City of East Palo Alto

Ravenswood Industrial Area Redevelopment Plan and General Plan Amendment

Prepared by:

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City of East Palo Alto Palo Alto, California 94303

with the assistance of Wallace Roberts & Todd

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DRAFT ENVIRONMENTAL IMPACT REPORT CITY OF EAST PALO ALTO RAVENSWOOD INDUSTRIAL AREA REDEVELOPMENT PLAN And General Plan Amendment

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1.0 INTRODUCTION

This Draft Program Environmental Impact Report (EIR) has been prepared in conformance with the California Environmental Quality Act (CEQA) and the City of East Palo Alto CEQA procedures. The City of East Palo Alto is the "lead agency" with respect to the preparation and review of this EIR.

Purpose

The proposed Ravenswood Industrial Area Redevelopment Plan ("Plan") is a general land use plan to guide physical development for revitalization of the project area. The proposed General Plan Amendment establishes consistency between the Plan and the General Plan and elaborates upon existing General Plan goals and policies. The 186-acre project area, located in the City of East Palo Alto, consists of the 166-acre Ravenswood Industrial Section and the 20-acre "Four-Corners" area at Bay Road and University Avenue. The project will enable the Redevelopment Agency of the City of East Palo Alto to develop a maximum of 1.8 million square feet of large scale high tech development; 130,000 square feet of retail commercial development; and 102 multifamily dwelling units. The Redevelopment Plan and General Plan Amendment are not a commitment to proceed with any specific project but rather serves as a general land use plan to guide the siting and development of future projects.

This EIR serves as a programmatic analysis of the land use, facility development, and traffic-related effects of fully implementing the proposed project. The CEQA Guidelines stipulate that analysis within an EIR should be at the level of detail of the project. Therefore, the EIR is general in scope except where plans and policies allow specific discussion of impacts. For this reason, this document is considered a program EIR as described in CEQA Guideleines Section 15168. In addition, Section 15180 of the CEQA Guidelines stipulates an EIR on a redevelopment plan shall be treated as a program EIR. A program EIR is prepared on a series of related actions that can be characterized as one large project. Usually, no subsequent EIRs are required for individual components of the redevelopment plan unless a subsequent or supplemental EIR is required according to provisions of the Guidelines. Individual development actions may be the subject of Initial Studies and subsequent environmental documents if the specific activity would create impacts or circumstances not addressed in the EIR. The environmental effects of specific building projects may continue to be reviewed in a "tiered" environmental analysis in accordance with CEQA. A tiered environmental analysis would focus upon issues relating to the proposed design and location of future building projects, including a more detailed, site-specific analysis of all environmental effects.

This EIR analysis includes a discussion of 1) the significant environmental effects of implementing the Redevelopment Plan and associated General Plan Amendment, 2) the mitigation measures available to reduce or eliminate such effects, and 3) the comparative environmental impacts of reasonable

alternatives to the Plan. The EIR serves as a general information document to provide the City of East Palo Alto and the general public with an analysis of the effects of implementing the proposed project.

EIR Review Process

This EIR will be published initially as a Draft EIR and will be subject to review and comment by the public as well as other interested jurisdictions, agencies, and organizations. The 45-day public review period will run from February 1 to March 19, 1990. The public may respond in writing to this Draft EIR at any time during the public review period. Comments or questions about this Draft EIR should be addressed to:

> Wallace Roberts & Todd 121 Second Street, 7th Floor San Francisco, CA 94105

Attn: Annemarie Dietzgen

Following public review, a Final EIR will be prepared in response to written comments received by the City and Redevelopment Agency during the public review period. The Final EIR will be available for public review prior to being considered by the City Council. The City Council will review and consider the Final EIR incident to their decision to approve, revise or disapprove the proposed Plan and General Plan Amendment.

The City of East Palo Alto will monitor implementation of all mitigation measures contained within this EIR. Monitoring will include: 1) verifying each mitigation's implementation; 2) recording the actions taken to implement the mitigations; and 3) retaining these records in the City's Mitigation Monitoring Project File. This file will be available for public review at the City Planning Department during normal operating hours.

Organization of the EIR

This EIR is the first part of a two-volume set. Volume 1 contains the EIR and Technical Appendices; and Volume 2 will include the comments received during the public review period and responses to those comments. Technical reports and other sources referenced in the EIR will also be made available for public review.

This Program EIR has been organized into the following sections.

Chapter 1, Introduction: Provides an introduction and overview that describes the intended use of the EIR and the EIR review and certification process.

Chapter 2, Summary of Environmental Impacts: Summarizes the environmental impacts that would result from implementation of the Redevelopment Plan and the General Plan Amendment as well as the mitigation measures incorporated to reduce or eliminate impacts. Chapter 3, Project Description: Provides background information on the project; describes the project location; discusses redevelopment objectives and the redevelopment process; summarizes the conditions of blight in the project area; and describes proposed redevelopment improvements and proposed changes to the General Plan.

Chapter 4, Environmental Setting, Impacts and Mitigation Measures: Describes the existing setting, discusses the environmental impacts, and identifies mitigation measures for the ten issue areas studied by the City.

Chapter 5, Project Alternatives: Presents three project alternatives, including the "No Project - No Development" alternative.

Chapter 6, CEQA Considerations: Presents CEQA-required discussions as well as a summary of unavoidable significant adverse impacts.

Chapter 7, Organizations, Persons and Documents Consulted: Lists references, persons, organizations and documents consulted during report preparation.

Throughout this EIR the term "development" refers to the building of structures, roads and parking areas. The proposed Redevelopment Plan and General Plan Amendment under review in this EIR has been referred to as the "Plan," and the "project."

2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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2.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The following summary briefly identifies significant environmental effects of the proposed project. Mitigation measures to be incorporated into the proposed project to reduce (to a level of insignificance) or avoid those effects are also outlined. Where unavoidable significant adverse impacts occur, the impact appears in bold face. Completion of the mitigation measures for the project should be verified by the City of East Palo Alto through adoption of a monitoring or reporting program. Potential impacts and mitigation measures are discussed in greater detail under the respective subject headings in Chapters 4.1 to 4.10.

It should be noted that adoption of the mitigation measure calling for realignment and narrowing of the proposed north access road in the Industrial Section intended to reduce significant impacts to biological resources would result in a modification of the Plan.

A jobs/housing analysis will be included in the Final EIR to address a concern contained in a response to the Notice of Preparation (NOP) received after the NOP review period deadline on November 8, 1989.

4.1 LAND USE AND PLANNING

Impact: The proposed retention of Romic Chemical Corporation, in its proximity to proposed new development on the 81-acre parcel in the Industrial Section, could endanger public safety in the event of a chemical fire or explosion on the Romic site.

Mitigation: Siting and design of buildings on the 81-acre parcel should incorporate fire safety features approved by Menlo Park Fire Protection District.

Impact: Due to its proximity to the Palo Alto Airport, proposed development of the Industrial Section for light industrial and office uses could jeopardize public safety and interfere with airport operations.

Mitigation: Building height in the Industrial Section should not exceed 155 feet, the height limit specified by the Santa Clara County Airport Land Use Commission for development located within that height contour from the Palo Alto Airport.

Impact: All existing uses within the Industrial Section, with the exception of Romic Chemical and PG&E substation, would be significantly affected by the proposed project by being forced to relocate.

Mitigation: The Redevelopment Agency will comply with state Community Redevelopment law regarding relocation of residents within the project area. If possible, the Agency will relocate existing businesses. In those cases where relocation of existing businesses is not possible, the potential exists for an unavoidable significant adverse impact.

Impact: The proposed new arterial loop road through the northern portion of the Industrial Section does not conform to BCDC policy which calls for no filling of the wetlands.

Mitigation: The project plan should incorporate all mitigations requested by the Bay Conservation Development Commission as part of the permit process.

Impact: The proposed redevelopment of the Industrial Section could affect the USFWS's planned addition of the project area's tidal wetlands to the San Francisco Bay National Wildlife Refuge.

Mitigation: Negotiations should be initiated with the US Fish and Wildlife Service to seek a conservation easement or cooperative management agreement for tidal wetlands in the project area.

4.2 GEOTECHNICAL FACTORS

Impact: Excavations for footings and trenching of underground utility systems for proposed development of the Industrial Section could be adversely affected by the presence of groundwater which is expected at depths of four to six feet below existing grade. Liquefaction could occur in bay muds and fills placed upon bay muds during seismic shaking.

- Mitigation: Site-specific soil engineering studies should be conducted in the Industrial Section prior to structural design and should include recommendations regarding foundations and subterranean drainage.
- Mitigation: During construction of underground utilities and foundations, special work to address ground water and excavation stability would be required.

4.3 BIOLOGICAL RESOURCES

Impact: Depending upon the extent of the harvest mouse population on the site and the extent of tidal inundation, the loss of ruderal refugial habitats adjacent to harvest mouse habitat due to the construction of the road through the northern portion of the Industrial Section may constitute a loss of endangered species habitat as defined by the Endangered Species Act.

Mitigation: The loss of upland refugia for the salt marsh harvest mouse and other wildlife potentially occurring in the tidal marsh from conversion of ruderal uplands to wetlands can be mitigated by converting the shoulder of the 4-lane loop road to appropriate refugial habitat. Such habitat should not be subject to tidal flooding and should provide escape cover such as annual grasses, alkali heath, and coyote brush.

Impact: The filling of an estimated 5.2 acres of wetland (seasonal and tidal) for the construction of the proposed 4-lane north access road could be considered an unavoidable significant adverse impact by most of the regulatory agencies with wetland jurisdiction.

Mitigation: Due to the severity of impact to wetland resources in and near the project area, the proposed access road through the northern portion of the Industrial Section to University Avenue should:

- o be resited from north of the Southern Pacific tracks to south of the tracks, and
- be reduced in width from 4-lanes (ROW 80 feet) to 2-lanes (ROW 40 feet) along the abandoned railroad spur on the western boundary with widening to 4-lanes (ROW 62 feet) 400 feet back from the new intersection at University Avenue.

Resiting the road from north to south of the tracks would preserve 3.5 acres of prime pickleweed habitat for the endangered salt marsh harvest mouse but would still require the filling of a narrow isolated strip of .8 acres of seasonal wetland. Reducing the width of the loop road through the tidal wetland portion of the project area would reduce to .9 acres the area of fill needed for road construction along the edge of the wetlands. Three areas adjacent to the tidal salt marsh are available for onsite replacement mitigation.

Although wetland losses would be mitigated by onsite replacement, the fill of approximately 1.7 acres of wetland for the construction of the north access road would still be considered an unavoidable significant adverse impact.

Impact: The tidal marshes within and adjacent to the project site may contain populations of the Federal and State of California endangered California Clapper Rail and salt marsh harvest mouse, and the State of California threatened Black Rail. Any loss of habitat for these three species would constitute a significant adverse environmental impact and may, in the case of the California Clapper Rail and saltmarsh harvest mouse, constitute a "take" of endangered species habitat.

- Mitigation: The proposed replacement of wetlands, as mitigated above, would reduce the level of impact due to losses of potential habitat for California Clapper Rail, California Black Rail, and the Salt marsh harvest mouse.
- Mitigation: A survey for the Federal Candidate Species List 2 <u>Point Reves</u> <u>bird's beak</u> should be conducted in the tidal wetland area proposed

for road construction. The time of year for the survey should occur when the plants are most readily identifiable. If found, a plan for their relocation should be implemented under the supervision of the US Fish and Wildlife Service.

Mitigation: A reconnaissance survey of potential <u>Burrowing Owl habitat</u> proposed for development should be conducted to determine if a burrow is being actively used by breeding or roosting owls. If it is found that owls are in residence in one or a series of burrows the habitat on-site should be retained or, if retaining the habitat is infeasible, the owls should be captured and relocated to suitable habitat at sites protected from future development. The U.S. Fish and Wildlife Service, under provisions in the Migratory Bird Treaty Act, requires that permits be acquired for any capture or relocation of Burrowing Owls.

Impact: Any nighttime lighting which illuminates the marsh, such as intense, non-directed street lighting or industrial yard lighting, could have an impact upon populations of smaller animals by making it easier for predators to see these species.

Mitigation: The effects of any necessary lighting can be minimized by ensuring that all light is focused down with minimum dispersal and that any non-focused light be directed away from the marsh or seasonal wetland areas.

Impact: The filling and grading of seasonal and tidal wetlands to facilitate the construction of the loop road is subject to the permit authority of the U.S. Army Corps of Engineers and to the comments of other federal and state agencies in their capacity as responding agencies under the California Environmental Quality Act (CEQA).

Mitigation: All conditions imposed in conjunction with permits issued by regulatory agencies should be met.

4.4 HAZARDOUS SUBSTANCES

Impact: The only significant current or past land use in the "Four-Corners" Section which may have resulted in site contamination was a gas station which has recently been closed. It is not known if the tanks have caused on-site fuel contamination.

Mitigation: Prior to redevelopment of the site, the underground tanks must be removed in accordance with the requirements of the California Code of Regulations Title 23, Chapter 3, Subchapter 16. If soil contamination is detected at the time of removal, a site investigation plan to define the impact to soil and to ground water will have to be prepared and executed in accordance with the requirements of the San Mateo County DOHS and the RWQCB. Subsequently, required delineation and remediation activities will also have to be carried out in accordance with these agencies to obtain site closure and agency concurrence for completion of remediation. This should be completed prior to the initiation of any grading or construction activities at the site.

Impact: A groundwater or soil remediation project that involves aeration of volatile organics may cause acute and chronic health effects.

Mitigation: To reduce exposure of potential employees and nearby residents to volatile organic vapors from ground water remediation techniques such as aeration, other means such as slurry walls and vapors barriers can be employed. Carbon absorption units may be placed on the aeration stripping tower to remove volatile organic vapors from the tower emissions (ongoing site remediation).

Impact: If it is assumed that the remaining 78 acres (not including the four known contaminated sites) are contaminated and if no site cleanup actions are taken, a potential maximum of 5,361 future employees as well as an undetermined number of construction workers could be exposed to contaminants in surface soils.

Mitigation: A follow-on focused, chemical process study aimed at researching current and specific historical land users' operations and their potentially deleterious activities, excluding the four known contaminated sites, is desirable. The purpose of these follow-on studies would be to classify each parcel so that essential site investigation and remediation decisions can be made.

> Based on the results of the follow-on data collection study, a Phase II soil and groundwater investigation should be initiated. Investigative techniques such as soil borings, groundwater monitoring wells, and soil surveys should be conducted to evaluate the nature and extent of the subject property.

Remediation of environmental contamination characterized during the soil and groundwater investigation should be implemented and may include items such as slurry walls, vapor barriers and capping of land areas. This should be done prior to any site demolition, renovation, grading and construction activities to protect construction and future facility personnel.

Impact: Other potential public exposure impacts associated with the proposed project relate to: a) buildings containing asbestos; b) the existence of transformers containing polychlorinated biphenyls (PCBs); and c) underground storage tanks. These potential sites of contamination are dispersed throughout the site and relate to the potential for public exposure during demolition.

Mitigation: Asbestos. An asbestos survey of all structures for friable (i.e. readily crumbled) and nonfriable building materials should be conducted prior to building demolition or renovation. According to EPA rules (CFRT 61, Subpart M, Section 61.145, Standards for Demolition and Renovation), all friable asbestos is required to be removed prior to demolition or renovation of a building or section of building. Currently, neither federal nor state regulations require the removal of asbestos-containing materials (ACBM) at any other time. Should demolition or renovation activities occur that include abatement or friable asbestos, the removed materials must be disposed of as hazardous waste in accordance with Title 22, Chapter 30, Article 7, Section 666999 of the California Code of Regulation. Nonfriable asbestos must be removed in such a way as to not damage it, thereby rendering it friable.

Transformers. A determination should be made for all transformers within the Industrial Park as to whether they are owned and operated by PG&E and, if not, whether they are dry-core or contain dielectric fluids. If individually owned, fluid-containing transformers are discovered on the project site, samples of the fluid should be collected and analyzed for PCB and furan content. This exercise should be performed prior to demolition of the buildings. If the transformers are found to contain PCBs, appropriate measures should be taken to ensure that the PCBs and the transformers are properly disposed of or treated by federal and state regulations for hazardous and PCB wastes. Soil samples from the transformer pad area should be collected and analyzed for PCBs furans to determine if contamination may have occurred from past transformer leaks. Any contamination should be cleaned up prior to any site demolition, renovation, grading or construction to protect both construction and future facility personnel.

Storage Tanks. As part of the demolition activities, all underground storage tanks within the project boundaries should be removed according to state and local regulations. Any associated soil and ground water should be cleaned up as specified by the County of San Mateo, the state DOHS and the RWQCB prior to any site demolition, renovation, grading or construction activities to protect construction and future facility personnel.

Impact: The employees at the proposed development and nearby residents could also face acute exposure hazards in the event of a possible hazardous substance release from the proposed industrial and research development (R and D) facilities due to an operational accident.

Mitigation: An evaluation of both normal operations and accidental releases should be performed. The evaluation should include a health risk assessment of the potential releases. The level of the evaluation proposed is that implemented in Risk Management Program and Prevention (RMPP) Plans in accordance with Chapter 6.95 of the California Health and Safety Code. However, it should include an analysis of all hazardous substances handled and should include a detailed health risk assessment.

Consideration should be given to facilities design. Activities that limit the amount of personnel present during the working hours such as warehousing, mechanical equipment rooms, and the like should be considered for the closest physical proximity to areas deemed to be potentially hazardous. Likewise, land uses that involve a high density of people such as office space or day care should not be located in close proximity to areas where hazardous materials are used, stored or generated.

Impact: The employees at the proposed development and nearby residents could also face acute and chronic exposure hazards in the event that toxic air contaminants are emitted under the normal operations of the proposed industrial and R and D facilities.

Mitigation: Analyses of the process operations of all proposed facilities should be performed prior to final design and subsequent construction approval to thereby identify potentially deleterious toxic air contaminants that might be emitted under normal or emergency conditions. The facilities should then be required to incorporate preventive emission control measures into designs to minimize or reduce to an acceptable level these potential emissions. Under California Assembly Bill 2588 (California Health and Safety Code Section 44300 et seq.), facilities that emit greater than a certain quantity of specified air toxics are required to prepare and implement an emission inventory plan.

4.5 TRAFFIC AND CIRCULATION

Impact: The project would significantly degrade the level of service at most of the analyzed intersections during the peak hour. The highest project impacts would occur along University Avenue, where five of the critical intersections would operate at LOS F. The LOS of Embarcadero/Bayshore would also degrade from D (V/C .86) to E (V/C .97).

The following proposed mitigation would not reduce traffic congestion to a less-than-significant level, therefore, this impact is an unavoidable adverse impact. Refer to Table 4.5.10 in Chapter 4.5 for Level of Service with mitigations.

Mitigation: Traffic Demand Management Program (TDM). Another principal means of mitigation for negative peak hour traffic impacts is an attainment of a reduction in peak period travel. This could be accomplished through an aggressive Traffic Demand Management Program (TDM), which aims to reduce the incidence of peak period single occupant vehicles by encouraging carpools, vanpools, transit use, and off-peak travel.

- Mitigation: Physical Improvements. Project mitigations would be required at five of the University Avenue intersections which would operate at unacceptable levels under the terms set by the City of East Palo Alto. Improvements would also be desirable at the Embarcadero/East Bayshore and Willow/Bayfront intersections. The recommended mitigations at each of these locations are discussed in the following text. (Table 4.5.9 shows the resulting service levels with the recommended mitigations.)
- University/Bayfront. The negative impact of a change in the pm peak hour V/C of .13 with project traffic could be mitigated by the construction of a second through lane along Route 84 or Bayfront for eastbound travel towards the Dumbarton Bridge. The demand for the northbound left-turn lane onto Route 84 is such that an additional left-turn lane could be provided for this movement as well.
- <u>University/O'Brien</u>. Significant negative impacts would occur at this location with the project and project alternatives during the pm peak hour. Heavy eastbound left-turns from the Menlo Park Industrial zone conflict with University Avenue through movements at this location.

The project impact could be mitigated by the construction of dual left-turn lanes from O'Brien to University northbound. This would require widening of the O'Brien leg of the intersection, relocating the north curb, restriping, as well as signal modifications.

- o <u>University/Bay Road</u>. The service level at University/Bay Road would approach the LOS F threshold without mitigations. Potential solutions to this condition would be to add dual west-bound left-turn lanes, and exclusive west-, east-and southbound right-turn lanes at this intersection. In order to accommodate these additional lanes, street widening on both University and Bay Road would be required.
- University/Donhoe. This intersection would experience significant negative impacts with the project and project alternatives added traffic. The heavy through volumes traveling north and southbound along University Avenue create the demand for an exclusive southbound right-turn lane. Implementation of this measure would require moving the curb.
- o <u>University/North Access</u>. Acceptable service levels at this intersection could only be accomplished with the widening of University Avenue.
- <u>Embarcadero/East Bayshore</u>. The heavy northbound left-turn movement at this location warrants providing a second exclusive left-turn lane at this intersection. This could be provided by re-striping the existing through/left lane to left-turn only. Elimination of the shared lane would allow upgrading the traffic signal and would further improve operations by reducing delay.

o <u>Willow/Bayfront</u>. Similar to-the University/Bayfront intersection, this location would experience an increased amount of congestion from the short-term scenario without project traffic. This a result of heavy regional travel from the Dumbarton Bridge to the Bayshore Freeway.

Because this intersection is an LOS F (1.85 V/C) with or without the project, this is <u>not</u> considered a significant project impact. However, unsatisfactory service levels due to regional traffic and short-term projects approved by Menlo Park would warrant consideration of improvements at this location. Improvements at this location would include additional west- and eastbound through lanes, and the construction of dual left-turn lanes northbound on Willow at Bayfront. This intersection is not in the City of East Palo Alto.

Impact: It is likely that the project would add to the existing need for additional service on the SAMTRANS 50C, 50V and 6A routes.

Mitigation: The City of East Palo Alto and transit operators should explore route diversions to serve the industrial site, including AC Transit's Dumbarton Bridge service and Santa Clara County service from southeast Palo alto. Bus shelters and transit service amenities should be provided at the SAMTRANS bus stops near the project area.

Cumulative Impact: Cumulative impacts would be similar to the short-term case; the greatest impacts would occur at the analyzed intersections along University Avenue, and at the Embarcadero/East Bayshore intersections.

Mitigation: Traffic Demand Management Program (TDM). The TDM program in conjunction with the previously discussed mitigations improves the overall performance of the analyzed intersections. As in the short-term case, the impact of such mitigations is greatest at the Industrial Section access points located at the University/Bay and University/North Access intersections. The University/Bay intersection would experience an overall improvement of .35 during the pm peak hour under the Alternative 1 scenario, and an increase of .07 at the University/North Access intersection under the same scenario.

Mitigation: Physical Improvements. Project mitigations for long-term cumulative impacts would be similar to the short-term case. Improvements would be required along University Avenue and at the Embarcadero/East Bayshore intersection. These mitigations are addressed in the Project Mitigations Section. The resulting am and pm peak hour levels of service and volume to capacity ratios are shown in Table 4.5.13.

4.6 AIR QUALITY

Impact: Construction of the proposed project could adversely affect short-term air quality by generating dust from equipment and vehicles.

- Mitigation: All construction contracts should require contractors to reduce dust generation. Construction dust impacts can be reduced by the following measures:
 - o construction-related dirt on approach routes to the construction sites should be cleaned on a periodical basis;
 - o adequate watering techniques should be employed including the spraying of wheels and lower portions of transport turcks before leaving the construction area; and
 - o transported loads and stockpiles of debris, soil, sand or other materials that can be blown by the wind should be covered.

Impact: Remediation of contaminated groundwater and soil potentially existing in portions of the Industrial Section could adversely affect air quality during the aeration and/or removal process.

Mitigation: Mitigation to reduce the air quality effects from remediation of contaminated soils and ground water can be found in Chapter 4.4 Hazardous Substances.

Impact: Project traffic, in conjunction with project-related stationary emissions, would adversely affect regional air quality by contributing an increase in ozone precursors (oxides of nitrogen) and a significant increase in particulate matter.

Mitigation: Project-related traffic should be reduced by implementing mitigation measures in Chapter 4.5 Traffic and Circulation. Implementation of the aggressive TSM program for the proposed project could reduce peak-hour vehicle trips by about 20 percent and total daily trips by about 22 percent.

> While the impact of the project on both local and regional air quality would be reduced by application of TSM, impacts on regional air quality would remain above the BAAQMD thresholds of significance and is therefore an unavoidable adverse impact.

Cumulative Impact: The project is located in an area that does not meet the national or state ambient air quality standards. The project would be part of a continuing pattern of rapid growth occurring in the South Bay region. The growth in emissions associated with the proposed project together with that of cumulative development in Santa Clara County and the South Bay would contribute to the continuing ozone and particulate matter problems in the region.

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The growth in emissions generated by this project and cumulative growth in the area would increase the needed emission reductions required if the state and federal ambient standards are to be attained in the future. Additional controls on stationary, mobile and area sources on a regional basis may be required to offset the additional emissions resulting from the project and cumulative development in the area.

Mitigation: Direct emissions from high tech or industrial facilities should conform to Bay Area Air Quality Management District regulations. District regulations include emission limitations, requirements for use of Best Available Control Technology, and offsets where emissions exceed certain thresholds. The Bay Area Air Quality Management District also has permitting authority over materials considered as toxic air contaminants. Prior to issuing a permit the District reviews the amount and method of release of a toxic material and performs a risk screening analysis.

4.7 NOISE

Impact: Multi-family development in the "Four-Corners" Section along University Avenue would be exposed to excessive exterior noise (CNEL of 70 to 75dB) from traffic.

Mitigation: Title 24, Part 2 of the California Administrative Code will require an acoustical analysis of the multifamily housing project on University Avenue which will show how the interior CNEL can be controlled to 45 dB. The study may recommend sound-rated windows and building construction to achieve the required interior noise level. Measures recommended by the study should be implemented.

Impact: Office use proposed for the 11-acre parcel in the southeast portion of the Industrial Section is located within the CNEL 60 contour of the Palo Alto airport and would, therefore, be exposed to excess noise levels from airplane overflights.

Mitigation: Office buildings located within the future CNEL 60 contour from Palo Alto Airport should comply with Santa Clara County Airport Land Use Commission's interior noise goal of 55 dBA (maximum, single event) from aircraft flyovers. This is typically accomplished through the use of sound-rated windows and building construction.

Impact: Mechanical equipment associated with the industrial uses (i.e., cooling towers, exhaust fans) are a potential source of noise impacts to adjacent residential areas.

Mitigation: In order to control mechanical noise to the limits set forth in the noise control guidelines of the City's Noise Element, an acoustical consultant should review the mechanical system design of proposed

buildings for exhaust fans and cooling towers and other potential noise sources which may adversely affect nearby residences.

Impact: Residential development along Illinois St. could be exposed to a maximum noise level of 78 dBA from construction of proposed development.

Mitigation: Noise from construction activities should be reduced by:

- o limiting construction to daytime hours, 7:00 a.m. 7:00 p.m.
- o requiring stationary equipment to be located away from the residential areas
- o providing enclosures or barriers for noisy stationary equipment if located close to residential property lines

4.8 CULTURAL RESOURCES

Impact: The Ravenswood Industrial Section has the potential for containing both prehistoric and historic material which could be adversely affected by proposed construction activities.

Mitigation: A preconstruction program of mechanical augering and backhoe trenching should be conducted inside the project area to assure that any buried or obscured cultural resources are located before actual grading or other forms of earthmoving associated with future construction are allowed to occur. Mechanical augering and/or backhoe trenching should be conducted in areas slated for excavation or grading to a depth sufficient to assure that any buried cultural materials which might fall within the depth of excavation are located. Initial augering should be designed to locate any cultural deposits and allow their mapping, in terms of aerial extent and depth below the surface.

> If cultural resources of either an historic or prehistoric nature are located, the following steps should be taken:

- o If it is determined that the discovered cultural resource is located inside areas which will not be disturbed by future landscaping and/or construction activities, no further plans need be made for the evaluation and/or mitigation of impacts to the resource, other than the preparation of a report describing the resources located.
- If it is determined that future construction or landscaping activities would adversely affect the identified resource, it should be the responsibility of the archaeologist to develop a program of evaluation of the resource in accordance with current CEQA guidelines (refer to Appendix H of this document). Neither backhoe work nor mechanical augering constitute such a program of testing; typically, an identified

resource would have to be evaluated through a program of hand excavation and analysis of the materials removed before the scientific importance (described in CEQA as "uniqueness") of the resource can be demonstrated.

If hand excavation and subsequent analysis demonstrate that the resources discovered inside impact zones are scientifically important, a report should be issued detailing the need for mitigation of impacts to the identified resources. On rare occasions the discovery of cultural materials, such as cemeteries, require the redesign of construction to minimize or eliminate any further impacts to the discovered resources. Conversely, if analysis demonstrates that the resources are not important, or "unique" as defined by CEQA, a finding would be made that there would be no further need for mitigation.

4.9 UTILITIES

Impact: Localized demands of the proposed development in the Industrial Section would require that the water delivery system be upgraded in certain areas to meet this demand.

Mitigation: The current water transportation system in the Industrial Section should be connected and upgraded to form looped water transmission systems. Design work for upgrading the water transportation system should utilize flow testing of the existing system to establish the actual water flows available. This work should be reviewed by the San Mateo Water District, the City of East Palo Alto, and the Menlo Park Fire District to determine that the project requirements have been met.

Impact: Sewage flows produced by proposed development in the Industrial Section would require upgrading of the existing trunklines and a small sewer line extension in the northern portion of the site.

Mitigation: Required trunkline improvements should be provided. Improvements should be viewed from their benefit to East Palo Alto and to the additional abilities of the East Palo Alto Sanitary District to collect user fees and connection fees based on increased capacity resulting from proposed construction.

Impact: The development in the areas north of Bay Road in the Industrial Section would create additional storm drainage and runoff that could not be handled by existing outfall facilities.

Mitigation: Additional outfall capacities should be developed as part of the project in order to provide for the storm drainage needs. Options may be available to upsize existing systems and re-construct them, or to provide an additional outfall to the Bay that will service the majority of the project area.

Impact: If additional outfall facilities are constructed there would be - . impacts to the adjacent tidal wetlands. Construction of a storm drain outfall would involve localized trenching, fill, excavation, and construction access adjacent to and on wetland areas.

Mitigation: Storm drainage outfall development should be designed to minimize adverse impacts to wetlands and should conform to regulatory agency permitting requirements in wetland areas. If possible, the introduction of additional storm drainage flows should be utilized to enhance marginal wetland areas as a part of mitigation for other project wetland impacts.

Impact: This new outfall, or use of existing outfalls to transmit additional storm water to the Bay, would also result in increased point discharge of sediments and water borne oils that may be picked up from parking areas and roadways.

Mitigation: Project outfalls should also take into account the potential for retention/sedimentation basin construction between the outfall and the Bay. This will assist in mitigating sediment load and water quality impacts associated with parking lot and roadway drainage systems. Final design of outfall/retention facilities should address the need for pumping as related to site elevations and retention basin capacity.

Impact: The project would place new facilities within known flood plain areas exposing them to potential high tide flooding.

Mitigation: In order to protect against high tide flooding, building pad and finished floor elevations should be established that are sufficiently above the high flood water elevations.

Impact: Increased areas of impermeable surfaces caused by proposed development in the Industrial Section would generate additional storm water runoff that could contribute to localized flooding, as has historically occurred in the area during heavy storms.

Mitigation: Localized storm water flooding can be mitigated by increased storm drainage capacities as outlined in the previous section on storm drainage.

Impact: Proposed development in the Industrial Section could block existing flood overland flow release points increasing the localized flood hazard potential.

Mitigation: Building areas and parking lots should be designed to re-route existing overland flow release zones without blocking them. Any design or redesign of levees should also address this potential blockage of flood waters to the Bay.

4.10 PUBLIC SERVICES

Impact: Traffic generated by the proposed project could adversely affect the ability of the police department to perform traffic-related services.

Mitigation: The City should hire additional police personnel in order to respond to increased demand for traffic-related police services. (The mitigation to reduce traffic congestion recommended in Chapter 4.5 Traffic and Circulation would help reduce the level of impact on police services from traffic congestion caused by implementation of the redevelopment plan.)

Impact: The retention of Romic Chemical Corporation as an existing land use in the Industrial Section would increase the risk to public safety by creating the potential for a major chemical fire or explosion adjacent to proposed large scale high tech development.

Mitigation: The Menlo Park Fire Protection District should approve all plans for new development to ensure that adequate safety features are incorporated. The large-scale high tech facilities to be sited across from the Romic facility may require additional safety design features, including an open space buffer between the two facilities, to minimize risk in the event of a chemical fire or explosion.

Mitigation: On-site water storage should be provided as necessary for special fire protection needs of individual projects. During actual project design, water system network analysis should be performed to determine the exact upgrades required.

3.0 PROJECT DESCRIPTION

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3. PROJECT DESCRIPTION

The proposed project is the adoption and implementation by the City of East Palo Alto of the Ravenswood Industrial Area Redevelopment Plan and General Plan Amendment. The Redevelopment Plan is the legal document that is adopted by ordinance of the City Council that sets forth the boundaries, permitted land uses, development provisions and controls, the general powers of the Redevelopment Agency, and other such provisions applicable to and within the project area. The proposed General Plan Amendment provides a comprehensive update of the goals, objectives, and policies for the revitalization of the project area. It is envisioned that a Specific Plan will be prepared to provide the land use regulations and guidelines necessary to fully implement the objectives and policies contained in the proposed project.

This chapter includes the following information:

- o background information on the project;
- o location of the project and project boundaries;
- o objectives of the project;
- o description of the redevelopment process;
- o summary of blighted conditions in the project area;
- o proposed redevelopment improvements; and
- o proposed changes to the General Plan.

The Redevelopment Plan is available for public review at the City Planning Department. The text of the General Plan Amendment is contained in Appendix B in this EIR.

Background

In March of 1988, the City Council of the City of East Palo Alto appointed a Citizen Task Force to study the options for the development of the Ravenswood Industrial Park, the major portion of the project area. The Task Force, in its November 1988 report, found that "the Ravenswood Industrial Park Area may legitimately be classified as 'blighted', economically and physically deteriorated, within both the meaning and intent of the California Redevelopment Act ... (and that) it is in the City's interest to utilize the provisions of the act to acquire the site, prepare the site and to capture the ensuing tax increment revenue." /1/ In response to the findings of the Task Force, the City of East Palo Alto Redevelopment Agency concluded that a redevelopment project should be explored. On May 15, 1989, the City Council took the first step by adopting a resolution designating the redevelopment survey area. On September 11, 1989, the East Palo Alto Planning Commission selected the Project Area, established the boundaries, and adopted the Preliminary Plan. It was then determined that a General Plan amendment would be required for the Project Area to attain consistency between the General Plan and the goals and objectives of the redevelopment program.

Location and Project Boundaries

As shown in Figure 3-1, the 186-acre project area is located by the San Francisco Bay south of Dumbarton Bridge in the northeasterly corner of the City of East Palo Alto. The Project Area contains the 166-acre Ravenswood Industrial Section and the 20-acre "Four-Corners" Section at the intersection of University Avenue and Bay Road which is connected to the Industrial Section by Bay Road. The Industrial Section portion of the project area is generally bounded by levees and tidal wetlands to the east, by an abandoned railroad spur paralleling Illinois Street to the west, by Weeks Street to the south, and by Southern Pacific Railroad Company tracks to the north, beyond which is City of Menlo Park open space. The "Four-Corners" Section consists of a number of parcels on each of the four corners of the intersection of Bay Road and University Avenue. Figure 3-2 shows the boundaries of the Project Area.

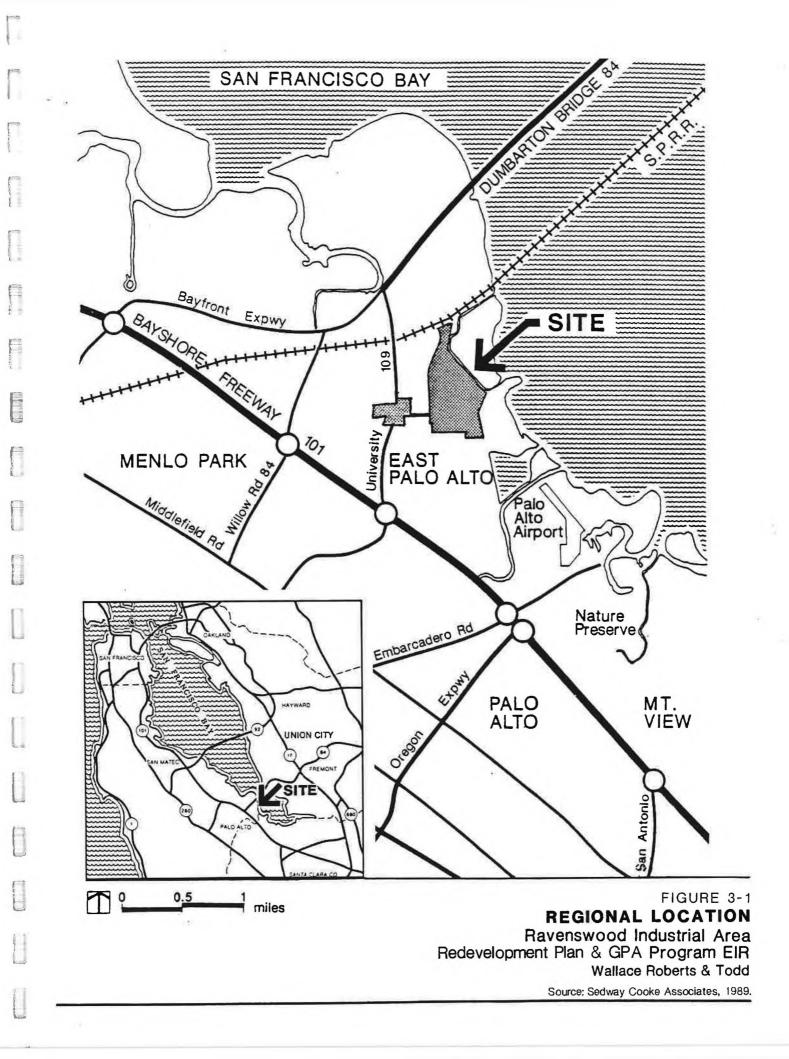
Project Objectives

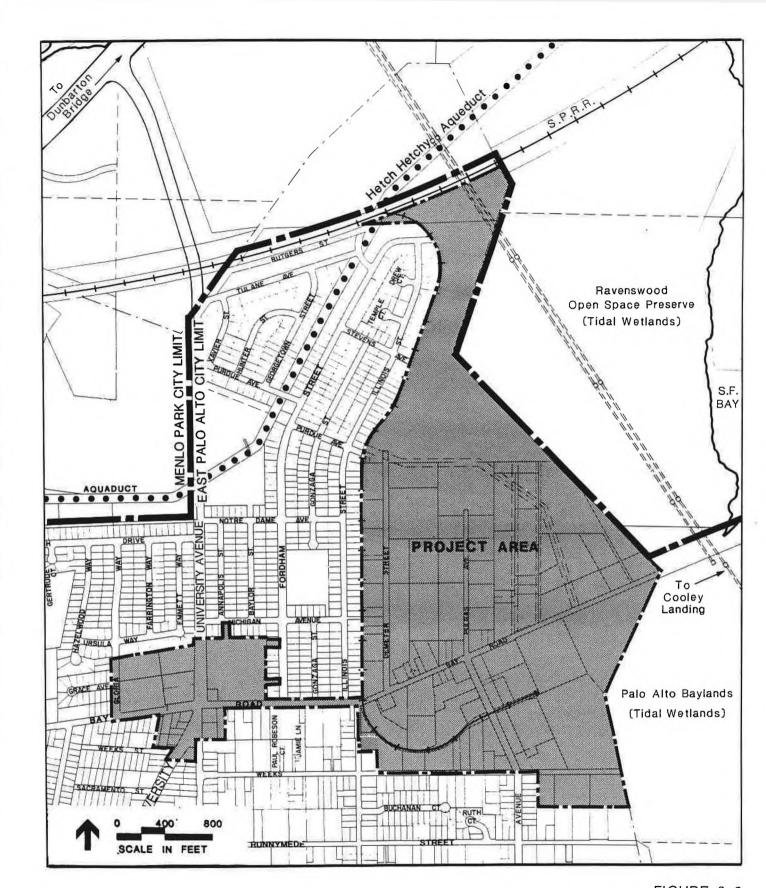
The Preliminary Report for the Ravenswood Industrial Redevelopment Project Area identifies the following goals and objectives which will attain the purposes of the California Community Redevelopment Law (Section 33324):

- 1. The elimination and prevention of the spread of blight and redevelopment of the Project Area in accord with the General Plan, specific plans, the Redevelopment Plan and local codes and ordinances.
- 2. The alleviation of toxic contaminants in the Project Area and the promotion of new development which best serves the residents of the City.
- 3. The promotion of new and continuing private sector investment within the Project Area to prevent the loss of, and to facilitate, industrial and commercial activity.
- 4. The achievement of an environment reflecting a high level of concern for architectural, landscape, urban design, and land use principles appropriate for attainment of the objectives of the Redevelopment Plan.
- 5. The creation and development of local job opportunities and the preservation and expansion of the area's existing employment base.
- 6. The replanning, redesign and development of areas which are stagnant or improperly utilized.
- 7. The expansion of the community's supply of housing (outside the Project Area), including opportunities for very low-, low- and moderate-income households.

The Redevelopment Process

The principal purpose of redevelopment is to remedy conditions contributing to blight by providing new public improvements and performing revitalization tasks within and serving the redevelopment area. The ordinance adopting the





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FIGURE 3-2 PROJECT AREA BOUNDARIES

Ravenswood Industrial Area Redevelopment Plan & GPA Program EIR Wallace Roberts & Todd Redevelopment Plan must contain specific findings regarding blight, the necessity for redevelopment, and the economic feasibility of the project.

In general, redevelopment projects may include rehabilitation of structures; provision of open space, public works and utilities; provision of housing, commercial, industrial and public structures; and related activities. In addition, redevelopment law requires that 20 percent of tax increment revenues be used to increase and improve the supply of low and moderate income housing.

A primary funding source proposed by the Agency would be tax increment revenue generated over the term of the project. The Agency, however, may also attempt to use various available funding sources, such as the General Fund and Capital Improvement Program, developer contributions, Community Development Block Grants, and assessment districts.

Tax increment financing has been the basis of much of redevelopment financing in the State of California. When a redevelopment plan is adopted, the total value of all of the taxable property in the project is determined and "frozen" at this level. This amount becomes the base from which tax increment revenue is determined. All of the taxing agencies which levy taxes in the project area (e.g. the City, the County, school districts, special districts) continue to receive at least the taxes they levy on this base value of taxable property.

Redevelopment is expected to result in new construction and higher property values. This new construction and higher property values ultimately result in increased tax revenues. These tax receipts are the tax increments which are allocated by the State Constitution and Redevelopment Law to the Agency to pay the costs of carrying out the project. When all loans, advances, and indebtedness of the agency are paid off, the project financing is completed and these higher taxes then flow again to the taxing agencies.

The Community Redevelopment Law contains requirements and a process designed to identify and address adverse fiscal impacts upon taxing agencies that are caused by a redevelopment project. First, the County Auditor is required to prepare a report containing specific information relating to taxing agencies, assessed value, and property tax revenues within the project area. Second, the taxing agencies are authorized to form a Fiscal Review Committee which may report to the Agency on the fiscal impacts of the redevlopment plan and suggest amendments which would alleviate or eliminate any detrimental fiscal effects. Third, the Agency is required to consult with each taxing agency prior to the public hearing on the redevelopment plan. Fourth, the Agency is authorized to make payments to a taxing agency to alleviate a financial burden or detriment, if any, caused by the redevelopment project. The report of the County Auditor, the Agency's analysis of the County Auditor's report, and the summary of consultations with taxing agencies would be contained in a report approved by the Agency and delivered to the City Council prior to the public hearing on the redevelopment plan.

Since the Agency will carry out these requirements in conformance with the Community Redevelopment Law, the redevelopment process will address the fiscal impacts on taxing agencies. The results of the process will be reported to the East Palo Alto City Council prior to the hearings and final adoption of the redevelopment plan, as stated above.

Summary of Blighted Conditions in the Project Area.

As noted above, the Community Redevelopment Law, as set forth in Section 33000 et seq. of the Health and Safety Code, sets forth criteria that an area must meet to qualify for redevelopment assistance. According to the Preliminary Report on the Proposed Redevelopment Plan for the Ravenswood Industrial Redevelopment Project /2/, the Project Area is characterized by a number of the conditions enumerated in Sections 33031 and 3302 of the Health and Safety code. Following is a summary of blighted conditions within the Project Area (Refer to the Preliminary Report on file with the Agency for a detailed description of existing physical, social and economic conditions. Also refer to Chapter 4.1 Land Use and Planning of this EIR):

1. Deterioration and Delapidation of Existing Buildings and Structures. The poor condition of the building stock in the Project Area is a direct indicator of the area's deterioration and a reflection of the underlying market conditions that support this process. Many of the buildings in the Project Area are in varying states of deterioration, are obsolete, and, in certain cases, are unfit or unsafe to occupy. Out of the total of 119 industrial, commercial and residential structures surveyed, 61 percent are in need of minor rehabilitation, 23 percent are in need of major rehabilitation, and 14 percent are in need of extensive reconstruction. Most of the structures in the project area were built over 40 to 60 years ago. These structures are obsolete because they have not been well maintained, were constructed from poor materials and/or do not meet changes in building standards or evolving social and economic needs.

2. <u>Defective Design and Character of Physical Construction</u>. There are numerous examples within the Project Area of defective and obsolete design in physical construction, especially in the Industrial Section. An industrial office and/or storage facility that has had windows and a door added without fixtures for opening or closing, posing possible fire safety hazards is one example of defective design.

3. <u>Age, Obsolescense, Mixed Character and Shifting Uses</u>. The layout of the Industrial Section, as well as the age of existing industrial facilities and infrastructure, do not lend themselves to encouraging new development or to protecting the human and natural environment from hazardous waste leakages resulting from industrial land uses. In addition, numerous examples of mixed character and shifting uses of the buildings have created incompatible conditions in the Project Area.

4. <u>Inadequate Parcelization for New Development</u>. The Project Area is characterized by parcels of irregular form, shape and size. The prevalence of irregular lot sizes is a major barrier to private sector investment due to the need for recycling of these properties into developable parcels. Existing ownership patterns in the project area contribute to the fragmentation of the area and the difficulty in combining parcels in order to effect new development. This diversity of ownership impedes the private sector's ability to assemble these lots. 5. Inadequate Public Improvements, Facilities, and Utilities. The prevalence of hazardous material contamination in the Industrial Section is a threat to the general health, safety and welfare of residents. The existence of such conditions present significant development constraints that cannot reasonably be expected to be reversed or alleviated by the private sector acting alone. In addition, existing transportation and circulation systems in the Industrial Section are deficient (e.g. access into and circulation through the Industrial Section is limited and streets are unpaved or in need of resurfacing); storm drainage is deficient; and other infrastructure is generally deteriorated.

6. <u>Social and Economic Maladjustment and Depreciated Values</u>. The incidence of crime in the project area may be considered as an indicator of social conditions which may be contributing to the area's economic decline and underutilization. It is estimated that approximately 34 people reside in the project area, or less that two-tenths of one percent of the population of East Palo Alto of nearly 19,000 people. However, 5 percent of all crimes reported in the City from October 1988 to September 1989 took place in the project area, or more than 25 times the Citywide crime rate. Most of these reported crimes were car theft, burglary and assault. These types of criminal activity can create barriers to private investment and to the patronizing of businesses by potential customers. Economic maladjustment is indicated by low retail sales in the City compared to countywide markets, slow new building permit activity, and slow growth in assessed property values. These conditions produce insufficient revenues to satisfactorily perform many municipal functions including greatly needed infrastructure improvements.

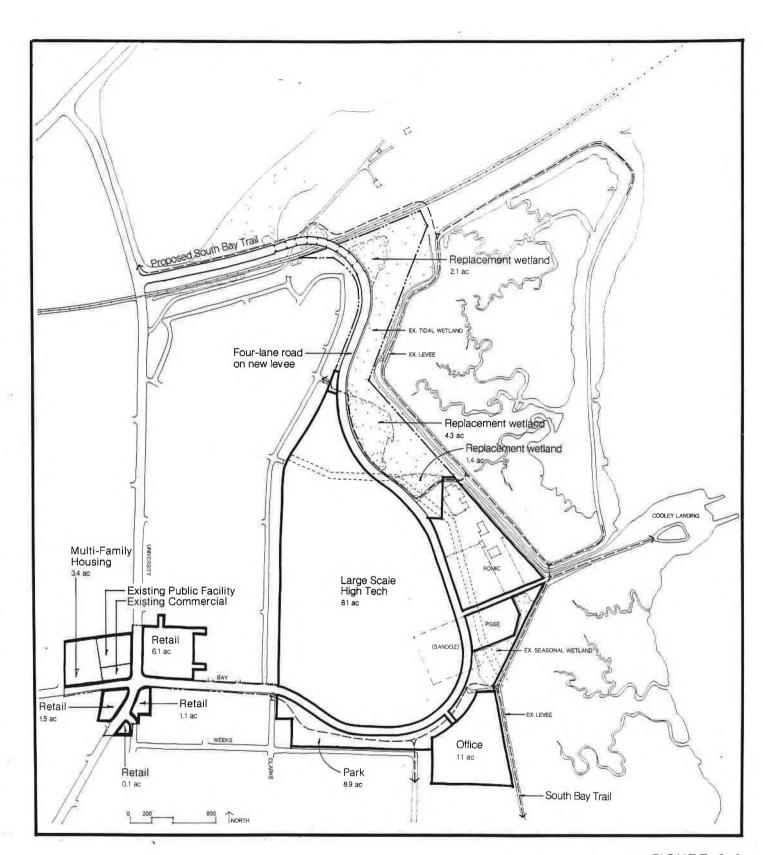
Proposed Redevelopment Improvements - Project Area

As shown in Figure 3-3 and summarized in Table 3.1, the proposed redevelopment program provides a maximum of approximately 1.8 million additional gross square feet of light industrial and office development in the Industrial Section and 130,000 gross square feet of retail commercial and 102 multifamily housing units in the "Four-Corners" Section. For organizational purposes, the following description of proposed land uses is addressed separately for the two subareas of the redevelopment area, i.e. the Industrial Section and the "Four-Corners" Section.

Proposed Redevelopment Improvements - Industrial Section

<u>Land Use</u>. The redevelopment plan proposes the following land uses in the Industrial Section:

- development of an 81-acre parcel for a single large-scale light industrial user such as for electronics and other light assembly operations and Research and Development and associated surface parking;
- o development of an 11-acre parcel for office use and associated surface parking which could be developed by a second user or be acquired by the high tech user for office use (this would provide a total of up to 1.8 million square feet for a single user)
- o PG&E substation and Romic Chemical Corporation would remain as existing uses
- o development of a 9-acre park



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FIGURE 3-3 PROPOSED PROJECT LAND USE PLAN

MAXIMUM HIGH - TECH DEVELOPMENT Ravenswood Industrial Area Redevelopment Plan & GPA Program EIR Wallace Roberts & Todd

	Gross Sq. Ft.					
Land Use	Acres	Far	(1,000)	Employees	Parking	
Industrial Section						
Large-scale High Tech ¹	81	.44	1,540	5,600	4,466	
Office ²	11	.58	278	1,112	890	
*Romic ³	14.4			123	100	
*PG&E	3.8				(approx.)	
	110.2 ac	developed				
Park (includes		•				
seasonal wetland)	8.9					
Open space/wetland	31	(wetland	d loss: -5.2 a	ac, wetland ga	ain: +7.8 ac	
Road ROW	16					
	166 (ap	prox.)				
"Four-Corners"	166 (ap	prox.)				
	166 (ap 8.8	prox.) .34	130	440	516	
Retail commercial ⁴			130 102 du	440	516 106	
Retail commercial ⁴ Multifamily housing	8.8	.34		440		
Retail commercial ⁴ Multifamily housing **Retail commercial	8.8 3.4	.34		440		
<u>"Four-Corners"</u> Retail commercial ⁴ Multifamily housing **Retail commercial *Public Facilities *Rights-of-Way	8.8 3.4 0.8	.34		440		
Retail commercial ⁴ Multifamily housing **Retail commercial *Public Facilities	8.8 3.4 0.8 2.0	.34 30 du/ac		440		

Table 3.1 Proposed Land Use Program

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1 2 Large-scale High Tech: 69 employees/ac (1/275 sf)

101 employees/ac (1/250 sf) Office:

3 Romic site reconfigured and acreage slightly increased due to main road alignment. 4 Retail commercial: 50 employees/ac

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<u>Infrastructure Improvements</u>. Proposed redevelopment of the Industrial Section requires the following infrastructure improvements (included as mitigation measures in Chapter 4.9 Utilities):

- o upgrading of the existing water delivery system;
- o upgrading, and expansion in certain areas, of the existing sanitary sewer trunklines; and,
- o construction of additional storm drainage outfall facilities, especially north of Bay Road.

<u>Circulation and Access</u>. Road access to the Industrial Section would be provided from University Avenue at Bay Road and from a new intersection north of Bay Road; circulation within the site would take place along a proposed loop road between these two access points. The loop road would be elevated across the Southern Pacific tracks on the northern boundary of the Industrial Section; the road would have four-lanes and an 80-foot ROW (a 20-foot buffer would be provided betwen the road and the adjacent residential area in the northern portion of the site). Clarke Avenue would be closed between Bay Road and Weeks Street. Pedestrian access would be provided from five points around the project area (Bay Road, Pulgas Avenue, Purdue Avenue, and two locations from the proposed trail along the levee). Access trails to the proposed South Bay levee trail on the Industrial Section's eastern boundary would be provided through the park from Bay Road and Pulgas Avenue and along the new levee from Purdue Avenue. (A bridge would be constructed north of Romic across the existing slough to connect to the South Bay trail.)

<u>Wetlands</u>. There are two onsite areas of replacement to mitigate for losses in tidal wetland due to siting of the new loop road. Wetland replacement would occur at a ratio of 1 (loss): 1.5 (gain). Areas of wetland replacement are shown on Figure 4.3-3 in Chapter 4.3 Biological Resources.

Proposed Redevelopment Improvements - "Four-Corners" Section

The program for the "Four-Corners" Section is based on buildout of the General Plan. Under implementation of the plan, 8.8 acres would be developed for retail commercial purposus; 3.4 acres would be developed for multi-family housing; 2 acres would remain in use as the County Building; and 0.8 acres would remain in commercial use. Onsite parking would be provided for these uses.

Proposed General Plan Amendment

As required by Health & Safety Code Section 33331, the proposed project must conform to the broad intent of the City's General Plan. The proposed General Plan Amendment updates background information and revises and/or expands goals, objectives and policies in five of the eight existing General Plan Elements (Land Use, Economic Development, Circulation, Conservation, and Housing) necessary for the implementation of the Redevelopment Plan.

The General Plan Amendment is intended to provide a comprehensive update of the City's goals, objectives, and policies for revitalization of the two Sections (Ravenswood Industrial Section and "Four-Corners" Section). While the updated goals, objectives, and policies are more detailed than those contained in the original General Plan, they build upon and are consistent with the fundamental economic development goals for (the two areas) first articulated in that document. /3/

Industrial Park Section. The General Plan Amendment modifies the existing land use designations for the Industrial Park Section by making the changes summarized below:

- The <u>Industrial Land Use Element</u> (a) establishes light industry as the preferred use (i.e. electronics and other light assembly operations, research and development facilities, office headquarters and other ancillary facilities that support light industrial operations); (b) permits as an acceptable alternate use general industrial facilities (most light and general manufacturing, assembling, processing and storage, and related office and research and development facilities) provided that such facilities do not preclude the attraction of potential light industrial operations; (c) discourages heavy industrial uses such as chemical plants and other uses which generate significant hazardous wastes; (d) encourages the phase-out of auto wrecking and storage yards; (e) provides for development of a loop arterial street through the Industrial Park Section; (e) provides for improved public access to wetland areas.
- 2) The <u>Residential Land Use Element</u> makes the determination that large scale residential development is inappropriate for the Industrial Park Section in that industrially-designated land within the City needs to be available to achieve the community's economic development goals.

"Four-Corners" Section. The General Plan Amendment redesignates the "Four-Corners" Section of the project area as the "Community Center", a new land use designation defined as follows:

Community CenterNeighborhood commercial uses supported by high density residential developments, offices, and public buildings to form an integrated 'core area' or 'hub' as the focus for community activity and identity.

The reader is referred to Appendix B for the complete text of the proposed revisions to the General Plan. Refer also to Chapter 4.1 Land Use and Planning.

Footnotes:

- /1/ City of East Palo Alto Citizens Task Force (To Study a Master Plan Development for Ravenswood Industrial Park Area), Final Report <u>Analysis of</u> <u>Options for Ravenswood Industrial Park Area</u>, November 1988.
- /2/ Preliminary Report on the Proposed Redevelopment Plan for the Ravenswood Industrial Redevelopment Project prepared by Katz, Hollis, Coren & Associates for the City of East Palo Alto Redevelopment Agency, January 1990.

/3/ City of East Palo Alto, General Plan Amendment, January 1990.

4.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

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4.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

The following sections describe the environmental setting of the project area; the impacts resulting from implementation of the Redevelopment Plan; and mitigation measures to reduce the impacts of the project. Potentially significant impacts are underlined in the text.

4.1 LAND USE AND PLANNING

EXISTING SETTING

Background

The 186-acre project area represents about 12 percent of the 1,600 acres which comprise the City of East Palo Alto. Although only incorporated in 1983, the City of East Palo Alto has historic roots which extend back to the 18th century when the area was a portion of the Rancho de las Pulgas, the largest ranch in the Bay Area. In 1848, a wharf was built at the end of Bay Road at the site of Cooley's Landing. The port was the first in what was to become San Mateo County and provided shipping for lumber, hay and other regional cargo. The town of Ravenswood grew up around the port which flourished as the hub of Peninsula shipping until completion of the railroad from San Francisco to San Jose. In 1916, Charles Weeks founded a cooperative poultry venture called Runnymede which divided its 600 acres into one and five-acre plots and lasted into the 1930s. In the 1940s and 1950s, subdivisions were built to house the influx of World War II veterans and flower-growing became the chief agricultural activity in the large-lot areas. While an aircraft plant moved into the area in 1948, it was annexed to the City of Menlo Park shortly after, as was another large industrial area in 1960. At the present time, land use within the City of East Palo Alto is primarily residential with the majority of households in the low-income category. Commercial and industrial activity in the City is minimal and local employment opportunities are five times lower than those encountered within a 12-mile radius of East Palo Alto. /1/

A general plan for East Palo Alto was adopted by the San Mateo County Board of Supervisors in 1963. The plan called for maintaining East Palo Alto as a medium-density residential community. In 1970, the East Palo Alto Municipal Council (which acted as advisory council to the Board of Supervisors) received Federal funds for a planning project for that portion of the community on the bay side of the Bayshore Freeway (Highway 101). In 1971, East Palo Alto received a Department of Housing and Urban Development grant for urban renewal to revitalize the community. In 1982, the San Mateo Board of Supervisors, upon the recommendation of the East Palo Alto Municipal Council, adopted the East Palo Alto Community Plan and EIR. Upon incorporation in 1983, the City recognized the need to have a General Plan that was responsive to the requirements of State law and reflective of the community's desires. In December 1986, the current General Plan for the City of East Palo Alto was adopted. /2/ The San Mateo County Zoning Ordinance (Sections 6100 - 6999), in effect at the time of incorporation, is used by the City to implement its General Plan.

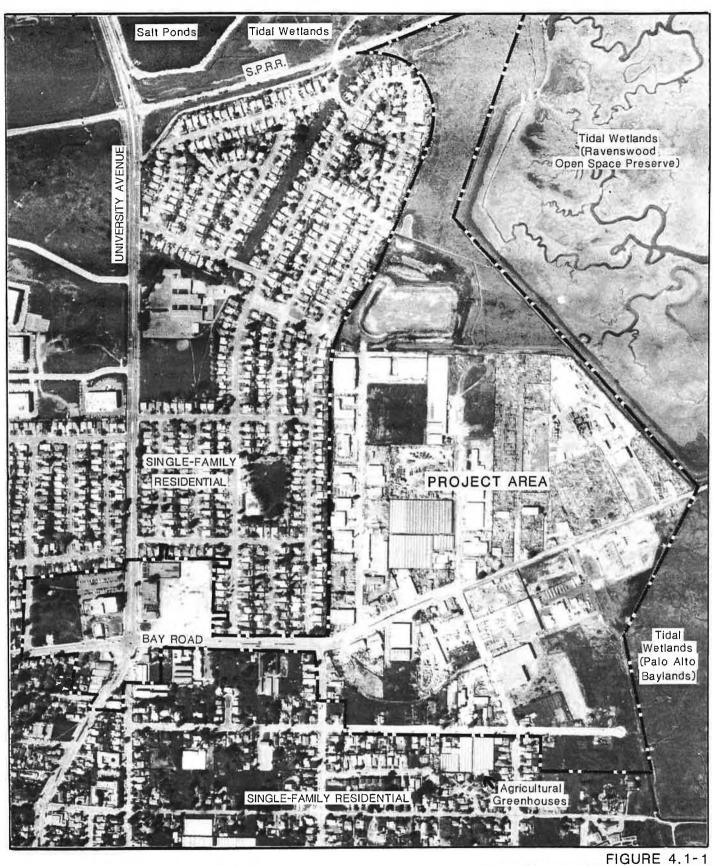
Land Use - Project Area

As described in Chapter 3.0 Project Description and shown in Figure 3-2, the project area, referred to as the Ravenswood Industrial Area, consists of 186 acres of which 166 are contained in the Industrial Section adjacent to the wetlands and the remaining 20 acres are located in the "Four-Corners" Section area at the intersection of University Avenue and Bay Road. The two subareas are linked by a short section of Bay Road. Figure 4.1-1 shows aerial features of the project area and surrounding uses and Table 4.1.1 summarizes the distribution of existing land uses in the project area. For organizational purposes, the discussion and analysis of land use issues and planning concerns

Table 4.1.1. Existing Land Distribution - Project Area

LAND USE	ACRES*	% TOTAL PROJECT AREA
Industrial Section		
Wetland and Open Space	23	12
Infill/Formerly Developed	42	23
Industrial	72	39
Miscellaneous	26	
Romic Chemical Corp.	12	
Auto Salvage	17	
Warehousing/Wholesale	9	
Open Storage	8	
Nurseries	10	6
Residential	1	
Office/Commercial	1	
PG&E Substation	8	5
Rights-of-Way	9	3
	(166 acres)	(approx.89%)
"Four-Corners"		
Formerly Developed	10.2	6
Retail/Commercial	1.8	1
Residential	.7	
Public Facilities	2.3	1
Right-of-Ways	5.	2
	(20 acres)	(approx.11%)
TOTALS	186 ACRES	100 %

*Acreages are approximate and were determined by planimeter of base map.



Source: Aerial Data Systems, March 20, 1989

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AERIAL PHOTOGRAPH/ SURROUNDING LAND USE

Ravenswood Industrial Area Redevelopment Plan & GPA Program EIR Wallace Roberts & Todd for these two subareas, i.e. the Industrial Section and the "Four-Corners" Section are addressed separately. (Refer to Figure 4.1-2 and Figure 4.1-10 for existing land uses in the respective subareas.)

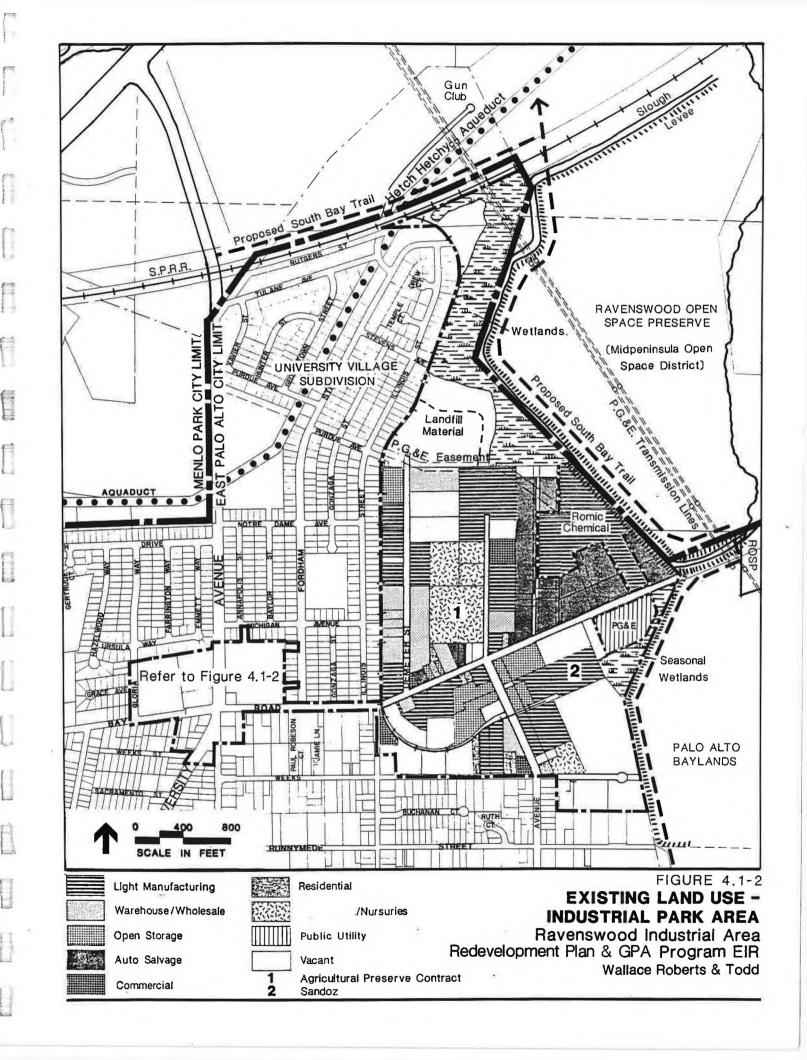
Land Use - Industrial Section

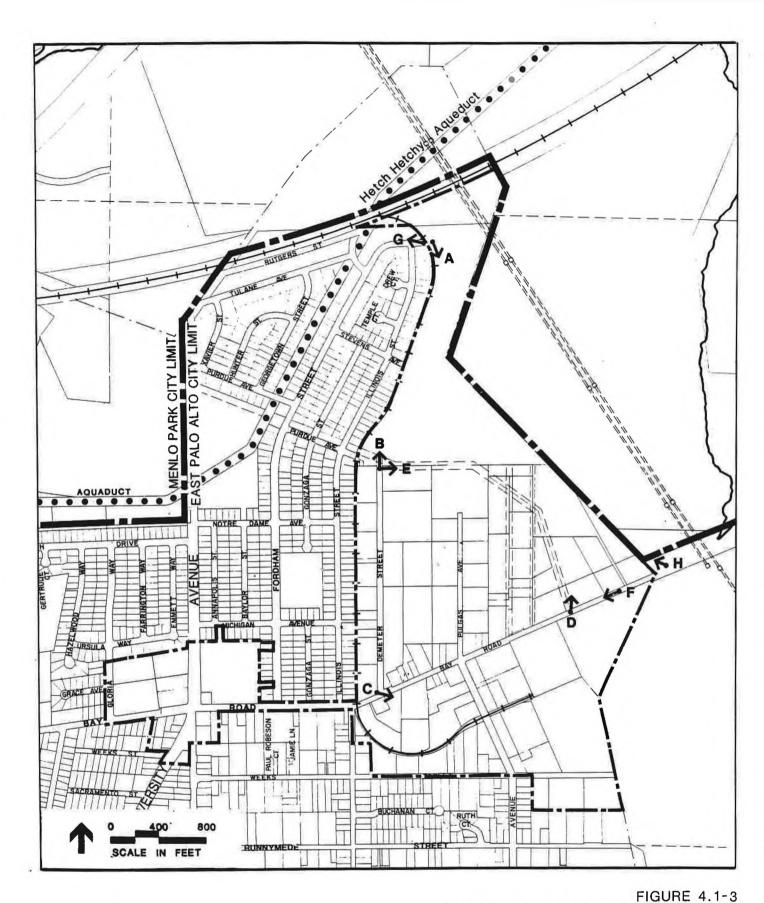
As shown on Figure 4.1-2, land uses in the Industrial Section portion of the project area consist of wetlands, large scattered areas of currently unused or minimally used land (auto salvage and storage yards), one chemical manufacturing plant, one solvent recycling plant, a Pacific Gas and Electric substation, and a wide variety of small-scale industrially-related businesses many of which use hazardous materials in their operations. In general, as shown in the series of photographs of the Industrial Section (keyed to a location map in Figure 4.1-3 and contained in Figures 4.1-4 to 4.1-6), buildings and roads in the area are poorly maintained; access to major portions of the Park does not exist; there are few infrastructure amenities such as sidewalks and gutters; abandoned vehicles and trash litter the right-of-ways; and, there are many parcels of land adjacent to existing structures which are not being utilized. At the present time, there are 118 parcels under 63 ownerships in the Industrial Section of which 31 individually-owned properties are one acre or less in size. Existing parcel ownerships are listed in Appendix C. The following discussion describes existing land uses in the Industrial Section in greater detail.

Formerly Developed Land and Infill. Undeveloped land in the northern portion of the Industrial Section consists of approximately 23 acres of tidal salt marsh and open space. An additional 42 acres of land exists as infill (i.e. scattered areas of unused or minimally used land within existing development) and as a storage area for fill material (soil) from the construction in the 1950s of adjacent residences.

Industrial. The following light industrial and manufacturing businesses are located within the Industrial Section: auto repair shops; welding, machine, and painting shops; sheet metal fabrication; metal plating; general chemical and agricultural chemical production; steel manufacture; and electronics. Other land uses associated with light industrial are auto salvage, warehousing and wholesale, and open storage. (Refer to Figures 4.1-5 and 4.1-6, Photos C, D and E.) Many of these uses involve the extensive handling of hazardous substances such as Romic Chemical Corporation, which is the regional chemical solvent recycling facility, and Sandoz Corporation (formerly the Zoecon/Rhone-Poulenc chemical plant) which manufactures insect controls. (Refer to Chapter 4.4, Hazardous Substances, for a full discussion of land uses in the Industrial Section associated with hazardous materials.) Other than the two large chemical plants and the PG&E substation, most industrial land uses are privately-owned businesses on small parcels.

PG&E Substation. The Pacific Gas and Electric Cooley Landing substation is located on Bay Road on the eastern boundary of the site (see Figure 4.1-6, Photo F). Vacant land surrounds the substation, some of which is seasonal wetlands.





