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Table 1-Summary of Impacts and Mitigations
2.0 Introduction

2.1 Purpose and Overview of the Environmental Review Process
This document is a Draft Environmental Impact Report (to be known hereafter in this document as the DEIR), prepared pursuant to the California Environmental Quality Act of 1970 (CEQA), as amended. This DEIR describes existing environmental conditions within and adjacent to the proposed Project area within the City of Newark. The DEIR also includes measures which could be incorporated into the Project to mitigate (lessen) anticipated environmental impacts to a level of insignificance or eliminate them entirely. Finally, this DEIR identifies and analyzes feasible alternatives to the proposed Project, cumulative impacts of this and other projects on the environment, and other mandatory elements as required by CEQA.

Responses to comments received regarding this DEIR during the public review period will be included in the Final Environmental Impact Report (FEIR). Together, the DEIR and FEIR constitute the full Environmental Impact Report (EIR) for the Project.

As provided in CEQA and implementing guidelines, public agencies are charged with the responsibility of avoiding or minimizing environmental damage to the fullest extent feasible. In fulfilling this responsibility, public agencies must balance a variety of objectives, including economic, environmental and social factors. As an informational document to local officials, governmental agencies and members of the public, the purpose of the EIR is to serve as a disclosure document, identifying potential impacts, mitigation measures and alternatives.

Approval of the EIR by the lead agency does not constitute approval of the underlying Project, in this instance, the adoption of the proposed Master Plan for Ohlone College District’s Newark Center for Health Sciences & Technology.

2.2 Lead Agency
The Ohlone Community College District is the lead agency for preparation of the EIR, as defined by Section 21067 of CEQA (California Environmental Quality Act). This means that the District is designated as the public agency which has the principal responsibility for approving or carrying out the proposed Project and for assessing likely environmental effects of the proposal.

Preparation of this EIR is in accord with CEQA, including all amendments thereto, and Guidelines for Implementation of the California Environmental Quality Act.

Methodologies used for determining standards of significance for each impact category analyzed in the EIR are based on CEQA Guidelines and are described in Section 4 of this DEIR. By applying appropriate significance criteria, impacts under
each environmental topic have been categorized as either "significant" or "less than significant." Methods used to determine the level of significance of potential impacts vary depending on the environmental topic, as described in the individual subsections.

2.3 Content and Organization of the Document
Sections 15122 through 15132 of the CEQA Guidelines describe the content requirements of EIRs. EIRs must include:

- a table of contents;
- a summary of the project’s proposed actions and their consequences;
- a description of the proposed project, including objectives to be achieved by the project;
- a description of existing environmental conditions;
- an analysis of the anticipated impacts on the environment should the project be built or carried out as proposed;
- feasible measures which can be taken by the proponent or the City to lessen or mitigate identified environmental impacts;
- project alternatives, including the "no project" alternative;
- significant irreversible environmental changes;
- growth inducing impacts;
- cumulative impacts, including environmental impacts of the proposed project viewed over time in conjunction with related past, present and reasonably foreseeable probable future projects whose potential impacts may compound or interrelate with the proposed project.

2.4 Notice of Preparation
The Ohlone Community College District has completed a Notice of Preparation (NOP) for the proposed Project and has circulated the NOP to all Responsible Agencies, other public agencies and interested citizens as required by CEQA. Copies of the NOP and responses received by the Lead Agency during the NOP review period are included within the appendix of this document (Appendices 8.1 and 8.2).
3.0 Project Characteristics

3.1 Project Location and Context
Located within the City of Newark, the 81-acre Project site is located west of Cherry Street, south of Mowry Avenue and east of the Union Pacific Railroad tracks. Alameda County Tax Assessor Numbers for the parcels comprising the site are 901-0185-013-07 and 901-0185-014.

For geographic orientation purposes, the following directions will be used in this DEIR: north will mean towards Mowry Avenue and the George Silliman Center; east will mean towards Cherry Street; south will mean towards Stevenson Boulevard; and west will mean towards San Francisco Bay.

Topographically, the site is generally flat with a gradual but distinct slope from east to west, toward San Francisco Bay. The site is vacant and apart, from street trees and a constructed berm along Cherry Street, contains no trees or unique geological outcrops. A recorded wetland exists in the westerly portion of the Project site. The site has historically been used for agriculture and continues to be cultivated for field crops.

The site is encumbered by several utility and other easements.

Surrounding land uses include athletic fields on the Newark Memorial High School campus to the east, vacant lands to the south and west and a combination of research and development uses and the George M. Silliman Recreation Center, operated by the City of Newark, to the north.

Exhibit 1 shows the regional setting of the City of Newark and Exhibit 2 shows the location of the proposed Newark Center within the City of Newark.

3.2 Site History
In early 2002, the voters of the Ohlone College Community College District approved Bond Measure A, which authorized the District to purchase land and construct a permanent college campus facility in Newark. Although the District has operated a facility in the City of Newark for a number of years, this facility is on leased land and is not anticipated to accommodate future student loads. Accordingly, the 81-acre site was purchased by the District in anticipation of developing such a master plan and constructing permanent facilities.

The site is currently vacant and had been planned for research and development uses for Sun Microsystems, Inc., however, construction plans were never implemented and the site is vacant.
3.3 Project Description

The Newark Center for Health Sciences & Technology Master Plan includes the following with regard to proposed campus development.

**Overall site design**
The portion of the site closest to Cherry Street is proposed to be developed for educational and supporting land uses. This includes approximately 30 acres of the site. The remainder of the site to the west would remain undeveloped with no plans for development at this time. Future development of this portion of the site will be subject to further CEQA review at the time development is proposed.

The proposed master plan is shown on **Exhibit 3**.

**Development program**
A single main educational building is proposed to be constructed fronting along Cherry Street. This building is proposed to contain two stories with 160,000 gross square feet of floor space. The main building would have a height of approximately 35 feet. Of this, approximately 145,000 square feet would be devoted to classrooms, offices and administrative space. Ten thousand (10,000) gross square feet would be used as a clinic for Washington Hospital or a similar user. A separate 5,000-square foot service and maintenance building would be constructed along the north side of the proposed campus. A separate day care building of approximately 18,000 square feet could also be constructed.

Academic programs to be undertaken within the Newark Center are proposed to consist of computer and information technology, exercise science and wellness, health sciences, environmental science and general education. A Learning Research Center (library and media center) is also proposed.

Administrative and support services included on the campus are proposed to consist of student services, a bookstore, a cafe, information services, admissions and records, maintenance and shop facilities and campus security.

**Enrollment and staffing**
The Newark Center is proposed to accommodate a total student enrollment of approximately 2,450 with a peak hour student enrollment and administrative staff load of 860.

The Newark Center proposes to offer classes six days per week between the hours of 8 a.m. to 10 p.m. Monday-Thursday, 8 a.m. to 6 p.m. Friday, and 8 a.m. to 5 p.m. on Saturday. The facility would also generally be open for public use, such as conferences and other public gatherings, on Friday, Saturday and Sunday evenings. The library portion of the Center would be open during the week, on Saturday and from 8 a.m. to 6 p.m. on Sunday. Hours of operation may be modified by District administration in the future based on anticipated use of facilities.
Parking access and public transit
Primary vehicular access to the site is proposed to be in the approximate center of the site’s Cherry Street frontage, using an existing left turn lane within the landscaped center median. Two new secondary drives are proposed to connect to Cherry Street using existing curb cuts at the site’s northern and southerly property lines. The main access drive is proposed as a four-lane entrance road with two inbound and two outbound lanes separated by a center median. The secondary drives are both proposed to have two travel lanes (right in and right out) only.

The central driveway intersection with Cherry Street is proposed to be signalized.

The three access drives connect to the campus perimeter roadway. This private roadway system provides access to the interior of the campus, including parking lots, the service/maintenance area and other areas.

Main parking lots would be located behind the main building with smaller parking areas sited east and west of the main building. Parking is proposed for approximately 650 vehicles, including disabled-access parking and parking for shuttle busses.

An AC Transit bus stop is located along Cherry Street, near the proposed main Project entrance.

Bicycle and motorcycle parking would also be provided.

Landscaping and open space
Site landscape includes an existing 50-foot wide landscaped easement along the south side of Cherry Street. Additional landscape development, varying from about 75 to 150 feet in width is proposed for this area between Cherry Street and the main building. Paved and planted outdoor use areas would be provided to the south, east and west of the main building. Significant tree cover would be provided at walkways and within parking lots.

Approximately 12.5 acres of the development portion of the site is proposed to be landscaped.

Infrastructure
Water, sewer, natural gas, electrical and telecommunication services would be extended to the site from Cherry Street, all undergrounded. Sewer service is also available on the west side of the Project site. On-site storm drains and open swales would also be constructed to accommodate increased amounts of stormwater. The storm drain system is also proposed to include a 0.74-acre detention basin south of the main building to assist in stormwater control.

To assist with energy conservation, solar collection panels are proposed to be installed on the roof of the main building. Other energy conservation techniques are also proposed to be used as part of campus development, including but not limited to a ground-source heat pump and an energy recovery system for the air handling system.
Grading
The development portion of the Project site is proposed to provide for building areas and to improve site drainage.

Copies of the draft Master Plan document are available at the Bond Program Construction office, Building 20, Ohlone College Main Campus, located at 43600 Mission Boulevard, Fremont.

Phasing
All of the above improvements would be constructed in a single phase.

3.4 Project Objectives
Objectives to be achieved through the approval and development of the Project include:

1) To develop and implement a campus master plan that provides strong identity and visibility from Cherry Street.
2) To develop a campus master plan that protects existing natural features and resources to the fullest extent feasible.
3) To provide a range of educational opportunities for District students within a campus of approximately 160,000 square feet, which includes classroom space, library and research space, office use, support uses and partnership space.
4) To allow for development of additional partnering land uses and activities on the site, so long as such uses further the basic educational mission of the District.
5) To provide for future expansion of the Newark Center in the future, as long as necessary CEQA environmental determinations are made prior to future construction.
6) To provide adequate on-site parking to support anticipated land uses as well as facilities to support non-vehicular modes of travel, including but not limited to bicycle facilities and a bus stop.
7) To provide connections to existing civic and educational uses in the Project vicinity, including the George M. Silliman Center and Newark Memorial High School.
8) To incorporate energy conservation and efficiency systems as part of Project design to minimize use of these resources.

3.5 Initial Study
An Initial Study has been prepared for this Project and is located in Appendix 8.1. Based on the Initial Study, the following topics were deemed not to be significant and will therefore not be addressed in this EIR: Agricultural Resources, Mineral Resources, Population and Housing, Local Schools, and Recreational Facilities.
3.6 Approvals and Permits Required
The following list identifies necessary approvals and permits needed to implement the Project:

- Approval of Environmental Impact Report (Ohlone College District)
- Approval of Newark Center Master Plan for Technology & Health Sciences (Ohlone College District)
- Federal Clean Water Act 404 Permit (U.S. Army Corps of Engineers)
- Section 1603 Streambed Alteration Agreement (Calif. Dept. of Fish & Game) (probable)
- Wetland Certification (Regional Water Quality Control Board)
- Approval of Building Plans (Division of State Architect)
- Approval of Building Plans (State Fire Marshal)
- Notice of Intent (filed with State Water Resources Control Board)
- Encroachment Permit (City of Newark)
- Water connections (Alameda County Water District)
- Sewer connections (Union Sanitary District)

3.7 Areas of Controversy
No areas of controversy have been identified regarding the proposed Project.
Exhibit 1. Regional Location
Exhibit 2. Project Setting
Exhibit 3. Master Plan
4.0 Environmental Analysis

Topics Addressed in the DEIR
This section of the DEIR identifies specific environmental areas which may be affected as a result of the implementation of the proposed Project. The impact areas are discussed individually in subsections 4.1 through 4.13:

- 4.1 Aesthetics and Light and Glare
- 4.2 Air Quality
- 4.3 Biological Resources
- 4.4 Cultural Resources
- 4.5 Geology, Soils and Mineral Resources
- 4.6 Hazards
- 4.7 Hydrology, Drainage and Water Quality
- 4.8 Land Use
- 4.9 Noise
- 4.10 Transportation and Circulation
- 4.11 Utilities and Public Services

Each topic area is covered in the following manner:

A. Environmental Issues
   An overview of issues related to the topic area.

B. Environmental Setting
   A discussion of existing conditions, facilities, services, applicable regulation and general environmental conditions on and around the Project sites.

C. Environmental Impacts and Mitigation Measures
   An identification and evaluation of potential impacts on the environment, should the Project be constructed as proposed. Standards of environmental significance will also be listed which set forth the basis on which the identification of environmental impacts will be made. Standards of significance for this DEIR are based on such standards listed in the California Environmental Quality Act.

Environmental impacts addressed in this document include the following:

- Potentially significant impact, which means that the identified impact would exceed the environmental standards of significance. In some instances, impacts may be positive rather than adverse.
- Beneficial impact, where implementation of the proposed Project would result in improved environmental conditions.
- Less-than-significant impact, which means an impact would not exceed the minimum environmental thresholds of significance.
- No impact, means that no environmental impact would be expected for a particular environmental topic.
Following each impact, measures will be listed which can be incorporated into the project to eliminate or reduce identified environmental impacts to a level of insignificance.

D. Level of Significance After Mitigation

This section will summarize the status of environmental impact remaining after implementation of mitigation measures.
4.1 AESTHETICS AND LIGHT AND GLARE

ENVIRONMENTAL ISSUES

This section of the DEIR deals with potential impacts related to on-site aesthetic conditions, aesthetic impacts related to surrounding properties, impacts to views and vistas and impacts related to the creation of light and glare.

ENVIRONMENTAL SETTING

On-site aesthetics
The Project site is relatively flat, vacant land that has been used for agricultural purposes and is still under cultivation. There are shallow ditches, swales and depressions dispersed across the site. A dirt road (former Station Road) runs along the westerly portion of the site. Wetland ponds exist in the southwest portion of the Project site caused by elevated railroad tracks that form the westerly boundary of the site.

Exhibits 4a and 4b depict various views of the Project site.

A PG&E lattice-type overhead tower has been constructed on the site to support regional overhead electrical power transmission lines.

Surrounding conditions
The immediate Project vicinity also is relatively flat in terrain. Street trees are located on both sides of Cherry Street. Along the west side of Cherry Street there is a continuous grass berm with meandering sidewalk. A vacant building adjacent to the north boundary of the property (the former Agilent Technologies site) has extensive landscaping around its perimeter. Vacant land is located to the west and south of the site. Development along the east side of Cherry Street includes one and two-story single-family residences to the north and two-story multi-family development. Newark Memorial High School athletic fields front on Cherry Street directly across from the Project site. Other development in the Project vicinity includes one and two story tilt-up office parks, one-story public buildings (a fire station and activity center) and the two-story Silliman Family Aquatic Center.

Views and vistas
The Project site provides distant views of the Newark Coyote Hills to the northwest due to undeveloped lands combined with generally low-rise buildings in this direction. The site is not located adjacent to any state or locally designated scenic highway.

Light and glare
No sources of light or glare exist on the site.
STANDARDS OF SIGNIFICANCE

For purposes of this DEIR, development of the Project site as proposed would constitute a significant impact if Project facilities would:

- Remove or substantially damage scenic resources (including but not limited to trees, ridgelands, ocean views, historic structures) within a state scenic highway;
- Obstruct scenic views available from adjacent properties; or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the project area.

ENVIRONMENTAL IMPACTS

On-site aesthetics
The proposed Project would convert the easterly portion of the site from an agricultural field to a community college campus. The proposed development plan includes the construction of a main two-story building that would be up to 35 feet in height, excluding small roof-top mechanical enclosures, and contain approximately 160,000 gross square feet. It would be sited to front along Cherry Street. Other secondary buildings would also be constructed as part of the Newark Center campus.

To maximize energy conservation, solar collector panels are proposed to be installed on portions of the main building roof. Panels would be parallel with the roof of the building and would likely not be visible from adjacent roads or other properties.

While the detailed design of the campus has not been completed, the Project Master Plan would ensure the campus is aesthetically pleasing and would blend in with high-tech business parks to the south and in the general area. Project development would be compatible with the scale and development of the area. Buildings would be one to two stories and would include extensive landscaping and open space areas.

The approximate two-thirds of the westerly portion of the Project site would remain undeveloped as indicated in the Master Plan and would continue in agricultural cultivation.

Master Plan objectives pertaining to the design aesthetics of the campus include:

- Building Design – While allowing for separate parking, entrances and signage for the Health Clinic and other possible partnership uses, building design will otherwise be uniform and consistent with a single campus identity. Functional separation will be created without compromising the single overall college identity in design and appearance.
- Landscape Features – Landscape design will follow the ecosystem model and the estuary theme. A central park will be created which flows through the campus and accommodates storm water detention needs and connects the wetlands area to the south with the buildings to the north.
- Provide Physical Cohesion - The adoption of standards for building forms and materials and the development of a unifying landscape will contribute to
physical quality and identity. Standards should produce a harmonious, not a homogeneous environment.

- Create a Park-Like Central Landscape - This area will become the center of an intellectual community. Meaningful relationship between building and adjacent landscape is valued.

These objectives would minimize the potential for unattractive views of the site and provide for buildings and landscaping that are compatible in scale and appearance with the surrounding neighborhood.

The Newark General Plan designates the Project site for ultimate development of Special Industrial land uses, so that the planned conversion of a portion of the site to the Newark Center would be consistent with long-term vision of the site by the City.

Overall, proposed development of the Newark Center campus would result in a less-than-significant impact with regard to on-site aesthetics.

**Impact 4.1-1 (on-site aesthetic impacts).** Approval of the Newark Center Master Plan would convert the easterly portion of the site from agricultural to urban uses. The proposed Master Plan contains policies to guide this development to ensure that an attractive campus is built that would be consistent with surrounding land uses (less-than-significant impact and no mitigation required).

**Surrounding aesthetic conditions**

As noted above, the buildings and related improvements constructed pursuant to the proposed Newark Center Master Plan would be consistent with surrounding business parks, industrial uses, such as the Agilent building and similar uses that have been constructed along the west side of Cherry Street. Existing mature landscaping along the Project’s Cherry Street frontage combined with the wide setback in front of the main Project building (approximately 250 feet) would effectively buffer the proposed Newark Center from residential land uses on the east side of Cherry Street.

Anticipated aesthetic impacts of the proposed Project on surrounding land uses is anticipated to be less-than-significant

**Impact 4.1-2 (surrounding aesthetic impacts).** The proposed Newark Center Project would be consistent with existing surrounding uses on the west side of Cherry Street and would provide a buffer for uses on the east side of Cherry Street (less-than-significant impact and no mitigation required).

**Views and vistas**

The site and Project vicinity are relatively flat and there are no distinctive topographic features such as ridgelands, water views, rock outcroppings or trees on site.

Development of the proposed Newark Center would not obstruct views of the Newark Coyote Hills from Cherry Street due to the row of mature street trees on the west side of this roadway.

The introduction of students, staff and visitors to the site would allow enhanced views of the distant hills from the site, which is not currently possible since there is no provision or facilities for on-site visitors.
Overall, there would be less-than-significant impacts related to blockage of views and vistas.

**Impact 4.1-3 (impacts to views and vistas).** Development of the Newark Center Project would not block existing views and vistas of the distant Newark Coyote Hills (*less-than-significant impact and no mitigation required*).

**Light and glare impacts**  
Project development would introduce night lighting at a site that is presently unlit. The most intensive night lighting would be concentrated along Cherry Street and would diminish in intensity and coverage as development continues to the west. The Project would result in an increase in night lighting along its Cherry Street frontage which could result in intrusive conditions (i.e., lights shining into windows) for residences fronting on Cherry Street and nearest the Project site. The level of light and glare could also be increased for passing motorists on Cherry Street. Parking lots are proposed to be located behind the main building which would minimize potential intrusions of light and glare to nearby residents.

Solar panels are not anticipated to generate significant levels of glare to adjacent residential or recreation uses, since the panels would be generally flat.

**Impact 4.1-4 (light and glare impacts).** Project development would increase night lighting and the potential for glare in the neighborhood and for passing motorists (*potentially significant impact and mitigation required*).

The following measure is recommended to mitigate light and glare impacts to a less-than-significant level.

**Mitigation Measure 4.1-1 (light and glare impacts).** Outdoor lighting shall be designed to maximize public safety and security while minimizing visual intrusion and glare both on campus and off-campus. Outdoor light fixtures shall include shrouds and other shielding as appropriate. Lighting along pedestrian pathways shall be low-level lights. To the extent practicable, area lighting and security lighting shall be controlled by the use of timed switches and/or motion detector activation to reduce energy consumption.

**LEVEL OF SIGNIFICANCE AFTER MITIGATION**

All aesthetic impacts can be reduced to a less-than-significant level.
Exhibit 4a-Site View
Exhibit 4b-Site View
4.2 AIR QUALITY

ENVIRONMENTAL ISSUES

Issues addressed in this DEIR include short-term construction air quality impacts, impacts related to additional vehicles accessing the Project site, and the Project’s contribution to regional air emissions. The section is based on an air quality analysis prepared by Donald Ballanti, which is contained in Appendix 8.4.

ENVIRONMENTAL SETTING

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

Northwest winds and northerly winds are most common in the Project area, reflecting the orientation of the Bay and the San Francisco Peninsula. Winds from these directions carry pollutants released by autos and factories from upwind areas of the Peninsula and the East Bay toward Newark, particularly during the summer months. Winds are lightest on the average in fall and winter. Every year in fall and winter there are periods of several days when winds are very light and local pollutants can build up.

Pollutants can be diluted by mixing in the atmosphere both vertically and horizontally. Vertical mixing and dilution of pollutants are often suppressed by inversion conditions, when a warm layer of air traps cooler air close to the surface. During the summer, inversions are generally elevated above ground level, but are present over 90 percent of the time in both the morning and afternoon. In winter, surface-based inversions dominate in the morning hours, but frequently dissipate by afternoon.

Topography can restrict horizontal dilution and mixing of pollutants by creating a barrier to air movement. The South Bay has significant terrain features that affect air quality. The Santa Cruz Mountains and Hayward Hills on either side of the South Bay restrict horizontal dilution, and this alignment of the terrain also channels winds from the north to south, carrying pollution from the northern Peninsula toward Newark.

The combined effects of moderate ventilation, frequent inversions that restrict vertical dilution and terrain that restrict horizontal dilution give Newark a relatively high atmospheric potential for pollution compared to other parts of the San Francisco Bay Air Basin and provide a high potential for transport of pollutants to the east and south.
Ambient air quality standards

Criteria Pollutants
Both the U.S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The federal and California state ambient air quality standards are summarized in Table 2.

The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and particulate matter (PM$_{10}$ and PM$_{2.5}$).

The U.S. Environmental Protection Agency established new national air quality standards for ground-level ozone and for fine particulate matter in 1997. The existing 1-hour ozone standard of 0.12 PPM microns or less) is to be phased out and replaced by an 8-hour standard of 0.08 PPM. Implementation of the 8-hour standard was delayed by litigation, but was determined to be valid and enforceable by the U.S. Supreme Court in a decision issued in February of 2001.

Suspended particulate matter (PM) is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. "Inhalable" PM consists of particles less than 10 microns in diameter, and is defined as "suspended particulate matter" or PM$_{10}$. Fine particles are less than 2.5 microns in diameter (PM$_{2.5}$). PM$_{2.5}$ by definition, is included in PM$_{10}$.

Toxic Air Contaminants
In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important, in terms of health risk, are diesel particulate, benzene, formaldehyde, 1,3-butadiene and acetaldehyde. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases.
### Table 2. Federal and State Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>Federal Primary Standard</th>
<th>State Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>1-Hour 8-Hour</td>
<td>0.12 PPM 0.08 PPM</td>
<td>0.09 PPM --</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>8-Hour 1-Hour</td>
<td>9.0 PPM 35.0 PPM</td>
<td>9.0 PPM 20.0 PPM</td>
</tr>
<tr>
<td>Nitrogen Dioxide</td>
<td>Annual Average</td>
<td>0.05 PPM --</td>
<td>0.25 PPM</td>
</tr>
<tr>
<td>Sulfur Dioxide</td>
<td>Annual Average</td>
<td>0.03 PPM 0.14 PPM</td>
<td>-- 0.25 PPM</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>Annual Average</td>
<td>50 g/m$^3$ 150 g/m$^3$</td>
<td>20 g/m$^3$ 50 g/m$^3$</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>Annual 24-Hour</td>
<td>15 g/m$^3$ 65 g/m$^3$</td>
<td>12 g/m$^3$ --</td>
</tr>
<tr>
<td>Lead</td>
<td>Calendar Quarter</td>
<td>1.5 g/m$^3$ --</td>
<td>-- 1.5 g/m$^3$</td>
</tr>
<tr>
<td>Sulfates</td>
<td>24 Hour</td>
<td>25 g/m$^3$</td>
<td>--</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>1-Hour</td>
<td>0.03 PPM</td>
<td>--</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>24-Hour</td>
<td>0.01 PPM</td>
<td>--</td>
</tr>
</tbody>
</table>

**Notes:**
- PPM = Parts per Million
- g/m$^3$ = Micrograms per Cubic Meter
- Source: California Air Resources Board, Ambient Air Quality Standards (7/9/03)
  - [http://www.arb.ca.gov.aqs/aaqs2.pdf](http://www.arb.ca.gov.aqs/aaqs2.pdf)

**Ambient air quality**

The Bay Area Air Quality Management District (BAAQMD) monitors air quality at several locations within the San Francisco Bay Air Basin. The closest multi-pollutant monitoring sites to the Project site are located in downtown San Jose on Fourth Street and in Fremont on Chapel Way. Table 3 summarizes exceedances of State and Federal standards at these monitoring sites during the period 2000-2002. Table 3 shows that ozone and PM$_{10}$ exceed the state standards in the South Bay. Violations of the carbon monoxide standards had been recorded at the downtown San Jose site prior to 1992.
### Table 3. Summary of Criteria Pollutant Air Quality Data for San Jose (Fourth Street) and Fremont (Chapel Hill) Sites

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Standard</th>
<th>Site</th>
<th>Days Exceeding Standard in:</th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td></td>
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<td>2000</td>
<td>2001</td>
<td>2002</td>
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<tr>
<td>Ozone</td>
<td>Federal 1-Hour</td>
<td>San Jose</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fremont</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Ozone</td>
<td>State 1-Hour</td>
<td>San Jose</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fremont</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Ozone</td>
<td>Federal 8-Hour</td>
<td>San Jose</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fremont</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>State/Federal 8-Hour</td>
<td>San Jose</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fremont</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Nitrogen Dioxide</td>
<td>State 1-Hour</td>
<td>San Jose</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fremont</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>Federal 24-Hour</td>
<td>San Jose</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fremont</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>State 24-Hour</td>
<td>San Jose</td>
<td>7</td>
<td>4</td>
<td>0</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Federal 24-Hour</td>
<td>San Jose</td>
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<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fremont</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>


**Attainment status and regional air quality plans**

The federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate portions of the state where the federal or state ambient air quality standards are not met as "nonattainment areas." Because of the differences between the national and state standards, the designation of nonattainment areas is different under the federal and state legislation.

The Bay is currently a non-attainment for 1-hour ozone standard. However, in April 2004, U.S. EPA made a final finding that the Bay Area has attained the national 1-hour ozone standard. The finding of attainment does not mean the Bay Area has been reclassified as an attainment area for the 1-hour standard. The region must submit a re-designation request to EPA in order to be re-classified as an attainment area.

The California Air Resources Board (CARB) and U. S. Environmental Protection Agency (EPA) have both proposed that the San Francisco Bay Area be classified as a nonattainment area for the federal 8-hour standard. The California Air Resources Board and U. S. Environmental Protection Agency have both proposed that the San Francisco Bay Area be considered unclassifiable with respect to the federal PM$_{2.5}$ standards. Unclassifiable means that an area cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary standards.
ambient air quality standard for the pollutant. U.S. EPA plans to finalize PM$_{2.5}$

Under the California Clean Air Act, Alameda County is a nonattainment area for
ozone and PM$_{10}$. The county is either attainment or unclassified for other pollutants.
The California Clean Air Act requires local air pollution control districts to prepare air
quality attainment plans. These plans must provide for district-wide emission
reductions of five percent per year averaged over consecutive three-year periods or if
not, provide for adoption of "all feasible measures on an expeditious schedule."

