or improvement plans for any activity in the area of Metropolitan's pipelines and rights-of-way be submitted for our review and written approval. The applicant may obtain detailed prints of drawings of Metropolitan's pipelines and rights-of-way by calling Metropolitan's Substructures Information Line at (213) 217-6564. To assist the applicant in preparing plans that are compatible with Metropolitan's facilities and easements, we have enclosed a copy of the "Guidelines for Developments in the Area of Facilities, Fee Properties,

and/or Easements of The Metropolitan Water District of Southern California." Please note that all submitted designs or plans must clearly identify Metropolitan's facilities and rights-of-way.

5-4 Metropolitan requests that the City analyze the consistency of the proposed project with the growth management plan adopted by the Southern California Association of Governments (SCAG). Metropolitan uses SCAG's population, housing and employment projections to determine future water demand. Development above these forecast provisions may increase demand on Metropolitan's resources and facilities beyond that anticipated.

5-5 Additionally, Metropolitan encourages projects within its service area to include water conservation measures. Water conservation, reclaimed water use, and groundwater recharge programs are integral components to regional water supply planning. Metropolitan supports mitigation measures such as using water efficient fixtures, drought-tolerant landscaping, and reclaimed water to offset any increase in water use associated with the proposed project.

5-6 We appreciate the opportunity to provide input to your planning process and we look forward to receiving future environmental documentation on this project. If we can be of further assistance, please contact me at (213) 217-6242.

Very truly yours,

Laura J. Simonek

Laura J. Simonek
Principal Environmental Specialist

SAK

Enclosures:
Facilities Location Map
Planning Guidelines

DEPARTMENT OF TRANSPORTATION
OFFICE OF REGIONAL PLANNING
DISTRICT 7, IGR/CEQA 1-10C
120 SO. SPRING ST.
LOS ANGELES, CA 90012
TEL: (213) 897-6696 ATSS: 8- 647-6696
FAX: (213) 897-6317

August 29, 2001

IGR/CEQA cs/010819
DEIR
City of Downey
Downey Landing Specific Plan
12214 Lakewood Blvd.
Vic. LA-105-15.76
SCH # 2001031096

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SEP 05 2001
PLANNING

Mr. Mark Sellheim
City of Downey
11111 Brookshire Ave.
Downey, CA 90241

Dear Mr. Sellheim:

Thank you for including the California Department of Transportation in the environmental review process for the above-mentioned project. Based on the information received, we have the following comments:

6-1 The trips generated by the retail center, studio/production facilities, the office and hospital facilities will have a significant traffic impact on the mainline Century Freeway (I-105). The proposed development generates approximately 3,000 vehicles/hour for the retail, studio/production and office facilities and an additional 1700 vehicles/hour for the hospital. With the additional traffic to be generated by the development, the Century Freeway is expected to operate at level of-service LOS-F0 from west of Lakewood Blvd. to east of Bellflower Blvd.

6-2 The Century Freeway and associated Lakewood Blvd. and Bellflower Blvd. ramps are located just south of the project site. Since the trips generated by the project will have a significant impact on the mainline 105 Freeway during the peak commute periods, further traffic analysis will be needed to determine the project's impact on the mainline 105 Freeway and will need to identify mitigation measures for the mainline 105 Freeway.

6-3 The local agency will need to implement a fair-share funding program on a pro rata basis to be used to mitigate traffic impacts generated by the development.

6-4 Any work to be performed within the State Right-of-way will need an Encroachment Permit from the California Department of Transportation. Lakewood Blvd., formerly State Route 19, was recently relinquished to the City of Downey.

6-5 We recommend that construction related truck trips on State highways be limited to off-peak commute periods. Transport of oversize or overweight vehicles on State highways will need a Transportation Permit from the California Department of Transportation.

If you have any questions regarding our response, refer to our internal IGR/CEQA Record # cs/010747, and please do not hesitate to contact me at (213) 897-4429.

Sincerely,

STEPHEN BUSWELL
IGR/CEQA Program Manager

cc: Mr. Scott Morgan, State Clearinghouse

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SEP 10 2001

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...Bernardino County: Jon Mikels, San ...rdino County • Bill Alexander, Rancho ...onga • David Eshleman, Fontana • Lee Ann ..., Grand Terrace • Bob Hunter, Victorville • ...a Norton-Perry, Chino Hills • Judith Valles, ...rnardino

...ra County: Judy Mikels, Ventura County • ...Becerra, Simi Valley • Donna De Paola, San ...ventura • Toni Young, Port Hueneme

...ide County Transportation Commission: ... Lowe, Hemet

...ra County Transportation Commission: ...avis, Simi Valley

September 7, 2001

Mr. Mark Sellheim
Principal Planner
City of Downey
Economic and Community Development Department
11111 Brookshire Avenue
Downey, CA 90241-7016

RE: **Comments on the Draft Environmental Impact Report for the Downey Landing Specific Plan - SCAG No. I 20010436**

Dear Mr. Sellheim:

7-1 Thank you for submitting the **Draft Environmental Impact Report for the Downey Landing Specific Plan** to SCAG for review and comment. As areawide clearinghouse for regionally significant projects, SCAG reviews the consistency of local plans, projects, and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

7-2 It is recognized that the proposed Project considers the development of a Specific Plan for a multiple-use development for the former Rockwell/Boeing site in the City of Downey. In total, the proposed Project area encompasses 160-acres, on four planning areas, with a potential for 3.7 million square feet of floor area. Proposed land uses include a shopping center, offices, technology and business park, hospital and medical facilities, along with other supporting uses. The proposed Project is located at 12214 Lakewood Boulevard in the City of Downey.

7-3 SCAG staff has evaluated the Draft EIR for the Downey Landing Specific Plan for consistency with the Regional Comprehensive Plan and Guide and Regional Transportation Plan. The Draft EIR includes a discussion on the proposed Projects' consistency with SCAG policies and applicable regional plans, which were outlined in our June 26, 2001 letter on the Notice of Preparation (NOP) for this Draft EIR.

7-4 The Draft EIR cited SCAG policies and addressed the manner in which the proposed Project is consistent with applicable core policies and supportive of applicable ancillary policies. This approach to discussing consistency or support of SCAG policies is commendable and we appreciate your efforts. Based on the information provided in the Draft Program EIR, we have no further comments. A description of the proposed Project was published in the August 16, 2001 Intergovernmental Review Clearinghouse Report for public review and comment.

If you have any questions, please contact me at (213) 236-1867. Thank you.

Sincerely,

JEFFREY M. SMITH, AICP
Senior Planner
Intergovernmental Review

Medical Care Program
Walnut Center
Pasadena, California 91188
(818) 405-3156

September 13, 2001

Mark Sellheim
Senior Planner
Downey Planning Department
11111 Brookshire Ave.
Downey, CA 90241

Re: Downey Landings Specific Plan EIR; State Clearinghouse #200110311096

Dear Mr. Sellheim,

8-1 Kaiser Foundation Hospitals ("Kaiser") appreciates the opportunity to review and comment on the Draft Environmental Impact Report ("DEIR") for the Downey Landing Specific Plan ("Specific Plan") which includes Kaiser's Bellflower Medical Center Replacement Project (the "Kaiser Project").

8-2 The DEIR describes the "Kaiser Area" and the Kaiser Project as the development of a hospital and medical center on fifteen acres of Parcel 5 and five acres of Parcel 2 fronting Bellflower Boulevard. Kaiser is currently exploring a proposal which would locate the Kaiser Project on the approximately 30 acre Ezralow Area III site fronting Imperial Highway. If the Kaiser Project were located in this area, neither the size nor scope of the Kaiser Project would increase. Kaiser is reviewing this alternative from a site utilization standpoint, its impact on the efficiency and functionality of the of the entire Specific Plan and possible increased efficiencies with existing Kaiser facilities. After completion of this analysis, Kaiser will determine the most desirable location. We would like the EIR

8-3 to confirm that the development of the Kaiser project at this alternate location would not result in any additional impacts and is consistent with the policy objectives of the Specific Plan.

8-4 From its discussions with the City, it is Kaiser's understanding that the intent of the Specific Plan is that the entire NASA site is treated as "one contiguous site" regardless of ownership and land use and that land uses within the Specific Plan could be rearranged and "swapped". Accordingly, Kaiser is requesting that the Specific Plan explicitly acknowledge that development of the Kaiser Project in Area III would be consistent with and permitted by the Specific Plan. Since Area III was analyzed in the DEIR, utilization of Area III for development of the Kaiser Project, as described in the DEIR, would not result in any additional, undisclosed or increased impacts. Kaiser requests that the final EIR contain sufficient information to allow the City to approve the Kaiser Project on either its currently identified location or Area III.

In addition to this general comment, Kaiser offers the following specific comments on the DEIR. As you will see, we have organized our specific comments to the DEIR by page and section number.

	Page No.	Comments
8-5	1-2	We would ask that an additional sentence be added to the project description of the Kaiser Project to clarify that the impact analysis was based on a "development envelope" of 1.6 million square feet of development (1,000,000 square feet of hospital and medical office facilities and 600,000 square feet of parking structure) in structures up to 8 stories tall.
8-6	1-5	Section 1.3. We would request language acknowledging that a Program EIR can also provide project level review for portion of the project and that the Kaiser Project has been analyzed at a project level.
8-7	2-7	Section 2.5.1. The description of the Kaiser Project should include any changes that are made to § 1.1
8-8	2-8	Section 2.5.2. Perhaps a statement that a change or modification in construction dates would not affect the environmental analysis would be helpful.
8-9	2-8	Section 2.5.3. Rezoning of the Specific Plan area should also be included as a requested approval.
8-10	3.1.2	We continue to believe that it would be helpful to state that 8 story structures do not result in aesthetic impacts and that the General Plan does not contain any height restrictions.
8-11	3.2-12	Impact 3.2-1. The last paragraph is confusing. PM_{10} is clearly identified as a less than significant impact in the discussion. However, as drafted, the last paragraph reads as if PM_{10} cannot be reduced to a less than significant level.
8-12	3.3-12	Impact 3.3-1. The necessary mitigation measures are clearly identified. Accordingly, is it necessary to speculate about what language may be included in the conveyance documents?
8-13	3.5-4	We believe that the consistency discussion of Floor Area Ratio ("FAR") should include a discussion of the FAR of the Kaiser site and acknowledge that it is higher than the rest of the project and the current projected development on the Kaiser site.
8-14	3.5-4	The FAR discussion at the bottom of the page should cross-reference the expanded discussion on page 3.5-4.
8-15	3.5-7	We believe that it would be helpful if the discussion of project consistency with Policy 3.12 include reference to Kaiser's Kaiserider program. More information on this program may be found in the attached letter from Kaiser's traffic consultant.
8-16	3.8-26	Mitigation measure 3.8-12. We question why a written agreement is necessary when the school fees are established and governed by state law. As school fees are the same in all jurisdictions, and required of all new developments, this section should state simply that Kaiser should pay required school fees.
8-17		Mitigation measure 3.8-13 appears to require the payment of fees for additional police personnel. Kaiser will provide adequate on-site security for its project and it is unclear how or why the Kaiser project would create a need for additional police services.

