3.3.7 - Hydrology and Water Quality

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3.3.7 - Hydrology and Water Quality

ENVIRONMENTAL SETTING

Regional Setting

The Romic facility is located in the City of East Palo Alto, which is bounded on the east by San Francisco Bay and on the south by San Francisquito Creek. Saltwater marshes and wetlands lie directly east and north of the facility. A 130-acre former saltwater evaporation pond is present within the marshes and wetlands east of the facility, and is separated from the facility by a tidal slough (the "east unnamed slough") and a levee. Immediately north of the facility, another channel (the "north unnamed slough") drains into the eastern tidal slough (Conor Pacific/EFW, 1999b).

- **Regional Surface Water**

Surface drainage in East Palo Alto gently slopes northward and eastward toward the San Francisco Bay. Engineered tidal sloughs that drain into the bay are situated to the east and north of the Romic facility. Surface runoff west of Pulgas Avenue from Runnymede Street to Bay Road is routed toward a slough that empties into the bay, where it is discharged (CBA, 1999).

The San Francisco Bay and Delta comprise the West Coast's largest estuary, encompassing approximately 1600 square miles of waterways and draining over 40 percent of the fresh water in California. In the estuary, the Sacramento and San Joaquin Rivers flow from Northern California's inland valleys into the delta before emptying into San Francisco Bay and the Pacific Ocean.

Across from the unnamed eastern slough and north of Cooley Landing is a 130-acre former saltwater evaporation pond (see Figure 2-1 in Chapter 2.0). The pond is surrounded by levees and managed by the Midpeninsula Regional Open Space District as part of the Ravenswood Open Space Preserve. The levee includes a bicycle and pedestrian trail.

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San Francisquito Creek is the nearest natural drainage feature and is located approximately one mile south of the Romic facility. San Francisquito Creek is bounded by levees east of Highway 101 through Palo Alto Baylands Nature Preserve and drains into the bay (CBA, 1999). Major stream channels are not located at or in the vicinity of the Romic facility.

- **Regional Groundwater**

The City of East Palo Alto is located in the San Mateo County Groundwater Basin, which is part of the Santa Clara Valley Basin that encompasses 580 square miles and is drained by Redwood and San Francisquito Creeks. The mineral, chemical and physical constituents found in the basin's groundwater generally fall below the California Domestic Water Quality Maximum Contaminant Levels. In some cases, the quality of local groundwater is considered to be poor because of contaminants from local industries. Declining groundwater levels have been noted for aquifers within the City due to factors such as streambed pollution and channelization, increased water use and low rainfall levels (CBA, 1999).

The sediments of the Santa Clara Valley Basin consist of alluvial fan deposits, which are part of the Niles Cone and interfinger with fine-grained estuarine deposits of the San Francisco Bay (see Figure 3.3.7-1). These estuarine deposits thicken toward the center of the bay. Thus, the thickness of the aquifers decreases westward toward the Romic facility, while the thickness of the aquitards increases (Conor Pacific/EFW, 1999b).

The uppermost 320 feet of alluvium is divided vertically into an upper and lower aquifer by a regionally extensive clay aquitard that is approximately 80 to 140 feet thick. The upper (shallow) aquifer correlates to the Newark aquifer of the Niles Cone, which is approximately 20 feet thick and occurs between depths of approximately 45 and 90 feet below ground surface (bgs). The shallow aquifer contains a high concentration of total dissolved solids (TDS) due to saltwater intrusion from the bay. Consequently, there are

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no operating wells in this aquifer, and the poor quality of the groundwater precludes its beneficial use as municipal, agricultural or domestic water (SF Bay Basin WQCP, 1995).

The regional aquitard extends across the basin, thinning toward the mountain ranges on each side. Site studies indicate that this unit provides a relatively impermeable barrier between the shallow aquifer and the underlying lower (deeper) aquifer. The deeper aquifer below this extensive aquitard correlates to the Centerville aquifer, which occurs at depths of 140 to 320 feet bgs. Unlike the shallow aquifer, the western Centerville or deeper aquifer is not impacted by saline water, even though it has been used as a major source of domestic, irrigation and industrial water in this area for some time. A schematic of the regional hydrogeology is shown in Figure 3.3.7-1. The nearest well to the Romic facility that is installed in the deeper aquifer is the "Schoof" well at Cooley Landing, approximately 0.4 mile east of Romic (Conor Paficif/EFW, 1999b).

Project Site

- **Site Surface Water**

Natural lakes or other bodies of water do not occur at the Romic facility. The nearest surface water bodies are San Francisco Bay, an engineered unnamed tidal slough that borders the eastern side of the facility, and a flood control pond along the north property line. Two waste containment ponds were formerly located on the northern portion of the site, but were filled in and capped with concrete (Harza, 1989). The former pond area is the current location of the northern drum storage warehouses (see Figure 2-3 in Chapter 2.0).

The site has been graded for surface water drainage control and is surfaced with concrete or asphalt, except for the equipment storage yard and southern parking lot, which are surfaced with compacted gravel. The surface grading causes surface runoff from the southern and eastern portions of the site to flow northwest (see Figure 3.3.7-2). Surface water flow on the site would be affected by the construction of additional areas of secondary containment for truck parking/staging; however, as no surface water is

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discharged from the site during normal conditions, these changes will not have any effect on surface water flow in the immediate area. Romic has filed a Notice of Intent (NOI) to comply with the California General Industrial Stormwater Permit, in order to allow for discharge of general plant stormwater to the slough in case of excessive precipitation.

Storm water can be discharged from several points at the facility. Rainwater collected from the roofs of the North Drum Storage Building is discharged directly to the unnamed slough east of the facility and does not enter the ground at the site. Rainwater from the front entrance drive and the administrative building roof is discharged to Bay Road. This water does not come into contact with industrial activity at the site. Storm water runoff from the rest of the facility flows to a sump located in the east-central portion of the facility where it is pumped to tanks for treatment or discharge.

The first 20,000 gallons from each distinct storm event is collected and routed to the facility's wastewater treatment system for processing. Runoff from subsequent storms is accumulated onsite in batch discharge tanks and analyzed as necessary. Based on results of the analysis, the water is: (1) discharged to the sanitary sewer or the unnamed east slough, (2) routed through the facility wastewater processing system and recycled back into the Romic processing stream, or (3) comingled with industrial wastewater and discharged to the local sewer (EPASD, 1996 and Romic SWPPP). The facility has been issued two permits to discharge storm water, plus treated groundwater, process water and sanitary wastewater. The first permit (Industrial Waste Discharge permit #01107) is for discharge into the East Palo Alto Sanitary District sewer system, and the second permit (NPDES Permit CA0029955) was issued by the RWQCB for the discharge of treated groundwater into the eastern slough. The facility filed a notice of intent to comply with the California General Stormwater Permit in 2003. Under this permit, the facility will be able to discharge excess stormwater from general areas of the plant to surface waters in case of excessive precipitation. The facility filed a notice of termination in 2004 for a slough discharge permit.

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Periodic surface water sampling of the eastern slough has been conducted as part of site remediation feasibility investigations (RFIs) since 1990, and additional surface water samples were collected as part of an ecological assessment of the slough conducted in 1993 (JSA, 1993). In 1994, low-level volatile organic compounds (VOCs) were reportedly detected in surface water samples collected from the eastern slough (Investigation Phase III Report, Jan 1995). Currently, surface water samples are analyzed quarterly for VOCs (Conor Pacific/EFW, 1999b).

According to the Federal Emergency Management Agency (FEMA), Romic is located in a 100-year floodplain, but is protected by an engineered levee on the east. The levee around the facility is reportedly two feet above the flood level for a 100-year storm. However, some portions of the facility would be inundated from a 100-year flood including the front driveway entrance to the facility. Waste management areas that would be impacted include some tank farms and the West Storage Building # 1. Damage to these areas is not anticipated, as the flooding waters would move at a low velocity. Containerized hazardous waste located in the West Storage Building #1 would be moved in the event of a flood, and provisions for moving these containers are included in the Part B Application. Waste in tanks in the flooded tank farms would not be affected by the floodwaters.

- **Site Groundwater**

At the site, a miscellaneous mixture of fill material overlies the discontinuous alluvial and estuarine sediments, which are primarily made up of silt and clay. These layers of silt and clay have low permeability, and water does not readily pass through them. Passing through the layers of silt and clay are deposits from river and stream channels composed of gravel, rock and sand. These channels have higher permeability, allowing easier passage of water. At the site, these deposits can be categorized into three discontinuous, water-bearing zones, called the A-, B- and C-zones. The zones are vertically separated by aquitards, or silt and clay layers, which are generally continuous in a horizontal plane and prevent water from passing from one zone to another. The three water-bearing zones are located from the surface to a depth of approximately 80

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feet. At a depth of approximately 80 feet, a thick clay layer underlies the bottom, or C-zone. Below the thick clay layer is a fourth water-bearing zone, called the D-zone (Conor Pacific/EFW, 1999b).

A description of the fill and water-bearing zones at the facility is as follows, beginning with the ground surface to the deepest depth explored (Conor Pacific/EFW, 1999b):

- Fill beneath the pavement is 1 to 14 feet thick and at its deepest point is approximately 2 feet below mean sea level (msl). This deepest point is located in the former pond area between retraction well 12 (RW-12) on the west part of the site and RW-6 on the east part of the site (see Figure 3.3.7-3).
- Groundwater is typically encountered within the fill, about 2 to 10 feet below ground surface (bgs) at elevations of 2 to 4 feet above msl.
- Contact between the fill material and the upper portion of the A-zone is often indistinguishable or gradational; thus, the lower saturated portion of the fill material is typically considered part of the A-zone.
- Water-bearing A-zone is 7 to 24 feet thick and extends to approximately 13 feet below msl.
- The aquitard underlying the A-zone and on top of the B-zone is 8 to 25 feet thick.
- The water-bearing B-zone is 3 to 24 feet thick and extends to a maximum depth of 25 feet below msl.
- The aquitard underlying the B-zone and on top of the C-zone is 9 to 24 feet thick.
- The water-bearing C-zone is 11 to 25 feet thick and extends to a maximum depth of 54 feet below msl.

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- Underlying the C-zone is a thick clay layer that separates the C-zone from the fourth water-bearing D-zone. The clay layer is part of the thick, regionally continuous aquitard separating the shallow aquifer from the deep regional aquifer.

Groundwater is generally confined in the A through D zones, although the uppermost or A-zone appears unconfined in some areas. Water within these zones flows generally to the east at estimated velocities of 0.12, 0.022 and 0.01 feet per day (ft/day) for the A-, B- and C-zones, respectively (Conor Pacific/EFW, 1999b).

Hydraulic characteristics of the water-bearing zones can be summarized as follows (Conor Pacific/EFW, 1999b):

- The water-bearing A-zone is characterized by moderate transmissivities of approximately 60 to 2,900 gallons per day per foot (gpd/ft). The hydraulic conductivity of A-zone sediments ranges from 5×10^{-4} to 1×10^{-2} centimeters per second (cm/sec) (1 to 29 ft/day). There is generally a downward gradient between the A- and B-zones, ranging from 0.01 to 0.4 foot per foot (ft/ft).
- The water-bearing B-zone is characterized by transmissivities of approximately 45 to 4,880 gpd/ft; the hydraulic conductivity of B-zone sediments ranges from 3×10^{-4} to 4×10^{-3} cm/sec (0.8 to 10 ft/day). There is generally an upward gradient between the B- and C-zones, ranging from 0.4 to over 1 ft/ft, except at well pair RW-7B and RW-7C (see Figure3.3.7-3), where a slight downward gradient of 0.04 has been measured.
- The water-bearing C-zone is characterized by transmissivities of 50 to 350 gpd/ft, and the hydraulic conductivity of C-zone sediments ranges from 2×10^{-4} to 1×10^{-3} cm/sec (0.5 to 3 ft/day). However, limited testing has been conducted. There is typically an upward gradient between the C- and D-zones.

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The D-zone is the deepest water-bearing zone investigated at the site. This zone is confined and is separated from the overlying C-zone by the regional aquitard. This aquitard is approximately 80 feet thick at this point. The horizontal groundwater gradient and flow direction have not been measured in this zone since well RW-16D is the only well installed in this unit (Conor Pacific/EFW, 1999b). During the RFIs, groundwater in the A- and B-zones was found to be impacted with VOCs. Romic implemented interim remedial actions to remove VOCs in the A-zone in May 1993 and in the B-zone in September 1998. Groundwater quality is monitored through a system of groundwater monitoring wells with the well locations shown on Figure 3.3.7-3.

Site Ground Water Remediation Program

Prior to the adoption of federal and state hazardous waste regulations in the 1970s, hazardous wastes generated by operations at the site of the current Romic facility were disposed of in unlined surface impoundments on the property. After the establishment of federal and state regulations pertaining to the treatment, storage and disposal of hazardous wastes in the late 1970s, hazardous wastes at Romic have been stored and treated, on the Romic property with secondary containment systems, and disposed of at approved offsite RCRA disposal facilities, in accordance with the federal Resource Conservation and Recovery Act (RCRA) of 1976, as amended in 1980 and 1984. The surface disposal in unlined surface impoundments contaminated the groundwater beneath the Romic facility. Groundwater remediation is currently ongoing at the facility.

Groundwater is extracted from six wells in the A-zone and one well in the B-zone. Extracted groundwater is treated by steam stripping and adsorption by granular activated carbon and then discharged to the unnamed slough located east of the Romic facility. The treatment of these waters is conducted under the oversight of the EPA, RWQCB and the SWRCB as permitted under NPDES permit CA0029955 and Industrial Wastewater Permit # 01107. The RWQCB adopted Waste Discharge Requirements Order 93-099 for the discharge on August 18, 1993. Romic performs periodic influent,

effluent and receiving water monitoring as set forth in the permit. This process is independent of the proposed project but is included because it occurs at the Romic facility and it will continue under the proposed project. Since the project will not change the quantity or quality of the groundwater discharged, the NPDES permit will not have to be revised.

Under EPA RCRA Consent Order #09880015, more than 3.5 million gallons of groundwater have been extracted and treated since 1993. Additional final remediation of these waters is being evaluated and may involve continued extraction and treatment of groundwater beneath the facility. A pilot study was conducted at the Romic facility to test an enhanced bioremediation technique using both cheese whey and molasses. The results of this study showed the use of this biotreatment is more effective than the current extraction and treatment system being used at Romic. On February 23, 2004, the USEPA allowed shutdown of the extraction and treatment system and expansion of the in-situ biological treatment test system as the sole method of treating groundwater contamination at the facility. Replacement with the in-situ biological treatment system is conditional on monitoring for possible rebound of volatile organic compound concentrations at selected locations through December 2004.

APPLICABLE STANDARDS

The proposed project is subject to federal, state and local statutes and regulations regarding surface water and groundwater resources. Applicable standards include:

- Federal Clean Water Act
- Code of Federal Regulations (CFR) Title 40, Parts 122, 260, 261, 264 (Subpart F, Appendix IX), 265 (Subpart F), 266 and 270
- California Porter-Cologne Water Quality Act
- California Code of Regulations (CCR) Title 22, Section 66260 et seq. and Title 23, Divisions 3 and 4
- California Health and Safety Code, Division 5, Chapter 6

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The Clean Water Act is administered by the EPA, which delegates authority to the State Water Resources Control Board (SWRCB) and, ultimately, the Regional Water Quality Control Board (RWQCB). Discharged surface water is subject to requirements of a National Pollution Discharge Elimination System (NPDES) permit, which is administered by the RWQCB pursuant to CFR Title 40 Part 122 and CCR Title 23. NPDES permits also are required under certain circumstances for the release of stormwater from industrial facilities.

CCR Title 23 implements the California Porter-Cologne Water Quality Act of 1970 and includes, but is not limited to, the state's regulation for the protection of surface water and groundwater. CCR Title 23, Division 3, describes the authority of the SWRCB; Division 4 details the authority of the RWQCB.

The California Health and Safety Code, Division 5, Chapter 6, includes regulations for the discharge of waste (from any producing, manufacturing or processing operation) into waters of the state, and requires compliance with waste discharge requirements or other requirements established by the RWQCB or SWRCB. Waters of the state include surface water and groundwater.

Federal regulations governing standards applicable to facilities that treat, store and/or dispose of hazardous waste (TSD facilities) are provided in RCRA regulations (Title 40 CFR Parts 260, 261, 264, 265, 266 and 270). These federal regulations are enforced by the California Department of Toxic Substances Control (DTSC) in accordance with regulations included in CCR Title 22 (Section 66260 et seq.). The RCRA regulations establish federal and state requirements for the operation of TSD facilities, including groundwater monitoring and potential corrective actions associated with releases from these facilities.

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THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the CEQA Guidelines (as amended July 22, 2003), an impact to water resources (hydrology and water quality) could be considered significant if it would:

- Violate any water quality standards or waste discharge requirements.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or off-site.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or off-site.
- Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map.
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows.

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- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
- Inundation by seiche, tsunami or mudflow.

POTENTIAL ENVIRONMENTAL IMPACTS

- **Violate any water quality standards or waste discharge requirements**

  Romic's recycling activities generate wastewater that is discharged to the East Palo Alto Sanitary District sewer. This water is discharged per a permit (Industrial Waste Discharge permit # 01107) and must meet the water quality standards required in the permit. The quality of water discharged following implementation of the proposed project will still have to meet those same water quality standards. Therefore there will be no impact on water quality with implementation of the proposed project.

  The maximum quantity of water that could be discharged to the sewer following implementation of the proposed project should remain approximately the same as the current maximum. This is because the maximum permitted quantity of liquid waste that can be processed (154,512 gallons/day) will remain the same. Therefore the impact of the proposed project on water quality standards and waste discharge requirements is less than significant.

- **Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g, the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).**

  Previous investigations at the facility identified chemicals of concern (COCs) in the soil and groundwater from three primary source areas: the central processing area, the former pond area beneath the drum storage warehouse, and an off-site area southwest of the facility. Soil and groundwater contamination occurred through past

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releases of solvent waste materials and recycled pure phase product from discontinued historical practices that result in spills, tank and container overfills, flooding events, breaks in transfer pipes, and waste materials leaching through the former wastewater receiving ponds.

Groundwater remediation measures being conducted at the facility involve the onsite treatment of contaminated shallow groundwater. The treatment of this water is conducted under the oversight of the EPA. Remediation methods may include continued extraction and treatment of groundwater from the impacted zones beneath the site or may involve in-situ bioremediation to reduce groundwater contamination. On February 23, 2004, the USEPA allowed shutdown of the extraction and treatment system and expansion of the in-situ biological treatment test system as the sole method of treating groundwater contamination at the facility. Replacement with the in-situ biological treatment system is conditional on monitoring for possible rebound of volatile organic compound concentrations at selected locations through December 2004. The quantity of water extracted and discharged to the bay will not change because of the project. Therefore the supply of groundwater will not be significantly impacted by implementation of the proposed project.

- **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or off-site**

  No grading or substantial removal of soil will occur during construction of the proposed project. Only minor removal of soil and pouring of concrete foundations for tanks and process units will occur during the construction. Therefore, the drainage pattern of the site or area will not be substantially altered and there will be a less than significant impact on erosion, siltation, or flooding, either onsite or offsite.

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- **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or off-site**

  The existing drainage pattern of the site or area will not be altered. The quantity of storm water discharged to the unnamed east slough and to Bay Road will not change with the proposed project, as the buildings and land that collect runoff from rainfall will not change in area, shape or surface characteristics. The average annual quantity of storm water currently discharged to the sanitary sewer is approximately 2.4 million gallons or about 20 percent of Romic's total discharge of 12 million gallons per year. This quantity is not expected to change with implementation of the project, since no major changes will be made to buildings or paved areas.

  The Federal Clean Water Act and the California Porter-Cologne Water Quality Act require that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for industrial facilities that have been issued a stormwater discharge permit. The purpose of the requirement is to prevent a discharge that may be contaminated. Romic has an SWPPP in place for current operations. Because implementation of the proposed project will not increase the facility's storm water runoff area, the quantity and quality of runoff from storms will not change. However, it is expected that Romic will be required to revise the existing SWPPP to reflect the changes in the number of tanks and treatment units at the facility.

- **Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff**

  The quality of storm water discharged from the site also will not change, as Romic must meet the same pretreatment requirements mandated by East Palo Alto Sanitary District (EPASD) that are met under existing operations. Therefore, the

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impact to storm water discharge from implementation of the proposed project will be less than significant.

In the event that there is an extremely strong storm that produces runoff that the Romic facility cannot dispose of though its normal discharge to the EPASD, Romic has obtained authorization to discharge directly to the slough under a State of California General Permit. This permit has been developed by the California State Water Resources Control Board pursuant to the U.S. Clean Water Act, and regulations developed by the U.S. EPA under the Act's NPDES program. To obtain authorization for stormwater discharge under this General Permit, a facility must submit a Notice of Intent (NOI). Authorization under the General Permit requires a facility to eliminate unauthorized non-stormwater discharges, develop and implement a storm water pollution prevention plan (SWPP), and monitor stormwater discharges. Romic plans to discharge stormwater under this permit only if it cannot perform its normal discharge to the EPASD.

- **Otherwise Substantially Degrade Water Quality**

The Federal Clean Water Act and the California Porter-Cologne Water Quality Act require that a Spill Prevention Control and Countermeasures Plan (SPCC) be prepared if oil is stored onsite in certain quantities. The purpose of the requirement is to prevent discharge of oil into navigable waters of the United States or adjoining shorelines. Romic has an SPCC plan in place that provides for current operations. The current SPCC plan lists two aboveground gasoline storage tanks (650 and 500 gallons) and three aboveground diesel storage tanks (8,800, 5,000, and 6,500 gallons) as used for petroleum storage. These tanks are used to store fuel for facility vehicles. The quantity and size of petroleum storage tanks will not change with implementation of the proposed project.

In addition to the tanks, there are several drums each of hydraulic oil, transmission fluid, engine oil, mineral oil and gear lube used to service facility vehicles. The number of these drums will not change with implementation of the proposed project.

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There also is a 200-gallon diesel tank for the emergency generator that will not change with implementation of the project.

The SPCC plan also lists 2531 drums with 139,205 gallons of waste that may contain at least part petroleum products, and 140 tanks with 22,000 gallons that may contain some petroleum products. The number and size of these tanks and drums will change with implementation of the project. As a result, with implementation of the proposed project, the SPCC plan will be revised to accurately reflect onsite petroleum storage and following implementation, the potential for degradation of water quality will be less than significant.