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PHOTOGRAPH LOCATION MAP Ravenswood Industrial Area Redevelopment Plan & GPA Program EIR

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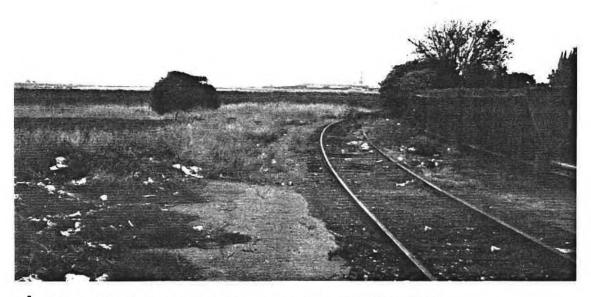
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A - Vacant land along railroad spur on northern portion of RIA.



B - Fill material on northern portion of RIA. View north from end of Demeter St.

FIGURE 4.1-5 SITE PHOTOGRAPHS C & D

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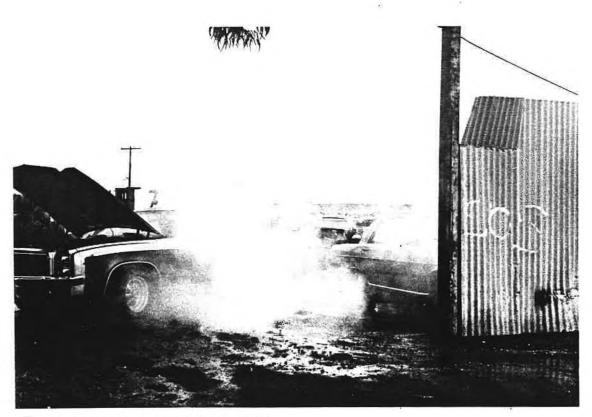
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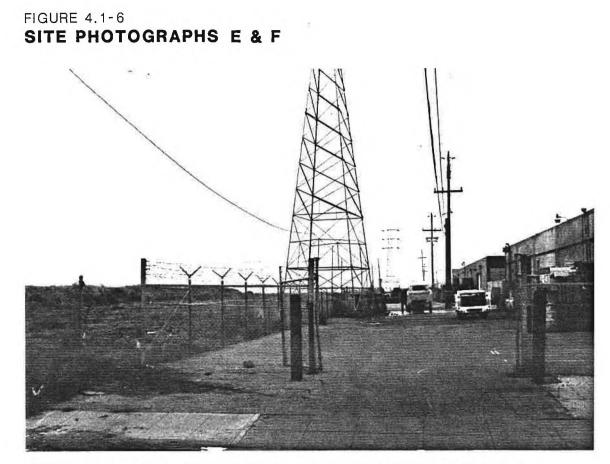
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C - Warehousing and light manufacturing on Bay Road - RIA.



D- Auto salvage on Bay Road - RIA.



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E - Warehouse/wholesaling and PG&E easement, end of Demeter St. - RIA.



F - PG&E substation. Looking southwest on Bay Road - RIA.

Nurseries. About 10 acres of the Industrial Section are used for agricultural nurseries. One 5-acre parcel is under Agricultural Preserve Contract with the City of East Palo Alto.

Agricultural Preserve Contracts were established in 1965 by state legislation known as the Land Conservation Act or Williamson Act (Government Code Sections 51200 <u>et seq</u>.). They are voluntary contracts between a county or city and landowners, in which landowners agree to keep their property in agricultural or open space use in return for lowered property tax assessments. The contracts are for 10 years and are automatically renewed each year for a new 10-year period, unless they are terminated. Termination of these contracts can occur by eminent domain, nonrenewal or cancellation. The City Council or County Board of Supervisors as appropriate may cancel a contract provided that the cancellation is in the public interest and that a statement of findings is made to that effect.

Other. In addition to the above uses, there are several residences and small-scale office and commercial uses along Weeks Street and Bay Road.

Easements. There are four easements which pass through the Industrial Section: 1) a Pacific Gas and Electric Company (PG&E) right-of-way which runs in a north then westerly direction to Purdue Avenue from the substation at the eastern extremity of Bay Road (see Figure 4.1-6, Photo E); 2) a PG&E public utility easement for high power transmission lines which cuts through the northern-most corner; 3) the Hetch Hetchy Aqueduct, owned by the City and County of San Francisco, which passes underground through the northwest corner at the end of Rutgers Street; and 4) the Southern Pacific right-of-way along the abandoned railroad spur which defines the western boundary of the Industrial Section south to Bay Road.

Surrounding Land Use. As shown on Figure 4.1-1, single-family residences adjoin the Industrial Section on its western and southern boundaries. The University Village Subdivision (see Figure 4.1-7, Photo G), a well-kept low to middle-income residential area built in the 1950s, extends from Rutgers Street to Bay Road. Smaller subdivisions and individually developed residential properties are situated along Weeks Street with residential use extending southward. A large agricultural nursery is also located on Weeks Street. Vacant land connects the southeast corner of the Industrial Section to vacant parcels on Runnymede Street. The Southern Pacific railroad tracks, an inactive line which may be converted to a light-rail system, crosses the San Francisco Bay just south of Dumbarton Bridge and passes along the northern boundary of the Industrial Section. North of the tracks is vacant land belonging to the City of Menlo Park and a Gun Club which is accessed from a dirt road off of Rutgers Street. (The Cities of East Palo Alto and Menlo Park are in the process of negotiating a transfer of land which will lead to the annexation to the City of East Palo Alto of 2,200 number of acres north of the tracks (3/.)Land east of the Industrial Section consists of tidal wetlands (see Figure 4.1-7, Photo H). The Palo Alto Airport is located slightly more than one-half mile to the south of the Industrial Section (refer to Figure 3-1).

FIGURE 4.1-7 SITE PHOTOGRAPHS G & H

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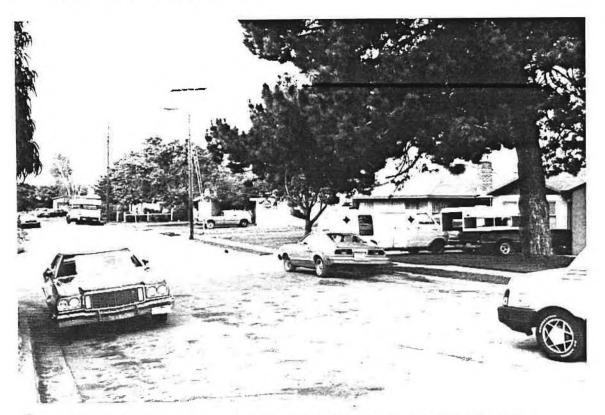
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G - Adjacent land use, University Village subdivision, at end of Fordham St.



H - Romic Chemical and Slough east of Industrial section.

Adjacent Tidal Wetlands. The tidal wetland north of Cooley Landing is a former salt evaporating pond separated from the Industrial Section wetland by a levee and the Mayfield Slough. The salt pond, as well as four acres on the south side of Bay Road at Cooley Landing, is owned by the Midpeninsula Regional Open Space District which has designated the area as part of the Ravenswood Open Space Preserve. (The Preserve includes District-owned wetlands immediately south of Dumbarton Bridge.) A 6-acre strip of land, which extends down the center of the Cooley Landing peninsula north to the slough channel, is owned by the manager of the Palo Alto Yacht Harbor who operates a boat repair facility on the property. The Faber and Laumeister Tracts south of Cooley Landing, known as the Palo Alto Baylands, are owned by the City of Palo Alto and are designated as Open Space in that city's General Plan. These baylands form a continuous strip of public open space, shorebird habitat, and wildlife corridor on the edge of a heavily urbanized area. /4/

Planning Activity in the Wetland Area. The Midpeninsula Regional Open Space District is developing plans for the Ravenswood Open Space Preserve. The District's goal in managing the Preserve is to restore high quality wildlife habitat as well as to provide compatible low intensity outdoor recreation. The District is seeking funds from the California Coastal Conservancy to prepare a master plan for the restoration of the salt pond to full tidal action and is working with San Mateo County and ABAG (Association of Bay Area Governments) on developing a trail system along the Bay. A segment of the proposed South Bay Trail is currently under construction. The segment starts at Runnymede Street south of the Industrial Section and follows the top of the existing levee along the Industrial Section's eastern boundary to the Ravenswood Open Space Preserve at Cooley Landing. The proposed trail would cross the Mayfield slough, continue north along the salt pond levee, cross the Southern Pacific tracks and land owned by the San Francisco Water Company in the City of Menlo Park and eventually join the Ravenswood Open Space Preserve near Dumbarton Bridge. At the Southern Pacific tracks, the trail would intersect with another proposed trail following the S.P. easement from University Avenue.

Other plans which affect the project area are those being made by the US Fish and Wildlife Service which administers the San Francisco Bay National Wildlife Refuge located in wetlands north of Dumbarton Bridge and directly across the Bay from the Industrial Section in Alameda County. The US Fish and Wildlife Service is seeking to enlarge the current boundaries of the Refuge in the South Bay by fee title acquisition and/or conservation easement acquisition and/or cooperative agreement. Proposed additions to the Refuge include the northern portion of the Industrial Section (the 29 acre parcel owned by Facciola Meat Co. on which the Industrial Section tidal wetlands are located), the Ravenswood Open Space Preserve, and the Palo Alto Baylands.

Bay Conservation and Development Commission. The Bay Conservation and Development Commission (BCDC), a State agency, is responsible for ensuring that development along San Francisco Bay is compatible with the objective of protecting the Bay as a natural resource. The Commission's area of jurisdiction comprises the Bay itself and all land within 100 feet of the Bay's shoreline (which the Commission defines as being the line of highest tidal action, or approximately seven feet above mean sea level). Within this area of jurisdiction a BCDC permit is required for the following activities: fill or dredging; shoreline development, which is defined as most work (including grading) performed within 100 feet of the Bay's shoreline; and substantial changes in use (e.g. shifting use from agriculture to residential). General BCDC policy is not to allow any filling of wetlands.

BCDC permits are of three types: administrative permits, which are issued for minor repairs or improvements at the discretion of the Executive Director and the commission, and which do not require a public hearing; major permits, which are issued when extensive work is proposed, and which require a public hearing before the Commission; and regionwide permits, which generally pertain to routine and on-going repair and maintenance work performed on existing shoreline structures.

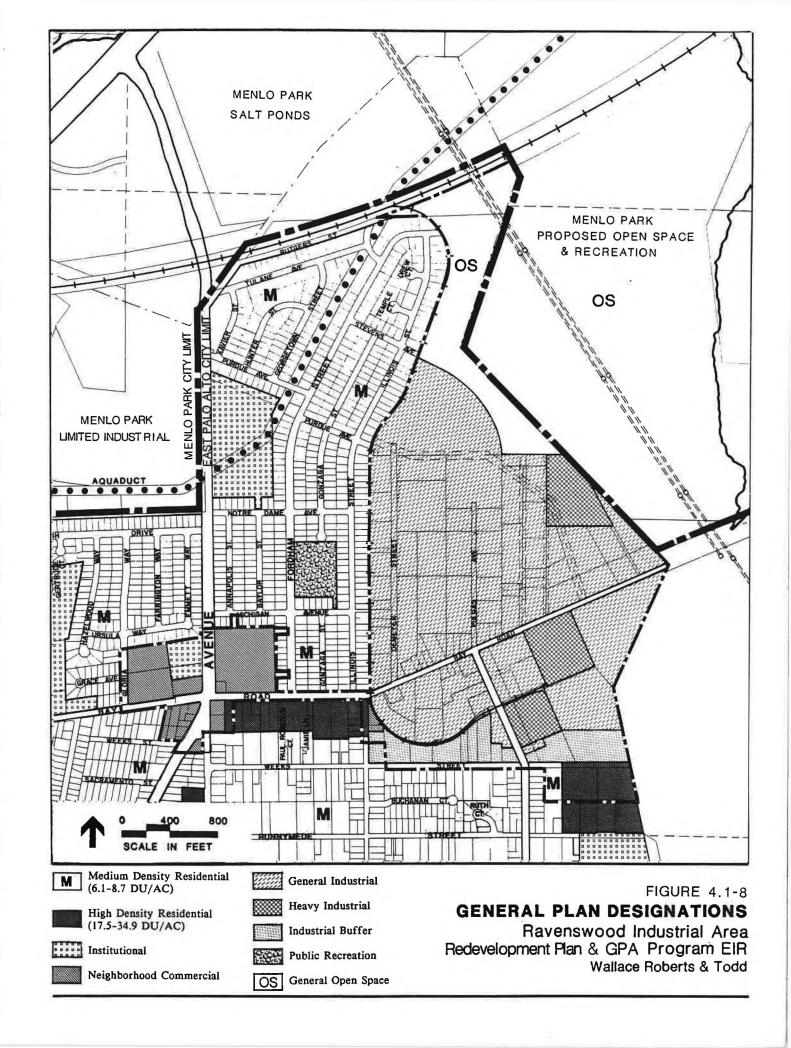
In considering a permit application, the Commission may seek the advice of its Design Review Board (DRB). The DRB reviews major permit applications to determine if the proposed projects provide maximum feasible public access to the waterfront. Although the findings of the DRB are strictly advisory, the Commission is empowered to deny a permit if public access is insufficient, and can likewise apply special conditions to the permit that must be met prior to completion of the proposed work. The Commission, however, cannot deny a permit solely on the basis of the appearance or design of a project. /5/

In 1983, BCDC issued a development permit for "Lucky Acres" on the 29-acre Facciola parcel in the northern portion of the Industrial Section. The permit shows that 14 acres of this parcel was determined by BCDC to consist of tidal marsh and that BCDC's shoreline band of jurisdiction extends 100 feet beyond the edge of the tidal marsh. Elsewhere in the Industrial Section, BCDC jurisdiction extends 100 feet inland from the edge of the water at the levee. /6/ In addition, the Bay Shoreline Element of BCDC's Public Access Plan indicates that the shoreline area near the subject site is "exceptional", and that a dike-top trail should be developed inboard of the salt pond, running south to Cooley Landing and north to the railroad causeway.

General Plan and Zoning - Industrial Section

General Plan Designation. As shown in Figure 4.1-8, the General Plan designations for the Industrial Section are: 1) "General Industrial" over the major portion of the site; 2) "Heavy Industrial" in the general areas of Romic Chemical and Sandoz Corporation; 3) "Industrial Buffer" on the north side of Weeks Street; 4) "High Density Residential" and (5) "Medium Density Residential" south of Weeks Street; 6) "Neighborhood Commercial" south of Bay Road between the railroad spur right-of-way and the western boundary; and 7) "Open Space" in the wetland area in the northern portion of the site.

Adjoining general plan designations are as follows: "Medium Density Residential" along the western boundary from Rutgers Street to Bay Road; "High Density Residential" south of Bay Road and along the south boundary; "Open Space" in the wetland area south of Cooley Landing; "Proposed Park and Recreation" for the wetland area north of Cooley Landing (City of Menlo Park); "Salt Ponds" (City of Menlo Park) across the railroad tracks on the northern boundary. Definitions for the above designations are as follows: /7/



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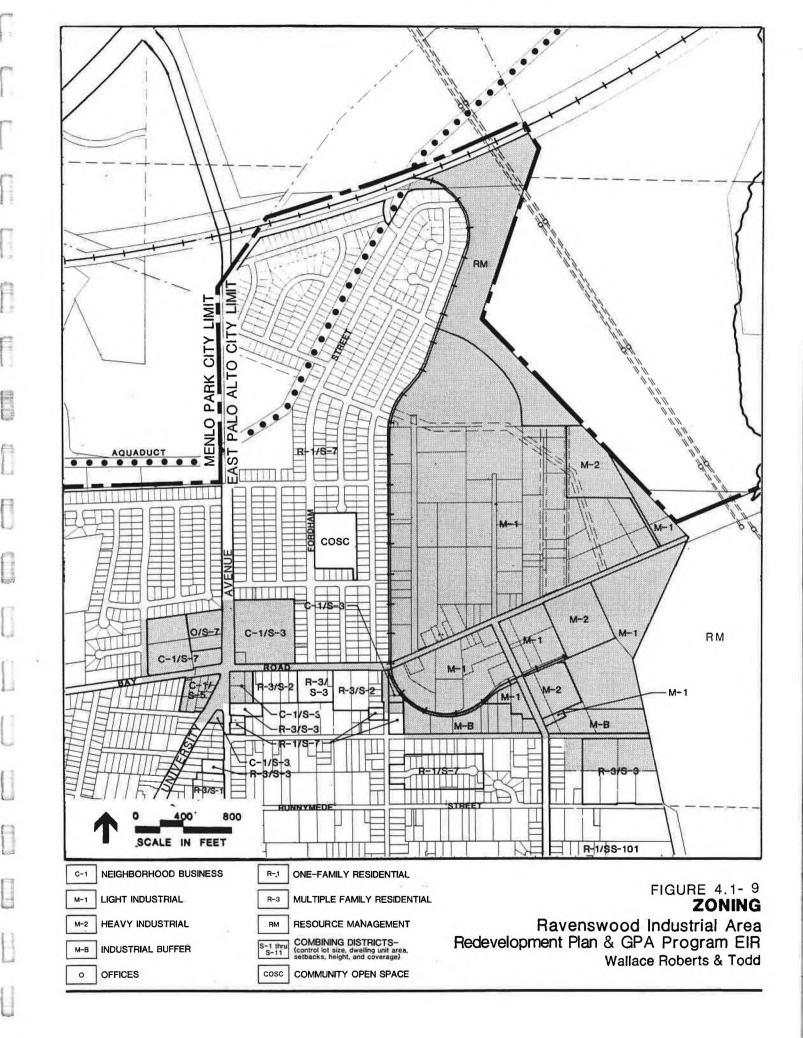
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"General Industrial"	Most manufacturing, assembling, processing, and storage; heavy industrial such as smelting and refining excluded.	
"Heavy Industrial"	Chemical plants, petroleum refining, stockyards, junkyards and similar uses.	
"Industrial Buffer"	Industrial offices, administration and research uses only; landscaped and set back to provide a transition between residential and general industrial uses.	
"High Density Residential"	Multi-family residential units such as apartments and condominiums with 18 to 35 units per acre.	
"Medium Density Residential" Single-family homes with 2 to 8 units per acre.		
"Neighborhood Commercial"	Limited to retail commercial uses such as grocery, drug stores, beauty shops, banks, clothing stores. All types of residential use are permitted with a use permit.	
"Open Space"	Areas where low intensity develoment is allowed to protect the visual and open characteristics of the land.	

City Zoning Ordinance. As shown on Figure 4.1-9, the Industrial Section is zoned into five zoning districts: M-1 (Light Industrial), M-2 (Heavy Industrial), M-B (Industrial Buffer), RM (Resource Management), and R-3 (Multi-Family). The majority of the Industrial Section falls within the M-1 District.

As stated previously, the City currently uses the San Mateo County zoning ordinance that was in effect at the time of incorporation. The ordinance relies on a listing of specific uses to establish permitted, conditionally permitted and prohibited uses. If a proposed use does not appear on the list of uses in the respective zoning districts, an amendment to the ordinance is required. (Newer ordinances employ a use classification system that defines permitted uses by broader functional descriptions and which can therefore more easily convey the intent of the land use designations.) According to the 1986 General Plan (see below Land Use Element - Fiscal), the existing zoning ordinance will be revised to fit the needs and goals of the City and, in designated areas (of which the project area is one), existing zoning will be superseded by Specific Plans.

General Plan Policies. The Land Use, Open Space, Conservation, Economic Development and Circulation Elements of the General Plan contain the following goals, objectives, policies and implementation measures relevant to the proposed project in the Industrial Section:



Land Use Element - General Goals (G.P. 1-2 to 1-4)

GOAL II: Foster and Maintain a Neighborhood-Focused Pattern of Development

Policy: Design traffic circulation systems to protect neighborhood integrity by limiting the number of intra-city arterials in any one neighborhood to the minimum necessary for safe and effective intra-city travel. Arterials should serve as neighborhood boundaries. (p.1-3)

Land Use Element - Industrial Land Use (G.P. 1-18 to 1-21)

The Ravenswood Industrial Section is designated in the General Plan as the City's industrial area. The General Plan states that "development of desirable industry in the Industrial Section has been very slow" "due to market forces and problems related to vehicular access, appearance, and security."

"In general, the development which has occurred includes uses such as auto wrecking yards and chemical plants which are not considered desirable in other locations. East Palo Alto could attract more such uses in the future because very little land is available for such uses in the mid-Peninsula area. Alternatively, the community can seek to upgrade the industrial park by immediately phasing out the wrecking yards and attracting higher quality, clean, light industry such as electronics, research, light assembly, and storage facilities. Such uses would improve the appearance of the area, be more compatible with surrounding uses, and serve as a catalyst for attracting further desirable development." (p.1-19)

"The Ravenswood Industrial Park has a long border with adjoining residential uses Due to their proximity to the industrial areas, open space and screening to protect residents from the noise, dust, and congestion common to industrial activity is necessary. Uses in this buffer area should be limited to those clearly compatible with residential development." (p.1-19)

GOAL I: To Allow Light Industrial Uses Which Are Consistent With Other Policies In This Land Use Element And Which Are Favorable To The Community Environmentally, Economically, and Fiscally

Policy: Ensure that industrial uses adjacent to or proximate to residential areas do not cause adverse vehicular traffic or parking impacts on those areas arising from the volume of traffic.

Policy: Establish limits on noise levels for industrial uses.

Policy: Establish standards to minimize emission odors, smoke, other air emissions, and liquid or solid wastes.

Policy: Limit the amount of light-generated glare emanating from industrial uses.

Objective No. 2: Encourage industrial uses creating few impacts or wastes.

Policy: Encourage research facilities, administrative facilities, and specialized manufacturing processes of a non-nuisance nature.

Policy: Establish standards for industrial research facilities that focus on traffic and the reduction of effects from internal operations.

Objective No. 3: To implement the immediate phase out of auto wrecking yards in the M-1 Zoning District in order to facilitate the development of these lands with the highest, best and cleanest quality office, manufacturing, assembly, storage and warehouse uses possible.

Land Use Element - Agricultural and Open Space (G.P. 1-28 to 1-29)

GOAL I: Encourage An Orderly Transition From Agricultural Uses To Other, Higher Intensity Uses

Objective No. 1: Encourage owners of agricultural land to relinquish Williamson Act contracts.

Land Use Element - Fiscal (G.P. 1-35)

GOAL I: To Accommodate New Development Which Is Adequately Provided With Municipal Improvements And Services

Policy: Encourage the use of assessment districts, industrial development bonds, capital facilities districts (Section 53311 et.seq. of the California Government code), and other techniques for financing improvements serving existing and new development.

Land Use Element - Action Program (G.P. 1-36 to 1-38)

Implementation of the above goals includes the following actions:

Action Program 13. Currently the City is using San Mateo County's Zoning Ordinance as a guideline for land use and development standards. Revised zoning regulations tailored to fit the needs and goals of East Palo Alto will be implemented.

Action Program 15. Specific Plans. There are a number of areas in East Palo Alto that are inherently unique. They require their own special/specific land use and development standards. In each of these areas there is a need to adopt what is called a Specific Plan. Specific plans are commonly used in areas of transition such as in the developing periphery of urban areas and in central city areas designated for rehabilitation or redevelopment. Some cover small areas like a few blocks while others cover many areas. Their main advantages are that they set forth very specific policies which serve to facilitate focused land uses in combination with clearly articulated development and design standards. These plans are fully meant to support the goals of the General Plan and serve to coordinate public and private efforts in the development of an area. Areas where specific plans will be implemented includethe Ravenswood Industrial Park and Buffer Zone Area and the University Avenue strip. Open Space Element (G.P. 3-1 to 3-24)

Designated open space areas in the vicinity of the Industrial Section portion of the project area include: Cooley Landing, all wetlands along the eastern edge of the City including the tidal wetlands in the Industrial Section, and the Hetch-Hetchy Aquaduct. It is the City's goal to make the wetlands along the eastern edge of the City

"a major part of the future shoreline park which would include provisions for an unimproved trail system, a marsh study area and a greenbelt buffering system along its entire length." (p.3-6)

GOAL I: To Protect East Palo Alto's Open Space Resources From Development Encroachment

Policy: Any action by the City involving the use of designated open space lands must be consistent with the Open Space Element of the General Plan.

GOAL III: To Ensure Accessibility To East Palo Alto's Open Space Resources

Policy: Make designated open space lands accessible and available to the public to the extent allowed by the sensitivity and susceptibility to damage of these lands.

Policy: Minimize visual obstruction of the Baylands, vistas and open space areas of the City.

Policy: Promote public access to open space areas where possible by providing pathways, access points, trailways, and bridges while protecting the privacy and security of adjacent residents, and while protecting and enhancing the open spaces themselves.

GOAL IV: To Expand And Enhance East Palo Alto's Open Space Resources

Policy: Enter into cooperative programs with public agencies and private groups in order to provide a trail system which ties together the urban area with the major open space recreational resources within the region.

Implementation of the above goals calls for all lands in the City presently zoned COSC (Community Open space Conservation District) and RM (Resource Management District) to be maintained as open space with any proposed rezoning of open space lands to other land use to be discouraged.

Conservation Element (G.P. 4-1 to 4-15)

GOAL IV: To Maintain A Reasonable Balance Of Agricultural Land Within The Urban Environment

Policy: The City shall carefully review all applications for cancellation of Williamson Act contracts to ensure that open space, industrial, and fiscal objectives are reasonably met. GOAL VII: To Maintain And Enhance The City's Scenic Beauty

Policy: The City will work together with the Mid Peninsula Open Space District to create a specific plan to protect the Baylands.

Economic Development Element (G.P. 8-1 to 8-10)

The Economic Development Element designates the Industrial Section as an Economic Development Area and states that "priority should be given to land improvements that have the potential for most effectively contributing to the goals of: 1) increasing existing resident income; 2) providing adequate basic neighborhood goods and services; 3) generating sufficient revenues to support and increase City services; 4) utilizing under-productive developable land resources; and 5) enhancing natural amenities and the quality, safety, and function of the built environment in East Palo Alto."

The Economic Element declares the City's intent to promote land uses that generate employment at levels comparable to the County; to develop at least 35 acres of industrially-zoned land for light-industry/labor intensive uses; and, to give priority to areas for light and labor-intensive heavy industry uses.

Implementation of the above goals includes use of the Specific Plan as an instrument for regulating the development of projects on the key improvement sites. (see Land Use Element - Fiscal, Action Program No. 15); and use of the redevelopment process to prepare, approve and adopt Redevelopment Plans for economic development areas.

Circulation Element (G.P. 6-1 to 6-21)

GOAL I: To Assure A Balanced Circulation System, Integrated With The Regional System And Offering A Variety Of Transit Options To The Community

Policy: Consider allowing that portion of University Avenue between Bay Road and Notre Dame Avenue to become a truck route as a means of promoting new development in the Ravenswood Industrial Park.

Policy: Explore the potential of extending either Pulgas Avenue or Demeter Street in a northwesterly direction, connecting to University Avenue, allowing access between the Ravenswood Industrial Park and the Dumbarton Bridge. Alternatively, extending either street or constructing a new one directly to Highway 94 rather than to University Avenue should be considered.

Policy: Cooperate with the City of Palo Alto and other appropriate jurisdictions in developing the Baylands Bicycle Trail Project.

Although policies elsewhere in the General Plan call for protection of residential areas from adverse traffic impacts, the provisions of the Circulation Element imply a balancing of the objectives of minimizing traffic impacts on residential areas with the dual objectives of enhancing employment and income opportunities and of correcting unacceptable existing land use conditions.

Land Use - "Four-Corners" Section

The "Four-Corners" Section of the project area, located at the junction at University Avenue and Bay Road, is identified in the City's General Plan (p. 1-14) as one of the three major shopping concentrations in the City of East Palo Alto. As shown on Figure 4.1-10 and indicated in Table 4.1.1, one-half of this area consists of currently vacant and unused land. (Refer to Appendix C for the parcel ownership list.) The Nairobi Shopping Center, built in 1957 on the northeast corner of the "Four-Corners" Section to serve the community as a full service commercial center, has recently been razed due to its diplapidated condition and its inability to become commercially viable. An abandoned gas station is located on the southwest corner; a former gas station, now razed, was located on the northeast corner. Existing uses include the County Office Building, several small-scale retail\commercial enterprises and three single-family residences. Land use surrounding the "Four-Corners" Section is single-family residential.

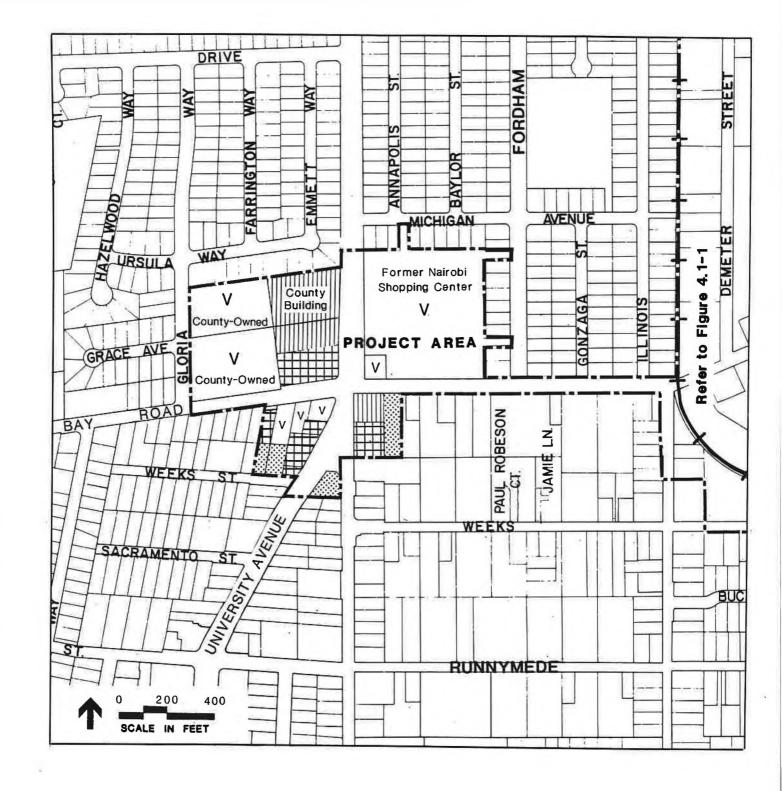
General Plan and Zoning - "Four-Corners"

General Plan Designation. As shown on Figure 4.1-8, most of the "Four-Corners" Section is designated "Neighborhood Commercial" on the City's General Plan map. The site on which the County Office Building is located is "Institutional" and a single-family residence on the southeast corner is "High Density Residential". All surrounding land is designated "Medium Density Residential". These designations are defined as follows (City of East Palo Alto General Plan, December 1986):

"Neighborhood Commercial"	Limited to retail commercial uses such as grocery, drug stores, beauty shops, banks, clothing stores. All types of residential uses are permitted with a use permit.
"Institutional"	(no definition contained in the G.P.)
"High Density Residential"	Multi-family residential units such as apartments and condominiums with 18 to 35 units per acre.

"Medium Density Residential" Single-family homes with 2 to 8 units per acre.

City Zoning Ordinance. As shown on Figure 4.1-9, the "Four-Corners" Section is zoned into two zoning classifications: 1) C-1 (Neighborhood Business) in which most retail/commercial uses and all residential uses are allowed (residential use requires a use permit); 2) and O (Offices). All parcels within the "Four-Corners" Section is overlaid by one of four combining districts (S-2, S-3, S-5, S-7), each of which prescribes specific building regulations as to minimum building site, setbacks, maximum coverage, etc. Density bonuses for provision of affordable housing is also specified for each combining district. R-1 (One-Family Residential) surrounds that portion of the "Four-Corners" Section zoned C-1 (Neighborhood Business); R-3 (Multiple Family Residential) adjoins that portion of the "Four-Corners" Section also having R-3 zoning. Design Review (DR) applies to all zoning districts. /8/





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Residential

Commercial

Public Facility

Vacant

FIGURE 4.1-10 EXISTING LAND USE -FOUR CORNERS AREA Ravenswood Industrial Area

Redevelopment Plan & GPA Program EIR Wallace Roberts & Todd General Plan Policies. The Land Use and Economic Development Elements of the General Plan contain the following goals, objectives, policies and implementation measures relevant to the proposed project in the "Four-Corners":

Land Use Element - Commercial (G.P. 1-14 to 1-17)

GOAL II: To Establish Standards For The Location And Density Of Commercial Areas

Policy: Augment security in commercial areas and provide incentives for "Mom & Pop" neighborhood commercial enterprises by encouraging mixed use commercial and residential.

Land Use Element - Special Area (G.P. 1-31 to 1-32)

GOAL I: To Maintain The University Avenue Area As The Primary Commercial/Retail and Office District Of The City Within The Limits Imposed By The Amount Of Land Available For Commercial And Office Expansion

Policy: Establish the former Nairobi Shopping Center site as the primary retail and commercial district in the City.

Land Use Element - Fiscal (G.P. 1-35 to 1-38)

Objective No. 2: To balance commercial, industrial, and residential development.

Policy: Encourage new commercial and light industrial uses to provide employment for East Palo Alto residents.

Policy: Encourage new commercial uses which will provide goods and services to East Palo Alto residents

Implementation of the above policies includes a Specific Plan for the University Avenue strip, which extends from the interchange at the Bayshore Freeway to Bay Road.

Economic Development Element (G.P. 8-1 to 8-10)

The Economic Development Element designates the "Four-Corners" Section as an economic development priority area ("key improvement site") which has the potential for creating the economic benefits set forth in the goals for economic development. Two types of development are identified for the "Four-Corners" Section at the University Avenue and Bay Road intersection: 1) development of a centralized neighborhood shopping district and 2) development of high-density residential sites within walking distance of the intersection. The recommended action plan states:

The City Council should assign highest priority to the development of a centralized neighborhood shopping center at the University Avenue and Bay Road site. Development priority for other undeveloped and underutilized lands in the City should include commercial uses that have highest

potential for capturing the leakage of local disposable income; then residential development affordable to the low and moderate income household should be supported; job-creating industries which do not pollute or produce other negative neighborhood impacts should then be emphasized. (p. 8-8)

As in the case of the Industrial Section, implementation of the above goals includes use of the Specific Plan as an instrument for regulating the development of projects on the key improvement sites; and use of the redevelopment process to prepare, approve and adopt Redevelopment Plans for economic development areas.

POTENTIAL IMPACTS

Potential Impacts - Industrial Section

Land Use Compatibility. The proposed project would result in the removal of all existing land uses other than Romic Chemical Corporation and the PG&E substation. The two parcels proposed for development, one for light industry (high tech) and the second for offices, would be for single-user large-scale operations. Given a FAR of 0.45 (floor to area ratio, i.e. total building square footage divided by total site square footage), the general appearance of the 81-acre parcel proposed for light industrial development would approximate 25 percent coverage by one or several two-story building(s), 50 percent coverage by on-grade parking, and 25 percent open space. If buildings were lower, the percentage of open space would be reduced. Development on the 11-acre parcel proposed for office use (FAR 0.58) would require slightly greater site coverage or taller buildings given that parking is proposed to be on-grade. This type of development would provide a greater degree of compatibility with surrounding residential use than currently exists. Compatibility would be enhanced by the general revitalization of the project area: improving its appearance, providing public amenities such as the park and trail access through the site to the tidal wetlands, improving public health and safety by means of site remediation, and providing a more wholesome atmosphere by removing structures currently used for criminal activity. The impact of the proposed development on adjacent wetlands would be minimal (refer to Chapter 4.-- Biological Resources).

The proposed retention of the PG&E substation in the Industrial Section would not present compatibility problems with adjacent uses. Under the proposed land use plan, the substation would be separated from new development by the new arterial loop road and the park. However, the proposed retention of Romic Chemical Corporation, in its proximity to proposed new development on the 81-acre parcel, could endanger public safety in the event of a chemical fire or explosion on the Romic site unless siting and design features were incorporated into new building development for that parcel.

Due to its proximity to the Palo Alto Airport, proposed development of the Industrial Section for light industrial and office uses could jeopardize public safety and interfere with airport operations. (Refer to Chapter 4.7 Noise for a discussion of potential airport noise impacts.)

Relocation of Existing Uses. All existing uses within the Industrial Section, with the exception of Romic Chemical and PG&E substation, would be significantly affected by the proposed project by being forced to relocate. Some businesses could experience difficulty in relocating in the area due to limited supply of industrial land. Loss of employment for people currently working in the Industrial Section could also occur. However, the long-term social and economic benefits deriving from more efficient use of land, new employment, and increased revenues for City services is expected by the City to exceed short-term relocation-related impacts. The impact on current residents of the Industrial Section would be mitigated by requirements of the Community Redevelopment Law (Section 33411.1) which states that "no persons or families of low and moderate income shall be displaced unless and until there is a suitable housing unit available and ready for occupancy by such displaced person or family at rents comparable to those at the time of their displacement." Community Redevelopment Law does not require the Redevelopment Agency to relocate existing businesses.

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Cancellation of Agricultural Preserve Contract. The proposed project requires cancellation of the existing Agricultural Preserve Contract for a five-acre parcel in the Industrial Section (Assessor's Parcel Number 063-131-220). The City Council of East Palo Alto may cancel the contract provided that it makes a finding that the cancellation is in the public interest (Land Conservation Act, Government code, Section 51282) in that:

- 1. Other public concerns substantially outweigh the purposes of the Land Conservation Act;
- 2. There exists no proximate uncontracted land that is available and suitable for the use to which it is proposed the contracted land be put; or that development of the subject contracted land would provide more contiguous patterns of urban development than the development of proximate noncontracted land;
- 3. Contiguous or proximate lands have developed or are proposed for development to urban uses;
- 4. Utilities and services necessary for development of the site are available within a reasonable distance from the site;
- 5. There is no other reasonable or comparable agricultural use to which the land may be put;
- 6. The proposed use furthers City-wide goals providing for a) infill versus scatteration development; b) a balance of residential to commercial or industrial growth.

By applying the above criteria to the proposed project and General Plan policy which encourages the transition from agriculture to higher intensity uses, the City could reasonably make a public interest finding to warrant cancellation of the contract. The small size of the parcel and its location within existing industrial uses which reduces the value of the parcel for agricultural purposes supports this conclusion. Therefore, no adverse impacts are anticipated as a result of the cancellation of the Agricultural Preserve Contract. **Conformance to General Plan Policies.** The General Plan Amendment affects land use designations in the Industrial Section by redefining uses under the "General Industrial" designation to allow "Most light and general manufacturing, assembling, processing and storage, and related office and research and development facilities" while no longer permitting heavy industrial uses; and changing the designation for a small portion of the Industrial Section along Weeks Street from "Medium" and "High Density Residential" to "Industrial Buffer". More specifically (as described in Chapter 3.0 Project Description), the General Plan Amendment modifies the existing land use designations for the Industrial Park Section by making the changes summarized below:

- The Industrial Land Use Element (a) establishes light industry as the preferred use (i.e. electronics and other light assembly operations, research and development facilities, office headquarters and other ancillary facilities that support light industrial operations); (b) permits as an acceptable alternate use general industrial facilities (most light and general manufacturing, assembling, processing and storage, and related office and research and development facilities) provided that such facilities do not preclude the attraction of potential light industrial operations; (c) discourages heavy industrial uses such as chemical plants and other uses which generate significant hazardous wastes; (d) encourages the phase-out of auto wrecking and storage yards; (e) provides for development of a loop arterial street through the Industrial Park Section; (e) provides for improved public access to wetland areas.
- 2) The <u>Residential Land Use Element</u> makes the determination that large scale residential development is inappropriate for the Industrial Park Section because industrially-designated land within the City needs to be available to achieve the community's economic development goals.

Although the Redevelopment Plan and General Plan Amendment seek to modify existing land use designations, they do not conflict with established General Plan policies or create significant incompatibilities with existing uses. The proposed project retains industrial land use of the Industrial Section although modifying the type of industrial uses allowed. The project also retains the intent of the Industrial Buffer designation by proposing office development and a park along the southern edge of the Industrial Section. Although office use is proposed for less than 5 acres of vacant land in the southeast corner of the Industrial Section currently designated for medium and high density residential use, the potential loss in housing stock would be approximately met by the development of high density residential units on 3.4 acres in the "Four-Corners". In addition, 20 percent of the tax increments generated by the project would be designated for low and moderate housing throughout the City. In general, the proposed project furthers the goals and objectives of the General Plan 1) by providing trails and access to the adjacent wetlands (Open Space Element); 2) by providing land improvements in an area designated as a priority Economic Development Area (Economic Development Element); and 3) by improving access to and circulation through the Industrial Section (Circulation Element).

Conformance to Other Relevant Plans The proposed Redevelopment Plan and General Plan Amendment affects the plans of relevan agencies as follows:

<u>Midpeninsula Regional Open Space District</u>. The two trails proposed for the Industrial Section would provide access to the proposed South Bay trail in two locations. The trails would facilitate access from Bay Road and residential areas to the south and from University Village Subdivision to the west. Provision along the proposed new road north of the Southern Pacific Co. tracks is also made for the District's proposed trail linkage from University Avenue to the South Bay trail.

Bay Conservation Development Commission. The proposed new arterial loop road through the northern portion of the Industrial Section does not conform to BCDC policy which calls for no filling of the wetlands. Road construction would require a BCDC permit. Proposed development could also occur within 100 feet of the existing levee (also within BCDC jurisdiction) on the 11-acre parcel slated for office use in the southern portion of the Industrial Section. Wetland mitigation has been provided for onsite at a replacement ratio of 1.5 acres replaced for every acre lost. Under the proposed project, there would be a gain of 6.4 acres and a loss of 4.2 acres. (Refer to Chapter 4. 3 Biological Resources for a more detailed discussion of wetland replacement.) Maximum access to the waterfront, another major concern of the agency, has been provided by the proposed project as discussed above.

US Fish and Wildlife Service. The proposed redevelopment of the Industrial Section could affect the USFWS's planned addition of the project area's tidal wetlands to the San Francisco Bay National Wildlife Refuge unless future negotiations between the USFWS and the City were to include their addition by means of conservation easement or cooperative agreement. (Refer to Chapter 4.3 Biological Resources for potential impacts to wildlife.)

Other Potential Impacts. The potential conflict between the Southern Pacific Company's possible future light-rail use of their tracks along the northern boundary of the Industrial Section with the proposed arterial loop road accessing the Industrial Section from University Avenue has been generally resolved by the elevation of the road over the tracks.

Potential Impacts - "Four-Corners" Section

Because the proposed Redevelopment Plan for the "Four-Corners" Section is build-out of the General Plan, the potential relocation of existing residences and businesses is the only anticipated impact resulting from the project. Proposed revisions to the General Plan area expand upon and add specificity to existing goals and policies without violating the broad intent of the existing General Plan for the "Four-Corners" Section, already identified in the General Plan as the primary commercial/retail, office and high density residential district of the City and a high-priority development site for a centralized neighborhood shopping center. The General Plan Amendment specifically designates the "Four-Corners" Section as the "Community Center", a new land use designation defined as follows: Community Center Neighborhood commercial uses supported by high density residential developments, offices, and public buildings to form an integrated 'core area' or 'hub' as the focus for community activity and identity.

All uses proposed under the project are currently allowed; therefore, no new land uses would be introduced to the "Four-Corners". Residential use in this area would no longer require a conditional use permit. The overall effect of the proposed project would be to give the City greater control in implementing the economic and social revitalization of the project area.

MITIGATION MEASURES

Development of the project area would be in conformance with the General Plan; therefore, potential land use impacts not identified in this document can be mitigated through standard entitlement procedures of the City including CEQA reviews, zoning requirements, the subdivision ordinance, and public works standards.

The following measures are recommended to mitigate the potential impacts of the project:

- Siting and design of buildings on the 81-acre parcel in proximity to Romic
 Chemical Corporation in the Industrial Section should incorporate fire safety features approved by Menlo Park Fire Protection District.
- 2. Building height in the Industrial Section should not exceed 155 feet, the height limit specified by the Santa Clara County Airport Land Use Commission for development located within that height contour from the Palo Alto Airport.
- 3. The Redevelopment Agency will comply with state Community Redevelopment law regarding relocation of residents within the project area. If possible, the Agency will relocate existing businesses.

In those cases where relocation of existing businesses is not possible, the potential exists for an unavoidable significant adverse impact.

- 4. The project plan should incorporate all mitigations requested by the Bay Conservation Development Commission as part of the permit process.
- 5. Negotiations should be initiated with the US Fish and Wildlife Service to seek a conservation easement or cooperative management agreement for tidal wetlands in the project area.

Footnotes:

- /1/ City of East Palo Alto General Plan Economic Element, 1986
- /2/ City of East Palo Alto General Plan Introduction (p.4), 1986
- /3/ Personal communication from Stan Hall, City Manager, City of East Palo Alto, December 1, 1989
- /4/ Personal communication from David Hansen, Land Manager, Midpeninsula Regional Open Space District, November 13, 1989
- /5/ If the city or county with jurisdiction over a project requires any permits other than building permits, these approvals must be received before an application can be filed with BCDC. If a major project is proposed, however, the Commission's staff recommends that their input be sought prior to seeking approval from the local jurisdiction; this informal review will reduce the likelihood that BCDC permit conditions/design modifications forcing the applicant to return to the local jurisdiction for additional review of the project.

The DRB defines maximum feasible access in terms of pedestrian access and in terms of visual access (e.g. improvement of public views and vistas of the Bay). The design criteria and standards applied by the DRB are presented in its Public Access Design Guidelines, which are based upon Bay Plan Policies and upon past permit decisions. These guidelines are general in nature and therefore give the Commission wide discretionary power both in denying a project and in setting special conditions for approval. In addition to denying a permit on the basis of public access considerations, the Commission can also deny a permit if the proposed project impacts wetlands or if it conficts with a high-priority use designated for that site by the San Francisco Bay Plan. (Sedway-Cooke, Feasibility Study for Sun Microsystems, 1989)

- /6/ Personal communication from Joan Lundstrum, Permit Analyst, San Francisco Bay Conservation and Development Commission, November 6, 1989
- /7/ City of East Palo Alto General Plan, December 1986
- /8/ San Mateo County Zoning Regulations, Sections 6100 to 6999, 1985 (as amended)
- /9/ Santa Clara County Airport Land Use Commission, Land Use Plan for Area Surrounding Santa Clara County Airports, August, 1973.

4.2 GEOTECHNICAL

EXISTING SETTING

The following section is based on information provided to the City of East Palo Alto by Brian, Kangas and Foulk (November 1989).

Geologic Conditions

The geologic map titled "Geologic Map of San Mateo County, California, Miscellaneous Investigation Series, Map I-1257-A" prepared by U.S. Geological Survey and dated 1983 indicates that the Industrial Section of the project area is located in the area underlain by primarily the alluvial fan and basin deposits (Qyf, Qyfo, Qb) of the Holocene period, except for the eastern edge where the Industrial Section is underlain by bay mud (Qm) of the Holocene period or alluvial fan deposits (Qob) of the Pleistocene period. The approximate boundaries of these deposits are shown on Figure 4.2.1.

Qyf is the younger (inner) alluvial fan deposits consisting of unconsolidated fine to coarse-grained sand, silt, and gravel.

Qyfo is the younger (outer) alluvial fan deposits consisting of unconsolidated sand, silt, and clayey silt.

Qb is the basin deposits consisting of unconsolidated, locally organic, plastic silt and clay.

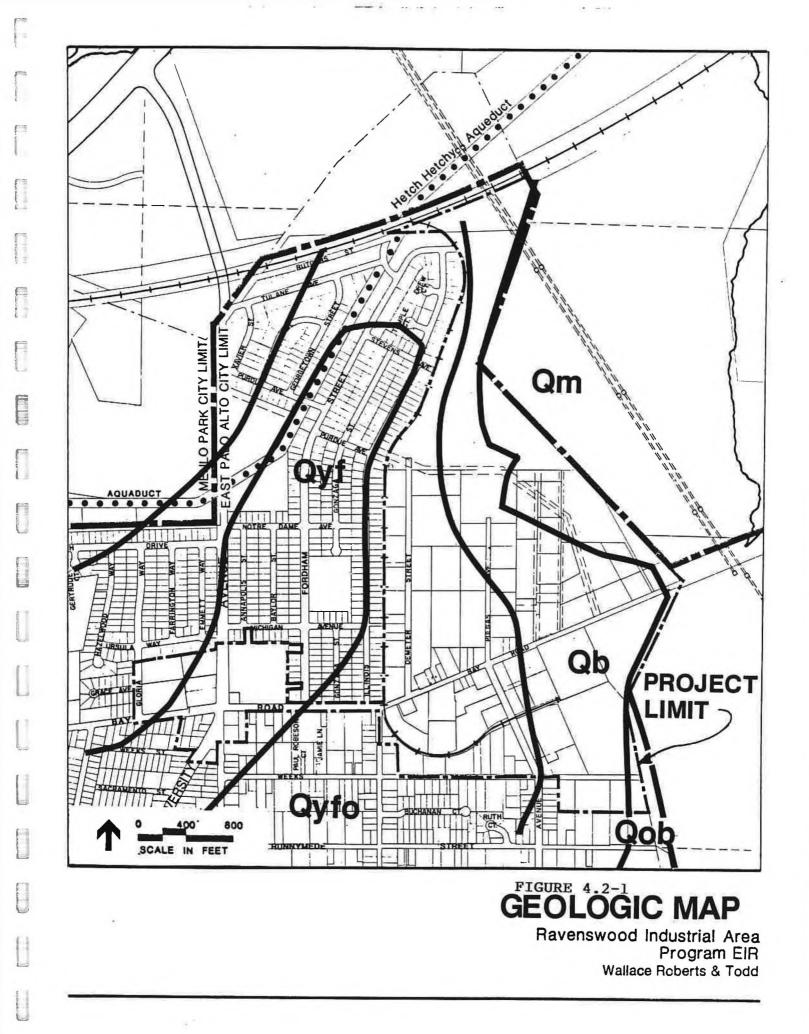
Qm is the bay mud consisting of unconsolidated, soft and highly compressible silty clay containing organic matter, with interspersed lenses and layers of sand, peat, gravel and shell fragments.

Qob is the coarse-grained older alluvial fan and stream terrace deposits consisting of poorly consolidated gravel, sand, and silt.

No specific subsurface investigation has been performed to date at the Ravenswood Industrial Section. The subsurface conditions described below are inferred from borings drilled by Tejima and Associates, Geotechnical Engineers and Geologists, adjacent to the Industrial Section.

<u>Ovf Area.</u> Borings which were drilled between East Bayshore Road and Garden Street, encountered stiff to very stiff, moderately expansive silty clay to a depth of 11 1/2 feet where the borings were terminated. Ground water was not encountered in the borings.

<u>Qvfo Area</u>. Borings which were drilled along the north side of Runnymede Street between Cooley Avenue and Clarke Avenue, encountered stiff and moderately expansive clay to depths ranging from 3 1/2 to 4 feet, underlain by



stiff to very stiff, sand to silty clay to a depth of 11 1/2 feet where the borings were terminated. Ground water exists at depths ranging from 8 1/2 to 11 1/2 feet under artesian pressure and generally stabilized at a depth of 4 feet below existing grade.

However, other borings which were drilled along the south side of Bell Street between Cooley Avenue and Clarke Avenue encountered very stiff, highly expansive silty clay to depths ranging from 1 1/2 to 2 1/2 feet, underlain by very stiff silty to sandy clay to depths of 7 to 8 1/2 feet, underlain by medium dense to dense clayey sandy gravel to a depth of 11 feet where the borings were terminated. Ground water was encountered at depths ranging from 8 to 9 feet under artesian pressure and rose to depths ranging from 7 to 7 1/2 feet.

<u>Ob Area</u>. Borings which were drilled along the south side of Garden Street on the west side of Pulgas Avenue, encountered medium stiff to stiff, slightly expansive silty clay to depths from 3 to 4 feet, underlain by soft to medium stiff silty clay to a depth of 8 feet, underlain by stiff and highly expansive silty clay to a depth of 11 feet where the borings were terminated. Ground water was encountered at depths ranging from 5 to 7 feet under artesian pressure and rose to a depth of 3 feet.

Borings which were drilled along Kavenaugh Drive between Hazelwood Way and University Avenue encountered very stiff and highly expansive silty clay to a depth of 3 inches, underlain by medium stiff to stiff silty clay or medium dense coarse sand to a depth of 10 feet where the borings were terminated. Ground water was encountered at depths of 5 1/2 to 6 feet.

Summary. Based on the geologic map and the available subsurface information described above, the majority of the project area is underlain by stiff and moderately to highly expansive surfacial clay to depths of 2 to 4 feet, underlain by soft to very stiff clay to depths of up to 10 feet. Ground water should be anticipated at depths of 4 to 6 feet below the existing grade. The bay mud in the eastern portion of the project area is expected to be less than 15 feet in thickness.

Seismic Activity

No known faults traverse the project area. The regionally active San Andreas fault passes approximately six miles southwest of the project area. The regionally active Hayward and Calaveras faults pass approximately 11 and 16 miles northeast of the project area. Major earthquakes along the adjacent segments of any of these faults could cause very strong ground shaking at the project area. However, the potential of strong groundshaking is common to all developments in the San Francisco Bay Area and it is not a unique condition at the project area.

POTENTIAL IMPACTS

Excavations for footings and trenching of underground utility systems for proposed development of the Industrial Section could be adversely affected by the presence of groundwater which is expected at depths of four to six feet below existing grade.

Liquefaction could occur in bay muds and fills placed upon bay muds during seismic shaking. Proper analysis and design techniques are required to address liquefaction potential.

MITIGATION MEASURES

The following measures are recommended to mitigate adverse impacts to proposed development resulting from geotechnical factors in the project area:

- 1. Site-specific soil engineering studies should be conducted in the Industrial Section prior to structural design and should include recommendations regarding foundations and subterranean drainage.
- 2. During construction of underground utilities and foundations, special work to address ground water and excavation stability would be required.

4.3 **BIOLOGICAL RESOURCES**

EXISTING SETTING

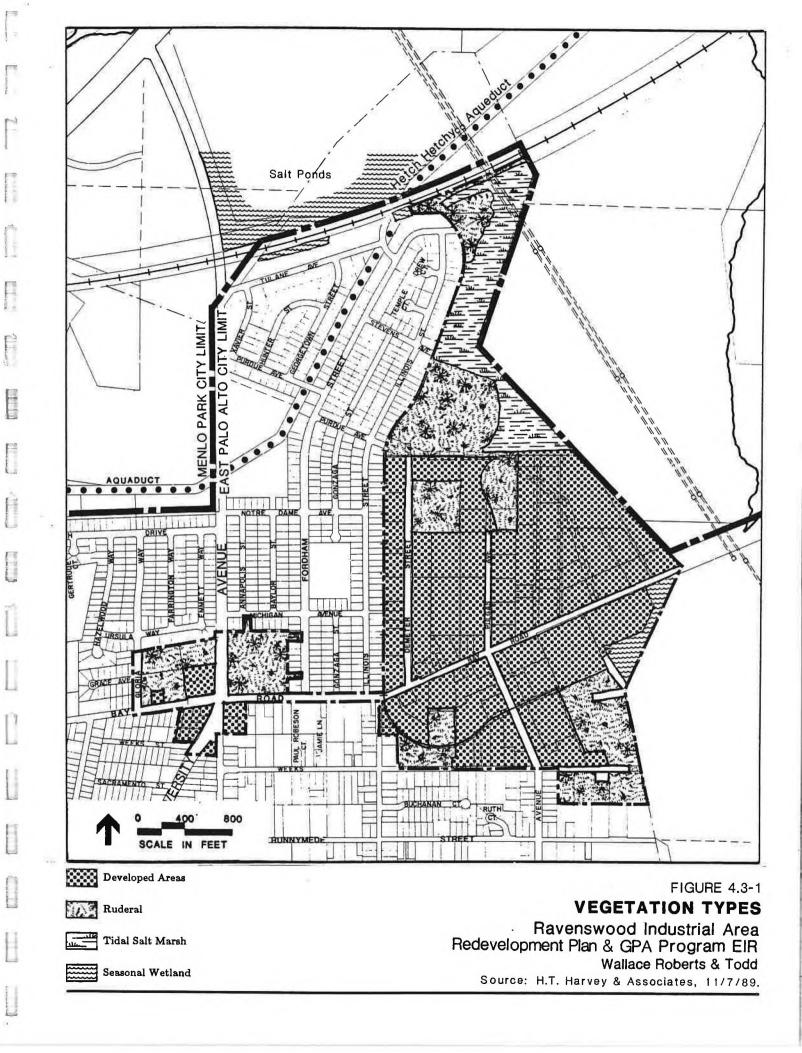
The following section is based on a report prepared by H.T. Harvey & Associates, Ecological Consultants, December 15, 1989 for the City of East Palo Alto. The section discusses vegetation and wildlife in the Ravenswood Industrial Section and includes information derived from a field survey of the area in October 1989. Refer to Figure 4.3-1 for the distribution of vegetation types in the project area.

Urban Industrial Areas

Approximately 110 acres of the Ravenswood Industrial Section is occupied by buildings, residential lots, large parking areas (paved and unpaved), and paved roadways. These areas support little native vegetation and therefore, provide only marginal habitat for native wildlife species. The vegetation observed in these areas consist of horticultural plantings, including, but not limited to, blue gum eucalyptus (Eucalyptus globulus), Monterey pine (Pinus radiata), black walnut (Juglans nigra), and almond (Prunus amygdalus). These industrial areas provide habitat for a limited number of passerine birds, such as House Finch (Carpodacus mexicanus) and House Sparrow (Passer domesticus). A few species of mammals such as Norway rat (Rattus norve gicus), house mouse (Mus musculus) pocket gopher (Thomomys bottae), and feral cat (Felis domesticus) exist in these heavily modified areas.

Ruderal Areas

Ruderal plant species are those typically occurring on highly disturbed upland sites. These species are generally weedy non-native annuals and biennials. Areas supporting a predominance of such species comprise approximately 52 acres of the Ravenswood Industrial Section and include vacant lots, recently disced fields, graded lots, levees, and fill surfaces. Periodic human disturbance to such areas, especially grading and discing, has precluded the establishment of perennial native species. Vascular plant species typical of such associations which were observed on the site include beet (Beta vulgaris), curly dock (Rumex crispus), ripgut brome grass (Bromus diandrus), panicled willow herb (Epilobium panicula tum), yellow star thistle (Centaurea solstitialis), Canada horseweed (Conyza canadensis), barnyard barley (Hordeum leporinum), Mediterranean barley (Hordeum geniculatum), garden orache (Atriplex hortensis), and covote brush (Baccharis pilularis var. consanguinea). Areas transitional between disturbed upland sites and tidal marsh frequently support a mix of upland and wetland plant species as defined by the U.S. Fish and Wildlife Service (U.S. Fish and Wildlife Service 1988). While upland species such as ripgut brome grass, beet, and barnyard barley all occur in such transitional areas, wetland indicator species as alkali heath (Frankenia grandifolia), saltgrass (Distichlis spicata ssp. stolonifera), and saltmarsh sand spurry (Spergularia marina) also occur in these transitional areas.



Upland ruderal habitats of the Ravenswood Industrial Section typically support diverse wildlife species despite periodic disturbance by man. Ruderal areas sustain populations of reptiles, birds and mammals, providing them with habitat suitable for breeding, foraging, and cover. Ruderal areas adjacent to tidal marsh are particularly important for water-oriented wildlife species. These ruderal areas often serve as refugia for shorebirds, waterfowl, herons, and egrets during periods of high tides and winter storm events.

Ruderal areas of the site are likely to provide habitat for several species of reptiles such as western fence lizard (Sceloporus occidentalis) and northern alligator lizard (Gerrhontus coeruleus). A dead Pacific gopher snake (Pituophis catenifer) was observed on a levee between the Palo Alto Baylands and the seasonal wetland.

Ruderal areas provide habitat for a wide variety of birds. Raptors, such as the Red-tailed Hawk (Buteo jamaicensis) and Northern Harrier (Circus cyaneus) are likely to hunt for small mammals and birds and roost in or adjacent to ruderal habitats. An active Burrowing Owl (Athene cunicularia) burrow was observed on the levee adjacent to the seasonal wetlands in the southern portion of the redevelopment area. California ground squirrel (Spermophilus beecheyi) burrows suitable for Burrowing Owl use were also observed in fill material near the tidal marsh in the northern portion of the redevelopment area.

Passerine birds observed or expected to occur in this habitat include, but are not limited to, Black Phoebe (Sayornis nigricans) and Audubon's Warbler (Dendroica coronata auduboni), which feed on insects; House Sparrow, White-crowned Sparrow (Zonotrichia leucophrys), Golden-crowned Sparrow (Zonotrichia atricapilla), House Finch, and Lesser Goldfinch (Carduelis tristis), which feed on seeds; and Brown Towhee (Pipilio fuscus) and Western Meadowlark, which feed on annual grass sprouts and insects.

Several species of small mammals are likely to occur in ruderal habitats of the redevelopment area. Small burrows blocked by mounds of loose soil indicated the presence of pocket gophers. California ground squirrel burrows were observed in several locations. House mouse (Mus musculus), California vole (Microtus californicus), Western Harvest~Mouse (Reithrodontomys megalotis), and Norway rat are all likely residents of this habitat. Predatory mammals are most likely to include feral cats and, possibly, red fox (Vulpes vulpes), the latter species having extended its range into South San Francisco Bay marshes in recent years.

As mentioned previously, upland ruderal areas are likely to serve as refugia for wildlife normally resident of adjacent tidal marsh during winter high water. In addition, the salt marsh harvest mouse is known to move into upland grassland habitats when pickleweed-dominated marsh plains are inundated.

Wetlands

Two types of wetlands were identified within the project area. These include seasonal wetlands and tidal salt marsh. Wetlands are vegetated habitats which experience inundation or soil saturation for portions of every year. Soils develop anaerobic conditions (i.e. those which lack oxygen) when saturated continuously for several days. Therefore, wetlands are generally characterized by plants adapted to life in soils deficient in oxygen due to inundation. Such soils are defined as hydric and can be characterized by dark to gray color, orange to reddish brown mottles, concretions, and the odor of hydrogen sulfide.

Historically, wetlands have been thought of as waste places to be drained or filled so that they could be put to more productive uses. Conversion of wetlands to uplands by draining or filling has resulted in substantial losses of these habitats during the last century. For example, it has been estimated that 6,500 acres of tidal marsh presently occur in San Francisco Bay south of the Bay Bridge (Dedrick 1989), or 14 percent of the 48,000 acres estimated to have originally occurred in the same area.

Regulatory Constraints on Development of Wetlands and Special Status Wildlife Habitats. Wetlands are now recognized as having significant values worth preserving. There is evidence that they can enhance water quality. Large wetlands can store considerable water, thereby, dampening flood flows during major storm events. They serve as important habitats for fish and wildlife. There is evidence that they can enhance water quality. They provide recreational opportunities for fishermen, hunters, hikers, and nature lovers. This new recognition of the importance of wetlands has resulted in the regulation of a variety of activities in them by several state and federal agencies. These agencies can include the U.S. Army Corps of Engineers (Corps), Environmental Protection Agency, U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Soil Conservation Service, California Department of Fish and Game, and California Regional Water Quality Control Board and the San Francisco Bay Conservation and Development Commission.

<u>U.S. Army Corps of Engineers.</u> The U.S. Army Corps of Engineers regulates activities in Waters of the United States and wetlands adjacent to those Waters. The Corps has derived its authority to regulate the kind of wetlands observed in the Ravenswood Industrial Section from two laws (U.S. Army Corps of Engineers (1985).

- o Section 10 of the Rivers and Harbors Act of 1899. This law requires a permit for any activity that will result in the obstruction or alteration of navigable waters of the United States.
- o Section 404 of the Clean Water Act of 1972. This law requires a permit for the discharge of dredged or fill material into waters of the United States or adjacent wetlands.

"Waters of the United States" include all navigable rivers, streams, and creeks, and their tributaries at ordinary high water (Department of Defense 1986). Wetlands are those areas the soils of which are saturated or inundated at a frequency and duration sufficient to select for rooted plant species (hydrophytes) adapted for life in saturated soil conditions (Federal Interagency Committee for Wetland Delineation 1989). In general wetlands may be regulated by the Corps if the following conditions have been met:

- o the soils of the site are saturated or inundated continuously for at least 7 days;
- o the soils have developed hydric characteristics;
- o the dominant plant species are hydrophytes;
- o the wetlands are adjacent to Waters of the United States (the test for such adjacency is not perfectly clear, but theoretically, wetlands should be connected hydrologically to Waters of the United States);
- o if the wetlands are isolated from Waters of the United States, then they function in interstate commerce (at present, the use of isolated wetlands by migratory birds satisfies this requirement);
- o the wetlands exist under normal circumstances, that is, the activities of man are not artificially perpetuating their occurrence.

Projects which may involve the filling of Corps-regulated wetlands should not proceed until the Corps has performed a jurisdictional delineation.

Projects that result in fills on 10 acres or more of jurisdictional wetlands usually require a standard individual permit subject to public interest review. /1/ Generally, a mitigation plan requires that wetland habitats lost to fill material be replaced in the immediate vicinity on an acre-for-acre and value-for-value basis. Projects resulting in fill on jurisdictional wetlands more than 1 acre but less than 10 acres in size require pre-project notification of the Corps, but may be subject to a Nationwide Permit. Should such be the case, the public review permit process would not be required.

In making the decision to issue or not to issue a permit, the Corps balances the likely benefits of the project against presumed detriments in terms of conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, food and fiber production, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, needs and welfare of the people, and considerations of private ownership (U.S. Army Corps of Engineers 1985).

U.S. Environmental Protection Agency. The Environmental Protection Agency (E.P.A.) shares authority with the U.S. Army Corps of Engineers in the regulation of fill in "waters of the United States". Although the E.P.A. can make jurisdictional determination and enforce provision of Section 404 of the Clean Water Act, it primarily serves as a commenting agency. The Corps carefully considers the comments made by the E.P.A. in response to the N.O.P. when deliberating on the issuance of a permit. The Corps may issue a permit over the objections of the E.P.A., in which case the E.P.A. can "elevate" the decision to a higher level in the Corps bureaucracy. Ultimately, the E.P.A. can veto the Corps' permit decision. <u>U.S. Fish and Wildlife Service.</u> The U.S. Fish and Wildlife Service (USFWS) usually provides input during environmental documentation and permitting of any development in San Francisco Bay Wetlands. The extent of this agency's role is determined by guidelines established in the Fish and Wildlife Coordination Act (1934 as amended) and the Endangered Species Act (1973 as amended).

Under the Wildlife Coordination Act, when a permit to fill regulated wetlands is processed by the U.S. Army Corps of Engineers, the USFWS is consulted to establish the wildlife values of the wetlands under consideration. The Fish and Wildlife Coordination Act "authorizes surveys to prevent losses of, and to enhance, fish and wildlife at water-use projects constructed or licensed by the federal government". Since the Army Corps of Engineers is responsible for licensing fill of "waters of the United States" the Wildlife Coordination Act is often invoked when the Corps processes wetland fill permits.

The Endangered Species Act charges each federal agency with the responsibility to ensure that its actions do not jeopardize the existence of species listed as Endangered or Threatened. The USFWS is the agency designated to oversee the implementation and enforcement of this act.

National Marine Fisheries. The National Marine Fisheries Service functions as a commenting agency in response to a Notice of Preparation issued by the Corps. This agency is likely to make recommendations to the Corps regarding projects which will adversely affect fish. The NMFS will have concerns about any proposed project which may diminish water quality in tidal sloughs of San Francisco Bay.

<u>California Department of Fish and Game.</u> The California Department of Fish and Game (CDFG) is the agency charged with protection and enhancement of fish and wildlife resources in the State of California. The extent of CDFG's role in permitting and environmental documentation of a project is determined through application of the California Environmental Quality Act (CEQA) and the Native Species Conservation and Enhancement Act. CDFG personnel function as "partners" with USFWS in determining impacts or mitigation requirements under parallel resource protection legislation.

<u>California Regional Water Quality Control Board.</u> The Regional Water Quality Control Boards (RWQCB) are responsible for issuing water quality certifications for projects which are in compliance with state water quality standards. The Corps will not issue a permit to fill "waters of the United States or adjacent wetlands unless the RWQCB has issued a water quality certification. The RWQCB is also a responding agency under CEQA and can make comments and recommendations to the lead agency regarding the certification of an EIR.

Bay Conservation and Development Commission. The Bay Conservation and Development Commission (BCDC) regulates various activities along the shoreline of San Francisco Bay under provision of the McAteer-Petris Act of 1965. The jurisdiction of the BCDC extends from 100 feet inland of the highest tide around the bay. This agency can regulate development activities within its area of jurisdiction by granting or denying of permits. Activities subject to its regulation include placing fill in wetlands, excavation, and modifications to land, structures, and land use.

Seasonal Wetlands. A small area (approximately 3 acres) of seasonal wetlands was observed within the redevelopment area to the east and south of the PG&E substation (refer to Figure 4.3-1). This area is separated from the tidal marsh of the Palo Alto Baylands by a levee, and is apparently not subject to tidal flooding. Seasonal wetlands usually have extended periods of soil saturation or inundation during the winter rainy season from rainfall and run-off, but are typically dry during the summer and fall. Plants observed in the seasonal wetlands of the redevelopment area include native perennials such as alkali heath, saltgrass, marsh grindelia (Grindelia humilis), and cattail (Typha sp.). Non-native annuals observed include curly dock, Russian thistle (Salsola kali) and its close ally Salsola soda. With the exception of Russian thistle and Salsola soda, each of the above species has been designated a wetland indicator species by the U.S. Fish and Wildlife Service (1988).

A second area of seasonal wetlands was observed, north and south of the Southern Pacific Railroad tracks outside of the Ravenswood Industrial Section at its northern boundary. Seasonal wetlands in this area either support pickle weed or were found barren of vegetation.

Wildlife use of these seasonal wetlands was not observed during reconnaissance level surveys in October. Observations made during surveys conducted in 1988 indicate that the seasonal wetlands are valuable winter foraging and roosting habitat for a variety of water birds (WESCO 1988). Great Egret (Casmerodius albus), Mallard (Anas platyrhyncos), Cinnamon Teal (Anas cyanoptera), willet (Catoptrophorus semipalmatus), and Killdeer (Charadrius vociferus) have all been observed in the seasonal wetland. Other species which typically use portions of the seasonal wetlands during the winter include Gadwall (Anas strepera), Northern Pintail (Anas acuta), Least Sandpiper (Calidris minutilla), Western Sandpiper (Calidris mauri), Long-billed Dowitcher (Limnodromus scolopaceus), and Greater Yellowlegs (Tringa melanoleuca).