STANDARDS OF SIGNIFICANCE

BAAQMD CEQA Guidelines provide the following definitions of a significant air quality
impact:

- A project contributing to carbon monoxide (CO) concentrations exceeding the
  State Ambient Air Quality Standard of 9 parts per million (ppm) averaged over
  8 hours or 20 ppm for 1 hour would be considered to have a significant impact;
- A project that generates criteria air pollutant emissions in excess of the
  BAAQMD annual or daily thresholds would be considered to have a significant
  air quality impact. The current thresholds are 15 tons/year or 80 pounds/day
  for Reactive Organic Gases (ROG), Nitrogen Oxides (NO$_x$) or PM$_{10}$. Any
  proposed project that would individually have a significant air quality impact
  would also be considered to have a significant cumulative air quality impact;
- Any project with the potential to frequently expose members of the public to
  objectionable odors would be deemed to have a significant impact;
- Any project with the potential to expose sensitive receptors or the general
  public to substantial levels of toxic air contaminants would be deemed to have a
  significant impact; or
- Despite the establishment of both federal and state standards for PM$_{2.5}$
  (particulate matter, 2.5 microns), the BAAQMD has not developed a threshold
  of significance for this pollutant. For this analysis, PM$_{2.5}$ impacts would be
  considered significant if project emissions of PM$_{10}$ exceed 80 pounds per day.

The BAAQMD significance threshold for construction dust impacts is based on the
appropriateness of construction dust controls. The BAAQMD guidelines provide
feasible control measures for construction emission of PM$_{10}$. With implementation of
the appropriate construction controls, the air pollutant emissions for construction
activities would be considered less than significant.

ENVIRONMENTAL IMPACTS

Construction related impacts
Construction activities such as excavation and grading operations, construction vehicle
traffic, and wind blowing over exposed earth would generate exhaust emissions and
fugitive particulate matter emissions that would affect local and regional air quality
during construction of the Project.
Construction dust could affect local air quality during implementation of the Project. The dry, windy climate of the area during the summer months creates a high potential for dust generation when and if underlying soils are exposed to the atmosphere. The proposed Project would substantial excavation and earthmoving. The movement of earth on the site is a construction activity with a high potential for creating air pollutants. After grading of the site, dust would continue to affect local air quality during construction of the Project.

During construction various diesel-powered vehicles and equipment would be in use on the site. In 1998 the CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines. High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truckstop) were identified as having the highest associated risk.

Health risks from Toxic Air Contaminants are a function of both concentration and duration of exposure. Unlike the above types of sources, construction diesel emissions are temporary, affecting an area for a period of days or perhaps weeks. Additionally, construction related sources are mobile and transient in nature, and the bulk of the emission occurs within the Project site at a substantial distance from nearby receptors. Because of its short duration, health risks from construction emissions of diesel particulate would be a less-than-significant impact.

According the BAAQMD CEQA Guidelines, emissions of ozone precursors (ROG and NOx) and carbon monoxide related to construction equipment are already included in the emission inventory that is the basis for regional air quality plans, and thus are not expected to impede attainment or maintenance of ozone and carbon monoxide standards in the Bay Area. Thus, the effects of construction activities would be increased dustfall and locally elevated levels of particulate matter ($PM_{10}$ and $PM_{2.5}$) downwind of construction activity. Construction dust has the potential for creating a nuisance at nearby properties. This would be a significant impact.

**Impact 4.2-1 (construction air quality impacts).** Construction activities to implement the Project would have the potential to cause nuisances related to dust and $PM_{10}$ (potentially significant impact and mitigation required).

Adherence to the following measure would reduce this impact to a less-than-significant level.

**Mitigation Measure 4.2-1 (construction air quality impacts).** Consistent with guidance from the BAAQMD for large sites, the following measures shall be required of construction contracts and specifications for the Project:

a) Water all active construction areas at least twice daily and more often during windy periods; active areas adjacent to existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers or dust palliatives;
b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard;
c) Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites;
d) Sweep daily (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality;
e) Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets;
f) Apply non-toxic soil stabilizers to inactive construction areas;
g) Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.);
h) Limit traffic speeds on unpaved roads to 15 mph;
i) Install sandbags or other erosion control measures to prevent silt runoff to public roadways;
j) Replant vegetation in disturbed areas as quickly as possible.
k) Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site; and
l) Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.

Regional air quality emissions
Vehicle trips generated by the Project would result in air pollutant emissions affecting the entire San Francisco Bay Air Basin. Regional emissions associated with Project vehicle use have been calculated using the URBEMIS-2002 emission model. The URBEMIS-2002 output is included in the Appendix of the air quality analysis.

The incremental daily emission increase associated with Project operational trip generation is identified in Table 4 for reactive organic gases and oxides of nitrogen (two precursors of ozone) and PM$_{10}$. The Bay Area Air Quality Management District’s thresholds of significance for these pollutants are also shown. Proposed Project emissions shown in Table 4 would be below these thresholds of significance for all three pollutants, so the proposed Project would have a less than significant effect on regional ozone air quality. No mitigation measures are needed.

Impact 4.2-2 (regional air emissions). The Project would result in a regional emission increase, but it would not exceed the BAAQMD significance thresholds (*less-than-significant and no mitigation needed*).
Table 4. Project Regional Emissions in Pounds Per Day

<table>
<thead>
<tr>
<th></th>
<th>Reactive Organic Gases</th>
<th>Nitrogen Oxides</th>
<th>PM_{10}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
<td>61.7</td>
<td>30.4</td>
<td>23.0</td>
</tr>
<tr>
<td>BAAQMD Significance Threshold</td>
<td>80.0</td>
<td>80.0</td>
<td>80.0</td>
</tr>
</tbody>
</table>

Source: Donald Ballanti

Carbon monoxide emissions
On the local scale, the Project would change traffic on the local street network, changing carbon monoxide levels along roadways used by Project traffic. Carbon monoxide is an odorless, colorless poisonous gas whose primary source in the Bay Area is automobiles. Concentrations of this gas are highest near intersections of major roads. New vehicle trips add to carbon monoxide concentrations near streets providing access to the site.

The BAAQMD’s CEQA Guidelines recommends estimation of carbon monoxide concentrations for projects where project traffic would impact intersections or roadway links operating at Level of Service D, E, or F, or would cause Level of Service to decline to D, E, or F.

The analysis of intersection Level of Service (LOS) prepared for the Project found that, of the 12 intersections studied, none would operate at LOS D or worse after addition of Project traffic in either the AM or PM peak traffic hour. Therefore, the BAAQMD threshold trigger level for estimating carbon monoxide modeling of concentrations would not be exceeded.

Considering that the proposed Project is in an attainment area for carbon monoxide (the state and federal ambient standards are met) and that Newark has relatively low background levels of carbon monoxide compared to other parts of the Bay Area and that Levels of Service at intersections affected by Project traffic would remain relatively good, it is concluded that added traffic from the Project could not cause a violation of the state/federal ambient standards. The addition of Project traffic would increase concentrations, but concentrations would remain below state/federal standards. Since the Project would not cause a violation of either ambient air quality standard, nor contribute substantially to an existing violation, the impact of the Project on local carbon monoxide concentrations is considered to be less than significant.

Impact 4.2-3 (carbon monoxide emissions).  The Project would change traffic volumes and congestion levels, changing carbon monoxide concentrations (less-than-significant impact and no mitigation required).  

Reactive Organic Gases | Nitrogen Oxides | PM_{10} |
4.3 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES

This section describes the methods used to assess biological resources within the Project area, including regulatory requirements, plant and wildlife resources, the presence or potential presence of special-status species, and potential impacts to wetlands on the site and measures to mitigate these impacts.

This section is based on a biological resources reconnaissance of the Project area conducted by LSA Associates, Inc. (LSA).

ENVIRONMENTAL SETTING

Methods
The site was visited by an LSA botanist and wildlife biologist on May 16, 2003. The survey entailed characterizing the vegetation and wildlife habitats, identifying sensitive habitats, and evaluating the potential for the occurrence of special-status species. The survey technique entailed walking selected transects across the Project site. These transects intersected ditches, swales, and slight depressions - features that provided a different habitat from the rest of the mowed agricultural field.

LSA developed a list of potentially occurring special-status species by accessing information in the California Natural Diversity Database (CNDDB 2004) about occurrences of species in the general vicinity of the Project site. Queries from the following quadrangles were used for this list: Newark, Niles, Milpitas, and Mountain View. LSA’s staff knowledge and the knowledge of recognized experts and agency personnel were also used to develop the list of potentially-occurring special-status species and the list was compared to a list provided by the U.S. Fish and Wildlife Service. For plants, the list of potentially-occurring special-status species included only those species that occur in seasonal wetlands because other habitats (such as salt marsh and upland grassland) were absent or disturbed by the agricultural activity. The potentially-occurring special-status animal species include those that occur in seasonal wetlands, annual grasslands, and agricultural areas.

The wetlands of the site were delineated by staff from McLaren/Hart, Inc. on September 24, 1999. The Routine Determination Method, as described in the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987), was used to identify the wetlands on site. The wetland delineation was subsequently verified by staff of the Corps on January 14, 2000.

Vegetation and wildlife habitats
The Project site consists of a fallow field dominated by barley (*Hordeum sativa*). The field had largely been mowed at the time of the site visit. In addition to the barley, mesic herbaceous vegetation also grew in shallow ditches, swales, and depressions that occurred on-site. The majority of the plants that grew on the Project site were non-native species.
The Project site is located in the eastern portion of the agricultural field and is surrounded by development on the north and east sides. The south boundary consists of a flood control canal that flows into Mowry Slough. The western side is an agricultural field. The agricultural field is approximately 1,000 to 1,100 wide and separates the proposed development from railroad tracks and the salt marsh beyond.

Barley Field. The fallow field was dominated by the barley that grew approximately 1.5 to 2 feet tall. The cover of the barley and the other associated species approached 100 percent. Other species present included Italian rye grass (Lolium multiflorum), bur clover (Medicago polycarpa), wild radish (Raphanus sativus) and mallow (Malva sp.).

Mesic Herbaceous Vegetation. Mesic herbaceous vegetation grew in ditches, swales, and depressions on the Project site (see Exhibit 5). The vegetation consisted of both native and non-native species. Dominant species included the Mediterranean barley (Hordeum marinum ssp. gussoneanum) that grew at the periphery of these features. Occasionally salt grass (Distichlis spicata) grew with the Mediterranean barley. Rabbit's foot grass (Polypogon monspeliensis), often grew next to the Mediterranean barley but in slightly more mesic sites that were located more toward the center of the features. The central portion of the ditches and depressions was dominated by native species that are adapted to inundation. These species include cattail (Typha sp.), alkali bulrush (Scirpus robustus), spike rush (Eleocharis macrostachya), and the non-native curly dock (Rumex crispus).

One ditch that is located in the northern portion of the property runs in an east-west direction. It was completely vegetated with cattails (Typha sp.). Some portions of the ditch were dry while other portions had shallowly ponded water.

Jurisdictional Wetland. A jurisdictional wetland occurs near the northeastern corner of the Project site (see Exhibit 6). This wetland is oval in shape and is approximately 70 feet by 48 feet in size. It ponds approximately 6 to 12 inches of water. The vegetation is described above as the mesic herbaceous vegetation. This feature is dominated by alkali bulrush and curly dock in the middle and Mediterranean barley at the edges.

Jurisdictional wetlands also occur in the southwest corner of the property owned by the Ohlone College but off of the Project site. This area is dominated by Mediterranean barley and annual pepper-grass (Lepidium nitidum). Bird's foot trefoil and bristly ox-tongue (Picris echioides) also grow there.

In light of the 2001 Supreme Court decision in the case Solid Waste Agency of Northern Cook County vs. United State Army Corps of Engineers (531 U.S. 2001), waters and wetlands on the site may no longer be subject to jurisdiction by the U.S. Army Corps of Engineers as they may meet the criteria as isolated waters. The Project applicant should resubmit the delineation for verification in light of this decision and receive written confirmation of the status of the wetlands on the site from the Corps.

Wildlife
The wildlife of the Project site are those that would commonly be expected to occur in a disturbed and agricultural setting that is adjacent to undeveloped areas. California ground squirrels (Spermophilus beecheyi) and their burrows occur abundantly
throughout the site. Other rodents such as the western pocket gopher (*Thomomys bottae*) and meadow vole (*Microtus californicus*) also occur in the agricultural field. The meadow voles appeared more abundantly near unplowed areas such as the edges of the ditches or edge of the Project site.

These tunnels excavated by the rodents provide refuge for a number of species of invertebrates and small vertebrates that either occur on-site or colonize the site from adjacent areas. These burrows are critical for many of the smaller species of wildlife that currently use the site such as fence lizards (*Sceloporus occidentalis*), other lizards, gopher snakes (*Pituophis catenifer*), racers (*Coluber constrictor*), garter snakes (*Thamnophis spp.*), and possibly Pacific treefrog (*Pseudacris regilla*) and western toad (*Bufo boreas*).

The ditches on-site contained water and were used by the tadpoles of Pacific treefrog and possibly western toad. These ditches held at least several inches of water at the time of the site visit and were approximately 2 to 3 feet wide.

Brewer's (*Euphagus cyanocephalus*) and red-winged blackbirds (*Aeglaia phoeniceus*) forage on the Project site after the grain has been cut. Yellow-headed blackbirds (*Xanthocephalus*) may forage on the site as this species was observed south of the Project site near the railroad tracks during the site visit. These species eat the grain and any insects present in the area. Mourning doves (*Zenaida macroura*) would also be expected to commonly forage in the barley field after it has been cut. Savanna sparrows (*Passerculus sandwichensis*) are expected to occur in the barley field before it is cut and in un-cut barley near the ditches containing cattails.

Raptors such as northern harrier (*Circus cyaneus*), white-tailed kits (*Elanus leucurus*), and red-tailed hawks (*Buteo jamaicensis*) may forage on the site, however nesting habitat on-site is limited to the street trees and the agricultural field that is harvested annually. Burrowing and foraging habitat exists for burrowing owls in the large number of ground squirrel burrows and open fields, however, none were observed during the site visit.

In summary, the agricultural use of the site, the absence of trees on-site, and the urban setting of the site reduces the wildlife value of the site. The species of wildlife on-site are typically species common to urban and agricultural areas. No unique wildlife habitats or values were observed during the fieldwork.

*Special-Status species*

For the purposes of this EIR, special-status species are defined as follows:

- Plants and animals that are listed or proposed for listing as rare, threatened, or endangered under the California Endangered Species Act (Fish and Game Code 1992 Sections 2050 et seq.; 14 CCR Sections 670.1 et seq.) and/or the Federal Endangered Species Act (50 CFR 17.12 for plants; 50 CFR 17.11 for animals; proposed rules in the Federal Register [FR] for proposed species);
- Plants and animals that are Candidates for possible future listing as threatened or endangered under the Federal Endangered Species Act (50 CFR 17.12 for plants; 61 FR 7591, February 28, 1996 for animals);
• Plants and animals that meet the definition of rare or endangered under CEQA (14 CCR Section 15380), which includes species not found on State or Federal Endangered Species lists;

• Plants occurring on List 1A, List 1B, and List 2 of the California Native Plant Society’s (CNPS) Inventory of Rare and Endangered Vascular Plants of California. The California Department of Fish and Game (CDFG) recognizes that Lists 1A, 1B, and 2 of the CNPS inventory contain plants that, in the majority of cases, would qualify for State listing, and CDFG requests their inclusion in EIRs as necessary;

• Animals that are designated as “Species of Special Concern” by CDFG; and

• Animal species that are “fully protected” in California (Fish and Game Code, Sections 3511, 4700, 5050 and 5515).

Special-status Plant Species. The potentially-occurring special-status plant species for the Project site are those that would occur in seasonal wetlands. The agricultural use of the site precludes the presence of those species that would occur in the uplands. These potentially-occurring special-status plant species grow at the edge and within seasonally ponded areas. Habitat consisting of Mediterranean barley grows at the edge of seasonally ponded areas.

A total of 11 plant species were considered in the evaluation of special-status plants within the Project vicinity based on a search of the California Natural Diversity Database (CNDDB 2003), and LSA’s knowledge of the region. Four of these species were eliminated from consideration due to the lack of suitable habitat on the site and/or the site’s location outside of the known range of the species. None of the special-status plant species potentially occurring in the region were found during the site visit in May 2003.

Plants for which no suitable habitat occurs on-site include: robust spineflower (Chorizanthe robusta var. robusta), Point Reyes bird’s beak (Cordylanthus maritimus ssp. palustris), western leatherwood (Dirca occidentalis), and California seablite (Suadea californica). Two of these species occur in salt marsh areas (California seablite, Point Reyes bird’s beak), one occurs in sandy areas (robust spineflower), and one occurs in woodland (western leatherwood).

The remaining species that could occur on the site are alkali milk-vetch (Astragalus tener), San Joaquin spearscale (Atriplex joaquiniana), Congdon’s tarplant (Centromadia parryi ssp. congdonii), dwarf downingia (Downingia pusilla), Contra Costa goldfields (Lasthenia conjugens), prostrate navarretia (Navarretia prostrata), and hairless popcorn flower (Plagiobothrys glaber). These potentially occurring species are listed in Table 5, which summarizes each species’ protective status, general habitat requirements, and potential for occurrence.

The potentially-occurring species all occur in seasonally wet areas and Congdon’s tarplant also occurs in agricultural fields and sloping areas that are not necessarily wet. Six of these species (prostrate navarretia, Congdon’s tarplant, alkali milk-vetch, San Joaquin spearscale, dwarf downingia, and Contra Costa goldfields) have been observed more or less together in the created wetlands of the Pacific Commons.
Preserve near the San Francisco Bay National Wildlife Refuge. Associated species include Italian ryegrass, black mustard (Brassica nigra), sweet clover (Melilotus indica) wooly marbles (Psilocarphus tenellus), popcorn flower (Plagiobothrys stipitatus var. micranthus) and coyote thistle (Eryngium aristatum var. aristatum).

Other populations of Congdon’s tarplant have been observed with bird’s foot trefoil (Lotus corniculatus). Mediterranean barley, rabbit’s foot grass, and alkali heath (Frankenia salina) in one area and with alkali heath, rabbit’s foot grass, Italian ryegrass, knotweed (Polygonum arenastrum), salt grass, and common spikeweed (Centromadia stipitata) in another area. The dwarf downingia and Contra Costa goldfields have also been observed growing together at other localities. Associates of these two species were coyote thistle (Eryngium aristatum var. hooveri), popcorn flower (Plagiobothrys stipitatus var. stipitatus), mousetail (Myosurus minimus ssp. minimus), brass buttons (Cotula coronopifolia), and wooly marbles (Psilocarphus brevissimus) at one locality and popcorn flower, coyote thistle, and California semiphore grass (Pleuropogon californica) at another locality.

Three wet areas occur on the Project site and these wet areas support many of the species associated with the special-status species. Because the associated species were present and these special-status species can withstand a minor amount of disturbance, the possibility exists that they could occur on the Project site in these wet areas.

The site visit was conducted in May and the San Joaquin spearscale, one of the later blooming special-status species, would have been observed during fieldwork. The San Joaquin spearscale grows and flowers during the late spring and summer and would have been observable during the survey. It was not observed and therefore is unlikely to occur on the site.

Congdon’s tarplant also grows and blooms during the summer but it begins to flower in June, a month after the survey. A related species, common spikeweed, was observed on the site, but the site visit was too early to distinguish all specimens from Congdon’s tarplant. Although unlikely, because the specimens observed were those of the common spikeweed, the occurrence of Congdon’s tarplant could not be ruled out on the Project site because many of the plant specimens observed were not yet in flower and therefore could not be distinguished from the common spikeweed.

The other potentially occurring special-status species could occur on-site in areas of suitable habitat. Although blooming records for many of these species extend into May and even June or July, the shallow wet areas on-site would not support blooming past April during the year that fieldwork was conducted. Once desiccated, they would become virtually indistinguishable from the other dried plants observed during the survey.

**Special-status Wildlife.** The potentially-occurring special-status animal species for the Project site are those that would occur in agricultural areas, grassy fallow fields, and seasonal wetlands. The agricultural use of the site precludes the presence or reduces the likelihood of occurrence of many of the special-status species.
A total of 11 animal species were considered in the evaluation of special-status animals within the Project vicinity based on a search of the California Natural Diversity Database (CNDDB 2003), and LSA’s knowledge of the region. Nine of these species were eliminated from consideration due to the lack of suitable habitat on the site and/or the site’s location outside of the known range of the species. None of the special-status animal species potentially occurring in the region was found during surveys of the site.

Animals for which no suitable habitat occurs on-site include: golden eagle (Aquila chrysaetos), western snowy plover (Charadrius alexandrinus nivosus), California black rail (Laterallus jamaicensis coturniculus), California clapper rail (Rallus longirostris obsoletus), Alameda song sparrow (Melospiza melodia pucillula), California least tern (Sterna antillarum browni), salt marsh harvest mouse (Reithrodontomys raviventris), salt marsh wandering shrew (Sorex vagrans halicoetes), and California brackish water snail (Tryonia imitator). Six of these species occur in salt marsh areas (Alameda song sparrow, California black rail, California clapper rail, salt marsh harvest mouse, salt marsh wandering shrew, and brackish water snail). Of the remaining species, two species nest in salt flats, salt pannes, and bare areas (California least tern and western snowy plover) and one nests in areas away from disturbance (golden eagle). None of these habitats occur on the Project site.

Heron rookeries would be absent from the site because of the urban nature of the trees that surround the Project site. No rookeries were observed in any of the adjacent trees of the Project site. The closest rookery is at the Alameda Creek Quarries Regional Park approximately 3 miles from the site. Heron rookeries are absent from the Project site.

The central California coast evolutionary significant unit of steelhead (Oncorhynchus mykiss irideus) is also not likely to occur on the Project site because of the absence of habitat. The branch of Mowry Slough, that is adjacent to the Project site, is controlled by a tide gate, thereby precluding access by fish. This branch also ends in the residential area of the City of Newark, it does not appear to extend beyond the residences based on the Niles USGS quadrangle (1987).

Species that potentially occur on-site but the likelihood of doing so is extremely unlikely are listed in Table 6 with reasons for their likely absence from the Project site. These species are: western pond turtle (Clemmys marmorata), tricolored blackbird (Agelaius tricolor), northern harrier (Circus cyaneus), short-eared owl (Asio flammeus), loggerhead shrike (Lanius ludovicianus), white-tailed kite (Elanus leucurus), and saltmarsh common yellowthroat (Geothlypis trichas sinuosa). The western pond turtle was observed in Alameda Creek west of Sunol approximately 9 miles from the Project site and it is not likely to occur on the site because of marginal habitat. The urban nature of the Project site with surrounding fence rows of ornamental trees have limited value as nesting habitat for raptors and loggerhead shrike. The stands of cattails occur in linear rows less than 10 feet wide, and therefore are unlikely to support nesting tricolored blackbirds or saltmarsh common yellowthroat because of their small size. The barley field provides potential nesting habitat for the northern harrier and the short-eared owl. However, since the agricultural field is cultivated, (seeded, disced, and mowed) it has only limited value to these species. Northern
harriers have been observed nesting in the salt marshes a few miles from the Project site (Plumber Creek, Alvarado District of Union City, Coyote Hills Regional Park) but no records are listed in the CNDDB for the short-eared owl in the vicinity. The northern harrier and short-eared owl would more likely nest in salt marsh that is distant from disturbance than in an area that is regularly disturbed.

The wildlife species that could occur on the site are the vernal pool tadpole shrimp (*Lepidurus packardi*), California tiger salamander (*Ambystoma californiense*), and western burrowing owl (*Athene cunicularia hypugea*). These potentially occurring species are discussed below and listed in Table 6, which summarizes each species’ protective status, general habitat requirements, and potential for occurrence.

**Vernal Pool Tadpole Shrimp**
The vernal pool tadpole shrimp is a federally listed endangered species that occurs in vernal pools and seasonal wetlands that pond water for sufficient amount of time for them to complete their life cycle. The tadpole shrimp are found in the Warm Springs area of Fremont along with the California tiger salamander and several rare plants. This appears to be the only remaining known occurrences of the vernal pool tadpole shrimp adjacent to San Francisco Bay in what was formerly an extensive area of seasonal wetlands and vernal pools.

The vernal pool tadpole shrimp is able to withstand a considerable amount of disturbance to its habitat. It is known from pristine vernal pools that are little disturbed to roadside ditches that receive pollutants and sediment in the run-off. These shrimp are able to tolerate fairly turbid water and alkaline as well as fresh water conditions.

The Warm Springs area is approximately 2 miles from the Project site. The intervening area consists of a patchwork of agricultural and industrial uses. Given the close proximity of existing habitat to the Project site and the tolerance of the vernal pool tadpole shrimp to a wide variety of conditions, its occurrence on the Project site cannot be ruled out. The likelihood of its occurrence is low, however, because of the isolation of the Project from known locations of the vernal pool tadpole shrimp, the small amount of habitat on the Project site, and the disturbance to the site.

Critical habitat for vernal pool tadpole shrimp was designated in Alameda county (USFWS 2003), however, the proposed Project site is located outside of the proposed critical habitat areas. The closest critical habitat unit is the Unit 14 located approximately 2 miles southeast of the Ohlone College Newark Center site. This Project, therefore, would not affect proposed critical habitat for vernal pool tadpole shrimp.

**California Tiger Salamander**
The California Tiger Salamander is listed as a threatened species under the federal endangered species act and is proposed for listing under the state endangered species act as well. It breeds in vernal pools, seasonal wetlands, and stock ponds that pond water for a sufficient amount of time to allow for
the metamorphosis of the larvae (approximately 10 weeks). The California tiger salamander is found in the Warm Springs area of Fremont along with the vernal pool tadpole shrimp and several rare plants. This appears to be the only remaining known occurrences of the California tiger salamander adjacent to San Francisco Bay in what was formerly an extensive area of seasonal wetlands and vernal pools.

The California tiger salamander migrates to breeding sites on rainy nights in winter from upland areas where they spend the majority of the year. Breeding occurs in ponds and eggs are laid singly attached to vegetation, rocks, wood, twigs or other supportive structure in the pond. The eggs hatch and the larvae feed upon invertebrates, and later the tadpoles of frogs and toads. The larvae mature in 2 to 5 months and then leave the pond. They enter rodent burrows (e.g., ground squirrel burrows) or cracks in the soil and remain there until the winter rains the following year. The cracks and rodent burrows provide a cool and moist environment with which to pass the warm and dry summer. Studies in the Santa Rosa area of Sonoma County show that the California tiger salamander is able to survive in areas that are regularly disked. Light discing (6-8 inches deep) does not destroy the subterranean portion of the burrows that provide the summer habitat for the California tiger salamanders. They have been shown to excavate their way into rodent burrows that have been covered by discing.

The Warm Springs area is approximately 2 miles from the Project site. The intervening area consists of a patchwork of agricultural and industrial uses. Given the close proximity of existing habitat to the Project site and the ability of the California tiger salamander to occur in disked areas, its occurrence cannot be ruled out. The occurrence of this species on-site is unlikely because of the isolation of the Project site from known locations of California tiger salamanders, the small amount of habitat on the Project site, and the disturbance to the site.

Critical habitat for California tiger salamander has been proposed in Alameda County (USFWS 2004), however, the proposed Project site is located outside of the proposed critical habitat areas. The closest critical habitat unit is the East Bay Region Unit 4 located approximately 2 miles southeast of the Newark Center site. This Project, therefore, would not affect proposed critical habitat for California tiger salamander.

Western Burrowing Owl
The western burrowing owl is a California state species of special concern. Burrowing owls typically are associated with California ground squirrels whose burrows they use as nests and daily refuges during all seasons of the year. They occur in flat and hilly areas, on grazed areas, agricultural fields, and in vacant lots that are mowed or disked. They even may be found nesting in pipes, culverts, or other man-made structures such as rubble piles. The burrowing owl used to be very abundant in the Newark area in the 1950s according to the California Natural Diversity Data Base. Now their habitat has been much reduced and they are much less abundant.
The western burrowing owl lives in burrows that are usually excavated by the California ground squirrel and modified by the owl. Occasionally, owls will dig their own burrows. Burrowing owls hatch their eggs and raise their young in the burrows. The breeding season for burrowing owls extends from the beginning of February through the end of August. Burrowing owls are active during the day and night but are particular active at dawn and dusk. They forage for insects and rodents, which form the main components of their diet.

Western burrowing owls were formerly known to occur on the site according to the California Natural Diversity Data Base. Records exist for observations in 1998 of burrowing owls in the Sun Microsystems and Hewlett Packard properties on Cherry Road. One of 3 pairs observed in 1998, fledged young from this location. No burrowing owls were observed there in 2003. The barley appeared to have recently been cut prior to the site visit. It is possible that the burrowing owls could arrive later in the year at this site after mowing.