- **Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map**

  Parts of the Romic facility, where the proposed project will be located, were found to be below the 8.0-foot floodplain elevation during a surveyor's study and could be impacted by flood waters. Therefore, the elevation of the eastern portion of the Romic facility, including adjacent land that was purchased in 1983, the driveway area and the neighboring property have been raised approximately two feet above the historical 100-year floodplain level. Housing is not part of the project and none will be placed at the project site.

- **Place within a 100-year flood hazard area structures that would impede or redirect flood flows**

  Portions of the Site previously below the floodplain elevation have been raised so that they are now approximately two feet above the 100-year floodplain level. The structures that are part of the project will therefore not have a significant potential to impede or redirect flood flows.

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- **Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam**

  In the unlikely event that the site was flooded, people at the site would be able to evacuate in time. According to the Seismic Risk Analysis performed for the site, structures would not be significantly degraded even if the site was flooded to a depth of five feet (Plecnik, 2003). There are no dams or levees in the vicinity of the site whose failure would expose people or structures to a significant risk of loss, injury or death. Therefore, the risk or loss, injury, or death to structures or people is less than significant.

- **Inundation by Sieche, Tsunami or Mudflow**

  As the Romic facility is located one-half mile west of San Francisco Bay, there is potential for it to be impacted by a tsunami generated by an earthquake near the facility. However, based on the small size of the tsunami recorded from the 1906 earthquake, the actual local tsunami hazard in the San Francisco Bay region is low because tsunami energy is attenuated during slow propagation through the shallow reaches of the bay (Geology, v27, pgs. 15-18). There are no lakes or reservoirs near the site that could cause a sieche that would inundate the site. Mudflows are not probable given the flat terrain of the area and the extensive paving of the surface at the site and in the vicinity. In summary, the possibility of inundation of the project site by seiches, tsunamis or mudflows is less than significant.

Groundwater Remediation

The existing groundwater remediation program is not part of the proposed project, and there will not be a change to this program related to implementation of the proposed project. Therefore, there will be no impact to the remediation program as a result of the proposed project.

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CLOSURE

The Closure Plan (CP) identifies steps necessary to close the facility at the end of its intended operating life, and applies to the operating units. These steps include decontamination of facility equipment and structures, sampling and analysis, and removal of all hazardous waste residue and contaminated soil. Adherence to the CP requirements in the permit will ensure hydrological and water quality impacts are less than significant.

MITIGATION MEASURES

Potential impacts to surface and groundwater resources from the proposed project will be less than significant. Therefore, mitigation measures are not required.

LEVEL OF SIGNIFICANCE AFTER MIGITATION

Impacts to surface and groundwater resources from the proposed project remain less than significant. Mitigation is not required.

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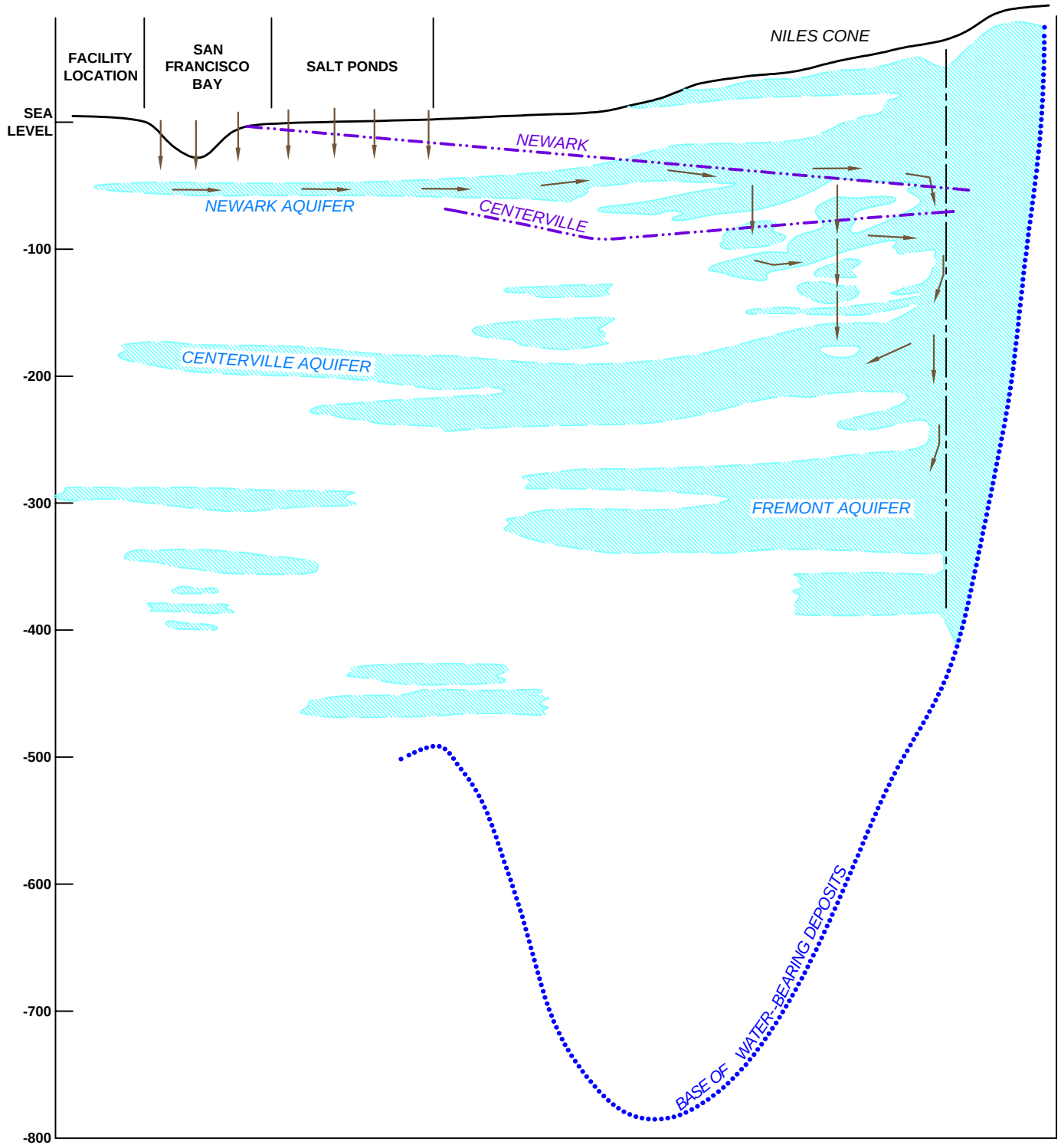


LEGEND

- Piezometric levels
- Aquifers
- Path of salt water intrusion

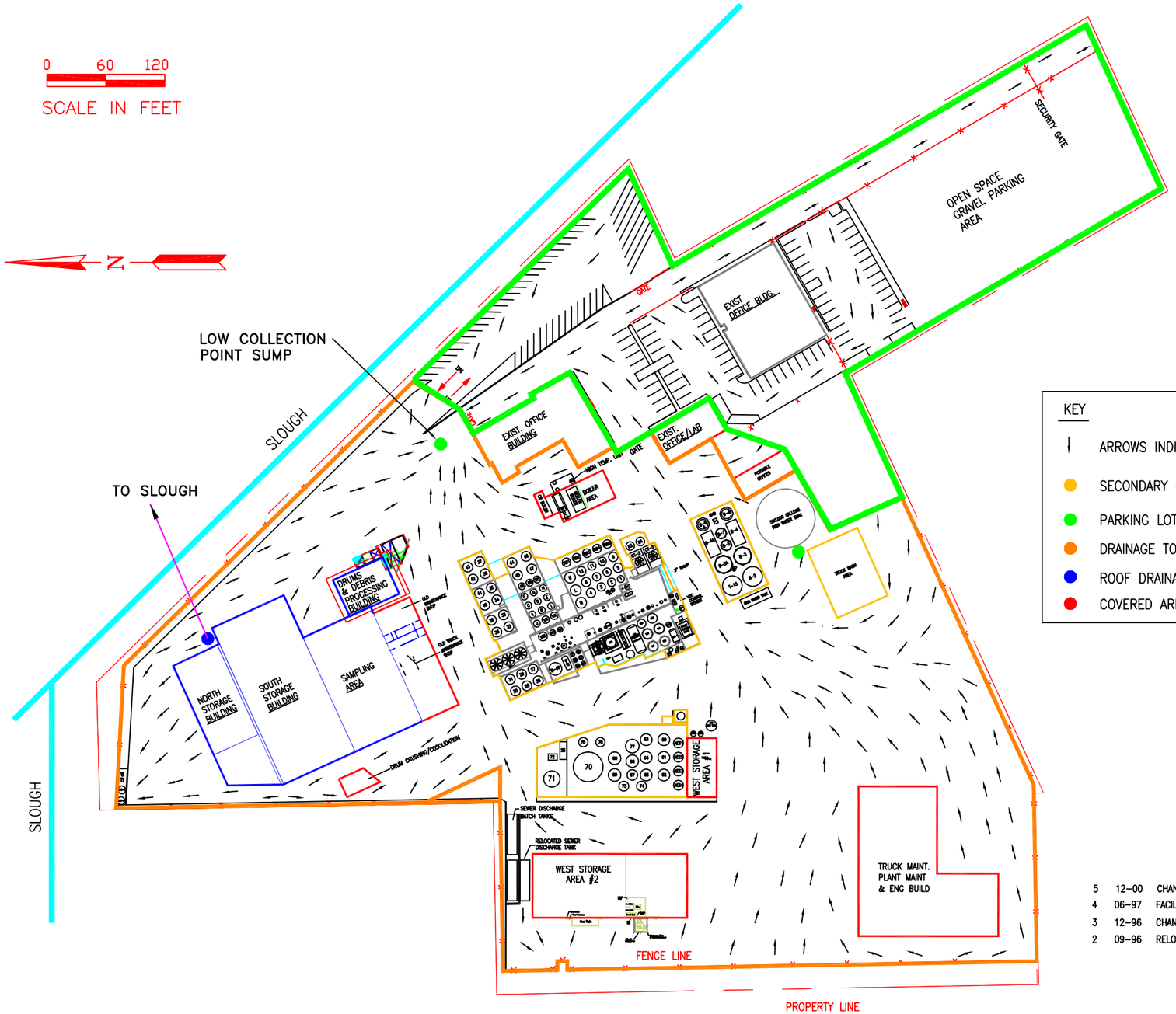
SOURCE: CONOR PACIFIC/EFW, 1999.

ROMIC FACILITY
REGIONAL HYDROGEOLOGY

ROMIC ENVIRONMENTAL
TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.7-1



NOTES

1) NO PORTION OF THE SITE IS IMPACTED BY RUN-OFF FROM SURROUNDING AREAS.

2) NO MUNCIPAL STORM DRAIN INLETS ARE LOCATED ON SITE.

3) THE NEAREST WATER BODY IS THE UN-NAMED SLOUGH NORTH AND EAST OF THE FACILITY.

4) NO SOIL EROSION.

KEY

- ARROWS INDICATE STORM WATER FLOW.
- SECONDARY CONTAINMENT AREAS.
- PARKING LOT AND DRIVEWAY DRAINAGE.
- DRAINAGE TO FACILITY LOW POINT.
- ROOF DRAINAGE TO SLOUGH.
- COVERED AREAS THAT DISCHARGE TO CONVEYANCE SYSTEM.

5	12-00	CHANGE MADE	JS
4	06-97	FACILITY AREAS	V.P
3	12-96	CHANGED MADE	V.P
2	09-96	RELOCATED SEWER TANK	V.P

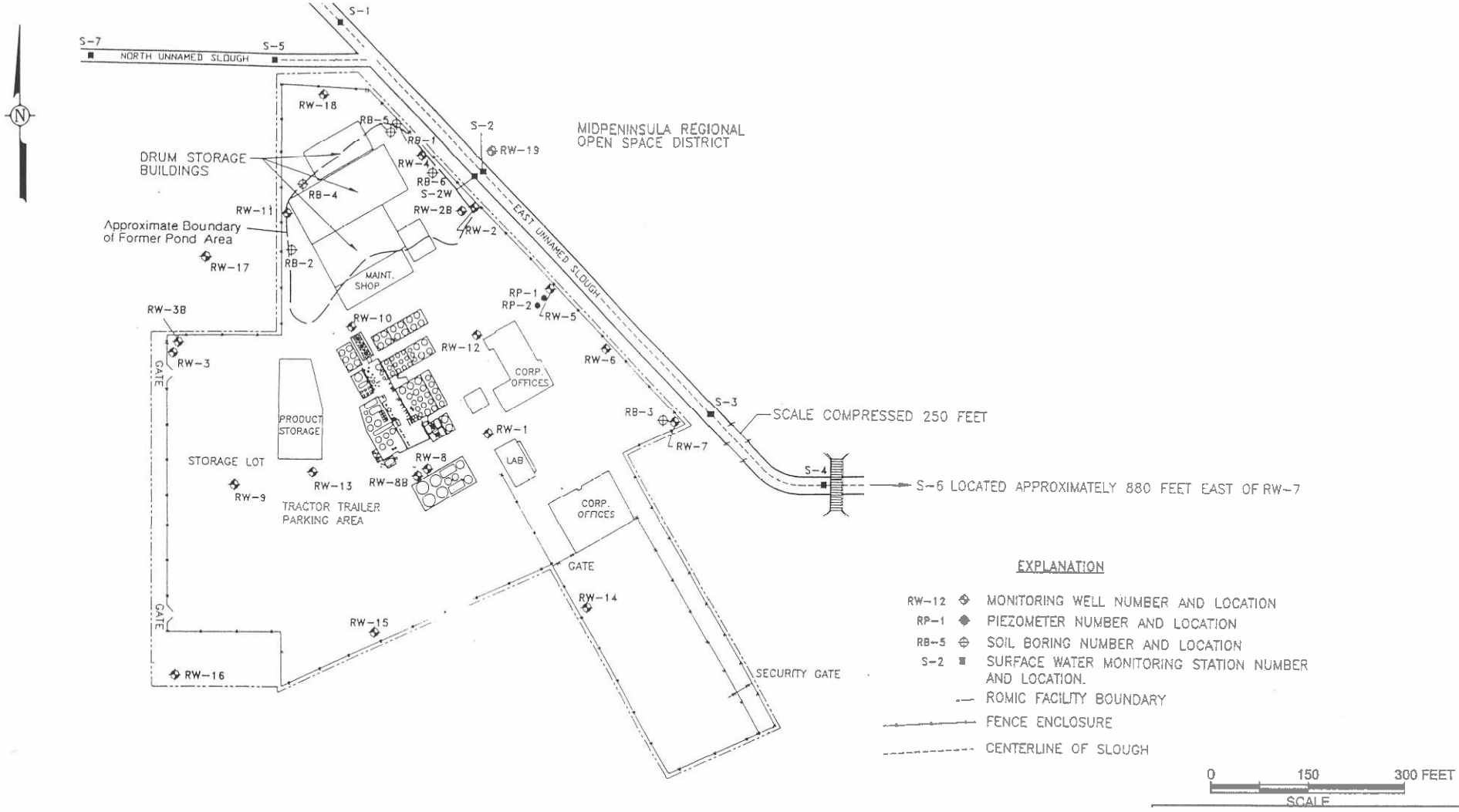
SOURCE: ROMIC ENGINEERING DEPARTMENT

SITE SURFACE DRAINAGE

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.7-2



SOURCE: ADAPTED FROM HLA, 1991

GROUNDWATER MONITORING WELL LOCATIONS

ROMIC ENVIRONMENTAL
TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.7-3

3.3.8 - Land Use and Planning

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3.3.8 - Land Use and Planning

ENVIRONMENTAL SETTING

Regional Setting

The Romic facility is located in San Mateo County, in the City of East Palo Alto. The City is situated between U.S. Highway 101 on the west and San Francisco Bay on the east, the City of Menlo Park on the north, and the City of Palo Alto on the southwest (see Figure 3.3.8-1).

Project Site and Vicinity

- **General Land Use**

East Palo Alto is comprised of ten neighborhoods that contain a variety of residential, commercial, agricultural, industrial, institutional and open space uses. The Bayshore Freeway (U.S. Highway 101) and University Avenue are major surface transportation routes that cross East Palo Alto (see Figure 3.3.8-2).

The Romic facility is located on approximately 14 acres in the existing Ravenswood Industrial Area, in the northeast section of the City of East Palo Alto. The neighborhood is bounded by San Francisco Bay on the east and is comprised of general industrial and industrial land uses. Nearby areas are mixed industrial, commercial and residential uses. No schools or day-care centers are within a one-quarter-mile radius, although several are within a one-mile radius (Figure 3.3.8-3). The nearest residence is approximately one-quarter-mile from the site, in an area of mixed industrial, commercial and residential land uses.

The irregularly shaped Romic property is bordered along its easterly boundary by an unnamed tidal slough and levee and the Ravenswood Open Space Preserve, and by a salvage yard near Bay Road. From north to south, the facility's westerly boundary is bordered by vacant land, a former salvage yard and Tara Street. From east to west, the southerly facility boundary is bordered by Bay Road, vacant land and an active salvage yard (see Figure 3.3.8-4).

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- **Recreational Use**

Two open space reserves are located east of the Romic facility to the north and to the south. The Ravenswood Open Space Preserve is located primarily within the City of Menlo Park, north of Cooley's Landing. Cooley's Landing is a peninsula of ecological open space designated for future recreation activities. South of Cooley's Landing, the Palo Alto Baylands Nature Preserve dominates the frontage of San Francisco Bay. These areas provide limited access for hiking, bird watching, nature study and cycling on established trails.

To the east of Romic is a saltwater evaporation pond. The pond is managed by the Midpeninsula Open Space District as part of the Ravenswood Preserve. A levee that forms the western boundary of the Ravenswood Preserve runs along the tidal slough adjacent to the east of the Romic facility, west of the saltwater evaporation pond, and is used as a bicycle path. Hikers and bird watchers also use the levee for recreation.

The City has four parks. The nearest, Jack Farrell Park, is located approximately three tenths of a mile west of the Romic facility.

- **Land Use and Zoning**

The Romic facility is in a land use area zoned for both light industrial (M-1) and heavy industrial (M-2) use as shown in Figures 3.3.8-2 and 3.3.8-4. Part of the Romic facility is zoned M-1 and part M-2 (Figure 3.3.8-4). Existing operations in the two, zoned areas are consistent with the allowed uses for those zonings.

The Romic facility consists of seven parcels, with the following Assessor's Parcel Numbers (APN): 063-121-070-5, 063-121-110-9, 063-121-160-4, 063-121-170-3, 063-121-390-7, 063-121-500-1 and 063-121-510-1. The majority of the Romic facility is zoned M-1, Light Industrial, which allows for a wide variety of activities, including the canning and packaging of lubricating oil, machine shops, storage and repair, paint mixing, hydraulic presses for molding plastics, truck storage, warehousing and welding.

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One parcel (APN 063-121-390-7) is zoned M-2, Heavy Industrial, which allows for all uses not otherwise prohibited by law except residential and commercial uses. A list of uses is prohibited unless a “Use Permit” has been obtained. The treatment, storage, and disposal of hazardous waste is not one of the uses prohibited and the City of East Palo Alto has deemed that the Romic facility is a conforming use and allowed under Section 6281 of the City’s Zoning Ordinance (Kiso, 2003).

- **Ravenswood Industrial Area**

As designated in the existing Land Use Element of the East Palo Alto General Plan, the Ravenswood Industrial Area consists of approximately 130 acres and includes the Romic facility (Figure 3.3.8-2). The Ravenswood Industrial Area has been variously used for agricultural, residential, commercial and industrial purposes since the 1940s. The U.S. Environmental Protection Agency (EPA), City of East Palo Alto and San Francisco Bay Regional Water Quality Control Board (SF-RWQCB) have been investigating the Ravenswood Industrial Area as part of the EPA Brownfields Initiative. Under the Brownfields Initiative, communities, regulatory agencies, property owners, developers and others are working together to redevelop industrial and commercial properties in previously developed, or "brownfield," sites. The goal is to create new economic opportunities, increase property values, and revitalize neighborhoods (U.S. EPA, 1996). The Ravenswood Industrial Area is named a "National Brownfield Pilot Project" by the U.S. EPA.

Immediately west of the Romic facility is an auto wrecking/auto parts resale business that operated from 1953 to 1995. Prior to 1953, the property was used for agricultural purposes. The property was subject to SF-RWQCB Site Cleanup Orders 93-162, 94-041 and 95-113 as part of the Ravenswood Industrial Area Brownfields Initiative. The property has since been remediated, and the Site Cleanup Orders have been rescinded. The property currently has a deed restriction, Soil Management Plan, and approximately 12,000 cubic yards of soil with residual concentrations of petroleum hydrocarbons and lead that have been capped and left in place (SFB-RWQCB, 1998). According to the SF-RWQCB, assuming the Soil Management Plan is adhered to, there

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are no known environmental conditions associated with these soils that prevent future industrial or commercial development of this property.

Across Bay Road from the Romic facility is an approximately 5-acre property owned by Sandoz Crop Protection Corporation, with an office, manufacturing facilities and a large undeveloped area. The property has been used for agricultural chemical manufacturing for over 60 years and has been owned by a succession of companies since 1926. Chipman Chemical Company (later acquired by Rhodia Incorporated, which then changed its name to Rhone-Poulenc Incorporated) caused soil and groundwater at the property to be contaminated with inorganic compounds, with arsenic as the primary constituent of concern (US EPA, 1992). The site is subject to SF-RWQCB Site Cleanup Order 92-022. The order places deed restrictions on the property and on specific areas adjacent to the property (including an area beneath Bay Road) believed contaminated by site activities.

APPLICABLE STANDARDS

Land uses for the project and in the vicinity of the Romic project are governed by the following:

- City of East Palo Alto General Plan
- City of East Palo Alto Zoning Ordinance
- Assembly Bill 2948
- San Mateo County Hazardous Waste Management Plan
- Deed Restrictions

In addition to the above, the City of East Palo Alto has prepared a Preliminary Draft Revitalization Plan (EPARP, 2000). The proposed project is located in the Ravenswood Business District, one of the areas included in the Revitalization Plan. The City has prepared a Draft Environmental Impact Report (DEIR) to amend its current General Plan and Zoning Ordinance for the Ravenswood Business District in accordance with the Revitalization Plan. The Ravenswood Business District portion of the Revitalization Plan is addressed in this DEIR (DEIR, 2003).