The saltgrass of the seasonal wetland may provide marginal habitat for the salt marsh harvest mouse (Reithrodontomys raviventris). This species has been live-trapped in habitats with a dense cover of saltgrass (H.T. Harvey and Associates files). Thus, individuals may occasionally move from the Palo Alto Baylands on the other side of the levee into the seasonal wetland habitat. However, the likelihood of a resident salt marsh harvest mouse population remains low in this wetland type since this species requires substantial growths of its primary food plant pickleweed (Salicornia spp.) to be present in any area in order to support a year-round population. Appropriate habitat for the saltmarsh harvest mouse was observed in the seasonal wetlands north of the Southern Pacific Railroad tracks.

Tidal Salt Marsh. Tidal salt marsh occupies approximately 23 acres of the northern portion of the redevelopment area. The conduit for tidal action is a slough channel forming the eastern boundary of the redevelopment area which is open to San Francisco Bay immediately north of Cooley Landing.

Marsh vegetation generally occupies a range of elevations from a -2.0 feet to nearly 7.0 feet in relation to mean sea level (BCDC 1982). The highest tides correspond to the highest elevation occupied by marsh vegetation. The dominant vegetation of the slough channels is cordgrass (Spartina foliosa). The dominant vegetation of the marsh plain between approximately 2.0 feet and 4.5 feet elevation above mean sea level is pickleweed (Salicornia virginica), although marsh grindelia, alkali heath, fat hen (Atriplex patula var. hastata), Salsola soda, and California sea-lavender (Limonium californicum) were commonly observed. Although not observed, the tidal salt marsh may also provide habitat for Pt. Reyes bird's beak (Cordylanthus maritimus ssp. palus-tris). The aforementioned species provide nearly 100 percent absolute cover on the marsh plain. This vegetation varies in height from a few inches to a few feet.

The dominant plant species of the highest elevations of the tidal marsh includes saltgrass, alkali heath, garden orache (Atriplex hortensis), Australian saltbush (Atriplex semibaccata), common tarweed (Hemizonia pungens), and spreading alkali weed (Cressa truxillensis var. vallicola). All of the above species have been designated as wetland indicator species by the U.S. Fish and Wildlife Service (1988).

A diversity of fish and wildlife species are known to occur in the tidal marshes of the South San Francisco Bay. The dense vegetation in the tidal sloughs and on the marsh plain in close proximity to upland areas contributes significantly to the suitability of the tidal salt marsh habitat of the Ravenswood Industrial Section for wildlife species. This dense marsh vegetation provides cover for small birds and mammals as well as foraging and resting habitat for wading birds, raptors, and potentially, predatory mammals. Adjacent uplands provide refuge for small mammals and birds during periods of extreme high water associated with winter storms. The proximity of this tidal salt marsh to the pristine tidal marsh of the Palo Alto Baylands and the former salt pond of the Midpeninsula Open Space District may enhance its use by a wide variety wildlife species.

The slough which provides regular tidal flooding of the salt marsh may provide habitat for several euryhaline (broadly salt tolerant) fish species. Such species commonly observed in South San Francisco Bay sloughs include staghorn sculpin (Leptocottus armatus), shiner surfperch (Cymatogaster aggregata), yellowfin goby (Acanthogobius flavimanus), top smelt (Atherinops affinis), and northern anchovy (Engraulis mordax).

Avifauna groups observed or expected to occur within the tidal salt marsh include waterbirds, raptors, and passerines. Great Egret, Snowy Egret (Egretta thula), and Great Blue Heron (Ardea herodias) are common wading birds which forage in sloughs and tidal flats for invertebrates, fish, and mice. A Greater Yellowlegs (Tringa melanoleuca) was observed foraging in a small pond at the northern end of the marsh. This tidal marsh may also serve as wintering habitat for California Clapper Rail (Rallus longirostris obsoletus) and California Black Rail (Laterallus jamaicensis coturniculus), the presence of the former species having been documented in the Palo Alto Baylands less than one-half mile away. Raptors likely to forage on mice in the marsh include Northern Harrier (Circus cyaneus), Red-tailed Hawk (Buteo jamaicensis), and Short-eared Owl (Asio flammeus). Burrowing owls may also move into the marsh from their burrows in adjacent levees to feed on beetles and Jerusalem crickets. Passerine birds observed in the marsh or in the transitional areas along its margins include the Marsh Wren (Cistothorus palustris), Song Sparrow (Melospi za melodia), Black Phoebe (Sayornis nigricans), Lesser Goldfinch (Spinus psaltria), and Common Yellowthroat (Geothlypis trichas). This marsh also provides suitable habitat for the Salt Marsh Yellowthroat (Geothlypis tricas sinuosa), although this species was not observed.

Several species of mammals are likely to occur in this tidal salt marsh. Native species may include the salt marsh wandering shrew (Sorex vagrans halicoetes), the salt marsh harvest mouse and the California vole (Microtus californicus). Each of these species has been observed in nearby marshes. Other species which may be resident in the marsh include house mouse, Norway rat (Rattus norvegicus), red fox (Vulpes vulpes), and feral cat (Felis domesticus).

POTENTIAL IMPACTS

Urban, Industrial Areas

Implementation of the proposed project is not likely to result in significant impacts to the biological resources of existing developed portions of the Ravenswood Industrial Section. In general, the loss of non-native horticultural plantings does not constitute a significant loss of botanical resources. Although the non-native trees and shrubs of the developed portions of the area do provide habitat for some animal species, relatively few are native to California, and none are known to be protected by federal or state law. It is expected that project landscaping will provide habitat comparable to that presently found throughout most of the developed portions of the Ravenswood Industrial Section.

Ruderal Areas

The proposed project would result in the conversion of 52 acres of ruderal habitat to industrial development, parkland, and tidal marsh. The plant species comprising ruderal areas are mostly non-native species. Loss of this habitat would not constitute a significant adverse impact to botanical resources.

Wildlife species which use ruderal areas are generalists and thus are able to utilize other habitats when ruderal areas are unavailable. Birds such as White-crowned and Golden-crowned Sparrows are also found in residential areas, freshwater marshes, chaparral, and oak woodlands. Most mammal species found in ruderal habitats, although not as mobile as birds, would likely find other areas of suitable habitat near the project site. For the salt marsh harvest mouse, ruderal areas within or immediately adjacent to seasonal or tidal wetlands provide important refuges during major storm or high tide events. Depending upon the extent of the harvest mouse population on the site and the extent of tidal inundation, the loss of ruderal refugial habitats adjacent to harvest mouse habitat due to the construction of the road through the northern portion of the Industrial Section may constitute a loss of endangered species habitat as defined by the Endangered Species Act.

Wetlands

The filling of an estimated 5.2 acres of wetland (seasonal and tidal) for the construction of the proposed 4-lane north access road could be considered an unavoidable significant adverse impact by most of the regulatory agencies with wetland jurisdiction.

In addition, the tidal marshes within and adjacent to the project site may contain populations of the Federal and State of California endangered California Clapper Rail and salt marsh harvest mouse, and the State of California threatened Black Rail. Any loss of habitat for these three species would constitute a significant adverse environmental impact and may, in the case of the California Clapper Rail and saltmarsh harvest mouse, constitute a "take" of endangered species habitat.

Seasonal Wetlands. While no project-related loss of seasonal wetland would occur within the Industrial Section, the construction of the proposed four-lane access road north of the Industrial Section along the Southern Pacific Railroad Tracks would result in the fill of approximately 3.5 acres of seasonal wetland. This seasonal wetland is potential habitat for the salt marsh harvest mouse. The overall impact to biological resources would be reduced by the proposed replacement of this loss with 5.2 acres of tidal wetland (a gain of 1.5 acres for every acre lost) adjacent to existing tidal wetland within the Industrial Section (see Figure 3-3).

Tidal Salt Marsh. The construction of a 4-lane loop road with an 80 foot right-of-way would result in the fill of an estimated 1.7 acres of tidal salt marsh along the edge of the marsh at the north end of the Ravenswood Industrial Section adjacent to the abandoned railroad spur. The impact of this loss would be reduced by the replacement of 2.6 acres of tidal wetland in adjacent ruderal areas. The bed of the new loop road would function as a levee to contain the newly-created tidal area and additional levees would be built as necessary.

The following table shows the wetland losses and gains as a result of the proposed project. All replacement is on-site and tidal wetland replaces seasonal wetland.

Table 4.3.1 Project Wetland Losses and Gains

Wetland Type	Loss	Gain
Seasonal Wetland	3.5 acres	0.0 acres
Tidal Wetland	1.7 acres	7.8 acres
TOTALS:	5.2 acres	7.8 acres

Replacement Ratio: 1.5 acres replaced for 1.0 acre lost

Special Status Species. Construction of the 4-lane loop road along the edge of tidal salt marsh could result in adverse impacts to species of special status potentially occurring in the marsh. These species may include the following:

<u>Point Reves bird's beak</u> (Cordylanthus maritimus ssp. palustrus). Pt. Reves bird's beak is Federal Candidate Species List 2 which means that threat and/or distribution data are insufficient at the present time to support listing.

<u>California Clapper Rail</u> (Rallus longirostris obsoletus). The California Clapper Rail is a federally endangered and State of California endangered species which may inhabit the tidal marshes of the Ravenswood Industrial Section. Development of tidal marsh areas and adjacent upland refugia would adversely impact this species.

<u>California Black Rail</u> (Rallus jamaicensis coturniculus). This small rail inhabits tidal marshes in South San Francisco Bay only in areas where upland refugia are available adjacent to marshes. The Black Rail is a California State Threatened Species. Because of its small size and vulnerability to predation this species is dependent upon the availability of upland refugia.

<u>Peregrine Falcon</u> (Falco peregrinus). Peregrine Falcon populations in the South San Francisco Bay are primarily winter residents. This species is listed as endangered by both federal and State resource agencies. Peregrine Falcons have been observed regularly in the Palo Alto Baylands where they hunt wintering shorebirds and waterfowl. Impacts to this species from the development would probably be minor due to the availability of suitable nearby foraging areas.

<u>Salt marsh harvest mouse</u> (Reithrodontomys raviventris). This federally and State listed endangered species is dependent upon tidal and diked salt marshes with dense stands of pickleweed (Salicornia sp.). Loss of either seasonal wetland or tidal marsh with dense pickleweed or the loss of upland refugia would adversely effect this species.

<u>Burrowing Owl</u> (Athene cunicularia). The burrowing owl is a California State listed "species of special concern." Although there are currently no specific legal requirements for protection of species listed in this category, the California Department of Fish and Game considers that the breeding populations of these species have declined severely or are otherwise so low that extirpation is a real possibility. In addition, breeding sites of Burrowing Owls are protected under the Migratory Bird Treaty Act which prohibits the destruction of nest burrows or the harassment or taking of individuals protected by this act. The Burrowing Owl is considered a migratory species as defined in the Code of Federal Regulations.

Related Impacts

Long-term impacts to wildlife resources in the adjacent tidal marsh and seasonal wetlands are not expected to be significant. Most wildlife species associated with the adjacent habitats would find little suitable food or cover in the areas to be developed. It is possible that scavenging species such as raccoons, skunks and possibly red foxes might occasionally utilize the developed areas for hunting rodents and scavenging in trash containers and a few individuals may be hurt or killed by automobiles as they cross from the marsh and wetlands areas into the developed areas. This, however, would not be considered a significant, long-term environmental impact unless numbers of individuals or the frequency of collisions were substantially higher than other roads in similar areas (e.g. Harbor Road in Palo Alto which leads to the Lucy Evans Interpretive Center). No information, however, is currently available on wildlife/automobile collisions along Harbor Road.

Road noise, depending upon the volume of traffic anticipated, would probably not constitute a significant long-term environmental impact to the biological resources of the adjoining marshes. Although Clapper Rails use calls of various types to communicate within a marsh system, the calls are generally of sufficient volume and frequency difference to allow for the continuation of normal call-induced behavior.

Effects of Lighting

Any nighttime lighting which illuminates the marsh, such as intense, non-directed street lighting or industrial yard lighting, could have an impact upon populations of smaller animals (such as the salt marsh harvest mouse, salt marsh wandering shrew, and the California Black Rail) by making it easier for predators (such as red fox, Common Barn-Owl, Short-eared Owl, feral cat, oppossum and skunks) to see these species.

Permit Requirements

The filling and grading of seasonal and tidal wetlands to facilitate the construction of the loop road is subject to the permit authority of the U.S. Army Corps of Engineers and to the comments of other federal and state agencies in their capacity as responding agencies under the California Environmental Quality Act (CEQA). Most responding agencies require that there be no net loss of wetland habitat. Therefore, to meet the approval of most responding agencies, projects should not be built in wetlands, or, if wetland losses are unavoidable, require that such losses be mitigated by the conversion of uplands to wetlands on, at the very least, an acre-for-acre and value-for-value basis.

MITIGATION MEASURES

No significant impacts to botanical resources are expected from the project-related conversion of ruderal habitats to commercial development, roads, or wetlands. Therefore, mitigation of project impacts to botanical resources known to occur in ruderal areas has not been proposed. However, the following measures are recommended to mitigate potential adverse impacts to wetland and wildlife resources.

1. <u>Upland Refugia Losses</u>. The loss of upland refugia for the salt marsh harvest mouse and other wildlife potentially occurring in the tidal marsh from conversion of ruderal uplands to wetlands can be mitigated by converting the shoulder of the 4-lane loop road to appropriate refugial habitat. Such habitat should not be subject to tidal flooding and should provide escape cover such as annual grasses, alkali heath, and coyote brush (Baccharis pilularis ssp. consanguinea).

- 2. <u>Wetland Losses</u>. Due to the severity of impact to wetland resources in and near the project area, the proposed access road through the northern portion of the Industrial Section to University Avenue should:
 - o be resited from north of the Southern Pacific tracks to south of the tracks, and
 - be reduced in width from 4-lanes (ROW 80 feet) to 2-lanes (ROW 40 feet) along the abandoned railroad spur on the western boundary with widening to 4-lanes (ROW 62 feet) 400 feet back from the new intersection at University Avenue.

Resiting the road from north to south of the tracks would preserve 3.5 acres of prime pickleweed habitat for the endangered salt marsh harvest mouse but would still require the filling of a narrow isolated strip of .8 acres of seasonal wetland. Reducing the width of the loop road through the tidal wetland portion of the project area would reduce to .9 acres the area of fill needed for road construction along the edge of the wetlands. The mitigated north access road would approximate that shown in Alternative Two (refer to Figure 5-2 in Chapter 5 Alternatives).

Three areas adjacent to the tidal salt marsh are available for onsite replacement mitigation. One area at the north end of the site has an elevation 2 to 4 feet above the marsh plain and occupies approximately 2.1 acres. A second area, composed of fill with a surface elevation 3 to 10 feet above the marsh plain, occupies approximately 4.3 acres. A third area, next to Romic Chemical also several feet above the flood plain occupies approximately 2 acres. Mitigated wetland losses and gains are shown in the following table. Refer to the end of Chapter 4.5 Traffic and Circulation for a discussion of how the implementation of this mitigation would affect project access and circulation.

Table 4.3.2 Mitigated Wetland Losses and Gains

Wetland Type	Loss	Gain
Seasonal Wetland	0.8 acres	0.0 acres
Tidal Wetland	0.9 acres	7.8 acres
TOTALS:	1.7 acres	7.8 acres

It is recommended that the surface elevation of all wetland replacement areas be reduced to the same elevation as the surrounding marsh plain and revegetated with plant species native to adjacent tidal marsh if the substrate is appropriate (such species would typically include pickleweed, California sea-lavender, fat hen, saltgrass, and alkali heath,) or allow revegetation to occur naturally with the establishment of tidal actions.

Although wetland losses would be mitigated by onsite replacement, the fill of approximately 1.7 acres of wetland for the construction of the north access road would be considered an unavoidable significant adverse impact.

3. Potential Loss of Habitat for Special Status Species.

o The proposed replacement of wetlands, as mitigated above, would reduce the level of impact due to losses of potential habitat for California Clapper Rail, California Black Rail, and the Salt marsh harvest mouse.

o A survey for the Federal Candidate Species List 2 <u>Point Reves bird's</u> <u>beak</u> should be conducted in the tidal wetland area proposed for road construction. The time of year for the survey should occur when the plants are most readily identifiable. If found, a plan for their relocation should be implemented under the supervision of the US Fish and Wildlife Service.

o A reconnaissance survey of potential <u>Burrowing Owl habitat</u> proposed for development should be conducted to determine if a burrow is being actively used by breeding or roosting owls. If it is found that owls are in residence in one or a series of burrows the habitat on-site should be retained or, if retaining the habitat is infeasible, the owls should be captured and relocated to suitable habitat at sites protected from future development. The U.S. Fish and Wildlife Service, under provisions in the Migratory Bird Treaty Act, requires that permits be acquired for any capture or relocation of Burrowing Owls.

- 4. <u>Effects of Lighting</u>. The effects of any necessary lighting can be minimized by ensuring that all light is focused down with minimum dispersal and that any non-focused light be directed away from the marsh or seasonal wetland areas.
- 5. <u>Permit-Related Conditions</u>. All conditions imposed in conjunction with permits issued by regulatory agencies should be met.

4.3 Biological Resources

Footnotes:

/1/ An application for such a permit should include maps and relevant project information, a 404(b)(1) alternatives analysis, and a mitigation plan. The alternatives analysis requires that the project applicant demonstrate that the project is water dependent (boat launching facilities, for example, would only be built adjacent to water bodies), or, if not, why practicable alternatives in upland habitats are not feasible. The point of such an alternatives analysis is to ensure that wetlands are not converted to uplands to accommodate a project that could just as easily have been built on uplands in the first place. Within 15 days of the Corps receiving a completed application for a standard individual permit (and related materials) from the project applicant, the Corps will issue a public notice to interested individuals, special interest groups, local agencies, state agencies, and other federal agencies. All comments on the proposed project in response to the public notice will be considered by the Corps.

References:

California Department of Fish and Game. 1989. List of state and federal endangered and threatened animals of California. 5 pp.

Harvey, H.T., and Philip Williams, and Jeffrey Haltiner. 1982. Guidelines for Enhancement and Restoration of Diked Historic Baylands. San Francisco Bay Conservation and Development Commission.

Reed, Porter B. 1988. National List of Plant Species that Occur in Wetlands: 1988 - California. U.S. Fish and Wildlife Service.

WESCO. 1989. East Palo Alto biological resources evaluation. 7 pp.

4.4 HAZARDOUS SUBSTANCES

The following section is based on a report prepared by ERC Environmental and Energy Services Co. (ERCE) (November 1989) for the City of East Palo Alto.

EXISTING SETTING

Site Characterization Process

Before identifying the existing conditions of the project as they relate to environmental contamination, it is essential that readers understand the process by which properties are characterized and the level and certainty of the existing data.

The definition and ultimate cleanup of environmental contamination on real property due to land use activities follows an orderly process. Each step in this process is of critical importance to succeeding steps. The most stringent and exacting system for characterizing and remediating contaminated sites is that prescribed by the federal government in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The NCP contains the implementing regulations for the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), also known as Superfund. Government-mandated contamination delineation and remediation projects must follow the strict guidelines of the NCP. Contamination discovery and delineation projects in the private sector do not have to follow the system strictly; however, the information collection steps are very important for regulatory agency acceptance of the findings, and therefore must be carried out carefully.

Briefly, the NCP steps toward remediation are the following:

- Site Discovery and Notification
- Preliminary Assessment Study
- Site Inspection Study
- Expanded Site Inspection Study
- Remedial Investigation and Feasibility Study
- Engineering Design of Chosen Remedial Alternatives
- Implementation of Remedial Alternatives
- Post Remediation Monitoring

Each of the steps described above are sequential and each is needed to plan and to implement the following step. Generally, a shortcut to a subsequent step cannot be made without adverse consequences including perhaps the need to repeat expensive investigations. Therefore, it is desirable to build on the successive information development activities as described.

In the private sector, as in government-managed programs, information collection and development steps are designed to provide essential data that will lead one to the point of being able to perform cleanup. The typical approach in the commercial sector has many names, but the work is carried out in phases. Phase I studies endeavor to collect historical land use information, review available historical aerial photographs and topographical maps, conduct a physical inspection of the property and surrounding parcels, collect and analyze samples of building materials to determine if they contain asbestos, and conduct other paper studies that will enable investigators to decide if there is a reason to suspect that contamination may be present (Preliminary Assessment). Note that this first step only provides evidence of possible contamination; it does not verify or define the type or level of contamination or its extent.

Once this phase has been completed and the conclusions indicate that there may be contamination, Phase II studies are conducted to confirm the presence and the nature of contamination (Site Inspection). If contamination is severe as shown by Phase II studies, subsequent activities, engineering studies are conducted to evaluate the viable means of dealing with the measured contamination and preventing it from having a significant adverse impact on the environment and to public health. Remedial measures are typically monitored to ensure that the remedial action has been conducted as designed.

Summary of Phase I Assessment

The ERCE report represents the results of a Phase I hazardous materials site assessment of the Ravenswood Industrial Park and is available for public review at the City of East Palo Alto Redevelopment Agency. The intent of Phase I site assessment was to identify existing or past activities that may have resulted in site contamination from hazardous materials and/or wastes.

The site assessment consisted of three major tasks: 1) a physical inspection of the site; 2) an historical land use survey of the site and surrounding parcels including a review of aerial photographs; and 3) a review of local, state, and federal regulatory agency files of industrial facilities within the Industrial Park project area. The regulatory agencies contacted for information relating to the use or disposal of hazardous materials and waste on or near the Industrial Park project area were: 1) the San Mateo County Department of Health Services (County DOHS); 2) the California Department of Health Services (State DOHS), Toxic Substances Control Division; 3) the Bay Area Air Quality Management District (BAAQMD); 4) the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB); and 5) the Environmental Protection Agency (EPA), Office of Waste Management/ Hazardous Waste Management Division and Office of Superfund Programs. Table 4.4.1 indicates the sites within the project area that are on file at the different agencies.

Historic Survey. The historical land use survey revealed that the project area has experienced many uses that may have involved the use and disposal of hazardous materials and wastes. Historical land uses, when evaluated from a process or operations perspective, and when juxtaposed with the history of environmental regulations pertaining to hazardous materials and wastes management, provide insight into the probable consequences of specific land uses. For example, the historic survey revealed that the project area was a large poultry farming cooperative business between 1916 and the 1930's. Individual poultry farmers remained in the area until at least 1948. By 1937, the first farmer had begun his farm on Weeks Street. Nurseries and greenhouses, which used pesticides and herbicides, flourished in the project area through the 1960's. Industrial uses of the project site began prior to 1940 and continue today. It is evident from the historical land uses. A

Year 2002. Recently, Santa Clara County added median High Occupancy Vehicle (carpool/transit) lanes in the median of Highway 101 from San Jose to the San Mateo County line, approximately east of the University Avenue interchange.

<u>Reconstruction of University Avenue Interchange.</u> The upgrade of the University Avenue interchange is an element of the improvement program for the San Mateo County Traffic Authority. It is currently listed as a low priority Measure A project, programmed for construction in Year 2003/2004. In order to accelerate the interchange improvements, the University Circle project will fund certain costs of the modifications. The modifications include widening of the existing southbound off-ramp to the University Avenue overpass.

The final choice of a new interchange configuration will depend on a project involving Caltrans and local governments. Caltrans is reviewing a draft Project Study Report (PSR) for interchange modifications and is expected to approve it in the near future

Transit

The "Four-Corners" Section is serviced by the SAMTRAMS 50C, 50V, and 6A lines routes which run along University Avenue and Bay Road. The Industrial Section is not directly serviced by public transit; however, Routes 50V and 6A have bus stops located at the corner of Fordham and Bay Road. In addition, East Palo Alto's Circulation Plan addresses the goal of encouraging transit to the Industrial Section when development warrants the service.

Lines 50C and 50V both connect East Palo Alto with Stanford Shopping Center via Downtown Palo Alto's University Avenue, running on 30-minute peak and mid-day head-ways. The SAMTRANS 6A route also runs on 30-minute peak headways between East Palo Alto and Menlo Park, Redwood City, and Canada College. (See Figure 4.5-5 for bus routes in the project vicinity.)

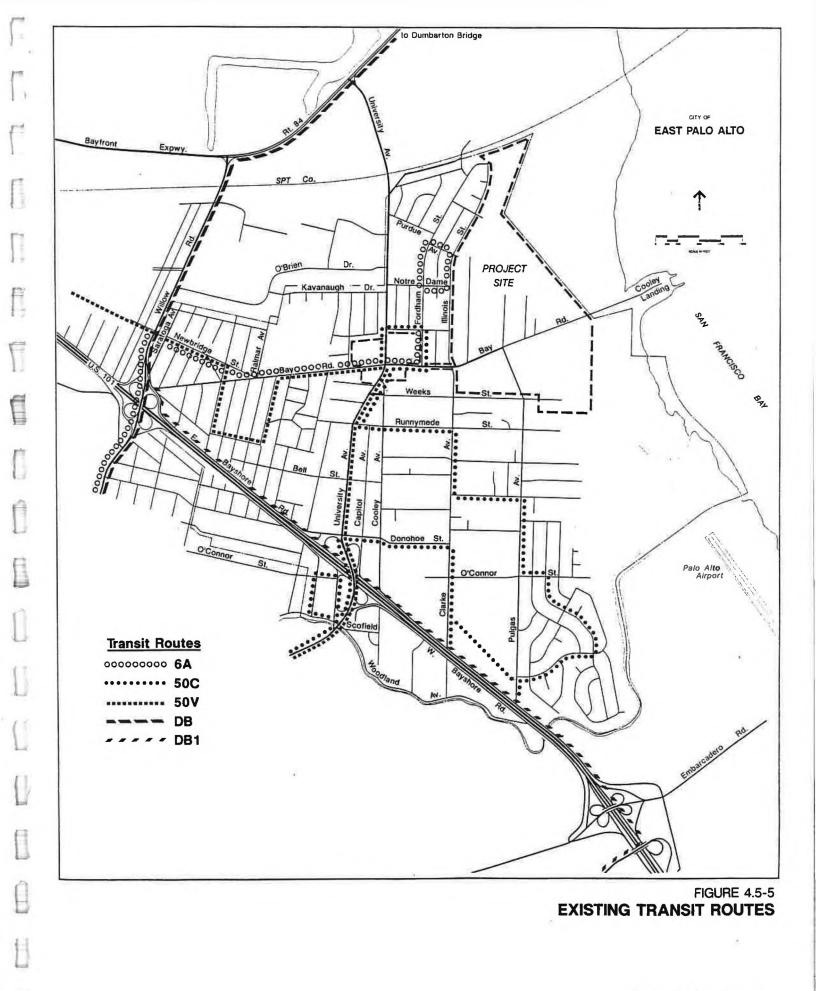
AC Transit's Dumbarton Bridge service (Route DB1) runs along the Bayfront Expressway and Willow Road, west of the project area. AC Transit has no immediate plans to change the service since it is principally intended as express service to the Stanford Research park.

The project area is also within 2 miles of the Palo Alto Caltrain Depot. The Peninsula commuter rail service connects Palo Alto with communities along the Highway 101 corridor from San Francisco to San Jose.

Bicycles

East Palo Alto has designated bike lanes along Bay Road from University to Pulgas Avenue and along Pulgas Avenue from East Bayshore to Bay Road, near the project area. A bike path is also designated along the dike which connects to the regional trail.

The principal bike route is the regional trail which crosses the Bayshore near the Embarcadero Road interchange to the east, and continues along the off-street right-of-way at the top of the levee separating Palo Alto and East



Korve Engineering, Inc.

Palo Alto. While the route presently terminates at Runymead Street, an extension further north towards the Dumbarton Bridge is to be completed in the near term. University Avenue north of the Bayshore Freeway is specifically excluded in East Palo Alto's bike plan, which designates Donohoe, Cooley and O'Conner in place of University.

Pedestrians

The "Four-Corners" Section has sidewalks along Bay Road and University Avenue. Pedestrian crosswalks are located on all four sides of the intersection. Currently, there are sidewalks along both sides of Bay Road which extend from University Avenue towards the Industrial Section; however, these sidewalks terminate at Pulgas Avenue.

POTENTIAL IMPACTS

The following section describes potential traffic impacts associated with the proposed project, project alternatives, and cumulative growth in the study area. Impacts on transit, bicycle and pedestrian conditions are also addressed.

Traffic Impacts

Traffic impacts are identified by providing a comprehensive analysis of am peak hour, pm peak hour, and daily traffic levels. This analysis includes consideration of direct project impacts as well as short- and long-term cumulative impacts due to other projects which may occur area wide. Cumulative volumes also anticipate some increase in peak hour regional through trips along University, especially in the non-peak travel flow direction. Direct project impacts have been evaluated by a comparison of short-term base conditions, (which includes growth due to approved projects) to short-term conditions with the project. A longer term cumulative analysis is also provided, which includes the project traffic as well as projects which have not yet been approved.

The prime criteria for defining a significant negative impact is when the service level of signalized intersections drops from LOS A-D into the LOS E-F range. This represents the development of substantial peak hour congestion at the intersection, a criteria which is generally accepted for urban intersections. In the event an intersection is currently operating in the undesirable range without project traffic, then the establishment of a criteria defining a significant negative impact is largely a matter of policy. The City of East Palo Alto has established a policy that deems a change of one-half service level (or a V/C change of \pm .05) due to project traffic to be significant at locations which would be heavily congested without project traffic.

Trip Generation: Project and Alternatives. The number of vehicle trips generated by the project and the project alternatives were estimated through a

trip generation analysis. The trip generation was calculated by subtracting the estimated generation of existing uses on the project site, from the proposed project uses. Existing uses in the project area generate a total of 5,716 daily trips, 504 am peak hour trips, and 600 pm peak hour trips, (inclusive of the "Four-Corners" Section). Approximately 25 percent of the commercial trips are identified as "internal trips" due to the passer-by or linked trips with primary destinations beyond the commercial uses. As such, these trips are not subtracted from the total trip generation level of the project and alternative land uses.

The trip generation rates for the project are displayed in Table 4.5.3. These rates are based upon rates identified in the Institute of Transportation Engineers, (ITE) Trip Generation Manual, 4th Edition. Certain trip rates using the current ITE manual vary with project size; the table indicates "typical" values based upon selected projects within the trip generation analysis.

Table 4.5.3 TRIP GENERATION RATES

	Land Use	Units	Daily	AM Pk	Hr%In	PM Pk	Hr%In
	High-Tech Industrial	Employees	2.45	.47	94	.44	6
	Office	Employees	3.15	.50	87	.48	16
1	Retail	KSF ^a	77.00	1.81	70	6.54	49
	Multi-Family Housing	Units	6.59	.51	22	.63	65
	Industrial	Employees	3.01	.44	83	.43	22
	Park	Acres	3.66	2.30	50	3.21	50

^aKSF is gross square feet in thousands. Source: ITE Trip Generation Manual, 4th Edition, 1987.

Table 4.5.4 identifies the estimated "net new external" trips for the project, the two land use alternatives and the "Four-Corners" Section. As shown, the project would generate approximately 18,270 trips daily with 2,530 AM and 3,080 PM peak hour trips occurring on a typical weekday. In comparison, Alternative I would generate approximately 18,870 daily trips, and Alternative 2 would generate an estimated 15,890 daily trips.

Table 4.5.4 TRIP GENERATION "Net New Trips"

		Daily	AM	Peak Hour	PM Pea	ak Hour	
			In	Out	In	Out	
Project							
	Industrial	12,630	2,350	180	140	2,480	
	"Four-Corners"	5,640	0	0	230	_230	
Total		18,270	2,350	180	370	2,710	
Alternat	tive 1						
	Industrial	13,230	2,450	190	150	2,560	
	"Four-Corners"	5,640	0	_0	230	230	
Total		18,870	2,450	190	380	2,790	
Alternat	tive 2						
	Industrial	10,250	1,790	150	120	1,870	
	"Four-Corners"	5,640	0	0	230	230	
Total		15,890	1,790	150	350	2,100	

Trip Distribution: Project and Alternatives. The trip distribution for the project and project alternatives is based on the expected market area for the facilities. Existing travel patterns, trip characteristics and access/circulation considerations have also been utilized. Locally, the commercial uses in the "Four-Corners" Section are expected to draw heavily from patrons living in the residential areas of East Palo Alto. The office and industrial uses are expected to draw from a more regional base. The resulting trip distribution is displayed in Table 4.5.5.

4.5-9

4.5 Traffic and Circulation

Table 4.5.5 TRIP DISTRIBUTION	
Destination Zone	Percent
Office and Industrial Uses	
North/East via Dumbarton Bridge	20.0
North/West via Bayfront Expressway	12.5
North/West via I-101	12.5
South/East via I-101	25.0
South/East via I-101 (Embarcadero)	5.0
South via University	5.0
South via Willow Road	5.0
East via East Bayshore	5.0
West locally (via Bay Road)	5.0
East locally (via Donohoe)	5.0
Commercial Retail and Residential Us	es
West locally (via Newbridge)	5.0
West locally (via Bay Road)	25.0
North/West locally (via O'Brien)	10.0
North/East locally (via Illinois)	10.0
South locally (via Willow Road)	5.0
South locally (via University)	5.0
South/East locally (via Woodland)	5.0
East locally (via Donohoe)	15.0
East locally (via Cooley)	20.0

Source: University Circle Redevelopment Project, EIR, 1988; Preliminary Review of Traffic Access Conditions, Potential Sun Microsystems Site, East Palo Alto, Robert Conradt, 1989; Traffic Study for Sun Microsystems, Inc. Proposal for Ravenswood Industrial Park, Fehr & Peers Associates, 1989.

Short-Term Future Traffic Conditions: Project and Alternatives. A large amount of development in the vicinity of the project has been approved, was under construction, or was partially occupied at the time traffic count data was collected. The impacts of the proposed project and alternatives have been evaluated taking into account the additional traffic due to approved projects or "short-term" future traffic conditions. This includes an areawide list of approved projects in East Palo Alto, Palo Alto, and Menlo Park, as well as regional trips on major facilities such as the Dumbarton Bridge and the Bayshore Freeway. These projects are identified in Table 4.5.6.

Traffic due to short-term base projects was estimated by computing the trip generation associated with each project and assigning traffic to roadways in accordance with the anticipated travel distribution, and likely routes of travel based upon the minimum time path through the street system.

Table 4.5-6 SHORT-TERM PROJECTS

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Project Name/Location	Land Use	Quantity	Units
East Palo Alto:			
979 Beech Street	Single-family Housing	11	units
1167 Woodland Avenue	Single-family Housing	52	units
948 Myrtle Street	Single-family Housing	6	units
2191 Clarke Avenue	Single-family Housing	6	units
725-765 Runnymede Street	Single-family Housing	8	units
934 Myrtle Street	Single-family Housing	5	units
761 Weeks Street	Single-family Housing	5	units
Beech Street	Multi-family Housing	52	units
University Circle Project	Hotel	220	rooms
	Office/Commercial	480,000	sq. ft.
	Retail	35,000	sq. ft.
Menlo Park:			
555 Glenwood Avenue	Multi-family Housing	138	units
1010 University Drive	Commercial	23,680	sq. ft.
1220-1240 University Drive	Office	11,850	sq. ft.
	Multi-family Housing	14	units
275 Middlefield Road	Office	26,400	sq. ft.
333 Middlefield Road	Office	44,386	sq. ft.
1365 El Camino Real	Office/Retail	11,333	sq. ft.
Bohannon Industrial Park	Office/R&D	515,300	sq. ft.
300 Constitution	Office/R&D	1,568,646	sq. ft.
O'Brien Drive	Office/R&D	300,000	sq. ft.
2400 Sand Hill Drive	Office	18,000	sq. ft.
21210-2122 Santa Cruz	Single-family Housing	12	units
Campo Bello/Sunrise Ct.	Single-family Housing	9	units
Palo Alto:		2	
Downtown	Office/Retail	300,000	sq. ft.
529 Bryant	Retail/Office	10,849	sq. ft.
800 Charlston	Townhomes	30	units
531 Cowper	Restaurant	677	
619 Cowper	Office		sq. ft.
940 E. Meadow	Office	526 3,295	sq. ft.
4219 El Camino Real	Office	and the second second second	sq. ft.
4345 El Camino Real	Motel Addition	3,295	sq. ft.
4195 El Camino Real	Oil Changers	10	units
3850 Fabian		852	sq. ft.
3950 Fabian	Mfg/R&D R&D	99,511	sq. ft.
USU Faliai		9,500	sq. ft.

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Table 4.5-6 Continued

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Project Name/Location	Land Use	Quantity	Units	
401 Florence	Bldg. Addition	2,100	sq. ft.	
431 Florence	Retail/Office	2,500	sq. ft.	
3200 Hanover	Training/Educ. Ctr.	29,000	sq. ft.	
850 Hansen	Office	1,557	sq. ft.	
3050 Hansen	Office	91,850	sq. ft.	
3401 Hillview	R&D	203,640	sq. ft.	
3330 Hillview	Office/R&D	36,000	sq. ft.	
400 Lambert	Office	2,200	sq. ft.	
2751 Louis Road	Church Addition	1,940	sq. ft.	
3900 Middlefield Rd.	Retail	946	sq. ft.	
3391 Middlefield Rd.	Church Addition	6,566	sq. ft.	
4001 Miranda	Office/R&D	3,000	sq. ft.	
620-640 Page Mill	Office/R&D	2,567	sq. ft.	
3176 Porter	R&D	44,700	sq. ft.	
762 San Antonio Rd.	Office	2,316	sq. ft.	
425 Sheridan	Multi-family Housing	51	units	
156 University	Retail/Office	5,125	sq. ft.	
250 University	Retail/Office	20,300	sq. ft.	
456 University	Office	5,072	sq. ft.	
456 University	Theatre	1,451	sq. ft.	
725 Welch Road	Hospital	274,700	sq. ft.	
725 Welch Hoad	riospital	2/4,/00	5 4 . II.	
Stanford University: ^a				
Beckman Center	Medical	191	students	
		18	faculty	
		90	staff	
RAF-II (Research Animal Fac.) Medical	3	persons	
Hoover Pavilion Re-use	Medical	137	visitors	
Crystallography Renovation	Medical	3	staff	
Ambulatory Surg. Renovation		27	staff	
E.D. Stone Phase Renovation		57	students	1
		10	faculty	
		77	staff	
General Use Permit Growth	Students	714	persons	
	Faculty	241	persons	
	Staff	969	persons	
	Other/Visitors	68	persons	

^aStanford population figures indicate projected increase in Adjusted Daytime population, i.e., the increase in persons expected at any given facility from 9:00 am - 3:00 pm, reduced to reflect holidays, vacations, sick and leave time.

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Table 4.4.1REGULATORY INFORMATION MATRIX

			RWQCB South					
Site	Current		Bay Site Management	BAAQMD	BAAQMD	California DOHS		EPA RCRA
Address	Occupant		System Quarterly Report	Permit Files	Violation Files	Site Files	Investigation Files	Investigation File
1802 Bay	Bay City Body Shop	x						
1805 Bay	Electrite Company	х				Х		
1848 Bay	ABS Faorication	х						
1877 Bay	Merchandising Systems, Inc.	X						
1905 Bay	Cal-Sprav, Inc.	x			х		X	
1990 Bay	Sandoz Crop Protection/Zeocon	х	Х	Х				x
2081 Bay	Pumic Chemical Co.	x	X	X	x			
1951 Pulgas	Podesta Nursery	X						
2411 Pulgas	Pitcher Drilling	х						. (f
2450 Pulgas	R.E. Borrmann Steel Co.	х						τ.
2483 Pulgas	Peck and Hiller Co.	x						
2519 Pulgas	Sat Iwaski Nursery, Inc.	x						
2526 Pulgas	Tritec Industries			х				
2528A Pulgas	Mastern Corp.	х						
2535 Pulgas	Touchatt Trucking	х						
2536 Pulgas	Anderson Sheet Metal, Inc.	х		х				
1045 Weeks	HEW Linung	x	1.2					
1045 Weeks	Garcia Well & Pump	x						
1054 Weeks	Albert Y. Nakai Nursery	x						
1103 Weeks	Gene Lopez	x						
1175 Weeks	Cal-Mac		х		x		х	
75 Demeter	I's Product Painting	х		х				
	Flexico Metal Products	x						
160 Demeter	Peninsula Charter Lines	x						
225 Demeter	RPM Steel Fabrication, Inc.	x						
325 Demeter	Brown Wood Products, Inc.	x						
350 Demeter	Howard J. White, Inc.	x					1.4	
350 Demeter	Willard Products	x						
351 Demeter	anow-McBride	x		x				
	Anow-Weblick	<u>^</u>	CEDCI A Commentant	A	and all The second of			

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Key: DOHS = Department of Health Services RWQCB = Regional Water Quality Control Board

CERCLA = Comprehensive Environmental Response Compensation and Liability Act RCRA = Resource Conservation Recovery Act.

BAAQMD = Bay Area Air Quality Management Division

typical example of this would be a parcel changing from agricultural land to a chemical manufacturing plant to an auto wrecking yard. (Refer to Appendix D for the directory listings of sites within the project area between 1940 and the present.) Consequently, there are historical land uses in the project area that typically involved the use and disposal of hazardous materials and wastes.

Physical Inspection and Regulatory Agency File Review. The physical inspection of the Ravenswood Industrial Park revealed many instances of poor hazardous waste management practices. Some of these were confirmed by information found in the regulatory agencies' files. As documented by the files, several sites within the project area are currently under investigation. In particular, Romic Chemical is an EPA-listed site under the Resource Conservation Recovery Act (RCRA) and Zoecon (now Sandoz Crop Protection Co.), investigated under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) /1/, was recently removed from the superfund list. Both are known to have significant soil and ground water contamination. Call-Mac, formerly a hazardous waste storage facility, is currently under investigation by both the California DOHS and EPA; and Electrite, a metal plating facility, has been ordered to submit a site characterization and cleanup plan to both the State and County DOHS. (Refer to Appendix -E- for a list of activities by address and current occupant in the Ravenswood Industrial Park which potentially contribute to hazardous substance contamination of the environment.) Figure 4.4-1 shows the location of industrial facilities in the Ravenswood Industrial Park (refer to Table 4.4.2 for legend) and Figures 4.4-2 to 4.4-4 are photographs of selected Ravenswood Industrial Park land use areas.

Conclusions

The proposed project envisions 163 acres of industrial activities; of this total, 92 acres comprise sites with known contamination. Fourteen acres of these contaminated acres are developing or in the process of implementing remedial action plans.

Of the remaining 71 acres, there is evidence that they too may be contaminated. This conclusion is based on two considerations. First, soil and ground water samples on properties contiguous to the project site have exhibited contamination. Second, historical land uses suggest possible contamination, and agencies' files identify contamination concerns associated with underground fuel tanks, onsite storage and use of waste oils, paints, metal solvents, and acids. Given these two indicators from the Phase I-type data collected, it is reasonable to suspect contamination and recommends Phase II studies to confirm soil and ground water contamination.

Major Known Contaminated Sites in the Ravenswood Industrial Area

The following discussion provides further information regarding the four sites, encompassing 92 acres, with known contamination problems. (Refer to Appendix E for complete information summaries for all the sites on file.)

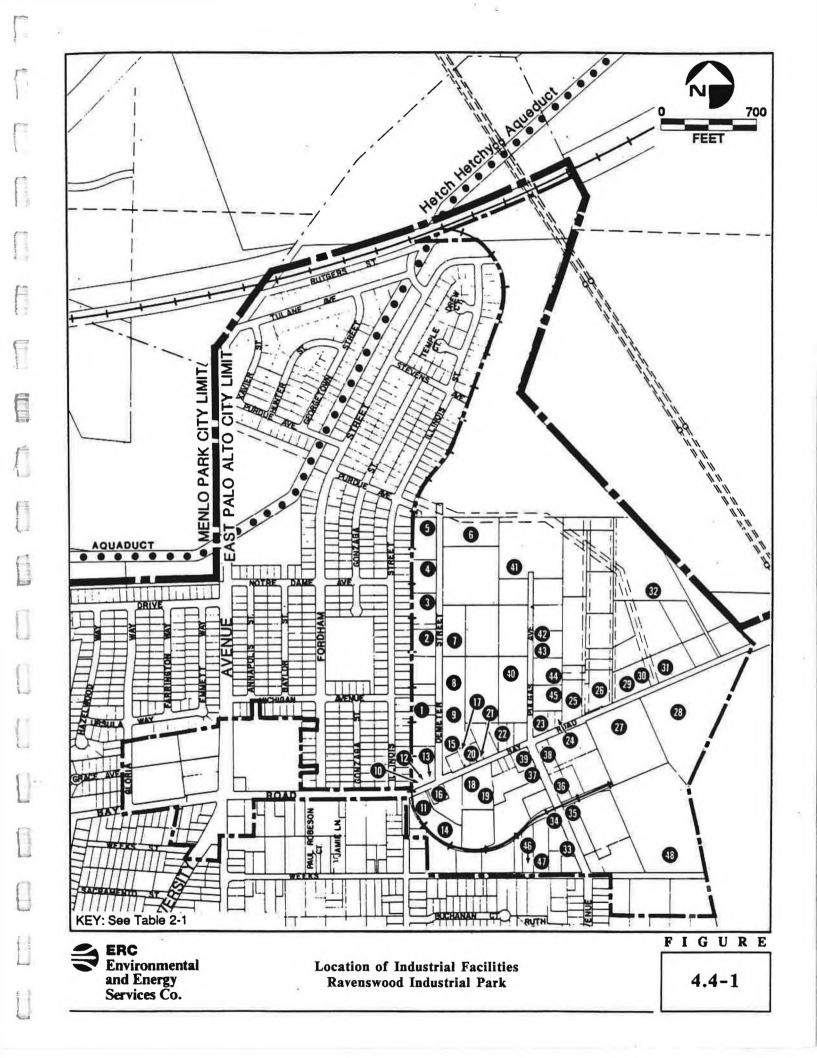


Table 4.4.2KEY TO FIGURE 4.4-1

DEMETER STREET

- 1. J's Product Painting
- 2. Eurodesign Ltd.
- 3. RPM Steel
- 4. Baron Welding & Iron Work
- 5. Brown Wood Products
- 6. Howard J. White Corp. Yard
- 7. Heckman Metals
- 8. WTC Transmissions
- 9. Peninsula Charter Lines

BAY ROAD

- 10. T & G Auto Sales
- 11. Bay City Body Shop
- 12. K & J Sales
- 13. Electrite Co. Inc.
- 14. Chemnetics/Sandoz Crop Protection
- 15. El Zalate Mechanic
- 16. ABS Fabricators/Sandoz Crop Protection
- 17. City Tow
- 18. D Sign Company
- 19. EPA Metal Finishers Inc.
- 20. Soul Brothers Motorcycle Club
- 21. Merchandising Systems
- 22. M&M Garage
- 23. Cal Spray Inc.
- 24. C & B Towing
- 25. Pick and Save Auto Wreckers
- 26. Rogge's Auto Wrecking
- 27. Sandoz Crop Protection (formally Zoecon/Rhone-Poulenc)
- 28. Pacific Gas & Electric Substation
- 29. Bay Area Auto Wrecking

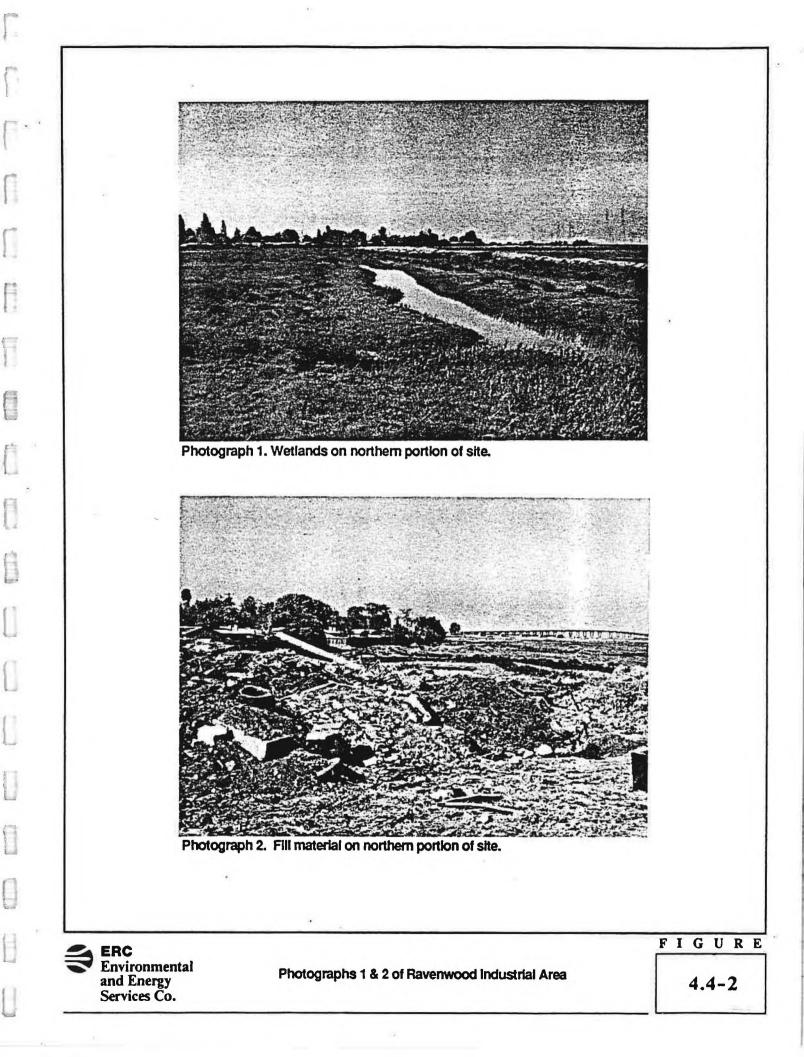
- 30. Bay Area Auto Wrecking
- 31. Bay Area Auto Wrecking
- 32 Romic Chemical

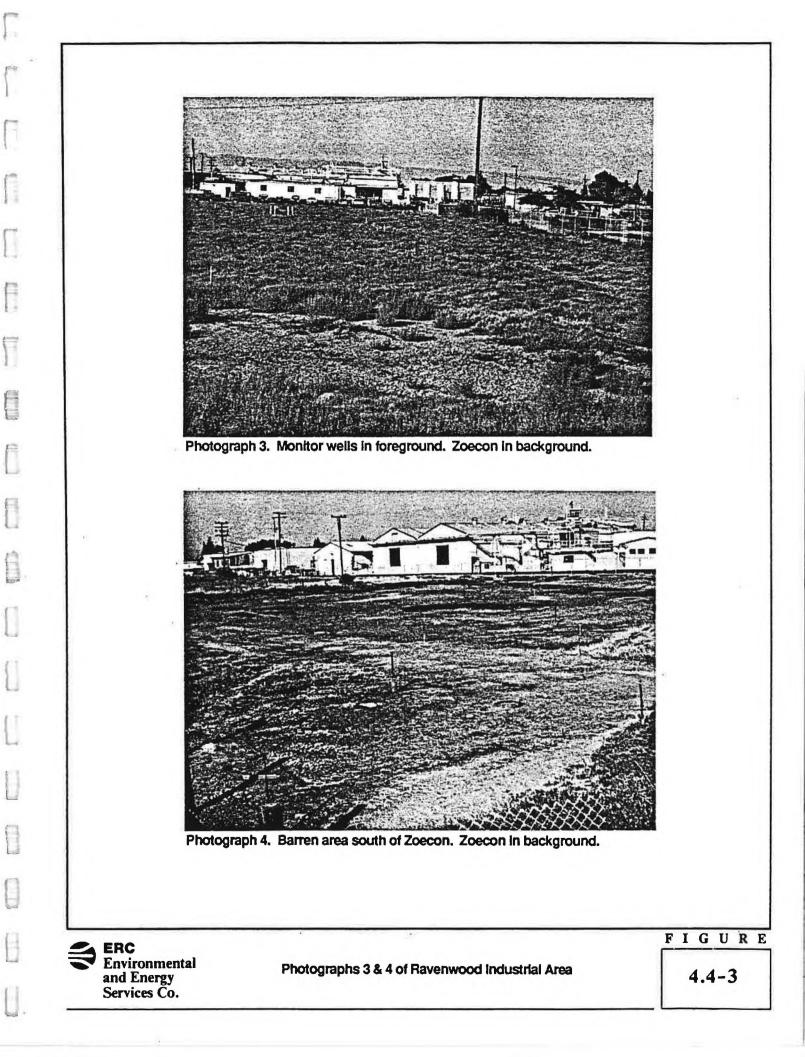
PULGAS AVENUE

- 33. Pitcher Drilling
- 34. Pitcher Drilling
- 35. R.E. Borrmann's Steel Co.
- 36. Bains Moving and Storage
- 37. Peck and Hiller
- 38. Spiral Paper Tubes
- 39. Junk Yard
- 40. Sat Iwasaki Nursery
- 41. Stonehurst Floral Products
- 42. Mastern Corp.
- 43. Stanford Minerals
- 44. East Palo Alto Sanitation District
- 45. John Nuckton, Inc.

WEEKS STREET

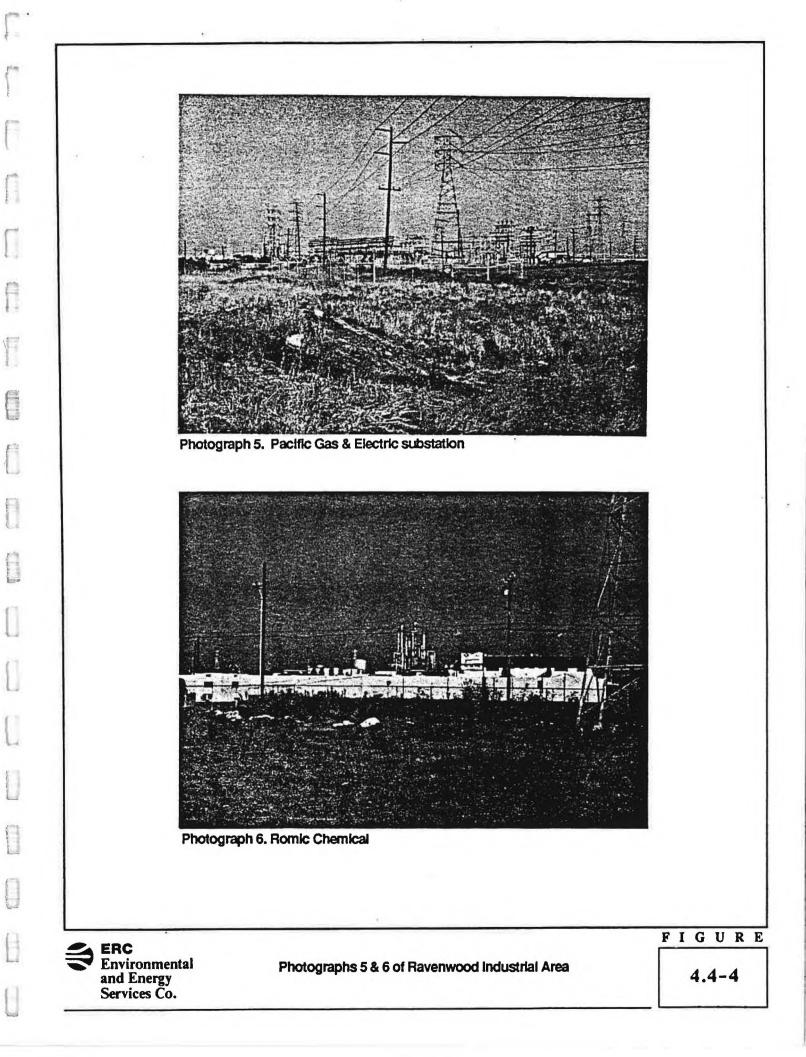
- 46. Robert Allen
- 47. HEW Drilling
- 48. Torres Property





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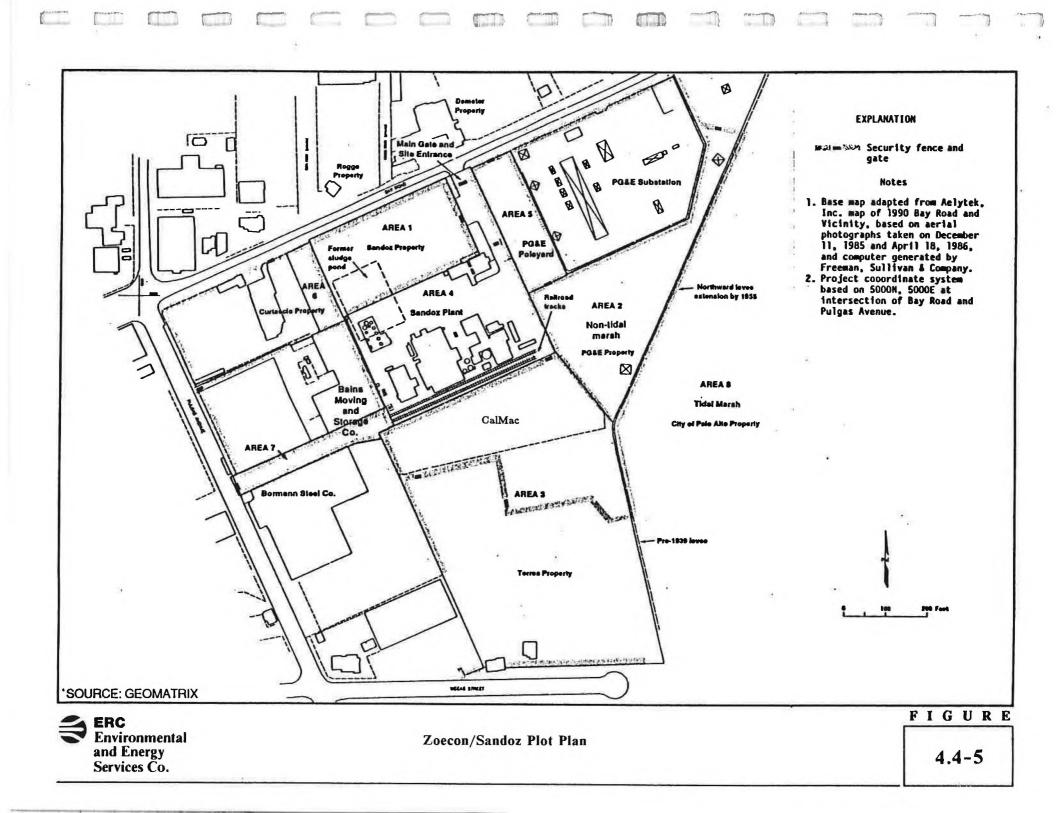
<u>1805 Bay Road - Electrite Co. Inc.</u> The facility's business plan (filed in March 1987) reveals that the business uses and stores a number of hazardous materials onsite for electroplating operations. Forty-six tanks containing metal and caustic solutions located in the center of the plant processing area are used in the electroplating operations. The facility also generates and stores onsite at any one time a maximum of 3,000 pounds of hydroxide metal sludge containing zinc, copper, and nickel.

Inspectors from the State DOHS visited the site in 1981 and noticed visible soil discoloration. Sampling of the discolored soil revealed high concentrations of heavy metals (cadmium, nickel, lead, zinc and chromium)./2/ An inspection of the site in 1987 by the County DOHS revealed ground water contamination, potential soil contamination, and violation of hazardous waste disposal regulations. State DOHS inspection reports from 1988 detail a history of poor waste management practices at the site. The Preliminary Assessment performed by the State DOHS recommended no further action for the Electrite site under CERCLA because a release to ground water was deemed to be unlikely given the great depth to beneficial ground water at the site and the low to moderate soil permeability./3/ An EPA consultant disagreed with the State DOHS and recommended a medium screening site inspection.

Correspondence from Electrite to the County DOHS in October 1988 states that no soil sampling had as yet been performed at the site, but that Electrite planned to initiate soil sampling the next year. Information in the Electrite file at the County DOHS indicates that the floors in the process area were cleaned and sealed in 1988 and that the facility was granted an industrial wastewater discharge permit by the East Palo Alto Sanitary Sewer District. A letter from Electrite to the BAAQMD, dated June 15, 1988, also reveals that they had initiated permit application procedures to properly dispose of their hazardous waste.

<u>1990 Bay Road - Zoecon/Sandoz</u>. The 5.2-acre Zoecon/Sandoz site has been used for agricultural chemical manufacturing for 60 years or more by a number of companies and has been under regulatory enforcement actions at various times dating back to 1982.

Prior to 1926, the site was occupied by Reed Zinc Company and a related entity, Reed Zinc Reduction Company. From 1926 to 1964, the site was occupied by Chipman Chemical Company and Chipman Chemical Engineering Company. In 1964, Rhodia, Inc. acquired Chipman and operations continued under the name of Chipman Chemical Company (1964 to 1967) and the Chipman Division of Rhodia, Inc. (1967 to 1970). Sodium arsenite compounds were formulated on the site throughout this period. Operations ceased in 1971, and the property and facilities were sold in 1972 to Zoecon Corporation. Rhodia, Inc. has subsequently changed its name to Rhone-Poulenc Inc. From 1972 to the present, Zoecon has manufactured biorational insect controls at the facility. Zoecon Corporation has been owned by Sandoz Corporation since 1983. In June 1986, Zoecon merged with Velsicol Corporation to form Sandoz Crop Protection Company which currently manufactures biorational insect controls. Refer to Figure 4.4-5 for a site plan of the property.



Investigations of the site and adjacent properties in 1981 revealed that the soil and ground water were contaminated with inorganic arsenic compounds and other heavy metals. Off-site contamination has occurred by the discharge of contaminated surface runoff from the site onto adjoining land including the seasonal wetland adjacent to the PG&E substation. Subsequent investigations confirmed areas of arsenic-contaminated soil and ground water. (Arsenic was chosen as an indicator of heavy metal contamination in subsequent investigations because its concentrations in the soil and ground water were much higher and more widespread than other metals and because the other metals are minor components of the arsenic ores used at the site.)

As a consequence of known site contamination, the Regional Water Quality Control Board (RWQCB) issued a Cleanup and Abatement Order which required, in part, that Zoecon and Rhone-Poulenc institute a sampling and analysis program to determine the lateral and vertical extent of contamination at the site. Following completion of such programs, Rhone-Poulenc assumed responsibility for remedial action at the site and vicinity, and developed a remedial action plan. A draft Remedial Action Plan was submitted to the DOHS, RWQCB, and the EPA in January 1986, followed by a final draft incorporating DOHS comments in July 1986.

Following submittal of the Remedial Action Plan, the EPA expressed the opinion that the Remedial Action Plan and the site characterization work conducted prior to 1987 did not fully satisfy the requirements of the National Contingency Plan and that additional work was needed before a final remedy could be selected and implemented. Subsequently, a Consent Order was entered into among Rhone-Poulenc, DOHS, and the RWQCB, which required that a Remedial Investigation and Feasibility Study be conducted for the site in accordance with EPA guidelines. In March 1987, DOHS issued a Post and Fence Order; in response, Rhone-Poulenc installed fencing to enclose portions of the adjoining PG&E and Torres properties and posted warning signs.

The remedial investigation report dated September 19, 1989 was recently approved and finalized although additional work may be required by the U.S. Fish and Wildlife Service. The remedial feasibility study is currently being discussed with the various regulatory agencies and is scheduled to be completed in mid-1990.

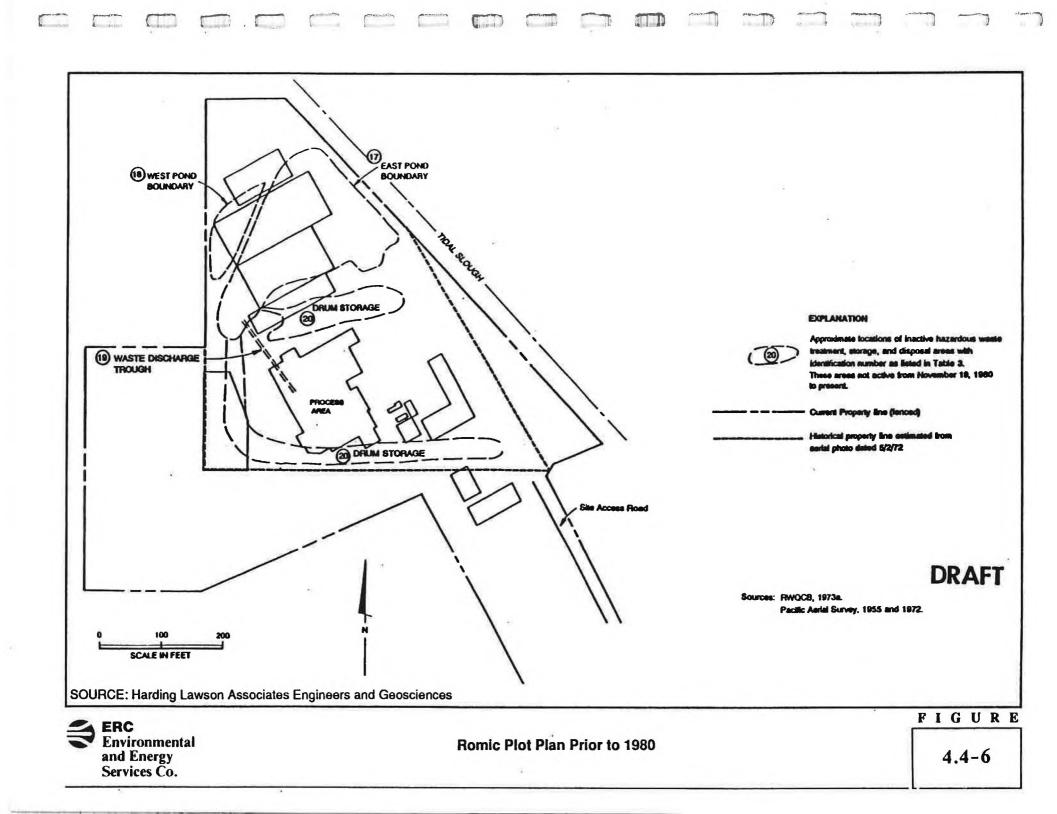
2081 Bay Road - Romic Chemical Corporation. The Romic Chemical Corporation operates a large-scale solvent recycling facility which serves the South Bay region. The facility handled approximately 4.2 million gallons of waste materials in 1983 consisting of halogenated solvents, non-halogenated solvents (such as methyl ethyl ketone, toluene, and acetone), and non-solvent wastes (such as vinyls, inks, and thinners). The facility currently handles approximately 7 million gallons of waste materials per year. Solvent recycling operations have occurred at the site since 1956, when Hird Chemical Corporation established the facility. Carad Chemical Corporation purchased the property in 1959 and owned and operated the plant until 1963, at which time P.D. Electronics purchased the plant and the Romic Chemical Corporation assumed operation of the facility as a lessee. In 1979, Romic purchased the property and has continued operation of the recycling plant to the present time. Refer to Figures 4.4-6 and 4.4-7 for site plans of the facility before and after 1980.

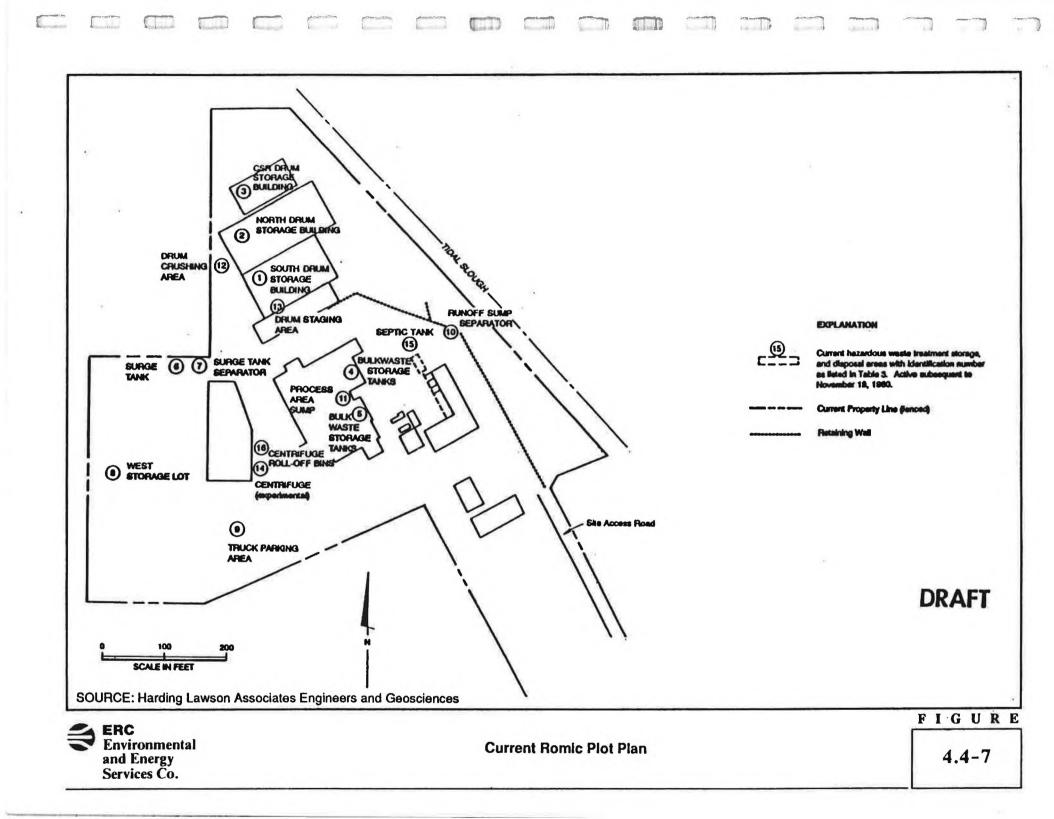
The Romic facility has been under regulatory enforcement actions at various times dating back to 1973. Two shallow unlined ponds with a total estimated area of 1.4 acres existed in the northern section of the site from the 1940s to the mid-1970s and apparently received waste discharge from the early recycling operations. During the winter rainy season, the ponds would occasionally flood over into the adjacent tidal slough on the eastern boundary. Romic built a levee in 1970 to prevent discharge into the slough from occurring. Following a breach of the levee two years later, Romic was ordered by RWQCB to repair the levee, connect a sanitary sewer line hookup to the East Palo Alto Sanitary District (EPASD), improve surface drainage, and begin disposing all materials considered unacceptable by the EPASD at properly permitted off-site disposal facilities.

During the years following Romic's purchase of the facility in 1979, the ponds were gradually filled with clean material. The surface of the filled pond area was covered with a synthetic liner and buildings with concrete slabs for the storage of drums were constructed. (Until at least 1980, unpaved areas were used for drum storage.) Retaining walls and other improvements were added along the perimeter of the site in order to prevent flooding. The major facility components at the present time are the recycling process area, three drum storage areas, bulk waste storage tanks, the product storage area, a recently installed process water treatment system, and a storage lot. The California DOHS issued a five-year Hazardous Waste Facility Permit to Romic in May 1986 for the operation of a waste solvent recycling facility. Romic has other current operating permits including ones from BAAQMD and the EPASD. In December 1988, EPA and Romic entered into a Consent Order which requires that Romic implement a RCRA Facility Investigation.