**Regulatory framework**
The following section describes the regulatory context of the Project.

**U.S. Fish and Wildlife Service (USFWS)**
USFWS has jurisdiction over species that are formally listed as threatened or endangered under the federal Endangered Species Act. The Endangered Species Act protects listed wildlife species from harm or “take.” The term “take” is broadly defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” An activity is defined as a “take” even if it is unintentional or accidental. An endangered plant or wildlife species is one that is considered in danger of becoming extinct throughout all, or a significant portion of its range. A threatened species is one that is likely to become endangered within the foreseeable future. In addition to endangered and threatened species, which are legally protected under the federal Endangered Species Act, the USFWS has a list of proposed and candidate species. Proposed species are those for which a proposed rule to list them as endangered or threatened has been published in the Federal Record. A candidate species is one for which the USFWS currently has enough information to support a proposal to list it as a threatened or endangered species. These latter species are not afforded legal protection under the federal Endangered Species Act. Nevertheless, Project-related impacts to federally listed, proposed, and candidate species or their habitats are considered “significant” under CEQA Guidelines (discussed below).

**California Department of Fish and Game (CDFG)**
CDFG has jurisdiction over threatened or endangered species that are formally listed by the State under the California Endangered Species Act. The California Endangered Species Act is similar to the federal Endangered Species Act both in process and substance; it is intended to provide protection to threatened and endangered species in California. The California Endangered Species Act prohibits the “take” of any plant or animal listed or proposed as threatened, endangered, or rare (“rare” applies only to plants). The California Endangered Species Act does not supersede the federal Endangered Species Act, but operates in conjunction with it. Species may be listed as
threatened or endangered under both acts (in which case the provisions of both State and federal laws would apply) or under only one act.

CDFG also maintains informal lists of “species of special concern.” These species are broadly defined as plants and wildlife that are of concern to CDFG because of population declines and restricted distributions, or they are associated with habitats that are declining in California. Project-related impacts to species on the State endangered or threatened lists and lists of species of special concern are considered “significant” under the CEQA Guidelines (discussed below).

CDFG also has jurisdiction over the bed and banks of watercourses according to the provisions of Section 1602 of the Fish and Game Code. The CDFG requires a Streambed Alteration Permit for the alteration of the bed or bank of or removal of any material from any natural drainage. The jurisdiction of CDFG extends to the top of the bank and typically includes the outer edge of riparian vegetation canopy cover.

**U.S. Army Corps of Engineers**
Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is responsible for regulating the discharge of fill material into waters of the U.S. and their lateral limits. Its jurisdiction is defined in 33 Code of Federal Regulations (CFR) Part 328.3(a) and includes streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the United States are termed “isolated wetlands” and may be subject to Corps jurisdiction.

In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the U.S. The type of permit required depends on the amount of acreage and the purpose of the proposed fill, and is subject to discretion from the Corps. There are two categories of Corps permits: nationwide (general) permits and individual permits. To qualify for a nationwide permit, a project must demonstrate that it has no more than a minimal adverse effect on an aquatic ecosystem. The Corps typically interprets this condition to mean that there will be no net loss of either habitat acreage or habitat value. This usually results in the need to provide mitigation for project-related fill of any creek or wetland.

An individual permit is required where a nationwide permit is not applicable. The consideration of an individual permit includes, but is not limited to, factors such as significant acreage of wetlands or waters of the U.S., areas of high biological or unique value, or length of watercourse affected. Individual permits require review of the project by the public, evidence that wetland impacts have been avoided or minimized to the extent possible, and provision of appropriate compensatory mitigation for unavoidable impacts.

**Regional Water Quality Control Board**
Pursuant to Section 401 of the Clean Water Act, projects that apply for a Corps permit for discharge of dredge or fill material into wetlands or other waters of the U.S. or State must also obtain water quality certification from the Regional Water Quality Control Board (RWQCB). This certification ensures that the project will uphold State water quality standards. Alternatively, the RWQCB may elect to notify an applicant
that the State may issue Waste Discharge Requirements in lieu of a Section 401 certification for a project.

CEQA Guidelines Section 15380
Although threatened and endangered species are protected by specific federal and State statutes, CEQA Guidelines section 15380(b) provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the federal Endangered Species Act and the section of the California Fish and Game Code dealing with rare or endangered species. Section 15380(b) was included in the guidelines primarily to address situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFG. Thus, CEQA provides a lead agency with the ability to protect a species from a project’s potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

California Native Plant Society
The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed lists of plants of special concern in California. A CNPS List 1A plant is a species, subspecies, or variety that is considered to be extinct. A List 1B plant is considered rare, threatened, or endangered in California and elsewhere. A List 2 plant is considered rare, threatened, or endangered in California but is more common elsewhere. A List 3 plant is a species for which CNPS lacks necessary information to determine if it should be assigned to a list or not. A List 4 plant has a limited distribution in California.

All of the plant species on List 1 and List 2 meet the requirements of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the CDFG Code, and are eligible for State listing. Therefore, plants appearing on Lists 1 or 2 are considered to meet CEQA’s Section 15380 criteria and effects to these species are considered “significant” in this document. Species on CNPS’ List 3 and List 4 are not addressed in this EIR.

Other Statutes, Codes, and Policies Affording Limited Species Protection
The federal Migratory Bird Treaty Act (16 U.S.C., Sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. The federal Bald and Golden Eagle Protection Act prohibits persons within the United States (or places subject to U.S. jurisdiction) from “possessing, selling, purchasing, offering to sell, transporting, exporting or importing any bald eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof.” Additionally, birds of prey (hawks, eagles, falcons, and owls) are protected in California under the State Fish and Game Code, Section 3503.5. Section 3503.5 states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Disturbance that causes nest abandonment and/or loss of reproductive
effort is considered “taking” by the CDFG and would constitute a significant impact to biological resources.

STANDARDS OF SIGNIFICANCE

Project effects on biological resources would be considered significant if it results in any of the following:

- Result in substantial reduction in numbers of, restriction in range for, or loss of habitat for a population of any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means;
- Create substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with the provisions of an approved local, regional, or state policy or ordinance protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

ENVIRONMENTAL IMPACTS

Less than significant impacts
The Project does not support any wildlife corridors because it is surrounded on three sides by development. Impacts to migrating wildlife are therefore nonexistent.

Potential impacts to non-native vegetation (e.g., barley) and non-sensitive wildlife (e.g. ground squirrels) are considered less than significant.

Impacts to wetlands
Construction of the Newark Center under the auspices of the Master Plan would remove approximately 0.08 acres of wetlands located in the northeastern corner of the Project site. Wetlands would be replaced by buildings and/or parking areas and would not be viable to preserve in its present location. Removal of the wetland area would be a significant impact.

Impact 4.3-1 (wetland impacts). Approval of the Master Plan and construction of the proposed Project would remove approximately 0.08 acre of wetland on the site (significant impact and mitigation required).
Adherence to the following measure would reduce impacts to jurisdictional wetlands to a less-than-significant level.

**Mitigation Measure 4.3-1 (wetland impacts).** Removed wetlands shall be replaced at a minimum ratio of 1:1 (one acre or portion of acre replaced for each acre or portion of acre impacted), which could occur on the Project site. A wetland mitigation replacement plan shall be developed and shall include, at minimum, a discussion of 1) the existing wetland's plant species composition and hydrology and the proposed plant species composition and hydrology of the mitigation wetland; 2) the performance standards by which success will be evaluated, 3) monitoring procedures, 4) contingency plan, 5) annual report, 6) and rationale for expected success. The mitigation plan shall be approved by the appropriate agencies prior to approval of the grading plan. A performance bond, letter of credit, or other financial instrument shall be established to guarantee any remedial work that might need to occur if the prior effort fails. The mitigation wetland should be monitored for 5 years after installation. Appropriate federal and/or state permits shall be obtained for fill of the wetlands prior to such activity.

**Impacts to special-status plant species**

Construction of the Newark Center could remove a number of special-status species on the site due to removal of existing site vegetation to accommodate proposed educational improvements. This would be a potentially significant impact.

**Impact 4.3-2 (special-status plant impacts).** Construction of the proposed Project could result in impacts to special-status plant species, if they were to occur on the site. These plants include alkali milkvetch, Congdon's tarplant, Contra Costa goldfields, dwarf downingia, hairless popcorn flower, and the prostrate navarretia (significant impact and mitigation required).

Implementation of the following (measure would reduce this impact to a less-than-significant level.

**Mitigation Measure 4.3-2 (special-status plant impacts).** Surveys shall be conducted for the special-status plant species. These surveys should begin during September 2004 and continue in the months of March and April 2005 to determine whether the potentially occurring special-status species grow on the Project site.

a) If the Contra Costa goldfields, dwarf downingia, alkali milk-vetch, prostrate navarretia, hairless popcorn flower, and/or Congdon's tarplant occurs on the Project site, then mitigation would consist of transplanting the populations (or seed from the populations) to the area proposed for wetland creation. Special-status plant populations would be temporarily avoided by establishing exclusion zones around the plant populations. Exclusion zones will be at least 50 feet in diameter. Once the plants set seed, typically in May or June, the seed shall be collected. Following seed collection, the exclusion zones may be removed and ground disturbing activities within the exclusion zone may occur.
b) A mitigation plan shall be developed for plants that will be transplanted or seeded to a different location. This mitigation plan shall include a discussion of 1) the existing habitat characteristics including plant species composition and hydrology, 2) the habitat characteristics of the mitigation area including plant species composition and hydrology; 3) the performance standards by which success will be evaluated, 4) monitoring procedures, 5) contingency plan, 6) annual report, 7) and rational for expected success. The mitigation plan shall be approved by the appropriate agencies prior to implementation of a grading plan. A performance bond, letter of credit, or other financial instrument shall be established to pay for any remedial work that might need to occur, if the prior effort fails. The mitigation area shall be monitored for 5 years after installation.

**Impacts to vernal pool tadpole shrimp and California tiger salamander**

Construction of the proposed Project could remove habitat of and individual species of vernal pool tadpole shrimp and California tiger salamander, both considered special-status wildlife species. This would be a significant impact.

**Impact 4.3-3 (impacts to vernal pool tadpole shrimp and California tiger salamander).** The Project could affect the vernal pool tadpole shrimp and the California tiger salamander if they were to occur in the pool and ditches or upland habitat on the Project site (significant impact and mitigation required).

The following measure would reduce this impact to a less-than-significant level.

**Mitigation Measure 4.3-3 (impacts to vernal pool tadpole shrimp and California tiger salamander).** The Project applicant shall enter into informal consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Game to assess the suitability of the habitats onsite for these species. If the agencies determine that the site does not have suitable habitat for these species, no additional surveys or mitigation will be required. If the agencies determine that the site provides suitable habitat, then surveys will be conducted to determine the presence of these species on the site. Surveys shall be conducted of the pond in the northeast corner of the site and of the ditches on and off of the Project site for the vernal pool tadpole shrimp and the California tiger salamander.

Surveys for the vernal pool tadpole shrimp shall consist of dry season and wet season surveys as described in the **Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)1(A) of the Endangered Species Act for Listed Vernal Pool Branchipods (USFWS 1996).** Dry season surveys shall be initiated prior to fall rains (October 2004). Wet season surveys should begin as soon as the pond fills in the late fall or winter of 2004 and extend through March 2005. The surveys for the California tiger salamander larvae should begin in February and extend into April. Aquatic surveys for California tiger salamanders should be conducted according to the joint USFWS and CDFG protocol dated October 2003. The following additional measures shall also be implemented:

a) If the vernal pool tadpole shrimp occur on the Project site, a mitigation plan shall be developed for translocating them to the site of the wetland.
restoration in the southwest portion of the property off of the portion of the property that would be used for the proposed Project or to another suitable mitigation site. This mitigation plan shall include, at minimum, a discussion of 1) the existing habitat characteristics including plant and animal species composition and hydrology, 2) the habitat characteristics of the mitigation area including plant and animal species composition and hydrology; 3) the performance standards by which success will be evaluated, 4) monitoring procedures, 5) contingency plan, 6) annual report, 7) and rational for expected success. The vernal pool tadpole shrimp mitigation plan shall be approved by the appropriate agencies prior to approval of the grading plan. A performance bond, letter of credit, or other financial instrument shall be established to pay for any remedial work that might need to occur, if the prior effort fails. The mitigation area shall be monitored for 5 years after installation. Coordination with the regulatory agencies would need to occur to develop the mitigation because the vernal pool tadpole shrimp is listed as endangered by the federal government.

b) If California tiger salamander larvae are found onsite during the surveys, impacts to this species shall be mitigated through the preservation of suitable upland at a 1:1 ratio (preserved:impacted) and preservation or creation of breeding habitat at a 2:1 ratio (preserved or created:impacted) at an offsite mitigation area. Mitigation for this species must include both terrestrial and aquatic habitat. A breeding pond, suitable for California tiger salamanders shall be created on the mitigation site. The area of the breeding pond will be at least two times as large as the breeding pond removed on the Project site (2:1 mitigation ratio) One or two ponds may be created. Upland habitat shall be replaced at a ratio of 1:1 for all areas impacted within 650 meters of the onsite breeding pond. The mitigation site must be in the Warm Springs or Newark area, must have suitable breeding as well as upland habitat as determined by a qualified biologist, and must be within 650 meters of a known breeding site with no barriers to movement between the known breeding site and the mitigation site.

A mitigation plan shall be developed for California tiger salamanders. This mitigation plan shall include a discussion of 1) the existing habitat characteristics including plant and animal species composition and hydrology, 2) the habitat characteristics of the mitigation area including plant and animal species composition and hydrology; 3) the performance standards by which success will be evaluated, 4) monitoring procedures, 5) contingency plan, 6) annual report, 7) and rational for expected success. The mitigation plan shall be approved by the appropriate agencies prior to implementation of a grading plan. A performance bond, letter of credit, or other financial instrument shall be established to pay for any remedial work that might need to occur, if the prior effort fails. The mitigation area shall be monitored for 5 years after installation.

Coordination with the regulatory agencies would need to occur to develop the mitigation plan because the California tiger salamander is proposed for listing by the federal and state governments.
c) Protection measures shall be developed to minimize mortality of California tiger salamander adults and larvae prior to and during construction, as well as during Project operation. The following steps shall be implemented:

1) If appropriate and feasible, adult salamanders shall be removed from the expansion area and re-located to suitable habitat elsewhere on-site or to an off-site mitigation area.

2) A salamander-proof barrier (e.g., fence or curb) shall be erected around the perimeter of the site to prevent salamanders from moving onto the site during ground-disturbing activities. The barrier will also help direct the salamanders to areas where breeding ponds are located.

3) A biological monitor approved by CDFG shall conduct an employee training session for all operators and managers involved in ground clearing and construction prior to the initiation of ground-disturbing activities. The purpose of the training shall be to inform the workers of measures being implemented to avoid, minimize, and mitigate impacts to tiger salamanders.

4) The biological monitor shall be present during initial ground-disturbing activities to move or salvage and possibly relocate any adult salamanders unearthed during earth-moving activities. The biological monitor shall make periodic checks of the site to document compliance with the protection measures. Monitoring visits shall continue through the first rainy season after the initial ground disturbance.

Burrowing owl impacts
Vacant portions of Newark, including the Project site, are inhabited by burrowing owls, which is a species of special concern. Burrowing owls were identified on the Lincoln Stevenson site, just south of the Newark Center site. Proposed grading and construction of the Newark Center Project would represent a significant impact to burrowing owl and owl habitat.

Impact 4.3-4 (impacts to burrowing owl). Grading of the Project site could impact western burrowing owls. Burrowing owls have been previously found on the site and if they were to occur on the site during grading they could experience mortality. Burrowing owls may use the site at all times of the year (significant impact and mitigation required).

The following measure would reduce this impact to a less-than-significant level.

Mitigation Measure 4.3-4a (impacts to burrowing owl): The Project applicant shall conduct protocol-level surveys for burrowing owls on the proposed development site. The survey will include both winter and breeding season surveys as stipulated in the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993). If burrowing owls are found on the site, then mitigation will be implemented according as described in the CDFG's Staff Report on Burrowing Owl Mitigation (October 1995). This entails establishing 6.5 acres of suitable habitat for each pair of burrowing owls displaced from the
Project site. These 6.5 acres should be adjacent to an area already used by burrowing owls. The replacement mitigation site shall be preserved in perpetuity for use as burrowing owl and wildlife habitat. An endowment for management and monitoring of the site will also be established.

**Mitigation Measure 4.3-4b.** Preconstruction surveys shall be conducted for the western burrowing owl prior to Project construction, including clearing and grubbing. These surveys shall conform to the survey protocol established by the California Burrowing Owl Consortium (Burrowing Owl Survey Protocol and Survey Guidelines, April 1993). Preconstruction surveys should be conducted no more than 30 days prior to the initiation of construction activities and at 30-day intervals if construction activities have not been initiated in an area. The following measures shall also apply:

a) If burrowing owls are found on-site, they shall be avoided to the extent practicable. A clearly defined area (i.e., orange construction fencing) shall be established around each burrowing owl burrow to be avoided. No disturbance should occur within 50 meters (approx. 160 ft.) of occupied burrows during the nonbreeding season of September 1 through January 31 or within 75 meters (approx. 250 ft.) during the breeding season of February 1 through August 31.

b) If the western burrowing owls occur on the Project site and construction will begin before February or after the end of August, and the burrows cannot be avoided, then passive relocation techniques may be used to relocate owls from the site. These passive relocation techniques would include excavating all potential burrows after excluding owls from the burrow for the required length of time. Passive relocation shall be done according to the current protocol established by the California Department of Fish and Game. Artificial burrows should be provided on the mitigation site for each occupied burrow destroyed on the Project site at a ratio of 2:1 (two artificial burrows created for each occupied burrow destroyed).

c) If the western burrowing owl occurs on the Project site and construction will begin during the breeding season (February through August), then a buffer of a radius of 75 meters (250 feet) will be established around any burrows containing owls.

d) Removal of burrowing owls on the Project site shall conform to the requirements of CDFG's Staff Report on Burrowing Owl Mitigation (October 1995). This entails establishing 6.5 acres of suitable habitat for each pair of burrowing owls displaced from the Project site. These 6.5 acres should be adjacent to an area already used by burrowing owls. The replacement mitigation site shall be preserved in perpetuity for use as burrowing owl and wildlife habitat. An endowment for management and monitoring of the site will also be established.

*Nesting raptor impacts*

Proposed construction activities on the Project site could have a significant impact on species of raptors currently using the site.
Impact 4.3-5 (impacts to nesting raptors). Construction activities may impact nesting
raptors or other nesting bird species through removal or pruning of trees on-site,
dISCing of land, through noise, or proximity of construction activity to a nest
(significant impact and mitigation required).

The following measure is recommended to reduce impacts to nesting raptors to a less-
than-significant level.

Mitigation Measure 4.3-5 (impacts to nesting raptors). Prior to initiation of
construction activities, ground disturbing activities, tree removal, or tree pruning, a
survey for nesting raptors and other birds shall be conducted on the site if the
activities will occur during the breeding season for birds in this area (February-
August). A qualified biologist shall conduct nest surveys to locate any active nests
on or immediately adjacent to the property. Preconstruction surveys should be
conducted at 30-day intervals unless construction activities have been initiated in an
area. Preconstruction surveys shall be conducted between February 1 and August 31.

If an active nest is found during the preconstruction survey, then the following
protective measures shall be implemented: 1) Establishment of clearly-delineated
(i.e., orange construction fencing) avoidance areas around each nest site that is a
minimum of 100 meters (330 feet) from the nest or dripline of the nest tree for raptors
or 30 meters (100 feet) from the nest for other birds; 2) monitoring by a qualified
biologist of active nest sites within an exclusion zone on a weekly basis throughout
the nesting season to identify any signs of disturbance; and 3) if the qualified
biologist identifies signs of disturbance, relocation of construction activities
pursuant to the biologist’s recommendation until signs of disturbance are eliminated.
Protection measures shall remain in effect until the young have left the nest and are
foraging independently or the nest is no longer active. A report shall be prepared at
the end of each construction season detailing the results of the preconstruction
surveys. The report shall be submitted to the City and CDFG by November 30 of
each year.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

All biological resources impacts would be reduced to a less-than-significant level after
mitigation.
Table 5. Special Status Plant Species Potentially Occurring On or In the Vicinity of the Ohlone College Project Site

<table>
<thead>
<tr>
<th>Species</th>
<th>Status (Fed/State/CNPS)</th>
<th>Habitat</th>
<th>Potential for Occurrence at Project Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asteraceae - Sunflower Family</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Congdon's tarplant <em>Centromadia parryi</em> var. <em>congdonii</em></td>
<td>--/--/1B</td>
<td>Seasonally wet areas, vernal pools, often with alkalinity. Known from Alameda, Contra Costa, Monterey, Santa Clara and San Luis Obispo counties. Extirpated from Santa Cruz and Solano counties. Blooms from June to November.</td>
<td>Habitat present in seasonally wet areas.</td>
</tr>
<tr>
<td>Contra Costa goldfields <em>Lasthenia conjugens</em></td>
<td>FE/--/1B</td>
<td>Vernal pools and other seasonally wet areas, often with little or moderate alkali content. Occurs in Alameda, Contra Costa, Monterey, Napa, and Solano counties. Blooms from March to June.</td>
<td>Habitat present in seasonal wet areas.</td>
</tr>
<tr>
<td>Boraginaceae – Borage Family</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hairless popcorn flower <em>Plagiobothrys glaber</em></td>
<td>--/--/1A</td>
<td>Alkaline vernal pools and seasonally wet areas, edge of salt marsh. Formerly known from Alameda, Merced, Marin, San Benito and Santa Clara counties. Considered extinct. Blooms from March to May.</td>
<td>Habitat present in alkaline seasonal wet areas.</td>
</tr>
<tr>
<td>Campanulaceae – Bellflower Family</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dwarf downingia <em>Downingia pusilla</em></td>
<td>--/--/1B</td>
<td>Seasonally wet areas, vernal pools. Occurs in Alameda, Merced Mariposa, Napa, Placer, Sacramento, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties. Blooms from March to May.</td>
<td>Habitat present in seasonal wet areas.</td>
</tr>
<tr>
<td>Chenopodiaceae – Goosefoot Family</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Joaquin Spearscale <em>Atriplex joaquiniana</em></td>
<td>--/--/1B</td>
<td>Mildly to strongly alkaline seasonally wet areas and vernal pools. Occurs in Alameda, Contra Costa, Colusa, Glenn, Merced, Monterey, Napa, Sacramento, San Benito, Solano, and Yolo counties. Extirpated from a few other counties. Blooms from April to October.</td>
<td>Habitat present in seasonal wet areas.</td>
</tr>
<tr>
<td>Fabaceae – Legume Family</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alkali milk-vetch <em>Astragalus tener</em> var. <em>tener</em></td>
<td>--/--/1B</td>
<td>Alkaline vernal pools and seasonal wetlands. Occurs in Alameda, Merced, Napa, Solano, and Yolo counties. Extirpated from a number of other counties. Blooms from March to June.</td>
<td>Habitat present in seasonal wet areas.</td>
</tr>
<tr>
<td>Polemoniaceae - Phlox Family</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Status (Fed/State/CNPS)</td>
<td>Habitat</td>
<td>Potential for Occurrence at Project Site</td>
</tr>
<tr>
<td>-------------------------------</td>
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<td>----------------------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Prostrate navarretia Navarretia prostrata</td>
<td>--/--/1B</td>
<td>Seasonally wet areas, vernal pools. Known from Alameda, Los Angeles, Merced, Monterey, Orange, Riverside, San Diego and possibly San Bernardino counties. Although considered extirpated from Alameda County, it has been established in created vernal pools at the Pacific Commons Preserve. Blooms from April to July.</td>
<td>Habitat present in seasonal wet areas.</td>
</tr>
</tbody>
</table>

**Notes:**

FE = Federally-listed as an endangered species.
FT = Federally-listed as a threatened species.
CE = State-listed as an endangered species.
CT = State-listed as a threatened species.
R = Rare in California
1A = Presumed Extinct in California
1B = Rare or Endangered in California and Elsewhere
2 = Rare or Endangered in California, More Common Elsewhere
3 = Need More Information
4 = Plants of Limited Distribution

<table>
<thead>
<tr>
<th>Species</th>
<th>Status (Federal/ State)</th>
<th>Habitat</th>
<th>Potential for Occurrence within Project Area¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burrowing owl</td>
<td>-/CSC</td>
<td>Nests in ground squirrel burrows in grasslands. Will also nest in artificial structures (culverts, concrete debris piles, etc.)</td>
<td>Most of the site is suitable and contains burrows of the California ground squirrels. Burrowing owls have been observed in the immediate vicinity of the site (Occ 270).</td>
</tr>
<tr>
<td>Loggerhead shrike</td>
<td>-/CSC</td>
<td>Grasslands and open shrub or woodland communities. Nest in dense shrubs or trees and forages in scrub, open woodlands, grasslands, and croplands. Frequently use fences, posts, and utility lines as hunting perches.</td>
<td>Grasslands provide foraging habitat. Marginal nesting habitat in urban trees at the edge of the site. Loggerhead shrikes usually nest in more isolated areas, nesting on site unlikely.</td>
</tr>
<tr>
<td>Northern harrier</td>
<td>-/CSC</td>
<td>Nests and forages in meadows, grasslands, open rangeland, and fresh or saltwater marsh.</td>
<td>The barley field may provide suitable nesting habitat while uncut. Cut barley would not provide habitat. Use unlikely as higher quality nesting habitat is available in the salt marsh in the vicinity.</td>
</tr>
<tr>
<td>Short-eared owl</td>
<td>-/CSC</td>
<td>Forages and nests in open habitats with few trees including grasslands, meadows, agricultural land, fresh or saltwater marsh, and dunes.</td>
<td>The barley field may provide suitable nesting habitat while uncut. Cut barley would not provide habitat. Use unlikely as higher quality nesting habitat is available in the salt marsh in the vicinity.</td>
</tr>
<tr>
<td>Tricolored blackbird</td>
<td>-/CSC</td>
<td>Nests in dense cattail and tule vegetation, Himalayan blackberry (Rubus discolor) or agricultural fields in the San Joaquin valley.</td>
<td>Suitable area of extensive stands of tule, and blackberry are absent, therefore it is not likely to nest on site. May forage on the site.</td>
</tr>
<tr>
<td>White-tailed kite</td>
<td>-/CFP</td>
<td>Nests in shrubs and trees in open areas and forages in adjacent grasslands and agricultural land.</td>
<td>The trees surrounding the site provide marginal nesting habitat. Kites usually nest in more isolated areas, and the kite is unlikely to nest on-site.</td>
</tr>
<tr>
<td>Species</td>
<td>Status (Federal/State)</td>
<td>Habitat</td>
<td>Potential for Occurrence within Project Area*</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>Saltmarsh common yellowthroat</td>
<td>-/CSC</td>
<td>Breeds and forages in dense low vegetation adjacent to salt and fresh water including pickleweed, knotweed and cattails.</td>
<td>The cattail habitat on the Project site consists of a narrow and exposed band and would be marginal for nesting especially considering suitable habitat in the salt marsh in the vicinity. The salt marsh common yellowthroat is unlikely to occur on-site.</td>
</tr>
<tr>
<td><em>Geothlypis trichas sinuosa</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reptiles and Amphibians</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>California tiger salamander</td>
<td>FPT/CSC (SP)</td>
<td>Breed in vernal pools, ponds, and stockponds. Spend summer and early Fall in uplands surrounding breeding sites, taking refuge in small mammal burrows or other underground cover.</td>
<td>California tiger salamanders known from within about 2.2-2.5 miles southeast of the site (Occ # 636,390,391,397). Suitable upland habitat present on site, although only marginal breeding habitat present onsite.</td>
</tr>
<tr>
<td><em>Ambystoma californiense</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western pond turtle</td>
<td>-/CSC</td>
<td>Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and adjacent grasslands or other open habitat for egg laying.</td>
<td>Brackish water slough adjacent to the site provides marginal habitat. Low likelihood of occurrence on site as vegetated drainage channels are small and densely vegetated with limited protect basking sites.</td>
</tr>
<tr>
<td><em>Clemmys marmorata</em></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

FE = Federally-listed as an endangered species.
FT = Federally-listed as a threatened species.
FPT = Proposed for listing as threatened under federal ESA.
CE = State-listed as an endangered species.
CT = State-listed as a threatened species.
CFP = State-listed as a fully protected.
CSC = State Species of Special Concern.
SP = Proposed for listing under the state ESA

* Nearest records are based on CNDDB (2004) occurrences unless otherwise noted.