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- **East Palo Alto General Plan**

The City of East Palo Alto General Plan (City of East Palo Alto, 2002) was adopted in December 1999 to serve as a policy guide for determining the appropriate physical development and character of the City. Implementation of the General Plan is to ensure that future development projects are consistent with community goals and that adequate urban services are available to meet the needs of new development. The General Plan includes the following seven elements and a General Implementation Program:

- Land Use Element
- Circulation Element
- Conservation and Open Space Element
- Noise Element
- Safety Element
- Economic Development Element
- Housing Element
- General Plan Implementation Program

The General Plan Implementation Program is comprised of actions, procedures and techniques that directly relate to the policies and plans of the corresponding General Plan element.

The proposed amendment to the General Plan, in accordance with the City's revitalization of the newly designated Ravenswood Business District, would create land use designations that would require amendments to the General Plan Land Use Element and Circulation Element to accommodate street improvements in the Ravenswood Business District. The General Plan Economic Development Element also would require amendment. The General Plan amendment proposes the following land use designations for the Ravenswood Business District:

- Business District Center (retail, eating, business services)
- Mixed Use Transition Areas (office, residential, retail)

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- Workplace Core (office, light manufacturing and assembly, warehousing and distribution, technology production)
- Residential Transitional Areas (multi-unit housing)
- Industrial Area (automobile-related sales and service, warehousing and distribution, manufacturing and assembly, equipment sales and service, and, with a permit, uses involving hazardous materials)

- **East Palo Alto Zoning Ordinance**

The City of East Palo Alto Zoning Ordinance (City of East Palo Alto, 1996), was adopted to promote and protect the public health, safety, peace, morals, comfort, convenience and general welfare, and for the following specific purposes:

(a) To guide, control and regulate growth and development in the City of East Palo Alto.

(b) To protect the character and the social and economic stability of residential, commercial, industrial and other private and public areas within the City, and to assure the orderly and beneficial development of such areas.

(c) To obviate the menace to the public safety resulting from the locating of buildings, and the use thereof, and the use of land, adjacent to streets and highways that are a part of the Circulation Element of the General Plan of the City, or that are important thoroughfares, in such manner as to cause interference with existing or prospective traffic movements on said streets and highways.

(d) To provide adequate light, air, privacy and convenience of access to property, and to secure safety from fire, inundation and other dangers.

(e) To prevent overcrowding the land and prevent undue congestion of population.

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In accordance with the City's Revitalization Plan, the proposed amendments to the Zoning Ordinance for the Ravenswood Business District would require adding a chapter that would establish requirements for the new land use designations and establish new design guidelines for the Ravenswood Business District.

In the proposed Zoning Ordinance Update related to revitalization of the Ravenswood Business District (Reference 3, Appendix D, pg. 34) Chapter TBD (17.5), Ravenswood Industrial Area, Section TBD 6783, Uses Permitted, states that, "The Industrial Area of the Ravenswood Business District has been provided to address the importance of industrial land to the region, and the absence of alternative locations for such uses, by supporting the continued existence and reinvestment in existing industrial uses."

Applicable specifically to the Romic facility, the Zoning Ordinance Update allows the following, subject to a Conditional Permit as provided in Chapter 24 of the City's Zoning Ordinance:

1) Activities involving the use of hazardous materials or chemicals as the main use. Such uses shall require a Hazardous Materials Use Permit as determined by the Menlo Park Fire Protection District. Each application for a permit shall include a *hazardous materials* management plan (HMMP). A permit may be issued for a term of five years.

* Special Condition – Activities involving the use of hazardous materials or chemicals may not be permitted on parcels fronting Bay Road and/or parcels fronting on the west side of Tara Street.

2) Chemical or testing laboratories.

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- **Assembly Bill 2948**

Assembly Bill (AB) 2948 requires each county to prepare for managing and providing adequate treatment, storage and disposal capacity for hazardous wastes generated within its borders. The San Mateo County Hazardous Waste Management Plan was approved in January 1992. The Romic facility is the County's only hazardous waste facility. The onsite capacity at Romic helps the County to fulfill the requirements of AB 2948 for existing treatment capacity.

- **San Mateo County Hazardous Waste Management Plan**

The San Mateo County Hazardous Waste Management Plan was approved by the City/ County Association of Governments of San Mateo County in January 1992. The Romic facility is explicitly named as the County's major chemical recycler for industries and businesses using solvents and other chemicals, and the County's only commercial off-site hazardous waste facility.

- **Deed Restrictions**

Various properties within the Ravenswood Industrial Area have deed restrictions that are related to future development of the properties. Deed restrictions are imposed when soil and or groundwater at a property is contaminated. Typically, deed restrictions limit the future use of a property to certain uses and restrict the use of, for example, residential development.

- **East Palo Alto Revitalization Plan**

The East Palo Alto Revitalization Plan (Preliminary Draft) was developed in August 2000 to address district formation, land use and development policies, and capital improvements. It contains land use policies, development standards and design guidelines to coordinate outside investment in the area. The Plan specifically addresses four areas of the city: Ravenswood Business District, Four Corners/Bay Road, University Avenue Corridor and the Weeks Neighborhood. The Romic facility is located in the area currently known as the Ravenswood Industrial Area, which in the Revitalization Plan, is called the Ravenswood Business District (see Figure 3.3.8-5).

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The City of East Palo Alto has rewritten the land use and development policies that condition growth and development in the newly designated Ravenswood Business District, noted in the Revitalization Plan as the city's largest opportunity zone. As stated in the Plan, the purpose of these policies is to establish a framework for new development to assure that separate projects will be coordinated sufficiently to result in a cohesive city district. These include establishment of workplace core areas, a district center, mixed-use transition area, residential transition areas and industrial areas (see Figure 3.3.8-6).

The Revitalization Plan acknowledges the importance of industrial land in the region and the absence of alternative locations for such uses. It supports the continued existence and reinvestment in existing industrial uses such as the Romic facility.

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the CEQA Guidelines (as amended July 22, 2003), an impact related to land use could be considered significant if it would:

- Physically divide an established community.
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

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POTENTIAL ENVIRONMENTAL IMPACTS

- **Physically Divide an Established Community**

  The proposed project will occur entirely within the existing 14-acre Romic facility, within an established industrial area where there are other, nearby, industrial uses. As a result, the project will not physically divide an established community.

  The proposed project is in compliance with the existing City of East Palo Alto General Plan and Zoning Ordinance and with the Revitalization Plan. With implementation of the currently proposed General Plan amendments, the Romic facility will be bordered on the west and south by the Workplace Core Area of the newly designated Ravenswood Business District (see Figure 3.3.8-2). Land uses in the Workplace Core are planned to include office, light manufacturing and assembly, warehousing and distribution and technology production (no housing). Adjoining uses would be consistent with the Romic facility. Also, the constraints provided by the Special Condition of the Proposed Amendment to the Zoning Ordinance severely limit the potential for the Romic facility to alter its property boundary. This Special Condition prohibits activities involving the use of hazardous materials on parcels fronting Bay Road and on parcels fronting on the west side of Tara Street (DEIR, 2003, Appendix D, pg. 34). Based on these factors, the proposed project would not divide any planned new communities.

- **Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.**

  The proposed project will not involve a change in land use or zoning of the Romic facility, or development on adjacent properties. Therefore, the proposed project remains consistent with the existing General Plan and with the General Plan Amendment for the Ravenswood Business District as currently proposed by the City.

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The proposed project would not affect zoning. As described in the East Palo Alto Zoning Ordinance, the Romic facility is consistent with existing zoning. The Romic facility also is consistent with the Zoning Ordinance Amendment for the Ravenswood Business District as currently proposed by the City.

The proposed project is in compliance with the City of East Palo Alto Revitalization Plan, wherein it is located within a designated industrial area of the new Ravenswood Business District. The Industrial designation includes and accommodates Romic's existing use, as well as the proposed project.

Within the Ravenswood Business District, the Revitalization Plan envisions several Mixed Use Transition Areas. A portion of one of these areas is located at the north end of Pulgas Avenue, one to two blocks west of the Romic facility boundary (see Figure 3.3.8-2). The impact of the proposed project located entirely within the existing Romic facility should have a less than significant incremental impact on this proposed land use since the level of operations at the facility will remain essentially the same.

- **Conflict with any applicable habitat conservation plan or natural community conservation plan**

  The proposed project consists of a continuation of ongoing activities and the addition of similar activities, which are conducted in compliance with applicable plans and policies. The project site is currently developed and is not within a habitat conservation plan or natural community conservation plan. The project will not affect ongoing activities at the two nearby nature preserves, as project-related activities will continue to occur within existing facility boundaries. The project also will not affect access to or use of the adjacent levee or bike path. Therefore, the proposed project will not affect nearby recreational land uses.

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The future recreational use of Cooley's Landing will not be impaired by the proposed project. Romic's activities will continue to occur within the facility's existing boundary. Further, access to Cooley's Landing will not be affected by project-related activities. Therefore, project-related impacts to Cooley's Landing, and to future recreational use of the facility, will be less than significant.

CLOSURE

The Closure Plan (CP) identifies steps necessary to close the facility at the end of its intended operating life, and applies to the operating units. These steps include decontamination of facility equipment and structures, sampling and analysis, and removal of all hazardous waste residue and contaminated soil. It is not possible to predict future land uses surrounding the project site during the closure period. If current land use designations remain in place, it is assumed that the project site and surrounding area would remain industrial use. Thus, closure of the facility would not be expected to result in any significant land use or planning impacts.

MITIGATION MEASURES

The proposed project is consistent with the City's current and proposed land use plans and zoning for the area. It also is consistent with existing and potential future land uses and with the City of East Palo Alto Revitalization Plan. It will not adversely affect adjacent industrial uses or nearby recreational uses of the Ravenswood and Palo Alto Baylands preserves or future recreational use of Cooley's Landing. As a result, impacts related to land use are less than significant, and mitigation measures are not required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Mitigation measures are not required. Impacts are less than significant.

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REFERENCES

1. City of East Palo Alto, 2002 *General Plan Amendment Related to the Ravenswood Business District.* Prepared by the Community Development Department, Planning division. May 31, 2002.

2. City of East Palo Alto, June 1998 *Draft General Plan*. Prepared by Cotton/Beland/Associates, Inc., and Dinwiddie & Associates. June 1998.

3. Draft Environmental Impact Report (DEIR), Amendments to the East Palo Alto General Plan and Zoning Ordinance and Infrastructure Improvements in the Ravenswood Business District, State Clearinghouse No. 2003012113, June 18, 2003.

4. City of East Palo Alto. *City of East Palo Alto Zoning Ordinance, 1995 Edition*. Adopted March 1996.

5. The East Palo Alto Revitalization Plan (EPARP), Ravenswood Business District, Four Corners/Bay Road, University Avenue Corridor, Weeks Neighborhood, by Freedman Tung & Bottomley, Preliminary Draft, August 2000.

6. Kiso, Wayne, Environmental Consultant for Romic. Email, September 25, 2003.

7. United States Environmental Protection Agency (US EPA), Region IX, Soil and Groundwater Investigation at the Ravenswood Industrial Area, East Palo Alto, California, prepared in cooperation with the California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board and the City of East Palo Alto, December 1996.

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8. San Francisco Bay Regional Water Quality Control Board (SFB-RWQCB), Note of Order 98-039: Rescission of Site Cleanup Requirements (Orders 93-162, 94-041, and 95-113) for 2005, 2017, 2025, and 2965 Bay Road, East Palo Alto, California, May 21, 1998.

9. United States Environmental Protection Agency (US-EPA), Superfund Record of Decision: Rhone-Poulenc, Inc./Zoecon Corp., EPA ID: CAT00611350, March 4, 1992.

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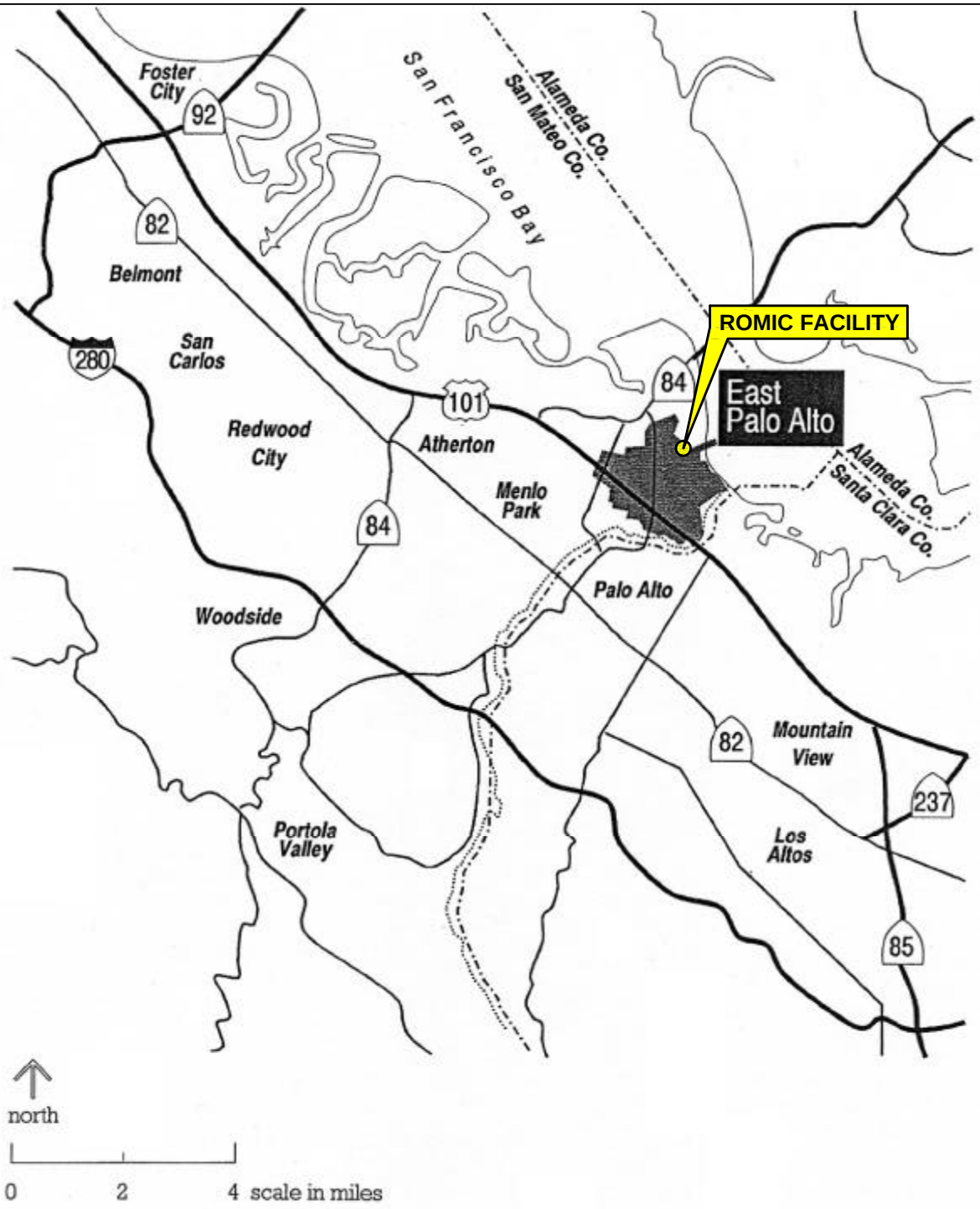


REGIONAL LOCATION

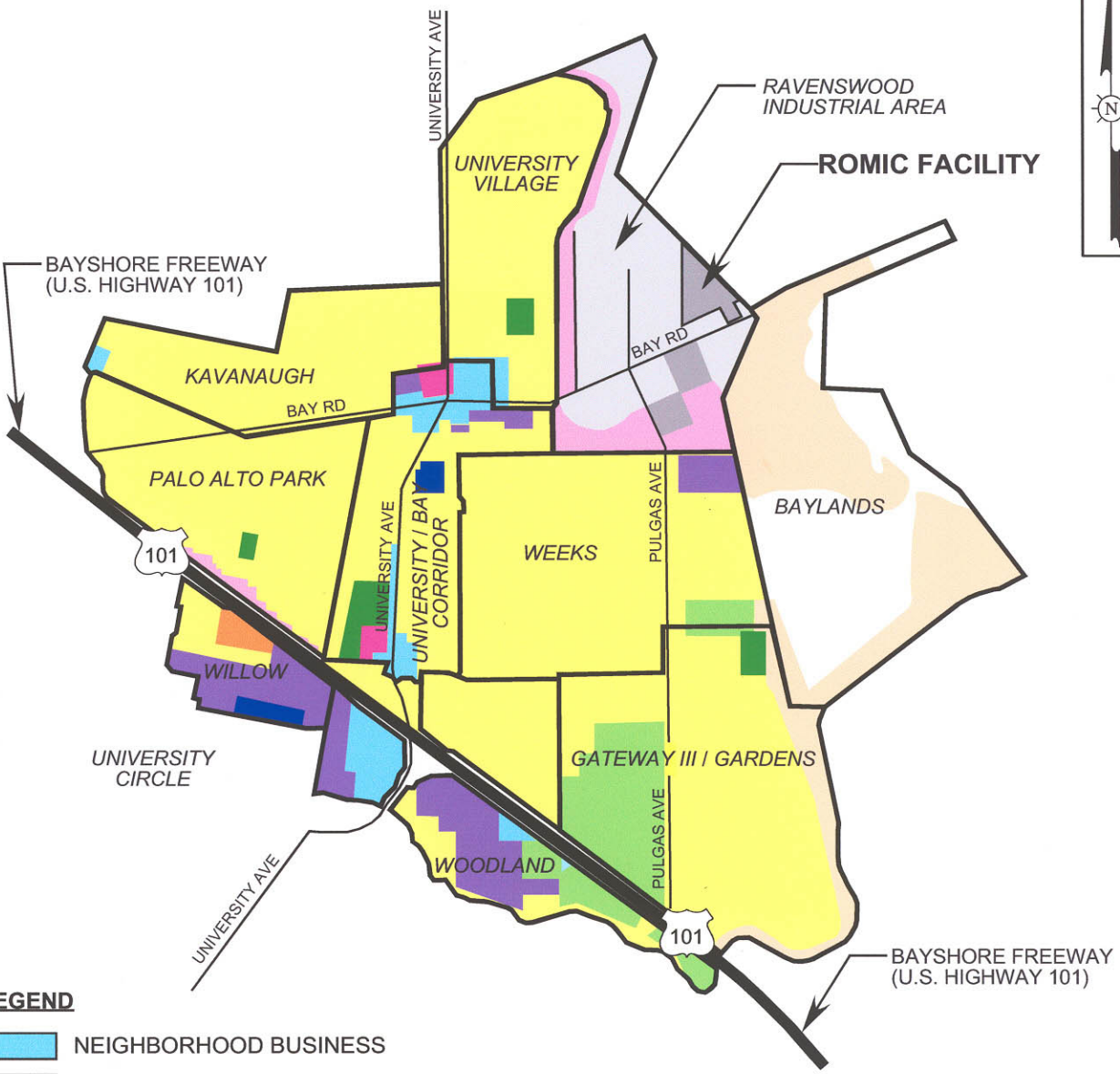
ROMIC ENVIRONMENTAL
TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

SOURCE: CITY OF EAST PALO ALTO GENERAL PLAN

TRC

FIGURE 3.3.8-1

97-231EIR-05 REV.03/30/00



LEGEND

- NEIGHBORHOOD BUSINESS
- GENERAL INDUSTRIAL
- HEAVY INDUSTRIAL
- INDUSTRIAL BUFFER (allows residential as mixed use)
- OFFICES
- ONE-FAMILY RESIDENTIAL
- TWO-FAMILY RESIDENTIAL
- MULTIPLE FAMILY RESIDENTIAL
- MULTIPLE FAMILY RESIDENTIAL
- RESOURCE MANAGEMENT
- COMMUNITY OPEN SPACE
- TWO-FAMILY RESIDENTIAL/ GENERAL COMMERCIAL

0 2,000 4,000 FEET
SCALE

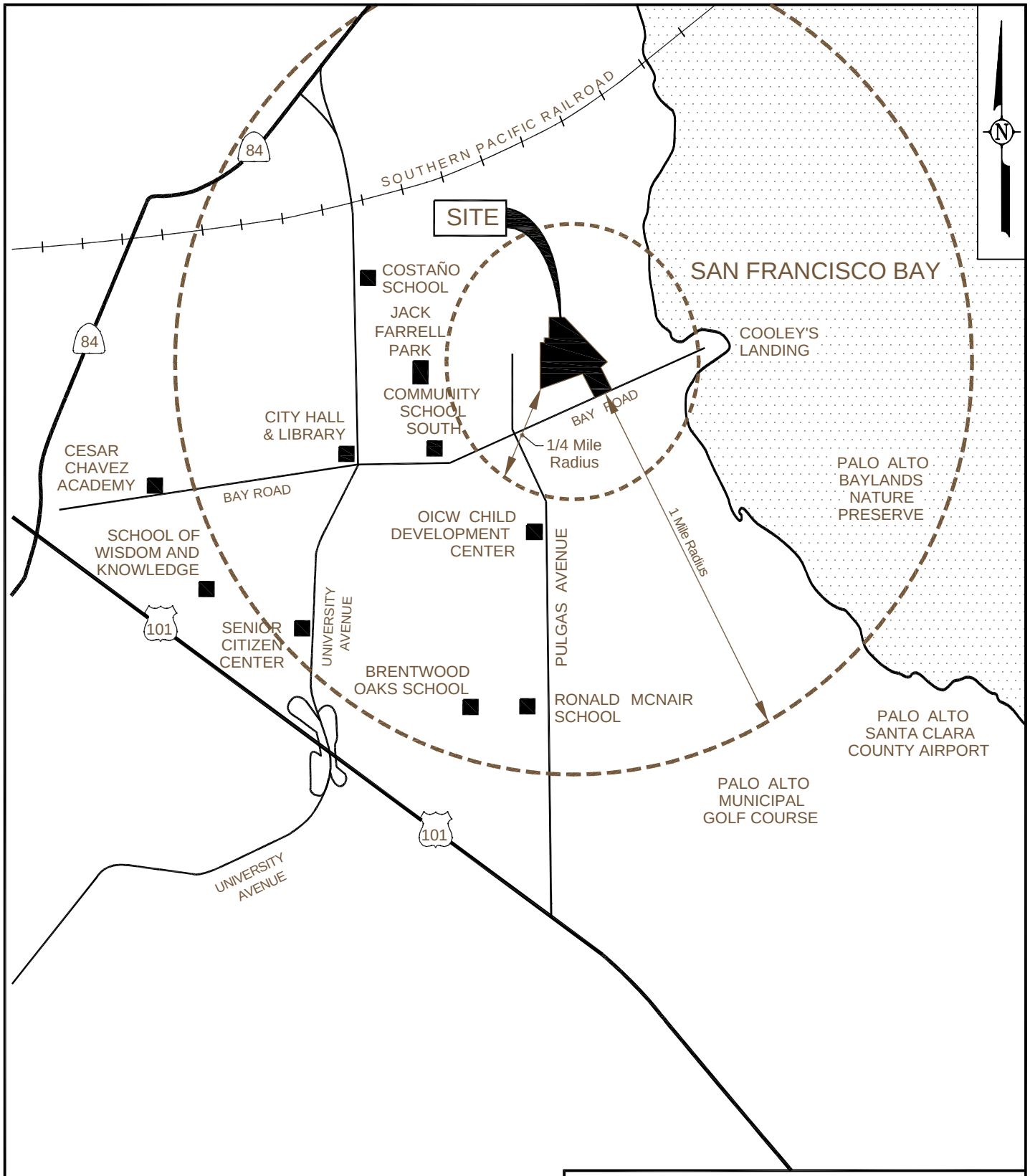
SOURCES: EAST PALO ALTO GENERAL PLAN, 1998 AND CONOR PACIFIC/EFW, 1999.