Three phases of field investigation have been conducted to date at the Romic site in order to evaluate site contamination. Metals concentrations in soil samples collected from the southern portion of the facility during previous site investigations suggest that the most significant onsite soil contamination is in this area. Concentrations exceeded the applicable hazardous waste total threshold limit concentrations for copper, mercury, and possibly chromium. Elevated levels of barium, nickel, vanadium, and zinc were also reported in samples from this area. Organic compounds have been detected in soil samples collected at locations in the northern portion of the site, in the vicinity of the former ponds. Contaminant concentrations in samples collected from the ground water underlying the site suggest the presence of a significant ground water contamination problem. There is a high probability that off-site locations have been impacted. The off-site location with the greatest likelihood of being severely affected is the area to the northwest of the site.

A draft work plan for the RCRA Facility Investigation was prepared by Romic in March 1989. The objective of the Facility Investigation is to collect sufficient data to adequately describe the nature and extent of chemicals in environmental media associated with activities at the Romic site. The data





will be used to initially screen, evaluate, and develop potential remedial action alternatives for controlling sources and migration of chemicals, and for assessing and supporting any additional appropriate interim remedial measures. The draft work plan proposes installation of additional on-site soil borings and monitor wells, and proposes the installation of three off-site monitor wells (one each to the east, west, and south). The draft work plan also proposes a schedule for conducting the proposed investigation; the compliance or noncompliance of Romic with the proposed schedule was unable to be determined at the time of this report.

End of Weeks Street - Call-Mac. (The following information about the Call-Mac (Torres Property) site is derived from sources other than the regulatory agencies because the file at the RWQCB was empty at the time this report was being prepared.) The site consists of approximately nine acres fronting Weeks Street and bounded by Zoecon/Sandoz to the north and the tidal wetlands to the east (refer to Figure 4.4-5). The site was used for storage of drummed hazardous waste from the mid-1950s to the early 1980s. From the mid-1950s to the early 1960s, Call-Mac (Torres Property) was transporting industrial wastes from the Shell Emeryville facility to be stored in drums on the east side of the property. In the late 1960s and early 1970s, wastes were also brought to the site from Diamond Shamrock in Redwood City and stored on the westerly portion of the property. Drummed wastes at the site were stored in trailers, stacked outside, and buried. An incinerator was constructed during one period and an attempt was made to incinerate the wastes.

A State DOHS inspection in 1981 revealed as many as 1300 drums and a multitude of small-volume containers scattered throughout the property. Many of the drums were noted to be leaking. In some areas, particularly a flooded area near the south gate, the leakage had discolored ponded rainwater.

In 1981, the State DOHS supervised clean-up activities at the site. Visible and buried drums detected with the aid of a metal detector were removed from the site in addition to 25 cubic yards of soil. Concentrations of tetraethylene tetramine as high as 8,050 ppm were identified in soil samples collected following clean-up activities at the site. Arsenic was also identified at concentrations exceeding 2,000 ppm. An additional investigation was undertaken at the request of Rhone-Poulence in 1989 to gain information relating to contaminants other than arsenic and related compounds at the site. Soil and groundwater samples were collected from Call-Mac (Torres Property) and several other adjacent locations.

The results of chemical analysis indicated significant concentrations of several purgeable halocarbons in groundwater samples collected from a pair of monitoring wells located in the southwestern corner of Call-Mac (Torres Property) and extending 70 feet to the south. The contaminants were discovered in both the upper and lower shallow ground-water zone.

POTENTIAL IMPACTS

The impact assessment addresses the likely adverse environmental and health effects associated with the redevelopment of the project area and specifically the four known contaminated sites.

Methodology

The impact analysis is based on the findings of the Phase I Hazardous Materials Site Assessment for the Industrial Park summarized above. As noted, the purpose of a Phase I Site Assessment is to provide information on current and historical on-site land uses, and to identify areas which may potentially be contaminated. Based on the results of earlier site contamination investigations, not performed as part of the Phase I Assessment, which included extensive soil and ground-water sampling and analyses, four industrial employers--Romic Chemical Corporation, Electrite Company, Inc., Call-Mac (Torres Property), and Zoecon/Sandoz--were specifically identified as having known on-site contamination. Public exposure to these sites if prior to completion of cleanup would constitute a significant adverse impact.

The remainder of the site is suspected to be contaminated, but the extent and degree of contamination can only be established following a Phase II Site Assessment. Assuming a worst-case scenario, development of these sites could also constitute potentially significant adverse environmental and health impacts unless the Phase II Site Assessment discloses the level of contamination does not pose a health risk or unless the site is cleaned up prior to development. It should be noted that this assumption is speculative and that the actual health risks can be determined only after following the steps outlined at the beginning of this section.

It is the role of this Program EIR to present the broad, long-range implications of the proposed redevelopment plan. The level of analysis, consequently, is not as detailed as a project-specific EIR. With respect to hazardous materials, this EIR only characterizes potential impacts and highlights where subsequent, focused EIRs would be needed to evaluate site specific problems.

Criteria of Significance

The impact analysis in this EIR uses two criteria to determine the significance of impacts associated with development of known or potential contaminated sites under the proposed project. (For comparison of alternatives refer to Chapter 5.0 Alternatives). The first criterion addresses the potential for public exposure to hazardous substances. If development of the project area is likely to result in exposure of individuals to hazardous substances through contact with contaminated soil and ground water, development would be considered to have a potentially significant impact. The second criterion is based on the ease and potential effectiveness of hazardous material cleanup associated with each of the alternatives.

Impacts - "Four-Corners"

Current and proposed land uses in the "Four-Corners" Section are residential, retail, commercial and office (public facility), and do not involve the use or storage of hazardous materials. The only significant current or past land use

in the "Four-Corners" Section which may have resulted in site contamination was a gas station which has recently been closed. It is not known if the tanks have caused on-site fuel contamination.

Impacts - Ravenswood Industrial Section

Known Contaminated Sites. Investigations of hazardous materials use and storage at Zoecon/Sandoz, Call-Mac (Torres Property) and Electrite Company have resulted in the identification of onsite and offsite hazardous material contamination. Similar findings have been made for Romic Chemical, but this site is not proposed for redevelopment under the proposed project. While no cleanup operations are currently underway, investigation and remedial action plans are being developed by Romic, Zoecon/Sandoz and Electrite in association with regulatory agencies. Cleanup of contamination on and offsite will be undertaken by Romic and Zoecon/Sandoz individually, and remediated to acceptable levels as established by the regulatory agencies. Consequently, there would not likely be a significant environmental or health risk from development of the Zoecon and Electrite sites which collectively account for virtually all of the known contaminated sites.

The portions of Electrite, Call-Mac and Zoecon/Sandoz proposed for redevelopment total about 14 acres of known contaminated lands. If no cleanup occurred, redevelopment of these sites in accordance with the proposed project would expose an estimated 1,147 employees (see Table 5.3 Acreages of known and suspected contaminated sites in Chapter 5.0 Alternatives). Remedial and cleanup actions are expected, however, so that no significant adverse effects are anticipated from redevelopment of these sites. Some adverse impacts may occur if the proposed remediation plans for these sites will not result to an extent that is compatible with the uses planned by the redevelopment agency. For example, federal, state or local agencies may require that site remediation activities remove contamination to a point that the site may be used only for a parking lot since some contamination may still remain. However, if the redevelopment agency plans to use this area for a high density office complex with extensive landscaping, this land use may not be compatible with the extent of the proposed remediation plan since remaining site contaminants may pose a health risk to onsite workers and this is especially true in the case of the Zoecon/Sandoz site, which has extensive arsenic contamination. The proposed site remediation plans should also be compatible with existing land uses. For example, a groundwater or soil remediation project that involves aeration of volatile organics may cause acute and chronic health effects ranging from dizziness, respiratory ailments and increased cancer risks for nearby residents inhaling organic vapors if measures are not implemented to control vapor releases during remediation activities.

Unknown Contaminated Sites. Historical and regulatory research, and recent observation of the sites indicates that the remaining 78 acres may be contaminated with such materials as pesticides, herbicides, fuel and solvent wastes from leaking underground storage tanks or surface spills of these materials. Certain sites may also be contaminated with heavy metal constituents due to scrap metal storage and disposal at auto wrecking yards. If it is assumed that the remaining 78 acres (not including the four known contaminated sites) are contaminated and if no site cleanup actions are taken, a potential maximum of 5,361 future employees as well as an undetermined number of construction workers could be exposed to contaminants in surface soils. Exposure symptoms may include headaches, acute respiratory irritation and possible failure, skin irritation and rashes, and in chronic exposure, possible lung and internal organ damage due to inhalation and ingestion of metal-contaminated soils. Those employees who come in frequent contact with fuel-contaminated soil may also have an increased cancer risk since benzene, a major gasoline constituent, is a carcinogen.

Other potential public exposure impacts associated with the proposed project relate to: a) buildings containing asbestos; b) the existence of transformers containing polychlorinated biphenyls (PCBs); and c) underground storage tanks. These potential sites of contamination are dispersed throughout the site and relate to the potential for public exposure during demolition. To protect workers involved in the demolition, the presence of asbestos in buildings must be identified so that proper precautions may be taken to properly contain and dispose of the asbestos-containing material. Asbestos has been identified as a carcinogen, and its major route is through inhalation. Unless provisions are taken to reduce its disturbance and generation of airborne fibers, workers would have an increased cancer risk due to asbestos exposure. The same applies to removal of transformers which contain PCBs. PCBs have been identified as potential carcinogens and thus, exposure to PCB-containing fluids during transformer removal and/or demolition at the site could result in an increased risk to workers. In addition, if transformers and underground storage tanks are not identified and properly removed, they may be damaged during demolition and grading activities. The contents of the tanks or the transformers may then be discharged to the soil, increasing the potential for worker exposure during site demolition and grading.

<u>Roadways</u>. Development of the Industrial Park would also require the construction of 12 to 13 acres of new roadways. Since these roadways would traverse the majority of the project area, the alignment for these new roadways could potentially be contaminated with any or all of the contaminants known or suspected to exist at the project site if no cleanup occurred. These include volatile organics from fuel and solvent contamination, metals, pesticides and semi-volatile organics. Potential exposure of road construction workers to contamination could occur if no cleanup actions were initiated. Such exposure would primarily consist of inhalation of volatile organics and skin contact and possible ingestion of metals and/or pesticides during grading activities. Acute exposure to these types of contaminants may result in skin irritation and rashes, upper respiratory tract distress and constriction, dizziness, and headaches. Exposure to volatile organic solvents or fuel constituents in sufficient concentrations may cause collapse and death due to respiratory failure.

<u>Construction Impacts</u>. Possible public exposure to contaminated soils and ground water (including ground water vapors) could also occur, especially during the construction and remediation phase of development. Individuals who may be exposed to current site contamination under the proposed project include construction workers who could come into contact with contaminated soil and ground water during site grading and foundation laying if site cleanup is not accomplished. Gardeners at the new development could also potentially be exposed to site contaminants if they are required to handle potentially contaminated soil. If the site cleanup does not occur, volatile organic compounds may be released from fuel and solvent contaminated soils during site grading. This may cause adverse health impacts on nearby residents who may inhale these vapors. In addition, office and production personnel, as well as nearby residents, could be exposed to volatile organic vapors emitted from contaminated soils in the project area or treatment systems erected to treat local contaminated ground water.

<u>Park</u>. An unknown number of people would be attracted to the proposed 9-acre recreational park, which would be the size of a large neighborhood park. Although the degree of risk associated with suspected contaminants is unknown, park visitors could potentially be exposed to hazardous materials and thus experience similar health effects, if no cleanup occurred.

Ease of Cleanup. In terms of ease of clean-up, the project's single-user would generally be in a good position to initiate a scheduled and organized remediation plan, be effective in reaching the attentions of regulatory agencies, and could have access to a sufficiently large budget to carry out such actions.

Ongoing Site Remediation. It should be noted that impacts associated with exposure to site contaminants would be mitigated to a large degree if site contamination investigations and site cleanup actions were undertaken at each of the sites prior to development. However, if an ongoing groundwater treatment program were initiated which involved emission of contaminant vapors to the atmosphere (such as an air stripper), the entire population within the project area could potentially be exposed to these vapors, depending upon the treatment method used and the degree of emission and release controls included in the treatment system design. Possible exposure symptoms could include upper respiratory tract irritation, headaches, nausea, mental confusion and possible increased cancer risks if carcinogens are emitted.

Accidental Releases. The employees at the proposed development and nearby residents could also face acute exposure hazards in the event of a possible hazardous substance release from the proposed industrial and research development (R and D) facilities due to an operational accident. Since this is not a focused EIR, no detailed information is available on site operations at the potential industries and R and D facilities that would be developed in the project area. Therefore, the specific impacts that might be expected to occur under these situations cannot be discussed at this time.

Operational Toxic Emissions. The employees at the proposed development and nearby residents could also face acute and chronic exposure hazards in the event that toxic air contaminants are emitted under the normal operations of the proposed industrial and R and D facilities. Since this is not a focused EIR, no detailed information is available on site specific operations and/or chemical processes at the potential industries and R and D facilities that would be developed in the project area. Therefore, the specific impacts that might be expected to occur under these situations cannot be discussed at this time.

MITIGATION MEASURES

Based on the Phase I Hazardous Materials Site Assessment of the Ravenswood Redevelopment Site, the following measures are recommended to mitigate the potential impacts to public health and safety arising from hazardous substances in the project area. The impact areas that would be mitigated by each measure are shown in parentheses following the measure.

- 1. Four Corners. Presumably underground storage tanks that were part of this facility are still present at the site. Prior to redevelopment of the site, the underground tanks must be removed in accordance with the requirements of the California Code of Regulations Title 23, Chapter 3, Subchapter 16. If soil contamination is detected at the time of removal, a site investigation plan to define the impact to soil and to ground water will have to be prepared and executed in accordance with the requirements of the San Mateo County DOHS and the RWQCB. Subsequently, required delineation and remediation activities will also have to be carried out in accordance with these agencies to obtain site closure and agency concurrence for completion of remediation. This should be completed prior to the initiation of any grading or construction activities at the site.
- 2. <u>Ongoing Site Remediation</u>. To reduce exposure of potential employees and nearby residents to volatile organic vapors from ground water remediation techniques such as aeration, other means such as slurry walls and vapors barriers can be employed. Carbon absorption units may be placed on the aeration stripping tower to remove volatile organic vapors from the tower emissions (ongoing site remediation).
- 3. Unknown Contaminated Sites. A follow-on focused, chemical process study aimed at researching current and specific historical land users' operations and their potentially deleterious activities, excluding the four known contaminated sites, is desirable. The purpose of these follow-on studies would be to classify each parcel so that essential site investigation and remediation decisions can be made. The historical land use survey as it now stands points to several sites at which seemingly innocuous activities are occurring and yet past land uses are known to have accommodated activities that need to further evaluated prior to planning and initiating a detailed site investigation.

Based on the results of the follow-on data collection study, a Phase II soil and groundwater investigation should be initiated. Investigative techniques such as soil borings, groundwater monitoring wells, and soil surveys should be conducted to evaluate the nature and extent of the subject property.

Remediation of environmental contamination characterized during the soil and groundwater investigation should be implemented and may include items such as slurry walls, vapor barriers and capping of land areas. This should be done prior to any site demolition, renovation, grading and construction activities to protect construction and future facility personnel (Remainder of the project area, roadways, park, construction impacts).

- 4(a). Asbestos. An asbestos survey of all structures for friable (i.e. readily crumbled) and nonfriable building materials should be conducted prior to building demolition or renovation. According to EPA rules (CFRT 61, Subpart M, Section 61.145, Standards for Demolition and Renovation), all friable asbestos is required to be removed prior to demolition or renovation of a building or section of building. Currently, neither federal nor state regulations require the removal of asbestos-containing materials (ACBM) at any other time. Should demolition or renovation activities occur that include abatement or friable asbestos, the removed materials must be disposed of as hazardous waste in accordance with Title 22, Chapter 30, Article 7, Section 666999 of the California Code of Regulation. Nonfriable asbestos must be removed in such a way as to not damage it, thereby rendering it friable. (Ravenswood Industrial Park-known contaminated sites and remainder of project area.)
- 4(b). Transformers. A determination should be made for all transformers within the Industrial Park as to whether they are owned and operated by PG&E and, if not, whether they are dry-core or contain dielectric fluids. If individually owned, fluid-containing transformers are discovered on the project site, samples of the fluid should be collected and analyzed for PCB and furan content. This exercise should be performed prior to demolition of the buildings. If the transformers are found to contain PCBs, appropriate measures should be taken to ensure that the PCBs and the transformers are properly disposed of or treated by federal and state regulations for hazardous and PCB wastes. Soil samples from the transformer pad area should be collected and analyzed for PCBs furans to determine if contamination may have occurred from past transformer leaks. Any contamination should be cleaned up prior to any site demolition, renovation, grading or construction to protect both construction and future facility personnel. (Ravenswood Industrial Park-known contaminated sites and remainder of project area.)
- 4(c). <u>Storage Tanks</u>. As part of the demolition activities, all underground storage tanks within the project boundaries should be removed according to state and local regulations. Any associated soil and ground water should be cleaned up as specified by the County of San Mateo, the state DOHS and the RWQCB prior to any site demolition, renovation, grading or construction activities to protect construction and future facility personnel. (Ravenswood Industrial Park known contaminated sites and remainder of project area.)

5. <u>Accidental Release</u>. To minimize the potential for public exposure to hazardous substances used, stored, or reclaimed at existing and proposed industrial plants and R and D facilities in the redevelopment of the project area, it is recommended that an evaluation of both normal operations and accidental releases should be performed. The evaluation should include a health risk assessment of the potential releases. The level of the evaluation proposed is that implemented in Risk Management Program and Prevention (RMPP) Plans in accordance with Chapter 6.95 of the California Health and Safety Code. However, it should include an analysis of all hazardous substances handled and should include a detailed health risk assessment (accidental release).

There is the question of the necessity for buffer zones to separate certain activities from others to attempt to ensure that contiguous activities do not deleteriously affect each other. In fact and in practice, buffer zones often have to be very extensive to provide the type of protection from remaining industries in the area and/or protection from remediation, consideration must be give to what is practical. Specifically, whereas the required extent of a physical buffer may not be feasible due to the limitation of land area, consideration should be given to facilities design. For example, one facility that is contiguous to a particularly hazardous area should not place air intake equipment immediately adjacent to the hazardous area. Similarly, activities that limit the amount of personnel present during the working hours such as warehousing, mechanical equipment rooms, and the like should be considered for the closest physical proximity to areas deemed to be potentially hazardous. Likewise, land uses that involve a high density of people such as office space or day care should not be located in close proximity to areas where hazardous materials are used, stored or generated.

Operational Toxic Air Emissions. To minimize the potential for public exposure to toxic air contaminants released from proposed industrial and R and D facilities in the project area, analyses of the process operations of all proposed facilities should be performed prior to final design and subsequent construction approval to thereby identify potentially deleterious toxic air contaminants that might be emitted under normal or emergency conditions. The facilities should then be required to incorporate preventive emission control measures into designs to minimize or reduce to an acceptable level these potential emissions. It should be noted that under California Assembly Bill 2588 (California Health and Safety Code Section 44300 et seq.), facilities that emit greater than a certain quantity of specified air toxics are required to prepare and implement an emission inventory plan. Based upon this plan, some facilities will be required to perform source testing and health risk assessments for air toxic emissions from their operations. These regulations may apply to some of the facilities that may be developed in the project areas, but may not apply to all facilities eventually constructed. Therefore, additional measures such as those described previously may be required. This could presumably be performed under focused EIRs.

6.

Other Recommended Mitigations:

 Mitigation for Known Contaminated Areas. Feasibility studies and remedial action plans for the Romic and Zoecon/Sandoz sites should be reviewed for adherence to minimum performance standards required to address the redevelopment agency's concerns. Negotiations with and lobbying of EPA may be required to meet the redevelopment agency's objectives. Long-term tracking of the Romic and Zoecon/Sandoz remediation programs should be implemented to ensure the protection of public health.

In the event that the Zoecon/Sandoz portion of the project site is to be developed, a health risk assessment of the impacts of the extensive arsenic contamination around Zoecon/Sandoz should be conducted (known contaminated sites).

2. <u>Regional Remediation</u>. Based upon the information collected about the Ravenswood Industrial Area (RIA) for the Program EIR, soil and ground water contamination may be expected at varying concentrations throughout the site due to past industrial activities. Additionally, some reports of soil and ground water contamination investigations show that there are high levels of organic contaminants in the soil and ground water in the redevelopment area. Underlying ground water in two large contiguous areas, which are the responsibility of others, are also highly contaminated.

Since the RIA contains approximately seventy (70) parcels of property, detailed soil and ground water contamination investigations for each of these parcels would be very costly and time consuming. Additionally, ground water cleanup levels stipulated by regulatory agencies for single parcel contamination are often very stringent due to the lack of information about the entire hydrogeological system in question and the potential impacts to other aquifers and contamination masses brought about by pumping and remediation activities. One measure of dealing with extensive soil and ground water contamination in the Ravenswood Industrial Area and complex problems posed by significant, contiguous contaminations is to treat the redevelopment area as a whole.

This approach entails developing data that fully characterizes existing soil conditions, acquifer and hydrogeological systems, flows, interconnections and similar phenomena. Once these relevant features have been described in technical detail, and investigations have been carried out to define location and the nature of existing contaminants, rates of ground water flow, fate, and transport, a remediation plan can be assembled and presented to regulatory agencies for the resolution of soil and ground water contamination in the entire area. Such a program would focus resources on cleaning the entire affected system (to a level satisfactory to regulatory agencies) as opposed to piecemeal characterization and cleaning. Once such an approach is approved and cleanup levels are established, remediation activities can take place over a long period of time and can be coordinated and coexist with redevelopment. Additionally, the data developed about the presence of contaminants in the soil and ground water systems can be used in geotechnical designs and the design of systems to prevent the movement of vapors and other soil and ground water contaminants into structures and thereby have a deleterious impact on constructors of occupants (ease of cleanup).

Footnotes

/1/ CERCLA and its 1986 Amendments (SARA) clarify the issues of contaminated property and transfers to new owners. Since the sale of land or a deed constitutes a contractual relationship, a subsequent purchaser of property may be held liable for contamination caused by the prior owner(s). A landowner who acquires land not knowing that it is contaminated ("innocent landowner") and has no reason to be aware of such contamination, may have a defense to the joint and several liability for cleanup of that property prescribed by CERCLA. To qualify for "innocent landowner" status, the landowner must show that at the time of purchase he has undertaken "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice."

/2/ San Mateo County Department of Health Services files on 1805 Bay Road.

/3/ California Department of Health Services and San Mateo County Department of Health Services files on 1805 Bay Road Electrite Co.

4.5 TRAFFIC AND CIRCULATION

EXISTING SETTING

This section describes the existing transportation systems within the project area based on a report prepared by Korves Engineering, Inc. (December 1989). The traffic study area focuses on areas in East Palo Alto, Palo Alto and Menlo Park, and is bounded roughly by Bayfront Expressway, Willow Road, the Bayshore Freeway (Route 101) and Embarcadero. The topics addressed are as follows:

- a. Traffic
- b. Transit
- c. Bicycles
- d. Pedestrians

The environmental setting is described in terms of existing (1988/89) conditions. In addition, future base traffic conditions are addressed which generally correspond to the Year 2010. Future base conditions include projected traffic volumes from other planned developments located in the vicinity of the project and regional through trips.

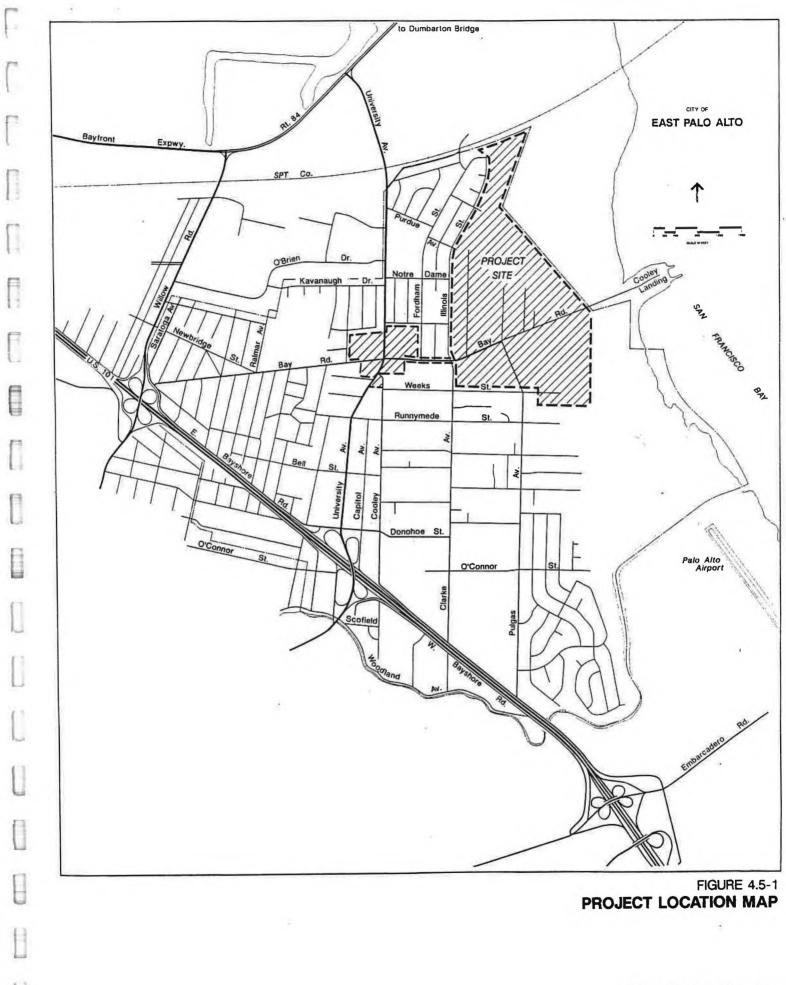
Traffic

The following discussion employs the directional conventions used by the City of East Palo Alto which consider University Avenue as a north-south street and all cross streets as east-west roadways.

Regional Access. As shown in Figure 4.5-1, the project area is located in the north-east corner of East Palo Alto. Regional access is provided by the Dumbarton Bridge which runs north of the project area, and the <u>Bayshore Freeway</u> (<u>Route 101</u>) a 6-lane facility which runs the length of the Peninsula from San Francisco to San Jose, south of the project area. The <u>Dumbarton Bridge</u> is a 4 lane toll bridge facility which provides direct access to the East Bay and Interstate 880. The Dumbarton connects to Bayfront Expressway which provides access to Route 101 via Willow Road and University Avenue.

<u>Bayfront Expressway</u> (Route 84) is a 4-lane limited access roadway connecting the Dumbarton Bridge and Marsh Road interchange at the Bayshore Freeway, north-west of the project area. The Bayfront Expressway provides Dumbarton Bridge access to Willow Road and University Avenue, as mentioned above.

<u>University Avenue</u> provides a continuous route between the Dumbarton Bridge and Stanford University in Palo Alto. The existing primary regional access to the project area occurs at University and Bay Road. University Avenue is designated as State Route 109 near the project area, and provides a connection to Route 84 and the Dumbarton Bridge north of East Palo Alto. University Avenue is a 4-lane facility near the project area, and a 2-lane facility south of the Bayshore Freeway through Palo Alto.



Korve Engineering, Inc.

<u>Willow Road</u> provides a north-south connection between the Bayfront Expressway and Middlefield Road, east of the project area. Between the Bayfront Expressway and the Bayshore Freeway, Willow Road is designated as State Route 114. Willow Road has 4 lanes north of the freeway and at the Bayshore interchange, and 3 lanes south of the freeway.

East Bayshore Road is a two lane roadway which serves as part of the Bayshore Freeway frontage road system. East Bayshore provides access from the North Bayshore area in Mountain View to Palo Alto, East Palo Alto and Willow Road at the Menlo Park boundary. This frontage road is south of the project area and runs north of the freeway. It is classified as an arterial roadway between University and the Palo Alto city limit, and a collector between University Avenue and Bay Road.

<u>Donohoe</u>, a two-lane roadway provides the closest access to the Bayshore Freeway south of the project area. Donohoe connects to the northbound on-ramps and bridge overcrossing. University Avenue crosses Donohoe leading to the northbound on-ramp and a signalized intersection at Capitol, which connects to the northbound off-ramp.

The double interchange of <u>Embarcadero Road and Oregon Expressway</u> provides the closest connection to the Bayshore Freeway east of the project area. Embarcadero is a five-lane arterial connecting the Bayshore and El Camino Real at the Galvez Street entrance to Stanford University. Oregon Expressway (Santa Clara County G3) provides a four-lane limited access connection to El Camino where the G3 continues as the page Mill Expressway.

Local Access to the Project Area. The primary streets which access the project area are Bay Road, Clarke Avenue, Demeter Street and Pulgas Avenue. These streets provide circulation throughout the Industrial Section and access to the regional roadway network.

<u>Bay Road</u> is a 4-lane east-west arterial that connects the Industrial Section to the "Four-Corners" Section and continues as a 2-lane road through the Industrial Section to Cooley Landing. This roadway provides direct access to University Avenue, and continues west of University, where it connects to East Bayshore Road.

<u>Clarke Avenue</u> is a two-lane roadway which begins at a "T" intersection with Bay Road and connects to East Bayshore Road south of the project area.

<u>Pulgas Avenue</u> provides a connection between Bay Road and East Bayshore Road, south of the project area. Pulgas is a two-lane arterial that runs in a north-south alignment, parallel with University Avenue

Existing Traffic Levels. Current traffic conditions at several locations within the immediate vicinity of the project area and the surrounding roadways were obtained through a traffic counting and data collection effort. Current count data was collected in East Palo Alto along University Avenue. Counts were also assembled from recent traffic and environmental studies, and from Menlo Park's traffic count program.

Evening peak hour turning movement count data was used to estimate the Average Daily Traffic (ADT) of intersecting roadways at locations where current data was unavailable. This method assumed that ten percent of daily travel occurs during the pm peak hour. Figure 4.5-2 shows the average daily traffic volumes within the vicinity of the project. As shown, substantial traffic volumes occur along Bayfront Expressway, University Avenue and Willow Road. These roadways provide access to Route 101. As a result, heavy congestion occurs during the peak periods.

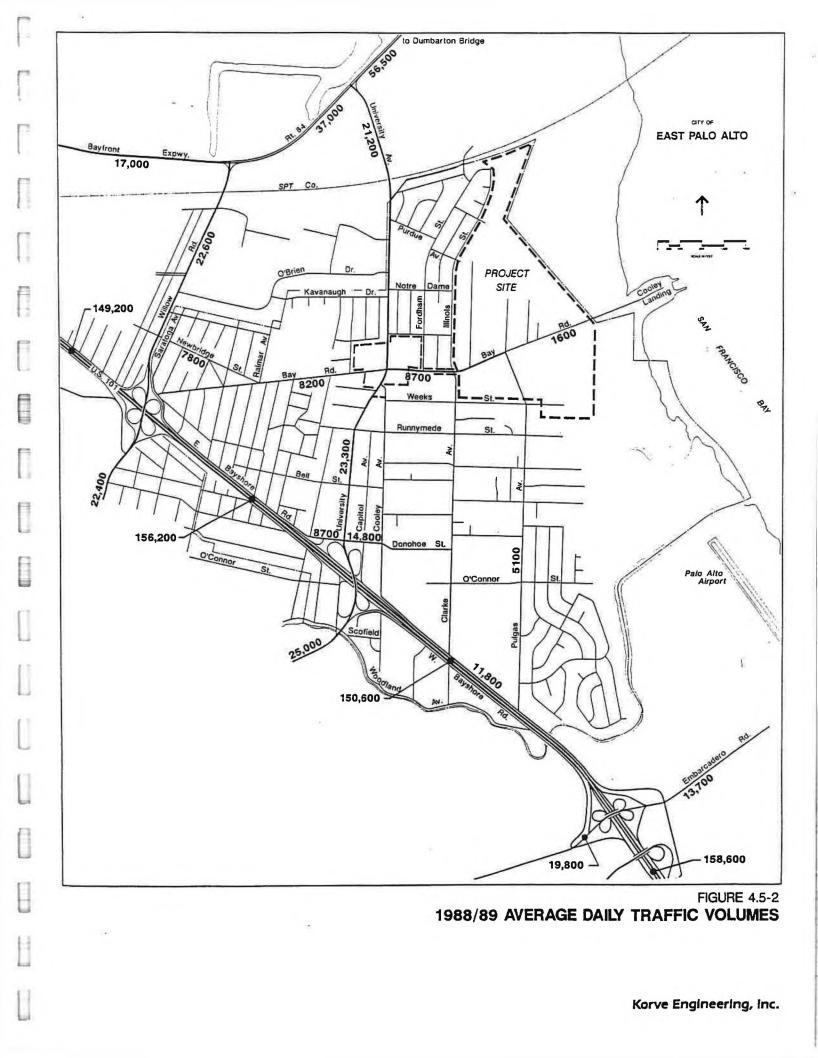
Intersection Service Levels. In order to evaluate the existing traffic conditions, as well as provide a basis for comparison of conditions before and after project generated traffic is added to the street system, the Level of Service (LOS) was analyzed at several critical signalized intersections. (See Figure 4.5-3 for the location of intersections included in this analysis.) The LOS evaluation indicates the degree of congestion which occurs during peak travel periods and is the principal measure of roadway performance.

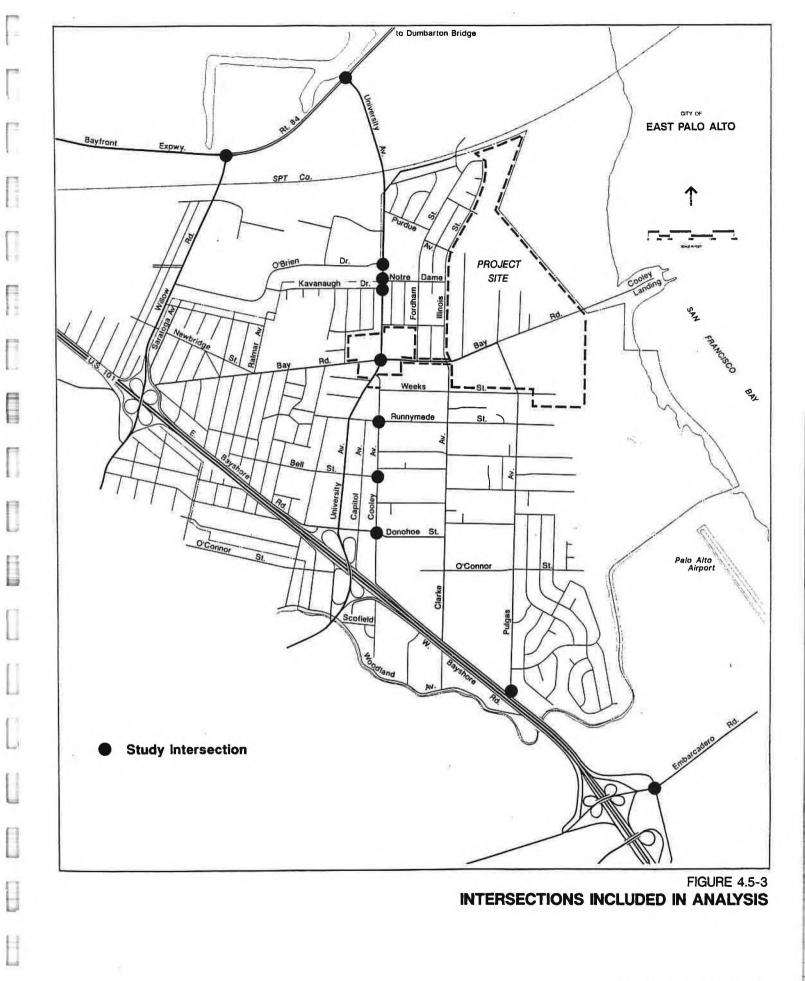
Existing traffic conditions at signalized intersections have been evaluated for am and pm peak hours using the "Planning Methodology" from <u>Transportation</u> <u>Research Board Circular 212</u>. This methodology is widely used in EIRs and generally provides conservative estimates of intersection capacity compared to most other techniques.

Table 4.5.1 defines the Levels of Service for signalized intersections, which range from "A" free flow conditions to "F" jammed conditions. LOS A,B, and C are generally considered satisfactory service levels, while LOS D is marginally acceptable, LOS E is undesirable, and LOS F conditions are unacceptable, although such conditions frequently occur at heavily-loaded urban intersections in the Bay Area.

Table 4.5.2 identifies am and pm peak hour levels of service (LOS) and volume to capacity rations (V/C) at critical study intersections in the vicinity of the project. Based upon the evaluation, the intersection at University and Bayfront Expressway operates in the E range during the morning and evening peak hours, and the Willow/Bayfront intersection operates at LOS F with a V/C ratio of 1.11 during the am peak hour.

Although acceptable service levels were computed at the remaining intersections based upon measured volumes, significant queueing of regional flows occurs due to capacity constraints affecting the access roadways serving the Dumbarton Bridge: In the am peak period, backups can develop from the University/Bayfront intersection extending back across the span. Morning traffic generally flows down University Avenue in a heavy but uninterrupted fashion. The heavy flow of northbound regional traffic onto the Dumbarton Bridge in the pm peak period backs up for varying lengths approaching the University/Bayfront intersection due to the single lane capacity provided at this point. This heavy regional flow subjects local drivers to slow speeds northbound along University in the evening peak period. Additional pm peak period backups associated with regional flow occur at the Donohoe/Capitol





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Table 4.5-1 LEVEL OF SERVICE DEFINITIONS Signalized Intersections

Level Of Service	Stopped Delay (Sec./Veh.)	Volume to Capacity Ratio	Description of Traffic Condition
A	<5.0	0.0 - 0.59	Insignificant Delays: No approach phase fully utilized and no vehicle waits longer than one red indication.
В	5.1 - 15.0	0.60 - 0.69	Minimal Delays: An occasional approach phase is fully utilized. Drivers begin to feel restricted.
С	15.1 - 25.0	0.70 - 0.79	Acceptable Delays: Major approach phase may become fully utilized. Most drivers feel somewhat restricted.
D	25.1 - 40.0	0.80 - 0.89	Tolerable Delays: Drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.
E	40.1 - 60.0	0.90 - 0.99	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long queues of vehicles form upstream.
F	<60.0	1.00 <u><</u> *	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections and queues may form which do not dissipate.

* While actual volumes through an intersection cannot exceed capacity, the demand can exceed capacity.

Sources:

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<u>Highway Capacity Manual</u>, Highway Research Board, Special Report No. 87, Washington, D.D. 1965; <u>Interim Materials on Highway Capacity</u>, Transportation Research Board Circular 212, Washington D.D., 1980 <u>Highway Capacity Manual</u>, Transportation Research Board Special Report No. 209, Washington, D.C., 1985; Korve Engineering, Inc. intersection (in some instances extending back up the Bayshore Freeway off-ramp) and approaching the Pulgas/East Bayshore intersection along East Bayshore.

It should be noted that Caltrans, in response to the October, 1989 earthquake, recently re-striped the Dumbarton Bridge to provide three lanes in each direction as well as improved the merge of northbound University traffic onto the roadway segment approaching the bridge. It appears that queueing along University has diminished since this has occurred, but before and after queue length and volume data are not available to confirm this has occurred.

Intersection service levels have been computed for University as well as other locations studied based upon ground counts which reflect the number of vehicles passing through each location during the peak travel period. All of the count data presented in this report along University Avenue were collected when traffic was flowing without significant back-ups.

Depending upon the length of the queue, the flow exiting the Bay intersection or others further south can be restricted. Under such conditions, the intersection service level would be qualitatively rated at "LOS F". (The Circular 212 Planning Method used to evaluate service levels does not provide a quantitative method for evaluating service levels under such conditions.)

	AM Pe	eak Hour	PM Pe	ak Hour
Intersection	LOS	V/C	LOS	V/C
iversity/Bayfront	Е	.96	Е	.95
iversity/Kavanaugh	Α	.51	Α	.57
iversity/Notre Dame	Α	.52	В	.63
iversity/O'Brien	Α	.37	D	.88
iversity/Bay	Α	.55	С	.74
iversity/Runnymeade	Α	.45	Α	.45
iversity/Bell	Α	.47	Α	.40
iversity/Donohoe	В	.65	В	.63
low/Bayfront	F	1.11	С	.72
gas/East Bayshore	Α	.45	D	.90
barcadero/E Bayshore	N/A		D	.82

Table 4.5.2 Existing Traffic Conditions at Signalized Intersections AM/PM Peak Hour Levels of Service and Volume/Capacity Ratios

Programmed Improvements. A variety of local and regional roadway improvements have been programmed or are under study over the longer term. Some of these improvements are included in the State transportation Improvement Plan (STIP) or in the spending program of the San Mateo County Traffic Authority (Measure A). /1/

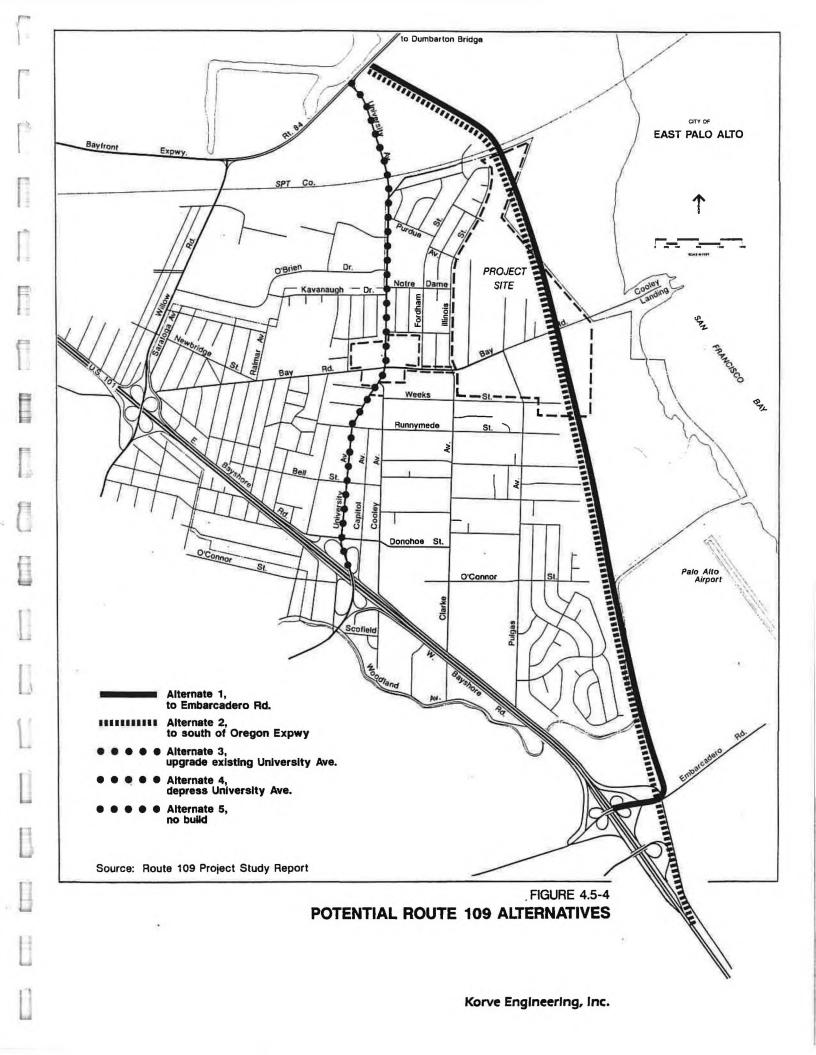
Bayfront Expressway (State Route 84). The new state toll fund will provide funding for the widening of the Bayfront Expressway from 2- to 4-lanes. The project will be developed in two phases; Phase 1 will widen the roadway from University Avenue (end of Dumbarton Bridge approach) to Willow Road and Phase 2 will widen the expressway to 4-lanes from Willow Road to Marsh Road. The San Mateo County Transportation Authority will fund a northern extension of the Bayfront Expressway from Marsh Road to Woodside Road and improvements of the existing section of SR 84 between Route 101 and El Camino Real (SR 82). This extension scheduled for construction in 1996/97, will eliminate the Route 84/US 101 route overlap between Woodside Road and Marsh Road.

In response to the October, 1989 earthquake, Caltrans re-striped the Bayfront Expressway to provide 4 through lanes. (Caltrans also provided 2 additional through lanes on the Dumbarton Bridge itself.) Therefore, the Transportation Authority project has been modified to a shoulder upgrading project since the through lanes have already been provided.

Route 109. Caltrans has recently completed a Project Study Report (PSR) for Route 109, which would connect the Dumbarton Bridge to destinations south of the bridge. The PSR is a preliminary evaluation of the range and scope of alternatives to be considered by Caltrans in the environmental review process. Under recent state legislation, a PSR is required before a freeway modification project can be included in the master priority list of state highway projects, (the State Transportation Improvement Program, STIP). When the PSR is approved, a cooperative agreement is drawn up with the local governments. The PSR does not provide a recommended alternative, but states that the next step in the study process would be a request by Caltrans to the California Transportation Commission (CTC) to proceed with a route adoption study through incorporation into the STIP.

Several alternatives for Route 109 were discussed in the PSR, including a widened University Avenue, a depressed University Avenue, as well as an alignment along the Bayside of East Palo Alto connecting to Route 101 at Embarcadero or Oregon Expressway interchanges. The latter alternatives run east of the project area. (See Figure 4.5-4) Implementation of alignment Alternative 1 or 2 would clearly provide significant relief to University Avenue and Willow Road as well as allow the possibility for providing an eastern access point to the Redevelopment area. Because the route adoption is not identified in the 1989 PSTIP and the funding source for the study is uncertain, this analysis does not assume any change in conditions along the Route 109 corridor.)

Bayshore Freeway Widening. A project to widen the Bayshore Freeway from the Santa Clara County Line to Whipple Avenue in Redwood City has been approved under the 1989 California State Transportation Improvement Plan. The project will widen this segment of the freeway from 6- to 8-lanes. Funding for this project will be provided by the State of California and construction should begin by mid 1990. The San Mateo County Transportation Authority has also proposed to develop auxiliary lanes along the shoulder, resulting in an ultimate 10-lane section between traffic interchanges. This is programmed for



Typical trip generation rates for short-term projects were based on previous traffic studies conducted in East Palo Alto, and Palo Alto. These rates are shown in Table 4.5.7. Traffic from projects in Palo Alto was based upon the City's trip generation rates incorporated in the Palo Alto Land Use and Transportation Study. Service levels at signalized intersections are evaluated using these forecast for the morning and evening peak hours.

Direct project impacts are identified by a comparison of traffic volumes and service levels without project trips, to volumes and service levels with project trips. Traffic conditions are evaluated by adding project traffic to the short-term base traffic. Service levels are evaluated using the existing intersection geometries.

Table 4.5.7 TYPICAL TRIP GENERATION RATES Used to Compute Trip Generation of Short-Term Projects

Land Use	Units ^a	Daily	AM Pk	Hr.%In	PM Pk	Hr.%In
Office	KSF	17.71	2.50	85	2.83	14
Business Park	KSF	14.30	2.00	89	2.04	20
Retail	KSF	69.71	3.33	51	8.08	48
Hotel	Rooms	8.70	.70	66	.66	54
Single-family Housing	Units	10.01	.85	25	1.07	64
Multi-family Housing	Units	6.12	.53	18	.69	75
Hospital	KSF	16.69	1.21	72	1.58	20
Restaurant	KSF	90.00	2.00	50	8.00	70
Research Center	KSF	5.30	1.20	92	.90	11
Theatre	KSF	78.00	0.00	0	7.90	70
Stanford Rates:						
Student (non-resident)	Person	1.8	10	72	10	28
Faculty (non-resident)	Person	3.2	10	66	10	34
Staff(non-resident)	Person	4.9	10	61	10	39
Visitors	Person	4.9	10	61	10	39

^aKSF is gross square feet in thousands.

Sources: ITE Trip Generation Manual, 3rd and 4th Editions; City of Palo Alto Trip Generation Rate Table Table 4.5.8 identifies the impact of the short-term future traffic growth with and without the project and land use alternatives at key signalized intersections. As shown, the short-term base projects would result in significant increases in traffic congestion along University Avenue, as well as at the Willow/Bayfront, Pulgas/East Bayshore and Embarcadero/East Bayshore intersections, thus warranting consideration of local roadway improvements to accommodate areawide travel growth, even if the redevelopment project were not approved.

The project would significantly degrade the level of service at most of the analyzed intersections during the peak hour. The highest project impacts would occur along University Avenue, where five of the critical intersections would operate at LOS F. The LOS of Embarcadero/Bayshore would also degrade from D(V/C.86) to E(V/C.97). (The impact of adding project traffic to the short-term base level is least with Project Alternative 2, where the largest increase in V/C ratio occurs at University/Bay which increases by (.40).) These direct impacts would be considered significant by the City of East Palo Alto's criteria for negative impacts.

Under pm peak hour situations in which northbound University is suffering from the queue of regional flow, it is difficult to quantify project impacts. The service level impacts indicated in the tables give the relative impact of the project, based upon existing traffic count data collected at times when intersections were not blocked by upstream queuing. When northbound traffic is queueing along University in the pm peak hour period, the impact of the project will displace flows coming onto University from locations further south. However, since local drivers generally avoid making trips along this segment at this time, the true impact is the displacement of regional flow coming into East Palo Alto. This displacement of traffic will therefore add to delays incurred by regional through traffic using East Palo Alto streets. It should be noted that the Redevelopment project is intended to attract a relocating "Silicon Valley" employer to East Palo Alto. If this occurs, then the analysis overestimates by as much as 20 percent am southbound and pm northbound impacts on the Bayshore Freeway, University Avenue, and the Dumbarton Bridge because these vehicles are presumably already using these routes today.

Average daily traffic impacts were evaluated by a comparison of volumes with and without project traffic. On streets bordered by residences, the most significant impacts occur when daily traffic volumes climb from a level below 3,000 ADT into the 3,000 to 5,000 ADT range.

The projected daily traffic levels for the short-term growth scenarios are presented in Figure 4.5-6. As shown, the highest volume increases would occur along Bay Road and Newbridge, where the volumes would experience increases of approximately 50% due to added project traffic. However, Bay Road is designated as an arterial roadway, and has adequate capacity to accommodate projected short-term volumes. Clarke Avenue would have daily traffic levels in excess of 5,000 trips with the short-term cumulative growth traffic; the greatest increase in projected traffic would be 11 percent with Alternative 1. The project would have no significant impact on Notre Dame or Fordham Streets.

Table 4.5-8 PROJECT IMPACT ON SHORT-TERM FUTURE TRAFFIC CONDITIONS

	Short-Term Base			t-term oject	Short-term w/Alt. 1		Short-term w/Alt. 2	
	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C
AM Peak Hour								
University/Bayfront	F	1.40	F	1.41	F	1.41	F	1.40
University/Kavanaugh	Α	.57	В	.63	в	.63	В	.62
University/Notre Dame	Α	.47	В	.64	В	.64	В	.63
University/O'Brien	Α	.43	Α	.56	Α	.56	Α	.53
University/Bay	В	.61	F	1.27	F	1.07	F	1.10
University/Runnymede	Α	.53	С	.79	В	.65	в	.70
University/Bell	Α	.54	В	.64	A	.56	Α	.57
University/Donohoe	С	.77	D	.88	D	.86	D	.86
Willow/Bayfront	F	1.85	F	1.85	F	1.85	F	1.80
Pulgas/East Bayshore	Α	.46	Α	.53	Α	.50	Α	.51
University/North Access	N/A		в	.61	В	.62	Α	.53
PM Peak Hour								
University/Bayfront	Е	.94	F	1.07	F	1.07	F	1.07
University/Kavanaugh	В	.63	В	.70	в	.70	в	.69
University/Notre Dame	в	.70	D	.81	D	.81	С	.79
University/O'Brien	Ε	.94	F	1.04	F	1.04	F	1.02
University/Bay	D	.81	F	1.29	F	1.15	F	1.20
University/Runnymede	Α	.53	D	.90	С	.74	D	.81
University/Bell	Α	.49	D	.90	С	.74	D	.81
University/Donohoe	В	.68	F	1.02	Е	.92	Ε	.95
Willow/Bayfront	Е	.95	E	.98	E	.98	D	.81
Pulgas/East Bayshore	E	.92	Е	.95	Е	.94	E	.94
Embarcadero/E Bayshore	D	.86	E	.97	Ε	.97	Ε	.94
University/North Access	N/A		F	1.05	F	1.03	E	.99

AM/PM Peak Hour Level of Service and Volume/Capacity Ratios

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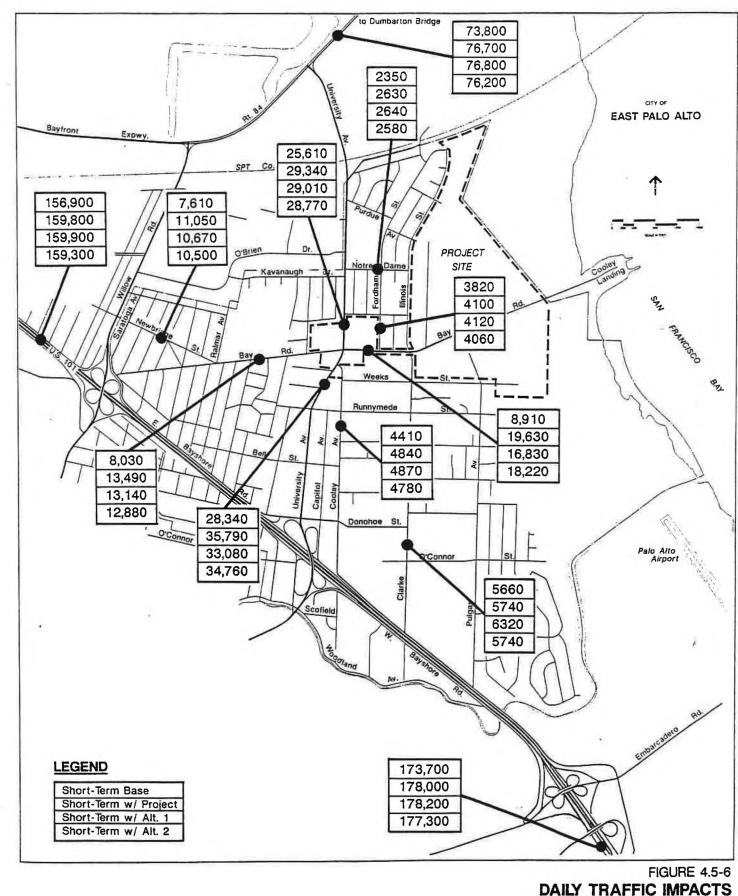
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WITHIN PROJECT AREA (Short-Term) The addition of project traffic to the short-term growth scenario outside the immediate study area would incrementally add to current congestion on the Bayshore Freeway and the Dumbarton Bridge, which provide regional circulation to the project vicinity. Given the distribution of traffic volumes as previously presented, approximately 2,900 northbound, and 4,000 southbound project generated vehicles would utilize the Bayshore Freeway on a daily basis. This represents a total increase of approximately 2 to 2½ percent in Bayshore Freeway volumes within the vicinity of the project. However, the Bayshore Freeway will be widened as a result of San Mateo county Traffic Authority Projects. Daily volumes on the Dumbarton bridge would increase by 2,900, or 4 percent due to project added traffic. This represents a 4 percent increase in daily volumes on the bridge. (However, the impact to the bridge will mainly occur at the signalized intersection of Bayfront/University.)

Transit Impacts

It is likely that the project would add to the existing need for additional service on the SAMTRANS 50C, 50V and 6A routes.

Public transit ridership by Peninsula commuters would be extremely limited due to the existing over-capacity loads and the need to provide an improved transit link between the project area and the Palo Alto Caltrain Depot. It is estimated that up to 30 percent of the employees would commute by bus to the project area. However, in the absence of a proposed TDM Program, it is estimated that a maximum of 5 percent would use transit. This reduction in trips would not significantly reduce the projected traffic levels.

Bicycle Impacts

Bay Road and Pulgas Avenue, which are presently designated as bike paths would remain in service as bike routes and would continue to be designated as bike routes near the project are. The project bike trail system would connect the existing routes at the south end of the industrial area, to the designated north of the area, which eventually connects to the Dumbarton Bridge bike path. In essence, the project enhances the bicycle system near the project area.

Pedestrian Impacts

The implementation of the project would result in a substantial improvement to the pedestrian circulation within the industrial park area. The project includes a pedestrian and bike trail system in and around the project site. The pedestrian system would provide a well identified pathway for both pedestrians who are destined for the project and for pedestrians traveling Cooley Landing located on the southeast corner of the industrial park area. Sidewalks would also extended along Bay Road to provide an improved pedestrian connection to University Avenue.

MITIGATION MEASURES

Traffic

Recommended mitigations include a combination of physical improvements as well as a highly aggressive Traffic Demand Management (TDM) program to reduce traffic generated by the project.

Physical Improvements. Project mitigations would be required at five of the University Avenue intersections which would operate at unacceptable levels under the terms set by the City of East Palo Alto. Improvements would also be desirable at the Embarcadero/East Bayshore and Willow/Bayfront intersections. The recommended mitigations at each of these locations are discussed in the following text. (Table 4.5.9 shows the resulting service levels with the recommended physical improvements.)

Table 4.5.9 SERVICE LEVELS AND V/C RATIOS WITH MITIGATIONS AM/PM Peak Hour

	Short-term w/Project		Short Term w/Alt 1		Short Term w/Alt. 2	
I	los	V/C	LOS	V/C	LOS	V/C
AM Peak Hour						
University/O'Brien	Α	.53	Α	.53	Α	.51
University/Bayfront	F	1.33	F	1.33	F	1.33
University/Bay	D	.90	D	.84	С	.79
University/Donohoe	С	.78	С	.77	С	.78
Willow/Bayfront	F	1.82	F	1.82	F	1.80
PM Peak Hour						
University/O'Brien	D	.83	D	.83	D	.81
University/Bayfront	Ε	.97	E	.97	E	.92
University/Bay	F	1.16	F	1.10	F	1.05
University/Donohoe	Ε	1.00	D	.88	E	.92
Embarcadero/E. Bayshore	D	.86	D	.86	D	.83
Willow/Bayfront	E	.95	Е	.95	D	.81

<u>University/Bayfront</u>. This intersection is at or very close to capacity under the short-term scenario which limits utilization of full capacity of the Dumbarton Bridge. The impact of regional through traffic which is generated on University Avenue and Willow Road due to lack of a true regional connection between the Bayshore freeway and Dumbarton Bridge is evident. In the absence of such a connection, the arterials located in East Palo Alto and Menlo Park are heavily burdened with regional through trips. The negative impact of a change in the pm peak hour V/C of .13 with project traffic could be mitigated by the construction of a second through lane along Route 84 or Bayfront for eastbound travel towards the Dumbarton Bridge. The demand for the northbound left-turn lane onto Route 84 is such that an additional left-turn lane could be provided for this movement as well.

These improvements would decrease the V/C ratio by .10. It is therefore recommended that Caltrans include this mitigation in the design of the planned improvement project along Route 84.

<u>University/O'Brien</u>. Significant negative impacts would occur at this location with the project and project alternatives during the pm peak hour. Heavy eastbound left-turns from the Menlo Park Industrial zone conflict with University Avenue through movements at this location.

The project impact could be mitigated by the construction of dual left-turn lanes from O'Brien to University northbound. This would require widening of the O'Brien leg of the intersection, relocating the north curb, restriping, as well as signal modifications.

The mitigation would improve the level of service and increase the V/C ratio by .21. The intersection would operate at LOS D with a V/C ratio of .83.

<u>University/Bay Road</u>. The service level at University/Bay Road would approach the LOS F threshold without mitigations. Potential solutions to this condition would be to add dual west-bound left-turn lanes, and exclusive west-, east-and southbound right-turn lanes at this intersection. In order to accommodate these additional lanes, street widening on both University and Bay Road would be required.

With these improvements in place, the University/Bay Road intersection would operate at LOS D with a V/C ratio of .83 with the project. This intersection is further improved with Alternative 2 which would increase the V/C ratio from 1.01 to .81. Although significant changes in V/C ratios would occur, the resulting traffic condition would remain LOS F with short-term plus project traffic.

<u>University/Donhoe</u>. This intersection would experience significant negative impacts with the project and project alternatives added traffic. The heavy through volumes traveling north and southbound along University Avenue create the demand for an exclusive southbound right-turn lane. Implementation of this measure would require moving the curb. The intersection would operate at LOS E with of V/C ratio of 1.00 with added project traffic and mitigations in place during the evening peak hour.

<u>University/North Access</u>. This intersection would operate at LOS F (1.05) during the pm peak hour with the short-term and long-term cumulative growth. Acceptable service levels at this intersection could only be accomplished with the widening of University Avenue.

<u>Embarcadero/East Bayshore</u>. The heavy northbound left-turn movement at this location warrants providing a second exclusive left-turn lane at this

intersection. This could be provided by re-striping the existing through/left lane to left-turn only. Elimination of the shared lane would allow upgrading the traffic signal and would further improve operations by reducing delay. As a result, this intersection would operate at LOS E with a V/C ratio of .97. An overall improvement in V/C ratio of .02 could be accomplished with the traffic mitigations.

<u>Willow/Bayfront</u>. Similar to the University/Bayfront intersection, this location would experience an increased amount of congestion from the short-term scenario without project traffic. This a result of heavy regional travel from the Dumbarton Bridge to the Bayshore Freeway.

Because this intersection is an LOS F (1.85 V/C) with or without the project, this is <u>not</u> considered a significant project impact. However, unsatisfactory service levels due to regional traffic and short-term projects approved by Menlo Park would warrant consideration of improvements at this location. Improvements at this location would include additional west- and eastbound through lanes, and the construction of dual left-turn lanes northbound on Willow at Bayfront.

These mitigations would decrease the V/C ratio by .03, however, the intersection would continue to operate at LOS F. It is recommended that Caltrans include this mitigation in the design of the planned improvement project along Route 84.

Traffic Demand Management Program (TDM). Another principal means of mitigation for negative peak hour traffic impacts is an attainment of a reduction in peak period travel. This could be accomplished through an aggressive Traffic Demand Management Program (TDM), which aims to reduce the incidence of peak period single occupant vehicles by encouraging carpools, vanpools, transit use, and off-peak travel.

In order to test the effectiveness of TDM, calculations of peak hour service levels with physical improvements and TDM have been accomplished. The analysis assumes attainment of peak period reductions of 35, 20, and 10 percent, for the project, Alternative 1 and Alternative 2, respectively. It should be noted that the level of reduction associated with the project and Alternative 1, while not unattainable, would require a comprehensive TDM program including measures such as:

- o Full Time Staffing
- o Employee Transportation surveys and reporting on a regular basis
- o Carpool Matching and Incentives
- o Vanpool Matching and Subsidies
- o Operation of Club Buses
- o Parking Management
- o Improved Transit Service and Promotion

The effectiveness of TDM measures and strategies which could be used to further mitigate project impacts is represented in Table 4.5.10, which shows the level of service and V/C ratio results at mitigated intersections. TDM would also improve traffic conditions at intersections which would not require phisical improvements.

Table 4.5.10 SERVICE LEVELS AND V/C RATIOS WITH MITIGATIONS AND TDM REDUCTIONS: AM/PM Peak Hour

	Short-term w/Project			Short Term w/Alt 1		t Term Alt. 2
I	LOS	V/C	LOS	V/C	LOS	V/C
AM Peak Hour						
Jniversity/O'Brien	Α	.50	Α	.51	Α	.50
Jniversity/Bayfront	F	1.33	F	1.33	F	1.33
Jniversity/Bay	В	.67	В	.69	В	.70
Jniversity/Donohoe	С	.77	С	.77	С	.78
Villow/Bayfront	F	1.80	F	1.81	F	1.80
Jniversity/North Access	Α	.50	Α	.55	Α	.51
M Peak Hour						
Jniversity/O'Brien	С	.80	D	.81	D	.80
Jniversity/Bayfront	E	.94	Е	.96	E	.95
Jniversity/Bay	E	.91	E	.94	Е	.92
Jniversity/Donohoe	D	.89	D	.84	Ε	.90
Embarcadero/E. Bayshore	D	.82	D	.84	D	.82
Villow/Bayfront	D	.81	Е	.95	Е	.95
	E	.95	Е	.98	Е	.96

The TDM program coupled with the intersection improvements generally improves the overall performance of the analyzed intersections. The impact of such mitigations is greatest at the Industrial Section project access points which occur at the University/Bay and University/North Access intersections. Excepting the Bayfront Expressway intersections which are heavily impacted by Regional flows, LOS E or better conditions would prevail at local street intersections for project traffic.

Proposed mitigation will not reduce traffic congestion to a less-thansignificant level, therefore, this impact is an unavoidable adverse impact.

Transit

The City of East Palo Alto and transit operators should explore route diversions to serve the industrial site, including AC Transit's Dumbarton Bridge service and Santa Clara County service from southeast Palo alto. Bus shelters and transit service amenities should be provided at the SAMTRANS bus stops near the project area.

Cumulative (Long-Term) Traffic Impacts

The cumulative traffic analysis considers project impacts in the context of traffic levels associated with the long-term or approved plus proposed projects in the project vicinity. The additional projects are listed in the following table.

Table 4.5.11 LONG-TERM BASE PROJECTS

Project Name/Location	Land Use	Quantity	Units
Menlo Park:			
1600 El Camino Real 320 Middlefield Road I-280/Sand Hill Road 2725 Sand Hill Road	Office Single-family Hotel Office	24,500 250 376 147,000	sq. ft. units rooms sq. ft.
Palo Alto:			
Stanford Shopping Center Palo Alto Med. Foundation	Retail Medical Ctr.	65,000 60,000	sq. ft. sq. ft.

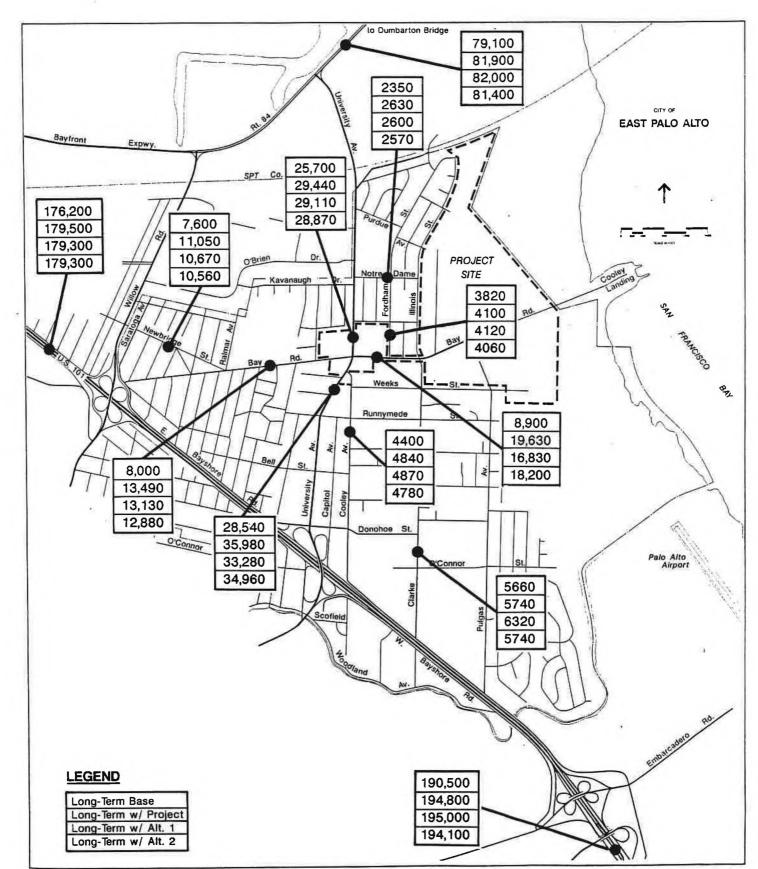
Similar to the short-term forecast, traffic due to long-term cumulative projects was forecast by computing the trip generation associated with each project and assigning traffic to roadways in accordance with the anticipated travel distribution and most likely routes of travel. The trip distribution applied to long-term cumulative projects were developed from previous traffic studies of Menlo park and Stanford projects. (Refer to Table 4.5.7 for trip generation rates used for the long-term cumulative projects.)

<u>Project impacts would be similar to the short-term case; the greatest impacts</u> would occur at the analyzed intersections along University Avenue, and at the Embarcadero/East Bayshore intersections.

The forecasted projected daily traffic levels for the long-term growth scenarios are shown in Figure 4.5.7. This graphic illustrates the increase in traffic that would occur by the Year 2010 with the project and project alternatives.

As in the short-term case, the greatest increase in volumes would occur along Bay Road and Newbridge Avenues. Project added traffic would increase volumes from 8,900 to 19,630, a 55 percent increase along Bay Road near the industrial park area. Newbridge would experience an overall increase of 31 percent.

Project added traffic on the regional circulation system includes an increase of 2,800 daily traffic volumes on the Dumbarton Bridge, or a 5 percent increase



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FIGURE 4.5-7 DAILY TRAFFIC IMPACTS WITHIN PROJECT AREA (Long-Term) in vehicle trips. The Bayshore Freeway would experience an overall increase of 7,600 vehicles, and a total increase of 4 percent in traffic volumes. Table 4.5.12 shows the project impact on cumulative traffic conditions.

Table 4.5.12 PROJECT IMPACT ON LONG-TERM CUMULATIVE TRAFFIC CONDITIONS

AM/PM Peak Hour Level of Service and Volume to Capacity Ratios

	Long-term w/Project		Long- w/A		Long-Term w/Alt. 2	
	LOS	V/C	LOS	V/C	LOS	V/C
M Peak Hour						
Jniversity/Bayfront	F	1.41	F	1.41	F	1.41
Jniversity/Kavanaugh	В	.63	В	.63	В	.62
Jniversity/Notre Dame	В	.64	В	.64	В	.63
Jniversity/O'Brien	Α	.56	Α	.56	Α	.53
Jniversity/Bay	F	1.27	F	1.07	F	1.10
Jniversity/Runnymede	С	.79	В	.64	С	.71
Jniversity/Bell	В	.64	Α	.56	Α	.57
Jniversity/Donohoe	D	.88	D	.86	D	.86
Villow/Bayfront	F	1.83	F	1.91	F	1.90
ulgas/East Bayshore	Α	.55	Α	.50	Α	.51
Jniversity/North Access	В	.61	В	.62	Α	.54
M Peak Hour						
Jniversity/Bayfront	F	1.08	F	1.08	F	1.05
Jniversity/Kavanaugh	С	.71	С	.71	В	.69
Jniversity/Notre Dame	D	.81	D	.81	С	.79
Jniversity/O'Brien	F	1.04	F	1.04	F	1.02
Jniversity/Bay	F	1.29	F	1.15	F	1.20
Jniversity/Runnymeade	E	.90	С	.74	D	.81
Jniversity/Bell	E	.91	С	.75	D	.81
Jniversity/Donohoe	F	1.02	E	.92	E	.95
Villow/Bayfront	Ε	1.00	Ε	1.00	Ε	1.00
Pulgas/East Bayshore	Ε	.95	Ε	.94	Ε	.95
Embarcadero/East Baysho	oreE	.97	Ε	.97	E	.94
Jniversity/North Access	F	1.05	F	1.03	E	.99

Cumulative Mitigation Measures

Project mitigations for long-term cumulative impacts would be similar to the short-term case. Improvements would be required along University Avenue and at the Embarcadero/East Bayshore intersection. These mitigations are addressed in the Project Mitigations Section. The resulting am and pm peak hour levels of service and volume to capacity ratios are shown in Table 4.5.13.