Exhibit 5- Location of Mesic Herbaceous Vegetation
Exhibit 6- Jurisdictional Wetlands
4.4 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES

This section of the EIR addresses potential impacts to historical, archeological, and cultural resources.

The following section is based a cultural resources report for the Project site prepared by Holman Associates in August 2003. This report is included in the DEIR as Appendix 8.5.

ENVIRONMENTAL SETTING

Ethnography

A recent ethnographic overview for the Newark Center and surrounding properties was prepared by David Chavez in his report on proposed improvements to the Union Pacific Railroad which forms the southern border of the Newark Center Project area (Chavez 2002). The following is excerpted from that report principally to provide the reader with an appreciation of the types of settlements which might have been found inside the Newark Center and its immediate surroundings.

The Chavez report identified the Native American group occupying the areas as the Alson.

The Alson held the low marshlands at the very southern end of the San Francisco Bay, both north and south of the mouth of the Coyote River, through which the Newark-Albrae Corridor extends.

The Huchiun and Alson, like other Bay Area tribes, occupied small territories that ranged from roughly 8 to 12 miles in width.

Within each tribal territory lived a number of intermarried families that comprised a small autonomous polity. Members of the local groups hosted dances, pooled their labor during specific short harvest periods, defended their territory and resolved internal disputes under the leadership of a headman. In some areas of California, the families of a tribe shared a single central village location for much of the year; however, Bay Area tribe members lived most of the year in a more dispersed pattern.

When the Spanish explorers initially passed through the East Bay they observed villages, which averaged sixty to ninety people, roughly every 3 to 5 miles. The structures in the villages consisted of domed thatched houses; sweat houses; dance houses; and storage structures. The houses measured from 6 to 10 feet across, with a square doorway and a hearth in the center of the floor, and coverings described as thatch or tule, alfalfa or fern over a bent willow framework. The sweat house was an excavated pit on a stream bank with the superstructure laid against the
bank. Dance enclosures were circular or oval fence-like structures with a door and an opposing opening in the rear and were usually located in a larger main village. (Spanish/Mexican Period
The Project area is located in the present-day area of Washington Township—which includes the towns of Fremont, Union City, and Newark—were traversed by several Spanish exploring parties between the discovery by Anglos of San Francisco Bay in 1769 and the establishment of Mission San Jose in 1797. American Period
After California became part of the United States in 1848, American settlers began arriving in great numbers. Spanish and Mexican land grants became mired in litigation in the 1850s, and although some landowners were paid for their property, American ranchers and farmers either returning from the gold country or simply squatters were moving in on land they felt was the property of the United States government.

Among the first to settle in the Newark area was Origin Mowry, who arrived as a passenger on the Mormon ship Brooklyn. In 1850 he took advantage of a deep slough just south of Dumbarton (slightly southeast of the Project Area) and sailed a sloop as far up as he could and established Mowry’s Landing—for a time known as Mowry’s Creek (Sandoval 1985). Landings such as Mowry’s, as well as Mayhew’s Landing to the north, provided the backbone of commerce to the area.

To a great extent, the town of Newark owes its existence to the establishment of the railroad. The South Pacific Coast Railroad was incorporated with an initial investment of $1 million, with 1,000 shares issued for $1,000 a piece. Fully 994 of these 1,000 shares were held by Alfred Davis as a silent partner for James Fair. Fair wished to keep his investment hidden because he was very wealthy and generally disliked—he feared that the price of property along the proposed line would sky rocket if sellers knew he was the buyer. When the Santa Clara Valley Railroad went bankrupt in 1876, Fair saw an opportunity to develop a narrow gage route from Dumbarton Point (with a terminal in Newark), then cross the marsh to Santa Clara and pick up cinnabar at New Almaden, lumber from Lexington, and over the ranges to Santa Cruz. A second proposed route was from Newark to through Alvarado, to Alameda Point. The first land acquisition was 4,000 acres of Newark from the Perrin Brothers Green Point Dairy Co in 1876 (it was both the Perrin Brother's and Davis' New Jersey birthplace that gave the town its name). A ranch house at Mayhew Landing in Newark served as Fair’s residence when he was in town. The Central Hotel was built adjacent to the tracks and the ferryboat Newark was ordered built by the South Pacific Coast Railroad to provide service from Dumbarton to San Francisco (MacGregor 1968).

In 1876 the Pacific Land Investment Company, a subsidiary of the South Pacific Coast Railroad, was incorporated with Fair at the helm. The planned residential community of Newark was inspired. The real estate was exactly as advertised—houses were well-built and rested on acreage exact in its dimensions. In 1877 the Pacific company began an aggressive ad campaign touting the joys of country living, with large ads in every Bay area newspaper.
Crystal Salt Works was established in 1864, when J.A. Plummer purchased the property adjacent to the new town of Newark. This property consisted of a large pond and natural salt marsh when Plummer added vats, windmills, and pumps, and subdivided the pond. A milling house was then built for the meatpacking trade.

Archeological background
To date a total of four prehistoric archaeological sites and a potential location for a fifth site have been located within a mile of the Newark Center Project area. Three of these sites, Ala-59, 336 and 337, were recorded in the early and mid 20th century to the southwest of the Newark Center. Work done by Chavez (2002), Holman (1982,2001) report that all three of these sites have probably been completely destroyed by recent historic land alteration associated with bay filling and/or the creation of new salt ponds. One possible new archaeological site location was originally reported by Holman in 1982 during the field inspection of 9 development areas for the City of Newark. Parcel 7, which borders the Newark Center property along its southern border (the Union Pacific Railroad corridor) turned up what may be a prehistoric site location along the banks of the drainage ditch which forms the eastern border of the Newark Center property north of the tracks.

It was during one of the passes over the property that archaeological material, not previously identified during the three previous walkovers, was discovered near the edge of the Alameda Flood Control channel. A contracting stem obsidian projectile point, scant evidence of fire cracked rock, and a chert waste flake were found in a small area near the levee bank. No traces of shell were found in the general area, usually an indicator of habitation sites along the bay margins. [Holman 1982:5-6]

The nearest recorded archaeological resource to the Newark Center Project, and the most important is Ala-599, recorded directly east across the drainage ditch at the southeast corner of the Newark Center property inside an existing commercial development and evidently extending into the railroad right of way. First formally recorded by the Ohlone Family Consulting Services (OFCS) in 1999, this archaeological site has been the focus of a number of studies, summarized in a 2001 letter report by OFCS, by Archeo Tec in 2002 and by Chavez in 2002.

The OFCS 2001 report summarizes the work done at this location up to that point. First discovered by John Holson in 1999 during trenching for a fiber optics cable trench, human remains were encountered but left in place and the site was not formally recorded. Shortly afterwards the OFCS became involved in monitoring for an adjacent technical park, a project which they continued with through 2001. In late 1999 one burial was exposed and removed by them, followed by the discovery of additional burials by Archeo-Tec on an adjacent property in 2001. A Primary record was prepared by Archeo-Tec in 2001 which provided a mapped location of the reburial of these remains. At the same time an unpublished report was produced by Archeo-Tec which summarized their work on what was
understood to be an extension of Ala-599 to the north of the original burial location found by Holson in 1999.

Chavez (2002) reviewed the Archeo-Tec report for his study of the railroad improvement project. He described a midden area of at least a meter in thickness, covered in areas by up to as much as 60 centimeters of imported fill:

> The site as whole appears to retain a relatively high degree of integrity and intactness....and....additional human internments and subsurface cultural features probably exist at one or more places within the borders of the archaeological deposit. [Pastron 2002 in Chavez 2002:13]

Chavez noted that Holson had also reported that there was as much as 10 centimeters of fill on top of the midden seen during his monitoring, and concluded that it was his opinion that the archaeological site probably extended into the railroad track right of way.

Archival research
Archival research was carried out by Miley Holman at the Northwest Information Center located at Sonoma State prior to the field inspection (file # 02-916). Numerous archaeological surveys have been done of the Newark Center and the surrounding areas: Banks and Fredrickson (1977) surveyed surrounding properties including what appears to have been all of the Newark Center with negative findings; Bard and Ogrey (1982 ) inspected a number of well sites including one inside the Newark Center also with negative findings.

David Chavez surveyed a large area for a reclamation project (1979) which included the entire Newark Center parcel with negative findings and returned in 1992 to conduct a field inspection of 4 parcels in the vicinity of the Newark Center again with negative findings. His work on the railroad upgrade project (2001) discussed a number of cultural resource locations in the general vicinity, in particular his opinion that Ala-599 probably extended into the railroad right of way from its then recorded location to the north of it. Holman covered a 10 acre portion of the Newark Center in 1982, and then conducted a complete field inspection of the Newark Center along with adjacent property in 1984, recording no prehistoric materials inside the Newark Center parcel.

In respect to the Newark Center parcel, the reports which included it in their coverage have in common the fact that no archaeological resources were visible during field inspection of the property. Almost all of these reports also make it clear that archaeological survey conditions were less than ideal: dense vegetation is cited as the usual reason why visual survey conditions were less than ideal.

Field inspection
A pedestrian survey of the proposed Ohlone College campus was conducted on May 22, 2003, by Alisa Reynolds and Ian Alexander of Holman & Associates. The Project area is located in the City Newark, Alameda County. It is roughly bordered by the channelized canal to the east, the Union Pacific Railroad tracks to the south, (running at a diagonal), Cherry Street to the north, and a fence to the west. Transects were placed 15 meters apart throughout the entire Project area. The area
is a large, flat agricultural field very near the original marshland borders of the San Francisco Bay.

Visibility varied from very good to zero. Large areas, especially towards Cherry Street, had recently been disked and soil was clearly visible. Grass was fairly low in portions of the northwest area where a dirt road crosses through this corner of the Project, allowing for moderate visibility of the ground surface. A large area in the southwest portion and bordering the canal, however, was completely obscured by dense, high, grasses. In this area there was no soil visible and some areas were completely impenetrable by foot.

No cultural resources-historic or prehistoric-were observed. Soil composition varied throughout the Project area. The area along the canal and near the southern portion of Cherry Street was characterized by decomposing sandstone and light, sandy soil. This was possibly the result of the channel excavation, but the area was flat and wasn’t marked by any obvious mounding or stockpiling of soil. Patches of the Project near Cherry Street exhibited somewhat dark organic soil with rounded cobbles; again, no cultural resources were observed. When soils were clearly visible, the center of the Project generally consisted of gray-brown silty soil with moderate amounts of rounded and semi-rounded cobbles.

A relatively small area of very dark silty soil, almost black, was observed in the southeast area of the Project, near the dirt road. No indicators of prehistoric use or habitation were present (no shell, bone, charcoal, or lithics). A small drainage ditch-dry at the time of survey-had been excavated nearby, possibly indicating that this area was subject to slight flooding in wet seasons, thereby creating an area of rich, dark soil.

**Historic structures**

No structures exist on the Project site, so there are no historic structures on the site.

**STANDARDS OF SIGNIFICANCE**

The Project, or construction based on the approved Project, would have a significant impact if one or more of the following were to occur:

- the physical demolition, destruction, relocation or alteration of a historic resource or its immediate surroundings to the extent that those physical characteristics which convey the historical significance and justify the identification of this historic resource, or the eligibility for such identification, would be materially altered;
- the disruption, alteration, or adverse affect on a prehistoric or historic archeological site or a property;
- an adverse physical or aesthetic change to a prehistoric or historic building, structure or object;
- the direct or indirect destruction of a unique paleontological resource;
- potentially cause a physical change that would affect unique ethnic cultural values; or
• have the potential to cause damage to an important archeological resource as defined in Section 15064.5 of the CEQA Guidelines, including human remains interred outside of a formal cemetery.

ENVIRONMENTAL IMPACTS

Archeological and Native American resources
Previous reports have all added to the understanding of this archaeological site (Ala-599), which appears to have been covered by as much as 60 centimeters of imported fill material. Numerous burials and what is described as an intact midden appears to extend northwards from the railroad tracks along the eastern side of the ACFCWCD channel. None of the several archaeological monitoring projects done have achieved the goal of determining the aerial extent of the site and only Chavez (2002) speculated that the site might extend southwards out of its recorded borders into the railroad right of way.

The archaeological deposit could in fact extend in other directions as well, possibly into the Newark Center Project area. The existing canal located along the border of the Newark Center parcel cannot be considered to be a natural border which would have separated the recorded location of Ala-599 with additional areas of midden: it is an historic creation, and may not represent the prehistoric drainage of the area. The soils removed when this channel was constructed may be responsible for the historical deposit found on top of Ala-599, and may be the reason why the repeated visual inspections of the proposed Newark Center property have failed to find any traces of it west of the canal.

For his railroad expansion study Chavez (2002) consulted the Sacred Lands Files of the Native American Heritage Commission to search for any information regarding sacred sites. While none were reported, two responses were received from Native American informants who wished to share their concerns in regards to Ala-599. Both Andrew Galvan and Kathy Perez mentioned the archaeological site, and urged that archaeological monitoring be done in the general vicinity of the recorded location of this site to insure that additional areas of archaeological deposit would be identified and treated properly.

Impact 4.4-1 (archeological and Native American resources). Although no prehistoric, Native American or archeologically significant resources have been identified within the Project area, there is a strong possibility that such unrecorded resources exist. Construction of new buildings, underground utility lines and site grading could result in disturbance to archeological and/or Native American resources (potentially significant and mitigation is required).

Adherence to the following mitigation measure will ensure that impacts to archeological, Native American and human remains would be less-than-significant.

It is recommended that a program of mechanical subsurface testing be done within that zone to search for buried archeological deposits. Testing should be comprehensive enough to aid in the determination of the aerial extent of any such deposit as well as its depth below the surface.
Any archaeological deposit found in this manner should then be mapped by qualified surveyors after the preparation of an updated archaeological site survey form to supplement the existing site record for Ala-599. Accurate mapping should aid the Project sponsors in the process of redesigning road placement, undergrounded utilities or landscaping so that impacts to the resource could be completely avoided. If complete avoidance of the cultural resource could not be achieved, it will be the responsibility of the Project sponsor to submit a plan for the evaluation of the resource as required under CEQA guidelines to the appropriate lead agency before any plans for the mitigation of impacts to the resource could be adopted.

**Mitigation Measure 4.4-1 (archeological and Native American resources).** Prior to construction on the site that will disturb any soil:

a) A program of mechanical subsurface testing shall be done by a qualified archeologist within a 300-foot wide band of the existing ACFCWCD Channel to search for buried archaeological deposits. Testing should be comprehensive enough to aid in the determination of the aerial extent of any such deposit as well as its depth below the surface.

b) Any archaeological deposit found in this manner should then be mapped by qualified surveyors after the preparation of an updated archaeological site survey form to supplement the existing site record for Ala-599. Accurate mapping should assist the Project sponsor to redesign road placement, undergrounded utilities, or landscaping so that impacts to the resource are reduced to a less-than-significant level.

c) If complete avoidance of the cultural resource cannot be achieved, the Project sponsor a resource protection plan conforming to CEQA Section 15064.5 shall be prepared by a qualified archeologist and approved by the Lead Agency.

d) If work on the Project lying outside the 300-foot wide band uncovers cultural resources, the provision of subsection “c” shall apply.

e) If human remains are encountered, the County Coroner shall be contacted immediately and procedures followed as specified in CEQA Guidelines Section 15064.5 (e).

**Historic resources**

Since there are no structures on the Project site, there would be no impacts to historic structures.

**LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Cultural resource impacts would be reduced to a less-than-significant level after mitigation.
4.5 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES

This section of the DEIR addresses soil conditions, existing topographic and geologic features, potential impacts related to site grading, and the potential for seismic-related hazards and mineral resources.

Information contained in this section is based on information contained in a site-specific preliminary geotechnical report prepared for this proposed Project by the firm of Treadwell & Rollo in 2003. This report is located in Appendix 8.6.

ENVIRONMENTAL SETTING

Regional geology
The Project site is within the Coast Ranges geomorphic province of California. The Coast Ranges province is generally characterized by northwest-trending mountain ranges and intervening valleys that are controlled by right-lateral strike-slip faulting along the San Andreas fault system. Bedrock in the southern San Francisco Bay area, near the bay margin, consists of Cretaceous-Jurassic Franciscan Complex, overlain by Tertiary sediments. The Tertiary sediments are overlain by Quaternary deposits.

The site lies in the flatland areas along the eastern margin of the San Francisco Bay. Due to thick Quaternary sedimentary deposits, Tertiary bedrock is unmapped in the site vicinity. Helley et al. mapped the site vicinity as underlain by interfingering interfluvial basin deposits, generally located farther east of the Bay. Knudsen et al. mapped these two units as Holocene basin deposits and Holocene alluvial fan deposits, respectively. Interfluvial basin deposits are described by Helley et al. as plastic, poorly sorted, organic-rich clay and silty clay in poorly drained areas marginal to the Bay that are generally less than ten feet thick. Younger fluvial deposits consist of unconsolidated deposits of mainly fine sand, silt and silty clay that form levees and overbank deposits along the Bay margin and are generally less than 15 feet thick.

Seismic setting
The Project site is within a region characterized by the seismically active San Andreas fault system, which is the principal tectonic element of the North American/Pacific plate boundary in California. Movements along this plate boundary in the Northern California region are primarily translational, resulting in mostly right-lateral strike-slip faulting along the San Andreas fault system. Seismic slip on the San Andreas fault system is partitioned into subsidiary structures that distribute plate movement across the Coast Ranges province, between offshore Continental Shelf areas to the west and the Sacramento Valley to the east. The San Andreas fault is located approximately 25 kilometers west of the site.

The Hayward Fault is considered one of the active subsidiary structures to the San Andreas fault system. It is located approximately six kilometers northeast of the site. Other major active faults in the site vicinity include the Calaveras (14 kilometers to the east), Greenville (33 kilometers to the east), San Gregorio (38 kilometers to the west) and Concord-Green Valley (40 kilometers to the north).
Site geology
The ground surface at the site slopes gradually downwards to the south, with elevations ranging from about 20 feet at the north corner to about eight feet in the south corner of the site. The site is underlain by interfluvial basin deposits (see Regional Geology discussion above). Soils exposed in drainage ditches on the site and along the neighboring drainage channel are generally clayey, consistent with the regional mapping.

In general, the site is underlain by young flatland deposits consistent with a bay margin environment and fluctuating sea level. The materials encountered suggest three distinct depositional environments: basin, estuarine and alluvial channel.

The upper several inches of the surface soil contains organics, primarily roots from the hay and previous agricultural products planted at the site. It is anticipated the soil contains significant organics to depths of about six to eight inches due disking activities after crop harvesting.

Available subsurface information indicates the site is generally blanketed by one to five feet of stiff to hard clay with varying amounts of sand. The clay has a high expansion potential and is typical of native surface soil in the area. This stiff clay is underlain by lower-plasticity clay that extends to depths varying between 25 and 42 feet below the ground surface. The clay is moderately compressible and overconsolidated. The groundwater level at the site is about five feet below the ground surface.

STANDARDS OF SIGNIFICANCE

The following standards of significance are used to assess potential environmental impacts related to geological, landform and topographic issues of the proposed Project:

- Exposure of people and/or property to the risk of harm from geological hazards and/or soil or seismic conditions. This would include surface rupture, strong seismic ground shaking and seismic-related ground failure, including liquefaction and landslides;
- Presence of an Earthquake Fault Zone (formerly Alquist-Priolo Seismic Study Zone), an active fault or an area characterized by surface rupture that could be related to fault activity;
- Development on a soil type that is unstable, or that would become unstable as a result of project implementation, and/or that could potentially result in on- or off-site landslides, subsidence, liquefaction or collapse; or
- Significant increases over present levels of soil erosion and loss of topsoil.

ENVIRONMENTAL IMPACTS

Should the proposed Project be approved and implemented, the following environmental impacts are anticipated: seismic hazards related to ground displacement due to rupture, ground deformation due to fault creep and seismic
Seismic ground shaking
The occurrence of earthquakes in the San Francisco Bay Area is inevitable. The U.S. Geological Survey has determined the overall probability of a 6.7 magnitude or greater earthquake occurring during the period 2003 to 2032 is 62 percent. Due to the proximity to active fault systems, development of the Project could expose students, staff, visitors, structures and property to severe ground shaking. This would be a significant impact.

Impact 4.5-1 (seismic ground shaking). There is a high potential to expose the Project site, site improvements, students, staff and visitors to moderate to very strong ground shaking during a major earthquake (significant impact and mitigation required).

Adherence to the following measure will ensure that seismic-related ground shaking would be reduced to a less than significant level.

Mitigation Measure 4.5-1 (seismic ground shaking). Potential ground shaking hazards to people, structures and property can be reduced but not eliminated through implementation of the following measures:

a) Structures shall be designed in accordance with all building design requirements established in the most recent California Building Code (CBC) and Division of State Architect requirements.

b) Design and construction of foundations and paved areas shall conform to all relevant seismic regulations and recommendations made by certified soils, geotechnical and structural engineers for each proposed building on campus.

c) New utilities shall be designed to withstand the expected ground motion of an earthquake in the vicinity of the Project site.

On-site soil settlement
The moderately compressible clay below the groundwater table will consolidate under the anticipated building loads and any new fill, causing settlement of the ground surface. The estimated ground settlement for each foot of fill placed on site is 0.3 inch. The estimated settlement for a representative column load three-story building would be about 1.5 inches, with a differential settlement of approximately 0.5 inch between adjacent columns. This would be significant impact.

Impact 4.5-2 (soil settlement). There is the potential for soil settlement on-site. This could result in damage to buildings, parking areas, underground utilities and other improvements (significant impact and mitigation required).

The following measure would reduce this impact to a less-than-significant level.
Mitigation Measure 4-5-2 (soil settlement). Building-specific settlement analyses shall be performed by a geotechnical engineer during the design phase for each individual building at the Project site to determine the anticipated building settlement. Design of an appropriate foundation will be determined based on the acceptability of the estimated settlements. The potential for soil settlement shall also be analyzed in the design of parking lots, driveways, underground utilities and other appropriate on-site facilities.

Liquefaction potential
Strong ground shaking caused by large earthquakes could result in ground failure such as that associated with soil liquefaction, differential compaction and lateral spreading. Settlement resulting from liquefaction in the sand and gravel layers at the site could range from zero to two inches. If liquefaction occurs, the surface clay should reduce the potential for ground surface disruption such as foundation bearing failure, lurch cracking and sand boils. The clay present above the potentially liquefiable soil layers at the site would reduce the settlement at the ground surface to about 0.5 inch. This would be a potentially significant impact.

Impact 4.5-3 (liquefaction potential). There is the potential for liquefaction on-site that could result in damage to buildings and other on-site improvements (potentially significant and mitigation required).

Adherence to the following measure would mitigate the potential for liquefaction to a less-than-significant level.

Mitigation Measure 4.5-3 (liquefaction potential) Site-specific field explorations shall be performed by a geotechnical engineer within each building footprint at the Project site during the design phase to identify detailed liquefaction potential and associated ground surface settlement. Recommendations of the exploration shall be incorporated into final foundation and building design.

Expansive soil
The upper one to five feet of soil on the Project site is highly expansive. Expansive soil tends to shrink and swell in response to changes in moisture content when it is not confined by heavy building loads. Site improvements such as foundations, floor slabs and driveways supported on expansive soil could experience distress and/or cracking if not properly designed. The presence of expansive soil on the site could result in significant impacts.

Impact 4.5-4 (expansive soil). There is the potential for structural damage to Project buildings and other improvements as a result of soil expansion and contraction (significant impact and mitigation required).

Adherence to the following measure will reduce this impact to a less-than-significant level.

Mitigation Measure 4.5-4 (expansive soil). All building floor slabs shall be underlain by 12 to 18 inches of non-expansive fill and should extend at least five feet beyond the building footprints. During the final geotechnical investigation for
individual buildings, the recommended thickness of the non-expansive fill layer will be identified. If the expansive soil is within three feet of the ground surface, shallow footings shall extend 36 inches below the lowest adjacent grade.

Fault rupture
The Project site is not within a designated Earthquake Fault Zone, therefore, the potential for surface fault rupture would be low. This is a less-than-significant impact.

Soil erosion
Because the site is relatively flat, substantial erosion is not anticipated at the site during Project construction activities. The Project must comply with all Phase II NPDES Storm Water regulations for construction activities which will minimize on-site erosion (See Hydrology and Water Quality section, Section 4.7).

LEVEL OF SIGNIFICANCE AFTER MITIGATION

All geologic and soil impacts could be mitigated to a less-than-significant level.
4.6 HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES

This section of the EIR addresses potential soil, groundwater and structural contamination. Information contained in this section is based on a Phase II Environmental Site Assessment prepared for the Project Site by Treadwell & Rollo, which is contained in Appendix 8.7.

ENVIRONMENTAL SETTING

The current and historic use of the site has been agricultural. Hay is the crop currently being cultivated. The site is located in an industrial area of Newark. Union Pacific railroad tracks are located immediately to the south of the Project site and an Alameda County Flood Control and Water Conservation District (ACFCWCD) drainage channel bounds the site on the eastern and southeastern boundaries. The site slopes gradually downwards to the south with elevations ranging from approximately 20 feet in the northwest corner to approximately eight feet in the south. Groundwater levels are at depths ranging from five to seven feet below the ground surface. The Project site is not included on the Department of Toxic Substance Control’s site clean up list (DTSC, 2004) as per Government Code Section 65962.5.

Soil issues
In 1989, a soil investigation at the site was conducted and approximately 3.1 parts per million (ppm) combined dichlorodiphenyltrichloroethane (DDT) and dichlorodiphenyltrichloroethane (DDE) and 2.5 ppm of toxaphene were reportedly detected in composite soil samples. At that time, the Department of Health Service, Toxic Substances Control Division (DTSC) stated they have recommended that deed restrictions be imposed on similar types of industrial sites where soil containing more than five ppm of toxaphene were to be left on site. The Project site would be under the five ppm standard; however, DTSC stated that regardless of the level of contamination, the existence of the residual contamination should be disclosed to future property owners on the deed and on a real estate transaction disclosure form.

Groundwater issues
A groundwater investigation conducted at the site in 1989 detected low concentrations of volatile organic compounds (VOCs). Tetrachloroethene (PCE), trichloroethene (TCE) and 1,2-dichloroethene (1,2 DCE) were detected in the northeast corner of the Project site. No source for the relatively low concentrations of VOCs in ground water was identified except for the adjacent unlined Alameda County Flood Control District channel. The Regional Water Quality Control Board (RWQCB) determined that no further action was required at the site. Groundwater testing conducted in 2003 noted detections of PCBs, metals, TPH and VOCs at either below laboratory detection limits or the residential PRGs (Preliminary Remediation Goals).
Airborne contamination
Several operations in the vicinity of the Project site were identified with documented releases of hazardous materials to soil, groundwater and air. Treadwell & Rollo’s review of documents did not find evidence that the documented releases at nearby properties are likely to have impacted soil or groundwater at the site. An air quality analyses for the site prepared by Cooper Environmental (Treadwell & Rollo, 2003), concluded that mobile sources (primarily auto and truck traffic) are likely to have the greatest adverse impact on air quality at the Project site (see Section 4.2, Air Quality, for a discussion of air quality impacts).

A review of point sources with potential air quality impacts located within 0.75 mile of the site was undertaken by the Bay Area Air Quality Management District (BAAQMD). Such reviews by BAAQMD are routinely undertaken for proposed K-12 schools, as required by CEQA and BAAQMD agreed to conduct such a review for Ohlone College. The BAAQMD review identified four facilities within 0.75 mile of the Project site that could result in potential hazardous air emissions. Of these two were identified as having the potential to significantly deteriorate the air quality at the Project site as a result of occasional releases of acutely toxic gases. The other two facilities are considered of minor potential impact due to the small extent of their emissions or of the potential for occasional accidental sudden release from upset operations.

STANDARDS OF SIGNIFICANCE
For purposes of this DEIR, development of the Project site would present a significant impact if it:

- Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release or hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous materials, substances or waste within one-quarter mile of an existing or proposed school; or
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or environment.

IMPACTS AND MITIGATION MEASURES

Less than significant Impacts
Agilent Technologies is located adjacent to the Project site. This facility has a history of air releases. However, operations have ceased and the facility is being closed. It should be note, if this facility were to remain in operation, it could represent a potentially significant air quality impact on the Project site. Evergreen Oil, Inc. is located about 0.73 mile northwest of the site. It has a history of neighborhood complaints of odors and/or other air emissions. The Project site is located
downwind of the facility and it is anticipated that normal operations of the facility would not result in adverse impacts on the Project site. However, if facility operation upsets occur very often, this could result in adverse impacts (likely hydrocarbon release and odor) at the Project site.