8-18 In addition to these comments, Kaiser's comments to Section 3.9, Transportation and Traffic, are set forth in the attached letter from Linscott Law & Greenspan, Kaiser's traffic consultants. Briefly summarized, Kaiser believes that the methodology used for analysis of the Kaiser Project results in a significant overstatement of the traffic impacts of the Kaiser Project. Kaiser requests that based on the corrected methodology, the impacts and mitigation discussion be revised accordingly. Also, it is important to Kaiser that additional information as to the details of specific transportation (infrastructure improvement) mitigation measures be included in the final EIR.

8-19 Thank you again for the opportunity to comment on the DEIR. Kaiser looks forward to working with you to implement the Kaiser Project, a project of mutual benefit to Kaiser, its members and the citizens of Downey.

Sincerely,

Nancy Burke
Land Use Manager
Kaiser Permanente

September 11, 2001 letter from Linscott, Law and Greenspan attached

LINSCOTT LAW & GREENSPAN
ENGINEERS

Philip M. Linscott, P.E. (1924-2000)
Jack M. Greenspan, P.E.
William A. Law, P.E. (Ret.)
Paul W. Wilkinson, P.E.
John P. Keating, P.E.
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September 11, 2001

Ms. Nancy Burke
Kaiser Permanente
75 North Fair Oaks Avenue, 1st Floor, E Annex
Pasadena, California 91124

Subject: **Comment Letter**
Transportation and Traffic Section
Downey Landings Specific Plan Program DEIR

Dear Ms Burke:

As requested , Linscott, ,Law & Greenspan, Engineers has studied and reviewed the Transportation and Traffic Section (Section 3.9) of the Downey Landings Specific Plan Program DEIR.

9-1 Briefly, we find that the transportation and traffic analysis in the Downey Landings Specific Plan Program DEIR has been performed to the general industry standard. However, the preceding not withstanding, we also find that the DEIR trip generation analysis significantly overstates the trip generation potential of the proposed Kaiser Medical Center; 201 trips (16.8 percent) in the AM peak hour, 570 trips (49.5 percent) in the PM peak hour, and 5,630 trips (33.5 percent) on a daily basis. On this basis, we conclude that the Kaiser Medical Center impacts will be significantly less than predicted in the DEIR.

Project Generated Traffic - Ezralow Development

9-2 Table 3.9-4 (page 3.9-9) presents the trip generation forecast for the Ezralow portion of the project. The Ezralow trip generation forecast is based on use of the trip generation equations published by the Institute of Transportation Engineers (ITE) in *Trip Generation, 6th Edition, 1997*, and presented on page3.9-7 of the DEIR. It should be noted that there is a typographical error in the equation for Retail Average Daily Traffic, the equation $Ln(T) = 0.643Ln(X) + 3.564$, should read $Ln(T) = 0.643Ln(X) + 5.866$.

Two Ezralow development options are presented; Option 1 with Building 1, and Option 2 without Building 1. A 25 percent pass-by reduction is applied to the retail use, and an internal capture trip reduction of 5 percent in the AM peak hour, and 10 percent in the PM peak hour and on a daily basis, is applied to the total Ezralow trip generation. Option 2 (shown on the next page) shows the greater trip generation and is used in the subsequent traffic impact analysis.

LINSCOTT LAW & GREENSPAN ENGINEERS

TRIP GENERATION - EZRALOW OPTION 2

AM Peak Hour	PM Peak Hour	Daily
2,040	2,680	23,860

Project Trip Generation - Kaiser Medical Center

Table 3.9-5 (page 3.9-10) presents the DEIR forecast for the Kaiser Medical Center portion of the Downey Landings project (see below). Unlike the Ezralow portion of the project, which is based on ITE trip generation equations, the Kaiser Medical Center trip generation forecast is based on average trip generation rates. Significantly, no internal trip capture reduction between the hospital and the
9-3 medical office building components of the Kaiser Medical Center is accounted for in the DEIR trip generation forecast.

DEIR TRIP GENERATION - KAISER

AM Peak Hour	PM Peak Hour	Daily
1,397	1,722	22,450

Revised Kaiser Medical Center Trip Generation

Examination of the ITE data for hospitals and for medical office buildings shows that five of the six Kaiser Medical Center trip generation components (hospital AM peak hour-PM peak hour-daily, and medical office building AM peak hour-PM peak hour-daily) have associated equations. Only the medical office building AM peak hour does not have sufficient data to develop a trip generation equation. On this basis, we conclude that the correct method of forecasting the Kaiser Medical Center trip generation is to use the ITE equations for all but the medical office AM peak hour, and use the average trip generation rate for the medical office AM peak hour. We further conclude that for consistency between the Ezralow and Kaiser trip generation analyses, internal trip capture reduction
9-4 between the Kaiser hospital and medical office building components should be applied. We also conclude a 10 percent reduction in the AM peak hour, and a 20 percent reduction in the PM peak hour and on a daily basis to be appropriate, as shown below.

REVISED KAISER MEDICAL CENTER TRIP GENERATION

	AM Peak Hour	PM Peak Hour	Daily
Hospital	618	622	9,280
Medical Office Building	711	818	11,750
Total Trips	1,329	1,440	21,030
With Internal Trip Reduction (10% AM, 20% PM & Daily)	1,196	1,152	16,820

LINSCOTT LAW & GREENSPAN
ENGINEERS

DEIR Kaiser Trip Generation Overestimation

Comparison of the DEIR Kaiser Medical Center trip generation based on average trip generation rates, with the revised trip generation based on five ITE trip generation equations and one average trip generation rate, shows that the use of all average trip generation rates in the DEIR produces a significant overestimation as set forth below.

9-5

KAISER TRIP GENERATION OVERESTIMATION

	AM Peak Hour	PM Peak Hour	Daily
DEIR Trip Generation	1,397	1,722	22,450
Revised Trip Generation	1,196	1,152	16,820
Difference	+ 201	+ 570	+ 5,630
Percent Difference	+ 16.8	+ 49.5	+ 33.5

As shown above, the DEIR AM peak hour is overestimated by 201 trips (+16.8 %), the PM peak hour overestimated by 570 trips (+ 49.5 %), and the daily traffic by 5,630 trips (+33.5 %).

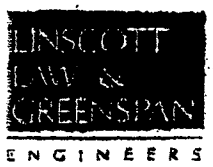
Reduced Kaiser Medical Center Intersection Impact

The DEIR predicts that the Kaiser Medical Center will impact 6 of the 20 intersections studied. Table 3.9-8 (Page 3.9-14) and Table 3.9-9 (page 3.9-15) summarize the results of the AM peak hour and PM peak hour Kaiser impact analyses. Shown to be impacted are the intersections of Lakewood Boulevard and Firestone Boulevard, Lakewood Boulevard and Bellflower Boulevard, Lakewood Boulevard and Stewart & Gray Road, Lakewood Boulevard and Imperial Highway, Bellflower Boulevard and Stewart & Gray Road, and Bellflower Boulevard and Imperial Highway as presented below.

9-6

DEIR Kaiser Intersection Impact

Intersection	AM Peak Hour	PM Peak Hour
Lakewood/Firestone	X	X
Lakewood/Bellflower	X	
Lakewood/Stewart & Gray	X	X
Lakewood/Imperial	X	X
Bellflower/Stewart & Gray	X	
Bellflower/Imperial	X	X



It should be noted, that since we do not have the actual traffic impact study intersection analysis worksheets, we are unable at this time to determine the change in Kaiser Medical Center impact. However, based on the degree to which the Kaiser traffic has been overestimated, it can be concluded that the Kaiser intersection impacts predicted in the DEIR will be significantly reduced.

Reduced Kaiser Medical Center CMP Freeway Impact

Table 3.9-13 (page 3.9-19) shows the predicted Kaiser Medical Center impact at the nearest Los Angeles County Congestion Management Program (CMP) freeway monitoring station, located on Interstate 105 (I-105) between Bellflower Boulevard and Interstate 605 (I-605). The DEIR text at the bottom of page 3.9-18 sets forth the CMP impact criteria as Level of Service (LOS) F, and a change in the demand-to-capacity ratio (D/C) greater than 0.02. The text goes on to state that there is a Kaiser impact in the westbound direction of I-105 in the AM peak hour, and an impact in the eastbound direction of I-105 in the PM peak hour.

9-7

However, examination of Table 3.9-13, shows the DEIR text to be in error. The increase in D/C in the westbound AM peak hour is shown to be 0.014, which is less than 0.02, and is, therefore, not a Kaiser Medical Center impact.

Further examination of Table 3.9-13, also reveals a further error in the DEIR. The increase in D/C in the eastbound direction in the PM peak hour is shown to be 0.016, which is also less than 0.02, and also not a Kaiser impact. However, there would be a Kaiser related CMP impact if it is inferred that all calculations are to be rounded off to only two decimal places (in which case the increase in D/C of 0.016 would become 0.02). In any event, since the DEIR overestimates the Kaiser Medical Center trip generation, the rounding will become a moot issue.

Kaiserider

While not specifically mentioned in the DEIR trip generation analysis, Kaiser Hospitals and Medical Centers have a system-wide well established and successful ride share program known as Kaiserider.