2	Long-term w/Project		-	Long-Term w/Alt 1		Long-Term w/Alt. 2	
	LOS	V/C	LOS	V/C	LOS	V/C	
AM Peak Hour							
University/O'Brien	Α	.53	Α	.54	Α	.51	
University/Bayfront	F	1.34	F	1.34	F	1.34	
University/Bay	D	.90	D	.84	С	.79	
University/Donohoe	С	.79	С	.78	С	.78	
Willow/Bayfront	F	1.83	F	1.83	F	1.82	
PM Peak Hour							
University/O'Brien	D	.83	D	.83	D	.81	
University/Bayfront	Ε	.96	E	.98	E	.96	
University/Bay	F	1.16	F	1.11	F	1.05	
University/Donohoe	E	1.00	D	.88	E	.93	
Embarcadero/E. Baysho	reD	.86	D	.86	D	.86	
Willow/Bayfront	E	.96	E	.96	E	.96	

Table 4.5.13 SERVICE LEVELS AND V/C RATIOS WITH MITIGATIONS AM/PM Peak Hour

Traffic Demand Management Program (TDM). The TDM program in conjunction with the previously discussed mitigations improves the overall performance of the analyzed intersections. As in the short-term case, the impact of such mitigations is greatest at the Industrial Section access points located at the University/Bay and University/North Access intersections. The University/Bay intersection would experience an overall improvement of .35 during the pm peak hour under the Alternative 1 scenario, and an increase of .07 at the University/North Access intersection under the same scenario.

	Long-term w/Project		Long-Term w/Alt 1		Long-Term w/Alt. 2	
I	LOS	V/C	LOS	V/C	LOS	V/C
AM Peak Hour						
University/O'Brien	Α	.50	Α	.51	Α	.50
University/Bayfront	F	1.34	F	1.34	F	1.34
University/Bay	С	.67	В	.69	В	.70
University/Donohoe	С	.78	С	.77	С	.78
Willow/Bayfront	F	1.81	F	1.82	F	1.80
University/North Access	Α	.50	Α	.55	Α	.51
PM Peak Hour						
University/O'Brien	С	.80	D	.81	D	.81
University/Bayfront	E	.95	E	.96	E	.96
University/Bay	E	.92	E	.94	E	.94
University/Donohoe	D	.89	D	.84	Е	.90
Embarcadero/E. Bayshore	D	.82	D	.84	D	.82
Willow/Bayfront	Ε	.96	E	.96	Ε	.96
University/North Access	E	.93	Ε	.98	E	.97

Table 4.5.14 SERVICE LEVELS AND V/C RATIOS WITH MITIGATIONS AND TDM REDUCTIONS - AM/PM Peak Hour

Project Access and Circulation

Principal access to the project area from the north is via a proposed road to intersect with University Avenue north of Purdue. This road would parallel the SP Railroad tracks and enter the project area at the northern boundary, forming a circulation loop through the Industrial Section and connect to Bay Road. In a mitigated response to the potential significant impacts to biological resources, the north access road would be reduced in width to a two-lane roadway throughout the area and widened to four-lanes approximately 400 feet from the intersection, in order to accomodate the queueing of vehicles. The signalized intersection would have dual left-turn lanes and an exclusive right-turn lane in the westbound direction, and exclusive left-turn lanes along University Avenue.

Access to the Industrial Section would also be provided via Bay Road. As previously discussed, added project would significantly degrade the service level at this intersection. During the evening peak hour, this intersection would operate at LOS F (V/C ratio of 1.11) under the long-term scenario with Alternative 1, and the suggested mitigations.

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Footnotes:

 /1/ Sources for programming information include: San Mateo County Traffic Authority, <u>Preliminary Program Expenditure Plan</u>, August 18, 1989; Ryu Inoue and Paul Mai, Caltrans, Project Development Engineers, telephone communication, November 3, 1989; and California Transportation Commission, <u>1988 Adopted California State Transportation Improvement Program:</u> (District 4), October 1988.

4.6 AIR QUALITY

EXISTING SETTING

The following section is based on information provided by Donald Ballanti, Certified Consulting Meteorologist (December 1989).

The Mulford-Carrell Act in 1969 and the Clean Air Act of 1970 established state and federal air quality standards for several pollutants. These standards are divided into primary standards, designed to protect the public health, and secondary standards, intended to protect the public welfare from effects such as visibility reduction, soiling, nuisance and other forms of damage. These standards are in the form of maximum durations of concentrations, and are shown in Table 4.6.1.

Table 4.6.1 Federal and State Ambient Air Quality Standards

		Federal	State
Pollutant	Averaging Time	Primary Standard	Standard
Ozone	1-Hour	0.12 PPM	0.10 PPM
Carbon Monoxide	8-Hour	9.0 PPM	9.0 PPM
	l-Hour	35.0 PPM	20.0 PPM
Nitrogen Dioxide	Annual	0.05 PPM	
	1-Hour		0.25 PPM
Sulfur Dioxide	Annual	0.03 PPM	
	24-Hour	0.14 PPM	0.05 PPM
	1-Hour		0.5 PPM
Suspended	Annual	50 ug/m3	30 ug/m3
Particulates	24-Hour	150 ug/m3	50 ug/m3
Lead	30-Day Ave.		1.5 ug/m3
	3-Month Ave	1.5 ug/m3	

PPM = Parts Per Million ug/m3 = Micrograms per Cubic Meter In addition to the "criteria" pollutants for which there are ambient air quality standards, there is a second class of regulated pollutants known as toxic (or hazardous) pollutants. These are known to be injurous, even in small quantities, but are relatively uncommon. There are emission limitations for these pollutants, rather than ambient air quality standards. To date, hazardous pollutants regulated by the Bay Area Air Quality Management District (BAAQMD) are asbestos, beryllium, mercury, vinyl chloride and benzene.

Air Pollution Climatology and Air Pollution Sources

The amount of a given pollutant in the atmosphere is determined by the amount of pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain and, for photochemical pollutants, sunshine.

Northwest winds and northerly winds are most common in East Palo Alto, reflecting the orientation of the Bay and the San Francisco Peninsula. There are several wind "gaps" in the coastal hills through which winds are channeled. Winds from these directions carry pollutants released by autos and factories from upwind areas of the Peninsula towards East Palo Alto, particularly during the summer months. Winds are lightest on the average in fall and winter. Every year in fall and winter there are periods of several days when winds are very light and local pollutants can build up.

Atmospheric stability refers to the tendency of the atmosphere's thermal stratification to suppress or promote vertical mixing of pollutants. The occurrence of high atmospheric stability, known as inversion conditions, severely reduces vertical mixing of pollutants.

Atmospheric stability is measured in the Bay Area twice daily by radios-ondes released at Oakland Airport. During the summer, inversions are generally elevated above ground level, but are present over 90% of the time in both the morning and afternoon. In winter surface-based inversions dominate in the morning hours, but frequently dissipate by afternoon.

The topography of the Peninsula also affects air quality. The mid-Peninsula area is inland and somewhat sheltered, so that the terrain partially restricts lateral dilution of pollutants.

The combined effects of moderate ventilation, frequent inversions that restrict vertical dilution and terrain that restricts horizontal dilution give East Palo Alto a moderate atmospheric potential for pollution.

East Palo Alto contains a multitude of air pollutant sources. The combustion of fuel for space and water heating, industrial processes and commercial use is one such pollutant source. The evaporation of fuels and solvents, incineration, fires, and pesticide use are examples of other typical pollutant sources. The largest single source of pollutants is vehicles, which in Santa Clara County are responsible for 89% of the emitted carbon monoxide, 77% of the emitted nitrogen oxides, 57% of the reactive organic gases, 67% of the emitted sulfur dioxide and 6% of the emitted particulates. /1/

Past and Current Air Quality

The Bay Area Air Quality Management District operates a network of permanent air quality monitoring sites throughout the Bay Area. Although none are located in East Palo Alto, several are located on the Peninsula and allow characterization of East Palo Alto air quality for regional pollutants such as ozone, nitrogen dioxide, and particulates. The District operates comprehensive monitoring sites measuring both gaseous and particulate pollutants in San Jose, about 15 miles southeast of East Palo Alto and Redwood City, about 5 miles northwest of East Palo Alto.

Data for gaseous pollutants from the BAAQMD network of permanent air quality monitoring sites for the years 1985-1988 are shown in Table 4.6.2 below, in terms of the number of days per year that the applicable federal or state ambient air quality standard was exceeded. Of the regional gaseous pollutants (ozone, nitrogen dioxide, sulfur dioxide) only ozone represents a problem in the mid-Peninsula. Table 4.6.2 indicates a downward trend in ozone concentrations during the period 1984-1988. Despite increases in population and traffic, controls on stationary sources and vehicles have brought continuous, slow reductions in emissions of ozone precursors since the early 1970's, resulting in a gradual improvement in ozone air quality. Also evident in Table 4.6.1 is a degradation of air quality from north to south.

			San	Redwood
Pollutant	Standard	Year	Jose	City
Ozone	Fed. 1-Hour	1985	2	1
		1986	1	0
		1987	1	0
		1988	0	0
Ozone	State 1-Hour	1985	12	5
		1986	12	1
		1987	23	2
		1988	12	2
Carbon Monoxide	Fed. 8-Hour	1985	6	0
		1986	4	0
		1987	0	0
	÷1	1988	2	0
Nitrogen Dioxide	State 1-Hour	1985	0	0
		1986	0	0
		1987	0	0
		1988	0	0

Table 4.6.2 Number of Days Exceeding State or Federal Ambient Air Quality Standards for Gaseous Pollutants, 1985-1988 /2/

Suspended particulates are not measured on a daily basis, but are measured every sixth day. The state standard for particulates was changed in 1983 from a standard for total suspended particulates (particles of aerodynamic diameter of less than 30 microns) to PM-10 (particles of aerodynamic diameter of less than 10 microns). The federal standards were similarly changed in 1987. Monitoring of PM-10 began at San Jose in 1985 and at Redwood City in 1986. This limited data base indicates that the federal ambient air quality standards are apparently met at both sites. The more stringent state standards, however, are exceeded at both sites.

Carbon monoxide is a non-reactive, localized pollutant that has different characteristics from the pollutants discussed above. It is most pervasive during cold, calm winter evenings when ground based inversions are present. San Jose carbon monoxide levels are the highest in the Bay Area, and violations of the state and federal standards occur each winter. Carbon monoxide is a relatively localized pollutant, however, and these violations are not widespread. Carbon monoxide levels within East Palo Alto are probably more similar to those at Redwood City than to those at San Jose.

The San Francisco Bay Area has been designated as a region where three national ambient air quality standards are being exceeded. Under the 1977 Clean Air Act, the Association of Bay Area Governments (ABAG) was empowered to prepare a non-attainment plan to develop a strategy to reach the national ambient air quality standards by the end of 1987. Despite considerable improvement in air quality, the Bay Area did not meet the 1987 deadline for attainment of the federal air quality standards.

Subsequently, the U. S. Environmental Protection Agency has adopted interim policies regarding post-1987 non-attainment areas. These policies give non-attainment areas until the end of 1990 to revise the State Implementation Plan (SIP) to demonstrate attainment and maintenance of the standards. After submittal of the revised SIP the EPA would classify non-attainment areas as near-term (3-5 years) or long term (more than 5 years). For near term non-attainment areas pollutant reductions of 3% per year would have to occur until standards are attained, and maintenance of the standard for a period of 10 years would have to be demonstrated.

The state of California has had its own ambient air quality standards for many years, but until recently there was no requirement that these standards be attained by any date. The California Clean Air Act was signed into law on January 2, 1989. This legislation requires areas that exceed the California ambient air quality standards to plan for the eventual attainment of the standards. The time given to various areas would depend on the severity of air quality problems. Areas classified as "moderate" would have until 1994 to attain the state standards, while "serious" and "severe" areas would have until 1997 and beyond, respectively.

POTENTIAL IMPACTS

Air quality impacts from development of the project area may be divided into three categories: short-term construction-related impacts; direct impacts from stationary emissions in the project area; and, indirect impacts on local and regional air quality from project-related automobile emissions.

Construction Impacts

<u>Construction of the proposed project could adversely affect short-term air</u> <u>auality by generating dust from equipment and vehicles</u>. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. The effects of construction activities would be increased dustfall and locally elevated levels of suspended particulates. Dustfall could be a nuisance at neighboring properties where soil dust may fall on exposed surfaces, requiring more frequent washing during the construction period.

Remediation of contaminated groundwater and soil potentially existing in portions of the Industrial Section could adversely affect air quality during the aeration and/or removal process. (Refer to Chapter 4.4 -Hazardous Substances) Remediation of potentially contaminated soils may require the excavation and removal of contaminated soil or remediation on the site by aeration. As the disturbed soil is exposed to air, the evaporation of hydrocarbons into the atmosphere is possible. The rate of emission of hydrocarbons depends greatly on the volatility of the hydrocarbons, the amount of soil aerated, and, to a lesser extent, on the temperature and wind conditions. Aeration of hydrocarbon-contaminated soil is regulated by the Bay Area Air Quality Management District (BAAQMD). Aeration of contaminated groundwater could also release contaminants into the air.

The removal of hydrocarbon-contaminated soil may require an Authority to Construct from the BAAQMD as a source of air pollutant emissions. Also, Regulation 8, Rule 40, of the BAAQMD Rules and Regulations places restrictions on the aeration of hydrocarbon-contaminated soil. This regulation limit on the amount of soil that can be aerated daily, based upon the severity of contamination. The District must be provided (no less than 24 hours prior to commencement of aeration) with estimates of total and daily quantities of soil to be aerated, average degree of contamination, and the chemical composition of contaminating organic compounds.

Direct Impacts from Stationary Emissions

Direct impacts are those related to emissions released on-site from stationary sources. High tech uses under the proposed project were assumed to consist of semiconductor and electronic component manufacturing, which are types of manufacturing likely to be a source of criteria air pollutants, primarily hydrocarbons, oxides of nitrogen and particulates. While it is not possible to know precisely the potential amounts and types of toxic air contaminants that might be used in project-related high tech manufacturing, for purposes of this analysis, the generalized emission factors for high tech industries were averaged to create a composite emission factor on a gross per-acre basis. The proposed project would include about 81 acres of high tech uses. The resulting emissions are shown in Table 4.6.3./4/ The effects of the stationary emissions are evaluated below under Regional Air Quality Impacts.

Table 4.6.3: Direct and Indirect Emissions, in Pounds per Day

		Daily Emis	sions, in Pour	ids per Day
		RHC	NOX	PM-10
Proposed Project	Direct	761	16	8
	Automobile	260	426	438
	Total	1021	442	446
Alternative 1	Direct	752	16	8
	Automobile	271	443	430
	Total	1023	459	438
Alternative 2	Direct	545	12	6
	Automobile	226	370	367
	Total	771	382	473
County-Wide /5/		200,000	200,000	17,000

RHC = Reactive Hydrocarbons NOX = Oxides of Nitrogen (Ozone Precursors) PM-10 = Particulate Matter, 10 Micron

Local Air Quality Impacts

Automobile emissions can affect local air quality by increasing carbon monoxide levels. While carbon monoxide levels along roadways accessing the project area would increase, they would remain below existing standards of significance. Concentrations of this pollutant were predicted under worst-case assumptions for traffic and meteorology. The CALINE-4 computer simulation model was applied to three roadway intersections: Bayfront/University; Bay Road/University; and Donahoe/University. Because these intersections are a focus of project traffic and congestion, these concentrations are considered to represent the highest occurring in the vicinity. A description of the CALINE-4 model and the assumptions made in its use are described in Appendix F. This analysis was carried out for existing traffic and two future years for the proposed project and alternatives.

Table 4.6.4 shows the results of the intersection analysis for the peak one-hour traffic period in parts per million. The one-hour values are to be compared to the federal one-hour standard of 35 PPM and the state one-hour standard of 20 PPM. Table 4.6.4 shows that existing carbon monoxide levels are below the standards, and would remain below the standards with construction of the proposed project or either of the alternatives.

Table 4.6.4: Predicted Worst Case One-Hour Carbon Monoxide Concentrations, in Parts per Million

Bayfront /	Bay/	Donahoe/
University	University	University
13.5	12.0	10.9
12.7	10.7	10.9
13.2	12.4	11.4
13.3	11.9	11.2
13.1	12.2	11.2
12.2	10.3	10.2
12.7	11.8	11.9
12.0	11.4	11.9
12.6	11.7	11.8
	University 13.5 12.7 13.2 13.3 13.1 12.2 12.7 12.0	UniversityUniversity13.512.012.710.713.212.413.311.913.112.212.210.312.711.812.011.4

Table 4.6.5 shows the results of the intersection analysis for the peak eight-hour traffic period in parts per million. The eight-hour values are to be compared to the federal and state standards of 9 PPM. Table 4.6.5 shows that existing carbon monoxide levels are below the standards, and would remain below the standards with construction of the proposed project or either of the alternatives.

Table 4.6.5: Predicted Worst Case Eight-Hour Carbon Monoxide Concentrations, in Parts per Million

	Bayfront /	Bay/	Donahoe/
Case	University	University	University
Existing	7.2	6.4	5.6
Short Term Base (1995)	6.7	5.7	5.8
Short Term Base + Project	7.0	6.6	6.0
Short Term Base + Alt. 1	7.0	6.3	5.9
Short Term Base + Alt. 2	6.5	6.5	5.9
Long Term Base (2000)	6.5	5.5	5.4
Long Term Base + Project	6.7	6.3	6.3
Long Term Base + Alt. 1	6.7	6.0	6.3
Long Term Base + Alt. 2	6.7	6.2	6.3

Regional Air Quality Impacts. Project traffic, in conjunction with project-related stationary emissions, would adversely affect regional air quality by contributing an increase in ozone precursors (oxides of nitrogen) and a significant increase in particulate matter. To evaluate emissions associated with the project, the alternatives and cumulative development, the URBEMIS-2 computer program, developed by the California Air Resources Board, was employed. The daily increase in regional emissions is shown in Table 4.6.3 for Reactive Organic Gases (hydrocarbons) and oxides of nitrogen (two precursors of ozone) and PM-10 (particulate matter, 10 micron). County-wide daily emissions are also shown. The URBEMIS-2 model and the conditions assumed in its use are described in the Appendix F.

Guidelines for the evaluation of project impacts issued by the Bay Area Air Quality Management District consider emission increases of PM-10 or ozone precursors to be significant if they exceed 150 pounds per day. /3/ Based upon this criterion the project and both alternatives would have a significant regional impact. District guidelines suggest a second threshold of significance for regional emissions equal to one percent of the county-wide emissions. The project and alternatives would not exceed this second significance criterion for hydrocarbons or oxides of nitrogen, but would for PM-10.

Cumulative Impacts

The project is located in an area that does not meet the national or state ambient air quality standards. The project would be part of a continuing pattern of rapid growth occurring in the South Bay region. The growth in emissions associated with the proposed project together with that of cumulative development in Santa Clara County and the South Bay would contribute to the continuing ozone and particulate matter problems in the region.

The growth in emissions generated by this project and cumulative growth in the area would increase the needed emission reductions required if the state and federal ambient standards are to be attained in the future. Additional controls on stationary, mobile and area sources on a regional basis may be required to offset the additional emissions resulting from the project and cumulative development in the area.

MITIGATION MEASURES

- 1. All construction contracts should require contractors to reduce dust generation. Construction dust impacts can be reduced by the following measures:
 - o construction-related dirt on approach routes to the construction sites should be cleaned on a periodical basis;
 - o adequate watering techniques should be employed including the spraying of wheels and lower portions of transport turcks before leaving the construction area; and

- o transported loads and stockpiles of debris, soil, sand or other materials that can be blown by the wind should be covered.
- 2. Mitigation to reduce the air quality effects from remediation of contaminated soils and ground water can be found in Chapter 4.4 Hazardous Substances.
- 3. Project-related traffic should be reduced by implementing mitigation measures in Chapter 4.5 Traffic and Circulation. Implementation of the aggressive TSM program for the proposed project could reduce peak-hour vehicle trips by about 20 percent and total daily trips by about 22 percent.

While the impact of the project on both local and regional air quality would be reduced by application of TSM, impacts on regional air quality would remain above the BAAQMD thresholds of significance and is therefore an unavoidable adverse impact.

4. Direct emissions from high tech or industrial facilities should conform to Bay Area Air Quality Management District regulations. District regulations include emission limitations, requirements for use of Best Available Control Technology, and offsets where emissions exceed certain thresholds. The Bay Area Air Quality Management District also has permitting authority over materials considered as toxic air contaminants. Prior to issuing a permit the District reviews the amount and method of release of a toxic material and performs a risk screening analysis.

Footnotes:

- /1/ Bay Area Air Quality Management District, <u>Base Year 1983 Emissions</u> <u>Inventory Summary Report</u>, 1987.
- /2/ California Air Resources Board, <u>California Air Quality Data, Annual Summary</u>, Vols. XVIII-XX, 1986-1989.
- /3/ Bay Area Air Quality Management District, <u>Air Quality and Urban</u> <u>Development- Guidelines</u>, 1985.
- /4/ Published emission factors are based on Bay Area industries prior to 1985. Since this time the Bay Area Air Quality Management District has adopted regulations requiring controls on organic compound (hydrocarbon) emissions from semiconductor manufacturing operations. The District estimates that this regulation reduces uncontrolled hydrocarbon emissions by about 50%; emissions for the proposed project and alternatives were assumed to be similarly reduced.
- /5/ California Air Resources Board, <u>Emissions Inventory 1983</u>, December 1986 standard of 20 PPM. Table 4.6.4 shows that existing carbon monoxide levels are below the standards, and would remain below the standards with construction of the proposed project or either of the alternatives.

4.7 NOISE

EXISTING SETTING

This chapter is based on a report prepared by Charles M. Salter Associates, Inc. (December 1989). Those readers not familiar with the fundamental concepts of environmental noise are referred to Appendix G.

Acoustical Criteria

City of East Palo Alto. The City of East Palo Alto has a Noise Element and Action Program which are part of the City's General Plan. The Noise Element contains noise guidelines which "serve as a benchmark for evaluating specific projects, plans, and ordinances where noise is an important consideration." Community Noise Equivalent Levels (CNEL) are used to establish land use compatibility noise standards. According to Table 4 of the Noise Element, daytime exterior CNELs of 60 decibels (dB) and 65 dB are acceptable for commercial and industrial land uses respectively. However, the Noise Element states that:

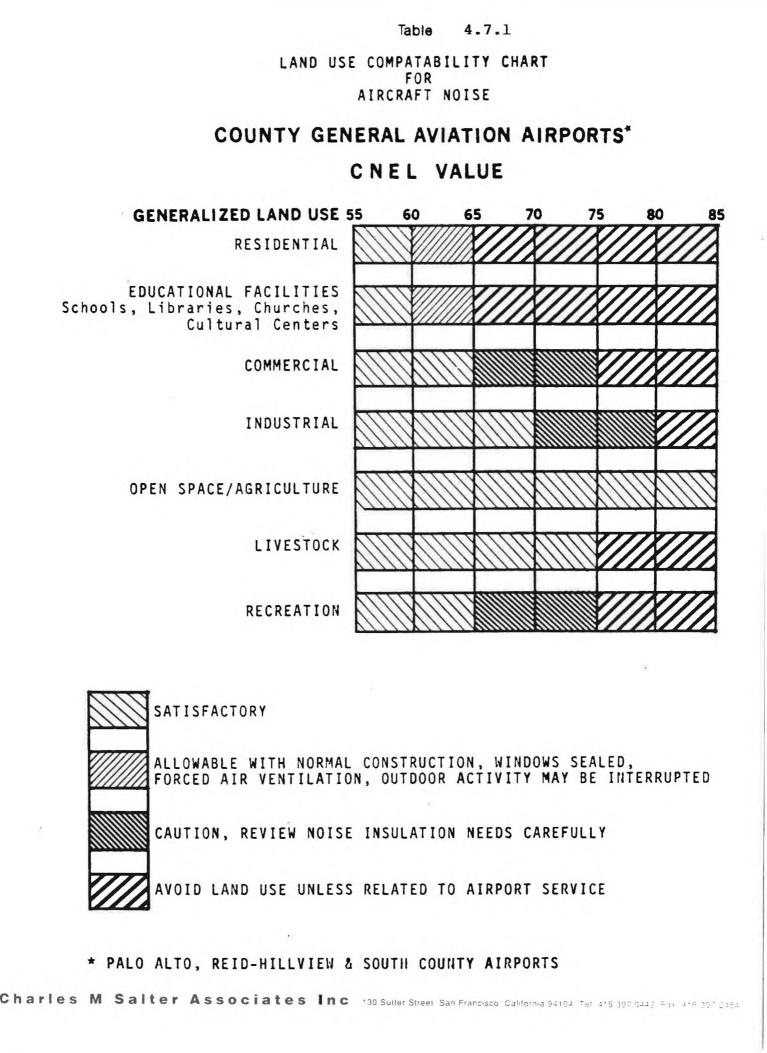
The exterior sound levels apply primarily in the areas most used by people for noise-sensitive activities (for example, in the patio and backyard areas of residential areas). It is recognized that there can be areas of transition between the louder and quieter areas. The transition extent of these areas should vary in accordance with the noise sensitivity of activities likely to occur in these areas and with the suitability of noise attenuation methods other than distance.

Santa Clara County Airport Land Use Commission (ALUC). The County has adopted land use compatibility standards for areas surrounding County airports. Table 4.7.1 summarizes these noise levels. The ALUC also recommends maximum interior noise levels for intermittent noise. For example, for executive offices or conference rooms, the document suggests a maximum single event noise level of 55 dBA.

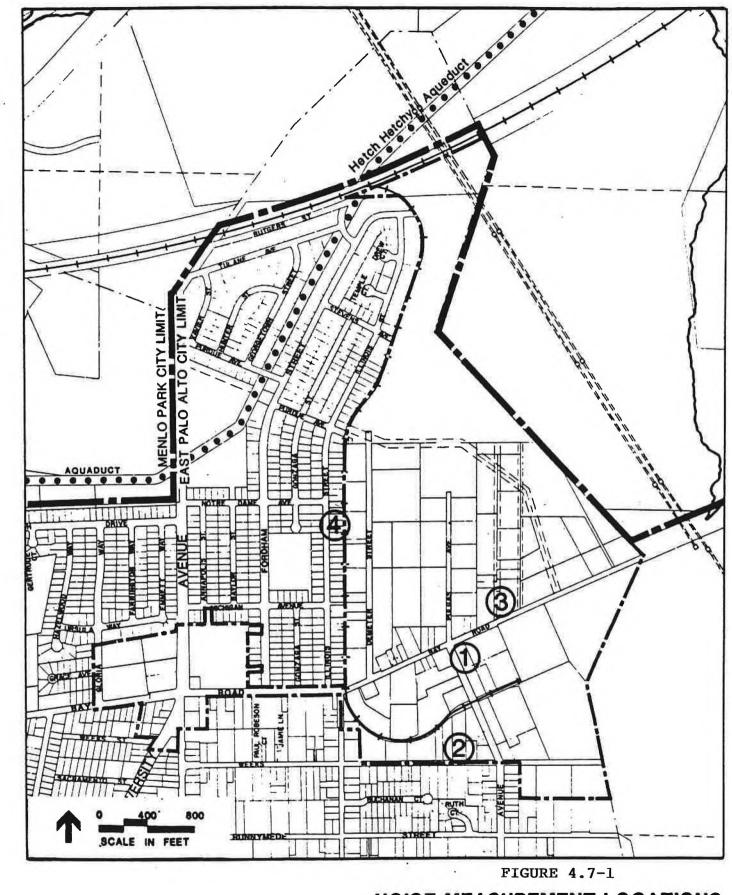
Current Noise Environment

The major noise sources affecting the project area are vehicular traffic along Bay Road and occasional aircraft overflights from the Palo Alto Airport. Other noise sources are industrial activities (primarily vehicular traffic) from a nearby waste removal company and other industrial uses in the area.

To quantify the existing noise environment, two 24-hour measurements and two 15-minute measurements were made on and around the project area. One 24-hour measurements was made near the residential area along Illinois Street and the other made along Bay Road. The 15-minute measurements were made at the Pulgas Avenue/Bay Road intersection and adjacent to residential areas along Weeks Drive. Figure 4.7-1 shows the location of these measurements; Table 4.7.2 summarizes the results of the measurements.



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NOISE MEASUREMENT LOCATIONS

Ravenswood Industrial Area Program EIR Wallace Roberts & Todd Charles M Salter Associates

Site								
No.	Location	Date/Time	L ₁₀	L ₅₀	L ₉₀	L _{eq}	L _{dn}	Comments
1	SW corner of Bay/Pulgas intersection; At property line of salvage yard on Pulgas; 50' from centerline of Bay	5 Oct. 1989 1:00 pm - 1:15 pm	70	61	50	66	66*	Industrial truck traffic
2	1003 Weeks Dr. 25' from railway centerline	5 Oct. 1989 1:35 pm – 1:50 pm	63	50	44	59	59*	One car/minute residential
3	Bay Rd. across from PG&E 15' above ground; 1200' west	5-6 Oct. 1989 2:00 pm - 2:00 pm					67	5% industrial traffic 15-20 vehicles/ minute
	of Pulgas; 15' from centerline of Bay Rd.				34		ä	
4	Illinois St. between Michigan Ave. and Notre Dame Ave. 15' above ground; 25' from road- way centerline	5-6 Oct. 1989 2:00 pm - 2:00 pm					68	One car/minute Residential Unusual noisy events affect noise measure- ments. Actual Ldn is probably closer to 63 dB

Table 4.7.2: Noise Measurement Results

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*Estimate based on simultaneous measurement.

The noise level along Bay Road is a CNEL of 66 to 68 dB at a distance of 50 feet from the roadway centerline. The majority of the noise was attributable

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to loud truck and car passbys along Bay Street. Trucks traveling to and from industrial areas along Bay Street generate maximum single event noise levels of up to 78 dBA. The noise level in the "Four-Corners" Section along University Avenue is a CNEL of 72 dB at 50 feet.

Noise levels in the residential area of Weeks Street were lower and were dominated by single events such as car passbys and general aviation overflights. Distant automobile and truck passbys also contributed to the noise. The measured noise level along Illinois Street was relatively high with respect to traffic volumes on the road. The high measured level is likely due to some unusual noisy events. Based on existing traffic volumes, it is estimated that the existing CNEL in the residential areas adjacent to Weeks Street and Illinois Street is 59 to 63 dB.

Noise contours for the Palo Alto Airport have been generated for existing airport operations and are shown in Figure 4.7-2. The contours are based on the Airport Master Plan which assumes an existing yearly volume of 220,000 operations. The contour and plan were prepared in 1981 by Hodges and Chute. According to the contours, a small portion of the Industrial Section would be exposed to a CNEL in excess of 60 dB.

Another potential noise source is the Southern Pacific freight line along the northern boundary of the Industrial Section. Although the train line is not currently operating, light rail service may go into operation in the future. According to the City's Noise Element, the rail line generates (when operating) a CNEL of 55 dB at a distance of 1,600 feet from the tracks.

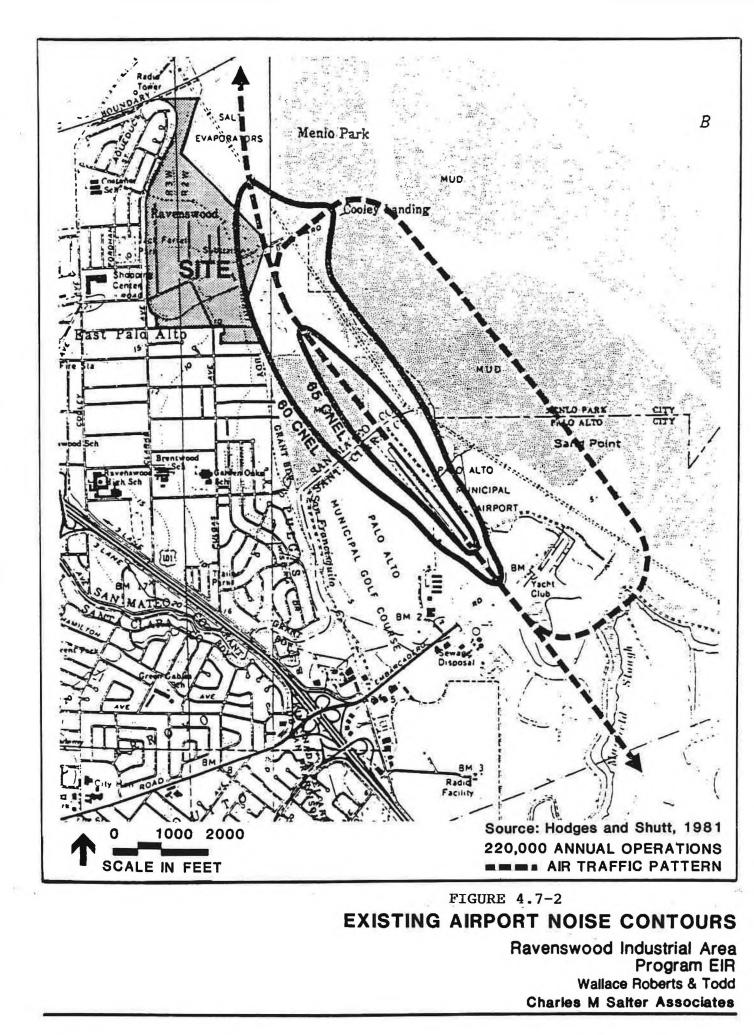
POTENTIAL IMPACTS

To determine the potential for noise impacts on adjacent residents, the potential for the project to increase existing noise levels has been evaluated. A 3 dB increase in average noise levels is just detectable and not considered a significant impact. A 4 to 5 dB increase is noticeable, but only considered an impact if the overall noise level exceeds the applicable standards. An increase of 6 dB or more is considered a significant impact.

Land Use Compatibility

Traffic Noise. <u>Multi-family development in the "Four-Corners" Section</u> <u>along University Avenue would be exposed to excessive exterior noise (CNEL of</u> <u>70 to 75dB) from traffic</u>. According to the City's Noise Element, exposure of multi-family housing to an outdoor CNEL in excess of 55 dB is considered a significant adverse impact.

Airport Noise. Based on discussion with the Santa Clara County Airport Land Use Commission (ALUC) staff and according to the Airport Master Plan, future annual aircraft operations could increase from 220,000 to 310,000 operations per year, which is the current capacity of the airport. This would expose the southern portion of the project area to a CNEL in excess of 60 dB from aircraft flyovers. The exact future noise level is unavailable at this



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time but will be available this summer when the Federal Aviation Regulation Part 150 Study, a federally funded noise and land use compatibility study, is complete. The ALUC considers a CNEL of up to 70 dB as satisfactory for industrial land uses. Although high-tech industrial uses would not be exposed to a significant adverse impact from airport noise, <u>office use proposed for the 11-acre parcel in the southeast portion of the Industrial Section is located</u> within the CNEL 60 contour of the Palo Alto airport and would, therefore, be exposed to excess noise levels from airplane overflights.

Train Noise. The proposed industrial uses are approximately 1,600 feet south of the rail line. According to the Noise Element, a CNEL of 55 dB is generated by train passbys at this distance. A CNEL of 55 dB is compatible with industrial uses and therefore train noise is not considered a significant impact.

Adjacent Land Uses

Traffic Noise. The proposed project would increase traffic volumes on local roadways. Table 4.7.3 indicates that the average noise levels (CNEL) could increase 1 to 3 decibels due to the proposed project. A 3-dB increase in average noise levels (CNEL) is generally not noticeable in environmental acoustics and would not be considered a significant impact.

Bay Road east of University would experience the largest increase from a CNEL of 67 to 70 dB at 50 feet. University Avenue between 101 and Route 64 would experience an increase from 72 to 75 dB at 50 feet. Noise level increases along Bay Road are primarily from the project, while along University Avenue they are due to existing and future approved and proposed projects. Actual noise level increases due to the project alone are less than 1 dB with the exception of Bay Road, which experiences a 3 dB increase.

				No**		
Roadway	Link	Existing*	Project	Project	Alt. 1	Alt. 2
Bay	W. of University	68	0	2	2	2
	E. of University	66	0	3	3	2
University	101 to N. access	72	2	3	3	3
	N. access to Rt. 64	72	1	2	2	2
Cooley	N. of 101		0	1	1	1
	S. of University		0	1	1	1
Willow	S. of 101		1	1	1	1
	101 to Rt. 64		1	2	2	2
Route 64	Willow to Universit	ty	2	2	2	2
	University to bridg	e	1	1	1	1

TABLE 4.7.3: Existing Noise Level and Future Noise Level Increments

Noise level is the CNEL at a distance of 50 feet from roadway centerline.
Existing plus approved projects and proposed projects (future base).

Mechanical Noise. <u>Mechanical equipment associated with the industrial uses</u> (i.e., cooling towers, exhaust fans) are a potential source of noise impacts to adjacent residential areas. Areas that would be exposed to mechanical noise impacts are residential areas along Illinois St. and south of Weeks Drive that are adjacent to the proposed 81-acre industrial parcel. The City has adopted noise control guidelines for residential land uses. The guidelines state that an exterior nighttime level of 45 dB is acceptable. During the daytime, the exterior noise goal of 55 dB is acceptable. Mechanical equipment that exceeds those criteria would expose residential housing to a significant adverse impact.

Construction Noise. Construction noise varies over the life of the project. Depending on the type of construction, the major noise generators are site grading and paving, excavation, super structure assembly, and finishing. Typical noise levels associated with construction are shown in Table 4.7.4.

<u>Residential development along Illinois St. could be exposed to a maximum noise</u> <u>level of 78 dBA from construction of proposed development</u>. Although these noise levels would exceed the City's daytime noise control guidelines, they would only occur when construction is adjacent the property line and only for the duration of the construction process.

Cumulative Impacts

Traffic noise will not increase significantly due to cumulative development. A comparison of existing and future traffic volumes (cumulative) indicates that

Table 4.7.4

CONSTRUCTION EQUIPMENT AND NOISE LEVELS

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A-weighted Noise Level at 50 feet, dB

Equipment	Present	With Feasible <u>Noise Control</u>
Earthmoving		
front loader	79	75
backhoes	85	75
dozers	80	75
tractors	80	75
scrapers	88	80
graders	85	75
truck	91	75
paver	89	80
Materials Handl:	ing	
concrete mixe:	r 85	75
concrete pump	82	75
crane	83	75
derrick	88	75
Stationary		
pumps	76	75
generators	78	75
compressors	81	75
Impact		
pile drivers	101	95
jack hammers	88	75
rock drills	98	80
pnuematic too	ls 86	80
Other		
saws	78	75
vibrator	76	75

Source: US EPA, "Noise from construction equipment and operations, building equipment and home appliances", 1971

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most noise increase will occur from short-term growth. However, both short-term and long-term increases have been accounted for in our analysis of the project and its alternatives. Impacts from light rail vehicles are unclear at this time. Additional information is required to assess noise impacts.

MITIGATION MEASURES

The following measures are recommended to mitigate potential noise impacts:

- 1. Title 24, Part 2 of the California Administrative Code will require an acoustical analysis of the multifamily housing project on University Avenue which will show how the interior CNEL can be controlled to 45 dB. The study may recommend sound-rated windows and building construction to achieve the required interior noise level. Measures recommended by the study should be implemented.
- 2. In order to control mechanical noise to the limits set forth in the noise control guidelines of the City's Noise Element, an acoustical consultant should review the mechanical system design of proposed buildings for exhaust fans and cooling towers and other potential noise sources which may adversely affect nearby residences.
- 3. Office buildings located within the future CNEL 60 contour from Palo Alto Airport should comply with Santa Clara County Airport Land Use Commission's interior noise goal of 55 dBA (maximum, single event) from aircraft flyovers. This is typically accomplished through the use of sound-rated windows and building construction.
- 4. Noise from construction activities should be reduced by:
 - o limiting construction to daytime hours, 7:00 a.m. 7:00 p.m.
 - o requiring stationary equipment to be located away from the residential areas
 - o providing enclosures or barriers for noisy stationary equipment if located close to residential property lines

References:

City of East Palo Alto General Plan, Noise Element

Santa Clara County Airport Land Use Commission, Airport Master Plan, August 1983

4.8 CULTURAL RESOURCES

The following section summarizes archival research and field investigation undertaken by Holman and Associates (November 1989) for cultural resources in the Ravenswood Industrial Section project area.

EXISTING SETTING

Archival Research

Archival research was conducted at the California Archaeological Inventory at Sonoma State University and the Bancroft Library, University of California, Berkeley to document the known prehistoric and historic site potential of the project area. The following information was obtained:

Historic Resources. As early as 1798 the project area marked the eastern margin of Rancho de las Pulgas with the system of marshlands serving as the boundary of what was the largest of the area's ranches. The mid-nineteenth century influx of Americans into California led to settlement of the East Palo Alto area. In 1848 a wharf which was to later be known as Cooley's Landing was constructed at the end of Bay Road, and in 1850 the community of Ravenswood located in the immediate vicinity of the Industrial Section became the first platted town in San Mateo County. Historic remains of the town, wharf and associated enterprises such as the Hunter and Schackleford brick factory, which employed some 80 Chinese workers, may constitute historic resources if their remains were covered and protected by landfill in the subsequent development of the area (Foss 1942).

Since the turn of the century a number of additional developments have taken place in the Industrial Section of the project area. During the first decade of the 1900s, new subdivisions were constructed on the area's drained higher ground. In 1916 a 1600-acre cooperative poultry colony called Runnymede was founded in the southern portion of the Industrial Section (Foss 1942). Since the colony's demise in the 1930's, the area has continued to undergo alteration and has become the site of existing business operations and, in one area near the University Village Subdivision, the repository of significant quantities of earth from the adjacent construction (Gerow 1968).

Prehistoric Resources. According to the records located at the California Archival Inventory and information obtained from Dr. Bert Gerow of Stanford University during the field investigation stages, the Industrial Section of the project area probably contains a portion of archaeological site San Mateo-77, one of the oldest and most famous archaeological sites of the San Francisco Bay area. The site may continue into the project area from the western border at Demeter Street from Michigan Avenue to Purdue Avenue. The extent of intrusions is not documented. The abandoned railroad spur along the western boundary of the Industrial Section was the eastern boundary of the SMa-77 site excavated by Dr. Gerow in 1951-52 (Gerow 1968). Gerow has observed that when he excavated SMa-77, traces of midden (prehistoric refuse) from this site continued into the current project area. His study produced some 43 burials as well as a collection of over 3,000 artifacts. Radiocarbon dates suggest the site was occupied approximately 3,000 years ago (Gerow 1974). SMa-77 is noteworthy for its antiquity and the richness of associated artifacts and as an area which remains germane to controversies concerning the process of prehistoric cultural evolution in the Bay Area more than 20 years after publication./1/

In 1982 and 1984, Robert Cartier undertook surface surveys in the northern section of the Industrial Section. Traces of prehistoric material in rodent hole backdirt and in disced soil led to a subsurface testing program which revealed only scant traces of shell midden material. Cartier concluded that there was no buried cultural stratum in this area and that the uncovered midden traces represented an area of activity peripheral to the adjacent SMa-77 site (Cartier 1982; 1984).

As an alternative explanation, Gerow suggests that Cartier's midden traces came from soil deposited on the project area during development of the University Village Subdivision. It is important to note that Cartier did not do any subsurface testing of the area immediately adjacent to SMa-77 in the area where Dr. Gerow suspects portions of the site extend into the current project area. In addition to the possible extension of the SMa-77 archeological site into the project area, the Industrial Section may contain other sites associated with SMa-77, or possibly other prehistoric sites of more recent origin.

Field Investigation

In October 1989, Holman & Associates conducted a field investigation of the Industrial Section project area. Due to buildings, surface debris and other obstructions, only 10% of the project zone was actually accessible to surface investigation. Surface exposure ranged from excellent in filled areas lacking ground cover to poor in those areas obscured by salt marsh pickleweed. Surface soils vary from light reddish-brown sandy clay in filled areas to dark gray bay mud in the the eastern portion of the project area. The piled construction spoils in the northern portion of the Industrial Section is light brownish yellow sandy clay containing angular rocks and concrete debris. At the eastern edge of the project area soil is native bay mud with cerethedia, clam, oyster and mussel shell present. Fragments of burned bird bone, cracked rock and cerethedia shell were observed in the immediate vicinity of a narrow slough leading into the project area from the wetlands to the east. As this soil may be the result of dredging, these finds remain inconclusive without further testing, but may be indicative of what lies beneath the fill to the north where the same material appears to be churned to the surface by repeated discing. No cultural resources were found in those areas where soils are visible.

Summary of Findings

While no definitive evidence of archaeological resources were found in the Industrial Section, this portion of the project area is immediately adjacent to a prehistoric archaeological site (Ca-SMa-77) and there is the possibility that portions of this site extend into the Industrial Section. Approximately 80 percent of the Industrial Section has been examined for prehistoric cultural resources using a mixed strategy of surface surveys and subsurface testing (Cartier 1982; 1984; Dotta 1974). These studies revealed traces of prehistoric material including fire-cracked rock, chert flakes and cerethedia shells. The Industrial Section may also contain nineteenth century historic cultural resources from the town of Ravenswood.

POTENTIAL IMPACTS

The Ravenswood Industrial Section has the potential for containing both prehistoric and historic material which could be adversely affected by proposed construction activities. Prehistoric burials are particularly likely to be found in the area adjacent to SMa-77. Historic material associated with Cooley's Landing, the Hunter and Shackleford brick factory or an early adobe structure of uncertain location are among the historic resources which might be encountered in the course of proposed construction. However, the potential for finding cultural resources is diminished in areas which have been subject to prior deep grading or buried under fill material.

MITIGATION MEASURES

The following measures are recommended in order to mitigate the potential impacts to cultural resources in the Industrial Section:

- 1. A preconstruction program of mechanical augering and backhoe trenching should be conducted inside the project area to assure that any buried or obscured cultural resources are located before actual grading or other forms of earthmoving associated with future construction are allowed to occur. Mechanical augering and/or backhoe trenching should be conducted in areas slated for excavation or grading to a depth sufficient to assure that any buried cultural materials which might fall within the depth of excavation are located. Initial augering should be designed to locate any cultural deposits and allow their mapping, in terms of aerial extent and depth below the surface.
- 2. If cultural resources of either an historic or prehistoric nature are located, the following steps should be taken:

o If it is determined that the discovered cultural resource is located inside areas which will not be disturbed by future landscaping and/or construction activities, no further plans need be made for the evaluation and/or mitigation of impacts to the resource, other than the preparation of a report describing the resources located.

4.8-3

o If it is determined that future construction or landscaping activities would adversely affect the identified resource, it should be the responsibility of the archaeologist to develop a program of evaluation of the resource in accordance with current CEQA guidelines (refer to Appendix H of this document). Neither backhoe work nor mechanical augering constitute such a program of testing; typically, an identified resource would have to be evaluated through a program of hand excavation and analysis of the materials removed before the scientific importance (described in CEQA as "uniqueness") of the resource can be demonstrated.

o If hand excavation and subsequent analysis demonstrate that the resources discovered inside impact zones are scientifically important, a report should be issued detailing the need for mitigation of impacts to the identified resources. On rare occasions the discovery of cultural materials, such as cemeteries, require the redesign of construction to minimize or eliminate any further impacts to the discovered resources. Conversely, if analysis demonstrates that the resources are not important, or "unique" as defined by CEQA, a finding would be made that there would be no further need for mitigation.

Footnotes:

/1/ Gerow's finds at SMa-77 led him to reconsider the prevailing theory of culture change in prehistoric California. Sometimes characterized as unilineal or neo-evolutionary, this scheme attributed cultural and somatic change to a series of microevolutionary adaptations over a period of several thousand years. Utilizing the individual grave lot as the primary unit of analysis, Gerow hypothesized a combination of gene flow and cultural exchange leading to the convergence of what had been two distinct somatic and cultural populations. Penutian speaking people with a technologically superior culture entering the lower Sacramento Valley some 4,000 years ago began to alter the gene pool as well as the technology and culture of the Hokan speakers who had preceded them in occupying the bay area. Consequently historically, not evolutionary factors would have played the greater role for much of California prehistory.

References:

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1974, A Preliminary Reconnaissance of the Archaeological Resources of the East Palo Alto Redevelopment Project Area No. 1. On file at the Northwest Information Center, California Archaeological Inventory, Sonoma State University, Rohnert Park, California. Northwest Information Center File No. s-3023.

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4.9 Utilities

4.9 UTILITIES

EXISTING SETTING

The following section is based on information provided to the City of East Palo Alto by Brian, Kangas and Foulk (November 1989).

Water Supply

Water supplied to East Palo Alto is provided by the East Palo Alto County Water Works District. The District is governed by the County Board of Supervisors and staffed by the County Public Works Department. The District purchases water from San Francisco's Hetch Hetchy aqueduct, which passes through the University Village area of East Palo Alto. District financing is provided by user charges.

Some upgrading of the existing waterworks system is currently taking place. Presently, twelve inch water mains exist in Bay Road to the eastern edge of the Industrial Section and in Illinois Avenue to the west of the Industrial Section. In addition, an eight inch line serves Pulgas Avenue north and south of Bay Road. Connections to these lines through the Industrial Section will be available to form a loop. Currently, pressures in the project area are regulated to stay in the range of 85 to 90 pounds per square inch (psi) static pressure.

The majority of the Ravenswood Industrial Section is contained within the East Palo Alto County Water Works District. The remaining portion of the site to the north (approximately 29 acres), would need to be annexed to the Water Works District in order to receive service. Part of this area includes wetlands that would not require water service.

Sanitary Sewers

Sanitary Sewer service is provided to most of the Industrial Section project area by the East Palo Alto Sanitary District, an independent district governed by an elected board. The East Palo Alto Sanitary District has a sewage treatment allocation of 2.9 million gallons per day for East Palo Alto. East Palo Alto flows are connected through a trunk line along the easterly quarter of East Palo Alto to a pump station and onto City of Palo Alto treatment plant facilities. The plant has a total capacity of 38 million gallons per day and serves several other cities.

At present, a sewer system evaluation study is underway by the East Palo Alto Sanitary District. The basis of this study is to determine ground water infiltration problems and to identify possible mitigation measures. Infiltration has been a problem in the past because of high ground water conditions throughout much of the District's system. The Industrial Section would be served by a fifteen inch (15") sewer main flowing in an easterly direction along Bay Road, connecting at the eastern edge of the Industrial Section to the trunk main that flows in a southerly direction. This 15" main was constructed in 1975 as an upgrade to a previous existing main. Some sections of the trunk line flowing towards the treatment plant have also been recently updated or are proposed for updating.

Presently, only a portion of the Industrial Section project area is within the East Palo Alto Sanitary District. The remainder of the site (approximately 29 acres) is within the West Bay Sanitary District. Part of this area includes wetlands that will not require sewer service. The West Bay Sanitary District has facilities near the Industrial Section, including a pump station at Illinois and Purdue Avenues. The District believes existing capacity is sufficient to service the 29 acres.

Storm Drainage

Currently, surface runoff along Bay Road and to the south of Bay Road is being routed to an existing pump station at the end of O'Conner Street. From this pump station, storm water is pumped to channels that discharge into San Francisco Bay. A holding pond at the pump station serves as an emergency overflow during storms that exceed the pump station capacity. This pump station was sized to cover development south of Bay Road. Storm drainage improvements to the north of Bay Road are limited to an existing outfall which extends easterly from the terminus of Purdu Avenue towards the Bay, just north of the Romex site. An existing 36 inch storm drain outfall is equipped with a flap gate. This outfall terminates to the northeast end of the Romex site and discharges into the existing tidal wetlands which eventually discharge into San Francisco Bay. The existing overland flood flows generally drain to the south and to the east.

Flood Control

The Industrial Section is adjacent to San Francisco Bay and is subject to both localized flooding from storm drain runoff and tidal flooding from high tide events in the Bay. The portion of the site to the north includes existing tidal wetlands that are frequently subject to inundation during winter. A large portion of the Industrial Section, including much of the area proposed for development is shown on the FEMA (Federal Emergency Management Agency) maps as being subject to flooding. The flood elevation indicated is 7' above sea level which is at, or exceeding, the existing elevation for the eastern half of the site. In addition, local flooding studies prepared by the U.S. Army Corps of Engineers have indicated that historically the area surrounding the site has been subject to localized flooding during heavy storm events. Existing levees to the west of the site provide some protection from the tidal wetland activity, but are at an insufficient elevation to provide secure protection against flooding.

POTENTIAL IMPACTS

Water Supply

The proposed projects will generate additional water demand in the area over and above the existing demand. According to Robert Frame of the San Mateo County Public Works Department, there is sufficient water available purchased from the City of San Francisco to supply the Ravenswood Industrial Section. Total capacity of the City of San Francisco's Hetch Hetchy aqueduct is approximately 184 million gallons per day. At the present time, water quantities have not been restricted to users in any part of this area of East Palo Alto.

Localized demands of the proposed development in the Industrial Section would require that the water delivery system be upgraded in certain areas to meet this demand. The County prefers that all mains be part of a loop system with no dead end lines. The size of this line should be based on a detailed water network analysis. Preliminary review indicates a 12 inch looped main would be sufficient.

Minimum fire flows for fire protection would be required in the project development area. The Menlo Park Fire Protection District has a minimum requirement of 2,000 gallons per minute with a residual pressure of 20 psi for commercial industrial developments. The fire flow rates for individual buildings and the need for fire sprinklers and additional service loads should be determined on a project by project basis. However, with implementation of the loop system described above, fire flow rates should be available that will cover the various potential project requirements on the site.

Sanitary Sewer

The proposed project would generate an additional .190 million gallons per day (MGD) to the sanitary sewer system. The existing sewage treatment plant has sufficient capacity to treat this amount of flow from the Ravenswood Industrial Section. East Palo Alto has an allocation of 2.9 MGD and currently uses 1.9 million gallons per day. The City's University Circle Redevelopment project (currently proposed) would contribute an additional .128 MGD to the system.

Sewage flows produced by proposed development in the Industrial Section would require upgrading of the existing trunklines and a small sewer line extension in the northern portion of the site. The additional sewer flows generated by the project would exceed current off-site trunk system capacities during wet periods of the year due to storm water infiltration. According to a draft sewer study performed by CREM Engineers for the East Palo Alto Sanitary District, the current sewer trunkline system requires upgrading in some areas. While some improvement of the overall trunkline system is being proposed by the East Palo Alto Sanitary District, it will not be sufficient to alleviate problems in the trunklines that will serve the Ravenswood Industrial Section. Therefore, upgrading certain sections of the trunklines would be necessary. In addition, a portion of the site may drain into the West Bay Sanitary District in the northern part of the Industrial Section. A relatively small sewer line extension would be required to service the minimal development proposal in this area from existing West Bay Sanitary facilities. Overall capacity in the system is sufficient to service this portion of the project area.

a.	Research and Development			
	(5,600 emp.)x(30 gal/day/employee/shi	ft) =	168,000	GPD*
b.				
	(1,112 emp.)x(20 gal/day/emp) = SUBTOTA	L	<u>22,240</u> 358,240	
c.	CFS = (358,240 GPD/1,000,000)x(1.547) =.55 CFS**		
"Fe	our-Corners" Contribution			
a.	Commercial/Retail:			
	$\frac{155,190 \text{ sf}}{250 \text{ sf/emp}} = 621 \text{ Employees}$			
	(621 emp)x(20 gal/day/emp) =		12,420	GPD
b.	Office:			
	$\frac{50,000 \text{ sf}}{250 \text{ sf/emp}} = 200 \text{ Employees}$			
	(200 emp)x(20 gal/day/emp) = SUBTOTA	L	<u>4,000</u> 16,420	
c.	CFS = (16,420 GPD/1,000,000)(1.547) =	= .03 CFS		
То	tal Contribution for Project			
	.294 CFS + .03 CFS =	.324 CFS		
*	Gallons per Day			

Assumptions:

Sanitary sewer estimated waste/sewage flow rates taken from Carroll / Resources Engineering and Management (CREM) Sanitary District Engineer.

Estimated waste/sewage flow rates:

- a. Research and Development = 30 gal/day/employee/shift
- b. Office = 20 gal/day/employee
- c. Retail = 20 gal/day/employee
- d. $CFS = MGD \times 1.547$

Employee assumptions per Wallace Robert & Todd Redevelopment plan for Ravenswood and Four Corners.

Storm Drainage

The project would increase storm drainage and runoff in the Industrial Section. This additional flow for the area south of Bay Road would be handled by existing facilities, including the retention basin and pump station. Most of this area is developed, making the net impact of the proposed project minor. The development in the areas north of Bay Road in the Industrial Section would create additional storm drainage and runoff that could not be handled by existing outfall facilities. The project would therefore require additional outfall facilities to be constructed or upgrades in capacity of existing systems.

If additional outfall facilities are constructed there would be impacts to the adjacent tidal wetlands. Construction of a storm drain outfall would involve localized trenching, fill, excavation, and construction access adjacent to and on wetland areas. Care must be taken to minimize this encroachment through selection of the outfall location.

The County of San Mateo would call for design of outfall and storm drainage pipelines to cover a ten year storm event. Rainfall intensities would be taken from the County of Santa Clara Drainage Manual. <u>This new outfall, or use of existing outfalls to transmit additional storm water to the Bay, would also</u> result in increased point discharge of sediments and water borne oils that may be picked up from parking areas and roadways.

Flood Control

The project would place new facilities within known flood plain areas exposing them to potential high tide flooding. Pumping at the storm drain outfalls can be utilized to help alleviate this condition during periods of high tide and high flood elevations. Levees adjacent to the site, between the site and the Bay, provide some minor protection, but are insufficient to be considered viable flood control facilities. The construction or reconstruction of levees would require building levees to a minimum of three feet above the expected high flood elevation in order to be recognized as positive flood barriers. Because of the extensive length of levees adjacent to the project, it seems unlikely that this alternative could be accomplished economically. In addition, these levee improvements would need to extend in both directions until they could be connected with existing positive flood barriers also having sufficient elevation to block the high event plus 3' of freeboard.

Increased areas of impermeable surfaces caused by proposed development in the Industrial Section would generate additional storm water runoff that could contribute to localized flooding, as has historically occurred in the area during heavy storms.

Proposed development in the Industrial Section could block existing flood overland flow release points increasing the localized flood hazard potential. If the entire site or portions of the site are filled, it could prevent runoff from finding its way to the Bay through the project area. If additional levees are constructed or existing levees are modified, blockage to flood overland flow release points could also occur.

Cumulative Impacts

Short and long-term projects in the project vicinity will generate increased demand on existing water supplies and sewage treatment facilities as well as an associated increased demand on existing distribution systems. There is no evidence that the above cumulative demands will have a significant impact on these resources. However, long term mitigation for project use of sewage treatment capacity allocated to the City of East Palo Alto should involve reviewing East Palo Alto's sanitary treatment needs for the long term, following the completion of build-out in the Ravenswood area and other East Palo Alto properties that have development potential.

MITIGATION MEASURES

The following measures are recommended to mitigate potential impacts resulting from the proposed project.

Water Supply

 The current water transportation system in the Industrial Section should be connected and upgraded to form looped water transmission systems. Design work for upgrading the water transportation system should utilize flow testing of the existing system to establish the actual water flows available. This work should be reviewed by the San Mateo Water District, the City of East Palo Alto, and the Menlo Park Fire District to determine that the project requirements have been met.

Sanitary Sewer

2. Required trunkline improvements should be provided. Improvements should be viewed from their benefit to East Palo Alto and to the additional abilities of the East Palo Alto Sanitary District to collect user fees and connection fees based on increased capacity resulting from proposed construction.

Storm Drainage

- 3. Additional outfall capacities should be developed as part of the project in order to provide for the storm drainage needs. Options may be available to upsize existing systems and re-construct them, or to provide an additional outfall to the Bay that will service the majority of the project area.
- 4. Storm drainage outfall development should be designed to minimize adverse impacts to wetlands and should conform to regulatory agency permitting requirements in wetland areas (refer to Chapter 4.3 Biological Resources). If possible, the introduction of additional storm drainage flows should be utilized to enhance marginal wetland areas as a part of mitigation for other project wetland impacts.
- 5. Project outfalls should also take into account the potential for retention/sedimentation basin construction between the outfall and the

Bay. This will assist in mitigating sediment load and water quality impacts associated with parking lot and roadway drainage systems. Final design of outfall/retention facilities should address the need for pumping as related to site elevations and retention basin capacity.

Flood Control

- 6. In order to protect against high tide flooding, building pad and finished floor elevations should be established that are sufficiently above the high flood water elevations.
- 7. Localized storm water flooding can be mitigated by increased storm drainage capacities as outlined in the previous section on storm drainage.
- 8. Building areas and parking lots should be designed to re-route existing overland flow release zones without blocking them. Any design or redesign of levees should also address this potential blockage of flood waters to the Bay.

4.10 Public Services

4.10 PUBLIC SERVICES

EXISTING SETTING

Police Services

The project area and the incorporated City is served by the East Palo Alto Police Department. Outside City boundaries, the County Sheriff, based in Redwood City, and the California Highway Patrol (CHP) have jurisdiction. The CHP patrols the Bayshore Freeway traversing East Palo Alto city limits, while the Sheriff patrols county-controlled roads.

The department has one station which is located at 2415 University Avenue. There are 34 department employees of which 31 are uniformed officers. The on-duty police officer to population ratio is 0.72 officers per 1,000 population. Response time is dependent on the class of crime involved. Class 1 and 2 crimes are responded to within one and one-half minutes. As class numbers increase response times get longer; a class 5 crime may be responded to as late as 24 hours later.

According to Chief of Police Nelson, the existing level of service in the City is inadequate /1/. The department needs more personnel to respond to the current demand for services. The current need is for 8 full time line personnel which would raise the police officer to population ratio to 1.17 officers per 1,000 population. While the City Administration makes a constant effort to seek out resources needed for various departments, no immediate expansion of facilities or services is projected. There is a mutual aid relationship with the County Sheriff's Office which also provides the department with jail facilities and emergency swat response. The California Highway Patrol investigates accidents in which police equipment or school buses are involved.

Crime in the project area is a current problem. Recently compiled statistics for the project area reveal that from October 1988 to September 1989 there were 55 thefts (44 of those being vehicle thefts), 2 rapes, 5 robberies, 14 assaults, and 19 burglaries.

Fire Protection Services

The City of East Palo Alto, including the project area, is serviced by the Menlo Park Fire Protection District which also serves portions of the City of Atherton, adjacent and unincorporated portions of San Mateo County, as well as the City of Menlo Park. The primary response station serving the project area is located at 2290 University Avenue, approximately one-half mile from the Industrial Section. This is the only station located within the City. The station of second response is the main station in the City of Menlo Park at 300 Middlefield, approximately five miles from the project area. There are five fire fighters stationed at the Unviersity Avenue station. Ten additional fire fighters are available from the Middlefield station. Other stations in the District assist as required. Response time to the project area from the University Avenue station is less than two minutes; from the Middlefield station response would be four to five minutes. There are two paramedic units in the Menlo Park Fire District, one of which is stationed at Drew Health Foundation, located at 2111 University Avenue.

The District's fire prevention services are housed at the main station at 300 Middlefield in Menlo Park. There are also company level inspection services and other local prevention programs. Hazardous waste monitoring services are provided by the San Mateo County Health Department's Environmental Health office. The District's insurance service office rating is currently three (3), both for fire and water service, which is considered adequate. No change is anticipated in the near future.

Existing levels of service are currently adequate. /2/ At this time there are no plans to expand the existing level of service. The District has a plan review and permit/fee system whereby new developments are assessed fees to cover the cost of fire prevention.

POTENTIAL IMPACTS

Police

According to Police Chief Nelson, the probable effect of the redevelopment plan on police services in the City would be to reduce the level of existing crime in the project area. This anticipated reduction in demand on police resources could be expected to increase the overall level of police services in the City by increasing the overall response time. While crime reduction in the project area would have benefical effects on police service, <u>traffic generated by the</u> proposed project could adversely affect the ability of the police department to perform traffic-related services.

Fire Protection Service

While implementation of the project would create an increase in demand for fire services by adding approximately 28 additional acres of development above existing levels, the Fire District does not anticipate significant problems in servicing the project area upon buildout. (For anticipated fire flow requirements, refer to Chapter 4.9 Utilities/Water Supply.) However, the retention of Romic Chemical Corporation as an existing land use in the Industrial Section would increase the risk to public safety by creating the potential for a major chemical fire or explosion adjacent to proposed large scale high tech development.

MITIGATION MEASURES

The following measures are recommended to mitigate project-related impacts on police and fire services:

- 1. The City should hire additional police personnel in order to respond to increased demand for traffic-related police services. (The mitigation to reduce traffic congestion recommended in Chapter 4.5 Traffic and Circulation would help reduce the level of impact on police services from traffic congestion caused by implementation of the redevelopment plan.)
- 2. The Menlo Park Fire Protection District should approve all plans for new development to ensure that adequate safety features are incorporated. The large-scale high tech facilities to be sited across from the Romic facility may require additional safety design features, including an open space buffer between the two facilities, to minimize risk in the event of a chemical fire or explosion.
- 3. On-site water storage should be provided as necessary for special fire protection needs of individual projects. During actual project design, water system network analysis should be performed to determine the exact upgrades required.

Footnotes:

- /1/ Personal communication from Chief of Police, Dan Nelson, City of East Palo Alto, November 1989.
- /2/ Personal communication from Fire Marshall Gene Sullivan and Chief Bennett of the Menlo Park Fire Protection District, November 13, 1989.

Π Π 0 **5.0 ALTERNATIVES** 0 E

5.0 ALTERNATIVES

CEQA requires that an EIR identify and analyze alternatives to the proposed project which could feasibly attain the basic objectives while substantially reducing or eliminating any significant environmental effects. An environmentally superior alternative must be identified as well. If the alternative with the least environmental impact is the "no project" alternative, then another alternative must be designated. The proposed Redevelopment Plan has been considered in this assessment as the principal proposal for redeveloping the project area. To provide a further understanding of the impacts of the project and possible approaches to reducing these impacts, and to meet CEQA requirements, three alternatives to the proposed action are described and briefly evaluated in this chapter. The three alternatives are:

Alternative One: High Tech Development/Multiple Large Users Alternative Two: Mixed Industrial and High Tech Development/Multiple Users

Alternative Three: No Project, No Development

Alternatives One and Two assume the same General Plan buildout of the "Four-Corners" Section as does the proposed project. The following description and comparison of alternatives, therefore, concentrates on the Industrial Section of the project area. Refer to Table 3.1 for the proposed land use program including the "Four-Corners" Section. Refer to Table 5.1 for the land use programs for the Alternatives. Refer to Chapter 4.4 Hazardous Substances, 4.5 Traffic and Circulation, 4.6 Air Quality and 4.7 Noise for quantitative information on comparative impacts.

ALTERNATIVE ONE - High Tech Development/Multiple Large Users

As shown in Figure 5-1, land use under Alternative One would provide for one or two large scale high tech parcel(s) for a total of 61 acres within the main loop road; one 19-acre parcel for a smaller scale high tech user at the Bay Road entrance; and one 15-acre parcel for office use south of the loop road adjacent to the Palo Alto Baylands. Sandoz would remain as an existing use in addition to the PG&E substation and Romic Chemical, the two existing uses which would remain under the project. Like the project, access to the Industrial Section would be by Bay Road and a new north access road which would form a loop through the project area and connect to Bay Road. Unlike the project, Clarke Avenue would be open between Weeks Street and Bay Road to provide additional access. At the north edge of the Industrial Section, the four-lane loop roadway (80 foot ROW) would be elevated over the Southern Pacific tracks and above the wetlands north of the tracks returning to grade at University Avenue.