CITY OF EAST PALO ALTO NEIGHBORHOODS AND LAND USE DESIGNATIONS

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.8-2



0 2,000 3,000 FEET

SCALE

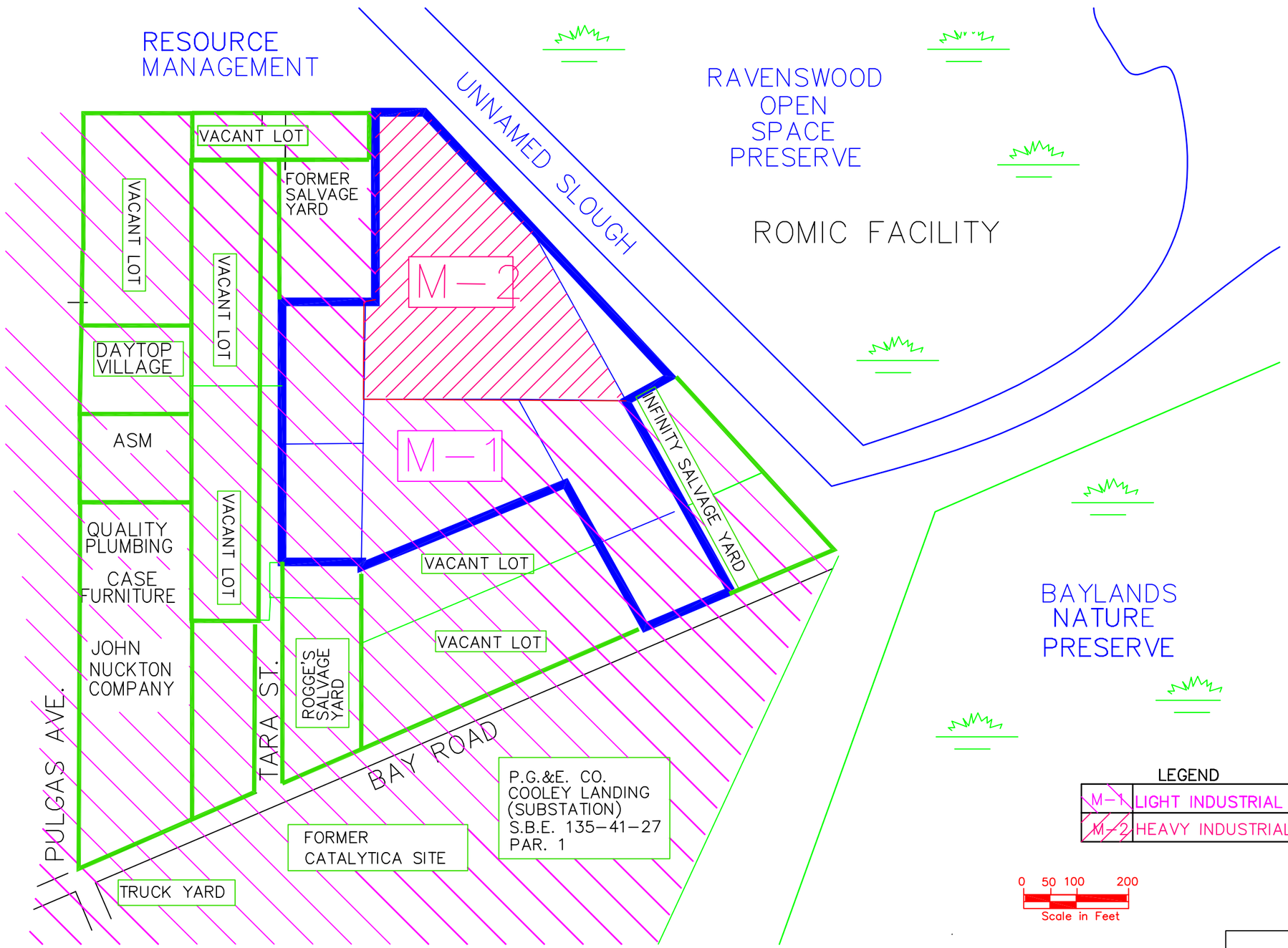
SOURCE: ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION, 1997.

NEARBY LAND USES

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.8-3



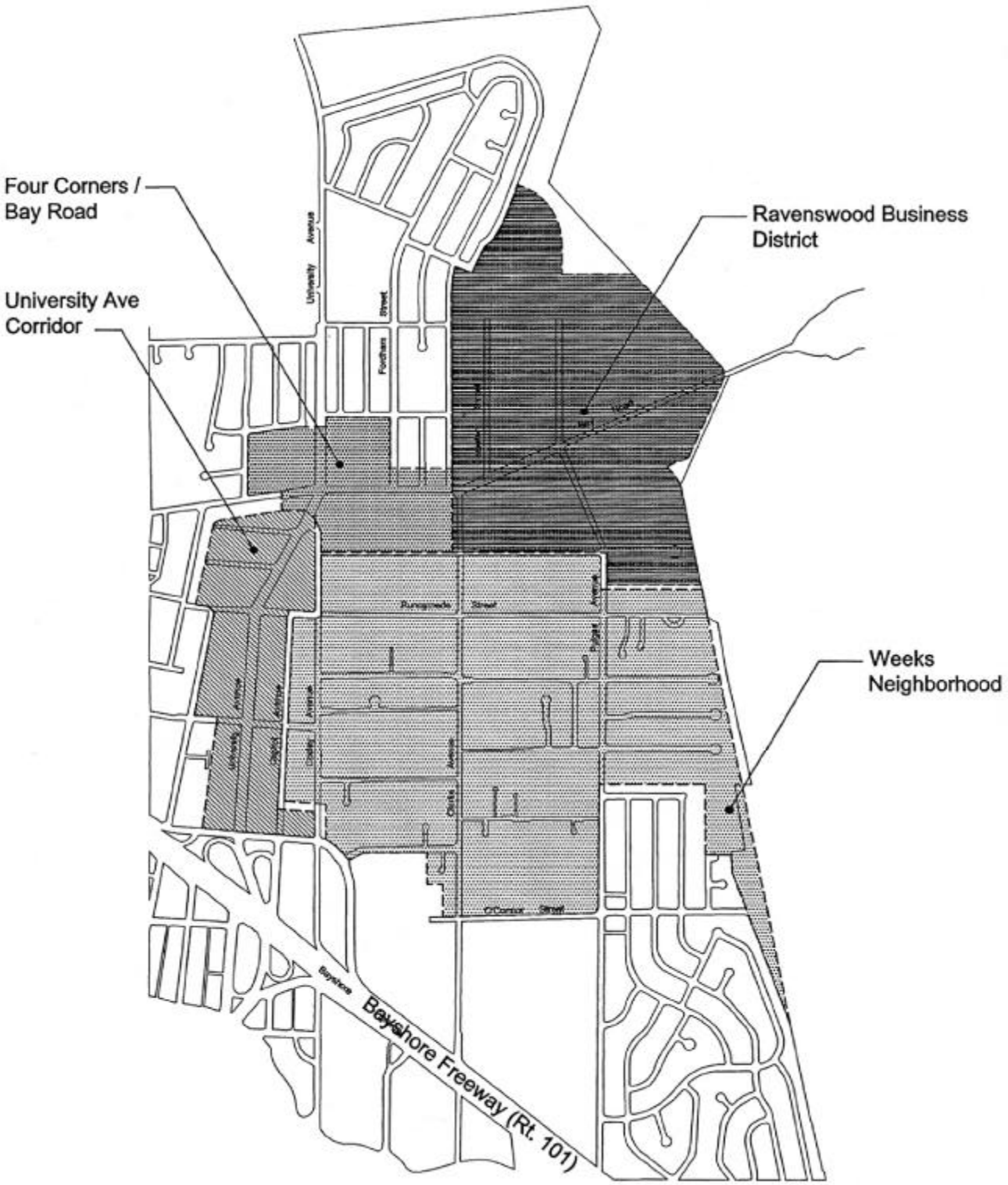
SOURCE: ROMIC ENGINEERING DEPARTMENT

ROMIC FACILITY ZONING AND ADJACENT PROPERTY USES

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.8-4



APPROXIMATE SCALE

0' 300' 600' 1200'

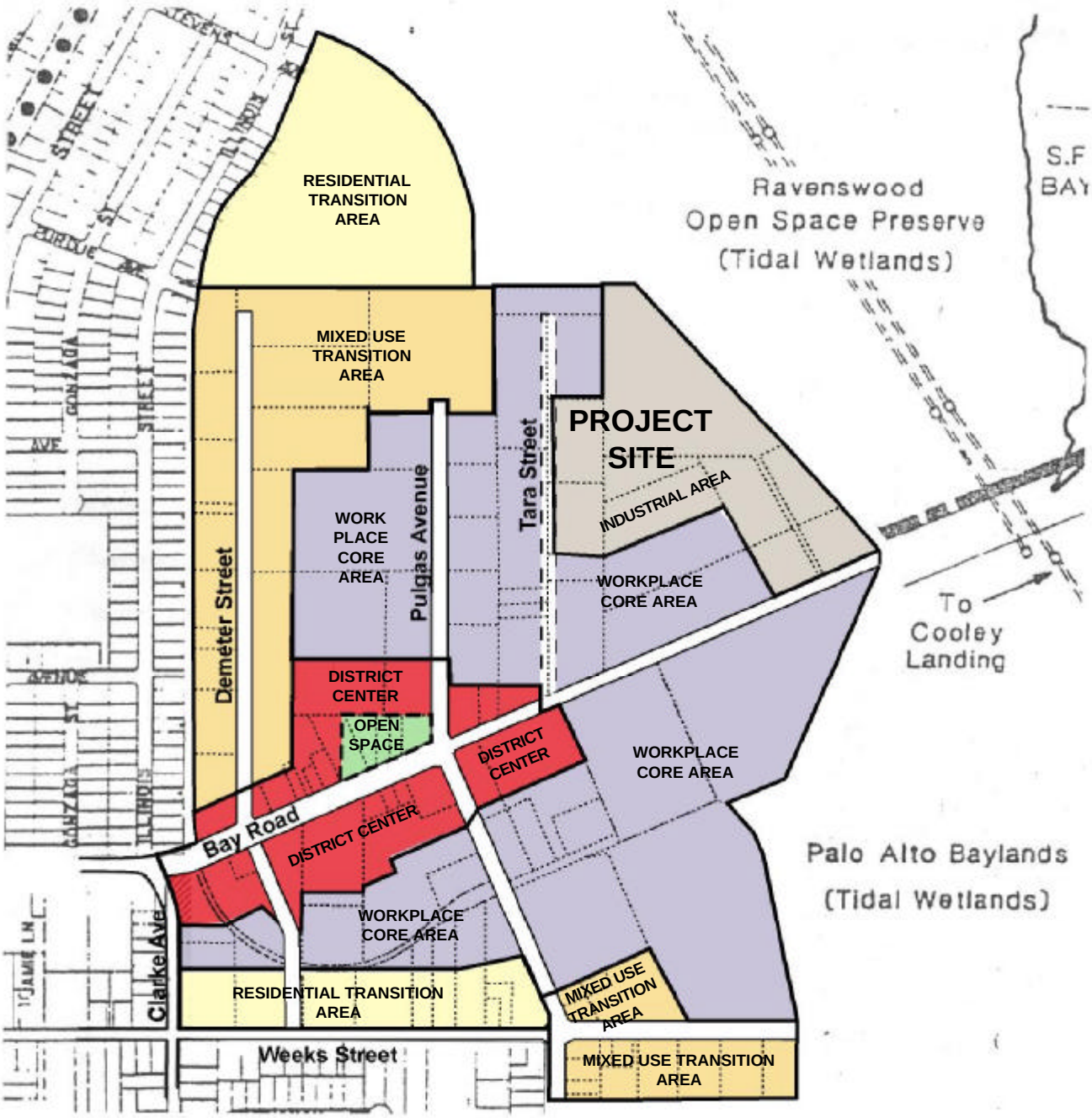
SOURCE: CITY OF EAST PALO ALTO REVITALIZATION PLAN

REVITALIZATION PLAN AREAS

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.8-5



ZONING FOR THE RAVENSWOOD BUSINESS DISTRICT

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

SOURCE: FREEDMAN TUNG & BOTTOMLEY

TRC

FIGURE 3.3.8-6

3.3.9 - Noise

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3.3.9 - Noise

ENVIRONMENTAL SETTING

Noise-Sensitive Land Uses

The area immediately surrounding the Romic facility generally is comprised of land uses that are not considered noise-sensitive. Land uses to the north and east are mostly open space. Land uses to the south and west are generally heavy and light industry. The area is also approximately one mile north of the Palo Alto Airport, and frequent air traffic is a contributor to the local noise environment.

The noise-sensitive receptors nearest the Romic facility include a drug and alcohol rehabilitation center and a residential area. The rehabilitation center, Day Top Village, is located on Pulgas Avenue, approximately one-tenth of a mile west of Romic. The residential area is located approximately four-tenths of a mile to the northwest. In addition, cyclists, hikers and bird watchers utilize the Ravenswood Reserve bike path along the levee on the eastern side of the Romic facility.

Noise Monitoring

A noise monitoring program was conducted on February 2, 2001, at locations along the Romic property line and at the above-mentioned sensitive receptors. The monitoring locations are depicted on Figure 3.3.9-1. Noise level measurements were conducted over a 30-minute period at these locations. The level of operations at the Romic facility in early 2001 was near full capacity while currently the facility is operating at less than full capacity. The use of these noise levels is therefore a reasonable estimate of maximum ambient operating noise that could occur before implementation of the proposed project.

A Bruel & Kjaer Model 2236 precision integrating sound level meter with an integral data logger was utilized for the monitoring program. The meter meets ANSI S1.4-1983 requirements for precision Type 1 sound level meters. The meter was calibrated before and after the survey period using a Bruel & Kjaer Model 4231 sound level calibrator.

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The microphone was fitted with a windscreen to reduce wind-generated noise and was mounted approximately five feet above the ground.

Local Noise Levels

Noise at the Romic property line monitoring locations was dominated by facility noise and frequent aircraft traffic. At the residential locations (R4, R5, R6), noise levels were dominated primarily by aircraft and vehicular traffic. Vehicular traffic at Bay Road and Pulgas Avenue did not appear to be the result of deliveries to Romic. Most of the traffic at this location appeared to be personal vehicle traffic. Noise from the Romic facility was not audible at any of the residential monitoring locations.

As shown in Table 3.3.9-1, facility property line L_{90} noise levels were highest at locations R1 and R2 (64 to 67 dBA). They were lowest at the front gate R3 location (51 dBA). Noise levels were relatively steady at all three locations. Most noises associated with elevated levels were the result of aircraft traffic. Much lower noise levels were measured at the residential locations (R4 and R5). Noise along the bike path on the eastern edge of the facility would be approximately the same as the noise level measured at the northeast property line, that is, at R1 or 64 dBA.

The City of East Palo Alto has also taken noise readings near the Romic facility as part of an Environmental Impact Report prepared for amendments to its general plan and zoning ordinance (Draft EIR, June 18, 2003). Noise readings were taken over a 24-hour period. The locations where the readings were taken are shown on Figure 3.3.9-2 and the results of the monitoring are shown in Table 3.3.9-2. Also shown on Figure 3.3.9-2 are the 60 and 65 CNEL contour lines for noise from the Palo Alto Airport.

The City of East Palo Alto noise readings are compatible with the noise readings obtained for the Romic facility. Reading R4 at the intersection of Illinois Street and Stevens Avenue has a CNEL of 52 dBA and is located approximately 1,000 feet north of the City's Location 2 at the end of Demeter Street that has a reading of 58 dBA.

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Reading R5 located approximately 1,000 feet southeast of Location 2, has a CNEL of 54 dBA. Reading R6, located at the intersection of Bay Road and Pulgas Avenue has a CNEL of 63, and Location 1 at the intersection of Pulgas Avenue and Weeks Street has a CNEL of 62.5. These two locations are approximately 10 dBA higher than R4, R5, and Location 2 and the reason is probably due to the greater vehicle traffic at the Pulgas Avenue intersections.

Compliance with Noise Standards

The CNEL levels for the Romic noise data were calculated to evaluate the existing measured noise levels against the East Palo Alto standard and Land Use Compatibility matrix. Calculation of an accurate CNEL normally requires 24 hours of data. However, it is possible to conservatively estimate the CNEL by using the level measured during the 30-minute monitoring and by assuming that this level remains constant during all hours of the day and night. Since monitoring was conducted during the day, when activity is highest, assuming that noise levels remain the same during other hours, including the late night hours, provides a conservative measure of noise. Table 3.3.9-1 provides a summary of the measured L_{90} and estimated CNEL levels for the monitoring locations.

The calculated CNEL levels shown in Table 3.3.9-1 reveal that, at the residential locations (R4, R5, R6), existing CNEL levels are below the East Palo Alto exterior noise standard of 65 dBA. This includes location R6, where heavy vehicular traffic resulted in higher noise levels than at the other residential locations. Further, the data reveal that the R4 and R5 locations have estimated CNEL levels that fall into the “clearly compatible” range for new residential development (52 and 54 dBA, respectively). Location R6, at 63 dBA CNEL, would be considered “conditionally acceptable” for new residential construction. The noise level along the bike path, which is located approximately 100 feet from the Romic northeast property line was not specifically measured but would probably be slightly less than the noise level measured at the northeast property line (R1).

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APPLICABLE STANDARDS

Community Noise Scales

Community noise levels are measured in terms of the "A-weighted decibel," or dBA. The A-weighting correlates overall sound pressure levels with the frequency response of the human ear. Table 3.3.9-3 provides examples of various outdoor and indoor noises and their typical A-weighted noise levels. Other common descriptors of noise include L_{eq}, L_{90} and L_{10}. These are described below.

The "equivalent noise level," or L_{eq}, is the average noise level on an energy basis for a specified period of time, such as one hour. The L_{eq} for one hour is the energy average of a specified sound level during that hour, or the average noise based on the energy content (acoustic energy) of the sound. The equivalent noise level utilizes the units of dBA.

The L_{90} and L_{10} also utilize the units of dBA. They indicate the percent of time that a given sound level is exceeded. The L_{90} is the sound level exceeded 90 percent of the time and is often considered the background, or residual, noise level. The L_{10} is exceeded 10 percent of the time and is a measurement of intrusive sounds, such as aircraft overflight.

Several rating scales have been developed for measurement of community noise to account for: (1) parameters of noise that have been shown to affect humans, (2) the variety of noises found in the environment, (3) variations in noise levels that occur as a person moves through the environment and (4) variations associated with the time of day. The predominant community rating scale used in California to assess land use compatibility is the Community Noise Equivalent Level, or CNEL. The City of East Palo Alto regulates noise using the CNEL.

The CNEL scale represents a time-weighted 24-hour average noise level based on dBA. Time-weighted refers to the fact that noise levels during certain hours of the day

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are adjusted for people's increased sensitivity to noise during those hours. Five decibels (dB) are added to a noise level during the evening hours (7 p.m. to 10 p.m.), and 10 dB are added to the nighttime hours (10 p.m. to 7 a.m.). The day-night, or L_{dn}, scale is similar to the CNEL scale except that evening hour readings are not adjusted. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNL," or simply "60 CNL."

City of East Palo Alto Draft General Plan, Noise Element

The General Plan Noise Element defines noise sensitive land uses as "activities that are interrupted by noise, including residences, schools, hospitals, religious meetings and recreational areas" and specifies standards for noise generators located near potential noise-sensitive land uses within the City. Projects or activities that may generate noise near a noise-sensitive use must incorporate noise control measures so that outdoor noise levels at the noise receptor do not exceed the noise exposure allowances shown on Table 3.3.9-4 (City of East Palo Alto, Draft General Plan, June 1998).

The City's noise standards are the basis for development of land use compatibility guidelines. A noise/land use matrix identifies conflicts between proposed projects and the existing and future noise environment (Table 3.3.9-5). As shown in the table, if a noise level falls within Zone A, the project is considered compatible with the existing noise environment, and no mitigation is required. If the noise level falls in Zone B, minor sound suppression is required and, prior to approval, a project must show it will meet the standard. Zone C requires substantial noise mitigation, and the proposed project must meet the standard prior to approval. Should the noise level fall above Zone C, the proposed project is considered incompatible with the existing environment and should not be approved.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines (as amended July 22, 2003), a noise impact could be considered significant if it would result in:

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- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

POTENTIAL ENVIRONMENTAL IMPACTS

➢ **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies**

- **Operations**

The proposed project is expected to generate an additional 32 truck/ employee vehicle trips/ day associated with increased solid waste processing activities and short-term construction related activities. Of this total, approximately 12 truck/ employee vehicle trips/ day would occur during peak traffic hours. An analysis of traffic noise was performed by the City of East Palo Alto to estimate the impact on noise levels with development of the Ravenswood Business District which includes the Romic facility. The analysis showed that about 12,800 vehicle trips would be added each weekday. This large increase in traffic caused the peak hour noise levels to increase by only 1-2 dBA (DEIR, 2003). In addition, any added noise would be indiscernible at residential

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and other sensitive sites such as R4 and R5 since these areas are located far from the vehicle commute route along University Avenue and Bay Road. Therefore, since the addition of 12,800 vehicle trips associated with the Ravenswood redevelopment is not expected to cause a significant increase in the noise level, the addition of 12 vehicle trips/day due to the Romic project is not expected to cause a significant increase in noise levels nor cause City noise standards to be exceeded.