9-8

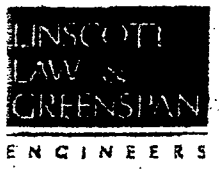
The Kaiserider program will be available at the proposed Downey Medical Center, and is in place for employees at the existing Kaiser Medical Center site (on the southwest corner of Rosecrans Avenue and Clark Avenue) who will be relocated to the Downey facility. Hence, it is also concluded that the Kaiserider program has the potential to further reduce project trip generation.

Findings and Conclusions

9-9

- The DEIR ignores the ITE trip generation equations for the Kaiser hospital and medical office building components in favor of average rates, even though ITE equations are used for the Ezralow portion of the Downey Landings Specific Plan.

LINSCOTT LAW & GREENSPAN
ENGINEERS



9-10 • The DEIR trip generation forecast for Kaiser based on average trip generation rates is significantly greater than the trip generation forecast using the ITE equations (plus one average trip generation rate for the medical office AM peak hour).

9-11 • The DEIR trip generation analysis overstates the trip generation potential of the proposed Kaiser Medical Center by 201 trips (16.8 percent) in the AM peak hour, 570 trips (49.5 percent) in the PM peak hour, and 5,630 trips (33.5 percent) on a daily basis.

9-12 • The DEIR is in error in concluding that Kaiser Medical Center traffic will produce a CMP freeway monitoring station impact.

9-13 • The DEIR trip generation analysis does not take into account the Kaiserider ride share program potential to reduce project trip generation.

9-14 • We also find that the DEIR is in error in concluding that Kaiser will produce a CMP freeway monitoring station impact, in that the computed demand-to-capacity (D/C) ratios are below the stated impact threshold.

9-15 • Based on the degree to which the Kaiser Medical Center trip generation is overstated, we conclude that the Kaiser Medical Center impacts will be significantly less than predicted in the DEIR.

9-16 We welcome the opportunity to be of service. If there are any questions regarding the above, please do not hesitate to call me at 626.796.2322, or e-mail me at greenspan@llgengineers.com.

Very truly yours,
Linscott, Law & Greenspan, Engineers

Jack M. Greenspan, P.E.
Principal

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STATE OF CALIFORNIA GRAY DAVIS, Governor

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
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Contact FAX: (916) 574-2065

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SEP 20 2001
PLANNING

September 19, 2001

File Ref: AD 385
Downey DEIR

Mr. Mark R. Sellheim
Principal Planner
11111 Brookshire Avenue
Downey, CA 90241-7015

Dear Mr. Sellheim:

10-1 The following are the California State Lands Commission's comments on the Draft Environmental Impact Report (DEIR) dated August 2, 2001, for the Downey Landing Specific Plan. Thank you for extending the time period past the September 17, 2001 deadline in order to provide us with the additional time needed to review the document and respond.

10-2 1. Page 2-5, Section 2.4, Line 13: Report mentions that the City has arranged to purchase Parcels 1 and 2 through the General Services Administration. This is a true statement. However, the actual details of the transfer of title is that NASA, through GSA, is transferring title to the property to the State of California, State Lands Commission. The State is then selling the property to the City. The State requests that it be identified as a party to the transaction. Suggested wording for the sentence: "The City of Downey has arranged to purchase Parcels 1 and 2 of the NASA plant from the State of California, State Lands Commission who is acquiring the excessed property from the General Services Administration (GSA)." Also, the sale to the City is now anticipated to occur in the Spring/Summer 2002. Also see Comment #12 which addresses the same issue found on Page 3.5-2.

10-3 2. Page 2-5, Section 2.4: In the last sentence should "analysis" be "analyzes"?

10-4 3. Page 3.3-4, Paragraph 1, last sentence: Report states that " However, another, unidentified contaminant source may remain on Parcel 2 . . ." The California Regional Water Quality Control Board (CRWQCB) has identified an isolated contaminated plume of TCE in the groundwater on Parcel 2; however, the source of this contaminant has not been identified.

10-5 4. Page 3.3-5, Paragraph titled "Parcel 2": Please be more specific on the detectable concentrations of VOC's, specifically the identification of high levels of TEC in the groundwater.

10-6 5. Page 3.3-5, Paragraph 4 titled "Parcel 2": There is mention of two storage tanks, one aboveground and one below. Are the aboveground storage tanks mentioned on this page and other pages throughout the section required to be removed? Is the underground emergency spill containment storage tank required to be removed? If not required to be removed, were these tanks required to be capped and abandoned in place?

10-7 6. Page 3.3-6, Paragraph titled "Parcel 4": This paragraph does not mention the higher concentrations of PCE and TCE that were found on the northern portion of Parcel 4 (as mentioned on Page 3.3-7, first bulleted item).

10-8 7. Page 3.3-6, Paragraph titled "Parcel 5": What is being done with the contaminated soils and groundwater on Parcel 5 (contaminations mentioned under the second and third bulleted items on Page 3.3-7)?

10-9 8. Page 3.3-7, Paragraph titled "Parcel 6": Is there more information on the contamination source for the TCE in the southeast and northwest portions of Parcel 6 (as mentioned under the fourth bulleted item)?

10-10 9. Page 3.3-7, First bulleted item: Should "TCA" be "TCE"?

10-11 10. Page 3.3-9, Paragraph titled "Current and Ongoing Remediation Activities": Suggest that the first sentence be re-written to reflect that, according to the CRWQCB, further monitoring of the TCE levels and investigation as to its source has been required by the CRWQCB. It is unknown at this time if remediation of the groundwater contamination on Parcel 2 will be required by the CRWQCB to reach the level of acceptable use.

10-12 11. Page 3.3-12, Paragraph under "Impact 3.3-1", second sentence: Sentence should read: However the conveyance **agreements** currently being formulated by the City, NASA, **State Lands Commission, and the Federal** *(not State)* General Services Administration will include measures . . . "

10-13 12. Page 3.5-2, Second Paragraph, Sentence #6: Sentence should be changed to accurately reflect the transfer of the property to the City. "Through the General Services Administration (GSA), the City of Downey arranged and purchased Parcels 3, 4, 5, and 6 from NASA. Conveyance of Parcels 1 and 2 to the City from the State Lands Commission is anticipated to occur in Spring or Summer 2002."

10-14 13. On Page 15 of Appendix A, First Initial Study, Section 4.0: Under No. 1, "No Impact" is defined as ". . . will not have any measurable environmental impact . . . and **no additional analysis is required.**" Under No. 2., the City defines "Less Than Significant Impact " as ". . . impacts, however, will be less than the levels or thresholds that are considered significant and **no additional analysis is required.**" The statement that "no additional analysis is required" is not true for the following listed environmental issues. How can the determination that these environmental issues have a "No Impact" or "Less Than Significant Impact" be made at this time?

10-15 a. Appendix A, pages 8 and 9, Geology and Soils: under 6(a)(3) "Seismic-related ground failure, including liquefaction", and under 6(c) "Be located on a geologic unit or soil that is unstable... as a result of liquefaction . . ." The site is located within a recognized and published Liquefaction Hazard Zone—as published and distributed by the State Geologist. On page 23, 4.6(a)(3), regarding liquefaction, the City recognizes the California Division of Mines and Geology report of February 1999 and cites State law that requires the developer to submit a geotechnical report (an additional analysis) to the City's Building and Safety Department. The same comment applies to comments on Appendix A, page 24, 4.6(c), in regards to liquefaction and lateral spreading. Therefore, since an additional analysis is required, how can a determination of "Less Than Significant Impact" be made?

10-16 b Appendix A, page 11, Mineral Resources: under 10(a) "Result in a loss of availability of a known mineral resource that would be of value to the region..." The City of Downey's response is "No Impact"—also so stated on Appendix A, page 29, 4.10(a). The Bureau of Land Management (BLM) Mineral Report, dated June 19, 2001, concludes with the statement, "Therefore, it is my opinion that the rocks beneath the subject site meet the criteria for being classified prospectively valuable for oil and gas". Although oil and gas resources are not *known* to exist, a body of geologic information has been recognized by the BLM and by the State Lands Commission which supports at least the potential for oil and gas resources on or near the site. Additional analysis would be required to confirm or at least add further definition to the potential of oil and gas resources; therefore, how can a determination of "No Impact" be made.

10-17 Thank you for the opportunity to respond to the DEIR. Should you have any questions, please feel free to call me at 916-574-1817.

Sincerely,

Marianne Wetzel

Marianne Wetzel
Public Land Management Specialist

cc: Robert Lynch, LMD
Hap Anderson, LMD
Jim Frey, Legal
Jim Martin, LMD
Bruce Crandall, LMD
Betty Silva, DEPM
Marina Voskanian, MRMD
Greg Pelka, MRMD
Richard Greenwood, MRMD

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

Gray Davis
GOVERNOR

Steve Nissen
DIRECTOR

September 17, 2001

RECEIVED
SEP 20 2001
PLANNING

Mark Sellheim
City of Downey Economic and Community Development Department
11111 Brookshire Avenue
Downey, CA 90241-7016

Subject: Downey Landings Specific Plan
SCH#: 2001031096

Dear Mark Sellheim:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on September 14, 2001, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

11-1 Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-445-0613 FAX 916-323-3018 WWW.OPR.CA.GOV/CLEARINGHOUSE.HTML

Document Details Report
State Clearinghouse Data Base

SCH# 2001031096
Project Title Downey Landings Specific Plan
Lead Agency Downey, City of

Type EIR Draft EIR

Description Specific Plan for a multiple-use development on the 160-acre former Rockwell/Boeing site in Downey. Proposed land uses include a shopping center, offices, plus buildings designed to accommodate research and development activities, and a Kaiser Permanente hospital and medical office facility, with supporting uses. Together, the project's buildings will total a maximum of approximately 3.7 million square feet of floor area in four distinct land use areas.