ALTERNATIVE ONE				
		C	R.SQ.FT	
	ACRES	FAR	(1,000)	EMPLOYEES
Large-scale High Tech ¹ Smalle ₁ -scale High Tech ²	61	.44	1,170	4,251
Smaller-scale High Tech ²	19	.44	364	1,140
Office ³	15	.58	379	1,516
			1,913	6,907
Romic ⁴	14.4			
PG&E	3.8			
Sandoz	4.4			
	117.6 ac	developed		
Park	3.7			
Open space/wetlands	28.8	(wetlas	nd loss: -1.7	ac, wetland gain: +2.6 a
Road ROW	12.3			
	and the second sec			
	163.0 ac	total		
ALTERNATIVE TWO	163.0 ac 1	total		
		total 	747 .	2,718
Large-scale High Tech	163.0 ac 1 		747 - 364	2,718
Large-scale High Tech Smaller-sçale High Tech	39	.44	364	2,718 1,140 1,050-1,333
Large-scale High Tech Smaller-sçale High Tech	39 19	.44 .44	364 <u>823</u>	1,140
Large-scale High Tech Smaller-scale High Tech Industrial ⁵	39 19 42	.44 .44	364	1,140 <u>1,050-1,333</u>
Large-scale High Tech Smaller-scale High Tech Industrial ⁵ Romic	39 19 42 12.5	.44 .44	364 <u>823</u>	1,140 <u>1,050-1,333</u>
ALTERNATIVE TWO Large-scale High Tech Smaller-scale High Tech Industrial ⁵ Romic PG&E Sandoz	39 19 42	.44 .44	364 <u>823</u>	1,140 <u>1,050-1,333</u>
Large-scale High Tech Smaller-scale High Tech Industrial ⁵ Romic PG&E	39 19 42 12.5 3.8 4.4	.44 .44	364 <u>823</u>	1,140 <u>1,050-1,333</u>
Large-scale High Tech Smaller-scale High Tech Industrial ⁵ Romic PG&E Sandoz Park	39 19 42 12.5 3.8 4.4 120.7 ac o 3.8	.44 .44 .45 developed	364 <u>823</u> 1,934	1,140 <u>1,050-1,333</u> 4,908-5,191
Large-scale High Tech Smaller-scale High Tech Industrial ⁵ Romic PG&E Sandoz Park	39 19 42 12.5 3.8 4.4 120.7 ac	.44 .44 .45 developed	364 <u>823</u> 1,934	1,140 <u>1,050-1,333</u>
Large-scale High Tech Smaller-scale High Tech Industrial ⁵ Romic PG&E	39 19 42 12.5 3.8 4.4 120.7 ac o 3.8	.44 .44 .45 developed	364 <u>823</u> 1,934	1,140 <u>1,050-1,333</u> 4,908-5,191

Table 5.1 Land Use Programs: Alternative One and Alternative Two

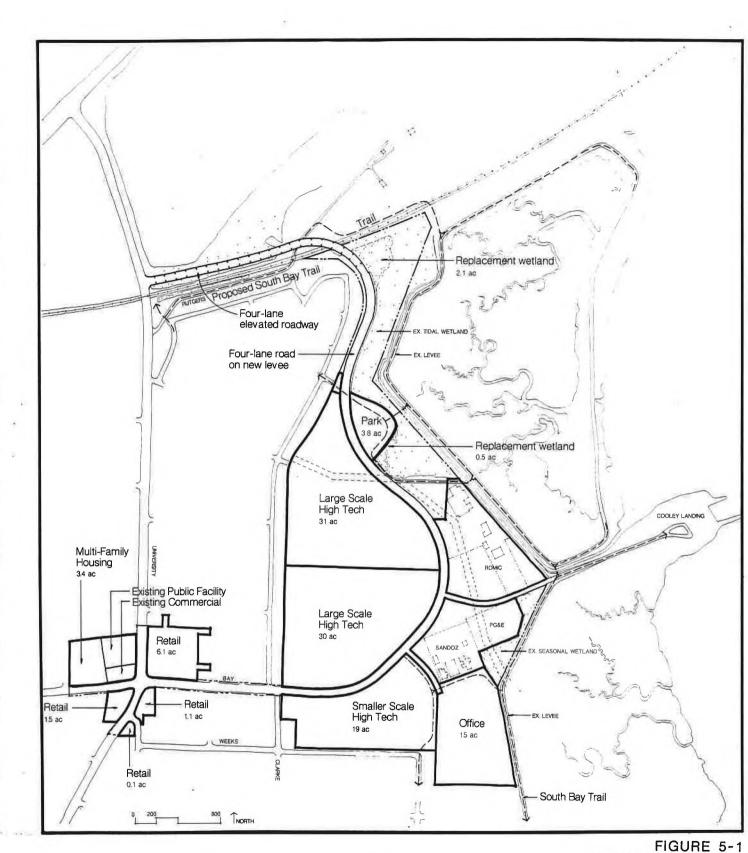
1 Large-scale High Tech: 69 employees/ac (1/275 sf)

2 Smaller-scale High Tech: 60 employees/ac (1/320 sf)

3 Office: 101 employees/ac (a/250 sf)

4 Romic site reconfigured and acreage slightly increased due to main road alignment

5 Industrial: 25 employees/ac (1/780 sf); 32 employees/ac (a/620 sf) based on actual employees of relocating businesses, from IPOA proposal



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MAXIMUM HIGH - TECH DEVELOPMENT MULTIPLE LARGE USERS Ravenswood Industrial Area Redevelopment Plan & GPA Program EIR Wallace Roberts & Todd

ALTERNATIVE TWO - Mixed Industrial and High Tech Development/Multiple Users

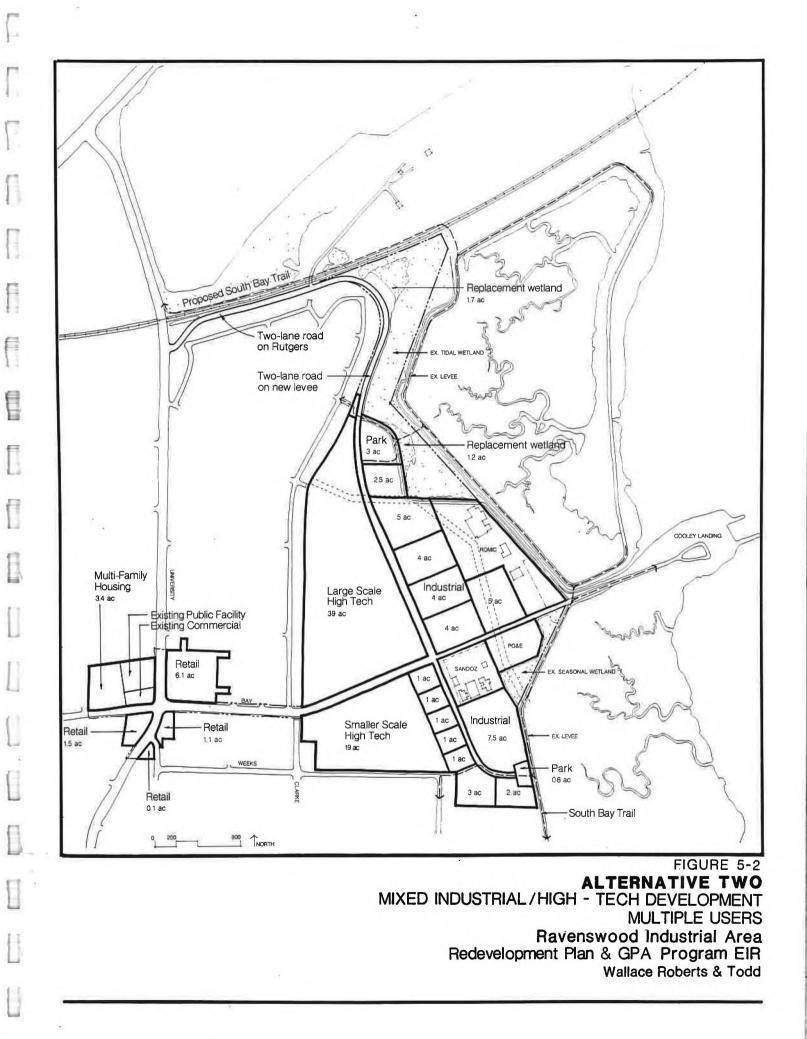
As shown in Figure 5-2, land use under Alternative Two would provide for one 39-acre parcel for a large scale high tech user and one 19-acre parcel for a smaller scale high tech user. Property owners who wished to remain in the project area would continue as industrial users after pooling and replatting the Industrial Section for multiple owners under a unified master plan. As in Alternative One, Sandoz along with Romic and PG&E would remain on the site as existing uses. As in the project, access to the project area would be by Bay Road and the new north access road. Access to Bay Road from Clarke Avenue would be closed. The 4-lane loop road narrows to 2-lanes (ROW 56 feet) in the northern portion of the site and continues to University Ave as a 2-lane road. Due to the large number of users, the interior circulation system is more complex with 2-lane roads accessing the smaller parcels.

ALTERNATIVE THREE: No Project, No Development

The "no project" alternative implies that the proposed development of the site would not occur and the property would remain in its present use for the immediate future. The preclusion of development at the site would eliminate both the adverse environmental effects described in this report and the beneficial effects of proposed development. Under this alternative, existing businesses would operate and expand as dictated by economics within the development standards of the general plan designations. Existing conditions of physical and social blight would continue with limited ability of either most individual businesses or the City to correct these deficiencies. Comprehensive clean-up of potentially contaminated soil and groundwater in the project area would not be likely to occur and public access to wetland areas would remain limited. Tax increment money for local housing and services would not be available. On the other hand, no filling of wetlands would occur and wildlife habitat would not be adversely affected. While traffic would be less under this scenario, the flow of traffic on University Avenue and other City streets would still be adversely affected by regional growth. This alternative would maintain the status quo and preserve the area for future development options; however, because of the blighting conditions in the project area, further decline could be expected to occur in the interim. This alternative would not meet the objectives of the City of East Palo Alto and the City's Redevelopment Agency.

ALTERNATIVE ANALYSIS

The following analysis focuses on topic areas in which Alternative One and Alternative Two would either reduce or increase the degree of environmental impact as compared with the proposed project. This comparison is shown in Table 5.2. If a potential environmental impact is not discussed in relation to a given alternative, it can be assumed that the impact from the alternatives would be similar to that of the proposed project.



Majo	or Project Impacts	Alternative One	Alternative Two	"No Project
4.1	Land Use			
	o relocation of			
	existing business*	0	+	+
4.2	Geotechnical			
	o development constraints	· 0	0	0
4.3	Biological Resources			
	o fill wetlands*	0	0	+
	o habitat value	-	+	+
4.4	Hazardous Substances			
	o potential exposure	+	+	-
	o likelihood of cleanup	-	-	-
4.5	Traffic			
	o intersection congestion*	0	0	0
	o residential streets	-	0	+
4.6	Air Quality			
	o regional air quality*	0	0	0
4.7	Noise	1		
	o traffic noise	0	0	0
4.8	Cultural Resources			
	o construction activities	0	0	+
4.9	Utilities	1		
	o sewage treatment capacity	0	0	+
4.10	Public Services			
	o City services	-	-	-
•	Unavoidable Adverse Impact	Under Project		
0	Similar Degree of Impact to P	roject		
+	Avoids or Reduces Impact to I	10,000		
_	Greater Degree of Impact that	n Project		

Table 5.2 Comparison of Alternatives

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Land Use. As with the project, Alternative One would require the relocation of existing businesses resulting in an unavoidable adverse impact. Under Alternative Two this impact would be avoided because existing businesses would have the option to remain as existing uses in the Industrial Section by means of a land pooling and reparceling plan. Land Use compatibility in the project area could be adversely affected from an aesthetic perspective if, for example, existing auto salvage yards continued to operate in locations visually apparent to the new high tech developments.

Geotechnical. The alternatives and the project would be equally affected by geotechnical conditions in the project area.

Biological Resources

Biological resources in the Industrial Section are affected by the alignment and width of the north access road. The 4-lane loop road (80 foot right-of-way) proposed in Alternative One attempts to minimize impacts to seasonal wetlands north of the Southern Pacific Railroad Tracks by providing for an elevated roadway through that habitat. While the amount of wetland fill is reduced with such a design (to 1.7 acres), the overall adverse impact to the habitat would be greater than the project. Footings for the elevated structure would permanently occupy former seasonal wetlands and construction activities could result in the removal of wetland vegetation with consequent impacts to wildlife species using it for forage and cover. Once constructed, the elevated roadway would cast sufficient shade on the marsh to preclude the re-establishment of vegetation. It could be expected, therefore, that wildlife habitat values would remain low under the elevated roadway. Any fill of wetlands is considered an unavoidable adverse impact.

The north access segment of the 2-lane loop road (56 foot right-of-way) proposed under Alternative Two would be aligned south of the Southern Pacific Railroad tracks thereby avoiding the prime seasonal wetland habitat to the north. The required fill of wetland habitat under Alternative Two (1.9 acres) would be approximately half the losses expected from the Preferred Project. Although the amount of wetland fill would be greater under Alternative Two than Alternative One, it would be the least environmentally damaging to biological habitat resources. No significant adverse impacts to the biological resources of the Ravenswood Industrial Area are expected from the "no project"

Hazardous Substances

The major environmental concern related to hazardous substance contamination in the Industrial Section is the potential for human exposure to the contamination. The project and alternatives can be evaluated on: 1) the degree to which the scenario proposes development of sites which have not undergone an investigation to define the nature and extent of contamination or any remedial action planning (refer to Table 5.3: Acreages of Known and Suspected Contaminated Sites); and, 2) the comparative potential success of the scenario to cleanup the project area. It is reasoned that a primary single user/owner of the project area would be in a more favorable position to effect total

	Acreages	of Known and Contamination	Suspected Site	
4 Known contaminated sites	÷	Proposed Project	<u>Alt 1</u>	<u>Alt_2</u>
Acreage proposed for Redevelopment as office industrial large-scale industria		5.0 <u>9.3</u> 14.3 ¹	5.0 <u>4.9</u> 9.9 ²	10.9 1.1 12.0^3
Percent under Remediation		38	11	27
Affected Population ⁴		1,147	843	349
Suspected Sites				
Acreage proposed for Redevelopment as industrial small-scale industria large-scale industria	վ	 <u>77.7</u> 77.7	19.0 <u>58.7</u> 77.7	19.7 19.0 <u>39.0</u> 77.7
Affected Population ⁴		5,361	5,190	4,324
Park Areas		9	4	4
Road Areas		13	12	12

 Table 5.3

 Acreages of Known and Suspected Site

 Contamination

¹Includes Electrite, Calmac, and Sandoz

²Includes Electrite and Calmac

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³Includes Electrite, Calmac, and a portion of Romic

⁴Based on employment densities from Sun Microsystems and Keyser Marston Associates

project area cleanup than would small individual user/owners with differing schedules and budgets because it would be easier for the single user/owner to coordinate cleanup activities, efficiently deal with regulatory agencies, and pay for cleanup costs. In addition, a single user could coordinate cleanup efforts categorically (for wrecking yards, for arsenic, etc.), and maintain flexibility in development schedule. Individual smaller owners may be less able to afford cleanup costs, and thus, financial responsibility for the site cleanup could revert to the state if the owner declared bankruptcy or was unable to produce sufficient funds to fund the cleanup; this could further prolong cleanup actions on the site.

Using the first criteria, Alternative Two would potentially expose the fewest number of future employees (4,324 people) on uninvestigated sites (totaling 94 acres); the project would potentially expose the greatest number of future employees (5,361) on uninvestigated sites (78); and Alternative One would fall between these figures. Although the degree of risk associated with these lands is unknown, there is a chance that exposure to hazardous materials could occur because of past activities and recorded migration of contaminants off the known contaminated sites.

Using the second criteria, the proposed project offers the greatest possibility of a large-scale site cleanup, compared to Alternatives One and Two. Alternative Two splits the site into the greatest number of individual users and therefore is the least likely of the three scenarios to achieve a complete cleanup. Alternative One divides the site into several different land uses and users which makes the ease and potential effectiveness of a large scale site cleanup less probable than it would be for one owner/user.

Traffic

Due to the effect of approved projects in the project vicinity (short-term base), the project and alternatives have similar impacts on the level of service on critical intersections in the project vicinity. Although Alternative Two has a lower trip generation by 15 percent than the project and a slightly lower V/C ratio, the adverse effects of this alternative on traffic congestion is not significantly lower than the other scenarios (refer to Table 4.5.8 in Chapter 4.5). Alternative One has the greatest adverse impact on residential streets with 11 percent greater use of Clarke Street than the project or Alternative One.

With recommended physical improvements and an aggressive Transportation Demand Management Program, the level of impact of all scenarios approaches a greater degree of similarity. This is due to the assumed steped effectiveness of the single user versus the multiple user to structure and control the TDM program. Implementation of the aggressive TDM program for the proposed project could reduce peak-hour vehicle trips by about 20 percent and total daily trips by about 22 percent. Trip reduction would be less for the alternatives because of the comparative reduced ability of multiple owners with smaller parcels to structure an effective program. TDM under Alternative One has the potential to reduce peak hour trips by about 20 percent and total daily trips by about 13 percent. TDM under Alternative Two has the potential to reduce peak hour trips by about 10 percent and total daily trips by 8 percent.

5.0 Alternatives

Air Quality

There is no significant difference between the project and the alternatives in terms of air quality impacts. All scenarios would have relatively the same short-term impacts from construction; all scenarios would remain below local air quality standards for carbon monoxide; all scenarios would exceed regional air quality standards for particulates (PM-10) and ozone precursors. While the impact of the project and alternatives on both local and regional air quality would be reduced by application of TDM, impacts on regional air quality would remain above the Bay Area Air Quality District thresholds of significance.

Noise

Noise impacts for Alternative One and Two are similar to the proposed project. Noise levels along local roadways would not differ significantly from the proposed project.

Cultural Resources

In the absence of better information regarding the location of possible cultural resources in the project area, the potential for construction activities to adversely affect cultural resources is similar for all scenarios.

Utilities

Although utility infrastructure needs (water distribution system, sewage trunklines, and storm drainage/outfall facilities) and demand on sewage treatment capacity vary according to the scenario, the alternatives and the project have similar overall impacts which can be mitigated.

Public Services

Demand for police and fire services would be similar under all scenarios. In general, public services in the project area and the City could be expected to benefit from the project in the form of tax increment revenues to fund improved City services. As discussed below, Alternatives One and Two would not be able to generate revenue for those improvements.

Summary

As shown in Table 5.2, Alternative Two is better able to reduce or avoid the significant adverse impacts caused by the proposed project than is Alternative One and is therefore the environmentally superior alternative. Alternative Two does not force the relocation of existing business in the Industrial Section and minimizes damage to wetland habitat value. However, it is unlikely that either Alternative One or Two could meet the objectives of the City of East Palo Alto because of their financial infeasibility.

6.0 REQUIRED CEQA CONSIDERATIONS

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6.0 CEQA CONSIDERATIONS

Cumulative Impacts

In addition to the proposed project, a number of other current and anticipated projects in the project vicinity will also contribute to local environmental change. Table 4.5.6 and Table 4.5.11 in Chapter 4.5 Traffic and Circulation contains (respectively) the list of short-term and long-term base projects respectively which are approved, under construction or planned for development. This list serves as the base for an understanding of cumulative impacts. An evaluation of cumulative impacts is required by CEQA when they are significant, but need not be as detailed as the discussion of project impacts. This section identifies the two significant environmental impacts that may result when other approved or planned projects in the vicinity are developed.

Traffic and Circulation. Cumulative traffic impacts and mitigation measures have been quantitatively analyzed and discussed in Chapter 4.5 Traffic and Circulation. With project mitigation, traffic congestion would still be a significant cumulative impact in the project vicinity. The greatest impacts would occur at the analyzed intersections along University Avenue, and at the Willow/Bayfront intersection.

Air Quality. Cumulative air quality impacts have been quantitatively analyzed in Chapter 4.6 Air Quality. The project is located in an area that does not meet the national or state ambient air quality standards. The project would be part of a continuing pattern of rapid growth occurring in the South Bay region. The growth in emissions associated with the proposed project together with that of cumulative development in Santa Clara County and the South Bay would contribute to the continuing ozone and particulate matter problems in the region.

The growth in emissions generated by this project and cumulative growth in the area would increase the needed emission reductions required if the state and federal ambient standards are to be attained in the future. Additional controls on stationary, mobile and area sources on a regional basis may be required to offset the additional emissions resulting from the project and cumulative development in the area.

Other Potential Cumulative Impacts. Based on existing information, the following topic areas were found not to have significant adverse cumulative environmental effects: land use, geotechnical factors, biological resources, hazardous substances, noise, cultural resources, utilities, and public services.

Growth-Inducing Impacts

The proposed project would occur on the City of East Palo Alto's only industrially designated land and would therefore not induce additional industrial growth in the City. Industrial development is already proposed in adjacent areas in the City of Menlo Park. The proposed project, however, could promote residential development in the City where vacant lots are available and could generate demand for housing in adjacent communities. The project land uses in the Industrial Section could be expected to produce the demand for service related businesses as well as retail commercial businesses. This activity would occur as planned under the project in the "Four-Corners" Section and is considered as an beneficial economic impact to the City and a goal of the redevelopment plan.

Local Short-Term Uses Versus Long-Term Productivity and Irreversible Commitment of Resources

Implementation of the project would represent a long-term commitment to continued industrial use of the Industrial Section. While industrial development would preclude this area from exclusive open space use (a desirable use in terms of its prime location adjacent to the Bay), approximately 40 acres would remain as wetland open space and parks.

A significant long-term benefit from the proposed project is the complete hazardous waste cleanup of the Industrial Section. Without a large scale single user as proposed, the likelihood of a comprehensive and effective cleanup occurring in the foreseeable future is remote due to the high potential cost involved and the difficulty of organizing such a procedure. In addition to the benefits to public safety, cleanup of the Industrial Section would probably have long-term benefits to biological resources. Benefits would be seen in terms of improved water quality in the Bay due to remediation of potentially contaminated ground water.

An additional long-term benefit of the proposed project would be the increased provision of public access to wetland areas and the South Bay trail along the levees east of the Industrial Section. Public enjoyment of these areas would be enhanced by removal of existing auto salvage yards and by comprehensive cleanup of the project area.

Unavoidable Significant Adverse Impacts

If the proposed project were implemented subject to effective incorporation of all impact mitigation measures recommended in this EIR, the following adverse impacts of project area buildout would remain unavoidable and, in some cases, irreversible:

1. All existing uses within the Industrial Section, with the exception of Romic Chemical and the PG&E Substation, would be significantly affected by the proposed project by being forced to relocate. The Redevelopment Agency will comply with state Community Redevelopment law regarding relocation of residents within the project area, and, if possible, will relocate existing businesses. In those cases where relocation of existing businesses is not possible, the potential exists for an unavoidable significant adverse impact.

- 2. Any fill of wetlands is considered by the regulatory agencies which have jurisdiction in wetlands to be a significant impact. Under the proposed project as mitigated, approximately 1.7 acres of wetland would need to be filled for the construction of the north access road in the Industrial Section. Because the road would provide needed access into the Industrial Area, filling of peripheral wetland for the construction of the road must be considered an unavoidable significant adverse impact.
- 3. Traffic generated by the proposed project would significantly degrade the level of service at most of the analyzed intersections during peak hour. The highest project impacts would occur along University Avenue. The proposed mitigations, consisting of physical improvements and an aggressive Transportation Demand Management System, while effective, would not completely reduce traffic congestion to a less-than-significant level; therefore, this impact is an unavoidable adverse impact.
- 4. Project traffic, in conjunction with project-related stationary emissions, would adversely affect regional air quality by contributing an increase in ozone precursors (oxides of nitrogen) and a significant increase in particulate matter. While the impact of the project on both local and regional air quality would be reduced by application of an aggressive Transportation Demand Management Program, impacts on regional air quality would remain above the Bay Area Air Quality Management District and is therefore an unavoidable adverse impact. (However, under the District's second threshold of significance for regional emissions equal to one percent of the county-wide emissions, the project would not exceed the criteria for oxides of nitrogen but would for particulate matter.)

7.0 ORGANIZATIONS, PERSONS AND DOCUMENTS CONSULTED

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7.0 ORGANIZATIONS, PERSONS AND DOCUMENTS CONSULTED

Preparation Staff

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Wallace Roberts and Todd

Pamela Dyson, Project Director Annemarie Dietzgen, Project Manager and Environmental Planner Sarah Butler, Graphic Artist Barbara Maloney, Partner-In-Charge Diane Ochi, Planner Dianne Anderson, Word Processing Scott Price, Word Processing

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H. T. Harvey and Associates (Biological Resources) H.T. Harvey Dave Hartesvelte Ron Duke

ERC Environmental and Energy Services Co. (Hazardous Substances) Robert Horner Carla E. Harris L.F. Byers Carol Secovitch

Korve Engineering, Inc. (Traffic) Brent Ogden Michelle Hightower

Donald Ballanti (Air Quality)

- Charles M. Salter Associates, Inc. (Noise) Alan Rosen
- Holman and Associates (Cultural Resources) Miley Holman John F. Salter

Persons and Organizations Consulted

City of East Palo Alto

Stanley Hall, City Manager and Executive Director of the Redevelopment Agency Linda Rahi, Deputy City Manager and Deputy Director of the Redevelopment Agency Marty Tarshes, Project Coordinator, Ravenswood Industrial Area **Redevelopment Project** Mosi Mays, Assistant to the Project Coordinator T. Dan Nelson, Chief of Police Don Fleming, Director, Planning Department Ron Scott, Building Official (former) Matthew Coyle, Building Inspector (present) Vann Major, Code Enforcement Officer Charles McDonald, Director, Public Works Department Kenneth Jones, Civil Engineer, Assistant to the Director of Public Works Russell Bouligny, Finance Director

City of East Palo Alto, Redevelopment Consultants

Goldfarb & Lipman Steven M. Goldfarb John T. Nagle Karen M. Tiedemann Linda S. Manhart

Katz Hollis Coren & Associates, Inc. Al Robertson

Keyser Marston Associates Denise Conley

Brian Kangas Foulk (Geotechnical and Utilities) David LaVelle

California Department of Health Services

Michelle Rembaum, Engineer/Geologist Paul Gardina, Associate Hazardous Materials Specialist

Industrial Property Owners Association

Virgus Streets, Executive Director Timothy Tosta, Attorney

Persons and Organizations Consulted (Continued)

Menlo Park Fire District

Gene Sullivan, Fire Marshall Jack Bennett, Chief

Mid-Peninsula Regional Open Space District

Craig Britton, Assistant General Manager and Land Acquisition Manager

County Airport Land Use Commissions

David F. Carbone, San Mateo County A.L.U.C. Staff Coordinator John Hau, Santa Clara County A.L.U.C. Staff Coordinator

Sun Microsystems

Larry Barone, Corporate Real Estate Manager Eric Richert, Senior Project Manager

Documents Consulted

- Final Report Analysis of Options for Ravenswood Industrial Park Area
 City of East Palo Alto Citizens Task Force, November, 1988
- Preliminary Report on the Proposed Redevelopment Plan for the Ravenswood Industrial Redevelopment Project - Katz, Hollis, Coren & Associates, January, 1990
- o General Plan Amendment City of East Palo Alto, January, 1990
- o General Plan City of East Palo Alto, 1986
- o San Mateo County Zoning Regulations, Sections 6100 to 6999, 1985 (as amended)
- Land Use Plan for Area Surrounding Santa Clara County Airports
 Santa Clara County Airport Land Use Commission, August, 1973
- List of State and Federal Endangered and Threatened Animals of California
 California Department of Fish and Game, 1989
- Guidelines for Enhancement and Restoration of Diked Historic Baylands
 H.T. Harvey, Philip Williams, and Jeffrey Haltiner, San Francisco Bay Conservation and Development Commission, 1982
- o National List of Plant Species that Occur in Wetlands Porter B. Reed, California, U.S. Fish and Wildlife Service, 1988

Documents Consulted - Continued

- o East Palo Alto Biological Resources Evaluation WESCO, 1989
- o Preliminary Program Expenditure Plan San Mateo County Traffic Authority, August 18, 1989
- o 1988 Adopted California State Transportation Improvement Program: District 4 - California Transportation Commission, October, 1988
- o Airport Master Plan Santa Clara County Land Use Commission, August, 1983
- Cultural Resources Evaluation of the Lucky Acres Project off Demeter Street in the County of San Mateo - Robert Cartier, Northwest Information Center, Sonoma State University, 1982
- Subsequent Archaeological Evaluation of the Lincoln Property Company EPA Project on Bay Road in East Palo Alto, County of San Mateo - Northwest Information Center, Sonoma State University, 1984
- A Preliminary Reconnaissance of the Archaeological Resources of the East Palo Alto Redevelopment Project Area No. 1 - James Dotta, Northwest Information Center, Sonoma State University, 1974
- o The History of Ravenswood Werner C. Foss, Jr., 1942
- o An Analysis of the University Village Complex Bert A. Gerow, Board of Trustees of the Leland Stanford Junior University, 1968
- Co-traditions and Convergent Trends in Prehistoric California San Luis
 Obispo County Archaeological Society Occasional Papers, 1974

8.0 TECHNICAL APPENDICES

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Appendix A Notice Of Preparation

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DECLARATION OF MAILING

I declare that:

I am a citizen of the United States and employed in San Francisco County, State of California, over the age of eighteen years, and employed by Goldfarb & Lipman. My business address is One Montgomery Street, Telesis Tower, 23rd Floor, San Francisco, California.

I served the following:

Notice of Preparation of Environmental Impact Report with Initial Study (a copy of which is attached hereto as Exhibit A) by mailing true copies thereof on October 13, 1989, by certified mail, return receipt requested, to:

- State Clearinghouse 1400 Tenth Street Sacramento, CA 95814
- All affected taxing entities in the proposed Ravenswood Industrial Redevelopment Project Area (Exhibit B)
- 3. Other interested parties (Exhibit C)
- Trustee Agencies pursuant to CEQA Section 15386 (Exhibit D).

I declare under penalty of perjury that the foregoing is true and correct and that this Declaration was executed on October 13, 1989, at San Francisco, California.

Jalia Munay

#B035/B55102

EXHIBIT A

NOTICE OF PREPARATION

TO:	San Mateo County Auditor, Assessor,	FROM:	City of East Palo Alto	
	Tax Collector, Administrator, All Affected Taxing Entities, Trustee		2415 University Avenue	
	Agencies, and Other Interested Parties	5	(Address)	
			East Palo Alto, CA	

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report

The City of East Palo Alto 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 probable environmental effects are contained in the attached materials. A copy of the Initial Study \underline{XX} 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 30 days after receipt of this notice.

Please send your response to Marty Tarshes at the address shown above. We will need the name for a contact person in your agency.

Project Title: East Palo Alto Ravenswood Industrial Redevelopment Project

Project Applicant, if any:

DATE October 9, 1989

	DYA.
Signature	Landa Rahi
Title Deputy	City Manager
Telephone	415-853-3100

Reference: California Administrative Code, Title 14, Sections 15082(a), 15103, 15375.

CITY OF EAST PALO ALTO

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INITIAL STUDY ENVIRONMENTAL EVALUATION CHECKLIST To be completed by Planning Staff)

I. BACKGROUND

Project Title: REDEVELOPMENT PROGRAM FOR THE RAVENSWOOD INDUSTRIAL AREA(INCLUDING REDEVELOPMENT PLAN, SPECIFIC PLAN AND ACCOMPANYINGFile No.:GENERAL PLAN AND ZONING ORDINANCE AMENDMENTS)

La a a

Project Location: NORTHEAST CORNER OF THE CITY OF EAST PALO ALTO: GENERALLY BOUNDED BY EAST PALO ALTO CITY LIMIT ON NORTH AND EAST, ILLINOIS ST. ON WEST AND WEEKS ST. ON SOUTH

Assessor's Parcel No.: N.A.

Applicant/Owner N.A.

PROJECT DESCRIPTION

SEE ATTACHMENT

ANALYSIS

poversial answers or answers needing clarification are explained on an attached sheet.

LAND SUITABILITY AND GEOLOGY	Yes	Maybe	No	N/A	Common Source(s)	Other Source(s)
(or could) this project:						
involve a unique landform or biological area, such as beaches, sand dunes, marshes, tide- lands, or San Francisco Bay.	<u>X</u>				<u>B,F,O</u>	
b. involve construction on slope of 15% or greater.			<u>X</u>		<u> </u>	
G4 be located in an area of soil instability (subsidence, landslide or severe erosion)?	<u></u>			·	Bh,D_	
be located on, or adjacent to a known earth- guake fault?	<u></u>			·	Bh,D	
e. involve Class I or Class II Agriculture Soils and Class III Soils rated good or very good for artichokes or Brussesl sprouts.		<u> </u>		. <u></u>	<u>M</u>	
f. cause significant erosion or siltation?		<u> </u>		•	<u>M,I</u>	
g. result in damage to soil capability or loss of agricultural land?	<u></u> X				<u>A,M</u>	
h. be located within a flood hazard area?	<u></u> X	-			<u> </u>	
1. be located in an area where a high water table may adversely affect land use?	<u></u>			. <u> </u>	<u>D</u>	
1. affect a natural drainage channel or stream- bed, or water course?	·	<u> </u>		•	<u> </u>	

	FIRTION AND WILDLIFE:	Yes	Maybe	No	N/A	Common Source(s)	Other Source(s
WII WII	1 (or could) this project:						
	affect federal or state listed rare or endangered species of plant life in the project area?		<u> </u>		÷ ŝ.	<u>P</u>	
	involve cutting of heritage or significant trees as defined in the City Heritage Tree and Significant Tree Ordinance?			x		1, A	
с. С.	be adjacent to, or inc'ude a habitat food source, water source, nesting place or breeding place for a federal or state listed rare or endangered wildlife species?		X			<u> </u>	
d.	significantly affect fish, wildlife, reptiles, or plant life?		<u>x</u>			<u> </u>	
••	be located inside or within 200 feet of a marine or wildlife reserve?		<u> </u>			<u>E,F,O</u>	<u> </u>
1. L.	infringe on any sensitive habitats?		<u>x</u>			P	
9.	involve clearing land that is 5,000 sq.ft. or greater, that has slopes greater than 20% or that is in a sensitive habitat or buffer zone?	x				I, F, Bi	
3. 11	SICAL RESOURCES:						
wi1	1 (or could) this project:						
a.	result in the removal of a natural resource for commercial purposes (including rock, sand, gravel, oil, trees, minerals or top			x		I	
j.r	soil?						

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MEDIS

Station Contract

171

Paral California Carrier

				Vor	Nauha	No	N/A	Common	Other
	i in	1	,	Yes	Maybe	10	u/ A	Source(s)	Source(s)
		1.14	ICAL RESOURCES: (Cont.)						
		b .	involve grading in excess of 150 cubic yards?		<u>X</u>			1	
	1999. 1997 - J.	0.	involve lands currently protected under the Williamson Act (agricultural preserve) or an Open Space Easement?			X		<u> </u>	
		d.	affect any existing or potential agricul- tural uses?	<u> </u>				A, K, M	
	.4.	AIR	QUALITY, WATER QUALITY, SOWIC						
		Will	(or could) this project:						
		* a.	generate pollutants (hydrocarbon, thermal odor, dust or smoke particulates, radiation, etc.) that will violate existing standards of air quality on site or in the surrounding						
			area?		<u> </u>			<u>I, N, R,</u>	
		b.	involve the burning of any material, includ- ing brush, trees and construction materials?						
0	.,5	C.	be expected to result in the generation of noise levels in excess of those currently existing in the area, after construction?			<u> </u>		_ 1	
		d.	involve the application, use of disposal of potentially hazardous materials, including pesticides, herbicides, other toxic sub- stances, or radioactive material?	<u> </u>				<u>Bq, I</u>	
			2	x				<u> </u>	
			be subject to noise levels in excess of le- vels determined appropriate according to the City Noise Ordinance or other standard?						
		f.	generate noise levels in excess of levels determined appropriate according to the City Noise Ordinance standard?		<u> </u>			<u>A, Bg</u>	
					_ <u>_ x</u>		-	<u> </u>	
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			Ŷ						

				16			
And States		Yes	Maybe	No	N/A	Common Source (8)	Other Source (B
	COUALITY, WATER QUALITY, SONIC: (Cont.)						
9.	generate polluted or increased surface water runoff?	<u> </u>				<u> </u>	,
b.	require a permit or other approval from any other agency? For example:	x				1,0,5	
	U.S. Army Corps of Engineers State Water Resources Control Board Regional Water Quality Control Board State Department of Public Health San Francisco Bay Conservation and					<u>I,Q,S</u> <u>I,Q,S</u> <u>I,Q,S</u> <u>I,Q,S</u>	
	Development Commission U.S. Environmental Protection Agency County Airport Land Use Commission Caltrans					<u>I,Q,S</u> <u>I,Q,S</u> <u>I,Q,S</u> <u>I,Q,S</u>	
بر ب	Bay Area Air Quality Management District Coastal Commission City Sewer/Water District Other		<u>x</u> <u>x</u>			<u>I,Q,S</u> <u>I,Q,S</u> <u>I,Q,S</u> <u>I,Q,S</u> <u>I,Q,S</u>	
1.	require installation of a septic tank/leach field sewage disposal system or require hookup to an existing collection system which is at or over capacity?					S	
.5. <u>TR</u>	MESPORTATION					3	
Wi	ll (or could) this project:						
a.	affect access to commercial establishments, schools, parks, etc.?			<u>x</u>		<u>A,I</u>	
b.	cause noticeable increase in pedestrian traffic or a change in pedestrian patterns?		<u> </u>			<u>A, I</u>	

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5.	TRANSPORTATION: (Cont.)	Yes	Maybe	No	N/A	Common Source(s)	Other Source(s)
	c. result in noticeable changes in vehicular traffic patterns or volumes (including bicycles)?	_ <u>X</u>				<u>I</u>	
	d. Involve the use of off-road vehicles of any kind (such as trail bikes)?			<u>X</u>		<u> </u>	
	e. result in or increase traffic hazards?		<u></u>			<u>s</u>	
	f. provide for alternative transportation amenities such as bike racks?			<u> </u>		<u> </u>	
	g. generate traffic which will adversely affect the traffic carrying capacity of any roadway?	<u> </u>				<u>S</u>	
. 6.	LAND USE AND GENERAL PLANS:						
	Will (or could) this project:						
	a. result in the congregating of more than 50 people on a regular basis?	<u>x</u>				<u> </u>	
	b. result in the introduction of activities not currently found within the community?		<u> </u>			<u> </u>	
	c. employ equipment which could interfere with existing communication and/or defense system?			X		I	
	d. result in any changes in land use, either on or off the project site?	X				<u> </u>	
	•. serve to encourage off-site development of presently undeveloped areas, increase development intensity of already developed areas (examples include the introduction of new or expanded public utilities, new industry, commercial facilities or recrea- tion activities)?	x				1,0,5	

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Yes Maybe No

N/A Common Other Source(s) Source(s)

D USE AND GENERAL PLANS: (Cont.)

- adversely affect the capacity of any public facilities (streets, highways, freeway, public transit, schools, parks, police, fire, hospitals, public utilities (electrical, water and gas supply lines, sewage and storm drain discharge lines, sanitary landfills) or public works serving the site?
- g. generate any demands that will cause a public facility or utility to reach or exceed its capacity?
- be adjacent to, or within 500 feet of, an existing or planned public facility?
- j. create significant amounts of solid waste or litter?
- k substantially increase fossil fuel consumption (electricity, oil, natural gas, coal, etc.)?
- require an amendment to or exception from adopted general plans, specific plans, or community policies or goals?
- m. involve a change of zoning?
- n. require the relocation of people or businesses?
- o. reduce the supply of low-income housing?
- p. result in possible interference with an emergency response plan or emergency evacuation plan?
- r. result in creation of or exposure to a potential health hazard.

x			<u> 1,5</u>	
	<u> </u>		<u>1,5</u>	
	_ <u>_x</u>		<u> </u>	
	<u> </u>		<u> </u>	
_	<u> </u>		<u> </u>	
	<u> </u>		<u> </u>	
	<u>x</u>	<u> </u>	<u> </u>	
<u>x</u>			<u> </u>	
	·	<u> </u>	<u> </u>	
		X	<u> </u>	
	<u>X</u>		<u> </u>	

•			Yes	Maybe	No	N/A	Common Source(s)	Other Source(s)
E's		HETIC, CULTURAL AND HISTORIC:						
n: 144 - 199	wi11	(or could) this project:						
	8.	be adjacent to a designated Scenic Highway or within a State Scenic Corridor?			<u>x</u>		A,Bi	
	b.	obstruct scenic views from existing residential areas, public lands, public waterbody, or roads?			<u>x</u> .		<u>A, I</u>	
	C.	involve the construction of buildings or structures in excess of three stories or 36 feet in height?		<u> </u>			<u>I</u>	
26	đ.	directly or indirectly affect historical or archaeological resources on or near the site?		<u> </u>			<u>H</u>	
	•.	visually intrude into an area having natural scenic qualities?			<u> </u>		<u>A, I</u>	
111.	MITTICA	TION MEASURES				١	(es No	
•	Mitiga Other	tion measures have been proposed in project mitigation measures are needed.	appli	cation.		-		
	The for	lowing measures are included in the project						

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The following measures are included in the project plans or proposals pursuant to Section 15070(b)(1) of the State CEQA Guidelines:

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V. MANDATORY FINDINGS OF SIGNIFICANCE

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· 6.

 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, or eliminate important examples of the major periods of California history or prehistory?

Th.

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Yes

X

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No

C There is a second

- Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?
- 3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable?
- 4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?
- 5. Is there a serious public controversy concerning the possible environmental effect of the project?

On the basis of this initial evaluation:

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

- I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because of the mitiga tion measures in the discussion have been included as part of the proposed project. NEGATIVE DECLARATION will be prepared.
 - I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Signature Linda Rahi

Deputy City Manager (Title)

October 9, 1989

X

Date

V. SOUNCE LIST

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- A. Field Inspection
- B. City General Plan
 - a. Land Use
 - b. Public Works
 - c. Transportation
 - d. Community Resources
 - e. Housing
 - f. Employment & Economic Development
 - g. Noise
 - h. Seismic Safety
 - i. Other
- C. City Ordinance Code
- D. USGS Basic Data Contributions

#43 Landslide Susceptibility
#44 Active Faults
. #45 High Water Table

- E. USGS Quadrangle Maps, San Mateo County 1970 Series
- F. East Palo Alto Rare and Endangered Species Maps, or Sensitive Habitats Maps

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- G. Flood Insurance Rate Map National Flood Insurance Program
- I. Project Plans or EIF
 - J. Airport Land Use Committee Plans, San Mateo County Airports Plan
 - K. Aerial Photography or Real Estate Atlas REDI
 - L. Williamson Act Maps
 - M. Soil Survey, Bast Palo Alto Area, U.S. Department of Agriculture, May 1961

- N. Air Pollution Isopleth Maps Bay Area Air Pollution Control District
- O. California Natural Areas Coordinating Council Maps

P. Forest Resources Study (1971)

O. Experience with other projects of this size and nature

R. Environmental Standards

Federal-Water Quality standards40 CFR 120Low Noise Emission Standards40 CFR 203General Bffluent Guidelines and Standards40 CFF 401National Primary and Secondary Ambient40 CFR 50

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State - Ambient Air Quality Standards Noise Levels for Construction Equipment

8. Consultation with Departments and Agencies

a.County Health Departmentd. Department of Public Worksb.City Fire Departmente. Disaster Preparedness Officec.California Department of Forestryf. Other

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ATTACHMENT

Project: Redevelopment Program for the Ravenswood Industrial Area (including Redevelopment Plan, Specific Plan and Accompanying General Plan and Zoning Ordinance Amendments)

Project Description

The proposed project is a redevelopment program for the Ravenswood Industrial Area (RIA) redevelopment site located adjacent to the San Francisco Bay's tidal wetlands south of Dumbarton Bridge in the northeasterly corner of the City of East Palo Alto (see attached location maps). It is envisioned that the program will be documented and implemented through: 1) adoption of a redevelopment plan pursuant to the California Community Redevelopment Law (Health & Safety Code Section 33000 <u>et seq.</u>); 2) adoption of a specific plan pursuant to Government Code Section 65451; and 3) possible amendment of certain General Plan and Zoning Ordinance provisions.

The project site includes a small "four-corners" area at the intersection of University Avenue and Bay Road which is connected to the RIA by Bay Road. Illinois Street bounds the RIA to the west and Weeks Street generally bounds the RIA to the south. The project site was designated as a redevelopment survey area requiring study in May 1989 by the City Council and Redevelopment Agency Board (identical membership). The approximately 200 acre site is currently developed with a number of industrial/manufacturing uses including a Pacific Gas & Electric substation and ROMIC Chemical Corporation (the regional chemical solvent recycling facility). Other uses include agriculture (a nursery) and auto salvage yards. With only several exceptions, there are no residential uses of the project site. More than 25 percent of the site is underutilized land, open space or vacant land, some of which consists of wetlands. Residential use surrounds the site to the south and west; wetlands and the Bay lie to the east; the Southern Pacific Transportation Company railroad tracks lie to the north. Past and present land uses of the site have involved the extensive handling of hazardous substances. Potential sources of contamination could include underground storage tanks, sumps, hazardous materials storage and disposal areas, agricultural areas where pesticides have been applied, and electrical transformers containing PCB-contaminated cooling fluids.

The proposed redevelopment program is still evolving through consultations with property owners and community representatives and through implementation of the CEQA environmental review process. However, the preliminary plan

for the site calls for 2 to 2 1/2 million square feet of development, primarily office and light industrial uses as well as some commercial uses. Associated parking is to be provided at three spaces per 1,000 square feet of built area. Sun Microsystems has proposed development of its corporate headquarters on the project site and several current property owners have proposed various new or expanded industrial and commercial uses in the area. ROMIC Chemical Corporation would remain as a functioning facility and the PG&E substation may remain. Under the program, a new road is proposed to run north through the site to connect to University Avenue and Dumbarton Bridge. The program also calls for traffic improvements to Bay Road, the primary access into the site. Access to the project site will be affected by future traffic projects in the area. Caltrans is studying alternatives for a future Route 109 which would allow traffic to flow more directly from the Dumbarton Bridge (Route 84) south to Highway 101 and to serve intermediary destinations such as the project site.

The proposed program is consistent with the intent of the City's General Plan to promote economic development opportunities in the redevelopment area. The envisioned specific plan will set forth a comprehensive set of regulations, conditions and activities to accomplish the City's General Plan objectives for the redevelopment area, while the envisioned redevelopment plan will outline financial and land development tools and resources to implement those objectives. Certain technical revisions to various elements of the General Plan as well as technical revisions to the City's Zoning Ordinance may prove appropriate to accommodate the envisioned redevelopment program.

The EIR for the redevelopment program will serve as the CEQA document for consideration of the redevelopment plan, the specific plan, and any necessary General Plan and Zoning Ordinance revisions.

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Environmental Analysis: Additional Discussion

1. LAND SUITABILITY AND GEOLOGY

Will or could this project:

a. involve a unique landform or biological area, such as beaches, sand dunes, marshes, tidelands, or San Francisco Bay? YES

Because the RIA is located adjacent to tidal wetlands of the San Francisco Bay (portions of which are part of the San Mateo County Baylands Reserve) and because the northern portion of the RIA contains coastal salt marsh, the project will involve unique biological areas.

c. be located in an area of soil instability? YES

Some soils present on the site exhibit high shrink-swell potential and low bearing capacity which create unstable conditions for most types of development. In addition, land subsidence has occurred in the project area as a result of groundwater overdrafting.

d. be located on, or adjacent to a known earthquake fault? YES

The nearest potentially active fault lies within the Stanford fault zone, four miles to the southwest of the project site. The San Andreas fault, located 7 1/2 miles southwest of the project site, is an active fault capable of significant seismic activity in the near future.

e. involve Class I or Class II Agriculture Soils and Class II Soils rated good or very good for artichokes or Brussels sprouts? MAYBE

Future review of the San Mateo Soil Survey would be required to determine the soil classes and crop capabilities which are present on the project site.

f. cause significant erosion or siltation? MAYBE

It is possible that significant short-term siltation of adjacent wetlands would occur during construction of proposed development. Long-term siltation could potentially occur due to higher velocity and volume of runoff from impermeable surfaces of proposed development.

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g. result in damage to soil capability or loss of agricultural land? YES

Ten acres of land on the project site currently used for agricultural purposes would be lost as a result of proposed development.

h. be located within a flood hazard area? YES

Although flood water and sediment from natural drainage channels is now diverted from the site, existing grading in the area has produced shallow local basins which flood during periods of intense rain, particularly during periods of high tides.

i.

be located in an area where a high water table may adversely affect land use? YES

Owing to the low elevation of the site (generally less than 15 feet) and the proximity of San Francisco Bay, the water table is found between 5 and 10 feet of the ground surface and locally less along the western boundary of the site. Basements, underground tanks, pipelines, and drainage systems would have to be designed for submerged or partly submerged conditions.

j. affect a natural drainage channel or streambed, or water course? MAYBE

Drainage swales and remnant portions of natural drainage channels could be affected by grading of the site under the proposed plan.

2. VEGETATION AND WILDLIFE

Will or could this project:

a.

c.

affect federal or state listed rare or endangered species of plant life in the project area? MAYBE

The proposed siting of a road through the northern portion of the redevelopment area where coastal salt marsh is present could affect the Pt. Reyes bird's beak because this plant community provides conditions suitable for its growth. The Pt. Reyes bird's beak is a flowering plant which is in category 2 candidate for federal listing, is eligible for state listing, and is protected by the California Native Plant Protection Act.

be adjacent to, or include a habitat food source, water source, nesting place or breeding place for a federal or state listed rare or endangered wildlife species? MAYBE

Several protected wildlife species may exist in or adjacent to the project area. These include the state and federally endanged salt marsh harvest mouse, California clapper rail, and the state threatened and federal candidate California black rail. Two additional species of concern are the salt marsh yellowthroat and salt marsh wandering shrew, both of which are federal candidates for listing as threatened or endangered.

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d.and f. significantly affect fish, wildlife, reptiles, or plant life? MAYBE

The environmental review process for the proposed project would determine the significance of the project's effect on biological resources.

e. be located inside or within 200 feet of a marine or wildlife reserve? MAYBE

The San Mateo County Baylands Reserve is located along the eastern boundary of the RIA. The environmental review process for the proposed project would determine the status of the Baylands Reserve as being a wildlife or marine reserve.

g.

involve clearing land that is 5,000 sq.ft. or greater, that has slopes greater than 20% or that is in a sensitive habitat or buffer zone? YES

The proposed siting of a road through the northern portion of the site would involve clearing more than 5,000 sq.ft. of currently undeveloped land some of which may be sensitive habitat or within a buffer zone.

3. PHYSICAL RESOURCES

Will or could this project:

b. involve grading in excess of 150 cubic yards? MAYBE

Although it is likely that the proposed project would entail large amounts of grading due to the size of the site, the proposed program does not provide sufficient detail at this preliminary planning stage to make a specific determination of future grading requirements. The relative flatness of the site, however, minimizes the need for grading.

d. affect any existing or potential agricultural uses? YES

Ten acres of land on the project site currently used for agricultural purposes (nurseries) would be lost as a result of development occuring under the proposed project.

4. AIR QUALITY, WATER QUALITY, SONIC

a. generate pollutants that will violate existing standards of air quality on site or in the surrounding area? MAYBE

Proposed light industrial land uses would generate hydrocarbon emissions which may violate existing regional air quality standards. Remediation of potentially contaminated soils on the project site could also significantly affect air quality by releasing toxic substances into the atmosphere.

be expected to result in the generation of noise levels in excess of those currently existing in the area, after construction? YES

The proposed project would increase traffic into and out of the area resulting in higher noise levels than currently exist.

d. involve the application, use of, disposal of potentially hazardous materials, including pesticides, herbicides, other toxic substances, or radioactive material? YES

The proposed project would require a comprehensive site remediation program of hazardous wastes found on the site. The ROMIC Chemical Corporation would continue as a regional facility to recycle solvents.

e.

c.

be subject to noise levels in excess of levels determined appropriate according to the City Noise Ordinance or other standard? MAYBE

Aircraft operations at the Palo Alto Airport south of the site and potential train activity north of the site could subject the project site to noise levels which exceed current standards.

f.

generate noise levels in excess of levels determined appropriate according to the City Noise Ordinance standard? MAYBE

The proposed project would increase traffic into and out of the area resulting in higher noise levels than currently exist and which may exceed the City's Noise Ordinance standard.

g. generate polluted or increased surface water runoff? YES

Under the proposed plan, greatly increased coverage of the site by impermeable surfaces such as buildings and parking areas would proportionately increase the amount of surface water runoff. Pollution of surface runoff could be expected to be less after remediation of the site.

h. require a permit or other approval from any other agency? MAYBE

While it is likely that permits or approvals would be required from most of the agencies checked on this list, that determination requires further environmental review which is not yet available at this preliminary stage of planning. The following agencies and areas of concern pertain to the project area: the U.S. Army Corps of Engineers and the EPA have regulatory interest in wetland areas; the San Francisco Bay Conservation and Development Commission has regulatory interest in development within their jurisdiction along the Bay; the EPA, the State Water Resources Control Board, the Regional Water Quality Control Board, and the State Department of Public Health have regulatory interest in potential soil and groundwater contamination and hazardous waste remediation plans; Caltrans has approval interest in traffic and circulation impacts from the proposed project; and, the Bay Area Air Quality Management District has approval/regulatory interest in the local and regional effects on air quality generated by the proposed project. In addition, the proposed

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project may have substantial effects on the sewer and water districts which provide service to the project area.

i.,

require installation of a septic tank/leach field sewage disposal system or require hookup to an existing collection system which is at or over capacity? MAYBE

The trunk line capacity of the sewer system may be adequate to accommodate the proposed project. However, reconstruction of the on-site collection network would be required as would comprehensive improvements to the existing storm water drainage system serving the site.

5. TRANSPORTATION

Will or could this project:

b. cause noticeable increase in pedestrian traffic or a change in pedestrian patterns? MAYBE

Commercial development at the "four-corners" area and improvements to Bay Road may noticeably increase pedestrian traffic and/or change pedestrian patterns.

c. result in noticeable changes in vehicular traffic patterns or volumes? YES

Increased traffic generated by the proposed project would substantially affect traffic patterns and volumes in the project area both on the local road network and on the nearby freeways. Traffic patterns would be affected by employees of the project entering and leaving the project site at commute hours. (Fehr & Peers Associates, Inc. September 1989)

e. result in or increase traffic hazards? MAYBE

The potential for traffic hazards could increase in the project area as a result of the increased amount of traffic from the proposed project and from pedestrian-vehicle conflict at intersections along access routes into the site.

g. generate traffic which will adversely affect the traffic carrying capacity of any roadway? YES

Increased traffic generated by the proposed project would aggravate the already overburdened carrying capacity of critical intersections north, west, and south of the site where the existing Levels of Service at peak hours is typically D through F. (Fehr & Peers Associates, Inc. September 1989)

6. LAND USE AND GENERAL PLANS

Will or could this project:

a. result in the congregating of more than 50 people on a regular basis? YES

Employment from new office, light industrial and commercial development would bring large numbers of people together on a regular basis.

b. result in the introduction of activities not currently found within the community? MAYBE

The possible introduction of new types of industrial activity in the RIA could result in new activities not currently found in the community.

- d.
- result in any changes in land use, either on or off the project site? YES

Proposed land uses under the plan would convert vacant land, agricultural nurseries, auto salvage yards, light manufacturing and warehouses to offices, light industry associated with electronic research and development, and commercial uses.

e. serve to encourage off-site development of presently undeveloped areas or increase development intensity of already developed areas? YES

Proposed development of the project site would bring substantial number of new technical, clerical and professional jobs to East Palo Alto and would serve as a catalyst for creating substantially more jobs indirectly related to the project area. This would include retail support businesses that would serve the new development.

f. adversely affect the capacity of any public facilities or public works serving the site? YES

Proposed development would affect the capacity of critical intersections and roadways in the project area and the storm drainage system on the site. Public services such as fire and police may also be affected.

i. be adjacent to, or within 500 feet of, an existing or planned public facility? MAYBE

The existing PG&E substation may continue as a land use on the project site. If so, proposed development would occur adjacent to this facility.

I.m. require an amendment to or exception from adopted general plans, specific plans, or community policies or goals? involve a change of zoning? MAYBE

Proposed use of the project site is in conformance with the City's General Plan intent for industrial development of the Ravenswood Industrial Area. Certain

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technical revisions to the Land Use Element, Circulation Element and possibly
other elements of the General Plan, as well as certain technical revisions to
the City's Zoning Ordinance may prove appropriate to accommodate the envisioned
redevelopment master plan. In addition, it is envisioned that a specific plan will be
prepared for the area pursuant to the provisions of Government Code Section 65451.
n. require the relocation of people or businesses? YES

Proposed redevelopment of the project site would require the displacement and relocation of many existing owners and commercial/industrial operations. ROMIC Chemical Corporation, and probably the PG&E substation, would not be relocated. The City of East Palo Alto estimates that 680 people are currently employed on the project site. Findings included in the Citizens Task Force Study for the Ravenswood Industrial Area (November 1988) indicate that a majority of the current uses should be able to relocate within East Palo Alto if the site is developed.

r. result in creation of or exposure to a potential health hazard? MAYBE

Past and present land uses on the project site have involved the extensive use of hazardous substances. Without comprehensive remediation of the site, the proposed project could result in the exposure of people to a situation potentially harmful to their health.

7. AESTHETIC, CULTURAL AND HISTORIC

Will or could this project:

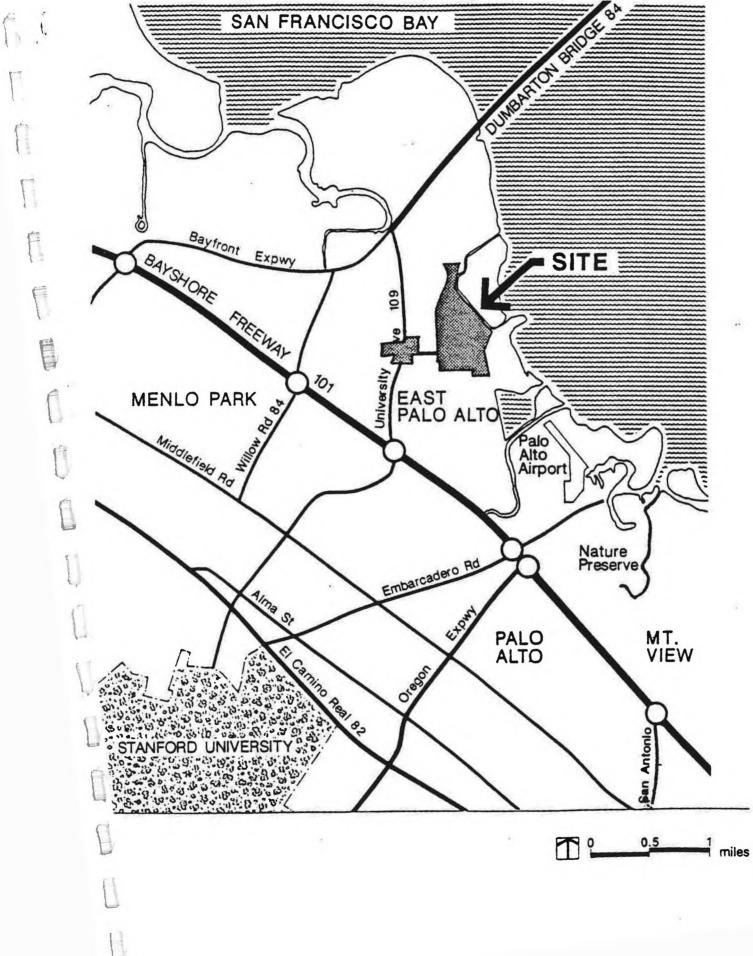
- c. inv
 - involve the construction of buildings or structures in excess of three stories or 36 feet in height? MAYBE

At this preliminary planning stage, it cannot be determined if buildings would exceed three stories.

d. directly or indirectly affect historical or archaeological resources on or near the site? MAYBE

The project area is adjacent to prehistoric site Sma-77, an important and well-known archaeological site used by a Stanford researcher to devise a theory of cultural evolution and subsequent convergence for the Bay Area and Central California. In addition, historic materials associated with the old settlement of Ravenswood could be located onsite. Further investigation would be required to determine their potential significance for development on the project site.

REGIONAL LOCATION



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REDEVELOPMENT AREA LOCATION

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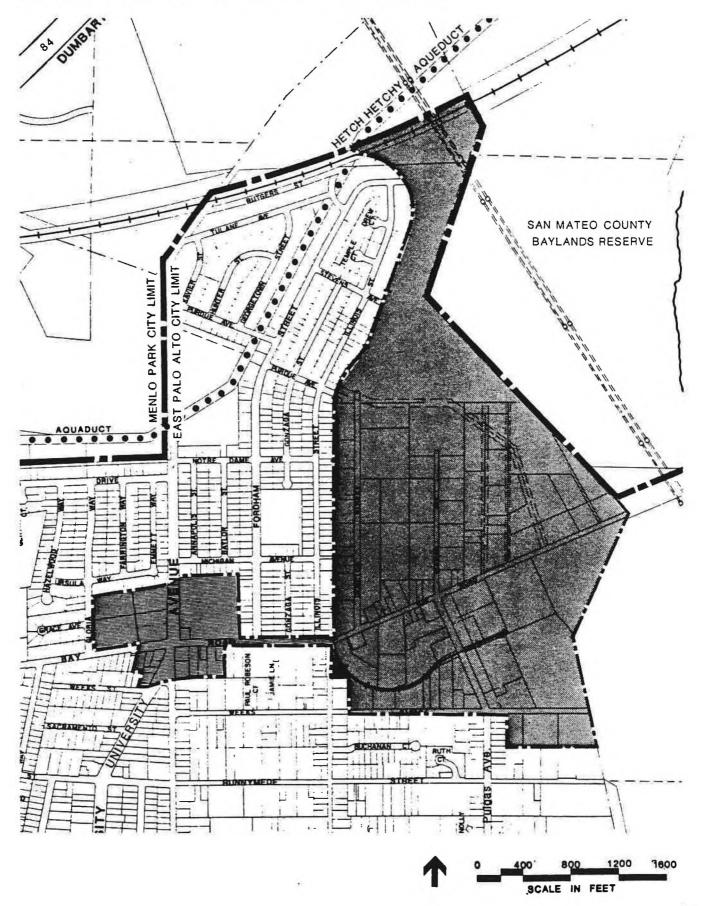
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EXHIBIT B

Ravenswood Taxing Agencies

Valuation Division State Board of Equalization Post Office Box 1713 Sacramento, CA 95812-1713

Roland Giannini San Mateo County Assessor County Office Building 2200 Broadway Redwood City, CA 94063

City Council City of East Palo Alto City Hall, 2415 University Ave. East Palo Alto, CA 94303

Board of Directors Menlo Park Fire Protection Dist. 300 Middlefield Road Menlo Park, CA 94025

Board of Directors Air Pollution Control Office (BAAQMD) 939 Ellis Street San Francisco, CA 94109

Board of Directors East Palo Alto Drainage District 805 Veterans Blvd. #301 Redwood City, CA 94063

San Mateo County Board of Supervisors Ravenswood Slough Flood Control Zone Hall of Justice and Records Redwood City, CA 94063

Midpeninsula Regional Open Space District Bldg. C, Suite 135 201 San Antonio Circle Mountain View, CA 94040 San Mateo County Administrator County Office Building 2200 Broadway Redwood City, CA 94063

Ross Conti San Mateo County Tax Collector Treasurer, County Office Building 2200 Broadway Redwood City, CA 94063

Board of Education Sequoia Union High School District 480 James Avenue Redwood City, CA 94062

Board of Directors Midpenisula Regional Open Space District, Santa Clara County 70 West Hedding San Jose, CA 95110

Board of Directors County Library 25 Tower Road Belmont, CA 94002

Board of Directors San Mateo County Mosquito Abatement District 1351 Rollins Road Burlingame, CA 94101

Board of Directors Ravenswood Lighting District 805 Veterans Blvd. **#**301 Redwood City, CA 94063 E.R. (Gerry) Trias San Mateo County Controlle County Office Building 2200 Broadway Redwood City, CA 94063

Board of Supervisors County of San Mateo Hall of Justice and Record Redwood City, CA 94063

Board of Directors East Palo Sanitary Distric 1856 Bay Road East Palo Alto, CA 94303

Board of Education Ravenswood City School Dist: 2160 Euclid Avenue East Palo Alto, CA 94303

Board of Directors County Harbor District No. 1 Johnson Pier Half Moon Bay, CA 94019

Board of Education San Mateo Junior College 333 Main Street Redwood City, CA 94063

San Mateo County Board of Education 333 Main Street Redwood City, CA 94063

EXHIBIT C

Environmental Document Distribution List

Planning Division County of San Mateo County Gov't Center 590 Hamilton Avenue Redwood City, CA 94063.

Frank D. Eich, Area Manager PG&E 1970 Industrial Way Belmont, CA 94002,

City of Menlo Park 701 Laurel Menlo Park, CA 94025 Attn: Director Community Development Dept..

Mr. Robert Batha Bay Conservation and Development Commission 30 Van Ness Ave., Room 2011 San Francisco, CA 94102.

West Bay Sanitary District 501 Portola Rd. Portola Valley, CA 94025

Chief of Police City of East Palo Alto 2415 University Avenue East Palo Alto, CA 94303.

Office of Education Ravenswood Elementary School 333 Main Street Redwood City, CA 94063. Association of Bay Area Governments Metrocenter P.O. Box 2050 Oakland, CA 94604.

East Palo Alto Water District 2415 University Ave. East Palo Alto, CA 94303.

City of Palo Alto Civic Center 250 Hamilton Avenue Palo Alto, CA 94301 Attn: City Manager,

Metropolitan Transportation Commission Metro Center 101 8th Street Oakland, CA 94607,

U.S. Geological Survey 345 Middlefield Rd. Menlo Park, CA 94025.

Operations Office Palo Alto Airport 1925 Embarcadero Road Palo Alto, CA 94303

County Education Tax 333 Main Street Redwood City, CA 94063.

Santa Clara County Airport Land Use Commission County Gov't Center, East Wing 70 West Hedding St. 7th Floor San Jose, CA 95110 Environmental Coordinator Caltrans District 4 Environmental Planning Bra P.O. Box 7310 San Francisco, CA 94120.

City of Menlo Park 701 Laurel Menlo Park, CA 94025

Attn: City Manager.

City of Palo Alto Civic Center 250 Hamilton Avenue Palo Alto, CA 94301 Attn: Director of Planning

State Clearinghouse Office of Planning and Res 1400 Tenth Street Sacramento, CA 95814

Water Quality Control Boar 1111 Jackson Oakland, CA 94607.

Mr. Stan Hall City Manager City of East Palo Alto 2415 University Avenue East Palo Alto, CA 94303.

Mr. Robert Sans
San Francisquito Creek Flo
Control District
805 Veterans Boulevard, #3
Redwood City, CA 94063 /

County of San Mateo Hall of Justice & Records 590 Hamilton Avenue Redwood City, CA 94063 Attn: County Manager.

EXHIBIT D

TRUSTEE AGENCIES

California Department of Fish and Game P.O. Box 47 Yountville, CA 94599

Natural Reserve System University of California 2120 University Avenue, 4th Fl. Berkeley, CA 94720

State Department of Parks and Recreation P.O. Box 942896 Sacramento, CA 94296-0001

State Lands Commission 1807 -13th Street Sacramento, CA 95814

10/16/89 #032/B55102

ACKNOWLEDGEMENT

State of California Project Notification and Review System Office of the Governor (916) 445-0613

SCH NUMBER: 89030045 TITLE: RAVENSWOOD INDUSTRIAL REDEVELOPMENT PROJECT SCH Contact: Loreen McMahon Dept. Date: 10/18/89 Clearance Date: 11/17/89 (If document recieved after 10 AM, review starts on next day.)

Please use the State Clearinghouse Number on future correspondence with this office and with agencies approving or reviewing your project.

This card does not verify compliance with environmental review requirements. A letter containing the State's comments or a letter confirming no State comments will be forwarded to you after the review is complete.

Rev. 8/82



SAN MATEO COUNTY HARBOR DISTRICT

OYSTER POINT MARINA PARK

October 16, 1989

Mr. Stanley H. Hall Executive Director East Palo Alto Redevelopment Agency 2415 University Avenue East Palo Alto, CA 94303

Dear Mr. Hall:

I received your September 20, 1989 Redevelopment Agency information on October 3, 1989.

The San Mateo County Harbor District would like to have you form a Fiscal Review Committee to review your project and the fiscal impact on the San Mateo County Harbor District.

The San Mateo County Harbor District would be willing to execute a Hold Harmless Agreement with the East Palo Alto Redevelopment Agency to guarantee that its property tax revenues do not get reduced in any way over the life of your project. The fiscal impact/detriment to the San Mateo County Harbor District is due to the fact that our property tax revenue is utilized to retire debt service on behalf of the Harbor District for Pillar Point Harbor in Half Moon Bay and Oyster Point Marina in South San Francisco. These revenues are critical to the Harbor District and must continue to grow to meet our projected debt service needs.

If you have any questions regarding this matter, please feel free to contact me at your leisure.

Very truly yours,

SAN MATEO COUNTY HARBOR DISTRICT

A ona a F. Miles?

Donald F. Guluzzy General Manager

DFG/mp epara

cc: Kenneth Dickerson, Legal Counsel Honorable Commissioners Boerio, Farnow, Flocks, Fuller & Lee Nancy Wiesen, Management Assistant DEPARTMENT OF FISH AND GAME POST OFFICE BOX 47 YOUNTVILLE, CALIFORNIA 94599 (707) 944-5500



October 19, 1989

Mr. Marty Tarshes City of East Palo Alto 2415 University Ave. East Palo Alto, CA 94303

Dear Mr. Tarshes:

Department of Fish and Game personnel have reviewed the Notice of Preparation of a Draft Environmental Impact Report (DEIR) for the East Palo Alto Ravenswood Industrial Redevelopment Project, City of East Palo Alto, San Mateo County. The project would potentially have significant effects upon tidal and diked wetlands and habitat for state and federally listed threatened and endangered species.

The DEIR should provide a thorough inventory of habitats within the project area. Habitat types should be mapped and acreages determined. Special attention should be given to wetland habitats. It is the Department's policy that projects should result in no net loss of either wetland acreage or habitat value.

The site should be surveyed to determine the presence or absence, distribution and population densities of sensitive plants or animals. Surveys should be conducted at the proper time of year, i.e., flowering period, breeding season.

The document should provide a thorough evaluation of project alternatives which will avoid or minimize impacts to biotic resources. In the event that impacts cannot be avoided, specific mitigation measures must be identified.

The DEIR should include a complete description of methods that will be used to prevent deleterious materials from entering wetlands and the Bay.

Questions concerning our comments should be directed to Mr. Carl Wilcox, Associate Wildlife Biologist, at (707) 944-5525.

Sincerely,

Brian Hunter Regional Manager Region 3

cc: Ms. Cay Goude
U. S. Fish & Wildlife Service/Eco. Service

NATIVE AMERICAN HERITAGE COMMISSION 915 CAPITOL MALL, ROOM 288 SACRAMENTO, CALIFORNIA 95814 (916) 322-7791

October 26, 1989

Mr. Marty Tarshes City of East Palo Alto 2415 University Avenue East Palo Alto, California

re: SCH# 89030045-NOP / Ravenswood Industrial Redevelopment Project

Dear Mr. Tarshes:

One recommendation would be to include the language used in Appendix K of the California Environmental Quality Act, (CEQA), and the discovery of cultural resources. The California Environmental Quality Act, Appendix K, deals with the discovery of archaeological sites and the procedures to follow. It also contains the instructions to follow when human remains are found during any phase of development.

The Native American Heritage Commission has prepared a pamphlet for use by lead agencies, planners, developers and property owners. It provides an easy-to-read breakdown of the California Codes pertaining to Native American human remains and their disposition. I have included a copy of this brochure for your information.

If you have any questions or need additional information, please contact this office.

Sincerely,

William enemy john

William Anthony Johnson J Staff Analyst

Enclosure

cc: Nancy Mitchell, OPR SCH



500 Laurel Street, Menio Park, California 94025-3486 (415) 321-0384 (415) 321-4265 FAX

November 2, 1989

East Palo Alto Redevelopment Agency 2415 University Avenue East Palo Alto, California 94303

Attn: Marty Tarshes Redevelopment Coordinator Ravenswood Industrial Area

RE: Redevelopment Program for the Ravenswood Industrial Area and your letter of October 25, 1989

Dear Mr. Tarshes:

There is a portion of West Bay Sanitary District included in the redevelopment program area.