Pesticide contamination
Soil testing undertaken in shallow soil throughout in 2003 did not contain the pesticides DDT, DDE at concentrations above the USEPA Region 9 Preliminary Remediation Goals (PRGs) direct contact exposure pathway for soils to be used for residential uses, except for one soil sample which exceeded the PRG for DDE (USEPA, 2002). Toxaphene is present in shallow soil exceeding both the residential and industrial/commercial PRGs. The residential PRGs are more conservative than the commercial/industrial PRGs and are generally applied to development sites for school use. Detections of polychlorinated biphenyls (PCBs), total petroleum hydrocarbons (TPH) and VOCs were either below laboratory detection limits or the residential PRGs.

Impact 4.6-1 (pesticide contamination). The Project site contains pesticides in shallow soil that exceed the USEPA residential and commercial/industrial PRGs (potentially significant impact and mitigation required).

Adherence to the following measure will reduce this impact to a less-than-significant level.

Mitigation Measure 4.6-1 (pesticide contamination). Prior to site grading and excavation, a human health risk assessment shall be completed to identify the potential health risks associated with the pesticides present on site. A regulatory agency shall be contacted to provide oversight of the human health risk assessment and recommended mitigation measures to ensure that they are appropriate for the development of the site for community college use.

It is understood that the Ohlone Community College District recently signed an oversight agreement with the State Department of Toxic Substances Control to oversee completion of the above mitigation measure.

Use and storage of hazardous materials
Construction of the Project under the auspices of the Master Plan would result in the use, storage and disposal of hazardous materials used in educational laboratories. Hazardous materials storage in the science labs would be minimal and would be limited to quantities allowed by the Uniform Building Code for Group B Occupancies as set forth by Table 7002.5A of the California Fire Code. Other sources of potentially hazardous materials would include storage of paints, solvents and other building maintenance supplies and the use and storage of lawn and garden care chemicals.

Impact 4.6-2 (use and storage of hazardous materials). The use, storage and disposal of hazardous materials could result in potential releases of those hazardous materials into the atmosphere, the underlying soil and the groundwater aquifer (potentially significant and mitigation required).
The following measure would reduce this impact to a less-than-significant level:

**Mitigation Measure 4.6-2 (use and storage of hazardous materials).** The District shall prepare a Hazardous Materials Management Plan for the Newark Center. The Plan shall include, but not be limited to, the following elements relative to hazardous materials: storage; safety precautions for handling; disposal; and staff and student training. The Hazardous Materials Management Plan shall be submitted to the City of Newark Fire Department for review and approval prior to site occupancy.

**LEVEL OF SIGNIFICANCE AFTER MITIGATION**

All hazardous materials impacts would be reduced to a less-than-significant level after mitigation.

### 4.7 HYDROLOGY, DRAINAGE AND WATER QUALITY

**ENVIRONMENTAL ISSUES**

This section contains an assessment of hydrologic, water-quality and drainage issues for the Ohlone College District’s proposed Newark Center.

**ENVIRONMENTAL SETTING**

*Climate*

The Ohlone College Newark Center Project site is located in the southern portion of the City of Newark (Alameda County) near the boundary with Fremont. The property is bounded by Cherry Avenue to the northeast, the Union Pacific Railroad (UPRR, formerly Southern Pacific Railroad) tracks to the southwest, an Alameda County Flood Control and Water Conservation District (ACFCWCD) drainage channel to the southeast, the Agilent light industrial facility to the northwest and the George M. Silliman Community Center to the southwest.

The area encompassing the Project site is located in the Mediterranean-type climate zone typical of coastal central California. This zone is characterized by cool, wet winters and warm, dry summers. Due to the proximity to San Francisco Bay, temperatures are more moderate than at more inland locations. Evaporation rates and evapotranspiration rates rise in response to the warmer weather and soil moisture storage is typically depleted by late April or early May (Table 7). Growth of native vegetation then slows or stops completely and landscape managers commence irrigation, which is generally maintained through early November. Summer temperatures are moderated by cool marine breezes and coastal fog, especially in late spring and summer.

Long-term daily meteorological data is available from the Newark, California weather station (NCDC station #046144) approximately 1.0 miles northwest of the
site, with a period of record from 1948 to the present. Average rainfall conditions in this area are the statistical mean of rainfall totals that show a wide range of values strongly influenced by global weather patterns, such as the El Niño Southern Oscillation and protracted periods of drought. Additionally, the location of the site on the western fringe of the Bay Plain further limits rainfall. The low elevations typical of the Plain reduce orographic (mountain-induced) precipitation while the Coast Ranges to the west often create a “rain shadow” by extracting excess atmospheric moisture from passing storms. Through the close of water year 2003 (the federal water year is defined as occurring from October 1st of any year through September 30th of the subsequent year, thus, water year 2003 extends from October 1st, 2002 through September 30th, 2003), the mean annual rainfall at the Newark station is 14.55 inches with a maximum of 31.02 inches in water year 1998 and a minimum of 6.23 inches during the severe drought of 1976. The record shows that the past decade has, in general, consisted of above-average rainfall conditions, with very wet years in water years 1993, 1995, and 1998. This wet period was preceded by prolonged dry conditions in the late 1980’s and early 1990’s, with five consecutive years of below-average rainfall.

**Surface hydrology**

Ground surface elevations on the undeveloped, roughly 81-acre Project site gradually decline from about 20 feet (NGVD 29, for all elevations cited herein) in the northwest corner to approximately 8 feet in the southeast corner. Almost the entire site drains southwards, eventually entering the earthen, trapezoidal flood control channel that parallels the eastern property boundary. This channel, which is designated as “Line D” of Zone 5, is owned and maintained by the ACFCWCD. Line D drains a total of about 3.5 square miles of lower-lying residential neighborhoods in Newark and Fremont. Line D joins Line B downstream and the combined channel empties into Mowry Slough, a tidal slough that has been converted into an ACFCWCD flood control channel, approximately 2,500 feet south of the Project site. Mowry Slough meanders through an extensive tidal marsh for another 5.7 miles before ultimately discharging into southern San Francisco Bay.

Approximately 80 acres of the Project site drain to a field inlet at the southeastern corner of the property, where runoff is discharged to the Line D channel (see Exhibit 7, Existing Drainage). Surface flows from the site are prevented from draining directly into Line D by a low berm between the fenceline and the adjacent channel maintenance road. Instead, runoff from the central and eastern portions of the Project site, and from a small portion of Cherry Street at the entrance to the property, drains overland through sheet flow and shallow channels that cross the agricultural fields into an approximately 2.8-acre existing wetland in the southeast corner of the site. Runoff from the far western portion of the site, as well as the 9-acre Agilent property and the 5-acre City of Newark property, is conveyed southeasterwards through a series of drainage ditches that also discharge into the existing wetland. The wetland drains through a field inlet at an elevation of 3.46 feet (the inlet is set several feet below grade in a ditch), then through an 18-inch pipe to a 48-inch reinforced concrete pipe that discharges into Line D just upstream from the UPRR tracks. The outlet into Line D does not have a flapgate, so flows
from the channel occasionally back up into the wetland during high tides and flood flows.

A small, approximately 1-acre portion of the Project site drains toward Cherry Street rather than to the southeast corner of the site. This area consists of landscaped earthen mounds along the northern border of the site paralleling Cherry Street. Runoff sheet flows down the slopes, over curbs and into the street, then enters the municipal storm drain system and is conveyed eastwards and discharged into Line D at the Cherry Street bridge crossing.

**Flooding**
The majority of the Project site lies within a special flood hazard zone (SFHA), as mapped by the Federal Emergency Management Agency (FEMA, 2000). Roughly 65 acres covering the central and eastern portion of the site are mapped within Flood Hazard Zone X: areas of 500-year flood, areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from the 100-year flood. (See Exhibit 8, FEMA flood map).

Designation of the SFHA flood zone on the Project site is probably associated with the adjacent Line D channel, which FEMA has mapped as being within flood hazard zone AE. This designation signifies that the base flood elevations for the 100-year storm event have been determined along the channel. Flood profiles for the 100-year event from the City of Newark Flood Insurance Study show water surface elevations of approximately 11.8 feet in the Line D channel at the southeastern end of the site, rising to approximately 17.0 feet at the northeastern end of the site. Along the southern section of the D Line, these water surface elevations are at or slightly higher than the elevation of the maintenance road separating the channel from the Project site, indicating that the adjacent portion of the property would be flooded during the 100-year event.

However, since the modeling for the FEMA mapping was completed a number of changes have occurred along Line D that would likely result in changes to the modeled 100-year water surface profile. The most significant of these changes has been at the UPRR crossing just downstream from the Project site, where twin 72-inch diameter corrugated metal pipes were replaced by a trestle bridge. Analyses completed for the Stevenson Point Technology Park southeast of the Project site indicate that this modification has increased conveyance beneath the crossing and decreased the backwater effect caused by the bridge (cite the Lincoln-Stevenson EIR). As a result flood elevations may have decreased by approximately 3 feet but this has not yet been confirmed by ACFCWCD. ACFCWCD staff (Andrew Otsuka, pers. comm) has also stated that the Line D channel was dredged in the recent past in order to re-establish the original channel geometry. Depending on when the original FEMA modeling was last updated, this change could either increase or decrease conveyance in the channel and alter water surface elevations along the site from those shown in the flood insurance study.

In sum, due to the topographic elevation of the Project area, none of the property comprising the Project area is located within a 100-year flood plain.
**Geology and soils**

Soils beneath the Project site are derived from sediment eroded from marine sedimentary and volcanic rocks comprising the Hayward Hills to the east. The Project site is located at the southern distal edge of the Niles Cone, an alluvial fan deposited by Alameda Creek from an apex at the mouth of Niles Canyon. The fan consists of poorly consolidated and unconsolidated clay, silt, sand, and gravel layers up to 1100 feet deep (Hickenbottom and Muir, 1998). The different layers were deposited as the relative sea level rose and fell in response to global ‘eustatic’ sea level changes associated with glaciation and tectonic uplift in the region. Coarser material was laid down when the sea level was lower and the shoreline was distant. During periods of higher sea level, finer material was deposited in the deeper water that was now further to the east. Shifting flood channels continued to deposit sands, silts, and clays until modern times, when the natural state of channel migration and flooding was restricted by urban development and the construction of the ACFC D Line D channel in the 1960s.

The Project site has been farmed for many years. As a result, the upper 6 to 12 inches of the clayey soils are enriched with organic matter. Soils mapping by the Natural Resources Conservation Service described the majority of the site as being mantled in Omni silty clay loam, a strongly-saline soil formed in alluvial floodplains. Borings completed by the Project geotechnical specialists and previous researchers show dense, expansive clays at depths of 1 to 5 feet below the ground surface, underlain by less-plastic clays to depths of 25 to 42 feet, interspersed with thin layers of clayey or silty sand and gravel. Interbedded soil layers, primarily alluvial sand and gravel deposits, extend to depths of about 90 feet, below which lie stiff clays.

The Omni soils have low permeability (Hydrologic Group D) and a low available water capacity (Table 8). Small areas in the northeastern and northwestern corners of the Project site are described as Marvin silt loam (Welch, 1981), a saline-alkali soil formed on low alluvial terraces. This soil type is also slowly permeable (Hydrologic Group C) but the available water capacity is higher than that of the Omni soils. Although both soils are highly erodible, the existing risk of erosion is low due to the flat topography of the Project site.

**Groundwater**

The slow infiltration rates and limited permeability of the clay soils covering the Project site generally constrain ground-water recharge. Precipitation during the rainy season, averaging approximately 13.8 inches between October and April, slightly exceeds average wet-season evapotranspiration of about 11.8 inches. Using regression equations applied to stream gages in the region, the U.S. Geological Survey has estimated that annual runoff likely averages about 1 inch on the Project site. Given the soils, geology, and topography at the Project site, mean annual recharge is only about 1 to 2 inches, and possibly lower.

Based on groundwater measurements in borings and monitoring wells the Project geotechnical specialists concluded that shallow ground water level is approximately 1 and 5 feet below the ground surface. Previous researchers measured ground
water levels at depths of 5 to 7 feet below the ground surface in March 1989 and May 1990, during the middle of a 5-year drought period.

Deeper beneath the Project site, the California Department of Water Resources (DWR, 1968) identified three primary gravel units within the Niles cone system as confined aquifers, with clay layers capping and separating them. The three water-bearing layers are known, from highest to lowest, as the Newark, Centerville/Fremont, and Deep aquifers. These aquifers are thickest in the upper portion of the fan but essentially merge into one aquifer in the recharge area at the apex of the fan. The aquifers become thinner, less continuous, more bounded by interfingering clays, and are composed of finer material as they near the Bay.

Historically, the high recharge rates and confined nature of the aquifers led to artesian conditions, and the first wells drilled at the lower edges of the fan often flowed at the surface. As the East Bay Plain was converted to agricultural land, these wells were used extensively for irrigation of crops leading to overdraft of the aquifers as early as 1915. Although the Alameda County Water District implemented a supplemental recharge program as early as 1919, by at least the 1950’s the aquifers were so overdrafted that high salinity water from the Bay was intruding into the aquifers. ACWD expanded their recharge efforts in the 1960s and imported water to offset losses, leading to a reversal of the overdrafting. By 1972 ground water recharge efforts, in combination with a general decrease in agricultural pumping as urban areas expanded, had increased ground water levels above sea level, halting the intrusion of brackish water. Recharge efforts continued through the 1980’s to the present, and ground water levels in the Niles Cone have continued to rise.

Water quality
The Alameda County Water District operates a ‘Newark’ (upper) aquifer groundwater monitoring well (well 55/1W-07H003) on the southern portion of the Project site. Total dissolved solids concentrations in water samples collected from this well were 6,886 parts per million (ppm) in the fall of 2000 and 13,092 ppm in the fall of 2001 (McHugh, 2001; 2002). Water samples collected from a well one-half mile further to the northeast (well 5/1W08G002) had values of 5,228 ppm when sampled in 2000 and 4,660 ppm when sampled in 2001. For comparison, the water quality objective for total dissolved solids concentrations in municipal supply (potable water) is 500 ppm (RWQCB, 1995).

The Project site is currently undeveloped and has been in agricultural use for decades. The Phase I and Phase II Environmental Site Assessment included a soil and groundwater investigation. Pesticides were not detected in any of the 12 groundwater samples collected. However, the Assessments detected elevated concentrations of the pesticide toxaphene in surface soils (upper 12 inches), most likely from historical farming applications. Toxaphene was one of the most heavily used insecticides in the United States until 1982, when it was cancelled for most uses; all uses were banned in 1990. Although toxaphene is slow to degrade (persistent), it is also relatively insoluble, so the primary threat to the environment would be through direct contact, or through transport of soil particles in surface runoff to wetlands or the Line D channel.
Groundwater resources
Given the topographic elevation of the Project area, it is unlikely that the East Bay Plain Groundwater Basin extends under the Project area.

Regulatory framework
The California State Water Resources Control Board (SWRCB or State Board) and each of the nine Regional Water Quality Control Boards have the authority in California to protect and enhance water quality. This authority stems both from their designation as the lead agencies in implementing the Section 319 nonpoint source program of the federal Clean Water Act, and from the state’s primary water-pollution control legislation, the Porter-Cologne Act. The Region 2 office of the Regional Water Quality Control Board (RWQCB or Regional Board) guides and regulates water quality in streams and aquifers of the San Francisco Bay area through designation of beneficial uses, establishment of water-quality objectives, administration of the National Pollution Discharge Elimination System (NPDES) permit program for stormwater and construction site runoff, and 401 water-quality certification where development results in fill of jurisdictional wetlands or waters of the United States.

San Francisco Bay Water Quality Control Plan
The Regional Board regulates water quality in the Bay Area in accordance with the Water Quality Control Plan or ‘Basin Plan’ (RWQCB, 1995). The Basin Plan presents the Board-designated beneficial uses for local aquifers, streams, marshes, rivers, and the Bay, as well as the water-quality objectives and criteria that must be met to protect these uses. Existing beneficial uses designated for south San Francisco Bay include: ocean, sport and commercial fishing; estuarine habitat; industrial service supply; fish migration; navigation; preservation of rare and endangered species; contact and non-contact water recreation; and shellfish harvesting. Fish spawning is a designated potential beneficial use. No specific beneficial uses have been designated for Mowry Slough but it is Regional Board policy to protect uses in tributary water bodies as well where such uses might reasonably apply.

Mowry Slough traverses almost 6 miles of tidal marshes before discharging into south San Francisco Bay, just north of the mouth of Coyote Creek. These marshlands and the nearshore aquatic habitat of the Bay support rare, migratory and estuarine species of fish, birds and other wildlife, the beneficial uses most sensitive to water quality impacts. Pollution from sediment during Project construction, and from pesticides, fertilizers, metals and hydrocarbons in post-construction urban runoff, could directly affect sensitive fish or wildlife species and their offspring.

NPDES General Permit for Storm Water Discharges
The 1987 amendments to the Clean Water Act [Section 402(p)] provided for United States Environmental Protection Agency (EPA) regulation of several new categories of nonpoint pollution sources within the existing National Pollution Discharge Elimination System (NPDES) permit program. In California, the federal government has delegated management of the NPDES permit program to the State and Regional Boards. Phase 1 NPDES permits were issued beginning in 1990.
for urban runoff discharges from municipalities of over 100,000 people, for facilities in industries recognized by the EPA as being likely sources of storm water pollutants, and for construction activities which disturb more than 5 acres. Phase 2 extended NPDES urban runoff discharge permitting to cities of 50,000 to 100,000 people, and NPDES construction activities permitting to construction sites which disturb between 1 and 5 acres implementation. By December 8, 2002, NPDES permitting authorities (the Regional Boards, in California) were required to issue general permits for Phase II regulated municipal separate storm sewer systems and small construction activity. By March 2003, operators of Phase II regulated municipal separate storm sewer systems (MS4s) and small construction activities were required to apply for NPDES permit coverage.

During Phase I, cities and county agencies in Alameda County formed the Alameda Countywide Clean Water Program (ACCWP) and developed a comprehensive Storm Water Management Program for urban runoff to meet Regional Board standards. The SWMP was submitted the to the Regional Board, which then issued a joint-city county NPDES permit (No. CA50029831) for a term of 5 years. The original permit, which was revised in 1997 and modified in July 1999, was amended and adopted by the RWQCB in Feb. 2003 to make it consistent with new or amended permits being issued to other cities and counties statewide.

Operators of Non-traditional Small MS4s, such as the Ohlone College District, were not initially required to obtain coverage under Phase II of the amended statewide NPDES General Permit for Storm Water Discharges. However, Regional Board staff have stated that they will request that the Ohlone College District obtain coverage under the statewide permit by December 2004 (Bruce Wolfe, RWQCB, pers. comm.). Once requested, the District will be required to submit a comprehensive Storm Water Management Program (SWMP) for urban runoff that meets the Regional Board’s standards. As with the joint city-county NPDES permits, upon acceptance of the SWMP by the RWQCB, the authority to regulate storm runoff discharges from storm drain systems is transferred to the permit holders, allowing them to more effectively integrate the storm-water control program with other nonpoint source control programs.

The recently amended NPDES permits both include additional provisions for control of water quality and storm water management planning for new development and redevelopment, including new design standards for structural or treatment BMPs (Best Management Practices) and guidelines to address hydromodification. To promote careful integration of storm water controls into the Project planning process, the Regional Board is requiring that new developments prepare a storm water management plan (SWMP). Elements of the plan include:

- Summarizing reference meteorological, geological and soils information needed to describe the site-specific hydrology that characterizes the site;
- Summarizing the pertinent regulatory framework as a reference for future detailed site design work;
- Using the information obtained to identify opportunities and constraints for dealing with stormwater quality management at the site;
• Setting forth a hierarchical suite of BMPs including site design, source control and treatment control elements that reflect the standards and goals of the City of Alameda, the County of Alameda and the RWQCB;

• Providing the Regional Board with reasonable certainty that appropriate measures adequate to addressing urban runoff impacts and complying with regulatory requirements will be implemented for the Project; and

• Achieving water quality treatment of 85% or more of the total runoff from the site as required by the RWQCB.

NPDES General Permit for Construction Activities
Because the proposed Project would disturb more than 1 acre of land, the Project proponents would be required to submit a Notice of Intent to the State Board and apply for coverage under the state NPDES General Permit for Construction Activities. Administration of these permits has not been delegated to cities, counties, or Regional Boards but remains with the State Board. The applicant would also be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) prior to commencing construction. Once grading begins, the SWPPP must be kept on-site and updated as needed while construction progresses. The SWPPP details the site-specific BMP’s to control erosion and sedimentation and maintain water quality during the construction phase. The SWPPP also contains a summary of the structural and non-structural BMP’s to be implemented during the post-construction period, pursuant to the nonpoint source practices and procedures encouraged by the Planning and Public Works Departments of the City of Newark and the County of Alameda.

Section 303(d) of the Federal Clean Water Act
The State of California is required by Section 303(d) of the federal Clean Water Act to provide the EPA with a list of water bodies considered by the State to be impaired (i.e., not meeting water quality standards and not supporting their beneficial uses). The list also identifies the pollutant or stressor causing impairment, and establishes a schedule for developing a control plan to address the impairment, typically a Total Maximum Daily Load (TMDL). Recommendations are made to the SWRCB by each of the nine RWQCBs using available information and data. The resulting list is employed by the EPA to prepare the biennial federal Clean Water Act Section 305(b) Report on Water Quality.

The RWQCB has identified south San Francisco Bay as not meeting water quality standards or supporting beneficial uses. Legacy pesticides (chlordane, DDT, dieldrin), pesticides in current use (diazinon), dioxin and furan compounds, mercury, PCBs and selenium were identified as the pollutants causing impairment, with urban runoff identified as one of the sources.

STANDARDS OF SIGNIFICANCE
Based on the CEQA Standards of Significance, the Project would generally be considered to have a significant effect on the environment if it would:

• Substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation on or off site;
• Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems;
• Place structures within a 100-year flood hazard area that would impede or redirect flood flows;
• 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;
• Substantially deplete groundwater supplies or interfere substantially with groundwater recharge;
• Violate any water quality standards or waste discharge requirements; or
• Otherwise substantially degrade water quality.

Two additional potential impacts are: placement of housing in a federally-delineated 100-year flood hazard zone, and exposure of people or structures to inundation by seiche, tsunami, or mudflow. Although FEMA mapped portions of the Project site as being within a 100-year flood hazard zone there would be no potential risk to households as no residences are proposed for construction on the Project site. Gilpin Geosciences (2003) researched the risk of tsunamis (sea waves caused by earthquakes or eruptions) and seiches (waves that occur within enclosed bodies of water due to earthquakes) on the Project site. They concluded that the potential for inundation of the site by a tsunami was negligible. They also concluded that the risk of flooding due to a seiche was low due to the distance of the site from San Francisco Bay, and from the three dams upstream from the site. Thus, these potential impacts are not discussed further herein.

ENVIRONMENTAL IMPACTS

Should the Project be approved and implemented, the following environmental impacts are anticipated: soil erosion, potential degradation of water quality from non-point source pollution, and potential increases in stormwater runoff from the Project area.

*Alteration of drainage patterns resulting in erosion or siltation*

Construction of approximately 30 acres of buildings, parking lots, landscaping, pathways and a new underground storm drain system on the Project site under the auspices of the Master Plan would alter the existing drainage pattern by changing the topography, filling channels, and diverting runoff into storm drains (see Exhibit 9). This would be a less than significant impact because review of historic maps and aerial photographs (showed that past use of the Project site has severely altered drainage patterns such that no natural drainages remain. The railroad tracks at the southwestern boundary of the parcel were already present on the earliest map reviewed (1899) but no drainage channels or sloughs extended onto the Project site. During the next century, ditches and ponds were constructed at various locations on the site to facilitate agricultural use. As farming patterns changed, new ditches were constructed and portions of older ditches were periodically filled or diverted.

Once the proposed Project storm drain system is constructed, runoff would be directed into storm drain inlets, swales and other engineered drainage facilities
instead of flowing across the site in an uncontrolled manner. Existing erosion and siltation from intermittently disced agricultural fields would be further reduced as soils are covered by buildings, parking lots, and roadways, or are stabilized by landscaping. This would be a benefit.

**Impact 4.7.1 (altered drainage patterns and resulting erosion).** Construction of proposed drainage improvements on the site would not change historic drainage patterns and would also significantly minimize existing quantities of natural erosion from the site (beneficial impact and no mitigation required).

*Increased rate or volume of runoff and need for downstream drainage facilities*

The Ohlone College Newark Center Project would increase the volume and peak rate of surface runoff by reducing the permeability and increasing the amount of directly connected impervious area on approximately 30 acres of the site. Without mitigation, substantial increases in peak rates and volumes of runoff could potentially require the City of Newark to modify the existing storm drain network to avoid flooding on Cherry Street or on properties downstream from the Project site. Higher runoff flows could also scour or fill the existing wetland at the south end of the site, or cause erosion in the Line D channel, entraining sediment that would be deposited further downstream, reducing channel capacity and increasing ACFCWCD maintenance costs.

At this stage of Project planning, best management practices (BMPs) for control of runoff quantity and quality have undergone conceptual and are being designed. The Project landscape architects (Conger Moss Guillard) have provided a plan view schematic of the proposed drainage facilities which served as the basis for this review.

Consistent with the Master Plan theme of development using an ecologically sustainable paradigm, conveyance and treatment of storm runoff has been a central organizing principle in landscape design of the Project. The proposed storm drain network serving 26 acres of development (See Exhibit 9) would be partitioned into three sub-watersheds separating drainage from the western parking lots, the central buildings and landscaping, and the eastern parking lots. Flows from each of these areas would be routed into a central parkway connecting buildings at the north end of the site with the existing wetland at the south end. Runoff would flow southwards from the parkway through a 2- to 3-foot deep, roughly 480-foot long grassed “conveyance channel” to a detention basin. Over a 48-hour period, runoff would drain from the basin would into the wetland, then flow through the existing drain inlet to the Line D channel. Alternatively, runoff would be bypassed directly from the basin to Line D through a new storm drain pipe.

Runoff from the northern 4 acres of the Project site, most of which currently drains south toward the wetland, would be routed through the new underground drainage system into the municipal storm drain system on Cherry Street to be discharged into Line D through the outfall at the bridge crossing.
The far western portion of the site would remain undeveloped, except for an approximately 2-acre area to be developed as a maintenance yard immediately south of the Agilent parcel. Drainage from the corporate yard would be treated and then directed into the new storm drain system serving the central portion of the Project. Drainage from other areas of this subwatershed, including the Agilent and City of Newark properties, would continue to flow through the existing system of drainage ditches to the wetland in the southeast corner of the site, and then into Line D.

Because the Project is at the conceptual design stage, calculations to size the detention basin and water quality treatment measures are being prepared. ACFCWCD staff (Andrew Otsuka, pers. comm.) have indicated that the Project will probably require detention and that basin sizing should be based on criteria detailed in the Hydrology and Hydraulics Criteria Summary for Western Alameda County (ACFCWCD, 1989), which is currently being updated. The existing manual states that if on-site detention is required, the NRCS unit hydrograph method should be used to calculate the volume of the basin required to mitigate peak flows and other important parameters (e.g., the basin invert elevation, the top of bank elevation, and outflow mechanisms). It is likely that the NRCS method will likely be replaced by a newer one in the updated manual.

To assess whether or not detention would be required, the Project engineers would need to build and run a hydrologic model to allow comparison of pre- and post-development peak runoff flows for the Project. ACFCWCD has stated that design of the storm drain system must be based upon the 25-year storm event and that post-development flows to Line D must not exceed pre-development flows. If the model shows an increase in post-development peak flows, then the detention basin should be sized to reduce post-Project peak flows for the calculated 100-year recurrence interval storm event to the 100-year existing condition peak flow. The model would also need to assess the effects of additional runoff on the capacity of the existing storm drain lines on Cherry Street, as well as the amount of existing detention provided by the wetland at the south end of the property and the storm drain through which ponded waters are released to Line D, and the tailwater effects in Line D.

Calculation of peak runoff flows and related modeling are currently being prepared, including the need for and potential design of detention measures. Thus, the preliminary conclusion is that the Project could potentially increase peak runoff rates significantly and that local and/or downstream flooding would be a potential concern.