Lead Agency Contact

Name Mark Sellheim
Agency City of Downey Economic and Community Development Department
Phone 562/904-7154 **Fax**
email
Address 11111 Brookshire Avenue
City Downey **State** CA **Zip** 90241-7016

Project Location

County Los Angeles
City Downey
Region
Cross Streets Lakewood Boulevard/SR-19/Stewart and Gray Road
Parcel No. 6256-004-900
Township 3S **Range** 12W **Section** **Base** S. Gate

Proximity to:

Highways
Airports
Railways UPRR
Waterways San Gabriel River
Schools Downey/Warren/Bellflower/Norwalk/Paramount/Santa Fe/Plus X
Land Use Mixed Use (includes commercial and industrial uses)

Project Issues Aesthetic/Visual; Air Quality; Flood Plain/Flooding; Drainage/Absorption; Job Generation; Housing; Noise; Public Services; Schools/Universities; Sewer Capacity; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Game, Region 5; Department of Parks and Recreation; Reclamation Board; Caltrans, District 7; Department of Housing and Community Development; Air Resources Board, Major Industrial Projects; Integrated Waste Management Board; State Water Resources Control Board, Division of Water Quality; Department of Toxic Substances Control; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; Regional Water Quality Control Board, Region 4

Date Received 08/01/2001 **Start of Review** 08/01/2001 **End of Review** 09/14/2001

Note: Blanks in data fields result from insufficient information provided by lead agency.

CIVIC SOLUTIONS, INC.
. . . community development consulting in the public interest

RECEIVED
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December 9, 2001

THOMAS G. MERRELL AICP
principal

Mark Sellheim, Principal Planner
City of Downey Economic and Community Development Department
1111 Brookshire Avenue
Downey, CA 90241-7016

RE: COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE DOWNEY LANDING SPECIFIC PLAN PROJECT.

Dear Mr. Sellheim:

Civic Solutions, Inc. would like to offer the following comments on the Draft Environmental Impact Report (EIR) for the proposed Downey Landing Specific Plan project on behalf of our client, Ms. Maria Hill et al., who resides at 12929 Sandy Lane, Downey.

Civic Solutions is a community development consulting firm providing comprehensive urban planning services to municipalities, special districts and homeowners associations. The firm is headed by Thomas G. Merrell, AICP, Principal, with over 35 years in municipal planning, and is guided by the company philosophy that community planning and development ultimately serve the public interest. Experienced urban planning professionals with extensive background in public and private sector service staff our firm. We sincerely thank you for considering our comments.

PROJECT SETTING

L-1 The Downey Landing Specific Plan project site is designated on the City of Downey General Plan Map as Mixed-Use, which allows commercial and manufacturing uses, or a combination of them. The site is zoned General Manufacturing (M2). The area is bounded by Stuart and Gray Road (north), Imperial Highway (south), Bellflower Boulevard (east), and Lakewood Boulevard and Clark Avenue (west).

PROJECT DESCRIPTION

The Specific Plan would accommodate a total building area of about 3.7 million square feet in four planning phases. Three phases would be developed by Ezralow retail properties and Kaiser Foundation Hospitals will develop the fourth. The Ezralow portion of the development would encompass approximately 141 acres consisting of retail shopping center (Area 1), motion picture studio or technology park (75 acres) and office park (32 acres). Proposed land uses include commercial retail (410,000 square feet), technology and business park and motion picture production (1.625 million square feet). The Kaiser portion would comprise of a 20-acre portion consisting of 1.6 million square feet of buildings (hospital and medical office uses), and structured parking.

Upon review of the Draft Environmental Impact Report prepared for this project, we have identified deficiencies in the areas of aesthetics, transportation and traffic, and socio-economic impacts. In the area of aesthetics, the lack of identifiable design features that could mitigate any light and glare impacts are worrisome, and we are concerned about the compatibility of this proposed project with surrounding land uses as certain impacts remain significant and unavoidable even after mitigation in some cases.

31726 RANCHO VIEJO ROAD • SUITE 223 • SAN JUAN CAPISTRANO • CA • 92675 • 949/489-1442 • FAX 340-8068

AESTHETICS

The Draft EIR identified project impacts related to lighting as significant and unavoidable. Impacts 3.1.1 and 3.1.2 of the Draft EIR state that the proposed Ezralow and Kaiser projects would introduce substantial sources of nighttime light and glare and would contribute to the exposure of residential areas in the City to increased nighttime light and glare intensities. The residential land uses located on Stuart and Gray Road, Lakewood Boulevard and Bellflower Boulevard are potentially subject to this impact. Mitigation Measure 3.1.7 states that no feasible mitigation measures would reduce the light and glare impacts to less than significant levels. The City of Downey proposes to issue a statement of overriding consideration for this impact since the impacts would remain significant and unavoidable at project implementation.

2 The lack of any identified specific mitigation measures in the EIR to serve as a guide is wontsome. This creates an environment where the nighttime light and glare impacts could be left unregulated even at the project implementation stage. It is recommended that the EIR at least identify "typical" code requirements designed to regulate light intensities or the spillage of light from one property to another. This would provide a point of reference and a targeted attainment level. On the other hand, one could question whether a project whose nighttime light and glare impacts are unavoidable and significant is desirable for the location and compatible with surrounding residential land uses. We believe that measurable impacts such as light and should be reduced to a less than significant level because they create quality of life problems for the City's residents upon project implementation. Our fear is that at that stage, enough would have been invested in the project that it may be infeasible to retrofit any identified negative impacts that cannot be mitigated to a less than significant level.

The EIR or project conditions of approval need to identify potential mitigation measures that would be used to measure project compliance. We believe that project conditions of approval may be ineffective when the environmental document approving the project does not recognize feasible mitigation measures that would reduce the impact of nighttime light and glare to a less than significant level.

TRANSPORTATION AND TRAFFIC

The City of Downey General Plan indicates that a project would have a significant roadway impact if the project causes a decrease from LOS "A", "B", "C", or "D" to LOS "E" or "F" at an affected intersection. The Downey General Plan also indicates that a project would have a significant roadway impact if the project causes an increase in Intersection Capacity Utilization (ICU) value by 0.02 or more at an intersection operating at LOS "E" or "F.

With project implementation the EIR identified five intersections that would operate at a Level of Service "E" or worse with an ICU value of 0.90 to more than 1.2. The intersections are: Lakewood Boulevard and Firestone Boulevard; Lakewood Boulevard and Bellflower Boulevard; Lakewood Boulevard and Stuart & Gary; Bellflower Boulevard and Imperial Highway, and
2-3 Lakewood Boulevard and Imperial Highway. Additionally, The Los Angeles County Congestion Management Plan (CMP) indicates that a project would have a significant freeway impact if the demand/capacity (D/C) ratio increases by 0.02 or more for a facility operating at LOS "F". The proposed project would cause Interstate 105 at the CMP monitoring station intersection to operate at LOS "F".

We do not concur with the assertion that the project meets the City of Downey General Plan Circulation Element Policy 2.1.1, Program 2.1.1.1. Program 2.1.1.1 states that the City shall maintain intersection service levels of major streets at "E" or better, excepting those intersections currently operating at Level of Service "F". The Consistency finding under Program 2.1.1.1 states that "the project is consistent with this program because mitigation measures have been proposed that would improve the level of service at any intersection projected to operate at LOS E or F that would be significantly impacted by the project". The General Plan threshold is LOS "E" or better.

For example, table 3.9-6 of the EIR indicates that the Ezralow development (AM peak hour) would cause the Lakewood/Bellflower intersection to operate from the existing LOS "D" to LOS "E" with project implementation. The Lakewood/Stuart & Gray intersection would operate from the existing LOS "D" to LOS "F", and the Bellflower/Imperial intersection would operate from the existing LOS "E" to LOS "F". These trends are inconsistent with the City's General Plan Circulation Element Policy 2.1.1, Program 2.1.1.1. Table 3.9-7 of the EIR identifies three intersections that, during PM peak hour, would operate at LOS "F" with project implementation. The existing conditions for these intersections are LOS "D" and "E". These findings are not consistent with the City's General Plan policy and if extrapolated, inconsistent with Southern California Area of Governments' (SCAG) Regional Transportation Plan Policy 4.01. The Kaiser Development does not fair any better as identified in tables 3.9-8 and 3.9-9.

More importantly, the Mitigation Measures in Section 3.9.7 of the EIR fail to relate any mitigation measure to an identified negative impact such as an intersection operating at an acceptable LOS level or ICU ratio with project implementation. The EIR should link each mitigation measure to an identified impact and demonstrate how each proposed mitigation measure reduces the identified impact to a less than significant level.

Parking for Retail Component

The Institute of Transportation Engineers (ITE) has a land use category identified as FreeStanding Discount Stores (FSDS). The ITE manual classifies a FSDS as a freestanding store with off-street parking "that offer a variety of customer services, centralized cashiering and a wide range of products. These stores typically maintain long store hours seven days a week. The stores could be the only ones on the site, but they also can be found in mutual operation with a related or unrelated garden center or service center". The ITE manual further illustrates that FSDS are sometimes found as separate parcels within a retail complex with their own dedicated parking.

4

The ITE Sixth Edition Free Standing Discount Store trip generation rate is 56.63 trips per day per 1,000 square feet of building area. However, from the analysis provided in the EIR, it is unclear what trip generation rate or parking ratio was used for the big box portion of the Ezralow Development. Based on published studies, using the Free-Standing Discount Store trip rate typically results in a 32 percent increase in trip rate and parking requirement compared to a shopping center parking requirement. It also results in a substantial increase in the transportation/circulation impacts and an increase in the associated emissions (Air Quality) and aesthetics (light and glare) impacts assumed for the development.

The EIR should clarify the methodology used to arrive at the required parking for this development and defend why the FSDS trip generation rate and parking standard was not used in this instance.

BLIGHTING IMPACTS

The California Environmental Quality Act (CEQA) Section 15131(b) indicates that economic or social effects of a project may be used to determine the significance of physical changes caused by the project.