Our interest will be to insure that our facilities and easements within the project area are protected, as well as to insure that our codes and regulations are observed with respect to those areas of construction within our district.

Those businesses and agencies within the district should be directed to this office for appropriate permitting prior to construction.

I enclose maps to identify the area within our district as well as our facilities.

If we can be of any further assistance, please let us know.

Very truly yours,

WEST BAY SANITARY DISTRICT

Chas W. Thomas, Jr. Projects Manager

CWT:jc

Enclosure Serving Areas in Menlo Park, Portola Valley, Atherton, East Palo Alto, Redwood City, woodside, and unincorporated san mateo county

Department of Environmental Management Planning and Development Division



Planning Division • 415/363-4161 Mail Drop 5500 • 590 Hamilton Street • Redwood City • California 94063

Building Inspection Section • 415/363-4601 Mail Drop 5514 • 590 Hamilton Street • Redwood City • California 94063 BOARD OF SUPERVISORS ANNA G. ESHOO MARY GRIFFIN TOM HUENING TOM NOLAN WILLIAM J. SCHUMACHER

PLANNING DIRECTOR CHRISTINE M. GOUIG

COUNTY OF SAN MATEO

November 3, 1989

Mr. Marty Tarshes City of East Palo Alto 2415 University Avenue East Palo Alto, CA 94303

RE: Notice of Preparation for the Draft Environmental Impact Report for the East Palo Alto Ravenswood Industrial Redevelopment Project.

Thank you for the opportunity to provide comments on the Notice of Preparation for Draft Environmental Impact Report for the East Palo Alto Redevelopment Project. Our staff has reviewed your Notice of Preparation and would like to commend you on your efforts in providing a thorough analysis on your initial study and an excellent project description. Our staff would like to provide you with the following comments to hopefully give you additional guidance in preparing a comprehensive environmental review for your DEIR.

San Francisco Bay Salt Marshes

As part of your project description, you refer to a proposed road that would be located in the northern portion of the redevelopment area where coastal salt marsh is present. The United States Department of the Interior may have plans for land acquisition or leasing for additions to the San Francisco Bay National Wildlife Refuge where these road improvements might occur. Also, the Association of Bay Area Governments has prepared a Bay Trail Plan and DEIR which may conflict with your proposed road improvements. It would be helpful for you to know whether or not the proposed road is consistent and can be coordinated with these other plans.

Thank you again for allowing the County of San Mateo to comment on your Notice of Preparation. We will be looking forward to reviewing and commenting on your DEIR.

William Rozar

William Rozar Senior Planner

RM1223

Pacific Gas and Electric Company

1970 Industrial Way Belmont. CA 94002 415/598-7400

November 7, 1989

Mr. Marty Tarshes City of East Palo Alto 2200 University Avenue East Palo Alto, CA 94303

Dear Marty:

3

Re: East Palo Alto - Ravenswood Industrial Park Redevelopment

Upon careful review, the amendment of the General Plan for the Ravenswood Industrial Park is acceptable to PG&E. Gas and electric services can and will be provided according to this site in accordance with tariffs currently on file with the C.P.U.C. at the time of application.

It is important I mention that because load data was not included in the package provided to us, an estimate was made by our engineering department to determine a probable load base. Using our rough estimates it is possible that a single customer electric substation may be required to serve the site. In the event this is required, land would have to be set aside within and rights-of-way obtained. the development Other possibilities may exist to serve the electric load including the reinforcement of existing distribution facilities to the This information can be determined by the submittal of site. accurate load data by the developer. Lead time could be significant, depending on the load, and the application be processed immediately upon receipt. Please allow up to 24 months to develop circuit capability to the site. It will hopefully take significantly less time than this.

Gas facilities are also in the site area. The adequacy of the facilities would have to be determined when load data is submitted.

In the event existing gas and electric facilities need relocation or abandonment, please contact this office in writing to make the necessary arrangements.

We welcome any questions you have and we would be pleased to help you in any way we can with your project.

Sincerely, Walk Rid.

Frank Eich Area Manager

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CAÑADA COLLEGE, Redwood City / COLLEGE OF SAN MATEO, San Mateo / SKYLINE COLLEGE, San Bruno

Office of the Chancellor-Superintendent

November 7, 1989

Marty Tarshes City of East Palo Alto 2415 University Avenue East Palo Alto, CA 94303

Dear Mr. Tarshes,

We recently received the Notice of Preparation of a Draft Environmental Impact Report on the proposed Redevelopment Project for the Ravenswood Industrial Area in East Palo Alto. We noted that in the copy of the Initial Study you sent us, there was no indication that the proposed Redevelopment Project would have an impact on the schools which serve the redevelopment project area. We believe that there are several potential impacts of the proposed Redevelopment Project on the San Mateo County Community College District and believe these should be addressed in the Environmental Impact Report.

We would be pleased to meet with the person preparing the EIR to discuss our interests and concerns. Please contact Barbara Christensen, Assistant to the Chancellor-Superintendent, at 574-6560 to discuss these matters.

We look forward to hearing from you on this in the next several weeks.

Sincerely,

Glenn P. Smith Chancellor-Superintendent

GPS:msr

BOARD OF TRUSTEES: Eleanore D, Nettle, President; James R, Tormey, Jr., Clerk; Thomas L. Constantino; William E. Jordan, M.D.; Jim Warren 3401 CSM Drive, San Mateo, California 94402 (415) 574-6550

SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION THIRTY VAN NESS AVENUE, SUITE 2011 SAN FRANCISCO, CA 94102-6080 PHONE: (415) 557-3686



November 7, 1989

City of East Palo Alto 2415 University Avenue East Palo Alto, California 94303

ATTENTION: Marty Tarshes

SUBJECT: Notice of Preparation of Draft Environmental Impact Report for East Palo Alto Ravenswood Industrial Redevelopment Project; (BCDC Inquiry File SM.MP.6705.1; Permit 15-82)

Gentlemen:

We appreciate the opportunity to review the Notice of Preparation for a draft Environmental Impact Report (EIR) for the proposed 200 acre East Palo Alto Ravenswood Industrial Redevelopment Project. The Commission has not had the opportunity to review the environmental documents, so the comments reflect staff review of considerations based on policies of the McAteer-Petris Act, the state legislation which established the Commission, and the San Francisco Bay Plan, adopted by the Commission to carry out the policies of the McAteer-Petris Act.

According to our records there is a large tidal marsh directly adjacent to the San Mateo County Baylands Reserve within the northern most portion of the redevelopment project boundaries. As shown on Bay Plan Map No. 6 a tidal ditch separates the Baylands Reserve from the eastern boundary of the redevelopment area. The Commission's jurisdiction includes the tidal marsh and tidal ditch (Bay jurisdiction) and 100 feet inland from the line of highest tidal action of the marsh and the ditch (100-foot shoreline band jurisdiction). Any work proposed within the Commission's jurisdiction requires permit approval from the Commission.

BCDC is concerned whether fill is proposed within the tidal areas. The Commission's policies limit fill in tidal areas - whether open water, marshes or tidal ditches - to fill for water oriented uses which would include ports, water-oriented public recreation and wildlife preserves if no alternative upland location is available. The Commission would be unlikely to approve filling of a tidal marsh for industrial, commercial or residential uses as these uses are not defined as water-oriented uses in the McAteer-Petris Act. Bay Plan policies discourage the filling of marshes because of the habitat value of marshes and the accelerated loss of marshes around the Bay. In 1983 the Commission approved Permit 15-82 for Lucky Acres Associates to prepare the upland portion of a 29 acre site for the purpose of developing an industrial/ warehouse park, which appears to be the northern most acreage within the redevelopment area. The permit requires that fourteen acres of the existing tidal marsh and two acres of adjoining uplands which would serve as a buffer for the marsh be preserved as open space. The permit further requires that City of Palo Alto November 7, 1989 Page Two

improvements be made to the tidal marsh to enhance circulation of waters within the marsh and to act as a barrier to humans and domestic animals into the marsh. The environmental impact report should fully address the impact of the project on tidal marsh and tidal areas and should outline mitigation measures to preserve these areas.

A second major concern is whether maximum feasible public access will be provided along the tidal areas unless there are conflicts with sensitive wildlife habitats. The McAteer-Petris Act provides, in part, that: "within any portion or portions of the shoreline band...the Commission may deny an application for a permit for a proposed project only on the grounds that the project fails to provide maximum feasible public access, consistent with the proposed project, to the Bay and its shoreline..." BCDC would be particularly concerned that projects within the redevelopment area maintain the integrity of the South Bay regional trail system proposed along the eastern levee which separates the redevelopment from the Baylands Reserve. Permit 15-82 requires Lucky Acres Associates to install a public access pathway, public access parking on Demeter Street, various improvements such as benches, signage and trash containers and a wooden boardwalk pedestrian bridge to the levee-top trail. The environmental impact report should discuss the opportunities for pedestrian public access to and around the Bay.

The project description outlines the problem of potential sources of ground contamination due to past industrial and agricultural practices. The environmental impact analysis should include identification of areas where contamination might have occurred and should discuss remediation measures. BCDC would be concerned whether contamination from past development has adversely affected the water quality of the Bay and particularly the tidal marsh and that future development would include clean up of contamination sources.

The EIR should include a thorough analysis of the traffic generated by the project area and its effect on the existing and proposed feeder road system. BCDC is concerned whether traffic generated by the project would cause a demand for future traffic links, such an alternate Route 109, to be planned in tidal areas, leading to filling in tidal areas for roadway purposes. Fill in the Bay for roadway purposes is not considered a water-oriented use and the Commission is unlikely to approve fill for such purposes.

We would appreciate the further opportunity to comment on the draft Environmental Impact Report.

Very truly yours,

an L. Lundstrom

JOAN L. LUNDSTROM Permit Analyst

JLL/qfr State Clearinghouse cc: 11/06/89 5626B

DEPARTMENT OF TRANSPORTATION BOX 7310 SAN FRANCISCO, CA 94120 (415) 923-4444 November 8, 1989



SM-084-PM-R27.19 SCH# NONE SM084162

Marty Tarshes City of East Palo Alto 2415 University Avenue East Palo Alto, CA

RE: REDEVELOPMENT PROGRAM FOR THE RAVENSWOOD INDUSTRIAL AREA - Notice of Preparation

Dear Mr. Tarshes:

Thank you for including the Department of Transportation (Caltrans) in the environmental review process for the above-referenced Notice of Preparation. The environmental document for this project should address the traffic impact in terms of:

- a) Trip generation, distribution and assignment;
- b) Average Daily Traffic (ADT), AM and PM peak hour volumes for State Routes 84, 101, 109, and for all significantly affected streets and highways including freeway ramps, crossroads, and controlling intersections for existing and future traffic.
- c) Future conditions with project traffic, and with cumulative traffic generated by all approved developments in the area. Coverage should include all traffic that would affect the facilities evaluated and should not be limited to projects under the jurisdiction of the lead agency.
- d) Mitigations that consider highway and non-highway improvements and services. Special attention should be given to the development of alternative solutions to circulation problems which do not rely on increased highway construction. For example, include methods of traffic demand management, public transit development, and traffic reduction strategies like rideshare, vanpool, carpool, and park and ride.

SM084162 Page 2 November 8, 1989

e) All mitigations being proposed should be fully discussed in the environmental document. Those discussions should include, but not be limited to the following areas:

> financing, scheduling, implementation responsibilities, monitoring responsibilities.

We look forward to reviewing the draft EIR when it becomes available. We expect to receive a copy from the State Clearinghouse; however, to expedite the review process, you may send two (2) advance copies to the undersigned contact person for this agency at the following address;

> Wade Greene District CEQA Coordinator Caltrans District 4 P.O. Box 7310 San Francisco, CA 94120

Should you have any questions regarding these comments, please contact Alice Jackson of my staff at (415) 557-2483.

Sincerely yours,

BURCH C. BACHTOLD District Director

by Made,

WADE GREENE District CEQA Coordinator

cc: Loreen McMahon, State Clearinghouse Susan Pultz, MTC Sally Germain, ABAG



MIDPENINSULA REGIONAL OPEN SPACE DISTRICT

OLD MILL OFFICE CENTER, BUILDING C, SUITE 135 201 SAN ANTONIO CIRCLE, MOUNTAIN VIEW, CALIFORNIA 94040

(415) 949-5500

November 13, 1989

Marty Tarshes EAST PALO ALTO REDEVELOPMENT AGENCY 2415 University Avenue East Palo Alto, CA 94303

Re: Response to Notice of Preparation; Redevelopment Plan for the Ravenswood Redevelopment Project Area

Dear Mr. Tarshes:

The proposed redevelopment plan area adjoins Midpeninsula Regional Open Space District's 372 acre Ravenswood Open Space Preserve. The attached map shows the location of the preserve. It lies east of the redevelopment area between Cooley Landing and the Dumbarton Bridge. Ravenswood Open Space Preserve includes a former salt pond of which 120 acres are enclosed within a ring levee. In its natural condition in the late 1800's this area was tidal salt marsh dominated by pickleweed. The preserve also includes part of Cooley Landing, and wetlands and tidelands along the bay shore south of the Dumbarton Bridge. These baylands form a continuous strip of public open space, shorebird habitat, and wildlife corridor on the edge of a heavily urbanized area.

The District had extensive discussions with the Coastal Conservancy on developing a master plan for the entire wetlands area between Cooley Landing and the Dumbarton Bridge. The plan would address access, recreational use and development, and habitat enhancement. These wetlands have the potential to become a regional recreation area because of their proximity to two major state highways (101 and 84) and have significant natural resource values. The area adjoins a low income area seriously deficient in recreational opportunities, and includes two potential recreational focal points: the fishing pier at the old Dumbarton Bridge, and Cooley Landing itself (which is under private ownership). It is also part of a chain of wetlands linked by the Bay Trail, which will eventually encircle the bay. Local wetlands presently accessible from the Bay Trail include the District's Stevens Creek Shoreline Nature Study Area, Mountain View Shoreline Park, Palo Alto Baylands, Ravenswood Wildlife Refuge, and Menlo Park's Bayfront Park.

Herbert Grench, General Manager; Board of Directors: Katherine Duffy, Robert McKibbin, Teena Henshaw, Edward Shelley, Nonette Hanko, Gerry Andeen, Richard Blahop

Marty Tarshes/EAST PALO ALTO REDEVELOPMENT AGENCY November 13, 1989 Page Two

The District's goal in managing Ravenswood Open Space Preserve is to restore high quality wildlife habitat as well as to provide compatible low intensity outdoor recreation. Restoration plans include opening the former salt pond to tidal action. The Bay Conservation and Development Commission and the Corps of Engineers have jurisdiction over the area, and have indicated they will probably not permit extensive dredging or filling for enhancement, access or development. The Department of Fish and Game. and the U.S. Fish and Wildlife Service have encouraged enhancement of the site for the endangered California Clapper Rail. Wetland enhancement projects are becoming more common as citizens have recognized the value of this fast-disappearing resource. Examples include San Leandro Bay, Hayward Shoreline. Oyster Bay, Point Pinole, Coyote Hills, and Crown Beach.

It appears that the redevelopment project could significantly degrade the vegetation, wildlife, air and water quality, noise, visual qualities, habitat value, and recreational use of Ravenswood Open Space Preserve and surrounding wetlands. The District asks that the Draft Environmental Impact Report specifically address the project's impacts upon:

- 1) Recreational use of Ravenswood Open Space Preserve, including the Bay Trail.
- 2) Access to Ravenswood Open Space Preserve from Bay Road and University Avenue.
- 3) Potential regional recreational use of wetlands surrounding Ravenswood Open Space Preserve, between the Dumbarton Bridge and Cooley Landing.
- 4) Wildlife of Ravenswood Open Space Preserve and surrounding wetlands, including threatened and endangered species such as the salt marsh harvest mouse, California clapper rail, California black rail, salt marsh yellowthroat, and salt marsh wandering shrew.
- 5) Water quality of the former salt pond in Ravenswood Open Space Preserve and surrounding wetlands.
- 6) Vegetation of Ravenswood Open Space Preserve and surrounding wetlands, including coastal salt marsh and Point Reyes Bird's Beak.
- 7) Air quality including potential health hazards from release of toxic substances from contaminated soils.
- 8) Historic and archaeological resources.

Marty Tarshes/EAST PALO ALTO REDEVELOPMENT AGENCY November 13, 1989 Page Three

In addition, we would like to correct some inaccuracies in the initial study for the Ravenswood industrial area.

- 1.e. Answer should be yes. The project will be located within 200 feet of Ravenswood Open Space Preserve, which is a wildlife reserve. It is also within the proposed refuge expansion area of the San Francisco Bay National Wildlife Refuge and has been incorporated into the Western Hemisphere Shoreline Reserve Network.
- 1.f. Answer should be yes. The project area includes coastal salt marsh which is considered sensitive habitat.
- 6.i. Answer should be yes. The project is located within 500 feet of an existing public facility (Ravenswood Open Space Preserve).

Thank you for this opportunity to respond to your Notice of Preparation for this project. Please continue to consult with the District during the preparation of the Draft Environmental Impact Report.

Sincerely,

David Wm. Hansen Land Manager

DWH:plm

Attach.

JAN LA FETRA MAYOR

JACK H. MORRIS MAYOR PRO TEM

GERALD R. GRANT

CALVIN M. JONES COUNCIL MEMBER

TED I. SORENSEN COUNCIL MEMBER



701 LAUREL STREET / MENLO PARK, CA 94025 / PHONE (415) 858-3380 / FAX (415) 328-7935

November 14, 1989

Mr. Marty Tarshes City of East Palo Alto 2415 University Avenue East Palo Alto, CA 94303

RE: Notice of Preparation (NOP) for the preparation of and Draft Environmental Impact Report for the East Palo Alto Ravenswood Industrial Redevelopment Project.

Dear Mr. Tarshes:

We appreciate the opportunity to comment on the NOP for the preparation of the proposed East Palo Alto Ravenswood Industrial Redevelopment Project.

However, given the broad scope of the project description and the absence of specific plans, our comments can only be general in nature. We hope that they can be of help to you in the preparation of the environmental documents. We will provide more detailed comments after the review of the Draft EIR.

Presumably, the proposed document will be a Program EIR that will allow East Palo Alto to look at the broad policy alternatives and the potential cumulative impacts resulting from the implementation of the proposed project, and additional environmental documents will be prepared analyzing the potential impacts with greater specificity once the specific plans delineating the physical improvements have been prepared. The Draft EIR should analyze the potential cumulative impacts of this project, the University Circle Project and any other projects contemplated by East Palo Alto in the regional and sub-regional context to determine the effects of the project on the existing environmental conditions.

While we understand that the Draft EIR will examine all potential environmental impacts that may result from the implementation of the proposed project, some of the major areas of concern to Menlo Park are:

Traffic:

Access to the project area will be along some of the freeways and major arterials which are already carrying substantial amounts of traffic. The traffic analysis should analyze the effects of the incremental increase of the traffic volumes from the proposed project and the cumulative impacts of the additional project traffic on the capacity of the affected roadways, as well as the A.M. and P.M. peak period impacts on the affected intersections. East Palo Alto Ravenswood Industrial Redevelopment Project November 14, 1889 Page 2

Traffic:

Of particular concern to Menlo Park are the effects of the project on the Bayfront Expressway, Willow Road from the Bayfront Expressway to Middlefield Road, U.S. 101 from Embarcadero Road to Marsh Road, University Avenue, Newbridge Street, Ivy Drive, Hamilton Avenue, Chilco Avenue and O'Brien Drive.

Air Quality:

The Draft EIR should analyze the effects of the emissions from the additional traffic generated by the proposed 2-1/2 million square feet of additional industrial floor space, as well as the potential impacts of any emissions generated by stationary sources within the project area.

Wetlands:

The Draft EIR should analyze the effects of the reduction of the existing wetlands as a result of the proposed project and its effects on the existing wildlife. The analysis should also discuss the impacts of the additional urban run-off from the project area into the adjacent wetlands and its effect on the habitat qualities of the wetlands.

Water Quality:

The Draft EIR should include a discussion of the potential impacts on the ground water resulting from the use of hazardous materials in the operation of potential land uses within the project site.

Jobs/Housing:

The Draft EIR should include information relative to the number of employees that may be expected to work within the project area as well as those employees that will work in secondary businesses to support the project area. It should also include a discussion of the housing demands created by this additional employment in terms of income of household and where these additional employees may be housed.

Public Utilities/Services:

The Draft EIR should include a discussion of the demands of the project on public utilities, governmental services and other support services.

Land Use:

The Draft EIR should include a discussion of the effects of the displacement of the existing agricultural lands and wetlands and the overall effects of the proposed project on these diminishing resources.

East Palo Alto Ravenswood Industrial Redevelopment Project November 14, 1889 Page 3

Safety:

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It appears that the project area is within the flight pattern of the Palo Alto Airport. The Draft EIR should discuss any potential safety problems resulting from the airport activities.

Thank you for the opportunity to provide input into the environmental review process at this early stage in the planning process.

Sincerely, Al Morales

Principal Planner (415) 858 3400

Doc 1884D

Sequoia Union High School District

480 JAMES AVENUE, REDWOOD CITY, CALIFORNIA 94062-1098

Administrative Offices (415) 369-1412

November 15, 1989

BOARD OF TRUSTEES

Richard W. Dorst Helen Hausman Rosemary Smith Sally D. Stewart Timothy F. Wellings, Jr.

MERLE D. FRUEHLING Superintendent S.F. HOUGHTON Assistant Superintendent Administrative Services

Hand delivered

Mr. Marty Tarshes City of East Palo Alto 2415 University Avenue East Palo Alto, CA 94303

SUBJECT: East Palo Alto Ravenswood Industrial Redevelopment Project Draft Environmental Impact Report

Dear Mr. Tarshes:

Thank you for the notice of preparation regarding a draft environmental impact report for the above-subject redevelopment project. This notice was received on October 16, 1989.

The Sequoia Union High School District wishes to advise you that it believes that this redevelopment project will definitely impact the district, and we desire that you keep us informed as to the progress of the project.

The contact person in our agency is S. F. Houghton, Assistant Superintendent, Administrative Services.

Sincerely,

S. F. Houghton Assistant Superintendent Administrative Services

1

SFH:sr

cc: Merle Fruehling Don Gielow State of California

Memorandum

To : State Clearinghouse 1400 Tenth Street, Room 121 Sacramento, CA 95814

Date: 11/16/59

Richard H. White

From : San Francisco Bay Regional Water Quality Control Board 1111 Jackson Street, Oakland 94607

Subject:

X

We have reviewed the subject environmental document/NOP and have placed an "X" before the water quality issue of concern.

This proposed project is subject to Section 401 of the Clean Water Act (Water Quality Certification). The Regional Board must determine that the proposed activity will not violate water quality objectives established for the San Francisco Bay Region and that the wetland fill activity complies with the Regional Board's Wetland Fill Policy.

The final EIR should clearly relate that the project is the least environmentally damaging practicable alternative that will serve to accomplish the basic project purpose. If this can be demonstrated, then there is a need to satisfy the Regional Water Quality Control Board's Wetland Fill Policy which requires "...no net loss of wetland acreage and no net lose of wetland value when the project and the mitigation are evaluated together".

A review of the proposed project indicates a need for a sediment and erosion control plan must be developed for construction related activities and should be consistent with the ABAG's "Manual of Standards for Erosion and Sediment Control Measures". At a minimum the erosion control plan should include:

- All necessary sediment control facilities both temporary and permanent to include typical details and specifications.
- o location maps of the erosion and sediment control measures.
- o Re-vegetation plans.
- o Schedule for installation and maintenance of the erosion and sediment control measures.

- o Soil conditions and geological reconnaissance report
- o If required, special provisions shall be provided for erosion and sediment control when grading in the rainy season (October 15 - April 15)
- We are concerned about the hazardous wastes and /or contaminated soils that may be present at the site. The extend and impacts of any hazardous wastes and contaminated soils, or other wastes, on the waters of the State should be identified in the final EIR. Clean up of any waste disposal site or contaminated soils and the disposal of the wastes and contaminated soils, or leaving contaminated soils on the site, can only be done in compliance with Titles 22 and 23 of the California Administrative Code and the California Water Code.
- The Final EIR should evaluate the potential adverse impacts on water quality and beneficial uses in San Francisco Bay resulting from the additional proposed water diversions associated with the project. The evaluation should consider the water quality impacts with different annual outflow conditions.

Other concerns

X

Thank you for the opportunity to provide comments on this project. If you have any questions, please contact me at ATSS 8-561-1329.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

November 17, 1989

City of East Palo Alto Planning Department 2415 University Avenue East Palo Alto, CA 94303

Attention: Marty Tarshes

Dear Mr. Tarshes:

We have received the Notice of Preparation of a Draft EIR for the East Palo Alto Ravenswood Industrial Redevelopment Project. The proposed Redevelopment Project involves the preparation of a Redevelopment Plan, a Specific Plan, and related General Plan and zoning ordinance amendments to facilitate development of the 200-acre Ravenswood Industrial Area located in northeast East Palo Alto. Preliminary plans call for the development of 2 to 2.5 million square feet of office, light industrial, and commercial space in the redevelopment area.

We recommend that the Draft EIR include an air quality impact analysis and commitment to appropriate mitigation measures if air quality problems are indicated. Analysis should take into account impacts of development under the proposed Redevelopment Plan and, where relevant, cumulative impacts of all predictable development in the vicinity of the Plan Area.

Recommended methods for conducting the air quality analysis, and for choosing among potential mitigation measures, are contained in the GUIDELINES cited at the end of this letter. At a minimum, the analysis should include the following elements:

- Evaluate whether existing sources of criteria air pollutants, odorous compounds, or toxic air contaminants, if any, located in the Plan Area and its vicinity could cause health or nuisance problems for future employees.
- 2. Evaluate air pollutant emissions and potential adverse health effects associated with remediation of soils contaminated as a result of past industrial activity in the Plan Area.

Mr. Marty Tarshes November 17, 1989 Page 2

- 3. Determine whether the Plan is consistent with the air quality element or section of the local general plan. If the local general plan does not include an air quality element or section, we urge the City to adopt one. (BAAQMD Resolution #1666, May 1986).
- 4. Estimate emissions of criteria air pollutants and toxic air contaminants from industrial facilities expected to locate in the Plan Area. If specific uses are not yet known, initial estimates of emissions should be made based on the most probable uses. The DEIR also should describe BAAQMD regulations and permit requirements that would apply to future industrial development in the Plan Area.
- Estimate the anticipated increase in emissions of ozone precursors (nitrogen oxides and volatile organic compounds) and fine particulate matter (PM₁₀) due to increased traffic in the Plan Area.
- Calculate worst-case carbon monoxide (CO) concentrations at the most congested and/or heavily traveled intersections in the Plan Area.
- 7. Discuss potential growth-inducing impacts due to development of the Plan Area, paying particular attention to impacts on the jobs/housing balance in the subregion.
- Assess the significance of the impacts identified in Items 1 through
 "Significance" is defined in the GUIDELINES and includes, among other indices, predictions of concentrations of CO - or any other air contaminant - greater than State or federal standards.
- 9. Identify appropriate mitigation measures and alternatives, evaluate their effectiveness in reducing impacts, and indicate who is responsible for implementing each mitigation measure. For impacts due to traffic associated with development under the Plan, trip-reduction measures, such as programs to encourage ridesharing, transit use, bicycling, etc., should be considered as well as roadway improvements. (BAAQMD Resolution #1716, January 1987, endorses Contra Costa County's transportation systems management ordinance because it specifically emphasizes trip reduction measures.)

Copies of the BAAQMD publication AIR QUALITY AND URBAN DEVELOPMENT - GUIDELINES FOR ASSESSING IMPACTS OF PROJECTS Mr. Marty Tarshes November 17, 1989 Page 3

AND PLANS (1985) were sent to all Bay Area Planning Directors in 1986. Additional copies are available from the BAAQMD Public Information Office. The most recent compilation of data from BAAQMD air monitoring stations is enclosed.

If you have any questions, please contact Henry Hilken, Planner, at (415) 771-6000, extension 112.

Sincerely,

- adost

Milton Feldstein Air Pollution Control Officer

MF:HH:Im

Enclosure

cc: BAAQMD Director Anna Eshoo BAAQMD Director Gus J. Nicolopulos lity of Palo Filto

P. O. BOX 10250 PALO ALTO, CALIFORNIA 94303

Department of Planning and Community Environment (415) 329-2546 250 Hamilton Avenue Post Office Box 10250 Palo Alto CA 94303-0862

November 20, 1989

Marty Tarshes Project Coordinator City of East Palo Alto 2415 University Avenue East Palo Alto, CA 94303

Dear Mr. Tarshes:

Subject: Comments on Notice of Preparation of Draft Environmental Impact Report for East Palo Alto Ravenswood Industrial Redevelopment Project

Thank you for the opportunity to respond to the Notice of Preparation (NOP) regarding the proposed redevelopment plan, specific plan and accompanying general plan and zoning ordinance amendments for the East Palo Alto Ravenswood Industrial Redevelopment Project which was received by the City of Palo Alto on October 20, 1989. City of Palo Alto staff has reviewed the NOP of a Draft Environmental Impact Report to permit the construction of 2 to 2 1/2 million square feet of primarily office and light industrial uses, as well as some commercial uses, in the designated Ravenswood Industrial Area. The following considered when preparing the Draft Environmental Impact Report (EIR) for the project.

A. Project Description

The project, as proposed, includes the adoption of the Redevelopment Plan and all subsequent related actions. In order for the EIR to be adequate, a much greater level of detail regarding potential project impacts should be evaluated. Details of the analysis should include site specific impacts, such as project ingress and egress, actual building massing and height, impacts of any required excavation, specific uses and parking demand. Height and building placement, in particular, is critical to the analysis of visual impacts from various Baylands open space areas and Santa Clara County Airport Land Use concerns regarding aircraft traffic in the project area. It is our opinion that the level of specificity identified in the NOP may be insufficient to address specific, as opposed to general, project impacts.

B. Project and Alternatives to be Analyzed

The NOP does not indicate that alternative land use schemes or alternative sites will be addressed. In general CEQA requires that a

range of reasonable alternatives to the project, or the proposed location of the project, be considered. Alternative land use schemes should include an assessment of no project, and should include documentation of the existing mix of uses and square footage of existing development. The potential for expansion under existing zoning and regulations should be assessed, and an assessment of a smaller comparable project, such as 750,000 square feet of office, light industrial, and commercial land uses should be made, as well as the proposed project.

CEQA also requires that a discussion of alternatives in the EIR shall focus on alternatives capable of eliminating any significant adverse environmental impacts, or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of project objectives. Given the potential for significant imbalance in available jobs and available housing, assessment of available areas for residential projects that could offset the housing deficit, should be considered as an alternative.

C. Transportation, Circulation and Parking

In addition to the following specific traffic comments, the cumulative traffic impacts should include the possible development of the University Circle Project and other development projects currently under consideration by the City of East Palo Alto. Although Caltrans is studying alternatives to traffic routing from the Dumbarton Bridge to Highway 101, the EIR and recommended mitigations should be independent of these proposed studies, but could incorporate Caltrans data or published studies.

The exact location of the proposed new road to University Avenue and the Dumbarton Bridge should be specified and impacts on wetlands, residential areas, and potential hazardous material sites should be included. If alternate routes are still being considered, the EIR needs to address the impacts of all possible routes

The following items should be considered when preparing the Transportation section:

- 1. The following intersections and street segments should be included and analyzed in the EIR. Analysis for intersections should include the PM peak commute period (3-6 PM). Analysis for street segments should include the PM peak commute period as well as average daily traffic (ADT). Some of the base data is available through the City of Palo Alto Transportation Division.
 - A. Embarcadero Road/East Bayshore Frontage Road.
 - B. Laura Lane/East Bayshore Frontage Road (Palo Alto will install a traffic signal at this location).
 - C. Middlefield Road/University Avenue.
 - D. University Avenue Between Woodland Road and Alma Street

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- E. East Bayshore Frontage Road between San Francisquito Creek and Embarcadero Road.
- F. Oregon Expressway between Highway 101 and El Camino Real.
- Analyze project impacts on the University Avenue/Highway 101 interchange, both in the existing configuration and the planned future configuration. Analysis should incorporate long-range traffic projections from Caltrans. The interchange analysis should also include the specific projected traffic flows from the proposed University Circle project.
- 3. Analyze project impacts on Highway 101 north and south of the University Avenue interchange and on Highway 84 east and west of University Avenue. As above, analysis should be based on Caltrans' long-range traffic projections and on existing highway configurations as well as planned future configurations.
- 4. Basic analysis scenarios should be the following:
 - A. Existing conditions
 - B. Future conditions at the time of project completion, without the project (i.e., the "no project" scenario). This scenario should include traffic from all approved but not constructed development in East Palo Alto, Palo Alto and other neighboring communities, as well as regional traffic growth. Projects which are not yet approved but are likely to be built should also be included. The "University Circle" project should also be included in this scenario. Road improvements which are planned to be built in this time frame should also be included.
 - C. Future conditions at the time of project completion, with the project (i.e., the "with project" scenario).
- 5. The "with project" analysis (item 4-C) should be based on two site access assumptions:
 - A. Access via existing roads, including analysis of the most likely routes that project traffic would follow to/from the south and east.
 - B. Access via existing roads plus a "southern connection". The southern connection could take the form of the alternatives as described in the Caltrans <u>Route 109 Project Study Report</u>, 6/8/89, and in the attached 6/25/89 letter to Robert Fitzgerald from Ashok Aggarwal and Kenneth Schreiber, except for Alternative 1 (direct connection to Embarcadero Road) which would unduly disrupt a residential area, and is strongly opposed by the City of Palo Alto.

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- 6. The EIR should define clear and reasonable standards by which traffic impacts will be judged to be environmentally significant, both for intersections and street segments.
- 7. Describe the alignment for a trail segment of the Association of Bay Area Governments' (ABAG) "Bay Trail" (aka "Ring Around the Bay"), which would fill in the gap in the trail system between the end of the San Francisquito Creek trail segment and the Dumbarton Bridge trail segment.
- Describe mitigations for significant project impacts. Include details of road and intersection improvements which are proposed as mitigation measures and project access. These details should include a discussion of feasibility, estimated cost of obtaining additional right-of-way, estimate construction cost and probable funding sources.
- 9. Analyze secondary impacts of road and intersection improvements which have been proposed as mitigation measures and project access. If there are significant impacts from these improvements, propose further mitigation measures and analyze as in item 8.
- 10. Propose an aggressive transportation demand management (TDM) plan for the project. The purpose of the plan would be to reduce the number of automobiles driven to the site by providing employees with alternative transportation modes and motivating them to utilize these modes. Analyze the site circulation plan in light of TDM needs (e.g., drop-off area for carpools, transit access, bicycle access and parking, and others), and specify any physical improvements which may be needed to accomplish TDM objectives.
- E. Housing

The NOP does not identify the number of on-site employees nor address the potential housing problems. The possible jobs/housing imbalance should be addressed and possible housing mitigation factors considered.

F. Earth, Air, Water, Human Health

We appreciate the recognition of the potential of hazardous materials on the site and the removal of these materials. Site remediation should be coordinated with the State Department of Health Services and Regional Water Quality Control Board. The EIR should address any additional site remediation measures which will become available due to redevelopment of the site, such as excavation of contaminated soil under existing structures or parking lots. The EIR should identify impacts from any below-grade construction, identify the potential for flooding, examine the capacity of the existing flood control system to accommodate the project and any system improvements required, and assess funding and timing of implementation of such improvements.

Due to the hazardous materials on the site and the proximity of the site to Bay marshes and wetlands, comments should be obtained, and the project

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Page -4-

coordinated with, various state and federal agencies such as Caltrans, State Lands Commission, Bay Area Conversation and Development Commission, State Fish and Game Department, U.S. Fish and Wildlife Service, the, Corps of Engineers, Bay Area Air Quality Management District and other regulatory agencies.

G. Other EIR Considerations

The following are notes on general areas of environmental concern. These areas focus on service capabilities and impacts to both the lead agency and this responsible agency, but do not generate the same level of concern to the City of Palo Alto as items A-F. These comments are intended to assist the City of East Palo Alto in preparing a complete environmental analysis.

1. Land Use/Zoning

Project consistency with the City of East Palo Alto General Plan and zoning, and the compatibility with existing zoning and land uses of adjacent areas need to be addressed.

2. Population, Housing and Employment

Employment generation, increased housing demand, and potential population increases of the project should be analyzed.

3. Air Quality

Cumulative air quality and potential exposure to high carbon monoxide and other pollutants should be modeled consistent with the requirements of the Bay Area Air Quality Management District.

4. Noise

Identify impacts on project due to noise from The Palo Alto Airport and the Southern Pacific Railroad.

5. Public Services and Facilities

Analyze the capability of East Palo Alto services and facilities, particularly emergency facilities, to accommodate a large-scale development in this location, potential impacts on any Palo Alto services should be identified.

6. <u>Light and Glare</u>: Construction of facilities on this site will have adverse impacts on light and glare, particularly on the Baylands and as viewed from the Bay and Baylands Preserves. The need for light reduction and mitigation of additional light and added glare should be considered, including the limiting of parking lot pole heights and the type of lighting fixtures proposed.

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- 7. <u>Plant and Animal Life</u>: The project location near San Francisco Bay should be addressed as it relates to the interruption of any plant and animal life.
- 8. Energy

Energy demands of the project and expansion of such services and long-term energy conservation measures to serve the project should be identified.

9. Utilities

Analyze the capability of current water, sewer and electrical systems to accommodate development on this site in consideration of other proposals for development that will impact existing utility systems.

10. Aesthetics

The design of multi-story buildings and parking facilities could result in substantial visual impacts. The potential for development of design guidelines or design review of this project should be analyzed to insure a pleasing environment for pedestrians, cyclists and motorists.

On behalf of the City of Palo Alto, let me again thank you for the opportunity to review the Notice of Preparation for the East Palo Alto Ravenswood industrial redevelopment Project. We look forward to reviewing the Draft EIR when that document is available. If you have any questions regarding the above comments, please do not hesitate to call me at 329-2354.

Sincerely,

Kenneth R. Schueiber

KENNETH R. SCHREIBER Director of Planning and Community Environment

KRS:JG:jm

cc: City Council Planning Commission City Manager

nopsunmi/JG

DEPARTMENT OF TRANSPORTATION DIVISION OF AERONAUTICS 1130 K STREET - 4th FLOOR MAIL: P.O. BOX 942873 SACRAMENTO, CA 94273-0001 (918) 322-3090 TDD (916) 323-7665



December 1, 1989

Mr. Marty Tarshes City of East Palo Alto 2415 University Avenue East Palo Alto, CA 94303

Dear Mr. Tarshes:

The City of East Palo Alto's NOP for Ravenwood Industrial Redevelopment Project; SCH #89030045

The Department of Transportation, Division of Aeronautics, has reviewed the above-referenced document with respect to the Division's area of expertise as required by CEQA. The following comments are offered for your consideration.

Since the project site appears to be located approximately 3000 feet to the north of Palo Alto Airport, the environmental document should consider airport-related noise and safety impacts on the project and the project's potential impact on airport operations. Consideration given to the issue of compatible land uses in the vicinity of an airport should help to relieve future conflict between airports and their surroundings.

Thank you for the opportunity to review and comment on this proposal. We look forward to reviewing future environmental documentation on this project.

Sincerely,

JACK D. KEMMERLY, Chief Division of Aeronautics

102 ~ Sandy Hesnard Environmental Planner

cc: Palo Alto Airport

Appendix B Text Of General Plan

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DRAFT FOR PUBLIC REVIEW January 1990

GENERAL PLAN AMENDMENT RELATED TO THE INDUSTRIAL SECTION AND THE FOUR CORNERS SECTION

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CITY OF EAST PALO ALTO

Adopted By City Council Resolution No. _____, 1990

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GENERAL PLAN AMENDMENT RELATED TO THE INDUSTRIAL SECTION AND THE FOUR CORNERS SECTION

PART I. PURPOSE AND SCOPE OF AMENDMENT

A. Background

The General Plan for the City of East Palo Alto (the "General Plan") was adopted in December 1986 as the City's basic policy document for directing the community's future. The General Plan identified as key elements of the community's economic development program the revitalization of the industrial area of the City (hereinafter referred to as the "Industrial Section") and the commercial hub at the intersection of University Avenue and Bay Road (hereinafter referred to as the "Four Corners Section"). The effective use and reuse of under-productive developable land resources in these two subareas is viewed in the Economic Development Element of the General Plan as central to the creation of job opportunities and expanded incomes for City residents, generation of revenues to support improved and expanded City services, and provision of adequate basic neighborhood goods and services within the community.

Building upon the original General Plan, this General Plan Amendment sets forth updated and expanded goals, objectives, policies and implementation strategies for the

-1-

revitalization of the Industrial Section and the Four Corners Section. Part I of the General Plan Amendment provides background information to set the context of the Amendment, including a description of the areas involved, a summary of the Amendment's purpose and scope, the relationship of the Amendment to the Ravenswood Industrial Area Redevelopment Plan that is being prepared concurrently, an outline of the California Environmental Quality Act ("CEQA") review process for the General Plan Amendment and the Redevelopment Plan, and a preview of further planning actions that will be initiated to accomplish effective economic revitalization of the Industrial Section and the Four Corners Section.

Parts II-V of this General Plan Amendment set forth the actual text and map amendments to the Land Use, Economic Development, Circulation, Conservation, and Housing elements of the General Plan.

B. Description of the Sections

1. <u>Industrial Section</u>. The Industrial Section contains approximately 166 acres of land in the northeast quadrant of the City (see Map 1 for location of the Industrial Section). The Industrial Section encompasses all of the City's current industrial facilities and all of the land zoned "industrial" in the City's Zoning Ordinance and designated for industrial use in the General Plan. The Industrial Section's current land uses include a Pacific Gas and Electric Company substation, a chemical manufacturing plant, a solvent

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recycling facility, a wide variety of small-scale industrially-related businesses, large scattered areas of unused and minimally used land (primarily auto salvage and storage yards), a few scattered residences, and a wetlands area along the northeastern boundary.

Many of the businesses in the Industrial Section employ hazardous materials in their operations. Past operations have resulted in contamination problems that will impair the long-term development potential of the Industrial Section unless extensive remediation efforts are undertaken. The Industrial Section is fragmented into numerous small parcel ownerships, making it difficult for existing businesses, private developers and potential new business users to assemble parcels large enough to sustain modern industrial operations. Access to the Industrial Section is generally inadequate, with Bay Road serving as the only truck route from the Section to the City's arterial circulation system and ultimately to the regional transportation network. Circulation and utility systems within the Industrial Section are similarly deficient by modern industrial standards.

As a result of these deficiencies, development of the Industrial Section has been extremely slow and the employment densities of existing uses are considerably below the typical densities for industrial employment centers elsewhere in San Mateo and Santa Clara counties. Consequently, the use of land in the Industrial Section has failed to meet key General Plan goals related to the provision of an employment and income

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base for City residents, and generation of revenues to support and increase City services.

2. Four Corners Section. The Four Corners Section comprises approximately 20 acres of land in the vicinity of the City's major commercial intersection at University Avenue and Bay Road (see Map 1 for location of the Four Corners Section). The Four Corners Section constitutes one of the three major shopping concentrations in the City and its development as a community "hub" or focal point is designated in the Land Use Element as a priority objective.

Unfortunately, two-thirds of the Section's land currently sits idle, with the remainder used for the County Office Building, several small scale retail/commercial enterprises, and three single family residences. The Nairobi Shopping Center, built in 1957 at the northeast corner of University Avenue and Bay Road to serve the community as a full service commercial center, has recently been razed due to its dilapidated condition and its inability to become commercially viable. Consequently, the Four Corners Section currently fails to fulfill its designated role in the General Plan as the community's commercial "hub".

C. Purpose and Scope of Amendment

In the past year, the City has initiated a review of certain economic development goals, objectives, and policies and the crucial role of the Industrial Section and the Four Corners Section in their achievement. This review has

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been undertaken partly as a periodic reassessment of the General Plan called for in Land Use Element General Goal III ("to monitor land use needs and periodically determine whether changes in land use are needed"). The review has been further stimulated in response to and in anticipation of various private development proposals for the two Sections.

This General Plan Amendment is one of two policy outcomes of the review of development needs and potential of the Industrial Section and the Four Corners Section. (The other policy document, the Ravenswood Industrial Area Redevelopment Plan, is described in Section D below). The General Plan Amendment is intended to provide a comprehensive update of the City's goals, objectives, and policies for revitalization of the two Sections. While the updated goals, objectives, and policies are more detailed than those contained in the original General Plan, they build upon and are consistent with the fundamental economic development goals for the Industrial Section and the Four Corners Section first articulated in that document.

This General Plan Amendment encompasses a comprehensive, coordinated set of revisions to five elements of the General Plan, thus providing in a single integrated document the City's current vision for revitalization of two of its key subareas. At the same time, the policy plan for the Industrial Section and the Four Corners Section set forth in this General Plan Amendment is structured to fit within and be

-5-

internally consistent with the framework of overall goals, objectives, and policies contained in the General Plan.

Because of their symbiotic relationship, it is appropriate to consider the revitalization of the Industrial Section and the Four Corners Section in an integrated General Plan Amendment. The two areas are physically and economically interrelated. The Four Corners Section serves as a physical and psychological "gateway" to the Industrial Section. Physical and economic revitalization of the Four Corners Section is important in creating the positive community image necessary to stimulate further private investment in the nearby Industrial Section. In turn, establishment of a strong employment and income base, both among City residents and other employees in the Industrial Section, will help to support the desired neighborhood commercial revitalization of the Four Corners Section. Finally, development of effective transportation links to the Industrial Section, which will in part involve the use of Bay Road and University Avenue through the Four Corners Section, will directly impact the revitalization potential of both areas.

D. The Redevelopment Plan

Concurrently with consideration of this General Plan Amendment, the East Palo Alto Redevelopment Agency (the "Agency") is preparing for consideration by the City Council a Ravenswood Industrial Area Redevelopment Plan (the "Redevelopment Plan"). The Redevelopment Plan encompasses

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essentially the same project area that is the subject of this General Plan Amendment. While the General Plan Amendment <u>articulates</u> the development goals, objectives and policies for revitalization of the Industrial Section and the Four Corners Section, the Redevelopment Plan will serve as a primary technique to <u>accomplish</u> those goals, objectives and policies. This coordinated use of the General Plan and the Redevelopment Plan implements the "tiered" planning approach recommended in both the Land Use and Economic Development elements of the General Plan.

The Redevelopment Plan will expressly adopt the goals, objectives, policies and land use designations of the General Plan (as amended) and any subsequently adopted specific plan(s) for the Industrial Section and the Four Corners Section (see Section F below for a further discussion of the adoption of a specific plan or plans). The Redevelopment Plan will imbue the Agency with legal authority to work with property owners, developers, and prospective business operators to assemble parcels, undertake necessary site and infrastructure improvements, and enforce design standards to stimulate revitalization consistent with the General Plan. Chief among the powers of the Agency will be the ability to assist the private sector, where necessary, in financing land assembly, site improvements (including hazardous materials remediation), and infrastructure improvements (circulation and utility systems) using property tax increment revenue generated by development in the redevelopment project area.

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E. CEQA Review

The General Plan Amendment and the Redevelopment Plan are the subject of an integrated program Environmental Impact Report (the "EIR") prepared pursuant to CEQA to evaluate the potential adverse impacts arising from implementation of the development program envisioned by these policy documents, as well as possible mitigation measures and program alternatives.

The City has served as the "lead agency" and the Agency as a "responsible agency" for preparation of the EIR. Following preparation of an Initial Study, City and Agency staff distributed a Notice of Preparation for the EIR on October 13, 1989. On behalf of the City and Agency, Wallace Roberts & Todd prepared a Draft EIR taking into consideration comments received in response to the Notice of Preparation. A Notice of Completion for the Draft EIR was published on ______, 1990 and the Draft EIR was circulated for a 45-day comment period. Following the comment period, Wallace Roberts & Todd completed the Final EIR, consisting of the Draft EIR together with responses to ______ comments received on the Draft EIR.

The Final EIR was certified by concurrent resolution of the City Council and the Agency on _____, 1990. Pursuant to the concurrent resolution, the City Council made the findings required pursuant to CEQA in connection with approval of the General Plan Amendment.

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F. Subsequent Actions

As highlighted in the General Plan (as modified by this Amendment), following adoption of the General Plan Amendment and the Redevelopment Plan, a specific plan (or perhaps two separate specific plans) will be prepared for the Industrial Section and the Four Corners Section pursuant to the provisions of Government Code Section 65450 <u>et</u>. <u>seq</u>. The specific plan(s) will build upon the goals, objectives and policies of the General Plan to outline more precise development standards and implementation guidelines for the Industrial Section and the Four Corners Section.

The specific plan(s) will provide further policy guidance to the Agency in implementing the Redevelopment Plan and to the City Council, the City Planning Commission and City staff in processing development proposals. The specific plan(s) may, among other elements, contain revised zoning standards for the Industrial Section and the Four Corners Section.

PART II. LAND USE ELEMENT AMENDMENTS

The Land Use Element of the General Plan is amended as follows:

A. <u>Residential Land Use - Large Scale Residential Development</u> The subsection entitled "Large Scale Residential

-9-

Development" within the section entitled "Residential Development" on page 1-6 is revised by adding an additional sentence at the end of the first paragraph as follows (<u>note</u>: the entire paragraph is set forth below to provide context for the added sentence, which is underlined):

"East Palo Alto has several large land areas which could accommodate relatively large-scale residential developments. These include the 32-acre floricultural area south of O'Connor Street and various portions of the Industrial Section. Introduction of housing development in such areas would provide: (1) new housing opportunities for people with a range of income levels; and (2) new jobs in the community, both in construction and in the commercial sector which would grow to meet the needs of an expanding population. On the negative side, large scale residential development could also contribute to traffic congestion, noise pollution and diminish the amount of land available for agricultural and institutional uses. For these reasons and because it is essential to preserve available industrially-designated land within the City to achieve the community's economic development goals, large scale residential development is determined to be inappropriate in the Industrial Section."

B. Industrial Land Use and Industrial Policies

The sections entitled "Industrial Land Use," "Type and Amount of Industrial Development," "Relationship of Industrial and Adjacent Residential Uses," and "Industrial Goals and Policies" (pages 1-18 through 1-21) are revised in their entirety to read as follows:

"INDUSTRIAL LAND USE

Current Setting of Industrial Section; Impediments to Development

The Industrial Section, containing approximately 166 acres in the northeasterly corner of the community, encompasses all of the City's current industrial facilities and all of the land zoned for industrial use in the City's Zoning Ordinance and designated for industrial use in this General Plan. The Industrial Section is generally bounded by the Southern Pacific railspur right-of-way and Clarke Avenue on the west, the baylands on the north and east, and Weeks Street on the south.

The Section's current land uses include a Pacific Gas and Electric Company substation, a chemical manufacturing plant, a solvent recycling facility, a wide variety of small-scale industrially-related businesses, large scattered areas of unused and minimally used land (primarily auto salvage and storage yards), a few scattered residences, and a wetlands area along the northeastern boundary.

The Industrial Section is surrounded by sensitive and valuable community resources: residential neighborhoods to the south and west; the "Four Corners" community center to the west on Bay Road at University Avenue; the baylands to the north and east; and Cooley Landing to the east. Industrial uses and circulation systems in the Industrial Section must be developed to be compatible with and provide buffers to these surrounding sensitive resources while enabling sound economic development of the Industrial Section itself.

Though long planned for industry, development of desirable business operations in the Industrial Section has been very slow. To date, East Palo Alto has been bypassed by industries that have grown explosively in other nearby parts of San Mateo and Santa Clara counties, such as electronics and aerospace. Impediments to the development of such quality industries in the Industrial Section include:

1. Poor aesthetic quality of many of the current heavy industries and auto junk yards in the Industrial Section and functional incompatibility of such uses with more modern light industrial operations;

2. Extensive long-term use of hazardous materials on many parcels in the Industrial Section which will affect the reuse of surrounding parcels unless an effective remediation program is implemented;

- 3. Fragmentation of the Industrial Section into numerous small parcel ownerships, coupled with the scattering of developed and underdeveloped parcels, which makes it extremely difficult for prospective business users to assemble parcels large enough to sustain modern industrial operations;
- 4. Limited access (via Bay Road) to the City's

arterial street system and thereby to the regional highway network;

5. Internal circulation and utility systems that are incomplete and wholly inadequate for modern industrial facilities; and

6. The perception by many potential desirable business users that the Industrial Section is unattractive and unsafe, due to its relative isolation, lack of visibility, and heavy industrial character of many of its current business operations.

Despite these problems, rising land values and the diminishing supply of light and general industrial land in the mid- and south-Peninsula area make the Industrial Section a potentially attractive industrial location <u>if</u> the impediments to development outlined above can be overcome through concerted public and private sector initiatives.

Vision for Development

The Economic Development Element outlines a series of community economic development goals, including increasing existing resident incomes; generating sufficient revenues to support and increase City services; utilizing underproductive developable land resources; and enhancing natural amenities and the quality, safety, and function of the built environment in East Palo Alto.

As the community's industrial district, the Industrial Section can best serve to meet these objectives if public and private actions are directed to the attraction of higher quality, clean, light industry, such as electronics and other light assembly operations, research and development facilities, office headquarters and other ancillary facilities that support such light industry. Such uses have several distinct advantages over heavier industrial uses:

1. They tend to generate higher property tax revenues and can generate higher sales tax revenues for the City to support community services;

2. As employment intensive growth industries, they have the potential to provide greater numbers of lasting, higher income, employment opportunities for community residents; and

3. As "clean" industries, such uses are more compatible with surrounding sensitive land resources and will better conserve the community's physical environment. While light industry and related operations constitute the preferred use for the Industrial Section, retention or attraction of some of the productive, labor intensive types of general industrial activities currently present in the Industrial Section would be acceptable as a means to achieve, to a lesser extent, the community economic development goals outlined above if market forces do not permit timely, large-scale development of light industrial operations. In any event, auto wrecking and storage yards and activities which continue to contribute to the hazardous materials problems of the Industrial Section should be phased out as rapidly as possible. New chemical plants and other activities which might contribute to future hazardous materials problems should not be introduced to the The few scattered residences are Industrial Section. incompatible with sound industrial development of the Industrial Section and should be removed, provided that suitable measures are taken to relocate the few affected households and to develop in-fill replacement housing units in more suitable residential neighborhoods of the community.

To achieve this vision for the revitalization of the Industrial Section will require large-scale land assembly and reparcelization to provide larger more appropriately configured development parcels, as well as major efforts to remediate hazardous contamination problems, provide the necessary circulation system and utilities network for modern industrial operations, and create adequate buffers and functional interrelationships with surrounding land resources. Consequently, it is essential that the vision for Industrial Section revitalization be accomplished through implementation techniques, such as adoption of a redevelopment plan and specific plan, that will establish a concerted public and private sector action program.

INDUSTRIAL GOAL AND POLICIES

Following are a series of goals, objectives and policies to translate the vision for Ravenswood Industrial Section revitalization into reality.

GOAL

TO STIMULATE DEVELOPMENT AND REDEVELOPMENT OF THE RAVENSWOOD INDUSTRIAL PARK IN A MANNER THAT WILL BEST ACHIEVE THE GENERAL GOALS OF THE ECONOMIC DEVELOPMENT ELEMENT RELATED TO INCREASING EXISTING RESIDENT EMPLOYMENT OPPORTUNITY AND INCOMES, GENERATING REVENUES TO SUPPORT AND EXPAND CITY SERVICES, AND ENHANCING NATURAL AMENITIES AND THE QUALITY, SAFETY AND FUNCTION OF THE BUILT ENVIRONMENT. Objective No. 1

To establish, through the City's land use regulations, the development of light industry and ancillary operations as the preferred use and certain types of general industry as an acceptable alternate use for the Industrial Section.

Policies

- 1. Encourage as the preferred development approach the attraction and development of high quality, labor intensive, clean, light industrial operations that are characterized by (a) significant potential for providing well-paying permanent jobs to local residents and for generating property tax, sales tax and other revenues to support City services and (b) the generation of limited, mitigable adverse environmental impacts. Such light industry includes, without limitation, electronics and other light assembly operations, research and development facilities, office headquarters and other ancillary facilities that support light industrial operations.
- 2. Permit as an acceptable alternate use general industrial facilities otherwise described in the "General Industrial" land use designation category (see Table 2 of this Land Use Element), provided that such facilities do not preclude the attraction of potential light industrial operations to the Industrial Section as well. Preference among general industrial facilities should be given to facilities best meeting the criteria for light industry operations described in Policy 1 above.
- 3. Discourage the development of additional chemical plants, other uses described in the "Heavy Industrial" land use classification (see Table 2 of this Land Use Element), and uses that generate or have the potential to generate significant hazardous wastes. Existing chemical manufacturing facilities may remain in the Industrial Section subject to all federal and state development and operating standards and to standards to be specified in City land use regulations.
- 4. Encourage the removal of auto wrecking and storage yards and activities which continue to contribute to the hazardous materials problems of the Industrial Section in order to establish an environment more attractive for the preferred and alternate uses described in Policies 1 and 2.

- 5. Provide for the orderly relocation of the few households in the Industrial Section and replacement of the remaining housing units in the Industrial Section through in-fill development in more suitable residential neighborhoods of the City, applying state and local standards for residential relocation and replacement housing.
- 6. To promote the orderly development of the Industrial Section in accordance with Policies 1-5, establish in the City's land use regulations appropriate standards for setbacks, landscaping, parking, and control of noise, odors, smoke, other air emissions, liquid and solid waste, hazardous materials, and light-generated glare.

Objective No. 2

To promote development of the Industrial Section as envisioned in Objective No. 1 through the establishment of an appropriate circulation and utility network and remediation of existing hazardous materials problems.

Policies

Provide for development of a loop arterial street 1. through the Industrial Section that provides access to the City arterial network via Bay Road at University Avenue and at a new intersection with University Avenue in the vicinity of the Southern Pacific rail crossing. The loop arterial should be designed and constructed to (a) create accessible large parcels suitable for modern industrial development, (b) adequately serve anticipated employee, truck and visitor traffic, (c) provide traffic flows through the University Avenue and Bay Road intersection that are compatible with revitalization of the Four Corners Section as a community center, (d) minimize noise and visual impacts on nearby residential and wetlands areas, (e) permit suitable access to the Cooley Landing area, and (f) provide for adequate linkage of the loop arterial at University Avenue near the Southern Pacific rail crossing (an area that is currently in the City of Menlo Park) through coordination of transportation planning efforts with the City of Menlo Park or through annexation of property near the proposed intersection, as appropriate.

2. Provide for development of utility systems suitable

to the needs of modern industrial operations and causing minimum adverse environmental impacts on surrounding land resources.

3. Working with affected business and property owners, develop and implement a workable hazardous materials remediation and prevention program to (a) alleviate or minimize the adverse effects of past operations in the Industrial Section, (b) require new developments on parcels impacted by past contamination to participate in remediation efforts as a condition of development approval, and (c) prevent the generation of hazardous materials problems from ongoing current operations and from future new operations.

Objective No. 3

To provide for orderly industrial development of the Ravenswood Industrial Section in a manner that is sensitive to and supportive of surrounding land resources.

Policies

- 1. Encourage development of the Industrial Section with the preferred and alternate uses described in Objective No. 1 above, which are designated in part because they will minimize adverse impacts on surrounding areas.
- 2. Implement development of the circulation and utility systems described in Objective No. 2 above, which are intended to minimize adverse impacts on surrounding areas.
- 3. Retain the wetlands along the northeast boundary of the Section to the maximum extent possible. Any wetlands that must be eliminated for development of the loop arterial described in Objective No. 2, Policy 1 above should be replaced in suitable locations at a ratio of at least one acre of replacement wetlands for each acre of lost wetlands.
- 4. Provide for construction of a levee to define the wetlands in the northern portion of the Industrial Section, and for development of an access trail along the levee throughout the Industrial Section boundary which can connect to the proposed South Bay trail.
- 5. Provide for appropriate pedestrian and bicycle access to the Section.
- 6. Limit uses along the southern boundary of the Industrial Section (adjacent to the existing residential neighborhood) to research and

development, office space and similar uses as provided in the "Industrial Buffer" land use designation (see Table 2 of this Land Use Element).

- 7. Promote development of the Industrial Section in a manner that facilitates access to Cooley Landing.
- 8. Promote development of the Industrial Section in a manner that retains and enhances the open vistas and habitat quality of the baylands and that preserves natural corridors for the movement of wildlife to and from the baylands (this Policy implements various goals and policies set forth in the Conservation Element).

Objective No. 4

To establish appropriate implementation mechanisms to coordinate the public and private sector resources necessary to achieve the above objectives.

Policies

- 1. Consider preparation and adoption of a redevelopment plan pursuant to the provisions of the California Community Redevelopment Law (Health and Safety Code Section 33000 <u>et</u>. <u>seq</u>.) to provide resources necessary for land assembly, site preparation and infrastructure financing to achieve the above outlined objectives and policies.
- 2. Prepare and administer a specific plan pursuant to the provisions of Government Code Section 65450 <u>et</u>. <u>seq</u>. to provide the land use regulations and guidelines necessary to implement the above outlined objectives and policies.
- 3. Consider use of assessment districts, Mello-Roos districts, development fees and other financing techniques to provide for orderly development of the infrastructure improvements necessary to implement the above outlined objectives and policies."

C. Agricultural and Open Space Goals and Policies

A new Policy 3 is added to Goal I, Objective No. 1 of the section entitled "Agricultural and Open Space Goals and Policies" to read as follows: "3. Establish a mechanism for the orderly and timely termination of the sole Williamson Act contract for land in the Industrial Section (covering approximately 5 acres) and for conversion of other scattered agricultural uses in the Industrial Section (covering approximately an additional 5 acres) to promote and ensure industrial development of that area consistent with the goals, objectives and policies set forth in the section of this Land Use Element entitled 'Industrial Goal And Policies'".

D. Special Area Goal and Policies

The following revisions are made to the section entitled "Special Area Goal and Policies" (page 1-31):

1. Policy 2 under Objective No. 1 is deleted (as it will be addressed more fully under a new Objective No. 4 set forth below), and former Policy 3 is renumbered to constitute Policy 2.

2. A new Objective No. 4 is added to read as follows:

"<u>Objective No. 4</u> In the Four Corners Section that serves as a focal point for community activity and identity.

Policies

- To the extent feasible under applicable market conditions, encourage the development of a concentration of compatible neighborhood commercial facilities in the Four Corners Section (the properties surrounding the intersection of University Avenue and Bay Road), including upon the former Nairobi Shopping Center site.
- 2. Encourage the development of compatible supporting uses that will add to the physical quality and vitality of the Four Corners Section, provide market support for neighborhood commercial facilities in the Four Corners Section, and establish the Four Corners Section as a focal point of community activity and identity. Such uses may include high density residential developments, offices, and institutional and open space facilities.

- 3. Establish through land use regulations (including a specific plan prepared pursuant to Government Code Section 65450 et. seq.) a design program for the Four Corners Section that functionally and aesthetically integrates the various uses in the Four Corners Section, and creates an identifiable design theme demarking the Section as the City's community center. These regulations will include standards for common-use parking facilities and open spaces, building design and landscaping, and pedestrian and vehicular access.
- 4. Consider adoption of a redevelopment plan to assist in the assembly of land and the financing of infrastructure and common-use facilities necessary to accomplish Policies 1-3."

E. Redevelopment Plans.

A new subsection 16 is added to the section entitled "Land Use Element Action Program" to read as follows:

"16. Redevelopment Plans

Redevelopment plans prepared pursuant to the California Community Redevelopment Law (Health and Safety Code Section 33000 <u>et seq</u>.) are also appropriate implementation mechanisms for some of the areas for which specific plans will be prepared. A redevelopment plan establishes a redevelopment project area meeting certain statutory requirements within which the community's redevelopment agency (the East Palo Alto Redevelopment Agency) is authorized to undertake an action program to stimulate private investment and reinvestment.

Among other activities, a typical redevelopment plan enables a redevelopment agency to assemble land for disposition to private developers, work with property owners to revitalize private improvements, finance and construct public facilities and improvements such as streets, utility systems, parks, and public buildings, and implement special design standards. To finance the agency's activities, a redevelopment plan may authorize the collection of 'tax increment revenue' - the increased property tax revenue generated by increases in project area assessed valuation as a result of the redevelopment program. In brief, redevelopment plans provide a mechanism to allow the City, through the Redevelopment Agency, to obtain special financial resources and establish public/private cooperative efforts to affirmatively work toward implementation of the goals and policies of the General Plan and relevant specific plans, rather than passively waiting for market forces to achieve such goals and policies.

Redevelopment plans for appropriate areas may be prepared and adopted before, after or concurrently with the preparation of specific plans for such areas. The provisions of each redevelopment plan should be consistent with the goals, policies, land use designations and development standards of the General Plan and any existing or subsequently adopted relevant specific plan. (Please see further discussion of the redevelopment plan as a General Plan and specific plan implementation technique in the Economic Development Element.)"

F. Figure 1

Figure 1 of the Land Use Element on page 1-40 sets forth the General Plan land use designations for all land in the City. Figure 1 is hereby amended to set forth the land use designations for the Industrial Section and the Four Corners Section shown on Map 2 of this General Plan Amendment. Basically, Map 2 indicates "General Industrial", "Industrial Buffer", and "Resource Management" uses for the Industrial Section, and "Community Center" uses for the Four Corners Section.

G. Table 2

The following revisions are made to Table 2 of the Land Use Element on page 1-45:

1. The definition of the "General Industrial" land use designation is revised in its entirety to read as follows:

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"General Industrial

Most light and general manufacturing, assembling, processing and storage, and related office and research and development facilities; 'heavy industrial' uses as defined in this Table 2 not permitted."

2. A definition for the new land use designation "Community Center" is added to the end of Table 2 to read as follows:

"Community Center

Neighborhood commercial uses supported by high density residential developments, offices, and public buildings and open spaces to form an integrated 'core area' or 'hub' as the focus for community activity and identity."

PART III. ECONOMIC DEVELOPMENT ELEMENT AMENDMENTS

The Economic Development Element of the General Plan is amended as follows:

A. Project Priorities

The first two numbered items in the section entitled "Project Priorities" on page 8-5 are revised to read as follows:

"1. Development of a vibrant community center, including centralized neighborhood commercial facilities, in the Four Corners Section, as more fully set forth in the section of the Land Use Element entitled 'Special Area Goal and Policies.' 2. Development of the Industrial Section for light and general industrial uses, as more fully set forth in the sections of the Land Use Element entitled 'Industrial Land Use' and 'Industrial Goals and Policies'".

B. Recommended Action Program

The following revisions are made to the section entitled "Recommended Action Program for Economic and Physical

Improvement":

The first sentence of the first asterisked action
 item (which appears on page 8-8) is revised to read as follows:

"The City Council should assign highest priority to the development of a vibrant community center, including centralized neighborhood shopping facilities, in the Four Corners Section, as more fully set forth in the section of the Land Use Element entitled 'Special Area Goal and Policies'".

2. The seventh asterisked action item (which appears on page 8-9) is revised to read as follows:

"The City Council/Redevelopment Agency should proceed with the preparation, review and adoption of redevelopment plans for appropriate key improvement sites. Specific plans should also be prepared for these sites. The redevelopment plan(s) should form a central element of the community economic development program for the City of East Palo Alto. (See further discussion of the use of redevelopment plans and specific plans for key improvement sites in the section of the Land Use Element entitled 'Land Use Element Action Program'".)

3. The ninth asterisked action item (which appears on

page 8-9) is revised to read as follows:

"The Redevelopment Agency should work with project area property owners in the manner prescribed for owner participation in the California Community Redevelopment Law and the applicable redevelopment plan(s)." The Circulation Element of the General Plan is amended as follows:

A. Figure 2

Figure 2 of the Circulation Element on page 6-6 sets forth the street classification system and truck routes in the City. Figure 2 is hereby amended to include the loop arterial street and truck route through the Industrial Section generally as shown on Map 2 of this General Plan Amendment.

B. Industrial Traffic

The section entitled "Industrial Traffic" on page 6-16 is revised in its entirety to read as follows:

"Industrial Traffic

The Industrial Section is relatively isolated from major highways. Trucks and other industrial traffic must pass through the center of East Palo Alto to reach the Industrial Section. Increased development of the Industrial Section will result in heavier volumes of traffic which could create problems of noise, congestion, and safety if such traffic is accommodated exclusively by the existing street network. Such problems would, in turn, diminish the Industrial Section's continued growth potential.

These problems could be mitigated through connection of a new loop arterial street from Bay Road northward through the Industrial Section and then westward along the abandoned Southern Pacific Railway spur, connecting back into University Avenue for easy access to the Dumbarton Bridge. Such an arterial is described more fully in the sections of the Land Use Element entitled 'Industrial Land Use' and 'Industrial Goal and Policies'. This loop arterial extension could be funded through a number of sources including an assessment district, direct developer and industrial property user contributions and redevelopment tax increment revenues."

C. Goal and Policies

Policy 7 under the subsection entitled "Roads" of the section entitled "Goal and Policies" on pages 6-19 and 6-20 is revised in its entirety to read as follows:

"7. Industrial Section Arterial Connector

Develop a loop arterial street through the Industrial Section that provides access to the City arterial network via Bay Road at University Avenue and at a new intersection with University Avenue in the vicinity of the Southern Pacific rail crossing. Such a loop arterial street will provide direct access from the Industrial Section to the Dumbarton Bridge and will alleviate congestion at the critical University Avenue/Bay Road intersection in the Four Corners Section and in surrounding residential neighborhoods. Since the likely location of the northern connection of the loop arterial street to University Avenue is currently within the City of Menlo Park, planning for the loop arterial should be coordinated with the City of Menlo Park or actions should be taken to annex the necessary property, as appropriate. See Policy 1 of Objective No. 2 in the section of the Land Use Element entitled 'Industrial Goal and Policies' for a further description of the loop arterial street."

PART V. CONSERVATION ELEMENT AMENDMENT

The Conservation Element of the General Plan is amended

as follows:

A. Agricultural Land Balance

A new Policy 3 is added to Goal IV ("to maintain a reasonable balance of agricultural land within the urban environment") on page 4-15 to read as follows:

"3. Establish a mechanism for the orderly and timely termination of the sole Williamson Act contract for land in the Industrial Section (covering approximately 5 acres) and for conversion of other scattered agricultural uses in the Industrial Section (covering approximately an additional 5 acres) to promote and ensure industrial development of that area consistent with the goals, objectives and policies set forth in the Land Use Element and the Economic Development Element."