An additional concern relates to potential changes in the hydrology of the existing wetland at the south end of the Project site. Currently, the wetland hydroperiod (the pattern and extent of seasonal inundation and saturation) varies with the amount and pattern of rainfall during the wet season. Once the Project is constructed, the proposed storm drain system will modify the wetland hydroperiod by routing runoff from developed portions of the site through water quality and detention features.
Modification of the wetland hydroperiod could result in changes in the extent and type of wetland vegetation or the quality of habitat for wetland-dependent species, which would be significant impacts. Since the wetland currently provides a modicum of detention, its existing and post-Project performance would be modeled as part of the drainage analyses required to design control measures for peak flows. This modeling could be used to design the drainage system so that the hydrology of the wetland is maintained, or at least not altered in such a way that wetland habitat quality is adversely impacted.

**Impact 4.7-2 (increased rate or volume of runoff and need for downstream drainage facilities).** The Project would likely increase runoff volumes and peak rates, potentially causing damage to the existing wetland and downstream drainage facilities (significant impact and mitigation required).

The following measure is recommended to reduce this impact to a less-than-significant level.

**Mitigation Measure 4.7-2 (increased rate or volume of runoff and need for downstream drainage facilities).**

a) The District shall model existing and post-Project runoff on the Project site using the criteria detailed in the most recent ACFCD drainage manual. The District shall demonstrate to ACFCD and the City of Newark that the proposed detention system and on-site storm drain network conform to all current, applicable design requirements.

b) The Project drainage system shall be designed to maintain and protect the existing hydrologic conditions sustaining the wetland at the southern end of the Project site.

Adherence to the above mitigation would reduce this impact to a less-than-significant level.

**Soil erosion, sedimentation and degradation of surface water quality**

The NRCS classifies the Omni and Marvin soils that cover the Project site as being highly-erodible (Welch, 1981). However, the conceptual grading plan maintains the relatively flat existing topography, so the post-Project risk of erosion would be generally low. Assuming that remediation of residual agricultural pesticide (toxaphene) would be accomplished prior to beginning construction, sediment would be the constituent of greatest potential concern during the construction-phase of development, when soils on the Project site are exposed during grading. In particular, sediment-laden runoff would need to be treated prior to being discharged to the existing wetland. Once the Project has been constructed, wet-season storm runoff from the Project’s parking lots would be of greatest concern. Since Mowry Slough traverses almost 6 miles of protected marshlands before discharging into the southern end of San Francisco Bay, pollutants in untreated runoff could impact the existing on-site wetland, and both tidal marsh and aquatic habitats and species downstream from the Project site. Pollutants which might impact surface-water quality during the Project construction phase include sediment, litter, petroleum products (gasoline, diesel, kerosene, oil and grease),
hydrocarbons from asphalt paving, paints and solvents, detergents, fertilizers, and pesticides (herbicides, insecticides, fungicides, and rodenticides). After the Project is built, trace metals and petroleum products from pavement runoff, and constituents related to fertilizer and pesticide applications pose the greatest risk of pollution.

Documents describing potential pollution sources and the control measures to be implemented to minimize pollution (i.e., erosion control plan, storm water pollution prevention plan, storm water management plan) have not yet been prepared for the proposed Project. However, conceptual designs for best management practices (BMPs) to control of runoff quality (see Exhibit 9, post-Project drainage conditions) have been prepared by the Project landscape architects and serve as the basis for this review.

Drainage from landscaped areas at the northern entry to the Project site would flow through bioretention basins prior to discharge to the municipal storm drain network along Cherry Street. Bioretention basins are small depressions, typically planted with a variety of water-tolerant plants. The basins receive runoff from a limited contributing area and reduce pollutant concentrations through biological, chemical and physical processes (e.g., settling, plant uptake, adsorption, volatilization). Treatment may occur as shallowly-ponded runoff percolates to the ground water table through layers of soil, sand, and organic mulch. In less permeable settings, ponded runoff is retained and evaporates and undergoes treatment within the basin itself. The depressions are and traffic through them is restricted to avoid compaction, inhibit sealing, and maintain the permeability necessary to promote infiltration.

Drainage from the main buildings and surrounding landscaped areas in the north-central portion of the site would be discharged at the northern end of a “storm water garden” immediately to the south of the buildings. Similar to “rain gardens,” small bioretention facilities increasingly incorporated into individual residential lots, the storm water garden is designed to provide enhanced runoff water quality within an aesthetically-pleasing landscape feature. The proposed storm water garden would detain and filter runoff as it flows southwards through a series of BMPs, including weirs, sediment forebays, and vegetated swales. Runoff from the eastern and western parking lots would pass through a separate set of sediment forebays or centrifugal screening devices at the south end of the storm water garden.

Following treatment, runoff treated in the storm water garden would flow through a 2- to 3-foot deep, roughly 480-foot long grassed “conveyance channel” extending down the center of the undeveloped portion of the Project site and emptying into a detention basin at the south end. Over a 48-hour period, the detention basin would discharge runoff into the existing wetland, to flow through the existing drain inlet to the Line D channel. Alternatively, runoff would be bypassed directly to Line D through a new storm drain pipe. The banks of Line D are susceptible to erosion, as evidenced by bank failures at several locations adjacent to the Project site. Uncontrolled discharges could promote further bank degradation at the point of discharge, which would be a significant impact.
Potential erosion could be prevented through installation of slope protection at the point where runoff is discharged to the Line D channel.

As previously noted, once detailed plans have been drawn up and approved for construction, the District would be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) to comply with the terms of the NPDES General Permit for Construction Activities. The SWPPP would detail the treatment measures and Best Management Practices (BMPs) to control pollutants that would be implemented during the construction and post-construction phases of Project development. The erosion control plan forms a significant portion of the construction-phase controls required in a SWPPP. The plan typically includes components for erosion control, such as: phasing of grading, limiting areas of disturbance, designation of restricted-entry zones, diversion of runoff away from disturbed areas, protective measures for sensitive areas, outlet protection and provision for revegetation or mulching. The plan also prescribes treatment measures to trap sediment once it has been mobilized, at a scale and density appropriate to the size and slope of the catchment. These measures typically include: inlet protection, straw bale barriers, straw mulching, straw wattles, silt fencing, check dams, terracing, and siltation or sediment ponds.

In addition to the erosion and sediment-control measures, the SWPPP includes construction-phase housekeeping measures for control of contaminants such as petroleum products, paints and solvents, detergents, fertilizers, and pesticides. It also briefly describes the BMPs used to reduce pollutant loadings in runoff and percolate once the Project is built and sets forth the BMP monitoring and maintenance schedule and responsible entities during the construction and post-construction phases.

In accordance with the statewide NPDES General Permit for Storm Water Discharges, the Regional Board is now requiring most sizeable projects to prepare and submit a Storm Water Management Plan (SWMP). The SWMP explains in greater detail than the SWPPP the opportunities and constraints for dealing with stormwater quality management at the site, describes the suite of BMPs proposed for post-construction water quality control and treatment, and explains how these BMPs will be operated and maintained to achieve treatment consistent with regulatory requirements.

Based on a preliminary review, the proposed series of water quality treatment BMPs (a “treatment train”) would address potential impacts on water quality in an integrated fashion prior to discharge to the wetland or the Line D channel, consistent with the Start at the Source manual. The different water quality BMPs envisioned would need to be sized according to the respective criteria set forth in the recently amended statewide NPDES Municipal Stormwater Permit and the recently updated California Storm Water Best Management Practices Handbook. For example, the Handbook specifies different design criteria for flow- and volume-based BMPs. Treatment measures such as water quality ponds or infiltration basins, which retain or detain runoff, must be sized on a volume hydraulic design basis using specific design criteria to capture 85 percent or more of mean annual runoff. Different criteria for flow hydraulic design basis are to be
used where runoff flows through a treatment measure without retention, such as vegetated swales or constructed wetlands.

**Impact 4.7-3 (soil erosion and surface water quality).** Soils on the Project site would be susceptible to wind and water erosion during grading operations, potentially exposing the existing on-site wetland and downstream drainage facilities to increased sedimentation. Activities associated with construction could lead to release of pollutants and potential degradation of water quality in the existing wetland and downstream tidal and open water habitats. Once the Project has been constructed, post-development runoff and drainage would contain pollutants that could potentially degrade water quality in the existing wetland and downstream tidal and open water habitats. If discharges from the storm drain system are discharged to the Line D channel without energy dissipation and slope protection, the banks and/or bed of the channel could erode impairing water quality and increasing maintenance costs (*significant impact and mitigation required*).

The following measure is recommended to reduce erosion and surface water quality impacts to a less-than-significant level.

**Mitigation Measure 4.7-3 (soil erosion and surface water quality).**

a) Prior to commencing construction, the District shall prepare an erosion and sediment control plan for the Project and submit it to the City of Newark Public Works Department for review.

b) Prior to commencing construction, the District shall prepare a storm water pollution prevention plan (SWPPP) for the Project. The SWPPP shall include water-quality control measures to reduce potential risks of surface- and groundwater contamination during the construction and post-construction phases of Project development. The SWPPP shall be developed in conjunction with staff of the City of Newark Public Works Department.

c) Prior to commencing construction, the District shall prepare and submit to the RWQCB a storm water management plan (SWMP) describing the best management practices (BMPs) proposed for post-construction water quality control and treatment, including how the BMPs will designed, operated, maintained and monitored.

d) Utility plans for the storm drain network shall conform to County (ACFCWCD) requirements for installation of energy dissipation and slope protection to minimize channel erosion at the outfall to the Line D channel.

e) Prior to site occupancy, the District shall prepare an integrated pest management plan describing how pests will be monitored and controlled on the Project facilities and grounds.

**Flooding and water-related hazards**

No portions of the site proposed for development lie within the 100-year floodplain (Zone A) as mapped by the Federal Emergency Management Agency (FEMA, 2000). However, roughly 65 acres covering the central and eastern portion
of the site are mapped within Flood Hazard Zone X: areas of 500-year flood, areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from the 100-year flood. (Exhibit 8, FEMA map).

Designation of the Zone X area on the Project site is probably associated with the adjacent Line D channel, which FEMA has mapped as being within the 100-year floodplain (Zone AE). This designation signifies that the base flood elevations for the 100-year storm event have been determined along the channel. Flood profiles for the 100-year event from the City of Newark Flood Insurance Study (FEMA, 2000) show water surface elevations of approximately 11.8 feet in the Line D channel at the southeastern end of the site, rising to approximately 17.0 feet at the northeastern end of the site. Along the southern section of the D Line, these water surface elevations appear to be at or slightly higher than the elevation of the maintenance road separating the channel from the Project site, indicating that the lowermost adjacent portions of the property may be subject to shallow flooding during the 100-year event.

However, since the modeling for the FEMA mapping was completed a number of changes have occurred along Line D that would likely result in changes to the modeled 100-year water surface profile. The most significant of these changes has been at the Union Pacific Railroad crossing just downstream from the Project site, where twin 72-inch diameter corrugated metal pipes were replaced by a trestle bridge. The EIR certified by the City of Newark for the adjacent Lincoln Stevenson Project south of the Project site notes that this modification has increased conveyance beneath the crossing and decreased the backwater effect caused by the bridge. As a result, flood elevations may have decreased by approximately 3 feet, but this has not yet been confirmed by ACFCWCD. ACFCWCD staff (Andrew Otsuka, pers. comm) have also stated that the Line D channel was dredged in the recent past in order to re-establish the original channel geometry. Depending on when the original FEMA modeling was last updated, this change could either increase or decrease conveyance in the channel and alter water surface elevations along the site from those shown in the flood insurance study.

**Impact 4.7-4 (flooding).** Portions of the Project site may be subject to flooding during extreme storm events, potentially causing damage to buildings and building contents and other improvements on-site. However, none of the proposed Project improvements would lie within a 100-year floodplain (Zone A) as mapped by FEMA. Therefore, the risk of flood damage has been classified as low by FEMA. In addition, FEMA mapping has not been updated to account for recent changes in the channel infrastructure and maintenance in the ACFCWCD Line D channel that would further reduce the risk of flooding at the site (less-than-significant impact and no mitigation required).

As proposed, construction of the Project would increase base elevations on the developed portion of the site by several feet. This is an appropriate additional protection measure, since approximately 65 percent of the site does lie within areas mapped as subject to some potential flood risk, though not of a magnitude associated with the 100-year floodplain. Raising elevations at the site has particular
merit in areas where the 100-year water surface in the D Line is contained by levees and is higher than the surrounding ground.

_Altered ground-water recharge and flow paths_
Recharge to ground water would not be substantially affected by development of the site as planned, since hydrologic conditions (soils and geology) on the Project site are not presently conducive to recharge. No mitigation measures are recommended.

_Degradation of groundwater quality_
Although the risk of potential impacts on ground water on the site is limited, development of a SWPPP and SWMP (as recommended for impacts to surface water quality) would reduce the potential impacts to below the level of significance.

As part of the Project’s energy efficiency, a geothermal ground-coupled heat exchanger is proposed to be constructed on the site. The heat pump would use the ground underlying the site as a heat sink to minimize the need to generate new energy for building heating and cooling. The heat exchanger would require boring a PVC pipes or similar approximately 125 feet below ground level. Based on discussions between the District and Alameda County Water District (ACWD) staff, such a boring is permitted so long as the aquifer is not penetrated. Following ACWD staff directions, installation of the heat exchanger is not anticipated to result in impacts to groundwater resources.

No further mitigation measures are recommended.

**LEVEL OF SIGNIFICANCE AFTER MITIGATION**

All hydrologic, drainage and water quality impacts can be mitigated to a level of less-than-significant.
Exhibit 7-Existing Drainage Features
Exhibit 8-Flood Zones
Exhibit 9- Post-Project Drainage
4.8 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES

Issues addressed in this section include potential impacts to existing land uses within the Project area and impacts to land uses surrounding the Project area. The issue of consistency of the proposed Project with City of Newark land use regulatory plans and programs is also discussed, although planned educational uses on the site are not subject to land use regulations adopted by the City.

ENVIRONMENTAL SETTING

On-site land use
The 81-acre Project site contains no habitable buildings or other structures since it has been cultivated for agricultural row crops for many years. A Pacific Gas & Electric Company (PG&E) lattice tower has been constructed on the Project site as part of a regional electrical transmission system. Natural features on the site includes a low-lying wetland pond area in the southwest corner of the site lying adjacent to the Union Pacific Railroad (UPRR) tracks, a row of mature trees that have been planted along the westerly side of Cherry Street along the site within the public right-of-way.

An unpaved private road (Old Station Road) exists generally paralleling the UP tracks in the westerly portion of the site.

There are no residences on the Project site.

Surrounding land use
Land uses surrounding the Project site include:

- To the north, an existing one-story light industrial/research and development use, currently vacant, with an associated surface parking lot. The building fronts on Cherry Street. Behind (to the west of) this building, the City of Newark has constructed the George Silliman Recreation Center a major park and recreation facility in the community.

- Lands east of the site are devoted to the athletic fields of the Newark Memorial High School, directly east of the Project site, with multi-family residential developments flanking the High School site.

- Land uses to the south include a regional drainage channel along the south side of the Project site maintained by the Alameda County Flood Control and Water Conservation District. Lands south of the drainage channel are vacant.

- UPRR tracks are located along the westerly boundary of the site. Lands
beyond the tracks to the west are vacant.

Regulatory framework
Land uses within the Project area are governed by the Ohlone College Community College District Board. Under the State of California Government Code (Sec 53094 (b)), educational uses constructed on District owned land are effectively exempt from local zoning and building code regulations.

For purposes of full disclosure, the following describes existing City of Newark land use regulatory programs pertinent to the Project site.

Newark General Plan. The City of Newark General Plan provides an overall land use framework for the future use of property within Newark. The General Plan contains a General Plan Diagram that assigns land uses and associated land use intensities to properties in the City as well as a General Plan policy document. The General Plan document contains an Introduction, a Plan Overview, a Land Use Element, a Transportation Element, a Housing Element (amended in 2002), an Open Space and Conservation Element, a Recreation Element, a Community Services and Facilities Element, an Environmental Safety Element, and a Noise Element. Exhibit 10 depicts existing Newark General Plan land use designations.

The General Plan Diagram classifies the Newark Center site as being developed for “SI-Special Industrial” land uses, which is intended to foster development of the highest standards of building design, landscaping and aesthetic amenities for advanced technology, biotechnology, business park and similar uses.

On March 23, 2004, the Newark Planning Commission adopted Resolution No. 1614 which states that the Planning Commission determined that the proposed Ohlone College Newark Center Master Plans conforms to the SI-Special Industrial General Plan land use designation.

Previously, on March 26, 2002, the Newark Planning Commission had adopted Resolution No. 1555, finding that the purchase of the Project site by the Ohlone College Community College District for purposes of developing the Newark Center is consistent with the Newark General Plan.

Newark Zoning Ordinance. The Newark Zoning Ordinance establishes permitted and conditionally permitted land uses for each individual zoning district within the community. The Zoning Ordinance also includes development standards for each district, regulating building intensity, height, setbacks and similar requirements, as well as requiring on-site parking and loading, signs and similar development provisions.

The Newark Center site is zoned “MT-Industrial Technology Park District,” which permits business parks and related land uses. Exhibit 11 depicts existing zoning applied on the Project site by the City of Newark.
STANDARDS OF SIGNIFICANCE

The following criteria have been used to define instances of a significant land use impact if a project would:

- conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project, including but not limited to a general plan, specific plan, zoning ordinance or similar document, adopted for the purpose of avoiding or mitigating an environmental impact;
- result in substantial change in the types of land uses in an area which could result in conflicts with neighboring land uses or with the established pattern of development;
- result in the physical division of an established community, as with the construction of a freeway, railroad, canal or similar barrier;
- cause the conversion of prime agricultural soils to a non-agricultural use;
- conflict with existing zoning for agricultural use or a Williamson Act Land Conservation contract; or
- conflict with an adopted Habitat Conservation Plan or Natural Community Conservation Plan.

ENVIRONMENTAL IMPACTS

Potential impacts include impacts to on-site land uses and impacts to adjacent or nearby off-site land uses.

On-site land use impacts
Since the Project site is vacant, development of the proposed Newark Center on the approximately easterly one-third of the site would not result with conflicts or incompatibilities with other existing land uses, since the site is vacant. No housing units or similar uses have been constructed on the site, so there would be no disruption or division of an existing community.

Existing wetlands in the southwest corner of the site would not be impacted, since development would occur some distance from the wetland ponds. Potential impacts to wetlands are addressed in Section 4.3, Biological Resources.

It is anticipated that agricultural operations may continue on portions of the site not built upon as part of the Master Plan.

Impact 4.8-1 (on-site land use impacts). Since the site is currently vacant, development of the proposed Newark Center for Health Science & Technology would have no impact on existing land uses (no impact and no mitigation required).

Surrounding land use
Properties surrounding the Project area have been developed with a mix of light industrial uses (the Agilent building immediately to the north and the former Lincoln Properties light industrial complex to the southwest), the Silliman
Recreation center (also to the north), Newark Memorial High School (to the east), higher density residential dwellings (to the east) and vacant property (to the south and west).

None of the surrounding uses are such that would significantly impacted by the development of the proposed Newark Center Project. The Newark Center complex would be consistent with the campus-like development characteristic of the Agilent and former Lincoln Properties. No development is proposed on the Project site that would be adjacent to the undeveloped property to the west. A significant landscaped setback is proposed to be provided along the Project’s Cherry Street frontage so that there would be no impacts to the high school or residential uses on the west side of Cherry Street.

The proposed Maintenance Yard on the Newark Center campus would be sited near the Silliman Recreation Center. There could be potentially significant impacts related to storage of outdoor vehicles and equipment within the parking lot of the Maintenance Yard as well as ongoing maintenance operations that could result in negative aesthetic impacts on the Silliman site. This could be a potentially significant impact.

**Impact 4.8-2 (surrounding land use impacts).** Location of the Newark Center Maintenance Yard near the Silliman Recreation Center could result in potentially significant adverse aesthetic impacts to the Silliman Center (potentially significant impact and mitigation required).

The following measure is recommended to reduce this impact to a less-than-significant level.

**Mitigation Measure 4.8-2 (surrounding land use impacts).** A 6-foot tall masonry wall or solid fence shall be constructed along the Project perimeter adjacent to the Silliman Recreation Center to screen unsightly conditions. The wall or fence shall be constructed at the same time as the permanent maintenance complex is constructed.

Adherence to the above measure would reduce potential impact to a less-than-significant level.

As noted in the Existing Conditions section, the Project site is exempt from City of Newark land use regulation under the California Education Code. The City of Newark has, however, adopted a resolution indicating that the proposed development of the Newark Center would be consistent with the Newark General Plan. No impacts are therefore anticipated with regard to consistency with land use regulatory programs and policies.

**Impact 4.8-3 (regulatory impacts).** The Project site is exempt from City of Newark land use regulations. However, the City of Newark Planning Commission has adopted a Resolution indicating that the proposed Master Plan is consistent with the Newark General Plan (no impact and no mitigation required).
LEVEL OF SIGNIFICANCE AFTER MITIGATION

All land use impacts can be mitigated to a level of less-than-significant.
Exhibit 10-City of Newark General Plan Designations
Exhibit11- City of Newark Zoning Designations
4.9 NOISE

ENVIRONMENTAL ISSUES

This section addresses potential noise impacts of the Project, including short-term construction noise, and long-term permanent noise as well as potential impacts from existing noise sources, such as truck noise associated with existing land uses. This section is based on an acoustic analysis of the site prepared by the firm of Charles Salter Associates in July, 2004. This report is included in Appendix 8.8.

ENVIRONMENTAL SETTING

Overview of noise concepts
Noise is defined as unwanted sound. Sound levels are measured and expressed in decibels (dB), with a dB of '0' corresponding approximately to the threshold of human hearing.

The method commonly used to quantify environmental noise involve measurement of all audible frequencies of sound, with an adjustment to reflect the fact that human hearing is less sensitive to low and high frequencies than to mid-range frequencies. This measurement is called "A" weighting, and a noise reading using this technique is called "A-weighted noise level" (dBA).

Environmental noise fluctuates in intensity over time. Therefore, time-averaged noise level computations are typically used to quantify noise levels and determine impacts. The two average noise level descriptors most commonly used to describe 24-hour daily average are LDN (day-night average noise levels) CNEL (Community Noise Equivalent Level) and Leq (noise equivalent level). The LDN measurement includes a 10 decibel penalty added to nighttime noise levels (10:00 p.m. to 7 a.m.) to account for the greater human sensitivity to noise during this period. The CNEL noise metric includes both a 5 dBA penalty for evening (7:00 p.m. to 10 p.m.) noise and a 10 dBA for night noise events.

Existing noise levels
The Noise Element of the Newark General Plan identifies major sources on noise in the Project area as including Union Pacific Railroad Company (UPRR) railroad tracks and noise generated by industrial operations west of Cherry Street.

Vehicular traffic activity from Cherry Street and occasional train operations from the UPRR train line are the primary noise sources audible at the proposed site. On 5 to 7 May 2003, a 48-hour noise measurement was conducted at the eastern side of the site to document the current noise environment due to Cherry Street. At this location, 78 feet west of the Cherry Street median centerline, the DNL was measured to be 70 dB.

A second 48-hour noise measurement was conducted 110 feet east of the UPRR train tracks and approximately 250 feet south of the Mowry Avenue median centerline. The purpose of this measurement was to document both the DNL and the maximum
noise levels (Lmax) due to individual train operations at the Project site. During the measurement period, the DNL ranged from 74 to 75 dB at a distance of 110 feet from the train line. Occasional nighttime train operations controlled the overall DNL. The measurement data indicated approximately 18 and 24 train operations per day, with the loudest events ranging between an Lmax (maximum noise exposure) of 101 and 104 dB at a distance of 110 feet. The area set aside for the Campus Expansion would be located approximately 1100 feet east of the UPRR train line. At this distance setback, the DNL from the train line would be 60 dB, while the Lmax from individual train operations would be up to 84 dB.

Existing and future noise levels for the roadway segment serving the Project were calculated using a version of the Federal Highway Administration’s Traffic Noise Prediction Model (FHWA RD-77-108), and incorporating the California Vehicle Noise Emission Levels (CALVENO) curves. Traffic volumes used in the model were provided in the Omni-Means Engineers and Planner’s Traffic Study for the Project. The future traffic scenario that was evaluated for this noise analysis is the Cumulative +Project (Year 2025) scenario. The existing and future DNL’s calculated for the roadway links serving the Project area are summarized in Table 9. From the measurement data, the DNL 70 dB measured at a distance of 78 feet from the median centerline of Cherry Street is approximately equivalent to the DNL 73 dB that was calculated at a distance of 50 feet in the Existing traffic scenario.

Table 9. Existing Noise Level

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Link</th>
<th>DNL @ 50’ from centerline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cherry Street</td>
<td>Mowry to Stevenson</td>
<td>73 dB</td>
</tr>
<tr>
<td>Mowry Avenue</td>
<td>East of Cherry</td>
<td>73 dB</td>
</tr>
<tr>
<td>Stevenson Boulevard</td>
<td>East of Cherry</td>
<td>71 dB</td>
</tr>
</tbody>
</table>

Source: Charles Salter Associates

The Noise Element of the Newark General Plan contains the following noise standards by land use type
Table 10. Exterior Noise and Land Use Compatibility Standards

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Normally Acceptable (dB DNL)</th>
<th>Conditionally Acceptable (dB DNL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential: single family</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>Residential: multiple family</td>
<td>65</td>
<td>70</td>
</tr>
<tr>
<td>Transient lodging</td>
<td>65</td>
<td>70</td>
</tr>
<tr>
<td>Schools, libraries, churches, nursing homes</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>Auditoria, concert halls</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Sports arenas, outdoor sports</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Playgrounds, neighborhood parks, golf courses, riding stables, water recreation, cemeteries</td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td>Office buildings, businesses, commercial and professional</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td>Industrial. Manufacturing, utilities</td>
<td>75</td>
<td>80</td>
</tr>
</tbody>
</table>

Source: Newark Noise Element

The interior residential noise exposure level is 45 dBA, established by the state building code.

STANDARDS OF SIGNIFICANCE

A noise impact would be considered significant if it would result in:

- exposure of persons or generation of noise in excess of standards established in the General Plan or noise ordinance (if one exists), or applicable standards of other agencies;
- exposure of persons to or generation of excessive groundborne noise levels;
- exposure of persons to or generation of excessive groundborne vibration levels;
- a substantial temporary permanent increase in ambient noise levels in the project vicinity above ambient levels (considered an increase of 3 dB over existing levels);
- development located in an area covered by an airport land use plan, or, where such plan has not been adopted, within two miles of a public airport or public use airport, if it would result in exposure of people residing or working in the area to excessive noise levels; or
- development within the vicinity of a private airstrip, if it would result in exposure of people residing or working in the area to excessive noise levels.

ENVIRONMENTAL IMPACTS

Temporary construction noise
Should the proposed Project be implemented, short-term, temporary increases in noise during construction phases of implementation can be expected. Such noises would be related to construction of campus facilities and construction of new
roadways and related infrastructure facilities. Typical noise generated by construction activities include earthmoving, truck traffic, back-up bells, air compressors, hammering and other mechanical equipment normally used during demolition and construction. Short-term construction noise impacts are anticipated to be significant due to the number of existing residences east of the site across Cherry Street, the athletic fields of Newark Memorial High School and activities at the Silliman Center north of the site.

Impact 4.9-1 (construction noise impacts). Residents adjacent to the Project area, students at Newark Memorial High School and users of the Silliman Center could be subject to short-term but potentially significant noise due to the construction of new buildings, parking areas and associated infrastructure improvements (potentially significant and mitigation required).

The following mitigation measure is recommended to reduce short-term construction noise to less-than significant levels:

Mitigation Measure 4.9-1 (construction noise impacts). A Construction Noise Management Plan shall be prepared that shall identify measures to be taken to minimize construction noise on surrounding areas. The Noise Management Plan shall be approved by the Ohlone College Facilities Manager and Newark Community Development Director prior to commencement of grading. The Plan shall contain, at minimum, a listing of hours of construction operations, use of mufflers on construction equipment, limitation on on-site speed limits, identification of haul routes to minimize travel through residential areas and identification of noise monitors. Specific noise management measures shall be included in appropriate contractor specifications.

Interior noise impacts
The proposed Educational Building would be located approximately 300 feet west of the Cherry Street median centerline. For the Cumulative + Project scenario, the calculated DNL at the façade of the Educational Building would be approximately DNL 63 dB. According to the Noise Element, a DNL of no more than 45 dB is considered acceptable in new schools and hospitals. Assuming standard building construction, it was calculated that sound-rated windows would not be necessary to achieve the indoor noise goal. However, the analysis results in the windows of the facade facing Cherry Street needing to be kept in the closed position. Allowing operable windows would result in a significant interior noise impact above that allowed in the Newark Noise Element.