The question becomes more critical in light of the documented blighting effects of big box retail outlets on local communities. A report titled "The Impact of Big Box Grocers on Southern California: Jobs, Wages, and Municipal Finances" prepared for the Orange County Business Council by professor Marion Boarnet of the University of California at Irvine, and professor Randall Crane of the University of California at Los Angeles, made the following key findings:

5

a. The fiscal benefits of superstores, and of discount retail more generally, are often much more complex, and lower, than they first appear. This is particularly true when big box retailers close existing stores to move into larger quarters elsewhere, when they expand an existing store to include food service, and when retailers reconfigure an existing store to

sell food without expansion. In each case, additional tax revenues generated will in part come from existing businesses elsewhere in the city in the form of lost market share.

b. The aggressive entry of superstores into the regional grocery business is expected to depress industry wages and benefits. This impact is estimated at ranging from a low of $500,000 to a high of almost $1.4 billion per year, potentially affecting 250,000 grocery industry employees.

c. The full economic impact of those lost wages and benefits throughout southern California could approach $2.8 billion per year.

d. Discount retail chains that operate superstores typically offer much less comprehensive health care coverage than major California grocery chains. One major economic impact of Superstores could be a dramatic reduction in health coverage for most of the 250,000 grocery employees in California. This can lead to lower quality care for grocery employees whose health insurance benefits are reduced.

e. Superstores are often conversions of existing discount retail stores. Local officials should consider the possibility of a future conversion to a superstore, and any attendant negative economic, fiscal, or land use impacts, when approving big box discount retail projects.

Another report, titled "The Shils Report: Measuring The Economic and Sociological Impacts of The Mega-Retail Discount Chains on Small Enterprise in Urban, Suburban and Rural Communities" concluded that in exchange for one new part-time job in a mega-discount chain store, about one and one-half full time jobs were eliminated in smaller stores. This report was prepared by Professor Edward B. Shils and Emeritus Professor of entrepreneurial studies, George W. Taylor of the Wharton School, University of Pennsylvania. The cumulative effects of closures of small businesses and loss of full time jobs have resulted in significant blighting effects in communities where these studies have taken place. Under CEQA, these documented blighting effects constitute physical changes to the environment. Therefore, the blighting effect of big box retail outlets on local economies should be analyzed and included in the EIR.

ALTERNATIVES

Although declared infeasible for economic reasons, the Reduced Scale Alternative would eliminate some or most of the significant and unavoidable environmental impacts. However, the EIR did not analyze the specifics of the Reduced Scale Alternative and did not provide any details. It would have been interesting to see amount of reduction in the project intensity would have made the development more environmentally friendly and eliminate the proposed findings of a statement of overriding consideration. The "No project"/No development" alternative is not an adequate comparison to a development whose impacts on the environment could be reduced with reduced building intensities or alternative land uses. L-6

An alternative land use analysis or a reduced intensity analysis should be included in the EIR to clearly show how a different mix of development or reallocation of land uses or both would produce a more environmentally friendly project.

COMPATIBILITY

Civic Solutions Inc. supports the City of Downey in its efforts to redevelop the project site and applauds the goals that have been established for developing the site. However, we are not convinced that this site is most suited for commercial uses since the land use history of the site to date does not include the types of commercial uses proposed. The proximity of the site to residential development makes the proposed high-volume development incompatible with the surrounding residential land uses. Portions of the site may be more suitable for uses that generate lower trip rates, less traffic volumes, and reduced noise, light, glare, trash and shopping carts. The EIR should strongly consider, adequately analyze, and sufficiently mitigate L-7

construction traffic noise and air quality impacts and the development on surrounding residential land uses. These impacts are long term impacts based on project phasing and the construction schedule.

8 Because of the number of parking spaces proposed and the need for parking lot lighting, the developer and the City should ensure that parking lot lights do not spill over to surrounding residential developments. At the same time, use of alternative site planning principles would insure that vehicular loading and unloading areas are oriented away and buffered from residential land uses. The buffering may consist of landscape berming, walls, or a combination of both elements.

CONCLUSION

9 The EIR has identified some issues that have been mitigated with identified mitigation measures but some issues such as light and glare, transportation and traffic, and socio-economic impacts have not been adequately addressed or mitigated. We support the development of this site and the efforts of the City of Downey to bring economic vitality back to the project site. It is our hope that our comments lead to an improved project and a well-informed decision by the City of Downey.

Sincerely,
CIVIC SOLUTIONS INC.

Gabriel Elliott
Senior Project Manager

Letter from Harlan R. Jeche, Department of Toxic Substances Control, August 20, 2001

Response to Comment 1-1: Comment noted.

Response to Comment 1-2: Comment noted. See Response to Comment 10-1 through 10-13.

Response to Comment 1-3: Comment noted. See Response to Comment 10 -1 through 10-13.

Response to Comment 1-4: Mitigation Measure 3.3-2 on page 3.3-18 of the Draft EIR requires the formulation a plan to be implemented in the event of the exposure of potentially contaminated soils during grading or excavation activities. The mitigation measure identifies the Los Angeles RWQCB as the government agency that would provide appropriate regulatory oversight. Further, Draft EIR Mitigation Measure 3.3-2 provides a basic mechanism for the implementation of appropriate procedures in the event of such a discovery. At a minimum, the following must occur:

- All work in the vicinity of the affected area shall cease.
- The Los Angeles RWQCB shall be contacted.
- The appropriate California Health and Safety Code procedures shall be followed.

In response to this comment, the mitigation measure shall be modified as follows:

"At a minimum, the plan shall identify the RWQCB as a responsible agency, and shall include the following specific points:

- A qualified construction monitor shall be designated and shall be present on-site during grading and excavation activity.
- The construction monitor shall be responsible for identifying pockets of potentially contaminated soils, and, upon identification of potential contaminants, for implementing the procedures outlined in the plan.
- All work in the vicinity of the affected area shall cease.
- The Los Angeles RWQCB shall be contacted.

- The appropriate California Health and Safety Code procedures shall be followed."

Note that Draft EIR Impact 3.3-1 on page 3.3-12 discusses the potential for contaminants on site that have not been identified by soil and ground water surveys conducted to date. Because the presence and nature of such contaminants is hypothetical, no remediation method can be specified at this time. Consequently, Draft EIR Mitigation Measure 3.3-2 requires the formulation of appropriate remediation procedures in consultation with the RWQCB.

Response to Comment 1-5: Refer to response to comment 1-4 for a discussion of the procedures to be followed if suspected soil contamination is encountered on the project site during grading and excavation activities.

Response to Comment 1-6: Comment noted.

State Clearinghouse Stamped Notice of Completion and Environmental Transmittal Form, August 1, 2001

Response to Comment 2-1: Comment noted.

Letter from Douglas Gray, Ezralow Retail Properties, (now called Downey Landing, LLC), August 30, 2001

Response to Comment 3-1: In response to this comment, the text on page 3.1-5 of the Draft EIR shall be modified as follows:

"Landscaping along the northern boundary is proposed to help diffuse this light, as well as an approximately three-foot earthen berm wall along the northern perimeter of Area I, a six-foot wall on the eastern perimeter, and landscaping along the western perimeter."

Response to Comment 3-2: In response to this comment, Mitigation Measure 3.2-4 on page 3.2-17 of the Draft EIR shall remain as follows:

"All new structures on the site shall have wall and attic insulation that exceeds current Title 24 requirements by at least five (5) percent."

All new projects within the state are required to comply with the provisions of Title 24 that are in effect at the time of development. These are minimum provisions necessary to meet current energy standards. However, in their CEQA Air Quality Handbook, the South Coast Air Quality Management District recommends that new development projects that result in significant daily air pollution emissions mitigate this impact by, amongst other things, exceeding Title 24 requirements. Although no specific target is recommended by the SCAQMD, they have reviewed EIRs for other projects that recommended exceeding Title 24 requirements by at least ten percent. Many projects have been constructed with this specification; it is feasible to implement such a mitigation measure. Because the current provisions of Title 24 are successful at minimizing energy demand, the City of Downey is recommending a five percent improvement for the proposed project.

Response to Comment 3-3: In response to this comment, Mitigation Measures 3.9 -1 through 3.9-7 on pages 3.9-24 through 3.9-25 of the Draft EIR shall be modified as follows:

"Provide a Second Northbound-to-Westbound Left-Turn Lane on Lakewood Boulevard at the Lakewood/Firestone Intersection, -OR- Provide Right-Turn Lanes in the Northbound, Southbound, and Eastbound Directions and Double Left-Turn Lanes in the Eastbound and Westbound Directions, as feasible within existing right-of-way.. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location.

"Provide an Additional Northbound Through Lane on Lakewood Boulevard at the Lakewood/Bellflower Intersection, as feasible within existing right-of-way.. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied

as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location.

"Provide an Additional Northbound and Southbound Through Lan e on Lakewood Boulevard at the Lakewood/Stewart & Gray Intersection , as feasible within existing right-of-way.. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right -of-way), project applicant shall contrib ute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location.

"Provide an Additional Westbou nd-to-Southbound Left-Turn Lane on Imperial Highway at the Lakewood/Imperial Intersection , as feasible within existing right-of-way.. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right -of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this location.

"Provide an Eastbound-to-Southbound Right-Turn Lane on Imperial Highway at the Imperial/Bellflower Intersection , as feasible within existing right-of-way.. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right -of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at this loca tion.

"Provide a Southbound-to-westbound Right-Turn Lane on Bellflower Boulevard at the Bellflower/Stewart & Gray Intersection , as feasible within existing right-of-way.. If this mitigation measure is deemed infeasible (i.e., it could not be completed wit hin existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimate ly install at this location.

"Prepare a Phased Mitigation Plan to link the specific mitigation measures (Measures 3.9-1 through 3.9-6) with the various levels and/or combinations of

development that are anticipated for the development, as feasible within existing right-of-way.. If this mitigation measure is deemed infeasible (i.e., it could not be completed within existing right-of-way), project applicant shall contribute to a fair-share funding program administered by the City of Downey to be applied as a partial payment of the roadway improvement or traffic signal coordination system that the City may ultimately install at these locations.

Response to Comment 3-4: Comment noted.

Letter from James A. Noyes, Department of Public Works, August 27, 2001

Response to Comment 4-1: Comment noted.

Response to Comment 4-2: Mitigation Measures 3.9-1 through 3.9-7 of the Draft EIR are proposed to mitigate the project's traffic impacts. The State of California Department of Transportation has had the opportun ity to comment, and a comment letter has been provided for their response. In addition, Lakewood Blvd., formerly State Route 19, was recently relinquished to the City of Downey.