The calculated CNEL at the northeast property line of the Romic facility is 71 dBA. The bike path is located approximately 75 feet east of the property line. Using the equation described in the following section, the noise level would reduce to approximately 44 dBA at the bike path. This is well within the City of East Palo Alto noise level maximum of 70 dBA for outdoor activities.

Although there would be an increase in the number of onsite processing operations, the permitted daily capacity would remain at 154,512 tons of liquid per day annual average. The permitted quantity of solid waste that can be processed will increase from 2 tons/day to 85 tons/day. Increased processing of solid waste may result in some increase in noise but it is expected to be insignificant. As a result, noise from onsite operations should not increase significantly. Existing noise levels are within standards established by the City of Palo Alto, and the proposed project would remain within those standards.

- **Construction/Retrofit**

The proposed project will involve construction and retrofit of onsite facilities, activities that will result in a temporary increase in noise levels at the site. The construction/retrofit period is expected to occur over a period of 24 months. During this time, onsite activities will include demolition of existing tanks, construction of foundations, erection of tanks and other structures, and sealing concrete and asphalt ground covering. Based on the noise levels shown in Table 3.3.9-6, noise from these activities will be greater than operations noise. The noise levels will occur on and off over the 24-month period and at various locations on the Romic site depending on

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where the demolition/construction is required. The noise levels shown in Table 3.3.9-6 are measured at a distance of 50-200 feet from the construction equipment. In some cases, the noise levels will be reduced from the levels shown in Table 3.3.9-6 before reaching the Romic facility property line. In other cases, depending on the location of the construction, the noise levels at the property line will be at or near the levels shown in Table 3.3.9-6. Construction noise from the site will have decreased substantially by the time it reaches sensitive receptor sites such as noise monitoring locations R4 and R5. Based on the *Industrial Noise Manual* (1975), the following equation represents the change in sound level with distance from the sound source:

$$L_{pr} = L_{ps} - 20[\text{Log } r - 0.5]$$

Where:

L_{pr} = Resultant average sound level at the receptor;

L_{ps} = Average sound level at the source; and

r = Distance in feet from the source to the receptor.

The distance from the western boundary of the Romic facility to the Daytop Village Rehabilitation Center (R5) is approximately 500 feet. Using a construction noise/sound level of 89 dBA at the western boundary, the noise level would reduce to approximately 45 dBA at the Daytop Village Rehabilitation Center. The distance to the intersection of Stevens Avenue and Illinois Street is approximately 2,000 feet. Again, assuming a construction noise/sound level of 89 dBA at the western boundary, the noise level would reduce to approximately 33 dBA at the intersection which is in a residential area.

These maximum noise levels would be intermittent during the day and over the 24-month construction period. These noise levels are within standards established by the City of East Palo Alto, so the impact from construction activities would be less than significant.

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- **<u>Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels</u>**

- **Operations**

  The proposed project will not involve generation of groundborne noise or vibration. Project activities will occur entirely within the Romic facility, which is paved with concrete.

- **Construction/Retrofit**

  Activities that will occur during the 24-month period include minor excavation, construction and/or reinforcement of foundations, removal of tanks, erection of new tanks and other structures, and sealing of concrete areas. Ground vibration is expected to be minimal to none. There will be no pile driving which generates vibration. Based on the surrounding vacant and/or industrial land uses, any periodic occurrence of groundborne noise or vibration is expected to be less than significant.

- **<u>A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project</u>**

  The increased amount of employee and truck vehicle traffic to the project site may result in a small increase in the ambient noise level. However, this increase will probably not be discernable to the average person and will therefore have a less than significant impact on the ambient noise level.

- **<u>A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project</u>**

  As described above, construction of the proposed project will result in periodic noise from construction equipment over the estimated 24-month construction period. However, this noise will be reduced substantially by the time it reaches off-site receptors and will be within the standards established by the City of East Palo Alto. Therefore the temporary and periodic increase in noise level from the project will have a less than significant impact on ambient noise levels.

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- **For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels**

  The Romic facility is approximately one mile north of the Palo Alto Airport, a general aviation facility. Periodic noise occurs as a result of air traffic associated with the airport. Because air traffic consists of propeller-driven airplanes and small jets that do not pass directly over the Romic facility and proposed project site, noise from aircraft is discernible at the site, but is not excessive. Therefore noise from the airport will have a less than significant impact on the proposed project.

- **For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels**

  The proposed project is not located within the vicinity of a private airstrip. Therefore people at the project site will not be exposed to excessive noise levels from a private airstrip.

CLOSURE

Implementation of the Closure Plan (CP) would result in dismantling activities and some worker trips to and from the Romic site. Noise from dismantling activities would be temporary and similar in nature to those of other industrial activities presently occurring at the facility. Thus, noise related impacts resulting from implementation of the CP are considered to be less than significant.

MITIGATION MEASURES

Noise related to the proposed project operation and construction-related activities would be less than significant. Therefore, mitigation is not required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Mitigation measures are not required. Impacts are less than significant.

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REFERENCES

1. Amendments to the East Palo Alto General Plan and Zoning Ordinance and Infrastructure Improvements in the Ravenswood Business District, Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2003012113, June 18, 2003.

2. City of East Palo Alto, June 1998 *Draft General Plan*. Prepared by Cotton/Beland/Associates, Inc., and Dinwiddie & Associates. June 1998.

3. Industrial Noise Manual, American Hygiene Association, 1975.

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TABLE 3.3.9-1
EXISTING AMBIENT NOISE LEVELS (dBA)
IN VICINITY OF PROPOSED PROJECT
Romic Facility, East Palo Alto, California

LOCATION (1)		L_{90} (dBA)	L_{10} (dBA)	L_{eq} (dBA)	CNEL(2) (dBA)
R1	Northeast Romic Property Line	64	70	70	71
R2	Northwest Romic Property Line	67	73	70	74
R3	Romic Front Gate on Bay Road	51	64	61	58
R4	Stevens Avenue/ Illinois Street Intersection	45	60	56	52
R5	Daytop Village Rehabilitation Center	47	59	57	54
R6	Bay Road / Pulgas Avenue Intersection	56	70	67	63

Source: TRC/Alton Geoscience, 2001.
(1) Locations shown in Figure 3.11-1.
(2) CNEL was conservatively calculated by assuming that the short-term, daytime L_{90} noise level measured would be constant through all 24 hours of the day.

TABLE 3.3.9-2
EXISTING AMBIENT NOISE LEVELS (dBA)
AT TWO LOCATIONS IN EAST PALO ALTO
(Near Romic Facility)

Site No.	LOCATION(1)	Noise Level in dBA(2)			
		L_{90}	L_{10}	L_{dn}	CNEL
1	Intersection of Weeks Avenue and Pulgas Avenue	48	60	62	62.5
2	At the northern end of Demeter Street	48	55	57.8	58

Source: Amendments to the East Palo Alto General Plan and Zoning Ordinance and Infrastructure Improvements in the Ravenswood Business District, Draft Environmental Impact Report, State Clearinghouse No. 2003012113, June 18, 2003, page IV.M-4.

(1) Locations shown in Figure 3.11-3.
(2) L_{dn} = day-night average noise level; CNEL = community noise equivalent level; L_{10} =noise level exceeded 10 percent of the time; L_{90} =noise level exceeded 90 percent of the time;

TABLE 3.3.9-3

SOUND LEVELS OF TYPICAL NOISES IN INDOOR AND OUTDOOR ENVIRONMENTS (A-Scale Weighted Sound Levels)

DB(A)	OVERALL LEVEL (Sound Pressure Level Approx. 0.0002 Micobar)	COMMUNITY (Outdoor)	HOME OR INDUSTRY	LOUDNESS (Human Judgment of Different Sound Levels)
130	UNCOMFORTABLY LOUD	Mil Jet Aircraft Take-Off w/After –burner From Air Craft Carrier @ 50 Ft. (130)	Oxygen Torch (121)	120 dB(A) 32 Times as Loud
120 110		Turbo-Fan Aircraft @ Takeoff Power @ 200 Ft. (90)	Riveting Machine (110) Rock-N-Roll Band (108-114)	110 dB(A) 16 Times as Loud
100	VERY LOUD	Jet-Flyover @ 1,000 Ft. (103) Boeing 707, DC-8 @ 6,080 Ft. Before Landing (106) Bell J-2A Helicopter @ 100 Ft. (100)		100 dB(A) 8 Times as Loud
90		Power Mower (96) Boeing 737, DC-9 @ 6,080 Ft. Before Landing (97) Motorcycle @ 25 Ft. (90)	Newspaper Press (97)	90 dB(A) 4 Times as Loud
80	MODERATELY LOUD	Car Wash @ 20 Ft. (89) Prop. Airplane Flyover @ 1,000 Ft. (88) Diesel Truck, 40 MPH @ 50 Ft. (84) Diesel Train, 45 MPH @ 100 Ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	70 dB(A)
70	QUIET	High Urban Ambient Sound (80) Passenger Car, 65 MPH @ 25 Ft. (77) Freeway @50 Ft. from Pavement Edge, 10:00 AM (76 +/- 6)	Living Room Music (76) TV-Audio, Vacuum Cleaner	60 dB(A) ½ as Loud
60	JUST AUDIBLE THRESHOLD OF HEARING	Air Conditioning Unit @100 Ft. (60)	Cash Register @ 10 Ft. (65-70) Electric Typewriter @ 10 Ft. (64) Dishwasher (Rinse) @ 10 Ft. (60) Conversation (60)	50 dB(A) ¼ as Loud
50		Large-Transformer @100 Ft. (50)		40 dB(A) $^{1}/_{8}$ as Loud
40		Bird Calls (44) Lower Limit Urban Ambient Sound (40)		
		(dB[A] Scale Interrupted		
10				

TABLE 3.3.9-4

INTERIOR AND EXTERIOR NOISE STANDARDS

Land Use	Noise Standards[1]	
	Interior [2,3]	Exterior
Residential – Single family, multifamily, duplex, mobile home	CNEL 45 dB	CNEL 65 dB[4]
Residential – Transient lodging, hotels, motels, nursing homes, hospitals	CNEL 45 dB	CNEL 65 dB[4]
Private offices, church sanctuaries, libraries, boardrooms, conference rooms, theaters, auditoriums, concert halls, meeting halls, etc.	Leq(12) 45 dB(A)	-
Schools	Leq(12) 45 dB(A)	Leq(12) 67 dB(A)[5]
General offices, reception, clerical, etc.	Leq(12) 50 dB(A)	
Bank lobby, retail store, restaurant, typing pool, etc	Leq(12) 55 dB(A)	
Manufacturing, kitchen, warehousing, etc	Leq(12) 65 dB(A)	
Parks, playgrounds		CNEL 65 dB[5]
Golf courses, outdoor spectator sports, amusement parks		CNEL 70 dB[5]

1. CNEL: community Noise Equivalent Level.
   Leq (12): The A-weighted equivalent sound level averaged over a 12-hour period (usually covering the hours of operation for the particular land use).
2. Noise standard with windows closed. Mechanical ventilation shall be provided per Uniform Building Code requirement to provide a habitable environment.
3. Indoor environment-excluding bathrooms, toilets, closets and corridors.
4. Outdoor environment-limited to rear yard of single family homes, multifamily patios and balconies (with a depth of 6 feet or more) and common recreation areas.
5. Outdoor environment-limited to playground areas, picnic areas and other areas of frequent human use.

Source: City of East Palo Alto Draft General Plan, June 1998.

TABLE 3.3.9-5

NOISE/LAND USE COMPATIBILITY MATRIX

LAND USE CATEGORY	COMMUNITY NOISE EQUIVALENT LEVEL (CNEL)						
	55	60	65	70	75	80	
Residential – Single Family, Multi family, Duplex	A	A	B	B	C		
Residential – Mobile Home	A	A	B	C	C		
Transient Lodging – Motel, Hotel	A	A	B	B	C	C	
Schools, Library, Church, Hospital, Nursing Home	A	A	B	C	C		
Auditorium, Concert Hall, Amphitheater, Meeting Hall	B	B	C	C			
Sports Arena, Outdoor Spectator Sport, Amusement Park	A	A	A	B	B		
Playground, Neighborhood Park	A	A	A	B	C		
Golf Course, Riding Stable, Cemetery	A	A	A	A	B	B	C
Office Building and Professional Buildings	A	A	A	B	B	C	
Commercial Retail, Bank, Restaurant, Theater	A	A	A	A	B	B	C
Industrial, Manufacturing, Utility, Wholesale, Service Station	A	A	A	A	B	B	B
Agriculture	A	A	A	A	A	A	A

Zone A – Clearly Compatible. Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Zone B – Conditionally Acceptable. New construction or development should be undertaken only after detailed analysis of the noise reduction requirement is made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Zone C – Normally Incompatible. New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.

Note: Shaded areas indicate new construction or development generally should not be undertaken.

Source: East Palo Alto Draft General Plan, June 1998.

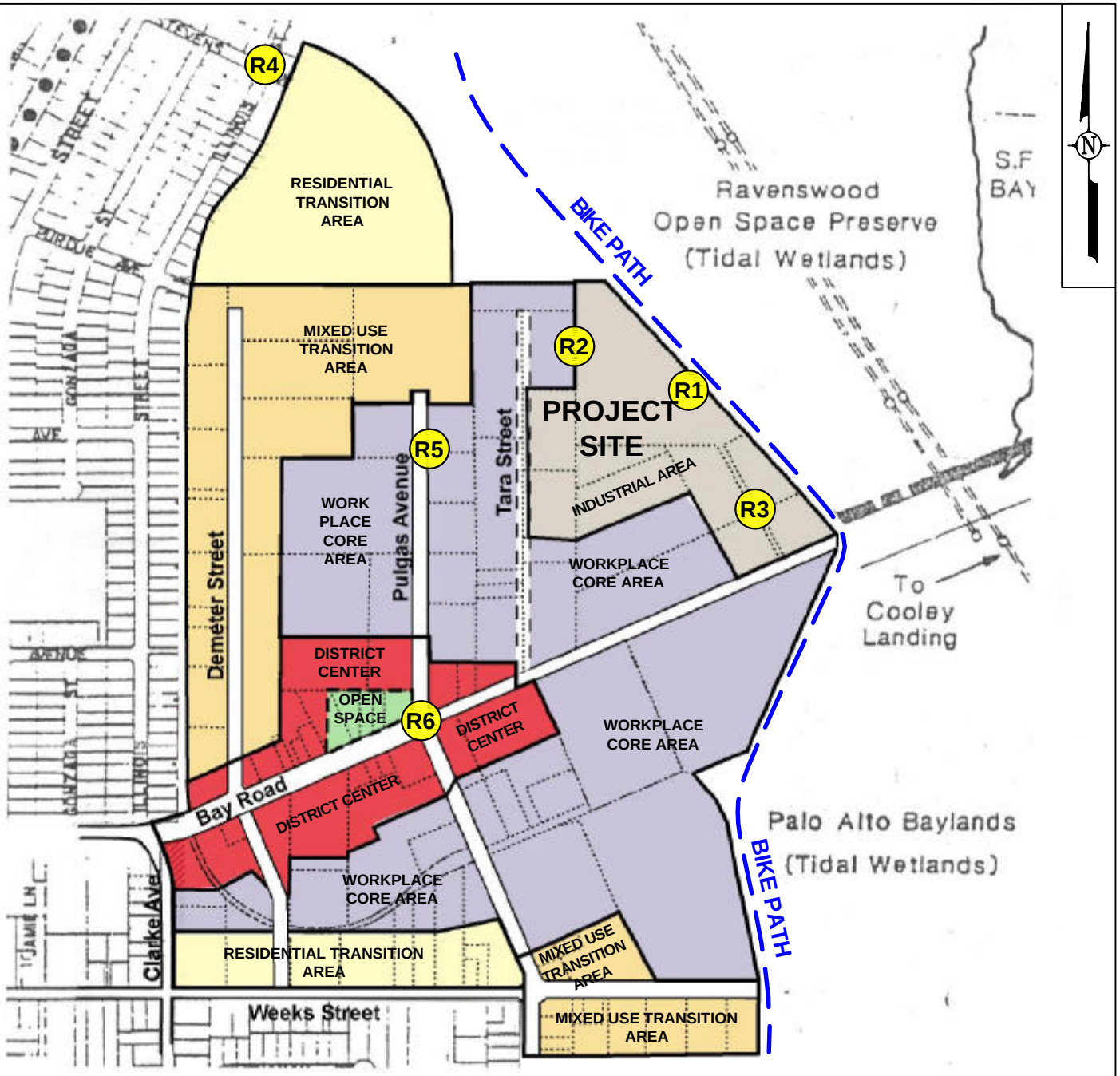
TABLE 3.3.9-6

TYPICAL CONSTRUCTION NOISE LEVELS
AND
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Construction Activity	Noise Level (L_{eq})[a]
Excavation	89
Foundations	78
Erection	85
Finishing	89
Construction Equipment.	Noise Level (dBA at 50 feet)
Concrete Mixer (truck)	85
Dump Truck	88
Portable Air Compressor	81
Generator	76
Pneumatic Tools	85
Backhoe	85
Pump	76

[a] Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

Source: Amendments to the East Palo Alto General Plan and Zoning Ordinance and Infrastructure Improvements in the Ravenswood Business District, Draft Environmental Impact Report, State Clearinghouse No. 2003012113, June 18, 2003, pg. IV.M-10.



LEGEND

District Center

Mixed Use Transition Area

Industrial Area

Open Space (District Center Square)

Workplace Core Area

Residential Transitional Area

R4 Noise Monitoring Location

SCALE: NOT TO SCALE

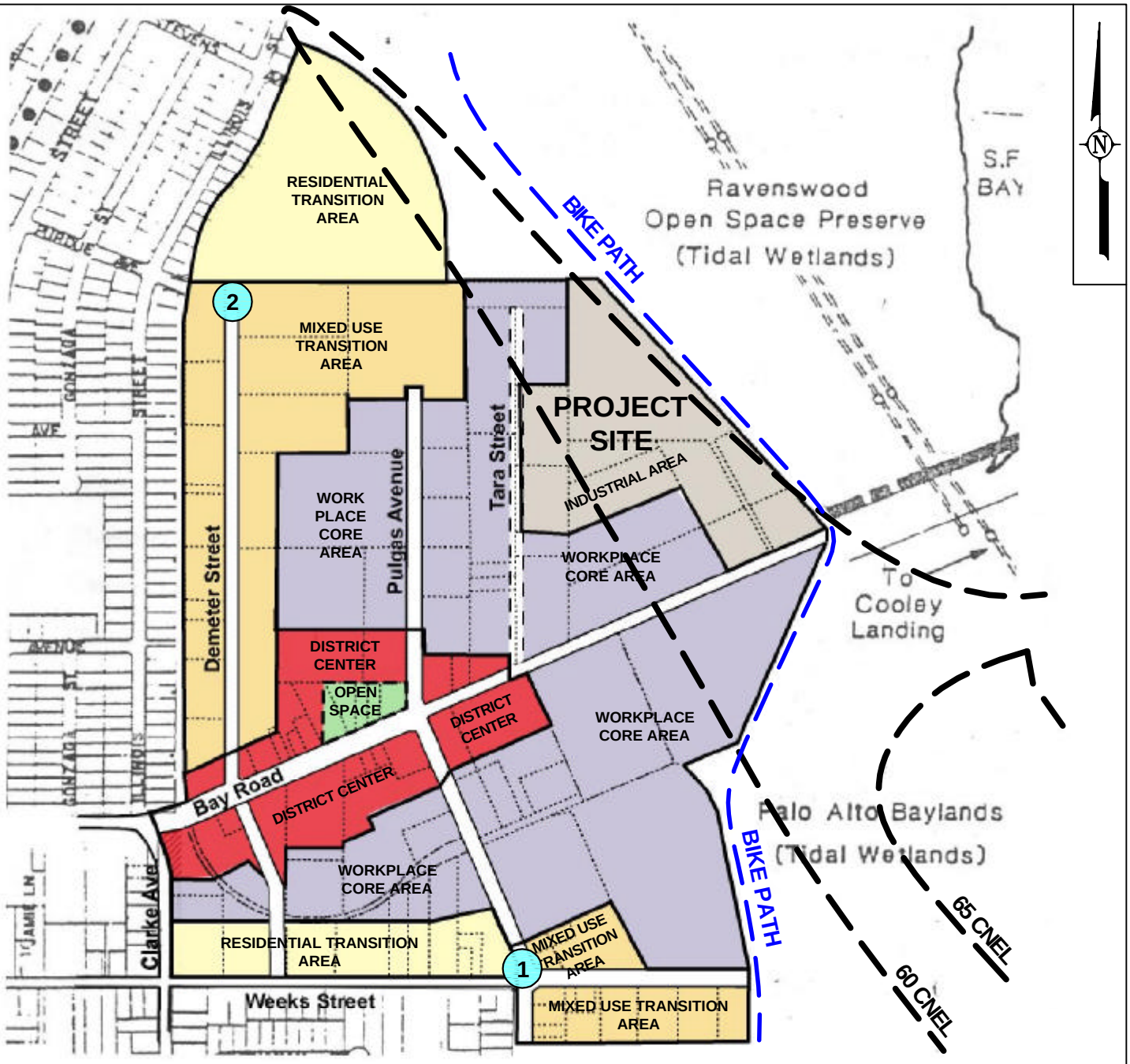
PROJECT NOISE MONITORING LOCATIONS

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

SOURCE: FREEDMAN TUNG & BOTTOMLEY

TRC

FIGURE 3.3.9-1



LEGEND

District Center

Mixed Use Transition Area

Industrial Area

Open Space (District Center Square)

Workplace Core Area

Residential Transitional Area

60 CNEL

65 CNEL

Noise Contours of Palo Alto Municipal Airport

1 Noise Monitoring Location

SCALE: NOT TO SCALE

CITY OF EAST PALO ALTO NOISE MONITORING LOCATIONS

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

SOURCE: FREEDMAN TUNG & BOTTOMLEY

TRC

FIGURE 3.3.9-2

3.3.10 - Public Services

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3.3.10 - Public Services

ENVIRONMENTAL SETTING

Fire Protection

The Menlo Park Fire Protection District (MPFPD) provides fire protection to the City of East Palo Alto and the project site. The MPFPD operates seven fire stations and provides fire protection and emergency medical services to the cities of Atherton, Menlo Park, East Palo Alto and some unincorporated areas of San Mateo County. Station No. 2 of the MPFPD is located at 2290 University Avenue in East Palo Alto, approximately 0.8 road miles from the project site. This station is equipped with one new Pierce Saber fire engine and staffed with three firefighters per shift. The next nearest station is Fire Station #77 at 1467 Chilco Avenue in the City of Menlo Park, about 2.5 road miles from the project site. The main station of the MPFPD is located at 300 Middlefield Road in Menlo Park about 3.5 road miles from the project site. The MPFPD also has a mutual aid agreement with the City of Palo Alto Fire Protection District for support in the event of an incident at Romic.