Impact 4.9-2 (interior noise impacts). Portions of the interior of the main building fronting Cherry Street could be subject to significant noise from vehicles using Cherry Street if operable windows are included as part of the building (potentially significant and mitigation required).

The following measure is recommended to reduce this impact to a less-than-significant level:
Mitigation Measure 4.9-2 (interior noise impacts). Final building design for the Cherry Street frontage of the main building shall be provided with a source of ventilation that does not require operable windows. Final building plans shall be reviewed by a mechanical engineer to ensure this standard is met (potentially significant and mitigation required).

Project traffic noise impacts
Table 11 indicates that the Project would contribute less than 1 dB to the future noise environment along three primary roadway links serving the Project. A 1 dB increase in noise is considered a less-than-significant increase and no mitigation is required.

Table 11. Existing and Future Noise Levels

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Link</th>
<th>DNL at 50 feet from centerline</th>
<th>Contribution due to Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Existing (Year 2001)</td>
<td>Cumulative+ Project (Year 2025)</td>
</tr>
<tr>
<td>Cherry Street</td>
<td>Mowry to Stevenson</td>
<td>73 dB</td>
<td>75 dB</td>
</tr>
<tr>
<td>Mowry Avenue</td>
<td>East of Cherry</td>
<td>73 dB</td>
<td>75 dB</td>
</tr>
<tr>
<td>Stevenson Boulevard</td>
<td>East of Cherry</td>
<td>71 dB</td>
<td>72 dB</td>
</tr>
</tbody>
</table>

Source: Charles Salter Associates

Impact 4.9-3 (permanent noise impacts). Increased traffic associated with the construction of the proposed Newark Center would contribute less than 1 dB to the surrounding noise environment (less-than-significant and no mitigation required).

Railroad noise impacts
Based on the noise measurement program, it was determined that the UPRR train line would generate a DNL of 60 dB at the facade of a future Campus Expansion building. Since this noise level is no more than the City’s “normally acceptable” noise goal, and would not be considered acceptable. For informational purposes, occasional train passbys would be as loud as Lmax 84 dB at the Campus Expansion area. With standard windows in the future buildings, the loudest train passbys would result in an Lmax of approximately 65 dB indoors. Though this noise level would be clearly noticeable indoors, the passbys are not expected to occur frequently enough to be considered a nuisance in a teaching facility. Therefore, no mitigation is required.

Impact 4.9-4 (railroad noise impacts). Train operations on the adjacent UPRR would not generate noise levels above the normally acceptable exterior noise exposure level (less-than-significant and no mitigation required).

Operational Noise
Activities occurring at the proposed Service and Maintenance Building proposed to be located on the northerly portion of the site would generate audible noise levels at adjacent existing land uses. Noise-generating events could potentially include loading dock activities, and general maintenance and repair activities, including the use of power tools. The Land Use section of this DEIR (Section 8) recommends construction of a 6-foot tall fence or wall along the property line north of this facility (see Mitigation Measure 4.8.2). This wall would acoustically shield Service and Maintenance Building activity noise to the Silliman Community Activity Center by approximately 5 dB. The Newark Noise Element allows Playground and Neighborhood Park land uses to be
located in relatively loud noise environments, where DNL of 75 dB is considered “normally acceptable.” The intermittent activities from the proposed Project would not generate noise levels as loud as DNL 75 dB at the adjacent community activity center.

**Impact 4.9-5 (operational noise impacts).** Future operations within the Maintenance area could generate significant noise levels, impacting outdoor activities of the Silliman Center. This impact would be reduced to a less-than-significant level through adherence to Mitigation Measure 4.8.2 (*less-than-significant and no mitigation required*).

**4.10 TRANSPORTATION AND CIRCULATION**

**ENVIRONMENTAL ISSUES**

This section of the DEIR address potential impacts to nearby roadways, public transit service, pedestrian and bicycle access, on-site parking and internal circulation within the Project area.

Information contained in this section is based on a traffic and circulation analysis prepared by Omni Means Transportation Planners which is contained in Appendix 8.9.

**ENVIRONMENTAL SETTING**

*Existing roadway network*

Streets that provide local and sub-regional access into and around the proposed Project vicinity include Mowry Avenue, Stevenson Boulevard, Cherry Street, Boyce Road, Auto Mall Parkway, Albrae Street, Balentine Drive, Cedar Boulevard, Central Avenue, Joaquin Murieta Avenue, and Alpenrose Court. Regional access to the Project site is provided by Interstate 880 and State Route 84.

A brief description of each roadway component follows:

*Mowry Avenue.* Mowry Avenue extends in a westerly direction from east of Interstate 880 to an area beyond the Union Pacific Railroad tracks and is a major arterial street. As Mowry Avenue crosses west over I-880, the roadway has six travel lanes and auxiliary lanes for the northbound and southbound loop on-ramps. The roadway continues with six travel lanes to Cedar Boulevard and then narrows to four travel lanes to Cherry Street. West of Cherry Street, the roadway has two lanes westbound and one lane eastbound with a two-way left-turn lane. At the Union Pacific railroad tracks the roadway narrows to two travel lanes and is unimproved in this area. An at-grade railroad crossing exists where Mowry Avenue passes over the Union Pacific railroad tracks. This crossing is stop-sign controlled. In the study area, Mowry Avenue provides access to commercial-retail, residential, and light industrial development.
**Stevenson Boulevard.** In the Newark area, Stevenson Boulevard extends in a westerly direction from east of Interstate 880 (I-880) to the Union Pacific Railroad tracks. Between I-880 and Cedar Boulevard, Stevenson Boulevard has six travel lanes with raised medians and turn lanes at major intersections. At Cedar Boulevard, the roadway narrows to four travel lanes and continues this width all the way to Eureka Drive. Once past Eureka Drive, the roadway narrows to two travel lanes and is unimproved to the Union Pacific railroad tracks. At this point, there is an at-grade crossing west to the Area 4 study site. It is noted that the roadway is not paved at this point and the at-grade crossing only has stop-sign control and railroad crossing signs. Stevenson Boulevard provides access to commercial and light-industrial areas.

**Cherry Street.** Cherry Street is a north-south arterial street that would provide direct access to the Project site. Between Mowry Avenue and Thornton Avenue, this street has four travel lanes and a two-way left-turn lane and provides access to commercial, residential, and industrial areas. South of Mowry Avenue, Cherry Street has four travel lanes with raised, landscaped medians. Cherry Street provides access to light-industrial and residential areas. At this time, a median break has been created on Cherry Street at the proposed Project’s main access (between Mowry Avenue and Joaquin Murieta Avenue) with left-turn storage lanes and inbound/outbound intersection turn lanes.

**Boyce Road.** Boyce Road extends southerly from Cherry Street at its intersection from Stevenson Boulevard. Like Cherry Street, Boyce Road has four travel lanes with raised landscaped medians. An at-grade railroad crossing is located on Boyce Road just north of Stewart Avenue. This crossing is controlled by warning lights and crossing gates. Boyce Road provides access to commercial and industrial development.

**Auto Mall Parkway.** Auto Mall Parkway is located south of the proposed Project site. A major arterial street, the roadway extends in an east-west direction from west of Boyce Road to east of I-880. From I-880 west, Auto Mall Parkway has six travel lanes to Boscott Road. Between Boscott Road and Boyce Road, the roadway has three travel lanes eastbound and two travel lanes westbound. West of Boyce Road, Auto Mall Parkway has four travel lanes to Nobel Drive and then narrows to two travel lanes with a two-way left-turn lane. Continuing west, the roadway narrows to two travel lanes and crosses over the Union Pacific railroad tracks to provide access to the Tri-City Waste Management landfill. The rail crossing is at-grade and controlled by flashing red lights, bells, and crossing gates.

**Albrae Street.** Albrae Street extends from Stevenson Boulevard in a southerly direction. For most of its length, Albrae Street is a two-lane roadway providing access to commercial-retail areas. Approaching Stevenson Boulevard the roadway has one travel lane northbound and two travel lanes southbound.

**Balentine Drive.** Balentine Drive extends north from Stevenson Boulevard opposite Albrae Street. This roadway has four travel lanes with a two-way left-turn lane and/or left-turn pockets at major intersections. Balentine Drive provides access to residential and commercial-retail areas.
Cedar Boulevard. Cedar Boulevard is a north-south arterial street that is located east of the Plan area adjacent to Interstate 880. Between Stevenson Boulevard and Birch Street it is a four lane divided street. From Birch Street north to Thornton Avenue the roadway has four travel lanes and a two-way left-turn lane for most of it length. This roadway serves both commercial-retail, industrial and residential areas as well as the Newark Memorial High School.

Central Avenue. Central Avenue has two travel lanes west of Cherry Street and extends in an east-west direction between Willow Street and Interstate 880. East of Filbert Street, the roadway widens to four travel lanes. Designated as a major arterial street and a truck route to State Route 84, Central Avenue provides access to warehousing and light-industrial areas north of the Project site.

Alpenrose Court. Alpenrose Court extends north from Mowry Avenue and is located opposite the main full-access entry to the Newpark Mall.

Joaquin Murieta Avenue. Joaquin Murieta Avenue extends in an east-west direction between Cherry Street and Cedar Boulevard. A wide two-lane roadway, Joaquin Murieta Avenue provides access to residential areas just south of proposed Project site.

On a regional basis, two freeways serve the study area. State Route 84 (SR 84) extends in an east-west direction north of the Project site. A six-lane facility, this route travels from I-580 in Livermore west across the Dumbarton Bridge. A full-access interchange is located at Thornton Avenue. Interstate 880 (I-880) is oriented in a north-south direction and is located east of the Project site. A multi-lane facility, I-880 provides access between San Jose and Oakland. Full access interchanges are located at Mowry Avenue, Stevenson Boulevard, and Auto Mall Parkway in the Project study area.

Existing traffic flow conditions
A principal concern raised by the potential development of the Ohlone College site is the related traffic increases that would occur on the surrounding street network. The following sections describe the study intersections, Level-of-Service concepts, and existing intersection capacity on the surrounding street network.

Intersections
Intersection operation is usually considered the key factor in determining the traffic handling capacity of a local circulation system. Based on discussions with City of Newark Engineering staff, the following twelve intersections were selected for evaluation of current operational characteristics:

<table>
<thead>
<tr>
<th>Study Intersections</th>
<th>Intersection Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cherry / Central</td>
<td>signalized</td>
</tr>
<tr>
<td>I-880 Northbound ramps / Mowry</td>
<td>signalized</td>
</tr>
<tr>
<td>I-880 Southbound ramps / Mowry</td>
<td>signalized</td>
</tr>
<tr>
<td>Alpenrose / Mowry</td>
<td>signalized</td>
</tr>
</tbody>
</table>
Cedar/Mowry signalized
Cherry/Mowry signalized
I-880 Northbound ramps/Stevenson signalized
I-880 Southbound ramps/Stevenson signalized
Balentine-Albrae/Stevenson signalized
Cedar/Stevenson signalized
Cherry/Stevenson signalized
Boyce/Auto Mall Parkway signalized

One method of measuring intersection operation is to apply a Level-of-Service (LOS) scale of operational performance. At a signalized intersection, LOS is determined by calculating the volume of conflicting turning movements at the intersection during a one-hour period. This total is then divided by the design capacity calculated to accommodate those turning movements. This calculation yields a volume/capacity ratio. The resulting v/c ratio corresponds to LOS ratings, which range from LOS "A" to "F." The range from A to F describes increasing levels of traffic demand and corresponding increases in delay and deterioration of service. (Please refer to Appendices of the traffic report for LOS definitions).

Intersection LOS A through F correspond to peak hour v/c ratios. LOS "A" represents free-flow conditions with little or no delay at signalized intersections. LOS "F" represents unstable flow conditions with volumes at or near design capacity. Vehicles are likely to experience major delays (40 to 60 seconds) crossing an intersection. LOS "F" represents a "jammed" condition where traffic flows exceed design capacity, resulting in long queues backing up from all approaches to intersections.

At an unsignalized intersection, intersection LOS usually refers to the minor street or stop sign controlled turning movement. While the overall intersection LOS may be "C" or better, a minor street turning movement may be functioning at LOS "D" or "E."

Existing intersection Level-of-Service
New AM and PM peak period (7:00-9:00 AM and 4:00-6:00 PM) counts were conducted at the 12 Project study intersections. From these peak period intersection counts, AM and PM peak hour volumes were determined and are shown in Figure 2. It is noted that freeway ramp intersection volumes may not exactly balance with adjacent intersection volumes due to traffic counts being conducted on different days. Peak hour intersection LOS has been calculated using two different methodologies: The Contra Costa Transportation Authority (CCTA) methodology has been used for signalized intersections. This methodology is based on the Highway Capacity Manual's planning application with operational capacities and is consistent with previous transportation studies performed for the City of Newark. For unsignalized intersections, the Transportation Research Board, 2000 Highway Capacity Manual--Special Report 209, Chapter 10, Unsignalized Intersections methodology has been used.

As shown in Table 12, all Project study intersections are operating at LOS C or better during the AM and PM peak hours. It is noted that some vehicle congestion (queueing) was observed at freeway ramp intersections at Mowry Avenue and Stevenson Boulevard as well as selected study intersections along Cherry Street. However,
vehicle queuing at these intersections dissipated over the course of the peak hour and 
all queues cleared the intersection as indicated by calculated levels-of-service.

Table 12. Existing Intersection Level-of-Service\textsuperscript{1,2} 
AM and PM Peak Hour

<table>
<thead>
<tr>
<th>No.</th>
<th>Intersection</th>
<th>AM LOS/VC</th>
<th>PM LOS/VC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central/Cherry</td>
<td>A 0.55</td>
<td>A 0.45</td>
</tr>
<tr>
<td>2</td>
<td>I-880 NB ramps/Mowry</td>
<td>A 0.34</td>
<td>B 0.65</td>
</tr>
<tr>
<td>3</td>
<td>I-880 SB ramps/Mowry</td>
<td>A 0.31</td>
<td>A 0.60</td>
</tr>
<tr>
<td>4</td>
<td>Cedar/Alpenrose Ct.</td>
<td>A 0.29</td>
<td>A 0.53</td>
</tr>
<tr>
<td>5</td>
<td>Cedar/Mowry</td>
<td>A 0.47</td>
<td>A 0.52</td>
</tr>
<tr>
<td>6</td>
<td>Cherry/Mowry</td>
<td>A 0.47</td>
<td>A 0.56</td>
</tr>
<tr>
<td>7</td>
<td>I-880 NB ramps/Albrae/Stevenson</td>
<td>A 0.33</td>
<td>A 0.54</td>
</tr>
<tr>
<td>8</td>
<td>I-880 SB ramps/Stevenson</td>
<td>A 0.32</td>
<td>A 0.55</td>
</tr>
<tr>
<td>9</td>
<td>Balentine-Albrae/Stevenson</td>
<td>A 0.31</td>
<td>C 0.72</td>
</tr>
<tr>
<td>10</td>
<td>Cedar/Stevenson</td>
<td>A 0.34</td>
<td>A 0.30</td>
</tr>
<tr>
<td>11</td>
<td>Cherry/Stevenson</td>
<td>A 0.38</td>
<td>A 0.47</td>
</tr>
<tr>
<td>12</td>
<td>Boyce/Auto Mall Parkway</td>
<td>A 0.32</td>
<td>A 0.37</td>
</tr>
</tbody>
</table>

Notes: 
2. AM and PM peak period counts conducted in March and April, 2001 by Baymetrics and Omni-Means Engineers & Planners.
3. Unsignalized LOS is expressed in seconds of delay.

Exhibit 12a shows existing traffic conditions.

Future base traffic conditions
Based on discussions with City of Newark staff, there are currently four approved/planned developments within the City that could likely affect traffic flows in the study area. These include the following three projects:

a. Central/Timber Retail Expansion: The existing neighborhood commercial-retail center on the south side of Central Avenue (between Timber Street and I-880) would be expanded from 20,019 to 23,926 square feet, an increase of 3,907 square feet;

b. Silliman Center Expansion: The existing Silliman Center located off of Mowry Avenue is currently being expanded to include a new swimming pool complex totaling 32,300 square feet;

c. Newpark Mall Expansion: The Newpark Mall Expansion project would consist of a 4,000 seat multi-plex theater, 22,500 square feet of restaurant uses, and 2,700 square feet of additional mall/retail uses;

d. Newark Rezoning Project: The planned development would convert approximately 25 acres of light industrial uses to residential uses and would be located between Cedar Boulevard and I-880 immediately south of Central Avenue. The proposed project is tentatively planned for 243 low-rise condominium/townhomes, 243 luxury condominiums, and 208 apartments.
Access points to/from the project site would be located off of Cedar Boulevard and Timber Street. (Since this project could develop over a longer period (> 5 years), 50% of the peak hour project trip generation has been assumed for Future Base conditions).

Daily and peak hour trip generation for Center/Timber Retail and Silliman Center short-term (3-5 years) future base projects has been based on the Institute of Transportation Engineers (ITE) research on retail and recreational community centers. For retail uses, a portion of the Project trips would represent "pass-by" trips. Pass-by trips reflect those retail customers who are merely stopping by the retail center on their way to/from some other primary trip purpose on Central Avenue or Timber Street. ITE identifies a pass-by rate of 36% for a retail development of this size. The proposed retail center’s trip generation would represent the net increase between proposed development (23,926 square feet) and existing development (20,019 square feet). Daily and peak hour trip generation for the Newark Rezoning and Newpark Mall Expansion projects have been based on recent transportation studies conducted for the City of Newark.
### Table 13. Future Base Project Trip Generation¹

<table>
<thead>
<tr>
<th>Project</th>
<th>Trip Rate</th>
<th>Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central/Timber Retail:²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposed:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily:</td>
<td>23,926 sq. ft. x 40.67/ksf</td>
<td>973</td>
</tr>
<tr>
<td>AM Peak:</td>
<td>23,926 sq. ft. x 2.59/ksf</td>
<td>62 (32 in; 30 out)</td>
</tr>
<tr>
<td>PM Peak:</td>
<td>23,926 sq. ft. x 2.59/ksf</td>
<td>62 (32 in; 30 out)</td>
</tr>
<tr>
<td>Existing:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily:</td>
<td>20,019 sq. ft. x 40.67/ksf</td>
<td>814</td>
</tr>
<tr>
<td>AM Peak:</td>
<td>20,019 sq. ft. x 2.59/ksf</td>
<td>52 (25 in; 27 out)</td>
</tr>
<tr>
<td>PM Peak:</td>
<td>20,019 sq. ft. x 2.59/ksf</td>
<td>52 (22 in; 36 out)</td>
</tr>
<tr>
<td>Net Increase:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily:</td>
<td></td>
<td>159</td>
</tr>
<tr>
<td>AM Peak:</td>
<td></td>
<td>10 (7 in; 3 out)</td>
</tr>
<tr>
<td>PM Peak:</td>
<td></td>
<td>10 (4 in; 6 out)</td>
</tr>
<tr>
<td>Silliman Center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily:</td>
<td>32,300 sq. ft. x 22.88/ksf</td>
<td>739</td>
</tr>
<tr>
<td>AM Peak:</td>
<td>32,300 sq. ft. x 2.68/ksf</td>
<td>87 (46 in; 4 out)</td>
</tr>
<tr>
<td>PM Peak:</td>
<td>32,300 sq. ft. x 2.26/ksf</td>
<td>73 (27 in; 46 out)</td>
</tr>
<tr>
<td>NewPark Mall Expansion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily:</td>
<td></td>
<td>7,627</td>
</tr>
<tr>
<td>AM Peak:</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>PM Peak:</td>
<td></td>
<td>499 (299 in; 200 out)</td>
</tr>
<tr>
<td>Newark Rezoning Project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily:</td>
<td></td>
<td>3,064</td>
</tr>
<tr>
<td>AM Peak:</td>
<td></td>
<td>267 (17 out; 284 out)</td>
</tr>
<tr>
<td>PM Peak:</td>
<td></td>
<td>303 (239 in; 64 out)</td>
</tr>
<tr>
<td>Total Future Base Project Trips</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily:</td>
<td></td>
<td>11,589</td>
</tr>
<tr>
<td>AM Peak:</td>
<td></td>
<td>364 (36 in; 328 out)</td>
</tr>
<tr>
<td>PM Peak:</td>
<td></td>
<td>885 (569; 316 out)</td>
</tr>
</tbody>
</table>

Notes:

(2) Based on ITE research, a "pass-by" rate of 36% would be applicable to retail trip generation. However, due to the very small increase in retail trip generation from the project the pass-by discount would not be measurable within the daily fluctuations of traffic flows.

Future base Project trip generation for the four approved and pending projects has been shown in Table 13. In all, future base projects would generate 11,589 daily trips with 364 AM and 885 PM peak hour trips. It is noted that the Newpark Mall Expansion project would generate little if any AM peak hour trips.

Peak hour distribution for future base project trips has been based on existing traffic volumes, area demographics, and marketing information conducted for the Newpark Mall expansion. The Silliman Center Expansion project would draw patrons from throughout the City of Newark and therefore peak hour distribution has been based...
on the demographic characteristics of the City. The Newark Rezoning project's trip
distribution off of Cedar Boulevard was based on existing residential traffic to/from
key intersections in the neighborhood. Consideration was also given to future base
project location, site access, and the most efficient routes to/from the freeway.

AM and PM future base Project trips were added to existing intersection volumes and
are shown in Exhibit 12b.

Effects of future base traffic on intersection operations
With short-term approved and pending projects, intersection LOS in the Project study
area would continue to operate at acceptable levels. As shown in Table 15, all twelve
study locations would continue to operate at LOS C or better during the AM and PM
peak hours. With future base Project trips, intersection v/c ratios would increase, but
overall operation would be acceptable.

Public transit service
Local and regional transit service in the Project area is provided by AC Transit. In the
Project area there are six (6) bus routes that provide service along study roadways
both directly and indirectly to the Project site. These bus routes include SB, 214, 215,
232, 233, and 235 and can be described as follows:

Newark Transbay Service SB. The Newark Transbay Express (SB) route operates
only during the peak commute hours between 5:15-8:45 a.m. and 4:00-7:45 p.m.
Monday through Friday. In the study area, the SB transbay express route originate
in the Stevenson/Cedar area and travels north on Cedar Boulevard to Central
Avenue to Newark Boulevard before continuing north into Fremont. Headways
are every 20-40 minutes in the Plan area.

Stevenson Boulevard Route 214. Route 214 operates Monday through Friday
between 5:30 a.m. and 10:30 p.m. Traveling between Fremont BART and Lido
Faire, route 214 provides access to many streets in the study area. Specifically,
route 214 provides access south on Stevenson Boulevard from BART to Cedar
Boulevard, Mowry Avenue, Central Avenue, Sycamore Boulevard, and Jarvis
Avenue before accessing Lido Faire. Headways are every 30 minutes.

Central Avenue/Osgood Road Newark Mall Route 215. Route 215 operates Monday
through Friday between 5:25 a.m. and 10:14 p.m. and on weekends between 6:49
a.m. and 6:57 p.m. In the study area, route 215 starts at NewPark Mall and
provides access south on Mowry Avenue before turning north on Cherry Street.
The route continues north on Central Avenue before traveling into Fremont.
Headways are every 30 minutes during the weekday commute periods. During
the weekends, headways are every 60 minutes.

Thornton Boulevard Route 219. Route 219 hours of operation are Monday through
Friday between 5:48 a.m. and 10 p.m. and weekends 7:00 a.m. to 7:00 p.m. The
route travels between Fremont BART and Lido Faire in Newark. In the Plan area,
route 219 travels on Cherry Street, Cedar Boulevard, and Mowry Avenue to
Newpark Mall before continuing east on Mowry Avenue into Fremont. Headways
are every 30 minutes during the weekdays. On weekends, headways are every 60 minutes.

*Cedar Boulevard Route* 232. Route 232 provides access between Ohlone College (Mission San Jose Campus) and Union City BART. Hours of operation are between 5:40 a.m. and 10:10 p.m. Monday through Fridays. South of the study area route 232 travels westbound on Auto Mall Parkway then turns north on Boyce Road accessing Cherry Street, Mowry Avenue, Cedar Boulevard, Lido Faire, and ultimately to Ardenwood Boulevard, Paseo Padre Parkway and Decoto Road to Union City BART. Headways are every 30 minutes during the peak commute hours. It is noted the AC Route 232 is the only AC route to pass directly in front of the Project site along Cherry Street.

*Newark Boulevard Route* 233. Route 233 provides access between Union City BART and NewPark Mall. The route operates Monday through Friday between 5:45 a.m. and 10:00 p.m. and weekends between 7:00 a.m. and 7:00 p.m. East of the Project site, route 233 originates at the NewPark Mall and travels west on Mowry Avenue before traveling north on Cherry Street. The route then extends north on Central Avenue to Cedar Boulevard to access the Lido Faire center and Union City BART via State Route 84. Headways are every 30 minutes for both weekday and weekend hours of operation.

*Albrae Street Route* 235. Route 235 travels between Albrae Street and Stevenson Boulevard. This route operates during the peak AM (6:40-8:20 a.m.), mid-day (12:00-12:30 p.m.), and PM peak (4:00-6:00 p.m.) commute periods Monday through Friday. From the Fremont BART station, route 235 travels south on Stevenson Boulevard to Cherry Street. From this point, route 235 turns south to access Stewart Street to Christy Street before traveling back on Albrae Street to Stevenson Boulevard. Headways are every 20 minutes during the morning commute period and 30 minutes during the PM commute period. This route is primarily located south of Project site (along Stevenson Boulevard).

*Pedestrian and bicycle routes*
A public sidewalk has been constructed along the west side of Cherry Street in front of the proposed Project.

The Newark General Plan, Figure 4-8, identifies a City of Newark and regional bicycle route along Cherry Street in front of the proposed Project.

*Parking*
No parking is provided on the Project site, since it is vacant.

*Alameda County Congestion Management Agency*
The Alameda County Congestion Management Agency (ACCMA) has identified I-880, SR 84, Mowry Avenue, Newark Boulevard, Paseo Padre Parkway, Stevenson Boulevard, Thornton Avenue, Ardenwood Boulevard as the Metropolitan Transportation System (MTS) Routes of Regional Significance. ACCMA has established an LOS standard of E for the Congestion Management Program (CMP)
roadway network, except where F was the level of service originally measured, in which case the standard shall be LOS F.

In addition to LOS roadway standards, CMA guidelines also specify that any proposed project generating 100 PM peak hour trips over existing conditions must conduct a traffic analysis of the project using the County-wide Transportation Demand Model for the base years 2010 and 2025.

STANDARDS OF SIGNIFICANCE

The following standards of significance criteria have been used in this DEIR.

- A reduction in service levels below LOS D for signalized intersections. This is based on City of Newark standard for Level of Service included in the Transportation Element of the General Plan;
- Exceed, either individually or cumulatively, a level of service standards established by the local Congestion Management Agency for designated roads or highways;
- Creation of other significant traffic or circulation impacts, such as creation of unsafe intersections, lack of sufficient sight-line distances and similar safety hazards;
- Result in inadequate emergency access to the project site;
- Provision of insufficient parking such that vehicles would be forced to park on adjacent public streets on a regular basis; or
- Conflict with adopted policies, plans or programs supporting alternative modes of transportation, such as busses, bicycles or pedestrian circulation.

ENVIRONMENTAL IMPACTS

Project trip generation
The proposed Project’s daily and peak hour trip generation has been based on the Institute of Transportation Engineers (ITE) and the San Diego Association of Governments (SANDAG) trip research on Junior/Community College uses. The most conservative daily, AM and PM peak hour trip rates have been used for this analysis.

Proposed Project trip generation has been shown in Table 14. As calculated, the proposed Project would generate 2,940 daily trips with 353 (282 in, 71 out) AM peak hour trips and 294 (188 in, 106 out) PM peak hour trips.

Project trip distribution
Discussions with Ohlone College staff indicate that the proposed campus would offer very special curriculums that would draw students from all over the Bay Area (similar to the existing Newark satellite campus). For this reason, at least 50% of the Ohlone College students are expected be to/from I-880 with the remaining students originating from the immediate surrounding cities. Consideration was also given to overall demographics within the City of Newark, existing traffic volumes, Project access points, adjacent intersections, and overall traffic flows along Cherry Street. The proposed Project distribution is estimated as follows:
Cherry Street to/from the south: 35%
(I-880 to/from south): 20%
(Stevenson east of I-880) 10%
Boyce Rd. to/from the south: 5%

Cherry Street to/from the north: 65%
(I-880 to/from north): 25%
(Mowry east of I-880): 10%
Central Avenue to/from the east: 15%
Central Avenue to/from the west: 5%
Cherry St. (N. of Central): 10%

Total 100%

The proposed Project’s peak hour trips have been added to future base intersection volumes and are shown on Table 15.