Response to Comment 4-3: The Initial Study addressed conforming to requirem ents of the State of California Division of Mines and Geology Special Publication 117. The City of Downey requires that liquefaction analysis be submitted as part of the plancheck process. The liquefaction report must be submitted to the City Building an d Safety Division along with construction drawings.

Response to Comment 4-4: Comment noted.

Response to Comment 4-5: Notices of Completion of the Draft EIR have been sent to adjoining cities as well as the State of California Department of Transportati on. These agencies all have the opportunity to review the Draft EIR.

Response to Comment 4-6: The City of Downey has participated in the review of the Los Angeles/San Gabriel River Watershed Plan. They are aware of the water sheets and connecting open green spaces for the area.

The Specific Plan landscape design maximizes green space (or greenbelts) on the entire site in order to maintain water on -site.

The Department of Public Works has reviewed the proposed project in light of maximizing capture of local rainfall on the project site, minimizing or eliminating incremental flows to the storm drain system, and providing filtering of flows to capture contaminants originating from the project site.

Letter from Laura J. Simonek, Metropolitan Water District of Southern California, August 2, 2001

Response to Comment 5-1: Comment noted.

Response to Comment 5-2: Comment noted. Comment noted. In order to avoid potential conflicts with Metropolitan's rights -of-way, the applicant shall submit any preliminary engineering design drawings or improvement plans for any activity in the area of Metropolitan's pipelines and rights -of-ways to the Metropolitan Water District of Southern California for review and written approval.

Response to Comment 5-3: See comment 5-2 for response.

Response to Comment 5-4: The Draft EIR analyzed the consistency of the proposed project with the growth management plan adopted by the Southern California Association of Governments in Sections 3.5 (Land Use and Planning), page 3.5-6, 3.7 (Population and Housing), page 3.7 -8, and 3.9 (Transportation and Traffic), page 3.9 -5. The Draft EIR analyzed policies provided by SCAG and to the satisfaction of SCAG in terms of project consistency with these policies.

Policy 3.01 states, "The population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review." Refer to letter attached here within from SCAG. The

consistency discussion with Policy 3.01 on page 3.7 -8 of the Draft EIR particularly addresses growth management concerns. This discussion is summarized as follows:

SCAG's projections show that capacity exists for additional employment opportunities, while still maintaining a balance with existing housing. In addition to SCAG's projections for the City, the proposed project is consistent with the projected growth in jobs in the Gateway Cities Subregion. Further, SCAG's population forecasts for the City of Downey are significantly lower than the actual Census 2000 counts, which exceed SCAG's projected population for the City at 2010, and closely approach SCAG's 2015 projection for the City.

Response to Comment 5-5: Comment noted. The Draft EIR includes several mitigation measures intended to reduce water consumption on the project site. These include Mitigation Measure 3.8-1, which requires the installation of ultra low-flush toilets, water conserving washing machines, faucets, and dishwashers, and other appropriate water conserving appliances or devices as appropriate. In addition, Mitigation Measure 3.4 -3 requires preparation of a Stormwater Pollution Prevention Plan and a Standard Urban Stormwater Mitigation Plan that incorporate Best Management Practices such as efficient irrigation practices.

Response to Comment 5-6: These closing comments are noted.

Letter from Stephen Buswell, The State of California Department of Transportation, August 29, 2001

Response to Comment 6-1: Comment noted.

Response to Comment 6-2: The DEIR traffic analysis indicates that the traffic generated by the proposed development would have a significant impact on the I -105 Freeway according to the CMP significance criteria because the freeway operates at level of service F and the project would result in an increase of greater than 0.02 in the demand/capacity ratio. There are no current plans, however, for increasing the capacity of the I -105 Freeway and there are no feasible mitigation measures for alleviating

the project's impacts. The DEIR indicates, therefore, that the project's impacts on the mainline freeway would be unavoidable and that a statement of overriding considerations would be recommended for adoption by the City of Downey

Response to Comment 6-3: It has been recommended that the City of Downey implement a fair - share funding program to allocate the costs of the required roadway improvements to the various components of the project. Such a program would not, however, be applicable to the mainlin e I-105 Freeway because no feasible mitigation measures or improvements are identified in the DEIR. If any work is conducted within the State right-of-way, an encroachment permit would be obtained, and it is acknowledged that Lakewood Boulevard is no long er a State highway.

Response to Comment 6-4: See response to comment 6 -3.

Response to Comment 6-5: The recommendation by Caltrans to limit construction related truck trips to off-peak periods on State highways has been noted and contractors will be enc ouraged to adopt this policy. It will not, however, be a required EIR mitigation measure.

Letter from Jeffrey M. Smith, Southern California Association of Governments, September 7, 2001

Response to Comment 7-1: Comment noted.

Response to Comment 7-2: Comment noted.

Response to Comment 7-3: Comment noted.

Response to Comment 7-4: Comment noted.

Letter from Nancy Burke, Kaiser Permanente, September 13, 2001

Response to Comment 8-1: Comment noted.

Response to Comment 8-2: Comment noted.

Response to Comment 8-3: The Final EIR confirms that the development of the Kaiser project at the alternate location (the approximately 30 acre Downey Landing L.L.C. Area III site fronting Imperial Highway) would not result in any additional impacts and is consistent with the policy objectives of the Specific Plan.

Response to Comment 8-4: Comment noted.

Response to Comment 8-5: In response to this comment, the text on page 1-2, specifically the Kaiser portion, of the Draft EIR shall be modified to include the following:

"Impact analysis for the Kaiser portion of the proposed project was based on a development envelope of 1.6 million square feet of development (1,000,000 square feet of hospital and medical office facilities and 600,000 square feet of parking structure) in structures up to 8 stories tall."

Response to Comment 8-6: In response to this comment, the text on page 1-5 of the Draft EIR shall be modified to include the following:

"A Program EIR can also provide project level review for a portion of the project. The Kaiser project has been analyzed at a project level."

Response to Comment 8-7: The description of the Kaiser project in Section 2.5.1 (Project Characteristics) is consistent with the Kaiser portion of Section 1.1 (Overview of the Proposed Project). In addition, any changes that might be made to Section 1.1 will be included in the corresponding Kaiser portion of Section 2.5.1.

Response to Comment 8-8: In response to this comment, the text on page 2-8 of the Draft EIR shall be modified as follows:

"Note that the current phasing scheme is tentative; however, the combination and progression of uses developed would not exceed 1.6

million square feet, and phasing variations would not materially affect the analysis of the Kaiser project in this EIR."

Response to Comment 8-9:

In response to this comment, an additional bullet under Section 2.5.3 City of Downey Requested Approvals on page 2-8 of the Draft EIR shall be added to include the following:

- "Rezoning of the Specific Plan area"

Response to Comment 8-10:

The General Plan does not contain any height restrictions, yet the applicable Specific Plan for the site does. The proposed building heights, as specified in the Downey Landing Draft Specific Plan Guidelines, are within the range of building heights currently on the site. Both market conditions and the character of the surrounding built environment preclude high-rise structures.

Within the Kaiser Medical Center will be several mid-rise structures including an eight-story hospital, a six-story medical office building and a six-story parking structure.

Building height guidelines for the Kaiser medical center include:

New buildings - Maximum of 160' in height.
Parking Structures - Maximum of 60' in height
Auxiliary Buildings - Maximum of 50' in height
Architectural features and landscape structures - Maximum of 40' in height

Even if height restrictions did not exist for the project site, this would have no bearing on whether it has an aesthetic impact. It was determined that the Kaiser medical center's eight story hospital would not result in significant adverse aesthetic impacts due to building height.

Response to Comment 8-11:

Mitigation Measures 3.2-1 and 3.2-2 would reduce the impacts of construction-related emissions of PM10 to a less than significant level but not those of NOx (oxides of nitrogen). Therefore, oxides of nitrogen would indeed remain significant and unavoidable. In response to this comment the last paragraph of Impact 3.2-1, page 3.2-12 of the Draft EIR, shall be modified as follows:

"Implementation of the identified mitigation (Mitigation Measures 3.2-1 and 3.2-2) would reduce the impacts of construction-related emissions of NOx and PM_{10}. ~~but not~~ However, these measures would

not be capable of reducing the impacts of NOx. to levels that would be considered less than significant, and impacts resulting from construction-related emissions would remain significant and unavoidable."

Response to Comment 8-12: Impact 3.3-1 does not speculate about language that conveyance documents may include. Rather, a general discussion of the types of requirements that would be included in the documents is intended to provide the context under which the impact was evaluated and the mitigation measures formulated.

Response to Comment 8-13: The FAR for the proposed project would be 0.43. This was evaluated as a general floor area ratio across projects, the project envelope, within the Draft EIR. Therefore, there is not a need to discuss the individual FAR for the Kaiser portion of the project within the consistency discussion. Furthermore, the Draft EIR states that the City determined that this reduced FAR of .43 is acceptable for the proposed uses and would not be inconsistent with the General Plan.

Response to Comment 8-14: Refer to Response to Comment 8-13.

Response to Comment 8-15: In response to this comment, the discussion of project consistency with Policy 3.12 on page 3.5-7 of the Draft EIR will be modified to include the following:

"In addition, Kaiser's Kaiserider program will assist in reducing the number of auto trips and vehicle miles traveled."

Response to Comment 8-16: The school fee rate is determined by State Law; however, the exact amount to be paid is not specified. Written agreement allows the project to proceed prior to payment being made.

In response to this comment, Mitigation Measure 3.8-12 on page 3.8-26 of the Draft EIR shall be modified as follows:

"Prior to issuance of building permits, the applicants shall ~~have entered into a written mitigation agreement with~~ pay the School District ~~which shall require payment of school fees~~ all required school fees."

Response to Comment 8-17: Kaiser would create a need for additional police services through its daily increase of daytime population in the City of Downey as a result of added employees, patients, and visitors. Attached here within is a

report of conversation with Downey Police Department to refer to in regarding this matter.

Response to Comment 8-18: Please refer to response to comments regarding the letter from Linscott Law & Greenspan, Kaiser's traffic consultants.

Response to Comment 8-19: Comment noted.