The response time for the engine and crew of Station No. 2 to arrive at the Romic facility is less than five minutes. The Chilco Avenue station has three fire fighters and one fire engine. The station's response time is within five minutes. Three fire fighting vehicles are located at the Middlefield Station (Station No. 1). Truck 1 is a combination ladder truck and fire engine staffed by a Captain and three firefighters; a Captain and two firefighters staff Engine 1; and Rescue 1 is a specialized vehicle that carries the Jaws of Life and other special rescue equipment (MPFPD web site). Response time from the Middlefield station to the Romic facility is within seven minutes (Keefer, 2003).

The Menlo Park Fire District main office in Menlo Park also provides fire prevention services. The San Mateo County Health Department's Environmental Health Office and the Office of Emergency Services, due to a mutual aid agreement with the MPFPD (Keefer, 2003), provide hazardous incident support to the site.

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Emergency medical aid is provided by the MPFPD and private ambulance companies in San Mateo County. One of the three fire fighters on each fire engine is a trained paramedic, and the Middlefield station has an additional contract ambulance with two paramedics (Keefer, 2003).

The fire engine at the University Avenue station, combined with services provided by nearby stations, provides adequate fire protection. Potential impediments to providing fire protection services to the Romic facility are traffic congestion on University Avenue during peak commute hours, old water lines susceptible to ruptures, and small sized pipes that cannot hold the flow of water required to extinguish certain fires (PEIR, 1999).

Police Protection

The East Palo Alto Police Department (EPAPD) provides police protection to the City of East Palo Alto including the Romic facility. The EPAPD has one station, at 2415 University Avenue where University intersects Bay Road. The EPAPD has approximately 47 police officers and the police officer/resident ratio in the City is approximately 1.6 officers per 1,000 residents (DEIR, 2003). Response time for officers to any part of the City, including the Romic facility, is less than five minutes. Police service is provided 24 hours a day (Sibley, 2003).

Other law enforcement entities in the area are the California Highway Patrol which patrols Highways 101 and 84, and the San Mateo County Sheriff, based in Redwood City, which has a contract with the EPAPD. The contract provides a Regional Investigative Bureau and a Crime Suppression Unit (Sibley, 2003).

Site security at Romic is provided by plant personnel who monitor the site and equipment 24- hours a day, 7 days a week. The Romic facility is surrounded by an 8-foot chain-link fence and block wall topped with three strands of barbed wire, and there are 12 controlled access points which prevent unauthorized personnel from entering the active portion of the facility (Romic, 1997b).

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Emergency Medical Response

Medical facilities are available at Stanford University Hospital and Sequoia Hospital both within 15 minutes of the project site. Stanford University Hospital is located at 300 Pasteur Drive in Palo Alto, approximately 3.5 miles from the Romic facility. Sequoia Hospital is located at 170 Alameda in Redwood City, approximately 7 miles from Romic.

Schools, Parks, Other Public Facilities

The City of East Palo Alto has three parks that include Jack Farrell Park, Bell Street Park, and Martin Luther King Jr. Park. The closest park to the Romic facility is Jack Farrell Park, located about one-half mile west. This park is 3.5 acres and contains a baseball field, basketball courts, picnic areas, a tot playground, and open space for various field sports. Bell Street Park is 5-acres in size and is located about one-mile south/southwest of the facility. Martin Luther King Jr. Park is 5.5 acres in size and is located approximately one-mile southeast of the facility (DEIR, 2003 and AAA, 2002).

The Romic Facility is located in the Ravenswood City School District and the Sequoia Union High School District. The Ravenswood City School District serves the city of East Palo Alto and operates 14 schools including a preschool and one charter high school with a population of approximately 5,000. No existing or projected capacity shortages have been reported for this school district. The Sequoia Union High School District operates four high schools in Redwood City, Atherton, Belmont, and Woodside. Three of the high schools, Atherton, Belmont, and Woodside, are open to students from East Palo Alto. Some of these schools are nearing or at full capacity.

APPLICABLE STANDARDS

There are no explicit applicable standards for public services associated with the proposed project.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines (as amended July 22, 2003), an impact to public services could be considered significant if the project would:

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- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services –

    -- Fire protection
    -- Police protection
    -- Schools
    -- Parks
    -- Other public facilities

POTENTIAL ENVIRONMENTAL IMPACTS

Fire Protection

There is little chance of a significant fire occurring at the Romic facility because fire protection systems and procedures are incorporated into the design and operation of the facility. Fire protection systems include secondary containment, automatic shut-off valves, nitrogen blanketing, operator training, and procedures to manage and profile flammable materials. Three safety systems would probably have to fail simultaneously for a significant fire to occur (HHRA, 2001). The facility also has an Emergency Response Plan with explicit procedures to follow in the event of a fire. Fire hydrants are also located on the facility and they are checked periodically for sufficient pressure and flow. There are approximately 30, 30-lb. and three, 300-lb. portable fire extinguishers available throughout the facility and three AFFF foam hose reels are located near the drum storage areas. Protection against fire and explosion is explained in detail in Chapter 3.0, Section 3.3.6, Hazards and Hazardous Materials, of this EIR.

For the existing facility without the proposed project, there is sufficient offsite fire fighting capacity in the Menlo Park Fire Protection District (MPFPD) which provides fire protection service to the City of East Palo Alto and the Romic facility. The MPFPD has

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two engines and six firefighters located within five minutes of the facility and, two additional engines and seven firefighters located within seven minutes of the facility. The project, which consists of additional storage capacity and some additional process units, is not expected to require more offsite fire protection services than currently exist. Therefore, the project will not require additional fire protection services or construction of new fire protection services and will not result in a significant impact on fire protection services.

Police Protection

The proposed project will increase the types of hazardous waste that will be received, stored and processed at the facility and the permitted storage capacity for the facility. These changes will not alter ongoing security facilities or systems and will not increase the need for police protection. As a result, there will be no significant impact on police protection services related to the proposed project.

Emergency Medical Response

The proposed project will increase the types of hazardous waste that will be received, stored and processed at the facility. These changes will not alter ongoing safety precautions or programs and will not increase the need for emergency medical response. As a result, there will be no significant impact to the need for emergency medical response based on the proposed project.

Schools, Parks, Other Public Facilities

The number of employees is not expected to increase between the currently authorized and proposed number (i.e., 118). Therefore, there is not expected to be any additional impact to schools, parks or other public facilities or require new or altered schools, parks or other public facilities.

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CLOSURE

The Closure Plan (CP) identifies steps necessary to close the facility at the end of its intended operating life, and applies to the operating units. Implementation of the CP would result in dismantling activities and some worker trips to and from the Romic site. The ultimate use of the facility following closure is unknown.

CP activities would not increase demand for fire, police or other public services about current levels and, thus would not result in significant impacts.

MITIGATION MEASURES

Impacts to public services will be less than significant. Therefore, mitigation measures are not required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Mitigation measures are not required. Impacts remain less than significant.

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5. American Automobile Association (AAA), City Series, Palo Alto-Mountain View. Street map showing location of parks and schools. Copyright 2002 by California State Automobile Association.

6. Human Health Risk Assessment (HHRA) and Ecological Risk Assessment for Romic's East Palo Alto Facility, Draft, by Environ Corporation, February 19, 2001, Section 7.1.3, page 7-3, and Section 7.1.3.3, page 7-9.

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3.3.11 - Transportation and Traffic

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3.3.11 - Transportation and Traffic

ENVIRONMENTAL SETTING

Regional Transportation Network

The City of East Palo Alto is served by an established transportation system, with vehicular access provided by the Bayshore Freeway (U.S. Highway 101) and State Route 84. A rail line extends through the northerly portion of the City to the East Bay and northward through San Mateo County. San Francisco International Airport is located approximately 18 miles to the north. Palo Alto Airport, a general aviation facility, is located in Santa Clara County, approximately one-quarter mile south of the East Palo Alto boundary and San Mateo County line. Bus service is available throughout the City of East Palo Alto and the surrounding vicinity (DEIR, 2003).

Project Area Roadways

Project area roadways are shown on Figure 3.3.11-1. The Bayshore Freeway (U.S. Highway 101) is an eight-lane roadway that provides regional north-south access to the city of East Palo Alto. It extends northward toward San Francisco and southward toward San Jose. In the 1999 Countywide Transportation Plan, the stretch of the Bayshore Freeway near East Palo Alto is classified as a Highly Congested Roadway, with an existing and projected Level of Service (LOS) designation of “F” during peak traffic periods.

University Avenue is a four-lane arterial that runs north and south through East Palo Alto. University Avenue has signalized intersections at Donohoe Street, Bell Street, Runnymede Street, Bay Road, Notre Dame Avenue, Michigan Avenue, O’Brien Drive, and Purdue Avenue.

Bay Road is a collector street that provides east-west access through East Palo Alto between Willow Road and Cooley Landing, an identified historical site on San Francisco Bay.

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The Bayshore Freeway (U.S. 101), Bayshore Road, University Avenue and Bay Road east of University Avenue are designated truck routes that provide access to the Romic facility, as shown on Figure 3.3.11-2. The portion of Bay Road associated with the truck route is a four-lane street that reduces to two lanes at Pulgas Avenue. The Bay Road truck route begins at the intersection of Bay Road and University Avenue and extends eastward, where it ends at Cooley Landing. Intersections along Bay Road east of its intersection with University Avenue are not signalized.

The capacity and efficiency of a roadway is determined primarily by the number of travel lanes, and the operation of intersections along the roadway. LOS is a grading system that compares the capacity of a roadway with the average daily traffic (ADT) that occurs on the roadway or more importantly, the traffic that occurs during peak traffic flow. Peak traffic flow usually occurs during weekday commute periods. Peak traffic flow periods for the City of East Palo Alto and associated freeways are 7-9:00 a.m. and 4-6:00 p.m.

Definitions of LOS for roadways are presented in Table 3.3.11-1. A LOS of "A" indicates traffic flow with few or no delays, and LOS "F" indicates substantially reduced speeds and stoppage of traffic along the roadways. The measurement of LOS at intersections is similar to that for roadways but instead of comparing capacity with the actual flow of traffic, the time delay for each vehicle at the intersection is the determining factor of LOS. Definitions of LOS for signalized and non-signalized intersections are shown in Table 3.3.11-2. The City of East Palo Alto has defined the limit of acceptable operations as LOS D for both roadways and intersections. Caltrans also accepts LOS D as the minimum acceptable operating level, but other counties and cities have accepted LOS E and F as acceptable minimums (primarily because of the difficulty/expense to improve the LOS).

Existing Traffic

The Romic recycling facility is located near the eastern termination of Bay Road in the Ravenswood Industrial Area of East Palo Alto. Hazardous wastes and processing materials are delivered to the facility by truck. The waste transport trucks utilize

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designated truck routes through East Palo Alto (see Figure 3.3.11-2). The major roadways are U.S. 101, CA-84 (Willow Road/Bayfront Expressway), University Avenue, and Bay Road. Vehicle access to the site following the truck routes is as follows:

- Traveling northwest on the Bayshore Freeway (U.S. 101): Take University Avenue Exit to Donohoe Street, west on Donohoe, then north on University Avenue to Bay Road and east on Bay Road to the project site.

- Traveling southeast on the Bayshore Freeway (U.S. 101): Take the University Avenue Exit, then north on University Avenue to Bay Road and east on Bay Road to the project site.

- Traveling southwest on the Bayshore Expressway (CA-84): Take the University Avenue exit, then south on University to Bay Road, and east on Bay Road to the project site.

- Traveling northeast on the Bayshore Expressway (CA-84): Take the University Avenue exit, then south on University to Bay Road, and east on Bay Road to the project site.

The existing peak hours LOS for the U.S. 101 and S.R. 84 highway segments that trucks and most other vehicles traveling to the project site will use are shown on Table 3.3.11-3. As can be seen, U.S. 101 during the morning peak period of 7-9:00 a.m. has a LOS of F. State Route 84 also has a LOS of F for traffic coming from the northeast into the Palo Alto area during the morning peak period and to the northeast when leaving the Palo Alto area during the afternoon peak period. For other directions and times (except for the a.m. southeast bound high occupancy vehicle (HOV) lane on U.S. 101), the freeways serving the project site have a LOS of D or better.

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The intersections encountered along the route to the project site are also key in determining the existing condition of traffic. The following intersections lie along the routes to the project site:

Traveling northwest on U.S. 101:

U.S. 101 Northwest bound Off-Ramp-Capitol Avenue/Donohoe Street
University Avenue/Donohoe Street
University Avenue/Bell Street
University Avenue/Runnymead Street
University Avenue/Bay Road

Traveling southeast on U.S. 101:

University Avenue/U.S. 101 Southeast bound Off-Ramp
University Avenue/Donohoe Street
University Avenue/Bell Street
University Avenue/Runnymead Street
University Avenue/Bay Road

Traveling southwest and northeast on S.R. 84 (Bayfront Expressway):

S.R. 84 (Bayfront Expressway) and University Avenue
University Avenue/Purdue Avenue
University Avenue/O'Brien Drive
University Avenue/Notre Dame Avenue
University Avenue/Michigan Avenue
University Avenue/Bay Road

The existing LOS at these intersections is shown in Table 3.3.11-4. During the morning peak traffic period (7-9:00 a.m.), the University Avenue/Donohoe Street intersection has a LOS of E. This is below the minimum LOS of D set by the City of East Palo Alto. Delivery trucks and other vehicles accessing the project site off of U.S. 101 will encounter this intersection and experience delays approaching one minute. Approaching

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the project site off S.R. 84 in the morning peak period, vehicles will also encounter delays close to one minute (LOS of F) at the University Avenue/Purdue Avenue intersection that is controlled by a two-way stop sign. All other intersections that would be encountered in the morning peak period are LOS of D or better.

During the afternoon peak period (4-6:00 p.m.) the U.S. 101 off-ramps and all intersections encountered on the route to the project site off of U.S 101have a LOS of D or better. Off of S.R. 84 and south on University Avenue in the peak afternoon period, three intersections encountered have a LOS of F. These are S.R. 84/University Avenue, University Avenue/Purdue Avenue, and University Avenue/Michigan Avenue. All other intersections encountered are LOS of D or better. A vehicle entering (or leaving) the project site in the afternoon peak period via Bay Road, University Avenue and S.R. 84, would encounter considerable delay. The delay would continue on S.R. 84 if the direction were northeast bound since the LOS rating on this roadway during the afternoon peak period is also F.

Field observations indicate that certain intersections along University Avenue during the afternoon peak traffic period have a lower LOS rating than calculated using measured traffic volumes. These include the Donohoe Street, Bell Street, Runnymede Street, Bay Road, and O' Brien Drive intersections. The observed LOS for these intersections is F and is shown in parentheses on Table 3.3.11-4. The reason for the difference between calculated LOSs and LOSs based on observation, is provided on page IV.C-18 of the City of East Palo Alto DEIR for amendments to the General Plan and Zoning Ordinance, June 18, 2003.

Existing Parking Capacity

Existing, designated parking at the Romic facility can accommodate approximately 40 trucks, 110 employee vehicles, and 9 visitor vehicles (Figure 3.3.11-3). These designated parking places do not include the open space gravel parking area near the entrance to the facility. This area could accommodate another 40-50 vehicles. Currently there are 5-8 trucks parked at the facility at any time.

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Existing Facility Truck Trips

Existing facility daily truck trips were calculated based on the maximum number of trucks Romic could process when operating at full permitted capacity. This figure constitutes the "baseline" against which employee transportation and traffic impacts of the proposed project are evaluated in this chapter. (See **Potential Environmental Impacts)**

Estimates indicate that Romic could process about 108 truck trips/ day if the facility was operated at full permitted capacity. The majority of the arrivals and departures would occur between non-peak commute hours. (See Table 3.3.11-5)

Since 1993, Romic has been operating at about 20% of its authorized capacity. Over this time-period, the number of trucks arriving and departing the facility has been averaging about 34 truck trips/ day. The majority of the arrivals and departures have been occurring during peak commute hours. (See Table 3.3.11-5)

Existing Facility Employee Vehicle Trips

Employees arrive and depart the facility in private vehicles, generally one/ vehicle. At full operational capacity, employees would account for approximately 236 vehicle trips/ day. All arrivals and departures would likely occur during non-peak commute hours. (See Table 3.3.11-5)

Historically, the number of employees arriving and departing the facility has been averaging about 144 vehicle trips/ day. The majority of the arrivals and departures have been occurring during non-peak commute hours. (See Table 3.3.11-5)

Palo Alto Airport

The nearest airport is the Palo Alto of Santa Clara County Airport (Palo Alto Airport), a general aviation facility located approximately one mile southeast of the Romic facility. The Palo Alto Airport is a general aviation airport that provides services for single and dual-engine airplanes and small jet aircraft (Achondoa, 2002). The airport averages 580 operations (combined takeoffs and landings) per day (Bennett, 2002). The airport

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operates 24 hours per day, with an FAA Air Traffic Control Tower in operation from 7:00 a.m. until 9:00 p.m. daily. Touch-and-go operations may not occur between 9:00 p.m. and 7:00 a.m. The airport has one lighted runway (Pilots Guide, 2002).

Due to the predominant wind pattern, normal approaches to the airport are from the southeast, and normal takeoffs are toward the northwest. Although the Romic facility is located northwest of the airport, the flight path is not over the Romic facility. After takeoff, pilots make an immediate 10-degree turn to the right and continue on course until reaching the Dumbarton Bridge, located approximately one mile northeast of Romic (Figure 3.3.11-5).

The Land Use Plan for Areas Surrounding Santa Clara County Airports (Airport Land Use Commission, September 1992) states that the Airport Land Use Commission (ALUC) is charged with protecting the public health, safety and welfare by minimizing the public's exposure to safety hazards in areas surrounding public airports, with the exception of areas that are already devoted to incompatible land uses. Safety considerations designed to protect both people and property include height restrictions for objects that may be hazardous to air navigation and limitations on land use and population densities.

The ALUC establishes safety zones for each airport within Santa Clara County (which includes the Palo Alto Airport) based on historical data and a demonstrated pattern of aircraft accidents around similar airports. Compatible types of land uses and population densities are adopted for areas within the safety zones. The purpose is to minimize the number of people exposed to aircraft crash hazards. Engine failure in general aviation aircraft occurs most frequently during takeoff, but may also occur on landing. Because takeoffs and landings are the most critical phases of flight, safety zones extend beyond the ends of runways. The safety zones range from 2,000 feet beyond the end of a runway for single-engine, general aviation aircraft weighing no more than 5,000 pounds, to 3,500 feet for twin-engine general aviation aircraft weighing no more than 12,500 pounds, to 5,000 feet for a preferential takeoff runway for aircraft weighing more than

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12,500 pounds and all jet-propelled aircraft. The safety zone may be reduced to 3,500 feet at the non-preferential end of the runway. Safety zone widths are 1,500 feet.

Safety zones are divided into inner and outer zones. The first 1,500 feet from the end of a runway is the “inner safety zone”, where no new objects are allowed to be erected or project above the elevation of the runway surface. The larger (longer and wider) “outer safety zone” has restrictions that include prohibition of residential uses and limitations on population density. At the Palo Alto Airport, the outer safety zone extends 3,500 feet from the southern end of the runway. At the northern end of the runway, the outer safety zone extends 3,500 feet from the end of the runway. The Romic facility is located more than 5,000 feet from the northern end of the runway and is therefore outside the airport safety zone.

Population density within the airport safety zone is limited to no more than 10 persons per acre on an annual average and no more than 25 persons at any one time. This limitation does not apply to the Romic facility since it is outside the airport safety zone.

Building height restrictions have been established on arrival and departure paths to the airport. These are shown in Figure 3.3.11-5. As can be seen, the Romic facility is within the 355-foot height restriction area and just outside the 255-foot height restriction area.

Takeoffs and landings from the Palo Alto Airport are controlled by air traffic controllers, located in a tower at the airport. These controllers direct aircraft landing and taking off from 7:00 a.m. to 9:00 p.m., seven days a week. From 9:00 p.m. to 7:00 a.m., the airport reverts to an “uncontrolled airport” where departing and arriving aircraft must provide their own separation through announcements on a pre-designated radio frequency.

As stated previously, aircraft taking off on Runway 31 turn right 10-degrees and proceed to the Dumbarton Bridge. They then turn right if departing to the east and left if departing to the west. Aircraft taking off on Runway 13 turn left for departure to the east and turn

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left 270-degrees to depart over the airport if departing to the west. Other departures are possible with permission of the tower controllers.

Landing is predominantly on Runway 31 because of prevailing winds from the northwest. An estimated 80 percent of the landings are on Runway 31 with the remaining 20 percent on Runway 13 (Fisher, 2004). All arriving aircraft are provided landing instructions by the tower controllers but the following landing patterns are normal and what an arriving aircraft can expect (Flight Guide, 2004). The landing patterns are shown on Figure 3.3.11-4.

Runway 31

Arrival from the Northeast - Aircraft can expect to make a right downwind parallel to the runway at an altitude of 800 feet (804 ft msl elevation). The aircraft then makes a right 90-degree turn to base and another right 90-degree turn to the runway heading of 310 degrees.

Arrival from the Southeast – Aircraft can expect a 45-degree entry via the Stanford Stadium to a left downwind parallel to the runway at an altitude of 1000 feet. Aircraft must maintain 1500 feet until crossing the Bayshore Freeway. The aircraft then makes a left 90-degree turn to base and another left 90-degree turn to the runway heading of 310 degrees. Aircraft may also be assigned a straight in approach on the runway heading of 310-degrees, but must first be cleared through the Moffett Federal Airport airspace.

Arrival from the Southwest – Aircraft can expect a 45-degree entry via the Stanford Stadium to a left downwind parallel to the runway at an altitude of 1000 feet. Must maintain 1500 feet until crossing the Bayshore Freeway. The aircraft then makes a left 90-degree turn to base and another left 90-degree turn to the runway heading of 310 degrees.

Arrival from the Northwest – Aircraft can expect a left downwind parallel to the runway at an altitude of 1000 feet. Must maintain 1500 feet until crossing the Bayshore Freeway.