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Appendix C Ravenswood Industrial Area Parcel Ownership

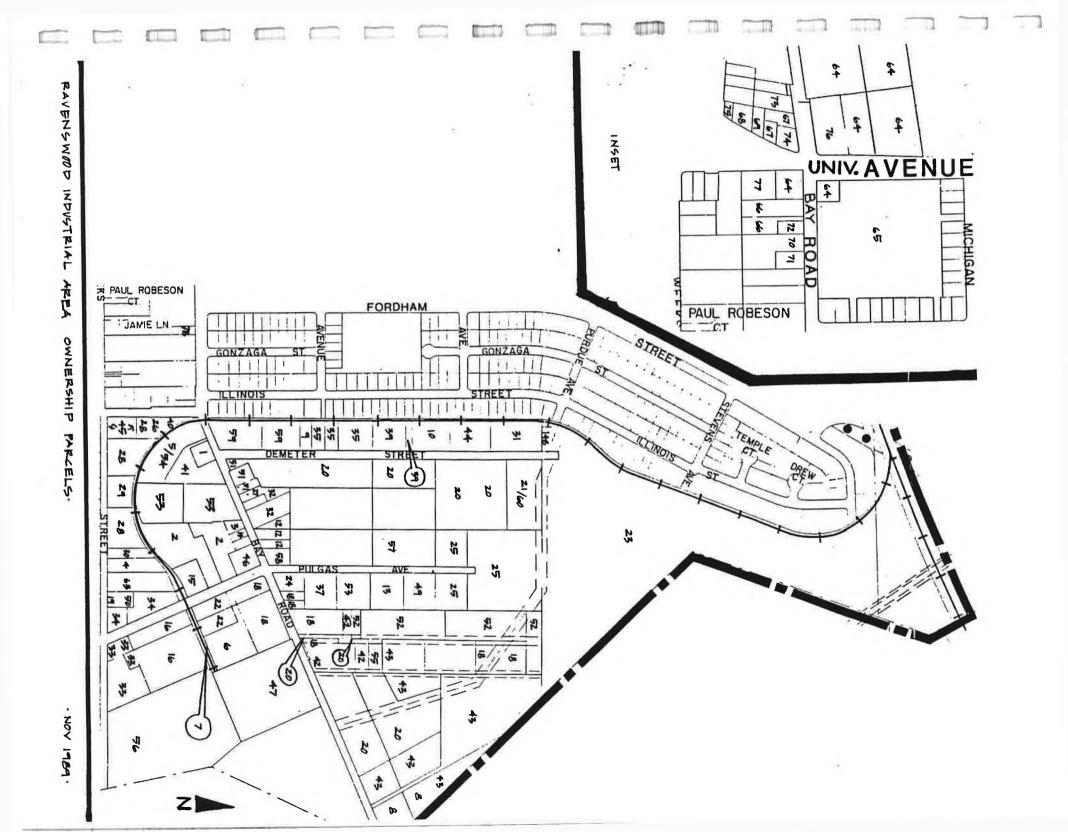
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NAME	ADDRESS	PARCEL#	USE	<u>IPOA</u>
R. Lake & M. Cordes	P.O. Box 50367 Palo Alto, CA 94303	063-231-220	Light Ind.	*
Z R.Peck & T O'Connor	1965 Latham Mt. View, CA 94040	063-231-190 063-231-200	Storage Storage	*
弓Roy L. Adger	1586 Bay Rd. PA, CA 94303	063-231-230	Triplex	
4 Robert Allen	1003 Weeks St. PA, CA 94303	063-232-090	Lt. Ind.	
S Lee's Backhoe Serv. Inc.	1800 Bay Rd. EPA, CA 94303	063 231 250 (tenant)		*
William & PA Bains	2470 Pulgas Ave EPA, CA 94303	063-240-350 - 063-240-340 -	Vacant Lt. Manufacturing	* (Dante Bains)
7 Bains Moving & Storage	P.O. Box 50219 PA, CA 94303	063-240-400 - 063-240-410 -		
& Michael Alden Baker	P.O. Box 368 RC, CA 94064	063-121-410		*
9 Samuel & M. Barajas	1896 Bay Rd. PA, CA 94303	063-231-280	SFR	
	255 Demeter St. PA, CA 94303	063-123-070-	Lt. Ind.	*
11 Jack H. Barnes	611 12th Ave. MP, CA 94025	063-133-090	Commercial Bldg.	

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NAME	ADDRESS	PARCEL#	USE	IPOA
12 Dean & Jean Beer	1225 Vienna Dr. #72	063-131-230	Vacant	
	Sunnyvale, CA 94086	063-131-240	Auto Sales	
		063-131-310	Vacant	
I ≯Michael C. Berthiaume	P.O. Box 50038	063-132-190	Lt. Ind.	*
	PA, CA 94303			
+Simon Bertrand	1894 Bay Rd.	063-231-270	SFR	
Simon Dornand	PA, CA 94303	005 251 270	0. R	
			en Martin	
15 Jennie J. Bishop	220 Emerson St.	063-231-180	Vacant	*
	PA, CA 94301			
16 R.E. Borrmann Steel	2450 Pulgas Ave	063-240-310/	Lt. Ind.	*
	EPA, CA 94303	063-240-390	Lt. Ind.	
17 Lee & H. Clemons	1528 Solana Dr.	063-231-220	Warehouse	
	Belmont, CA 94002			
BMelvin Rob Curtaccio	350 6th Ave.	063-121-050	Vacant	*
	Redwood City, CA	063-132-100	Vacant	
	also 160 Philip Rd.	063-132-170	Storage	
	Woodside, CA 94062	063-132-160	Vacant	
	also 1925 Bay Rd.	063-240-330	Storage	
7.8.	EPA, CA 94303	063-132-120	SFR	
		063-132-130	Auto Sales	
		063-132-110	Storage	
		063-240-320	Storage	
		063-121-060	Storage	
19 William M. Davis II	P.O. Box 32489	063-232-300	SFR	

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NAME	ADDRESS	PARCEL#	USE	IPOA
	SJ, CA 95152			
Michael J. Demeter	160 Demeter St.	063-121-330	Vacant	*
Michael J. Demeter	EPA,CA 94303	063-132-090	Vacant	
	2111,011 7 1000	063-121-340	Vacant	
		063-121-360	Vacant	
		063-121-120	Storage	
		063-121-290	Lt. Ind.	
		063-121-430	Vacant	
		063-131-290	Service shops	
		005 151 270	bervice shops	
Demeter Str. Warehouse	1001 Rengstdorff Mt. View, CA	063-121-320	Warehouse storage	
Duca & Hanley Prop.	19312 Athos Pl.	063-240-220/	Vacant	
	Saratoga, CA 95070	063-240-210-	Vacant	
Economy Foods (Facciola)	P.O. Box 50548 Palo Alto, CA 94303	063-050-030	Vacant	
John & Rachel Garcia	11951 Hilltop Dr. Los Altos, CA 94022	063-132-140-	Lt. Ind.	*
Harmony Investment	2265 Cabrillo Hwy	063-121-200	Vacant	
	Half Moon Bay, CA 94019	063-121-210	Lt. Ind.	
	47	063-121-020	Lt. Ind.	
Mike Ibrahim	3339 Tree Swallow Pl. Fremont, CA 94536	063-232-310	Store Bldg.	
Bobbie Ingram	1861 Bay Rd.	063-131-330	Residential	

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RAVENSWOOD INDUST	RIAL AREA OWNERSHIP I	IST		
NAME	ADDRESS	PARCEL#	USĖ	IPOA
8Chiyoko & HA Iwasaki	1001 Waverly Ave.	063-232-220	Vacant	
	PA, CA 94301	063-232-210 063-232-230	Vacant Vacant	
		063-232-200	SFR	
9Satoru & E. Iwasaki	217 Stockbridge Ave. Atherton, CA 94025	063-131-220	Agricultural	*
DJames & F. Lambert	150 Cardinal Ln. Los Gatos, CA 95030	063-232-260	SFR	
Helen Lamp	431 Costa Rica Ave. San Mateo, CA 94402	063-123-010	Storage	•
32 Marilyn Lemmon	486 Dymond Ct.	063-131-270	Parking lot	
	PA, CA 94306	063-131-260	Warehouse	
3 Gaudenecio U. Lopez	1103 Weeks St.,	063-240-360	Vacant	
à	EPA, CA 94303	063-240-270	Vacant	
1		063-240-370	SFR	
		063-240-380	Greenhouse	
4 A & R M	P.O. Box 50367	063-232-150	Warehouse	
	PA, CA 94303	063-232-160	Office Bldg.	
55Yoke K. & Ngoc Mo	1737 University Ave.	063-133-080	Warehouse	*
	PA, CA 94301	063-133-070	Warehouse	
4		063-133-100	Warehouse	
6Nautilus Ltd. Inc.	P.O. Box 1111 San Bruno, CA 94066	063-271-430	Vacant	

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NAME	ADDRESS	PARCEL#	<u>USE</u>	IPOA
37 John Nuckton Enterpr.	306 Cliff Dr. Aptos, CA 95003	063-132-150	Lt. Ind.	
38 Pacific Gas & Electric				
39 Ray Park & Sons	225 Demeter St. PA, CA 94303	063-123-080 063-123-030	Vacant Vacant	
ODallas & Berth Price	810 Schembri Ln. EPA, CA 94303	063-232-340		
A Roblake Inc.	770 Welch Rd. PA, CA 94303	063-231-240	Lt. Manufacturing	* (R. Lake)
Ronald G. Rogge	780 E. Meadow, PA 94303 also 1987 Bay Rd., EPA	063-121-150 063-132-220	Auto Wrecker Auto Wrecker	•
3 Romic Chemical Corp.	2081 Bay Rd. EPA, CA 94303	063-121-440 063-121-390 063-121-110	Starter	•
		063-121-110 063-121-070 063-121-100 063-121-160	Storage Lt. Ind. Storage Lt. Ind.	

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 ++Richard L. Russell
 310 Devonshire Blvd. San Carlos, CA 94070
 063-123-060
 Lt. Ind.

 +*Jimmie H. Rutherford
 901 Weeks St PA, CA 94303
 063-232-270
 Vacant.

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NAME	ADDRESS	PARCEL#	<u>USE</u>	IPOA
		063-232-290	SFR	
b David A. Salzberg	4063 Scripps Ave PA, CA 94303	063-231-210-		
7 Sandoz (Zoecon Corp).	P.O. Box 10975 Palo Alto, CA 94303	063-240-020	Lt. Ind.	
g Menlo Park Sanitary	500 Laurel St. Menlo Park, CA 94025	063-050-020	Transport	
9 County of San Mateo	Cnty. Govt. Ctr. RC, CA 94063	063-121-190	Commercial lot	
OJudith Sargent	2040 Middlefield Mt. View, CA 94043	063-232-300-	SFR	
67 Don & Carolyn Sevy	3820 Park Blvd PA, CA 94306 also 4 Claremont Pl. Menlo Park, CA 94025	063-131-300 063-131-320 063-131-330	Office Bldg. Auto Sales Storage	*
ZJoseph Scianacalepore	3390 Alder Ave. Fremont, CA 94536	063-121-030 063-121-040 063-132-040 063-121-350 063-132-020	Vacant Storage Vacant Storage Auto Sales	
3Dennis Sibbert	163 Highland Ave San Carlos, CA 94070	063-231-260 063-231-170 063-132-210	Lt. Ind. Vacant Lt. Ind.	•

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NAME	ADDRESS	PARCEL#	USE	IPOA
Don & Carol Tanklage	1025 Tanklage Rd. San Carlos, CA 94070	063-231-250	Vacant	
ET.J. Thompson	410 Cambridge Ave. PA, CA 94306	063-132-060-	Auto Sales	*
J.G. Torres Concrete	P.O. Box 1270 Mountain View	063-240-170?	Industrial acreage	*
Charles F. Touchatt	P.O. Box 254 RC, CA 94064 also 2535 Pulgas Ave. EPA, CA 94303	063-121-370	Trucking	*
Herbert Tyson	2509 Pulgas EPA, CA 94303	063-131-340		
Philip & Lo Wang	5 Miller Ct Redwood City, CA 94061	063-133-110 063-133-130	Warehouse Vacant	*
Howard J. White	1001 N. Rengstorff Ave. Mountain View, CA	063-121-320	Warehouse	
Annastine Williams	1085 Weeks St. PA, CA 94303	063-232-250	Multi-Family Dwelling	
Robert Williams	Reserve Investment 3301 El Camino, Ste. 217 Atherton, CA 94075	063-271-390 063-271-400	Vacant Vacant	
Henry Wong	1011 Powell St. SF, CA 94108	063-232-240	Lt. Ind.	*

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RAVENSWOOD INDUSTRIAL AREA OWNERSHIP LIST -- COMMERCIAL AREA

County of San Mateo 063-103-360 County Dept. of General Services 64 Real Property Division 063-103-370 County Government Center 063-103-380 Redwood City, CA 94063 063-103-390 063-103-400 063-103-420 063-103-430[.] 063-111-230-063-220-540-19 Barca Industries 063-111-250 P.O. Box 51537 Palo Alto, CA 94303 16 James L. Casey (Trustee) 063-220-760 c/o Wells Fargo Bank TREO 063-220-770-P.O. Box 63700 San Francisco, CA 94163 67 C. Chin 063-203-160-063-203-340/ 063-203-180 18 Cube Dyer 251 Ivy Dr. Menlo Park, CA 94025 69 Charles Gaines 063-203-170/ 7037 Cabernet Newark, CA 94560 70 David G. Harris, et. al. 063-220-840 P.O. Box 712 San Carlos, CA 94070 7/ Oscar D. and Shirley J. Hicks 063-220-790 249 Arroz Pl. Fremont, CA 94536 72 Mickey Manuel 063-220-740/ c/o ACQ Home Peop. Sect. #3156 FHA 042 434 402 303 Washington, DC 20410 73 Wilma Manuel 063-203-330 960 Clemente Mt. View, CA 94043

	2		
74	Mike Ibrahim Stanley and Jean Blumenthal	063-203-300	3339 Tree Swallow Pl Fremont, CA 94536
15	Abdul Salem Rabah	063-203-310	2371 University Ave PA, CA 94303
76	McDonald's Corp.	063-103-310	Regional Office 2480 N. 1st Street San Jose, CA 95131 Attn: Construction Dept.
7	7 Tarek and Norma Shoman	063-220-890	100 Tulare Dr. / San Bruno, CA 94060
78	SClark W. Wallace	063-220-900	1586 Bay Rd. East Palo Alto, CA 94303

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Appendix D Directory Listing of Industrial Section Sites 1940-Present

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Table 4-1

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Address	Years	Establishment
BAY ROAD		
1794 Bay Road	1963-1970 1988	Angel's Haven Day Nursery St. Mark American Zion Church
1800 Bay Road	1954-1963 1965-1967 1969-1971 1972-1973 1978-1988	Santa Barbara Flower Growers Inc. Pledger's Welding Shop Custom Auto Trim Photomation Foundry Lee's Backhoe Service, Inc.
1801 Bay Road	1967-1970 1972 1973-1978 1988-1989 1989	Western Chemical & Mfg Company Western Marine Distributor Gates Auto Service & Repair (Shop) Gates Automotive Service T&G Auto Sales (leasing, retail, wholesale
1802 Bay Road (10)	1988 1970-1989	B&N Towing Bay City Body Shop
1803 Bay Road (11)	1972 1973 1975 1989	Custom Associates (carpet ulpholstery) TWA Van Lines Branches Body & Fender K&J Sales (telephone accessories)
1804 Bay Road* (12)	1054 1060	
	1954-1960 1961 1965 1967-1989	Amcoe Sign Company Vidya Inc (space science laboratory, electronics mfrs) Ad Venture Sign Company Product A Mfg. Co. (plastic fabricator)
1805 Bay Road* (13)	1963 1965-1989	Magi Dyes Chemical Mfg. Electrite Plating Company Inc.
1836 Bay Road* (14)	1967-1989 1989	Chemnetics, Inc. (platers) Sandoz Crop Protection (packaging)
1841 Bay Road	1954-1972 1954-1978 1973-1978 1988	Peninsula Transit Lines Inc. Yellow Cab Company Peninsula Charter Lines Inc. Families in Transition
1844 Bay Road	1975-1978	Pharmchem Research Foundation

DIRECTORY LISTINGS OF SITES WITHIN THE PROJECT AREA BETWEEN 1940 AND PRESENT

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Address	Years	Establishment
1847 Bay Road (15)	1950	Sat Yamada Nursey
	1958-1965	J.F. Brown Cabinet Shop
	1954-1961	Fred R. Brown (Residence, Co-Owner of Cabinet Shop)
	1965-1970	Don Sevy Co mfrs rep
	1971-1973	Gates Auto Service & Repair
	1975-1978	Charles Cannon Auto Body & Paint
	1989	El Zalate Mechanic
1848 Bay Road* (16)	1968	Applied Materials Technology (warehouse)
	1969-1970	Turner Poly Tech Labs Inc (research)
	1972-1975	Pharmchem Laboratories Inc.
	1967, 1988	Adralloy, Inc. (metallurgists)
	1989	Sandoz Crop Protection (warehouse)
	1989	ABS Fabricators
1849 Bay Road (17)	1967-1972	Community Information Referral & Service Center
	1975	Joanna Cooper (new residence)
	1988	A&S Mobil Auto Service
	1989	City Tow (1849 B Bay Road)
1852 Bay Road (18)	1967-1972	Scale Models Unlimited
,,,	1973	Prototype Models Limited (model making)
	1973	Exhibit A (display designers)
	1973-1988	D. McCreery Sign Company
	1988	D Sign Company
1854 Bay Road	1988	Joyce Brothers Builders
1856 Bay Road (19)	1975-1978	J. Schneider Exhibits and Displays
	1988-1989	ABS Fabricator Inc
	1989	EPA Metal Finishers Inc.
1861 Bay Road (20)	1954	Pledger Mfg Co (playground equipment)
	1959-1960	(in rear) Roberts Lupetto Commercial Artists
	1961-1963	(in rear) Albright Refrigeration & Appliance Services
	1967	B&J Sandblasting
	1972	Bernard Service (engine supplies)
	1975-1988	Soul Brothers Motorcycle Club
	1969-1970	Exhibits of California (displays & exhibits)
	1972-1978	Exhibits of California (conference room)

Address	Years	Establishment
1877 Bay Road (21)	1971-1978 1989	Exhibits of California (displays) Merchandisong Systems Inc.
1881-1885 Bay Road	1957-1960	Mendes Auto Wreckers
1881 Bay Road	1961	Lomba's Auto Wreckers
1885 Bay Road (22)	1954-1957 1961-1988	The Woodcrafters (cabinet maker) M&M Garage (Auto Repair & Wreckers)
1890 Bay Road	1948-1957 1961	(rear) FY Iwasaki (nurseryman) Roberto Lupetti Studio Art Gallery (1890A Pulgas)
1898 Bay Road	1961 1961 1961	K&S Salvage (junk dealers) (rear) Pledger's Welding Shops (1898 1/2) Hergott & Villalobos Painting Co.
	1963 1963 1967-1968 1965-1973	Pledger's Salvage Pledger's Welding Shop Unity Tabernacle Baptist Church Peck & Hiller Construction Co. (general
	1971-1972 1975 1978	contractor) Nairobi College (office) Malcolm House Skyhawk Records
1901 Bay Road	1961 1961-1968	R.J. Foster Precision (mach mfrs) Malmberg Engineering Inc. (mechancial engineering)
	1970-1973 1978	AAA Anodizing Co. Applied Vacuum Technology (vacuum equipment)
1905 Bay Road (23)	1961-1965	Go Power Corporation Mfg. (parts for go- carts)
	1967-1969 1972-1989	J&W Engineering Inc. Cal Spray, Inc.
1909 Bay Road (24)	1988	C&B Towing (storage yard)

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Address	Years	Establishment
913 Bay Road	1958	Nordon Constrn Corp (bldg contrs)
	1959-1960	Freeway Cabinet Shop
	1967	EVD Mfg Co (mach)
	1968-1978	L. Kinnon Auto Repair
923 Bay Road	1954-1955	Allan L. Fraer (plaster contractor)
	1957	Pledger Mfg Co (playground eqpt)
925 Bay Road (25)	1957	Allan L. Fraer (plaster constractor)
	1958	K&S Salvage and Lumber
	1959-1961	Bay Road Auto Wrecking Company
	1963-1965	United Auto Wreckers
	1967-1978	Auto Salvage
	1988	C&B Towing
	1989	Pick and Save
	1989	dba C and B Bayshore
1950 Bay Road	1958-1960	Palo Alto Wrecking Company
1750 Bay Road	1963	Carl's Auto Wrecker
	1965-1975	M&M Auto Wreckers
	1978	Import Specialties (annex)
1960 Bay Road	1967-1968	Riley's Auto Wrecking
	1969	Hanlon Auto Wrecker
	1970-1978	Import Specialties (auto salvage)
1985 Bay Road	1954-1978	C&C Auto Dismantlers (wreckers)
1905 Day Roud	1954-1978	C&C Auto Wreckers
1987 Bay Road (26)	1963-1967	Sherwin Auto Wreckers
1907 Day Road (20)	1968-1989	Rogge's Auto Wrecking
1990 Bay Road		
"end of Bay Road"		
ond or Buy Road	1940-1954	Chipman Chemical Company
1990 Bay Road (27)	1955-1969	Chipman Chemical Company Inc. (insecticide mfr)
	1970-1972	Rhodia Inc. (Chipman Division) insecticide
	1973-1974	Zoecon Corp (Process Research Center)
	1975-1978	Zoecon Corporation (Chemical Division)
	1988	Sandoz Crop Protection
	1989	Zoecon/Rhone-Poulenc

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1991 Bay Road	1958-1961 1958-1961 1963	Haywood's Scrap Iron & Metal Yard Albert J. Haywood (residence) Edward R. Newell Salvage Dealer
1995 Bay Road	1954-1963	Electrite Company Inc. (platers)
1997 Bay Road	1954-1955 1959-1960	McDougall Builder's Supply The Purecell Corporation (filter makers)
2000 Bay Road (28)	1957-1960	Pacific Gas & Electric (sub plant)
2005/2017 Bay Road (2	29) 1965-1978 1989	United Auto Wreckers Bay Area Auto Wreckersy
2017 Bay Road (30)	1948 1957 1958 1959-1960 1988	Itaru Nakatsu (rancher) Newell's Auto Wrecking Don Percey Auto Salvage Mello's Auto Wrecking Bay Area Auto Wrecking
2019 Bay Road	1957-1973 1957-1970 1975-1978	Sam's Auto Wrecking Soren Poulsen (residence) Infinity Salvage
2025 Bay Road (31)	1969-1975 1989	Able Auto Wreckers Bay Area Towing & Auto Wreckers
2065 Bay Road	1959-1978	Clark's Auto Wreckers
2077 Bay Road	1958-1960 1963-1965 1967 1968-1970 1971-1978	Prochem Chemical Corporation (mfrs) Dean's Auto Wrecking Hanlon's Auto Wrecking Klauer's Auto Wrecking (auto wrecker) Ernie's Auto Wrecking
2081 Bay Road (32)	1957-1958 1959-1963 1965-1989	Hird Chemical Refining Corp (plant) Carad Chemical Corporation (mfrs) Romic Chemical (last address on Bay 1970)
÷	1988 1988	Antifreeze Environmental Service California Solvent Recycling
2091 Bay Road	1988-1989	Infinity Salvage

DIRECTORY LISTINGS OF SITES WITHIN THE PROJECT AREA BETWEEN 1940 AND PRESENT

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ALL STREET

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Address	Years	Establishment
2099 Bay Road	1973-1978	Norman's Auto Wreckers
2100 Bay Road	1972-1989 1988 1979	Palo Alto Boat Works Peninsula Paving Company Chemelex
(end of) Bay Road	1940-1955,1963 1957-1960	Chipman Chemical Company Public Dump
DEMETER STREET		12 · · · ·
Between 1940-1950, No	Demeter Street liste	d with or without addresses.
Demeter Street near Bay	1954	(nr SP Co tracks) Johnson & Mapes (warehouse)
	1955	Johnson & Mapes
65 Demeter Street	1965-1973	Johnson & Mape Construction Co. (storage)
75 Demeter Street (1)	1954-1955 1959-1968	John Nuckton Inc. (wholesale Florists) Bill Suyeyasu Wholesale Florists
e	1969-1971 1972-1978 1988-1989	Vacant Flexico Products J S Product Painting
141 Demeter Street	1989	Sunrise Towing/Body Shop
155 Demeter Street	1959-1963	Johnson & Mape Construction Co (yard)
160 Demeter Street (9)	1988-1989	Peninsula Charter Lines
175 Demeter Street	1959-1978	Metal Slitting Company (metal cutting)
177 Demeter Street	1959-1961	PG Industries Mill (metal rolling mill)
195 Demeter Street	1965 1967-1978	Twin Pines Mfg. Co (metal stamping) Metal Slitting Company (warehouse)
215 Demeter Street	1955 1959-1967 1968-1972 1973	Marie Lumber Co Floor Corp of America Kline's Flooring Supply Metal Slitting Company (Sub Plant) D&S Auto Body
	1975-1978	Metal Slitting Company

Address	Years	Establishment
	1050 1051	
218 Demeter Street (8)	1959-1961	Sakrete of Northern California (pre mix cement)
	1963-1965	Alcal Co. Shingle Mfr.
	1968-1969	EVD Mfg (Shop)
	1908-1909	Rapid Radial transport (delivery service)
4	1978	Limbrick & Hicks Guard & Patrol Service
	1988	West Coast Transmissions (wholesale
-		transmissions)
	1989	WTC Transmissions
219 Demeter Street (2)	1968-1978	Brown Wood Products (crate mfg)
	1988-1989	Eurodesign Ltd.
	1050 1065	
220 Demeter Street (7)	1959-1965	Alpar Mfg Corp (electronic hardware)
	1967	Astro Structures Inc. (Electronic Apparatus Mfg)
	1968-1978	East Palo Alto Electronics
	1980-1988	Flexico Metal Products
		Racher Distributions
	1988	
	1989	Heckman Metals
225 Demeter Street (7)	1967-1968	J&J Fabrications Inc. (steel fabrications)
	1969-1971	M Schepps Co (surplus metal)
	1969-1971	Powerflow Engineering Equipment
	1978	Marathon Corporation (Rubber Mfg)
	1988-1989	R.P.M. Steel
255 Demeter Street (4)	1972-1978	Multirig Auto Repair
235 Demeter Succi (4)	1988-1989	
		Baron Welding & Iron Work
	1988-1989	Clarke's Machines
	1989	J&J Fabricating
325 Demeter Street (5)	1954-1965	Durant Insulated Pipe Company (plumbing
		supplies)
	1959-1965	Durant Mfg Plumbing Supplies
	1967	Waco Products Plastics Mfg
	1969-1971	Kush Mfg co (wood products and wood
		reels)
	1972	Holiday Vehicle Specialties Inc.
	1972	Sequel Products Corp
	1975-1978	Duraframe Inc. (waterbed frames)
	1988-1989	Brown Wood Products

DIRECTORY LISTINGS OF SITES WITHIN THE PROJECT AREA BETWEEN 1940 AND PRESENT

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DIRECTORY LISTINGS OF SITES WITHIN THE PROJECT AREA BETWEEN 1940 AND PRESENT

Address	Years	Establishment
345 Demeter Street	1975-1978	Bay Area Towing & Car Storage
350 Demeter Street	1975-1978	Ravenswood School District (warehouse) (last address on st. 1975)
	1988-1989	Bay Boat Co. (marine hrdwre, reprs, restortns)
	1988	Willard Products
	1989	Demeter Warehouse
351 Demeter Street	1988-1989	Arrow McBride Metal Stamping
(End of) Demeter (6)	1989	Howard J. White Corporation Yard
DUI CAS STDEET		×

PULGAS STREET

In 1936-1938, no addresses are listed on Pulgas Street, but the street is referred to in relation to addresses found on Weeks Street.

Pulgas near Weeks	1948-1954	Calstone Co Inc. (building materials)
1889 Pulgas	1954	Campana Market
1951 Pulgas	1968-1989	Podesta Nursery
1961 Pulgas	1948-1965	Podesta Nursery
1981 Pulgas	1954-1958 1963-1989	Rainey's Painting Decorating Service Mount Olive Missionary Baptist Church
2033-2035 Pulgas	1965-1975 1989	Garden Oaks School & Multipurpose Building Ronald McNair Intermediate School
		(Ravenswood Dist.)
2101 Pulgas	1954-1972 1973-1978	Norito Kajikawa (nurseryman) Hiroshi Uemura (nurseryman)
2166 Pulgas	1968-1978	George's Janitorial Service & Building Maintenance
2195 Pulgas	1989	OICW Child Development Center
2229 Pulgas	1954-1978	Tom T Iwatsubo (gardener)
2245 Pulgas	1967-1968	Sires Shoe & Luggage Repair

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Address	Years	Establishment
2255 Pulgas	1954	McCammon-Wunderlich Co. (contractors)
2315 Pulgas	1968-1978	Clip and Style Salon (beauty shop) (Mrs. Leslie Hart)
2325 Pulgas	1967-1971	St. Samuel Church of God in Christ
2377 Pulgas	1954-1955	FloPana Laboratory
2401 Pulgas	1963-1967 1963-1967	Garden Mart Real Estate (owners) Garden Town Garden Supplies
2411 Pulgas (33)	1963-1965 1963-1965 1963-1965 1963-1965 1973-1978 1981-1989	Cole & Angeli Art Serv Winnek Television Systems Inc. (Elec Res Image Systems Ltd. (Elec Research) Stereofilm Inc. Health Development Corporation Pitcher Drilling
2417 Pulgas	1972 1973 1975 1978 1988	Nairobi Apparel Sonic Electronics Al's Carpet & Furniture Baines Moving & Storage (warehouse) Horace Robertson
2419 Pulgas	1963-1968 1969-1970 1972-1978 1979-1983	Chapman Chemical Co. AIM Inc. (minerals consultant) Baines Moving & Storage International Health Service Corporation
2421 Pulgas	1963-1973 1988	Ernel Stationary Printing (printing) Golden L Auto Workshop
2423 Pulgas	1961-1965 1968 1972-1973	Palo Alto Cabinet Shop Hu Mai Electronic Equipment Palo Alto Wood Refinishing

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Address	Years	Establishment
2425 Pulgas	1958	East Palo Alto Supply Co. (building materials)
	1958	Ken Davey (landscape architect)
	1958	East Palo Alto Lumber
	1959-1961	Garden Mart Corporation (real estate
	1959-1901	owners)
	1958-1961	Garden Town (garden supplies)
	1959-1961	G.K.Turner Associates (scientific instrument mfrs)
	1963	H&M Screw Products
	1963-1965	Hue Mac Electronic Equipment
2	1963-1968	American Breeders Service (livestock
	1903-1908	breeding)
	1968	Allied Associates Engineering (shop) (rear
	1978	St. Samuel Church of God in Christ
2427 Pulgas	1958	Johansen Woodworking Shop
2433 Pulgas	1963	Proto Stamping (metal stampings)
	1965	H&M Screw Products
	1989	Soul Kitchen Restaurant
2435 Pulgas	1968-1969	H&M Screw Products
2445 Pulgas	1958	West Fertilizer Inc.
2447 Pulgas (34)	1959-1963	Davis & Roesener Wholesale Florists
	1972	Saint Samuel Church
	1975	J &J Custom Cabinets
	1989	Pitcher Drilling
2450 Pulgas (35)	1955-1989	R.E. Borrmann's Steel Co
2470 Pulgas (36)	1963-1972	Hunter Container Corp (mfg)
	1988-1989	Bains Moving & Storage
	1988	K.E. Smith
	1989	Hunter Container Corp.
	1989	Yellow Cab
	1989	Wm & R.A. Baines
2475 Pulgas	1958	Forrest Bauder Floor Coverings
	1959-1961	D&M Carpet Service
	1963-1973	Bishop Insulation (warehouse)

DIRECTORY LISTINGS OF SITES WITHIN THE PROJECT AREA BETWEEN 1940 AND PRESENT

Address	Years	Establishment
2477 Pulgas	1958-1961	Fla-Pena Research Laboratories (vitamins)
-	1963	D&M Carpet Service
	1973	Forest Crafter (wood products)
2479 Pulgas (37)	1968-1978	Peck & Hiller(Shipping and Receiving)
2480 Pulgas (38)	1988	Heartwood Cabinets
	1989	Spiral Paper Tubes
2483 Pulgas	1989	Peck & Hiller
2491 Pulgas	1959-1960	Hergott & Vellalobas (paint contractors)
2493 Pulgas	1959-1961	Physical Electronics Laboratories
	1965-1973	Arequipa Foundation (medical research)
	1969-1973	Chemo Therapy Research Laboratory (medical research)
	1079	Scinti Labs
	1978	
	1988	International Health Services
	1988	PEM Tech Inc
	1989	Physical Electronics Laboratories #2
2495 Pulgas (39)	1959-1960	K&S Salvage
2511 Pulgas	1958-1978	Parry Realty
2519 Pulgas (40)	1948-1950	Satoru Iwasaki (nurseryman) (end of Pulgas addresses 1948-1950)
	1054 1090	
	1954-1989	Sat Iwasaki Nursery
2520 Pulgas (45)	1958-1989	John Nuckton, Inc. (Wholesale Florists)
	1968-1975	Peninsula Flower Growers
2524 Pulgas (44)	1963-1978	Wersted Building (Commercial Building)
	1963-1989	G.K.Turner Assoc., Inc. (Tech & Lab
	1988-1989	Inst. Mfrs.) East Palo Alto Sanitation District
2526 Pulgas	1988-1989	McCourt Cable Systems
2528 Pulgas (43)	1963-1965	Advanced Alloys Mfg
	1968-1978	Formetrics (display and mock ups)
	1988	Peden Engineering Co.
	1989	Stanford Minerals Research
	1707	Juniora minerals research

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Address	Years	Establishment
2528A Pulgas (42)	1963-1989	Masero Laboratories
2020111 argas (+2)	1705 1707	Mastern Corporation
2530 Pulgas	1963	Thunderbird Plastics Inc (mfrs)
	1967-1978	Formetrics (Display Mock Ups)
2532 Pulgas	1963-1969	Caw Engineering Water Purifying Eqpt
	1972-1978	Formetrics (Sub Plant)
2534 Pulgas	1963	WE Van Tassel & Co. (mfg rep)
	1963-1965	Scale Models Unlimited Architectural Models
	1968-1969	Caw Engineering (sub ofc)
	1970	Formetrics (sub plant)
2535 Pulgas	1954-1978	Bay Road Nursey Inc.
5	1988-1989	Touchatt Trucking
2536 Pulgas	1967-1989	Anderson Sheet Metal, Inc.
2538 Pulgas	1965-1969	Santa Barbara Flower Growers Inc. (wholesale florists)
	1971	Nowels Publications (warehouse)
	1973	Peninsula Industrial Painting Corp.
2550 Pulgas	1973-1975	Spensco Enterprises
2555 Pulgas	1958	McCammon-Wunderlich Co (road contractors)
	1959-1968	Wunderlich Co. (gen'l contrs)
	1965-1970	Wunderlich Development co. (real estate)
	1971-1978	Research Homes of California (real estate)
	1975	James A Alams (new residence)
2555 A Pulgas	1963-1968	Ervin Varwig Contractors & Engineers (last address listed)
2560 Pulgas	1972-1973	EPA Redevelopment Agency
	1972-1973	East Palo Alto Municipal Council
	1975-1978	Penda House (drug rehabilitation)
	1988	Drew Health Foundation -New Day
2565 Pulgas (41)	1988-1989	Stonehurst Floral Products

Address	Years	Establishment
TARA ROAD		
49 Tara Road	1957-1960 1961	Bay Side Auto Wreckers Carl's Auto Wreckers
51 Tara Road	1961	Winston's Wrecking Yard
101 Tara Road	1988	Pick & Save Auto Wrecking
145 Tara Road	1975	A&A Auto Wreckers
150 Tara Road	1954 1961-1965 1967-1969 1970-1975 1988	Taro Auto Service (auto repair) Rogge Backhoe & Trenching (yard) Rogge's Auto Wrecking (storage yard) Rogge's Excavating & Demolition (storage yard) Rogge's Excavating
154 Tara Road	1988	J. Galvan Auto Body
155 Tara Road	1975	C&C Auto Wreckers (parts department)
160 Tara	1972 1975	Hanlon Auto Wrecking Rogge's Auto Wrecker
190 Tara Road	1965-1967 1969-1973	Shirwin Auto Wreckers (storage lot) Rogge Auto Wrecking (storage lot)
200 Tara Road	1967-1973 1970-1975	Forsyth Scrap Metal William Forsyth (homeowner)
202 Tara Road	1968-1975	Recon Tire & Tube Co.
206 Tara Road	1967 1969-1975	Palo Alto Wreckers Buck's Auto Wreckers
264 Tara Road	1958-1961 1967-1969 1973-1975	Gillespie Brothers Paving Contractors Tresser's Auto Parts J&J Auto Wrecking

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DIRECTORY LISTINGS OF SITES WITHIN THE PROJECT AREA BETWEEN 1940 AND PRESENT

Address	Years	Establishment
WEEKS STREET		
1937-1938:	Addresses only	listed between 705 and 720 Weeks Street
1003 Weeks Street (46)	1958-1965 1967-1972 1975-1978 1989	Menlo Pharmaceuticals Inc. (drug mfrs) Macronetic (tool mfr) Nairobi Vocational and Maintenance School Robert Allen
1020 Weeks Street	1958-1988	Toshio Saburomaru (gardener)
1045 Weeks Street	1975-1978 1988-1989 1988-1989 1989	Nairobi Vocational Maintenance Center Garcia Well and Pump HEW Drilling Alluvial Soil Lab
1054 Weeks Street (47)	1988 1989	Albert Nakai Nakai Nursery
1151 Weeks Street	1972-1978	Fred Cuaresma Nursery
1175 Weeks (48)	1989	Call -Mac Chemical
1103 Weeks	1989	Torres Property

Note: () = Refer to location designations on Figure 2-2 in Section 2.

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Appendix E Industrial Section Activity Summary by Address

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Address	Establishment	Comments
1800 Bay	Lee's Backhoe Service	Previous uses include flower growing, a
1801 Bay	T&G Auto Sales	welding shop, auto trimming and a foundry. Previous uses include chemical manufacturing and auto repair.
1802 Bay	Bay City Body Shop	Facility is on file as a small-scale hazardous waste generator.
1803 Bay	No information available.	Previously used by TWA van lines and as a body shop.
1804 Bay	Product A Manufacturing	Currently involved in plastics manufacturing Previously a space science lab and electronics manufacturer.
1805 Bay	Electrite Co.	Metal platers with known metals soil and ground-water contamination. Previously chemical manufacturing.
1836 Bay	Chemnetics,Inc. Sandoz	Currently used for metal plating. Used as a warehouse.
1841 Bay	Families in Transition	Previously used by Peninsula Charter and Yellow Cab.
1844 Bay	Pharmchern Research	No information available.
1847 Bay	El Zalate Mechanic	Auto repair shop historically used for auto painting and as a nursery.
1848 Bay	ABS Fabricators	Metal fabricators with a hazardous waste generator permit.
	Sandoz Adralloy	Currently used as a warehouse. Perform metallurgy.
1849 Bay	City Tow A&S Mobil Auto Service	No information available. No information available.
1852 Bay	D. Sign Company	Previously occupied by display designers and model makers
1854 Bay	Joyce Brothers Builders	No information available.
1856 Bay	EPA Metal Finishers & ABS Fabricators	Previously used by display designers.
1861 Bay	Soul Bros Motorcycle Club	Previously used for engine supplies, sandblasting, and an appliance service company.
1877 Bay	Merchandising Systems	Business plan on file reporting hazardous materials usage. Past use of display manufacturing & gardening.
1881 Bay	No information available.	Previously used by auto wreckers.
1885 Bay	M&M Garage	Currently used for auto repair and wrecking. Previously used for cabinet making.
1898 Bay	No information available.	Previously used for salvage, welding, and painting operations.

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Address	Establishment	Comments
1901 Bay	No information available.	Previously used by an anodizing company
1905 Bay	Cal Spray, Inc.	and machine manufacturer. Industrial spray painting currently performed.Hazardous waste generator with above ground tanks. Used to manufacture
1000 D		parts.
1909 Bay	C&B Towing	Used as a storage yard.
1913 Bay	No information available.	Previously used for auto repair and machine manufacturing.
1925 Bay	Pick & Save, C&B Bayshore	Currently auto dismantling and towing.
1950 Bay	No information available.	Previously used for auto wrecking.
1960 Bay	No information available.	Previously used for auto wrecking.
1985 Bay	No information available.	Previously used for auto wrecking.
1987 Bay	Rogge's Auto Wrecking	Surface soils appeared heavily stained during physical. Steam cleaner wash discharging to Bay Road.
1990 Bay	Sandoz/Zoecon	Chemical manufacturing since 1940. Currently a proposed NPL site.Severe soil
	1. Contract (1. Contract)	and ground-water arsenic contamination.
1991 Bay	No information available.	Previously used by a scrap metal company and a salvage dealer.
1995 Bay	No information available.	Occupied by Electrite Platers in the 1950s and 1960s.
2000 Bay	PG&E substation	Present since 1957. Above ground tank onsite.
2005 Bay	Bay Area Auto Wreckers	Surface soils appeared heavily stained during physical inspection.
2017 Bay	Bay Area Auto Wreckers	same
2019 Bay	No information available.	Previously used for auto wrecking.
2025 Bay	No information available.	Previously used for auto wrecking.
2025 Bay 2065 Bay	No information available.	Previously used for auto wrecking.
2005 Bay 2077 Bay	No information available.	Previously used for auto wrecking and chemical mfg
2081 Bay	Romic	Used for chemical manufacturing & recycling since the 1950s. Known severe soil and ground-water solvent contamination. An EPA RCRA site.
2091 Bay	Infinity Salvage	Large operation with an onsite car crusher.
2100 Bay	Palo Alto Boat Works	Operated since 1972.
2100 Bay 2100 Bay	Peninsula Paving Co.	operation since 1772.
end of Bay	Public dump	Operated in late 1950s and early 1960s.
chu or bay	rubiic duitip	operated in rate 1950s and early 1900s.

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Address	Establishment	Comments	
1951 Pulgas	Podesta Nursery	On file for tank removal, however, DOHS stated it was removed from a differen facility.	
1961 Pulgas	residential	Previously the site of a nursery.	
2411 Pulgas	Pitcher Drilling	Hazardous waste generator with an	
util i uigus	Tiwher Diming	underground gas storage tank.	
2417 Pulgas	Horace Robertson	Previously the site of a warehouse and an electronics company.	
2419 Pulgas	No information available.	Previously the site of Chapman (sic? Chemical.	
2421 Pulgas	Golden L Auto Workshop	Previously used by stationary printers.	
2423 Pulgas	The Outsiders	Previously used for wood refinishing electronic equipment supplier, and a cabine shop.	
2425 Pulgas	No information available.	Previously used for livestock breeding mfg., and as a lumber yard.	
2433 Pulgas	Soul Kitchen	Previously used for metal stamping and screw products.	
2445 Pulgas	No information available.	Previously the site of a fertilizer company.	
2447 Pulgas	Pitcher Drilling	Previously used by cabinet makers and florists.	
2450 Pulgas	R.E. Borrmann's Steel Co.	Operates as a steel distributor.On file for an underground gas tank with leak of 0.14 gl/hr in piping.Dispenser pump labelled "kerosene" onsite.	
2470 Pulgas	Yellow Cab	Operating in the area since the 1950s. Appear to perform own maintenance.	
	Hunter Container Corp.	Present since 1963.	
	Bains Moving & Storage	Operating in area since 1972.	
2480 Pulgas	Spiral Paper Tubes	Previously used for cabinet making.	
2483 Pulgas	Peck & Hiller	Operates as a construction contractor yard.Hazardous waste generator with an underground diesel tank.	
2491 Pulgas	No information available.	Previously used by paint contractors.	
2493 Pulgas	Physical Electronics Lab	Current occupant present since 1959. Also used for medical research.	
2495 Pulgas	No information available.	Historically used for salvage operation.	
2519 Pulgas	Sat Iwasaki Nursery	Nursery since 1954.Underground diesel tank removed without sampling. Two tanks present with leaks up to 0.4 gl/hr.	
2520 Pulgas	John Nuckton, Inc.	Currently wholesale florists. Flower growers in the 1970s.	
2524 Pulgas	EPA Sanitary District	Commercial bldg.	

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Address	Establishment	Comments	
	Turner Associates/instrument manufacturing	Laboratory instrument manufacturer since 1963.	
2528 Pulgas	Stanford minerals research	Alloy manufacturing company in the 1960s.	
2528A Pulgas	Mastern Corp.	Perform ore testing and mercury reclaiming since 1963.	
2535 Pulgas	Touchatt Trucking	Hazardous waste generator. Known waste oil and fuel contaminated soil. Above and underground tanks present. Operated as a nursery for 20 years.	
2536 Pulgas	Anderson Sheet Metal	Hazardous waste generator with air emissions permit.	
2538 Pulgas	No information available.	Historically used by a painting co., a florist, and as a warehouse.	
2565 Pulgas	Stonehurst Floral Products	No information available.	
1003 Weeks	Robert Allen	Previously used by a tool manufacturer and a drug manufacturer.	
1045 Weeks	 Alluvial Soil Lab HEW Drilling 	No information available. Hazardous waste generator with 2 underground tanks.	
	Garcia Well & Pump	Hazardous waste generator with 2 underground tanks.	
1054 Weeks	Nakai Nursery	Historically used as a nursery.	
1103 Weeks	Gene Lopez	Ranching since the 1940s. Underground gas storage tank onsite.	
1151 Weeks 1175 Weeks	No information available. Call-Mac	Historically used as a nursery. Drum storage since the 1950s. Known arsenic and tetraethylene tetramine soil contamination.	
75 Demeter	J's Product Painting	Hazardous waste generator of very small amount of paint sludge.	
	Flexco Metal Products	Main facility at 220 Demeter.	
141 Demeter	Sunrise Towing/Body Shop	No information available.	
160 Demeter	Peninsula Charter Lines	Hazardous waste generator. Known soil contamination removed with 2 underground tanks. Two underground tanks still onsite.	
175 Demeter	No information available.	Historically used for metal working.	
177 Demeter	No information available.	Historically used for metal working.	
195 Demeter	No information available.	Historically used for metal working.	
215 Demeter	No information available.	Historically used for metal working.	

EAST PALO ALTO SITE SUMMARY

Address	Establishment	Comments
218 Demeter	WTC Transmissions	Severe surface soil staining continuing beyond property boundaries.
219 Demeter	Eurodesign, Ltd.	No information available.
220 Demeter	Heckman Metals	Lead batteries noted stored in yard.
	Flexco Metal Products	Self-certified to generate no hazardous wastes.
225 Demeter	RPM Steel	Underground gas tank removed without soil samples collected.
255 Demeter	Baron Welding & Iron Work	No information available.
	J&J Fabricating	No information available.
	Clarke's Machines	No information available.
325 Demeter	Brown Wood Products	Underground gas tank removed.Collected samples found to contain less than 100 ppm gas. Previously plastics manufacturing
345 Demeter	No information available.	Previously a towing company was located here.
350 Demeter	Demeter Warehouse	An above ground and underground fuel storage tank.
	Willard Products Bay Boat	Stores dry chemicals
351 Demeter end of Demeter	Arrow McBride Metal Stamp Howard J. White Corp./	Hazardous waste generator. See Demeter Warehouse at 350 Demeter Street.
49 Tara	No information available.	Historic site of auto wreckers.
51 Tara	No information available.	Historic site of auto wreckers.
101 Tara	Pick & Save Auto Wrecking	No information available.
145 Tara	No information available.	Historic site of auto wreckers.
150 Tara	Rogge's Excavating	Previously used as a storage yard and for auto repair.
154 Tara	J. Galvan Auto Body	No information available.
160 Tara	No information available.	Historic site of auto wreckers.
206 Tara	No information available.	Historic site of auto wreckers.
264 Tara	No information available.	Historic site of auto wreckers.

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Appendix F Air Quality Methodology

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AIR QUALITY METHODOLOGY AND ASSUMPTIONS

A. CALINE-4 MODELING

The CALINE-4 model is a fourth-generation line source air quality model that is based on the Gaussian diffusion equation and employs a mixing zone concept to characterize pollutant dispersion over the roadway (1). Given source strength, meteorology, site geometry and site characteristics, the model predicts pollutant concentrations for receptors located within 150 meters of the roadway. The CALINE-4 model allows roadways to be broken into multiple links that can vary in traffic volume, emission rates, height, width, etc.. The intersection mode of the model was employed, which distributes emissions along each leg of the intersection for free-flow traffic, idling traffic and accelerating and decelerating traffic. The intersection model extended 500 meters in all directions. Receptors (locations where the model calculates concentrations) were located at distance of 10 meters from the roadway edge for all four corners of the intersection.

The worst case mode of the CALINE-4 model was employed. In this mode the wind direction is varied to determine which wind direction results in the highest concentration for each receptor. Emission factors were derived from the California Air Resources Board EMFAC-7PC computer model. Adjustments were made for vehicle mix and hot start/cold start/ hot stabilized percentages appropriate to each roadway. Temperature was assumed to be 40 degrees F.

The computation of carbon monoxide levels assumed the following worst-case meteorological conditions:

Windspeed: 1 mps Stability: G Category Mixing Height: 1000 meters Surface Roughness: 100 cm Standard Deviation of Wind Direction: 20 degrees

The CALINE-4 model calculates the local contribution of nearby roads to the total concentration. The other contribution is the background level attributed to more distant traffic. The assumed background levels of 6.9 PPM in 1990, 6.6 PPM in 1995 and 6.4 PPM in 2000 were taken from published sources. (2) To generate estimates of 8-hour concentrations from the 1-hour CALINE results a persistence factor was employed. The persistence factor of 0.53 was based upon the highest observed ratio of annual maximum 8-hour and 1-hour concentrations measured at the Redwood City monitoring site during the period 1986 through 1988.

B. URBEMIS-2 MODEL

Estimates of regional emissions generated by project traffic were made using a program called URBEMIS-2. URBEMIS-2 is a program that estimates the emissions that would result from various land use development projects. Land use project can include residential uses such as single-family dwelling units, apartments

and condominiums, and nonresidential uses such as shopping centers, office buildings, and industrial parks. URBEMIS-2 contains default values for much of the information needed to calculate emissions. However, project-specific, user-supplied information can also be used when it is available.

The following is a description of the parameters that were used in the regional air quality analysis of the proposed project:

-Ambient Temperature: 60 degrees F.

-Trip Lengths:	Home-Other	5.3 miles
	Home-Work	9.6 miles
	Home-Shop	3.7 miles
	Non-Home Based	Work 8.6 miles
	Non-Home Based	Non-Work 5.6 miles

-Year of Analysis: 1995

-Average Speed: 35 miles per hour for all trip types.

The URBEMIS-2 model does not calculate emissions of PM-10. A separate calculation of PM-10 emissions was made based on the Vehicle Miles Travelled associated with the proposed project. An emissions factor of 1.54 grams per mile was assumed. This emission rate was based upon emission rates for different types of roadways published by the U. S. Environmental Protection Agency. (3) In calculating the PM-10 emission factor it was assumed that 5% of the project VMT would occur on both local and collector streets, 20% would occur on major streets and highways, and the remaining 70% would occur on freeways and expressways.

References

(1) California Department of Transportation, <u>CALINE-4-A Dispersion Model for</u> <u>Predicting Air Pollutant Concentrations near Roadways</u>, Report No. FHWA/CA/TL-84/15, 1984.

(2) Bay Area Air Quality Management District, <u>Air Quality and Urban</u> <u>Development</u>, November, 1985.

(3) U. S. Environmental Protection Agency, <u>Compilation of Air Pollutant</u> <u>Emissions Factors, Volume 1: Stationary Point and Area Sources</u>, AP-42, Fourth Editions, September 1985. References Appendix G Fundamental Concepts of Environmental Noise

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APPENDIX A

FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL NOISE

This section provides background information to aid in understanding the technical aspects of this report.

Three dimensions of environmental noise are important in determining subjective response. These are:

- a) The intensity or level of the sound;
- b) The frequency spectrum of the sound;

c) The time-varying character of the sound.

Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB), with 0 dB corresponding roughly to the threshold of hearing.

The "frequency" of a sound refers to the number of complete pressure fluctuations per second in the sound. The unit of measurement is the cycle per second (cps) or hertz (Hz). Most of the sounds which we hear in the environment do not consist of a single frequency, but of a broad band of frequencies, differing in level. The name of the frequency and level content of a sound is its sound spectrum. A sound spectrum for engineering purposes is typically described in terms of octave bands which separate the audible frequency range (for human beings, from about 20 to 20,000 Hz) into ten segments.

Many rating methods have been devised to permit comparisons of sounds having quite different spectra. Surprisingly, the simplest method correlates with human response practically as well as the more complex methods. This method consists of evaluating all of the frequencies of a sound in accordance with a weighting that progressively de-emphasizes the importance of frequency components below 1000 Hz and above 5000 Hz. This frequency weighting reflects the fact that human hearing is less sensitive at low frequencies and at extreme high frequencies relative to the mid-range.

The weighting system described above is called "A"-weighting, and the level so measured is called the "A-weighted sound level" or "A-weighted noise level." The unit of A-weighted sound level is sometimes abbreviated "dBA." In practice, the sound level is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting characteristic. All U.S. and international standard sound level meters include such a filter. Typical sound levels found in the environment and in industry are shown in Figure A-1.

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Although a single sound level value may adequately describe environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise is a conglomeration of distant noise sources which results in a relatively steady background noise having no identifiable source. These distant sources may include traffic, wind in trees, industrial activities, etc. and are relatively constant from moment to moment. As natural forces change or as human activity follows its daily cycle, the sound level may vary slowly from hour to hour. Superimposed on this slowly varying background is a succession of identifiable noisy events of brief duration. These may include nearby activities such as single vehicle passbys, aircraft flyovers, etc. which cause the environmental noise level to vary from instant to instant.

To describe the time-varying character of environmental noise, statistical noise descriptors were developed. $"L_{10}"$ is the A-weighted sound level equaled or exceeded during 10 percent of a stated time period. The L_{10} is considered a good measure of the maximum sound levels caused by discrete noise events. $"L_{50}"$ is the A-weighted sound level that is equaled or exceeded 50 percent of a stated time period; it represents the median sound level. The " L_{90} " is the A-weighted sound level equaled or exceeded during 90 percent of a stated time period and is used to describe the background noise.

As it is often cumbersome to quantify the noise environment with a set of statistical descriptors, a single number called the average sound level or " L_{eq} " is now widely used. The term " L_{eq} " originated from the concept of a so-called equivalent sound level which contains the same acoustical energy as a varying sound level during the same time period. In simple but accurate technical language, the L_{eq} is the average A-weighted sound level in a stated time period. The L_{eq} is particularly useful in describing the subjective change in an environment where the source of noise remains the same but there is change in the level of activity. Widening roads and/or increasing traffic are examples of this kind of situation.

In determining the daily measure of environmental noise, it is important to account for the different response of people to daytime and nighttime noise. During the nighttime, exterior background noise levels are generally lower than in the daytime; however, most household noise also decreases at night, thus exterior noise intrusions again become noticeable. Further, most people trying to sleep at night are more sensitive to noise.

To account for human sensitivity to nighttime noise levels, a special descriptor was developed. The descriptor is called the CNEL (Community Noise Equivalent Level) which represents the 24-hour average sound level with a penalty for noise occurring at night. The CNEL computation divides the 24-hour day into three periods: daytime (7:00 am to 7:00 pm); evening (7:00 pm to 10:00 pm); and nighttime (10:00 pm to 7:00 am). The evening sound levels are assigned a 5 dB penalty and the nighttime sound levels are assigned a 10 dB penalty prior to averaging with daytime hourly sound levels.

For highway noise environments, the average noise level during the peak hour traffic volume is approximately equal to the CNEL.

The effects of noise on people can be listed in three general categories:

- a) Subjective effects of annoyance, nuisance, dissatisfaction;
- b) Interference with activities such as speech, sleep, and learning;
- c) Physiological effects such as startle, hearing loss.

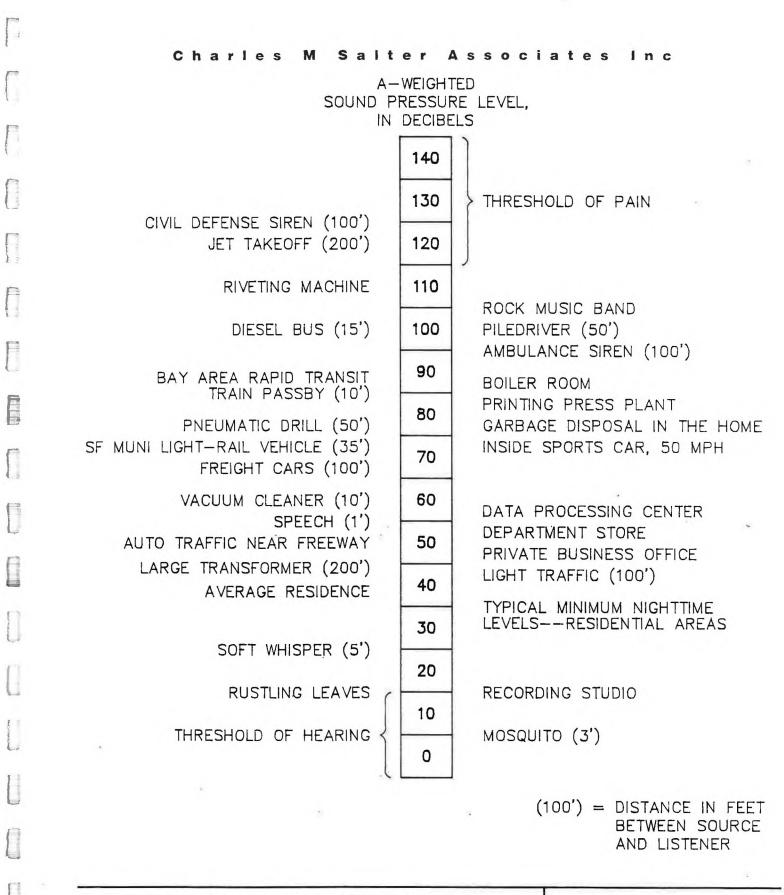
The sound levels associated with environmental noise usually produce effects only in the first two categories. Unfortunately, there has never been a completely predictable measure for the subjective effects of noise nor of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over time.

Thus, an important factor in assessing a person's subjective reaction is to compare the new noise environment to the existing noise environment. In general, the more a new noise exceeds the existing, the less acceptable the new noise will be judged.

With regard to increases in noise level, knowledge of the following relationships will be helpful in understanding the quantitative sections of this report:

- a) Except in carefully controlled laboratory experiments, a change of only 1 dB in sound level cannot be perceived.
- b) Outside of the laboratory, a 3 dB change is considered a just-noticeable difference.
- c) A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- d) A 10 dB change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse community response.

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TYPICAL SOUND LEVELS FIGURE A1 MEASURED IN THE ENVIRONMENT 224 AND INDUSTRY

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Appendix H CEQA Appendix K: Archaeological Impacts

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APPENDIX K

ARCHAEOLOGICAL IMPACTS

- I. CEQA applies to effects on historic and prehistoric archaeological resources.
- II. Public agencies should seek to avoid damaging effects on an archaeological resource whenever feasible. If avoidance is not feasible, the importance of the site shall be evaluated using the criteria outlined in Section III.
 - A. In-situ preservation of a site is the preferred manner of avoiding damage to archaeological resources. Preserving the site is more important than preserving the artifacts alone because the relationship of the artifacts to each other in the site provides valuable information than can be lost when the artifacts are removed. Further, preserving the site keeps it available for more sophisticated future research methods. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.
 - B. Avoiding damage may be accomplished by many approaches, including:
 - 1. Planning construction to miss archaeological sites;
 - 2. Planning parks, greenspace, or other open space to incorporate archaeological sites;
 - 3. "Capping" or covering archaeological sites with a layer of soil before building tennis courts, parking lots, or similar facilities. Capping may be used where:
 - a. The soils to be covered will not suffer serious compaction;
 - b. The covering materials are not chemically active;
 - c. The site is one in which the natural processes of deterioration have been effectively arrested; and
 - d. The site has been recorded.
 - 4. Deeding archaeological sites into permanent conservation easements.
- III. If the Lead Agency determines that a project may affect an archaeological resource, the agency shall determine whether the effect may be a significant effect on the environment. If the project may cause damage to an important archaeological resource, the project may have a significant effect on the environment. For the purposes of CEQA, and "important archaeological resource" is one which:

A. Is associated with an event or person of:

1. Recognized significance in California or American history, or

- 2. Recognized scientific importance in prehistory.
- B. Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions;
- C. Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
- D. Is at least 100 years old and possesses substantial stratigraphic integrity; or
- E. Involves important research questions that historical research has shown can be answered only with archaeological methods.
- IV. If an archaeological resource is not an important archaeological resource, both the resource and the effect on it shall be noted in the Initial Study or EIR but need not be considered further in the CEQA process.
- V. If avoidance of the important archaeological resource is not feasible, the Lead Agency should include an excavation plan for mitigating the effect of the project on the qualities which make the resource important under Section III.
 - A. If an excavation plan is prepared, it shall:
 - 1. Be a brief summary of the excavation proposed as part of a mitigation plan;
 - 2. Be available for review only a need-to-know basis;
 - 3. Not include the specific location of any archaeological resources if the plan will be made known to the general public.
 - B. An excavation plan may:
 - 1. List and briefly discuss the important information the archaeological resources contain or are likely to contain;
 - 2. Explain how the information should be recovered to be useful in addressing scientifically valid research questions and other concerns identified in subdivision (a);
 - 3. Explain the methods of analysis and, if feasible, display of excavated materials;
 - 4. Provide for final report preparation and distribution; and
 - 5. Explain the estimated cost of and time required to complete all activities undertaken under the plan.
 - C. The Lead Agency may require a mitigation plan to be carried out as a condition of approval of the project.

VI. A public agency following the federal clearance process under the National Historic Preservation Act or the National Environmental Policy Act may use the documentation prepared under the federal guidelines in the place of documentation called for in this appendix.

VII. Limitations on Mitigation

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Special rules apply to mitigating significant effects on important archaeological resources.

- A. If it is not feasible to revise the project to avoid an important archaeological resource, the Lead Agency shall require the project applicant to guarantee to pay one half of the cost of mitigating the significant effect of the project on important archaeological resources.
 - 1. In determining the payment to be required from the applicant, the Lead Agency shall consider the in-kind value of project design or expenditures intended to permit any or all important archaeological resources or California Native American culturally significant sites to be undisturbed or preserved in place.
 - a. Consideration of in-kind values does not require a dollar for dollar set-off against the payment by the project applicant.
 - b. In deciding on an appropriate set-off, the Lead Agency shall consider such factors as whether the project design or expenditures would provide other benefits to the applicant and whether the design or expenditures required special changes in the project plans.
 - 2. When it decides to carry out or approve the project, the Lead Agency shall, if necessary, reduce the mitigation measures specified in the EIR to those which can be funded with:
 - a. The money guaranteed by the project applicant, and
 - b. Money voluntarily guaranteed by any other person or persons for the mitigation.
 - 3. In order to allow time for interested persons to provide a voluntary funding guarantee, the Lead Agency shall not decide to carry out or approve a project having a significant effect on important archaeological resources until 60 days after completing the final EIR on the project.
 - 4. In no event shall the Lead Agency require the applicant to pay more for mitigation within the site of the project than the following amounts:
 - a. One half of one percent of the projected cost of the project, if the project is a commercial or industrial project.
 - b. Three fourths of one percent of the projected cost of the project for a housing project consisting of one unit.

- c. If a housing project consists of more than one unit, three fourths of one percent of the projected cost of the first unit plus the sum of the following:
 - (i) \$200 per unit for any of the next 99 units,
 - (ii) \$150 per unit for any of the next 400 units,
 - (iii) \$100 per unit for units in excess of 500.
- B. Unless special or unusual circumstances warrant an exception, the field excavation phase of an approved mitigation plan shall be completed within 90 days after the applicant receives the final approval necessary to begin physical development of the project.
 - 1. With a phased project, the mitigation measures shall be completed within 90 days after approval is granted for the phased portion to which the specific mitigation measures apply.
 - 2. The project applicant can elect to extend the time limits for completing the field excavation phase of the approved mitigation plan.
 - 3. A mitigation plan shall not authorize violation of any law protecting American Indian cemeteries.
- C. Excavation as part of a mitigation plan shall be restricted to those parts of an important archaeological resource that would be damaged or destroyed by the project unless special circumstances require limited excavation of an immediately adjacent area in order to develop important information about the part of the resource that would be destroyed.
- D. Excavation as mitigation shall not be required for an important archaeological resource if the Lead Agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource, provided that the determination is documented in the EIR.
- E. The limitations on mitigation shall not apply to:
 - 1. A public project if the Lead Agency decides to comply with other provisions of CEQA that apply to mitigation of significant effects, and
 - 2. A private project if the applicant and the Lead Agency jointly elect to comply with other provisions of CEQA that apply to mitigation of significant effects.
- F. The time and cost limitations described in this section do not apply to surveys and site evaluation activities intended to determine whether the project location contains archaeological resources, and if so, whether the archaeological resources are important as defined in this appendix.

VIII. Discovery of Human Remains

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- A. In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
 - 1. The coroner of the county in which the remains are discovered has been informed and has determined that no investigation of the cause of death is required, and
 - 2. If remains are of Native American origin,
 - a. The descendants from the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
 - b. The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.
- B. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - 1. The Native American Heritage Commission is unable to identify a descendant;
 - 2. The descendant identified fails to make a recommendation; or
 - 3. The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.
- C. If the human remains are discovered before the Lead Agency has finished the CEQA process, the Lead Agency shall work with the Native American Heritage Commission and the applicant to develop an agreement for treating or disposing, with appropriate dignity, of the human remains and any associated grave goods. Action implementing such an agreement is exempt from:
 - 1. The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
 - 2. The requirements of CEQA and the Coastal Act.
- IX. As part of the objectives, criteria, and procedures required by Section 21082 or as part of conditions imposed for mitigation, a Lead Agency should make provisions for archaeological sites accidentally discovered

during construction. These provisions should include an immediate evaluation of the find. If the find is determined to be an important archaeological resource, contingency funding and a time allotment sufficient to allow recovering an archaeological sample or to employ one of the avoidance measures should be available. Construction work could continue on other parts of the building site while archaeological mitigation takes place.

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Note:

Authority cited: Sections 21083 and 21087, Public Resources Code; Reference: Section 7050.5, Health and Safety Code; Sections 5097.98, 21001(b) and (c), and 21083.2, Public Resources Code; Society for California Archaeology v. County of Butte, (1977) 65 Cal. App. 3d 832.

Discussion:

This appendix responds to problems that have arisen in applying CEQA to archaeological resources. In some areas of the state, full excavations of archaeological sites have been required for nearly every site discovered within the tract where a project would be located regardless of the importance of the sites. As a result, federal officials have noted that in CEQA documents they have found descriptions of archaeological excavations of sites that would not be regarded as important enough to call for excavation under federal law. This experience has shown a need for establishing standards to guide agencies in deciding whether a site would be important enough to call for analysis under CEQA.

While there have been problems in some parts of the state, archaeological impacts have been handled well in other areas. Mendocino County and Santa Barbara County especially have been noted for the excellence of their methods for dealing with archaeological resources. This appendix does not mandate a uniform system statewide so that successful local programs can continue.

The unnecessarily large number of excavations has also involved an unnecessary conflict with Native American values. Native Americans have been upset by people digging up the remains of their ancestors. While archaeology can be carried out in conjunction with Native Americans, and has been done successfully to help Native Americans learn about their ancestors, too often excavations have been carried out without concern for the sensitivities of Native Americans. The approaches described in this appendix should reduce the conflict with Native American values concerning protection of burial sites.

An important principle in this appendix is the emphasis on avoidance of archaeological sites. Avoidance is discussed as a way of avoiding a significant impact in the first place, thereby enabling a project to qualify for a Negative Declaration. Where the proposed project includes a potential impact on a site, avoidance is suggested as a preferred mitigation measure where all other factors are equal. If a project can be altered to avoid a site, the costs and delays involved in an archaeological excavation may also be avoided, and there would be no interference with Native American sensitivities. Possible methods of avoidance are listed in order to give people ideas of how to proceed. These methods are not exclusive and could be supplemented by other methods at the option of the Lead Agency. The appendix also identifies standards for determining the importance of the archaeological site and provides that a project would have a significant effect on the environment if it would cause damage to an important archaeological site. These standards are in keeping with the efforts in CEQA to focus on significant effects rather than on all effects. The standards are an effort to focus on archaeological resources that people would generally agree are important rather than requiring protection of all archaeological resources. The standards are consistent with the standards included in AB 952 (Deddeh), Chapter 1623 of the Statutes of 1982. The appendix uses the term "important" archaeological resources rather than "unique" archaeological resources in order to use terminology more closely related to accepted scientific usage. The substance of the standards remains consistent with the bill despite the change in label.

The appendix encourages the preparation of an excavation plan in an EIR as one of several possible mitigation measures for destruction or damage to an archaeological site. The excavation plan is an effort to achieve greater precision in the ways in which any necessary excavation would be carried out. The excavation plan would put a burden on the archaeologist to explain the importance of the site and to demonstrate how the proposed excavation would serve some public interest. The elements listed for an excavation plan are suggested but not required. This approach allows Lead Agencies to take various approaches in excavation plans. The plans are intended to shift the burden to the archaeologist to demonstrate the necessity for an excavation rather than requiring a staff worker in the Lead Agency to deal with unfocused claims of the importance of the site. The Resources Agency has received information suggesting that planners working for Lead Agencies have had difficulty in evaluating claims from expert archaeologists demanding that excavation be allowed. The excavation plan requirement is designed to alleviate that problem.

To conform to the recently enacted Assembly Bill 952, Chapter 1623 of the Statutes of 1982, the appendix identifies various restrictions on archaeological mitigation and cost limitations on archaeological mitigation. These restrictions apply to the CEQA process, and people implementing the Act need to be made aware of them. The appendix reorganizes and clarifies the limitations and adds interpretations with a few subjects from the bill such as offsets and the 60-day delay in approval after completing the EIR.

The appendix also suggests ways for Lead Agencies to standardize their methods of dealing with archaeological resources. The methods could be included within mitigation measures in EIRs or included in the CEQA procedures which an agency is required to adopt by Section 21082 of the Public Resources Code. The appendix also encourages Lead Agencies to deal with the problem of unexpected sites which may be discovered during construction. The appendix does not mandate any particular way to deal with this situation.

The appendix also reflects the protections recently enacted in Senate Bill 297 (Garamendi), Chapter 1492 of the Statutes of 1982, for human remains discovered during excavation. If the human remains are of Native American origin, special rules and procedures apply. The rules and procedures are included here because they are so closely related to the archaeological activities discussed in this appendix.