Letter from Jack M. Greenspan, Linscott, Law & Greenspan, Engineers, September 11, 2001

Response to Comment 9-1: The Trip Generation manual (Institute of Transportation Engineers, 6th Addition, 1997) was the source of the data used for estimating the volumes of traffic that would be generated by the proposed development components, and there are two categories of equa tions in this manual that can be used to calculate the traffic volumes. One is the average rate (e.g., number of trips per 1,000 square feet of floor area) and the other is a formula that replicates a fitted curve of the representative data points for eac h particular land use. The average rate was used in the DEIR traffic analysis for estimating the traffic volumes for the proposed Kaiser hospital and medical buildings, which resulted in slightly higher traffic volume estimates as compared to the fitted curve equation. The differences between the two methodologies are shown in the table below. The larger numbers were used for the DEIR traffic analysis to ensure that the impacts of this project were not understated. If the smaller numbers from the fitted curve equation were to be used for the analysis, the conclusions in the DEIR would be the same; i.e. that the Kaiser development would have a significant impact at four intersections during the morning peak hour and two intersections during the afternoon peak hour.

COMPARISON OF TRIP GENERATION ESTIMATES

AVERAGE RATE VS. FITTED CURVE EQUATION

Trip Generation Methodology	AM Peak Hour	PM Peak Hour	Daily
DEIR – Average Rate	1,397	1,722	22,450
Fitted Curve Equation	1,329	1,440	21,030
Difference	-68	-282	-1,420
Percent Difference	4.9 %	16.4 %	6.3 %

The differences between the DEIR -estimated traffic volumes and the volumes cited in the comment letter by LL&G also reflect the assumption that there would be a 10 percent reduction in traffic during the morning peak hour, a 20 percent reduction in traffic during the afternoon peak hour, and a 20 percent reduction in daily traffic volumes associated with internal linkages between the office buildings and the medical center. While these assumed percentag es appear to be relatively high and cannot be verified with empirical data, the intersection analysis was re -addressed to identify the locations that would be significantly impacted using the reduced traffic volumes cited in the comment. The re -analysis using the reduced volumes results in the same conclusions as shown in the DEIR; i.e. that the Kaiser development would have a significant impact at four intersections during the morning peak hour and two intersections during the afternoon peak hour.

Response to Comment 9-2: The comment correctly points out that there is a typographical error in the DEIR on page 3.9 -9. The equation for average daily traffic for the retail use should be: $Ln(T) = 0.643\ Ln(X) + 5.866$.

Response to Comment 9-3: This comment states that the DEIR traffic analysis addresses two options for the Downey Landing L.L.C. component of the project, that a passby reduction was applied to the retail use, and that an internal capture trip reduction was applied to the project as a whole. Comment noted, no further response required.

Response to Comment 9-4: See response to comment 1 above

Response to Comment 9-5: Tables 3.9-8 and 3.9-9 of the DEIR indicate that the Kaiser development alone would have a significant impact at four

intersections during the morning peak hour (Lakewood/Firestone, Lakewood/Bellflower, Lakewood/Stewart & Gray, and Bellflower/ Imperial) and two intersections during the afternoon peak hour (Lakewood/Imperial and Bellflower/Imperial). The impacts cited in the comment for six intersections during the morning peak hour and four intersections during the afternoon peak hour actually represent the combined impacts of the Downey Landing L.L.C. and Kaiser developments. A re-analysis of the intersections that would be significantly impacted by the Kaiser development using the reduced traffic volumes stated in the comment indicates that the conclusions of the intersection analysis would be the same as that which was presented in the DEIR; i.e., that four intersections would be significantly impacted during the morning peak hour and that two intersections would be significantly impacted during the afternoon peak hour. The ICU values and levels of service for the reduced traffic volume scenario are shown in the table below for the significantly impacted intersections. Similarly, the conclusions of the intersection analysis for the combined Downey Landing L.L.C. and Kaiser developments are unchanged from what was presented in the DEIR.

KAISER DEVELOPMENT IMPACTS – REDUCED TRAFFIC VOLUMES

Intersection	ICU Value – Level of Service				
	Future w/o Project	With Project (from DEIR)	With Project (Reduced Volumes)	Project Impact (Reduced Volumes)	Significant Impact (Reduced Volumes)
AM PEAK HOUR					
Lakewood/Firestone	1.145 – F	1.171 - F	1.167 – F	0.022	Yes
Lakewood/Bellflower	0.891 – D	0.958 - E	0.948 – E	0.057	Yes
Lakewood/Stewart & Gray	0.949 – E	0.982 – E	0.977 – E	0.028	Yes
Bellflower/Imperial	0.990 – E	1.117 - F	1.099 – F	0.109	Yes
PM PEAK HOUR					
Lakewood/Imperial	1.021 – F	1.110 – F	1.080 – F	0.059	Yes
Bellflower/Imperial	0.901 – E	1.016 – F	0.978 – E	0.077	Yes

Response to Comment 9-6: The comment correctly points out that there is a typographical error in the DEIR text in the discussion of the Kaiser project's impacts on the I-105 Freeway according to the CMP criteria. The second sentence of the paragraph on page 3.9-20 shall be changed to:

The analysis indicates that the Kaiser project would <u>not</u> have a significant impact at this freeway location according to the CMP guidelines as the locations that operate at LOS F have a project impact ~~greater~~ <u>less</u> than 0.02 during the morning peak hour in the

westbound direction and during the afternoon peak hour in the eastbound direction.

Response to Comment 9-7: It is acknowledged that the Kaiser development would most likely implement the Kaiserider ride-share program, which should successfully reduce the volumes of traffic that would be generated by the proposed facility. No further reductions have been incorporated into the traffic volume estimates used for the traffic analysis, however, because it is assumed that ride-share programs were also in use at the facilities that were surveyed while assembling the trip generation data for the Trip Generation manual.

Response to Comment 9-8: Comment 8 is a summary of Comments 1 through 7. No additional response is needed because these comments are all addressed above in Responses 1 through 7.

Response to Comment 9-9: Comment noted.

Response to Comment 9-10: Comment noted.

Response to Comment 9-11: Comment noted.

Response to Comment 9-12: Comment noted.

Response to Comment 9-13: Comment noted.

Response to Comment 9-14: Comment noted.

Response to Comment 9-15: Comment noted.

Response to Comment 9-16: Comment noted.

Letter from Marianne Wetzel, California State Lands Commission, September 19, 2001

Response to Comment 10-1: Comment noted.

Response to Comment 10-2: In response to this comment, the text beginning on page 2 -5, line 13, of the Draft EIR, shall be modifie d as follows:

"~~Through the General Services Administration (GSA),~~ The City of Downey has arranged to purchase Parcels 1 and 2 of the NASA plant from the State of California, State Lands Commission who is acquiring the excessed property from the General S ervices Administration (GSA). Parcels 3, 4, 5, and 6 of the plant have already been purchased by the City, and conveyance of Parcels 1 and 2 to the City is anticipated to occur in ~~Fall 2001~~ Spring/Summer 2002."

Response to Comment 10-3: In response to this comment, the last sentence of section 2 -4, page 2-5 of the Draft EIR, shall be modified as follows:

"As further described below, the Specific Plan is the project that this EIR ~~analysis~~ analyzes, pursuant to CEQA."

Response to Comment 10-4: In response to this comment, the last sentence of the first paragraph, page 3.3-4 of the Draft EIR, shall be modified as follows:

"~~However, another, unidentified contaminant source may remain~~ The California Regional Water Quality Control Board (CRWQCB) has identified an isolated contaminated plume of TCE in the groundwater on Parcel 2; however, the source of this contaminant has not been identified ~~(Stewart 2001, pers. comm.)~~.

Response to Comment 10-5: In response to this comment, the second sentence of the fou rth paragraph, page 3.3-5 of the Draft EIR, shall be modified as follows

As of August 2001, TEC and tetrachloroethene (PCE) were detected in groundwater beneath Parcel 2. During this sampling episode, TCE ranged in concentration from 26 µg/l to 170 µg/l. PCE ranged in concentration from 8.4 µg/l to 16 µg/l. The concentrations of both PCE and TCE exceeded the State of California Department of Health Services Maximum Contaminant Levels (MCLs) of 5 µg/l for these compounds; however, the groundwater monito ring wells located upgradient from Parcel 1 (which is also upgradient from Parcel 2)

indicate PCE concentrations ranging from <7.5 µg/l to 14 µg/l. TCE concentrations in the upgradient monitoring wells ranged from 120 µg/l to 1,200 µg/l..

Response to Comment 10-6: Aboveground and underground storage tanks, if no longer in use, are required by most agencies to be removed and properly closed.

Response to Comment 10-7: In response to this comment, the second sentence of the fourth paragraph, page 3.3-6 of the Draft EIR, shall be modified as follows :

Soils samples collected in the northwestern portion of Parcel 4, near the UST, yielded only low concentrations of fuel hydrocarbons. PCE was detected at concentrations ranging from 6 g/kg to 402 g/kg, and TCE was detected at concentrations ranging from 7 to 113 g/kg. Although other areas that were not sampled may have had greater impacts, SCS's 1998 investigation and previous investigations by Earthtech (1996)...

Response to Comment 10-8: Currently, some investigation is being undertaken to define the extent of VOCs in groundwater beneath Parcel 2. This investigation may also further assess VOCs in groundwater beneath Parcel 5. Currently, soil on Parcel 5 is not included in this investigation.

Response to Comment 10-9: No additional information regarding the source of TCE in the southwest and northwest portion of Parcel 6 is currently available.

Response to Comment 10-10: PCE and 1,1,1, TCA were found in soil samples collected from borings completed to 20 feet below ground surface (bgs). Additionally, TCE, PCE, toluene, trimethylbenzene, and xylenes were found in the same boring at a depth of 40 feet bgs. The concentrations of PCE ranged from 11 to 402 µg/kg, the concentrations of 1,1,1, TCA ranged from , 5 to 48 µg/kg, and xylenes ranged in concentrations from, 5 to 906 µg/kg

Response to Comment 10-11: In response to this comment, sentence #1 of the second paragraph, page 3.3-9 of the Draft EIR, shall be modified by adding the following sentence:

The RWQCB-LA has required additional characterization of groundwater beneath Parcel 2 to more fully assess the extent of the VOCs.