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The aircraft then makes a left 90-degree turn to base and another left 90-degree turn to the runway heading of 310 degrees.

Runway 13

Arrival from all Directions - Aircraft can expect to make a left base approach with an approximate three quarter-mile final. Controllers can change the approach to a right base approach for aircraft arriving from the west (Fisher, 2004).

APPLICABLE STANDARDS

San Mateo County Countywide Transportation Plan

The San Mateo County Countywide Transportation Plan (San Mateo County, 1999) outlines traffic plans and objectives for the area. Two freeways are identified for improvements by the year 2010 -- southern U.S. Highway 101 and eastern State Route 84. Both of these roadways provide access to East Palo Alto and are part of the routes that trucks use to access the Romic facility. The California Department of Transportation (Caltrans) manages these roadways, plus University Avenue, as they are part of the California state highway system.

San Mateo County Hazardous Waste Management Plan

The San Mateo County (County) Hazardous Waste Management Plan (San Mateo County, 1992) includes recommended transportation routes for hazardous waste shipments. Recommended routes for intra-county hazardous waste shipments are U.S. Highway 101 (north/south) and State Routes 380 and 92 (east/west). State Routes 82 and 84 are listed as “never preferred” routes of transport. Transportation routes for inter-county transport of hazardous wastes are identified as freeways and highways only. Between San Francisco and Santa Clara Counties, U.S. Highway 101 and State Route 280 are identified as the preferred routes. U.S. Highway 101 is shown on Figure 3.3.11-1, and SR 280 lies approximately 5 miles to the southwest of 101.

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City of East Palo Alto Draft General Plan, Circulation Element

The Circulation Element of the City Draft General Plan has a stated purpose to provide a safe, efficient and adequate circulation system for the City and provides the following goals:

- Support development of an efficient regional transportation system.
- Provide a system of local roadways that meets community needs.
- Increase the use of public transit and non-vehicular methods of transit.
- Improve traffic safety in residential neighborhoods.
- Improve transportation system efficiency.

Land Use Plan for Areas Surrounding Santa Clara County Airports

The Land Use Plan for Areas Surrounding Santa Clara County Airports (Airport Land Use Commission, September 1992) was consulted regarding airport safety issues. The Land Use Plan (LUP) states that the Airport Land Use Commission (ALUC) is charged with protecting the public health, safety and welfare by minimizing the public's exposure to safety hazards in areas surrounding public airports, with the exception of areas that are already devoted to incompatible land uses. Safety considerations designed to protect both people and property include height restrictions for objects that may be hazardous to air navigation and limitations on land use and population densities.

The ALUC establishes safety zones for each airport within Santa Clara County (which includes the Palo Alto Airport), based on historical data and a demonstrated pattern of aircraft accidents around similar airports.

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the CEQA Guidelines (as amended July 22, 2003), impacts to transportation and traffic could be considered significant if they would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the

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number of vehicle trips, the volume to capacity ratio on roads or congestion at intersections).

- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Result in inadequate parking capacity.
- Conflict with adopted policies, plans or programs that support alternative transportation (e.g., bus turnouts, bicycle racks).

POTENTIAL ENVIRONMENTAL IMPACTS

➢ **Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads or congestion at intersections).**

Proposed Facility Truck Trips -

Operational Phase -

Enhanced solid waste processing capabilities will increase the volume of hazardous waste currently being shipped off-site and transported to approved off-site disposal facilities. It is projected that this will increase the number of trucks by approximately 12 truck trips/ day over existing baseline conditions. While the majority of the arrivals and departures would occur during peak commute hours, this increase is not considered substantial in relation to the existing traffic load and capacity of the street system.

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Construction Phase -

Construction activities associated with retrofit of existing facilities and construction of new facilities will create additional truck traffic to and from the facility over a period of approximately 24 months. It is estimated that the number of trucks arriving and departing the facility will increase by approximately 6 truck trips/ day. While the majority of the arrivals and departures would occur during peak commute hours, this increase is not considered substantial in relation to the existing traffic load and capacity of the street system.

Proposed Facility Employee Vehicle Trips -

Operational Phase -

The number of employee vehicle trips/day associated with project approval is not expected to increase over existing baseline levels (236 vehicle trips/day).

Construction Phase -

Construction activities associated with retrofit of existing facilities and construction of new facilities will create additional construction-worker vehicle traffic over a period of approximately 24 months. This increase is estimated to be approximately 14 vehicle trips/ day. Since all arrivals and departures would occur during non-peak commute hours, this increase is not considered substantial in relation to the existing traffic load and capacity of the street system.

- **Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.**

  The increase in traffic during peak hours is not expected to exceed, either individually or cumulatively, the existing or proposed level of service of F on U.S. 101 during the peak morning period, and the LOS of F on State Route 84 for southwest bound traffic in the morning and northeast bound traffic in the afternoon.

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- **<u>Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.</u>**

  Air traffic from the Palo Alto Airport occurs in the vicinity of the Romic facility. However, due to the predominant wind pattern, normal approaches to the airport are from the southeast, and normal takeoffs are toward the northwest. The departure flight path is not over the Romic facility; after takeoff, pilots make an immediate 10-degree turn to the right and maintain that heading until reaching the Dumbarton Bridge, located approximately one mile northeast of Romic (Figure 3.3.11-5). As a result, air traffic passes east of the Romic facility.

  Arriving aircraft use the landing patterns shown in Figure 3.3.11-4. All patterns for landing on Runway 31, the predominant runway for landing, are well clear of Romic and the proposed project site location and therefore will not be impacted by the project. Since aircraft landing on Runway 31 do not pass over the Romic facility, there will be a less than significant impact from the proposed project on aircraft landing on Runway 31.

  Aircraft arriving from all directions are assigned a left base approach to Runway 13 or an alternate approach at the discretion of the controller. The most likely alternate approach would be a right base approach for aircraft arriving from the west. The left base approach typically has a final flight path length of three-quarters of a mile wherein aircraft would not pass over the Romic facility and the proposed project. Occasionally, there are multiple aircraft waiting to land on Runway 13 and the final flight path would extend over and beyond the Romic facility to the northwest. This would result in aircraft flying over Romic but with an altitude of 1,000 feet or greater when passing over the facility (Fisher, 2004). Since aircraft passing over are well above the facility, and the proposed project will not extend into the flight path airspace, there will be no impact on air traffic patterns. Since the vertical separation between landing aircraft on Runway 13 and the Romic facility is 900 feet or greater, there will be a less than significant safety impact to the proposed project from arriving aircraft.

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Potential project-related effects on air traffic will be less than significant, as the proposed project will occur within the existing Romic site. New facilities will not be higher than existing ones and will not be constructed outside the existing facility boundary. In addition, the Romic facility is outside the established land use safety zone for the Palo Alto Airport. As a result, there will be no project-related effect on local air traffic and no effect on existing air traffic patterns.

- **Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).**

  The proposed project includes the addition of new treatment processes and waste categories for treatment. However, the same types of wastes will be transported to the site as with current operations. Therefore, an increase in hazards is not anticipated. The proposed project will not incorporate hazardous design features such as sharp curves or dangerous intersections. The transport trucks will continue to use designated truck routes and comply with U.S. Department of Transportation regulations. Romic will continue to assure that trucks transporting waste to the facility will use hazardous waste manifests, U.S. Department of Transportation regulation placards and that drivers are properly trained in the transportation of hazardous waste.

  An off-site release of pure methanol from a tanker truck was analyzed in the Human Health Risk Assessment of the site. The release was assumed to occur at one of the intersections along the truck route to the site and would cover one-quarter of the intersection area. Analysis of the assumed release showed that it would have a less than significant impact on human life and health. (HHRA, 2001).

- **Result In Inadequate Emergency Access**

  Romic has made arrangements with emergency response groups as to the type of response that might be required and the potential hazards that may be encountered during a response. The Menlo Park Fire Protection District is the primary first

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responder for onsite emergencies and would be assisted by a San Mateo County Hazardous Materials Response Team as required. Offsite responders are contacted by dialing 9-911 or in the case of a fire automatically or manually by various alarms. Offsite responders would access the site through the main entrance (South Gate # 2) or through the gates off Tara Road (Gates 6-9 if necessary (see Figure 2-3). The addition of new tanks and processes will not affect these existing access routes for offsite entities responding to an onsite emergency.

- **Result In Inadequate Parking Capacity**

  Existing, designated parking at the Romic facility can accommodate approximately 40 trucks, 110 employee vehicles, and 9 visitor vehicles (Figure 3.3.11-3). These designated parking places do not include the open space gravel parking area near the entrance to the facility. This area could accommodate another 40-50 vehicles. Since there are existing parking spaces for 110 employee vehicles, there will be sufficient parking for employee vehicles.

  Currently there are 5-8 trucks parked at the facility at any time. This could increase by approximately 3 trucks with increase operations from the proposed project. Since there is existing space to park 40 trucks, there will be sufficient parking for trucks once the proposed project is implemented. This onsite parking capacity will therefore be able to accommodate any project-related increase in vehicles without modification.

  Parking is not provided outside the facility on Bay Road. The proposed project will not create a need for such parking. Therefore, the project will not affect parking capacity outside the facility.

- **Conflict with Adopted Policies, Plans Or Programs that Support Alternative Transportation**

  Project-related impacts to existing traffic in the City of East Palo Alto will be less than significant. Further, the project will not result in new traffic patterns or need for

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additional street or parking capacity. As a result, the project will have a less than significant impact on alternative transportation plans.

CLOSURE

Implementation of the Closure Plan (CP) would result in dismantling activities and some worker trips to and from the Romic site. Traffic from dismantling activities would be temporary. Thus, no significant traffic and transportation impacts would result from implementation of the CP.

MITIGATION MEASURES

Impacts to transportation and traffic will be less than significant. Therefore, mitigation measures are not required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Mitigation measures are not required. Impacts will be less than significant.

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1. Human Health Risk Assessment (HHRA) and Ecological Risk Assessment for Romic's East Palo Alto Facility, Draft, by Environ Corporation. February 19, 2001.

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10. Flight Guide, Airport and Frequency Manual, Volume 1, 11 Western States, Revision 107. January 2004. Published by Airguide Publications, Inc., 1207 Pine Avenue, P.O. Box 1288, Long Beach CA 90801.

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TABLE 3.3.11-1

ROADWAY LEVELS OF SERVICE (LOS) DEFINITIONS

LEVEL OF SERVICE	DESCRIPTION	VOLUME TO CAPACITY (V/C) RATIO
A	Primarily free-flow operations at average travel speeds, usually about 90 percent of free-flow speed. Vehicles can maneuver unimpeded within the traffic stream. Delay at signalized intersections is minimal.	0.00 - 0.60
B	Reasonably unimpeded operations at average travel speeds, usually about 70 percent of free-flow speed. Ability to maneuver is only slightly restricted, and stopped delays are not bothersome.	0.61 - 0.70
C	Represents stable operations, but ability to maneuver and change lanes in mid-block locations may be more restricted. Lower queues and/or adverse signal coordination may contribute to lower average travel speeds of about 50 percent of free-flow speed. Drivers will experience some appreciable tension.	0.71 - 0.80
D	Borders on a range in which small increases in flow may cause substantial increases in approach delay and, therefore, decreases in arterial speed. Causes range from adverse signal progression, inappropriate signal timing, high volumes, or any combination of these factors. For planning purposes, this Level of Service is the lowest that is considered acceptable. Average travel speeds are about 40 percent of free-flow speed.	0.81 - 0.90
E	Characterized by significant approach delays and average travel speeds of one-third of free-flow speed or lower. Causes range from adverse progression, high signal density, extensive queuing at critical intersections, inappropriate signal timing, or some combination of these factors.	0.91 - 1.00
F	Characterized by arterial flow at extremely low speeds below one-third to one-quarter of free-flow speed. Congestion is likely at critical signalized intersections, resulting in high approach delays. Adverse progression is frequently a contributor to this condition.	Above 1.00

Source: Cotton/Beland/Associates, Inc.; Dinwiddie & Associates (June, 1998).

TABLE 3.3.11-2

SIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS) DEFINITIONS

LEVEL OF SERVICE	DESCRIPTION	AVERAGE DELAY AT INTERSECTION (Seconds)
A	Very low delay of vehicles with favorable progression through intersection and/or short signal cycle lengths	≤ 10.0
B	Low delay of vehicles with good progression through intersection and/or short signal cycle lengths	10.1 to 20.0
C	Average delay of vehicles with fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Longer delay of vehicles due to a combination of unfavorable progression through the intersection, long cycle lengths, and high volume to capacity ratios. Many vehicles stopped and individual cycle failures are noticeable.	35.1 to 55.0
E	High delay of vehicles indicating poor progression through the intersection, long cycle lengths, and high volume to capacity rations. Individual cycle failures are frequent occurrences.	55.1 to 90.0
F	Delays unacceptable to most drivers with delays due to over-saturation, poor progression through the intersection, or very long cycle lengths.	> 80.0

UNSIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS) DEFINITIONS

LEVEL OF SERVICE	DESCRIPTION	AVERAGE DELAY AT INTERSECTION (Seconds)
A	Little or no delay	≤ 10.0
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: DEIR, Amendments to the East Palo Alto General Plan and Zoning Ordinance and Infrastructure Improvements in the Ravenswood Business District, State Clearinghouse No. 2003012113, June 18, 2003, pg. IV.C-16.

TABLE 3.3.11-3

FREEWAY SEGMENT EXISTING LEVELS OF SERVICE (LOS)

SEGMENT	PEAK HOUR*	DIRECTION	LOS
U.S. 101 – Whipple Avenue to Santa Clara County Line Mixed-Flow Lanes	AM	Northwestbound	F
	AM	Southeastbound	F
	PM	Northwestbound	B
	PM	Southeastbound	D
U.S. 101 – Whipple Avenue to Santa Clara County Line HOV Lanes	AM	Northwestbound	B
	AM	Southeastbound	E
	PM	Northwestbound	D
	PM	Southeastbound	B
S.R. 84 – Willow Road to University Avenue	AM	Southwestbound	F
	AM	Northeastbound	A
	PM	Southwestbound	A
	PM	Northeastbound	F
S.R. 84 – University Avenue to Alameda County Line	AM	Southwestbound	F
	AM	Northeastbound	A
	PM	Southwestbound	A
	PM	Northeastbound	F

Source: DEIR Amendments to the East Palo Alto General Plan and Zoning Ordinance and Infrastructure Improvements in the Ravenswood Business District, June 18, 2003. Table IV.C-4, pg. IV.C-21.

*Peak Hours: AM – 7 to 9:00; PM – 4 to 6:00
HOV – High Occupancy Vehicle

TABLE 3.3.11-4

INTERSECTION EXISTING LEVELS OF SERVICE (LOS)

INTERSECTION	PEAK HOUR*	INTERSECTION CONTROL	INTERSECTION DELAY (Seconds)	LOS**
U.S. 101 Northwestbound Off-Ramp-Capitol Avenue./Donohoe Street	AM	Signal	24.3	C
	PM		21.0	C
University Avenue/Donohoe Street	AM	Signal	56.1	E
	PM		47.2	D(F)
University Avenue/Bell Street	AM	Signal	6.9	A
	PM		15.4	B(F)
University Avenue/Runnymede Street	AM	Signal	7.1	A
	PM		8.0	A(F)
University Avenue/Bay Road	AM	Signal	36.1	D
	PM		53.8	D(F)
University Avenue/U.S. 101 Southeastbound Off-Ramp	AM	Signal	18.1	B
	PM		27.2	C
S.R. 84 (Bayfront Expressway) and University Avenue	AM	Signal	22.2	C
	PM		85.7	F
University Avenue/Purdue Avenue	AM	Two-way stop sign	57.0	F
	PM		>120	F
University Avenue/O'Brien Drive	AM	Signal	11.8	B
	PM		18.3	B(F)
University Avenue/Notre Dame Avenue	AM	Signal	17.5	B
	PM		22.0	C
University Avenue/Michigan Avenue	AM	Two-way stop sign	31.7	D
	PM		115.0	F

Source: DEIR Amendments to the East Palo Alto General Plan and Zoning Ordinance and Infrastructure Improvements in the Ravenswood Business District, June 18, 2003. Table IV.C-3, pg. IV.C-19.

*Peak Hours: AM – 7 to 9:00; PM – 4 to 6:00
**Calculated LOS. LOS in parenthesis is from field observation. See text for explanation.

TABLE 3.3.11-5
ROMIC ENVIRONMENTAL
DAILY TRUCK & EMPLOYEE VEHICLE TRIPS

BASELINE OPERATIONS
(Existing Permitted Capacity)

	6am	6:45	7am	7:30	8am	9am	10am	11am	12pm	1pm	2pm	2:45	3pm	3:30	4pm	5pm	6pm	7pm	8pm	9pm	10pm	10:45	11pm	11:30	12pm	1am	2am	3am	4am	5am		Total Trips/Day	Peak Trips* of Total
			3rd shift ends										2nd shift starts										2nd shift ends										
			1st shift starts										1st shift ends										3rd shift starts										
Operations:																																	
Employee Arrivals		56										46										16										118	0
Employee Departures				16										56										46								118	16
Waste Truck Arrivals	2		3	4	4	4	4	3	3	3	3		3		4	4	3	2	2	2	1											54	26
Waste Truck Departures			2	3	4	4	4	4	3	3	3		3		3	4	4	3	2	2	2		1									54	24
																															Total	344	66

PROPOSED OPERATIONS
(Baseline w/ Additions)

	6am	6:45	7am	7:30	8am	9am	10am	11am	12pm	1pm	2pm	2:45	3pm	3:30	4pm	5pm	6pm	7pm	8pm	9pm	10pm	10:45	11pm	11:30	12pm	1am	2am	3am	4am	5am		Total Trips/Day	Peak Trips of Total
			3rd shift ends										2nd shift starts										2nd shift ends										
			1st shift starts										1st shift ends										3rd shift starts										
Operations:																																	
Employee Arrivals		56										46										16										118	0
Employee Departures				16										56										46								118	16
Truck Arrivals	2		**5**	4	4	4	**6**	3	3	3	3		3		**6**	4	3	2	2	2	1											60	30
Truck Departures			2	3	4	**6**	4	4	3	3	3		**5**		3	4	**6**	3	2	2	2		1									60	28
Construction:																																	
Employee Arrivals		7																														7	0
Employee Departures														7																		7	0
Construction-Related Deliveries			1				1								1																	3	2
Construction-Related Departures						1								1			1															3	2
																															Total	376	78

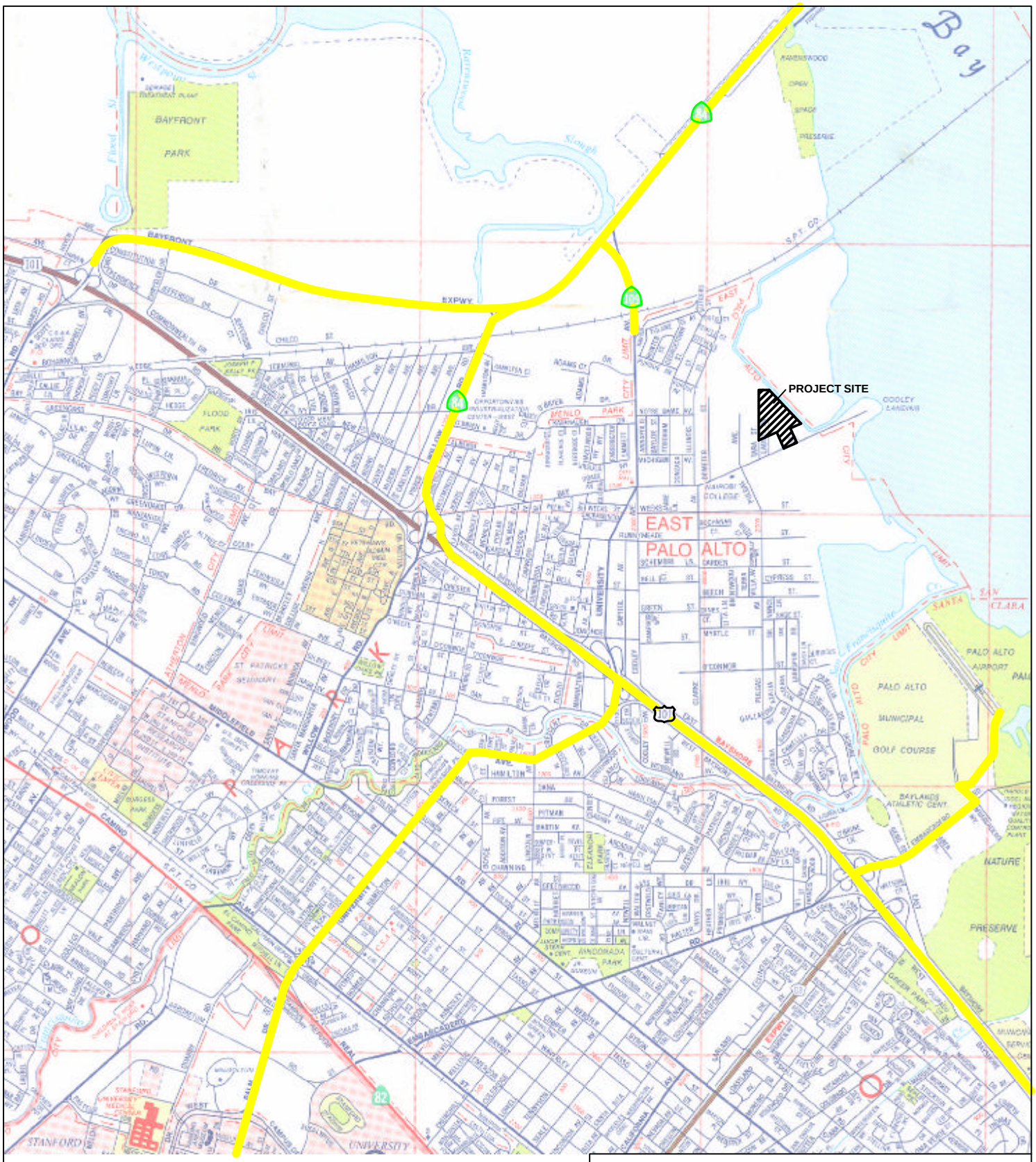
HISTORICAL OPERATIONS
(@ Approx. 20% of capacity)