Response to Comment 10-12: In response to this comment, sentence #2 of the second paragraph, page 3.3-12 of the Draft EIR, shall be modified as follows

However, the conveyance agreements currently being formulated by the City, NASA, State Lands Commission, and the Federal General Services Administration will include measures for the…

Response to Comment 10-13: In response to this comment, sentence #6 of the second paragraph, page 3.5-2 of the Draft EIR, shall be modified as follows:

Through the General Services Administration (GSA), the City of Downey arranged ~~to purchase~~ and purchased ~~the property from NASA.~~ Parcels 3, 4, 5, and 6 ~~have already been conveyed to the City, and~~ from NASA. Conveyance of Parcels 1 and 2 to the City from the State Lands Commission is anticipated to occur in ~~Summer or Fall 2001~~ Spring or Summer 2002.

Response to Comment 10-14: The initial study, in this case, is a tool used to help determine the scope of environmental impact requiring additional analysis within the EIR. Explanations for each determination are provided within the initial study.

Response to Comment 10-15: The city is following standard practice in requiring that a geotechnical report be prepared during project construction plan check.

Response to Comment 10-16: As noted on page 29 (section 4.10b) of the Initial Study, the project site has not been delineated as a mineral resour ce recovery site in the City's General Plan or any other kind of Land Use plan. Therefore a determination of "No Impact" can be made.

Response to Comment 10-17: Comment noted.

Letter from Terry Roberts, Governor's Office of Planning and Research, September 17, 2001

Response to Comment 11-1: Comment noted.

Letter from Gabriel Elliot, Civic Solutions, Inc., December 9, 2001

Response to Comment 12-1: Comment noted.

Response to Comment 12-2: Code requirements (i.e. City of Downey Municipal Code) for regulating light intensities or the spillage of light from one property to another were identified on pages 3.1-2 and 3.1-3 of the Downey Landing Draft EIR and state the following:

"Section 9144.06
Subsection (g) specifies that no operations, activity, or lighting fixture shall create illumination which exceeds five-tenths (.5) foot-candles at any point on the lot lines of the use.

Section 9152.18
Subsection (b) specifies that outdoor lighting shall be arranged so as not to direct light on any street or abutting property, and that exposed bulbs are not permitted. Subsection (d) requires approval of lighting intensities by the City Traffic Engineer and City Planner. Subsection (f) forbids, in commercial and manufacturing zones, lighting structures over five feet in height within 20 feet of a public right-of-way (except for car dealerships)."

In addition to these code requirements, compliance with these code requirements was addressed on page 3.1-3 of the Draft EIR and states the following:

"The project will prevent to the fullest extent possible the direction of light off-site and light spillage onto nearby residential properties. The project will further utilize non-exposed bulbs and obtain approval of all lighting intensities as required in the Municipal Code. The Downey Landing Specific Plan incorporates the requirements of the Downey Municipal Code as to outdoor lighting. Therefore, the project will therefore comply with the provisions of Sections 9152.18 and 9144.06 of the Downey Municipal Code and their specified subsections."

The proposed project is subject to code compliance; however, not all aesthetic/light and glare impacts can be mitigated to a less than

significant level due to reasons stated under impacts 3.1 -1 and 3.1-2 on pages 3.1-4 through 3.1-7 of the Draft EIR.

Response to Comment 12-3:

The comment cites five intersections that would operate at level of service E or F after project implementation. This observation is valid for the Downey Landing L.L.C. component of the project. For the combined project (Downey Landing L.L.C. and Kaiser), seven intersections are projected to operate at LOS E or F, including the five listed in the comment plus the intersections of Lakewood at the I -105 Ramps and Bellflower at Stewart & Gray. All of these intersections would be significantly impacted by the project except for Lakewood at the I-105 ramps based on the significance criteria outlined in the DEIR. The comment correctly states that the project would have a significant impact on the I-105 Freeway according the CMP criteria cited in the DEIR. The comment also states that the project is not consistent with the General Plan Circulation Element because it changes the level of service to LOS F at several intersections. The levels of service shown in Tables 3.9-6 through 3.9-11 indicate the unmitigated levels of service. The impacts that were identified in the DEIR and the mitigated levels of service are shown in the table below for the combined project. The ICU levels with mit igation are based on the intersection improvements described in Section 3.9.7 for Mitigatio n Measures 3.9-1 through 3.9-6.

EFFECTS OF PROPOSED MITIGATION MEASURES ON INTERSECTION LEVELS OF SERVICE

Intersection	ICU Value – Level of Service				
	Future Without Project	Future With Project	With Project and Mitigation	Project Impact With Mitigation	Significant Impact After Mitigation
AM PEAK HOUR					
Lakewood/Firestone	1.145 F	1.209 F	1.088 F	- 0.046	No
Lakewood/Bellflower	0.891 D	1.014 F	0.863 D	- 0.028	No
Lakewood/Stewart & Gray	0.949 E	1.077 F	0.960 E	0.011	No
Lakewood/Imperial	0.843 D	0.990 E	0.895 D	0.052	No
Bellflower/Stewart & Gray	0.729 C	0.974 E	0.854 D	0.125	No
Bellflower/Imperial	0.990 E	1.145 F	0.984 E	- 0.006	No
PM PEAK HOUR					
Lakewood/Firestone	1.244 F	1.293 F	1.166 F	- 0.078	No
Lakewood/Stewart & Gray	0.922 E	1.056 F	0.935 E	0.013	No
Lakewood/Imperial	1.021 F	1.072 F	1.018 F	- 0.003	No
Bellflower/Imperial	0.901 E	1.139 F	0.916 E	0.015	No

Response to Comment 12-4:

The land use category of free standing discount store was not used for calculating the volumes of traffic that would be generated by the retail component of the project because the buildings are not free standing and are expected to operate as an integral group of buildings rather than an isolated building, primarily because many customers would patronize multiple uses within the development. With regard to the parking demand for the retail center, the fact that a free standing discount store generates a higher volume of traffic on a daily basis than a typical retail facility does not necessarily indicate that it would have a higher parking demand at any given time. The free standing discount store has a higher trip generation rate because it is typically open for more hours of the day. The peak parking demand does not necessarily correlate with the daily trip generation rate. The retail center, as proposed, would have more parking spaces than what is required by the City of Downey's Municipal Code. The site would not, therefore, be deficient relative to the number of parking spaces provided.

Response to Comment 12-5:

The project would create new opportunity for employment and not cause blighting. The Draft EIR project description makes no reference to the inclusion of big box retail outlets as part of project development. Project objectives stated on pages 2-3 and 2-4 are the following:

- "Create employment opportunities that will replace the jobs that were lost with the closing of the NASA facility, with respect to both quantity and quality.
- Increase and diversify the number of retail merchandise opportunities in the community for the purpose of capturing those Downey residents who are shopping elsewhere so as to reduce the City's leakage of sales tax revenue.
- Provide for the development of additional retail businesses so as to enlarge the City's retail trade area and in turn strengthen its economic base.
- Enhance the visual character of the project site, which in turn will help to strengthen the image of the community."

Therefore, economic and social effect of the project will be positive with creation of employment opportunity, diversifying retail opportunities, strengthening the City's economic base, and enhancing the area's visual character. All these project attributes actually combat the effects of blight. In addition, retail uses will be in conformance with the guidelines specified in the Specific Plan and the General Plan, and no blighting would result from these uses.

Response to Comment 12-6:

The project provides a building envelope of maximum scale development. Many alternative land use mixes were considered including a reduced scale alternative addressed on page 4 -5 of the Draft EIR. This alternative was found to be infeasib le, though, because it would not meet the basic project objectives. Project applicant Downey Landing L.L.C. Retail Properties has indicated that due to purchase and lease prices, it is economically infeasible to reduce the project size and still support th e project by potential revenues. A reduced alternative would be economically infeasible for project applicant Kaiser to construct hospital facility of sufficient capacity to accommodate the needs of its membership. In addition, alternative sites were also considered and found to be infeasible, while the no project/no development alternative would not meet basic project objectives, nor would it constitute the highest and best use of the site.

Response to Comment 12-7:

The Draft EIR addresses the issue of compatibility with surrounding land uses. Low to medium residential, neighborhood commercial, commercial manufacturing, medical office, county office, and educational uses surround the project site and are compatible with the commercial retail, hospital, and medical office uses that are proposed. As stated on page 2-3 of the project description, the entire project site is designated in the General Plan Land Use Diagram as Mixed -use, which allows commercial and manufacturing uses, or a combination of them. Hospitals and medical facilities are commercial uses, or are otherwise consistent with "combination of commercial/manufacturing uses." The zoning designation for the project site is General Manufacturing (M2), with Parking Buffer (P -B) on the perimeter of the site along Clark Avenue, Imperial Highway, and Stewart & Gray Road. In addition, the Draft EIR adequately analyzed and sufficiently mitigated construction traffic noise and air quality impacts of the proposed development in terms of surrounding re sidential land uses.

In addition, the Draft Specific Plan provides specific guidelines for development of the site. The Specific Plan allows for flexibility in land use development, including, but not limited to commercial uses. These land uses will be influenced by market condition, as ia most new development.

Response to Comment 12-8:

As discussed on pages 3.1 -4 through 3.1-7, the lighting provisions in Section 9152 of the Downey Municipal Code would prevent the direction of light off-site, particularly with respect to the lighting fixtures that would be used in the parking areas of Area I and the lighting fixtures that would be used in the parking areas of the Kaiser facility and would reduce glare impacts and corresponding light spillage onto nearby residential uses. Downey Landing LLC plans full -intensity lighting of Area I for security reasons, therefore, no feasible measures

would significantly reduce the increase in ambient lighting on the project site. The Draft EIR states that light and gla re buffering from residential land uses will consist of walls and landscaped earthen berm along the perimeters, preventing significant amounts of spillage of light onto adjacent properties. However, no mitigation measures are available that would signific antly reduce the potential for the direction of vehicle headlights onto residential uses along Stewart & Gray Road, Lakewood Boulevard, and Bellflower Boulevard.

Response to Comment 12-9: Issues associated with light and glare, transportation and traffic , and socio-economic impacts have been adequately addressed in the Draft EIR. Refer to the responses to comments above.