	6am	6:45	7am	7:30	8am	9am	10am	11am	12pm	1pm	2pm	2:45	3pm	3:45	4pm	5pm	6pm	7pm	8pm	9pm	10pm	10:45	11pm	11:30	12pm	1am	2am	3am	4am	5am		Total Trips/Day	Peak Trips of Total
			3rd shift ends										2nd shift starts										2nd shift ends										
			1st shift starts										1st shift ends										3rd shift starts										
Operations:																																	
Employee Arrivals		50										16										6										72	0
Employee Departures				6										50										16								72	6
Truck Arrivals			2		3	3		2		1		1			2	2		1														17	12
Truck Departures					2	3	3		2		1		1			2	2		1													17	9
																															Total	178	27

TRANSFER OPERATION
(Alternative #1: No Project)

	6am	6:45	7am	7:30	8am	9am	10am	11am	12pm	1pm	2pm	2:45	3pm	3:45	4pm	5pm	6pm	7pm	8pm	9pm	10pm	10:45	11pm	11:30	12pm	1am	2am	3am	4am	5am		Total Trips/Day	Peak Trips of Total
			1st shift starts												1st shift ends																		
Operations:																																	
Employee Arrivals		35																														35	0
Employee Departures																35																35	35
Truck Arrivals			10		10	10		10		10		10			20	10																90	60
Truck Departures			20		12	12																										44	44
																															Total	204	139

*** Peak traffic hours (shaded 7- 10am and 4- 7pm) are expanded from the City's definition of 7- 9am and 4- 6pm to reflect a worst case**



MAJOR ACCESS ROAD TO SITE

SOURCE: CALIFORNIA STATE AUTOMOBILE ASSOCIATION ROADMAP OF PALO ALTO

ROADS IN VICINITY OF PROJECT SITE

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.11-1

TRUCK ROUTE TO SITE

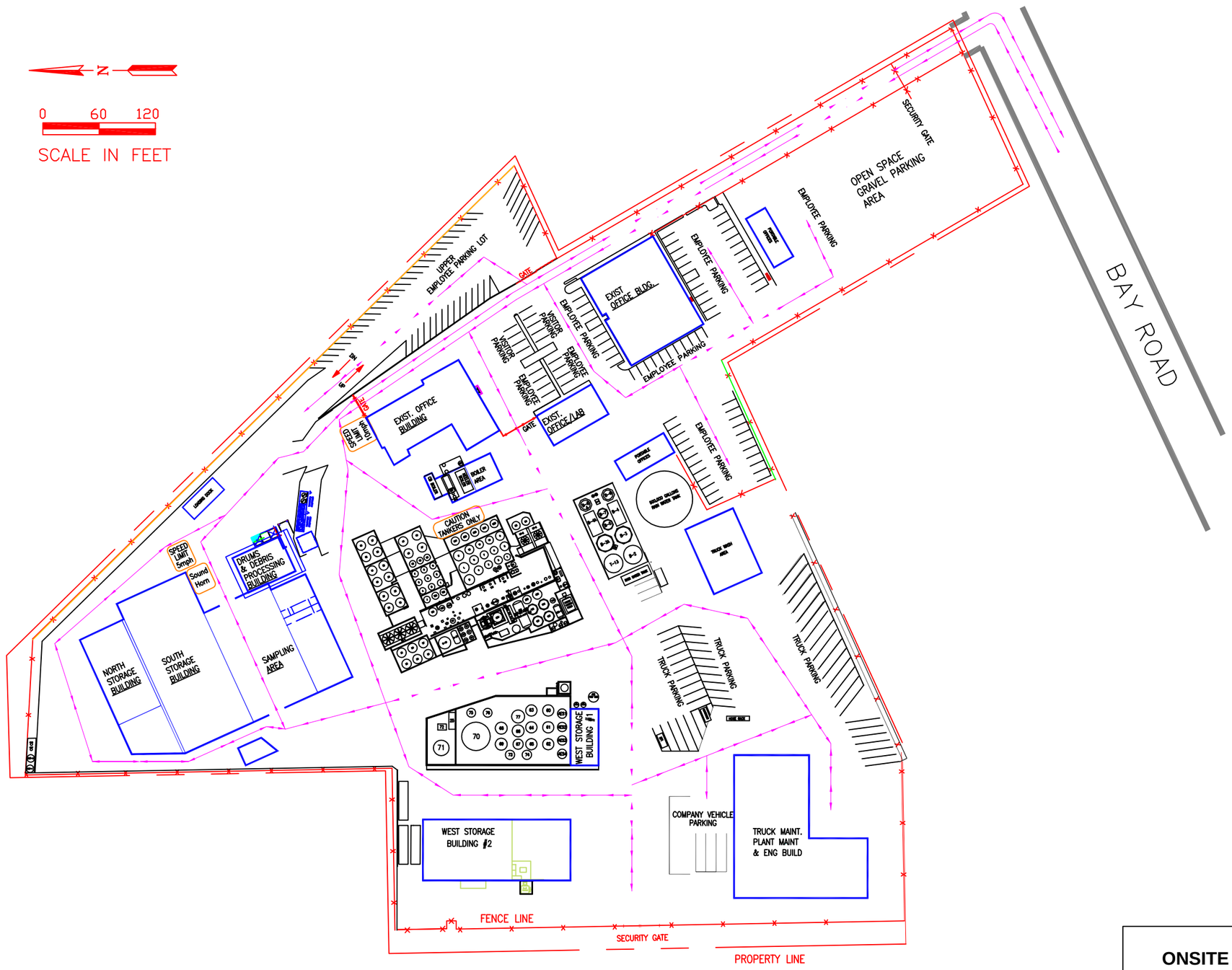
SOURCE: CALIFORNIA STATE AUTOMOBILE ASSOCIATION ROADMAP OF PALO ALTO

TRUCK ROUTES TO PROJECT SITE

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.11-2



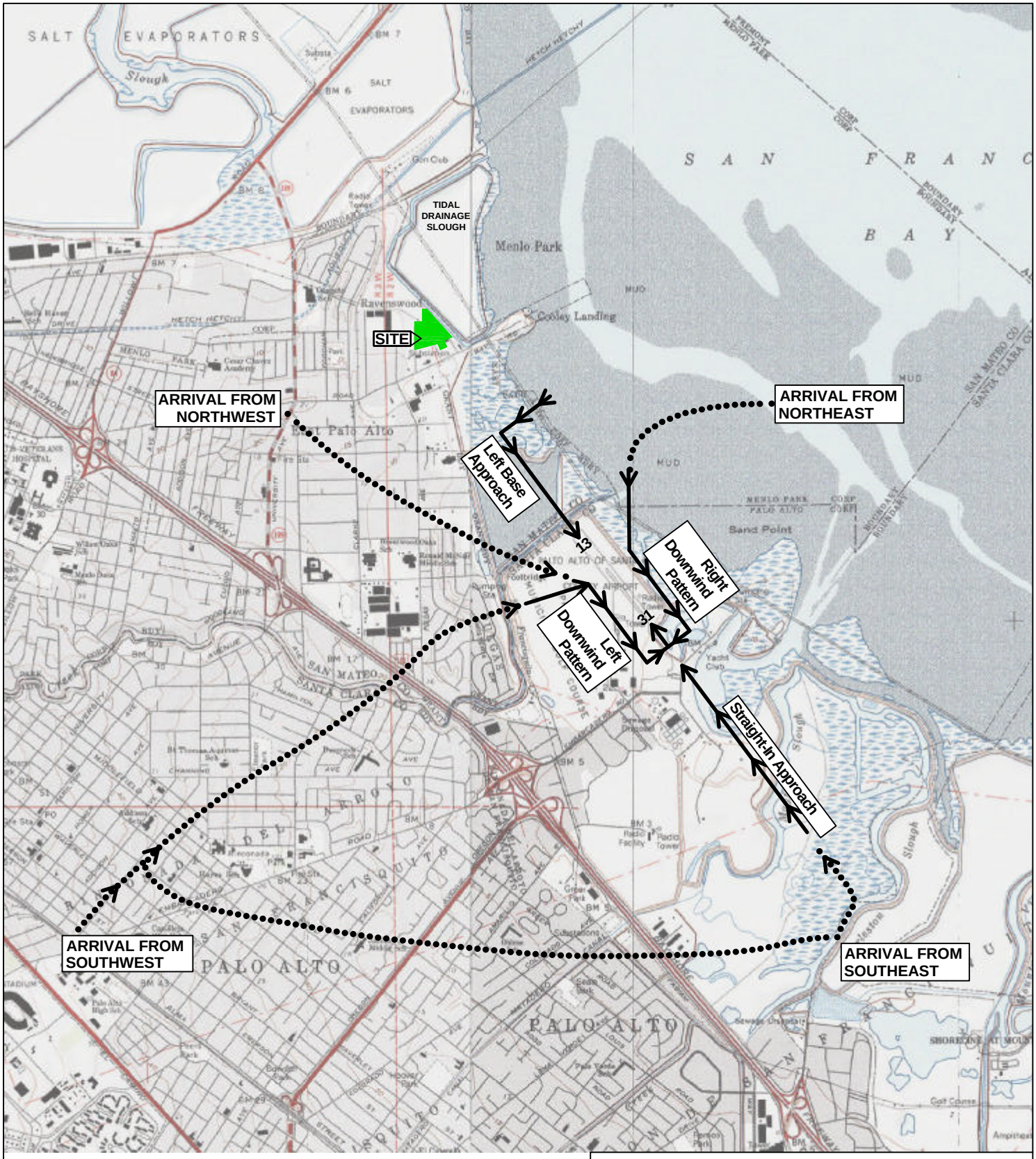
SOURCE: ROMIC ENGINEERING DEPARTMENT

ONSITE TRAFFIC PATTERN AND PARKING

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.11-3



APPROX. SCALE (FEET)

0 3,000

SOURCES:
UNITED STATES GEOLOGICAL SURVEY 7.5 MINUTE TOPOGRAPHIC MAPS - MOUNTAIN VIEW AND PALO ALTO QUADRANGLES
FLIGHT GUIDE, AIRPORT AND FREQUENCY MANUAL, VOLUME 1, 11 WESTERN STATES, REVISION 107, JANUARY 2004 (PUBLISHED BY AIRGUIDE COMMUNICATIONS)

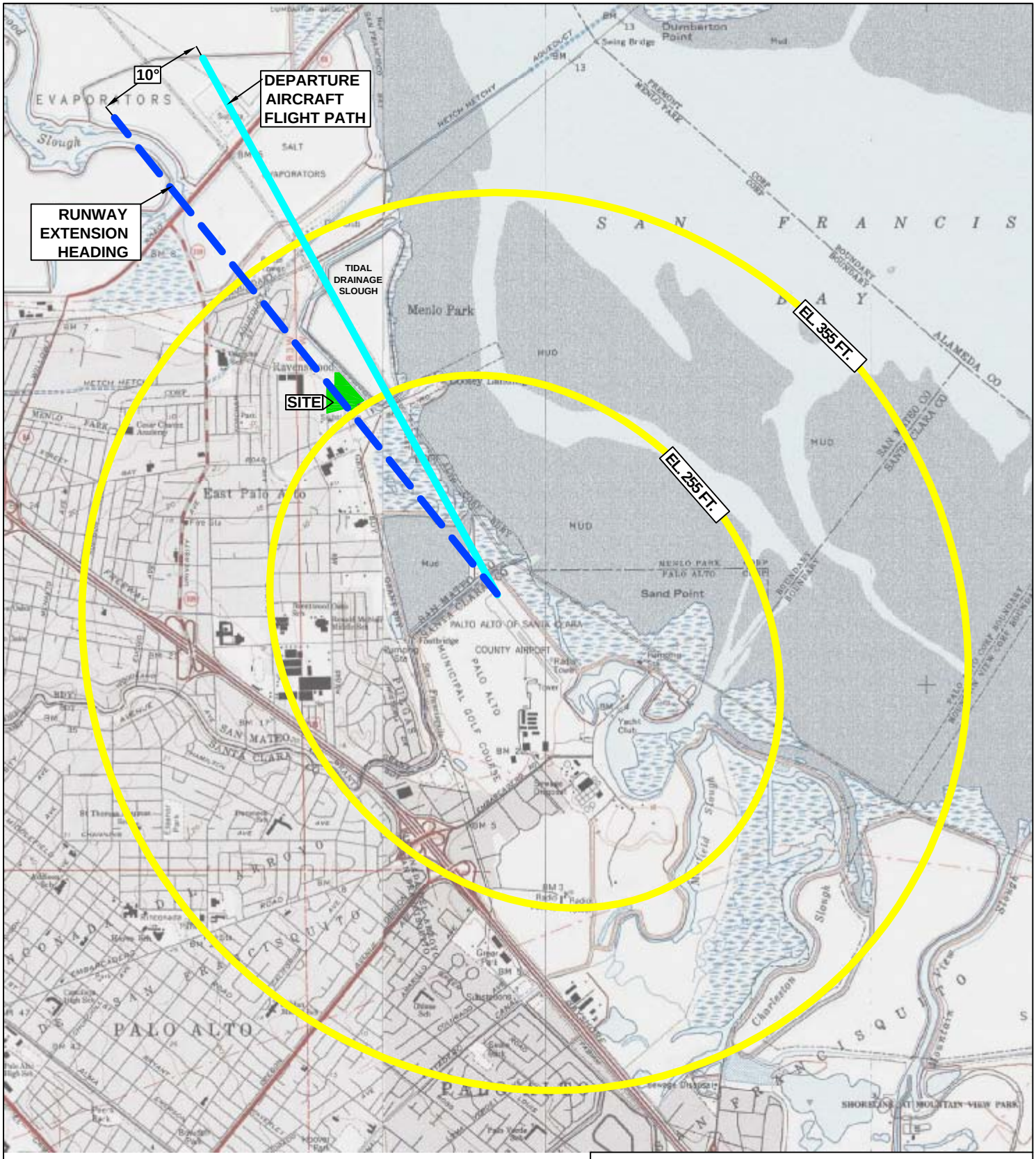
N

PALO ALTO AIRPORT LANDING PATTERNS

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.11-4



APPROX. SCALE (FEET)

0 3,000

SOURCES:
UNITED STATES GEOLOGICAL SURVEY 7.5 MINUTE TOPOGRAPHIC MAPS - MOUNTAIN VIEW AND PALO ALTO QUADRANGLES
COUNTY OF SANTA CLARA PLANNING DEPARTMENT, SEPTEMBER 1991

N

HEIGHT RESTRICTION BOUNDARIES
DEPARTURE PATTERN

ROMIC ENVIRONMENTAL TECHNOLOGIES CORPORATION
EAST PALO ALTO, CALIFORNIA

TRC

FIGURE 3.3.11-5

3.3.12 - Utilities and Service Systems

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3.3.12 - Utilities and Service Systems

ENVIRONMENTAL SETTING

Water Supply

The East Palo Alto County Waterworks District (EPAWD) obtains most of its water supply from the San Francisco Water Department's (SFWD) Hetch-Hetchy Aqueduct, which passes through the City water is distributed through underground cast iron main pipelines. The water system is currently being upgraded. In general, the water system meets or exceeds county and state standards except for fire protection, which is currently limited in some areas of the City due to undersized pipe (Bravo, 2004).

CalAm's firm daily allocation of water from Hetch-Hetchy is approximately 2.1 million gallons per day. Current daily water use for the City of East Palo Alto is approximately 2.25 million gallons per day. The difference of 150,000 gallons per day is currently purchased as additional water from Hetch-Hetchy. CalAm and the City of Palo Alto are in the process of reinstating an existing City water well that would provide an additional 500,000 gallons per day of capacity. Projected daily water use is estimated to be approximately 4.1 million gallons per day in 2025 (Bravo, 2004).

Water is used at the Romic facility for domestic use and operations. Daily consumption is approximately 35,000 gpd. This constitutes approximately 1.5 percent of total water use in the City of East Palo Alto. Potable water from the EPAWD is distributed at the Romic facility via a piping system that supplies site buildings for domestic use and fire protection.

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Sewage and Wastewater Disposal

The East Palo Alto Sanitary District (EPASD) is the primary provider of sanitary sewer services for the City and is the provider for the Romic facility. The EPASD has a 2.7 million gallons per day (MGD) capacity entitlement agreement with the Palo Alto Regional Water Quality Control Plant. Currently, EPASD is using approximately 1.7 MGD of its 2.7 MGD capacity entitlement. The projected daily sewage flow could exceed the 2.7 MGD entitlement when full buildout of the planned Ravenswood Business District occurs. However this is not expected until 2025 (DEIR, 2003).

Romic discharges water from restrooms, laboratories and other facilities and wastewater from onsite processing and captured storm flows. Some of these waters are treated onsite before being discharged under an Industrial Waste Discharge Permit. An annual average of 375,000 gallons per month is discharged to the EPASD.

Electric Power

Electric power is supplied to the Romic facility by PG&E via an existing distribution line. Onsite electrical use averages approximately 13,000 kilowatt (kW) hours per day. The facility also has a backup generator (300-kVA) to provide power to critical systems in the event of a power outage. The backup generator is automatically activated in the event of a power outage.

Natural Gas

Natural gas is supplied to the Romic facility by PG&E. It is used primarily as fuel for two steam boilers. Current use is approximately 3,500 therms/day. Future use is estimated to remain the same.

Telephone and Communication

Telephone service is provided to Romic by SBC Communications. Onsite internal communication at Romic is provided via two-way radio and/or signal horns. External communications are provided by an auto-dialer system for emergency support personnel (Romic, 1997b).

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Waste Disposal

In East Palo Alto, municipal solid waste is collected by BFI Peninsula and transported to the South Bayside Transfer Station and then to the Ox Mountain Sanitary Landfill located three miles east of Half Moon Bay for final disposal. As of the year 2000, the Ox Mountain Sanitary Landfill's remaining permitted capacity was estimated to be approximately 44 million cubic yards and the landfill was not expected to reach capacity until 2020 (DEIR, 2003).

APPLICABLE STANDARDS

Natural gas, electricity, and telephone service are purchased from vendors that are regulated by the California Public Utilities Commission. The collection of solid municipal waste is provided by the City of East Palo Alto. While numerous laws and regulations as well as standards apply to these agencies, the standards are not directly applicable to the Romic facility which only employs their services.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines (as amended July 22, 2003), an impact to utilities and service systems could be considered significant if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Not have sufficient water supplies available to serve the project from existing entitlements and resources and new or expanded entitlements are needed.
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate

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capacity to serve the project's projected demand in addition to the provider's existing commitments.

- Be served by a landfill that does not have sufficient permitted capacity to accommodate the project's solid waste disposal needs.

- Be out of compliance with federal, state and local statutes and regulations related to solid waste.

POTENTIAL ENVIRONMENTAL IMPACTS

➢ **Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board**

Wastewater from the Romic Facility is discharged under permit to the EPASD. The wastewater must meet requirements set by the EPASD and the water discharged by the EPASD must meet water quality standards set by the Regional Water Quality Board. Therefore, wastewater discharged from the Romic facility and from the proposed project will not exceed the wastewater standards and treatment requirements of the Regional Water Quality Board.

➢ **Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects**

At the Romic facility, wastewater is generated by employee use, waste processing operations, captured storm water and the groundwater treatment program. The proposed project is not expected to require additional employees, so there will be no increase in domestic water use and disposal, nor will the allowed average throughput of 154,512 gallons per day change. The groundwater treatment program and the release of captured storm water are unrelated to the proposed project and will be ongoing. As a result, there will be no significant change to the quantity of domestic and processing wastewater discharged from the facility to EPASD as a result of the proposed project.

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- **Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects**

  Storm water potentially contacting hazardous materials does not flow off the Romic site. Precipitation is captured onsite, where it flows to an underground collection system. The water is sampled and, if necessary, treated in the facility wastewater treatment system. It then is discharged to the EPASD. The project will not affect the storm water collection and treatment system and will not require new storm water drainage facilities or expansion of existing facilities. Therefore, there will not be a significant impact on existing local or regional storm water drainage systems from implementation of the proposed project.

- **Not have sufficient water supplies available to serve the project from existing entitlements and resources and new or expanded entitlements are needed**

  Water use at Romic is for employee use and for hazardous waste treatment processes. Since the proposed project is not expected to result in an increase in total employees relative to currently authorized numbers, and since the facility's processing rate will not be increased above the current permitted level of 154,512 gallons of liquid per day, no significant impact on water use is anticipated and new or expanded entitlements will not be needed.

- **Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments**

  The quantity of wastewater discharged from the facility after implementation of the proposed project will not increase significantly. Therefore it is not necessary for the wastewater treatment provider to determine that it has adequate capacity to serve the proposed project.

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- **Be served by a landfill that does not have sufficient permitted capacity to accommodate the project's solid waste disposal needs**

  From operations, Romic currently generates and disposes of approximately 30 cubic yards of municipal solid waste a month. Based on the proposed project, that amount will remain approximately the same. Based on the Ox Mountain Sanitary Landfill's remaining capacity of 44 million cubic yards, this amount is less than significant.

  During construction of the proposed project, a maximum of 50 cubic yards of construction and demolition waste consisting of removed components and discarded temporary bracing will be generated. In addition, footing work for foundations will generate a maximum of 25 tons of concrete and soil waste. The construction waste will be taken to the Ox Mountain Sanitary Landfill which accepts construction waste. This relatively small quantity of construction waste will have a less than significant impact on the Ox Mountain Sanitary Landfill's capability to receive waste.

- **Be out of compliance with federal, state and local statutes and regulations related to solid waste**

  By delivering its waste to the properly designated landfills, Romic will be in compliance with all federal, state, and local statutes and regulations related to solid waste.

CLOSURE

The Closure Plan (CP) identifies steps necessary to close the facility at the end of its intended operating life, and applies to the operating units. Implementation of the CP would result in dismantling activities and some worker trips to and from the Romic site. The ultimate use of the facility following closure is unknown.

CP activities would not increase demand for utilities or service systems above current levels and would not result in significant impacts.

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MITIGATION MEASURES

The requirements of the proposed project would be less than significant. Therefore, mitigation measures are not required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures are required. Impacts remain less than significant.

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REFERENCES

1. Amendments to the East Palo Alto General Plan and Zoning Ordinance and Infrastructure Improvements in the Ravenswood Business District, City of East Palo Alto Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2003012113, by ESA, June 18, 2003.

2. Bravo, Fernando, City Engineer, City of East Palo Alto. Telephone conversation on May 6, 2004; (650) 853-3117.

3. Cotton/Beland/Associates (CBA). *Final Program Environmental Impact Report, City of East Palo Alto General Plan.* November 23, 1999.

4. Romic Chemical Corporation (Romic). *Romic Audit Information, Romic Environmental Technologies Corporation, East Palo Alto, California.* November 1997b.

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