Table 14. Proposed Project Trip Generation
Daily, AM and PM Peak Hour

<table>
<thead>
<tr>
<th>A. Project Component</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohlone College Newark Center: 2,450 students</td>
<td></td>
</tr>
</tbody>
</table>

| B. Project Trip Generation Rates:
| Daily | 1.2 trips/student |
| AM Peak | 0.144 trips/student |
| PM Peak | 0.12 trips/student |

| C. Project Trip Generation |
| Daily | 2,450 students x 1.2 trips/student | 2,940 trips |
| AM Peak | 2,450 students x 0.144 trips/student | 353 trips (282 in, 71 out) |
| PM Peak | 2,450 students x 0.12 trips/student | 294 trips (188 in, 106 out) |

Notes:

Effects of proposed Project traffic on future base intersection operation
With proposed Project traffic added to future base volumes, study intersections would continue to operate at acceptable levels. As shown in Table 15, all twelve intersections would be operating at LOS C or better with existing plus approved/pending plus Project traffic. There would be slight increases in intersection v/c ratios from increased Project trips. Exhibit 12c shows future base + Project traffic.
Table 15. Existing and Future Base Intersection Level-of-Service (LOS) AM and PM Peak Hour Conditions

<table>
<thead>
<tr>
<th>No.</th>
<th>Intersection</th>
<th>Future Base</th>
<th>Future Base + Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>AM LOS/VC</td>
<td>PM LOS/VC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AM LOS/VC</td>
<td>PM LOS/VC</td>
</tr>
<tr>
<td>1</td>
<td>Central/Cherry</td>
<td>A 0.56</td>
<td>A 0.46</td>
</tr>
<tr>
<td>2</td>
<td>I-880 NB ramps/Mowry</td>
<td>A 0.34</td>
<td>B 0.65</td>
</tr>
<tr>
<td>3</td>
<td>I-880 SB ramps/Mowry</td>
<td>A 0.31</td>
<td>B 0.61</td>
</tr>
<tr>
<td>4</td>
<td>Cedar/Alpenrose Ct.</td>
<td>A 0.29</td>
<td>A 0.60</td>
</tr>
<tr>
<td>5</td>
<td>Cedar/Mowry</td>
<td>A 0.49</td>
<td>A 0.54</td>
</tr>
<tr>
<td>6</td>
<td>Cherry/Mowry</td>
<td>A 0.48</td>
<td>A 0.57</td>
</tr>
<tr>
<td>7</td>
<td>I-880 NB ramps/Stevenson</td>
<td>A 0.33</td>
<td>A 0.55</td>
</tr>
<tr>
<td>8</td>
<td>I-880 SB ramps/Stevenson</td>
<td>A 0.32</td>
<td>A 0.55</td>
</tr>
<tr>
<td>9</td>
<td>Balentine-Albrae/Stevenson</td>
<td>A 0.31</td>
<td>C 0.74</td>
</tr>
<tr>
<td>10</td>
<td>Cedar/Stevenson</td>
<td>A 0.35</td>
<td>A 0.30</td>
</tr>
<tr>
<td>11</td>
<td>Cherry/Stevenson</td>
<td>A 0.38</td>
<td>A 0.49</td>
</tr>
<tr>
<td>12</td>
<td>Boyce/Auto Mall Parkway</td>
<td>A 0.32</td>
<td>A 0.39</td>
</tr>
</tbody>
</table>

Notes:

1. Omni-Means Engineers & Planners, AM and PM peak period (7:00-9:00 a.m. & 4:00-6:00 p.m.) intersection turning movement counts on Cherry Street, Cedar Avenue, Central Avenue, Mowry Avenue, and Stevenson Boulevard, City of Newark, April-May, 2003.

2. Intersection Level-of-Service (LOS) is expressed as a Volume/Capacity (v/c) ratio. This methodology is based on the Contra Costa Transportation Authority (CCTA) standards and is consistent with previous transportation studies conducted in the City of Newark (Planning Area 2, Planning Area 4, and Newark Redevelopment Area).

Impact 4.10-1 (Project traffic impacts). Although construction of the proposed Project would increase traffic on nearby roadways and intersections, increases in traffic would not be significant based on standards of significance (less-than-significant impact and no mitigation measures are required).

Cumulative traffic conditions
Cumulative Year 2025 traffic projections have been based on the Alameda County Congestion Management Agency (ACCMA) transportation model output. Specifically, AM and PM peak hour Year 2025 link volumes were compared to existing base model volumes. The percentage change (increase) was then applied to existing AM and PM volumes (manual counts) to generate Year 2025 cumulative intersection volumes.

AM and PM peak hour cumulative Year 2025 intersection volumes have been shown in Exhibit 12d.

It is noted that the projected cumulative Year 2025 traffic growth would include the proposed Project volumes based on a review of ACCMA land use projections and previously planned uses for the site. Specifically, the previously proposed land use for the 81 acre site included Sun Microsystems research and development facility. Had this facility been constructed, it had the potential to generate 1,251 PM peak hour trips. This would far exceed the proposed Ohlone College trip generation. For these reasons, Year 2025 cumulative traffic projections would be conservative.
With cumulative Year 2025 volumes, intersection LOS would be at acceptable levels (LOS C or better) with the exception of the Cedar/Mowry intersection. As shown in Table 16, overall intersection LOS during the PM peak hour would be E (0.94). Based on ACCMA Year 2025 projections, peak hour link volumes on Mowry Avenue would increase by 100% and volumes on Cedar Boulevard would increase by over 80%, causing significant impacts at the Cedar/Mowry intersection. Discussions with Newark Engineering staff indicate that the City has re-surfaced/re-striped the eastbound Mowry Avenue approach to include a separate right-turn lane. This improvement would provide for one (1) left-turn lane, two (2) through lanes, and one (1) right-turn lane on eastbound Mowry Avenue at Cedar Boulevard. These improvements have been factored into the cumulative LOS calculation for this intersection. However, the Cedar/Mowry intersection is anticipated to operate at LOS E under future cumulative conditions, even without the proposed Project.

With Project traffic added to cumulative intersection volumes, eleven of twelve locations would operate at LOS C or better during AM and PM peak hours as shown in Table 16. The proposed Project would add 103 trips or 0.019% to overall cumulative volumes at the Cedar/Mowry intersection, which would continue to result in an unsatisfactory condition.

Proposed AM and PM peak hour Project traffic was added to cumulative intersection volumes and are shown on Exhibit 12e.

<table>
<thead>
<tr>
<th>No.</th>
<th>Intersection</th>
<th>Cumulative</th>
<th>Cumulative + Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>AM</td>
<td>PM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LOS/VC</td>
<td>LOS/VC</td>
</tr>
<tr>
<td>1</td>
<td>Central/Cherry</td>
<td>B 0.62</td>
<td>A 0.55</td>
</tr>
<tr>
<td>2</td>
<td>I-880 NB ramps/Mowry</td>
<td>A 0.36</td>
<td>C 0.79</td>
</tr>
<tr>
<td>3</td>
<td>I-880 SB ramps/Mowry</td>
<td>A 0.41</td>
<td>B 0.66</td>
</tr>
<tr>
<td>4</td>
<td>Cedar/Alpenrose Ct.</td>
<td>A 0.41</td>
<td>B 0.68</td>
</tr>
<tr>
<td>5</td>
<td>Cedar/Mowry</td>
<td>B 0.70</td>
<td>E 0.94</td>
</tr>
<tr>
<td>5</td>
<td>(mitigated)</td>
<td>B 0.66</td>
<td>D 0.85</td>
</tr>
<tr>
<td>6</td>
<td>Cherry/Mowry</td>
<td>B 0.61</td>
<td>C 0.73</td>
</tr>
<tr>
<td>7</td>
<td>I-880 NB ramps/Stevenson</td>
<td>A 0.38</td>
<td>B 0.68</td>
</tr>
<tr>
<td>8</td>
<td>I-880 SB ramps/Stevenson</td>
<td>A 0.35</td>
<td>B 0.61</td>
</tr>
<tr>
<td>9</td>
<td>Bantline-Albrae/Stevenson</td>
<td>A 0.35</td>
<td>C 0.73</td>
</tr>
<tr>
<td>10</td>
<td>Cedar/Stevenson</td>
<td>A 0.41</td>
<td>A 0.48</td>
</tr>
<tr>
<td>11</td>
<td>Cherry/Stevenson*</td>
<td>A 0.45</td>
<td>B 0.62</td>
</tr>
<tr>
<td>12</td>
<td>Boyce/Auto Mall Parkway</td>
<td>A 0.37</td>
<td>B 0.61</td>
</tr>
</tbody>
</table>

Notes:
1. Omni-Means Engineers & Planners, AM and PM peak period (7:00-9:00 a.m. & 4:00-6:00 p.m.) intersection turning movement counts on Cherry Street, Cedar Avenue, Central Avenue, Mowry Avenue, and Stevenson Boulevard, City of Newark, April-May, 2003.
2. Intersection Level-of-Service (LOS) is expressed as a Volume/Capacity (v/c) ratio. This methodology is based on the Contra Costa Transportation Authority (CCTA) standards and is consistent with previous transportation studies conducted in the City of Newark (Planning Area 2, Planning Area 4, and Newark Redevelopment Area).
**Impact 4.10-2 (cumulative traffic impacts).** The addition of Project traffic to future cumulative conditions would result in the Cedar/Mowry intersection operating at an unsatisfactory operation during the PM peak hour condition (*significant impact mitigation is required*).

Adherence to the following measure would reduce this impact to a less-than-significant level.

**Mitigation Measure 4.10-2 (cumulative traffic impacts).** The District shall contribute a proportional share to the City of Newark towards recommended cumulative intersection improvements at the Cedar/Mowry intersection, which shall consist of re-striping the southbound Cedar Boulevard approach to include two (2) left-turn lanes, one (1) through-lane, and one (1) shared through/right-turn lane.

With these improvements, intersection LOS would improve to B (0.66) during the AM peak hour and LOS D (0.85) during the PM peak hour and would therefore be consistent with City standards.

**Alameda County Congestion Management Agency (ACCMA) MTS Routes**

The basis for evaluating Year 2010 and 2025 conditions with and without the proposed Project on Alameda County Congestion Management Agency (ACCMA) MTS routes have been transportation model projections derived from the ACCMA. Specifically, ACCMA Year 2010 and 2025 transportation model volumes were assembled based on ABAG 2002 projections (*ACCMA 2010-2025 Base Model, PM peak, DKS Associates, 2004*). For proposed Project impacts to the MTS network, PM peak hour trip generation was used to develop link volumes on all MTS roadways in the study area.

**Year 2010 Impacts on MTS Routes**

MTS routes in the Project study area that would be affected by PM peak hour Project trips include Mowry Avenue, Newark Boulevard, Stevenson Boulevard, Thornton Avenue, I-880, and SR 84. The CMA LOS standard for monitoring purposes for arterial streets is D (consistent with City standards). The LOS standard on freeways is LOS E, except where LOS F was the level of service originally measured, in which case the standard shall be LOS F.

Based on the above criterion, for Year 2010 without Project conditions, all arterial segments would be operating at LOS D or better as shown in Table 17. With respect to freeway segments along Interstate 880 and State Route 84, one eastbound segment on State Route 84 west of Thornton Avenue would be operating at LOS F. All other freeway segments would operate at LOS D or better during the PM peak hour.

For year 2010 with Project conditions, arterial segment LOS would continue to operate at acceptable levels (LOS D or better) during the PM peak hour. The eastbound freeway segment of State Route 84 (west of Thornton Avenue) would continue to operate at LOS F. All other freeway segments are expected to operate at acceptable levels during the PM peak hour.
Year 2025 Impacts on MTS Routes
For year 2025 without Project conditions, all arterial segments would continue to
function at LOS D or better as shown in Table 17. With respect to freeway segments
along Interstate 880 and State Route 84, the eastbound segment on State Route 84
west of Thornton Avenue would be operating at LOS F. All other freeway segments
would operate at LOS D or better during the PM peak hour.

For year 2010 with Project conditions, arterial segment LOS would continue to operate
at acceptable levels (LOS D or better) during the PM peak hour. The eastbound
freeway segment of State Route 84 (west of Thornton Avenue) would continue to
operate at LOS F. All other freeway segments are expected to operate at acceptable
levels during the PM peak hour.

Public transit
Currently, there are no AC Transit bus lines that directly serve the Project site.
Previously, AC Route 232 (Ohlone College) served both the existing Mission San Jose
Park campus as well as providing direct access to the Project site along Cherry Street.
Route 232 then continued on to the Union City BART Station. However, due to low
ridership (17 passenger trips/hour), this route was discontinued in the Project site area
and at the existing Ohlone College campus in Mission San Jose and has been re-routed.
Discussions with AC Transit staff indicate that AC Route 213 (Mowry) would be
extended from Newpark Mall to directly serve the Project site and then continue
to/from Mowry Avenue on its normal route.

Projected monthly ridership data assumes a two (2) percent mode split for bus
ridership. Based on a projected college enrollment of 2,450 students, monthly
ridership data could be quantified as follows:

 Students: 2,450 students x 2% x 2 trips/day x 20 school days per month = 1,960
 monthly riders (98 daily riders)

This ridership calculation for the proposed Ohlone College suggests that there could
be an increase of 1,960 riders on AC Transit Route 213 when serving the Project site.
On a daily basis, this would equate to an increase of 98 passengers or 12-13 passengers
per hour. AC Transit staff indicates that there is excess capacity on this route and this
increase in ridership would be less than the 17 passenger trips per hour that AC Route
232 was discontinued in the Project study area. A less-than-significant impact would
therefore result with regard to the AC Transit District.

In terms of impacts to the Bay Area Rapid Transit District (BART) system, the effects of
the Ohlone College Newark Center have been quantified for BART based on increases
in daily ridership. It is likely that students going to/from campus could use both the
Union City and Fremont BART stations depending on direct or indirect bus
connections to AC Transit. Assuming the same student transit mode ridership for
BART usage as AC Transit impacts to BART could be quantified as follows:

 Students: 2,450 students x 2% x 2 trips/day = 98 riders (48 inbound and 48
 outbound)
As shown above, on a daily basis, the proposed Project has a potential to generate 98 riders. It is likely that the majority of these trips would occur during the morning and evening commute periods. However, to the extent that these trips would be spread out over the course of the day, impacts to BART operations would be reduced.

During peak commute periods, BART provides four 8-car trains with a capacity of 2,240 seats. BART assumes an even higher load factor during peak commute times (1.35) which increases the total peak hour capacity to 3,024 seats for the four peak hour BART trains. Based on Union City BART weekday average exit data, the station currently average 3,699 exits on a daily basis. With a peak hour capacity of 3,024 seats, the addition 48 student trips would have a less-than-significant impact on BART operations during the peak commute periods. Again, these calculations are likely conservative given that they assume the students would all be commuting during the peaks hours rather than over the course of the day.

**Impact 4.10-3 (public transit impacts)**. The proposed Project is expected to generate additional ridership on both the AC Transit District and the Bay Area Rapid Transit District. Based on ridership projections for the Project, increases are anticipated to be less-than-significant on each public transit district (less-than-significant impact and no mitigations required).

*Vehicle access and on-site circulation*
Access to the proposed Project site would be gained via Cherry Street. An existing, full-access driveway (with median break) is currently located between Mowry Avenue and Stevenson Boulevard. This intersection provides separate inbound left and right-turn lanes and would be signalized as part of proposed Project development. Two other limited access driveways (right-turns only inbound/outbound) would be located off of Cherry Street; one north of the main access driveway and the other south. These driveways would provide access to parking areas located north and south of the main campus buildings.

An additional secondary access driveway is shown connecting to Mowry Avenue from the proposed campus just west of the existing playfields. It is likely that this driveway would serve delivery vehicles and/or provide emergency vehicle access to the site. The driveway could also be used by staff/students at buildout. However, this would be a circuitous route compared and would likely not be heavily used.

A main east-west internal drive (with raised median) would provide access into the site from the full-access intersection at Cherry Street. This internal drive would then form a "t-" intersection with a north-south internal drive that would provide access to the parking fields located both north and south of the campus buildings. This configuration could result in potential conflicts between vehicle movements. To promote efficient and safe vehicle operation, it is recommended that the internal "t-type" intersection be stop-sign controlled for the north-south internal drive. This control would allow inbound traffic from the signalized Cherry Street intersection to access the parking fields and avoid potential vehicle queuing problems during peak class attendance periods. Similarly, the north-south internal drive should be stop-sign controlled at the limited access drives from Cherry Street. The northerly limited access
drive would also provide access to the future internal roadway which would access Mowry Avenue.

**Impact 4.10-4 (access and on-site circulation).** Proposed access to the Project site is anticipated to be adequate to accommodate future vehicular traffic. A potentially significant impact could result with traffic conflicts along the main internal access road and proposed side drives (significant impact mitigation is required).

The following measure is recommended to reduce this impact to a less-than-significant level.

**Mitigation Measure 4.10-4 (access and on-site circulation).** Stop signs shall be installed along the north-south internal road intersecting with the three site driveways to promote traffic safety and internal circulation efficiently.

Installation of stop signs as required by the mitigation measure would reduce this impact to a less-than-significant level.

**Emergency access**
The Master Plan includes construction of a main access drive in the approximate center of the Cherry Street frontage of the Project site. Two secondary drives would also be constructed, one north and one south of the main access. The main campus building would be encircled by on-site driveways leading from the entrances to parking lots adjacent to and behind the main building.

Provision of the three driveways into the site and the perimeter drive would ensure adequate access by emergency trucks and equipment in the event one or two of the drives would be blocked. There would therefore be no impact with regard to inadequate emergency access to the Project site.

**Impact 4.10-5 (emergency access).** Three driveways would be provided to the Project site as well as a perimeter drive to ensure adequate emergency access to the site even if one or more of the driveways are blocked (no impact and no mitigation required).

**Pedestrian and bicycle routes**
The proposed Master Plan includes an interconnected grid of pedestrian pathways on the campus that would link the central building complex with the sidewalk on Cherry Street, all parking lots and the central open space feature.

The proposed pedestrian circulation network is shown on page 5.8.2 of the Master Plan document.

No changes to bicycle transportation would be made to the bicycle path along Cherry Street.

**Impact 4.10-6 (pedestrian and bicycle impacts).** Construction of the proposed Project would have no impact to existing public bicycle and pedestrian facilities and on-site pedestrian and bicycle facilities would be provided as part of the Project (no impact and no mitigation measures are required).
Parking
The Master Plan proposes to provide approximately 650 on-site parking spaces to serve a total of approximately 2,450 students. It is anticipated that approximately 800 students would use the Newark Center campus at any one time.

The Ohlone Community College District has established a standard of 0.22 parking spaces for the maximum student load on campus. Under this standard, and assuming a maximum of 2,450 students, a total of 539 spaces would be required. Since 650 spaces are proposed as part of the Master Plan, adequate on-site parking would be provided. Parking would include both standard stalls and disabled-access stalls.

In the event, the number of planned parking spaces may not be adequate, the District has sufficient unallocated space on the Project site to provide overflow parking so that students would not be required to use either adjacent streets or nearby private or public lots for parking purposes.

Impact 4.10-7 (on-site parking impacts). Approximately 650 on-site parking spaces would be provided as part of the Newark Center Master Plan. Based on the District standard of 0.22 spaces per maximum student enrollment, 539 spaces would be needed, so that parking supply would exceed the District standard (no impact and no mitigation required).

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Transportation, circulation and parking impacts can all be mitigated to a less-than-significant level.
Table 17. Year 2010 and 2025 PM Peak Hour Mainline Arterial and Freeway Levels of Service MTS Roadways With and Without Ohlone College Newark Center

<table>
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<tr>
<th>Year</th>
<th>PM Peak Hour Mainline Arterial and Freeway Levels of Service MTS Roadways With and Without Ohlone College Newark Center</th>
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<tr>
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<td>2025</td>
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MTS Roadways With and Without Ohlone College Newark Center
Table 17-continued
Exhibit 12a. Existing AM and PM Peak Hour Traffic Volumes
Exhibit 12b. Future Base AM and PM Peak Hour Traffic Volumes
Exhibit 12c. Future Base + Project AM and PM Peak Hour Traffic Volumes
Exhibit 12d. Cumulative AM and PM Peak Hour Traffic Volumes
Exhibit 12e. Cumulative + Project AM and PM Peak Hour Traffic Volumes
4.11 UTILITIES AND PUBLIC SERVICES

ENVIRONMENTAL ISSUES

This section of the EIR discusses provision of community services, including fire and police services and utility systems, including water, sanitary sewer, solid waste disposal, natural gas, electricity and telecommunication systems.

ENVIRONMENTAL SETTING

Police protection
The Newark Police Department provides police protection services to the City of Newark. The Department is headquartered at City Hall, located at 37101 Newark Boulevard. The Police Department currently provides police protection services to the existing Newark satellite facility. Typical police calls to this facility include vehicle break-ins and illegal parking. Currently, one police office officer patrols the beat containing the project site. In general, this beat has the highest call rate in the city because it contains the Newark Mall, which generates a high level of calls to the Police Department.

The Ohlone College Community College District presently provides private security patrols to the main Fremont campus; however, security officers rely on local police resources for major incidents.

Fire protection
The Newark Fire Department would provide fire protection and emergency response services to the community. Fire Station #3, located at the corner of Cherry Street and Mowry Avenue provides the first response to the Project site. The average response time from Station #3 is six minutes. If needed, the second response would be from Station #1, located at 7700 Thornton Avenue, with a response time of seven minutes (Preston, 2004)

Water supply
The Alameda County Water District (ACWD) provides domestic and firefighting water to the Cities of Newark, Fremont and Union City via a grid of pipelines across these cities. The District obtains water from a number of sources, including imported surface water from the Tuolumne River, the San Francisco Bay-Sacramento River Delta and locally pumped groundwater resources.

Near the Project site, a 16-inch pressurized water main is located in Cherry Street. There are two 12-inch stubs on the Project’s Cherry Street frontage that are connected to the 16-inch water main (Fajeau, 2004).

Wastewater collection, treatment and disposal
Wastewater service is provided by Union Sanitary District (USD), which serves Newark, Fremont and Union City. The District operates sewer lines, pump facilities and the sewage treatment plant in Union City Sewer lines in Newark generally
operate by gravity with flows from the northeast to southwest. Sewage is fed into central force mains at the Irvington Pump Station to the Newark Pump Station at Hickory and Thornton Avenue and then to the sewage treatment plant.

Treated effluent leaving the sewage plant is pumped to a plant in San Leandro for ultimate disposal into San Francisco Bay through pipe facilities operated by the East Bay Dischargers Authority.

Near the Project area, a sanitary sewer main ranging in diameter from 18-inches to 21-inches has been constructed in the Cherry Street right of-way (Fajeau, 2004). A 12-inch sewer main runs along the southern property line in a public sanitary sewer easement. This main flows eastward to the Cherry Street Lift station. The lift station discharges westward via twin, 33-inch force mains along the site’s southern boundary in an East Bay Dischargers Authority easement (MBT, 2004).

Solid waste
TriCities Waste Management, Inc. provides solid waste and recycling service in Newark. TriCities maintains a landfill that is located approximately four miles from the site. The landfill has a remaining capacity of one to two years. Currently, the cities of Newark and Fremont are working towards development of a transfer station facility where solid waste will be transported (Maderas, 2004).

Electricity and natural gas
Pacific Gas and Electric (PG&E) provides electricity and natural gas to the City of Newark and would serve the Project site. The company maintains a network of underground transmission pipes and pumping facilities for natural gas and a combination of overhead and underground electrical lines. Electrical transformers and other above-ground support facilities are also maintained by PG&E.

Local gas service near the Project includes a 4-inch diameter pipe terminating at the eastern access point to the site. Overhead electrical service is available from adjacent roadways.

Telecommunication service
SBC/Pacific Bell provides telephone service to the City of Newark much of northern California. Centralized communication infrastructure is in place in the Project area however there are no telecommunication facilities currently in place on the Project site (Lin, 2004)

STANDARDS OF SIGNIFICANCE

For purposes of this DEIR, development of the Project site would present a significant impact if it:

- Results in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for public services;
• Exceeds wastewater treatment requirements of the Regional Water Quality Control Board
• Requires or results in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
• Would be served by a landfill with insufficient permitted capacity to accommodate the Project’s solid waste disposal needs; or
• Does not comply with federal, state and local statutes and regulations related to solid waste.

ENVIRONMENTAL IMPACTS

Police services
The proposed Project would increase demand for police services, however, the project would not adversely affect the ability of the Police Department to serve the Project site or Project area. No additional personnel or equipment would be required as a result of campus development (Shearn, 2004).

The District anticipates providing a security guard on the Newark Center campus, one during the day shift and one during the evening shift. There may also be sharing of security services between the 2 campuses. It is still anticipated that Newark Police staff would be called on the campus for major situations and crime investigation. The increased demand for services resulting from the Project is considered a less-than-significant impact.

Although not required as a mitigation measure, it is recommended that the District meet with the Newark Police Department to clearly identify campus police responsibilities and conditions in which campus police will call on the Police Department for assistance.

Impact 4.11-1 (police services). Increases in calls for police services to the Newark Police Department that could occur as a result of the Project could be accommodated with existing police personnel and equipment (less-than-significant and no mitigation required).

Fire and emergency services
The proposed Project would not adversely affect the ability of the Fire Department to serve the Project site. Response times would not be lengthened as a result of the Project and there would not be a need for additional personnel or equipment (Guier, 2004).

Improvements constructed as part of the Newark Center Project would meet current fire and life safety code requirements to minimize on-site fire hazard. These requirements would include but would not be limited to meeting minimum water fire flow and pressure requirements, use of appropriate building materials, providing adequate access to buildings for emergency equipment, providing fire extinguishers, smoke detectors and emergency signing.
**Impact 4.11-2 (fire and emergency services).** Increases in calls for fire and emergency services to the Newark Fire Department that could occur as a result of Project could construction be accommodated with existing police personnel and equipment (*less-than-significant and no mitigation required*).

**Water supply**

Water conservation measures would be incorporated into the Project as part of their LEED (Leadership in Energy and Environmental Design) program for building design and campus operations. The LEED program is a voluntary consensus-based national standard for developing high-performance, sustainable buildings. The estimated water use for the Project, excluding landscape irrigation, would be approximately 9,238 gallons per day (gpd) (MBT, 2004) The Project site is located in water pressure Zone 1 of the ACWD which has adequate storage capacity to meet the needs of development in the Project area, including the proposed project (Stevenson, 2004). The increased demand for water resulting from the Project is considered a less-than-significant impact.

Landscape irrigation would further increase the amount of water consumed at the project site. Approximately 12.5 acres of the project site would be landscaped. The Alameda County Water District encourages the use of water conservation measures to reduce water consumption for landscape irrigation.

**Impact 4.11-3 (water supply).** Increases in water consumption could be accommodated by existing capacity. New water facilities would not be required to serve the project site (*less-than-significant impact, although mitigation is recommended to reduce water consumption for site irrigation*).

Adherence to the following measure would mitigate this impact to a less-than-significant level.

**Mitigation 4.11-3 (water supply).** A water conservation plan should be developed for the irrigation of landscape features on the campus. The plan shall include the following components:

- a) The majority of plants and trees shall be native and other appropriate drought-tolerant plants;
- b) A drip irrigation system shall be installed and programmed to account for seasonal conditions; and
- c) The use of recycled water to irrigate landscape areas shall be considered.

**Wastewater collection, treatment and disposal**

The proposed Project would discharge to the 12-inch main along the southern property line, which according to USD, is currently operating at ten percent of its capacity (MBT, 2004). It is estimated that wastewater flow from the Project would be approximately 11,144 gpd (MBT, 2004).

Project development would not adversely affect treatment capacity at the Union City treatment plant. There is adequate capacity to accommodate the project. Existing sanitary sewer lines are adequate to serve the project site (Doman, 2004).
Impact 4.11-4 (wastewater collection, treatment and disposal). Increases in wastewater generation as a result of Project construction could be accommodated in existing USD collection, treatment and disposal facilities without need for facility expansion. (less-than-significant impact and no mitigation required).

Solid waste
The Project could be adequately served by TriCities Waste Management, Inc. The company would work with the District to develop a service plan that will best meet the needs of the Project (Maderas, 2004). Any additional personnel or vehicles needed to provide solid waste service is included in rate payments.

It is also anticipated that adequate recycling facilities would be provided on campus to assist the City of Newark in meeting solid waste reduction goals mandated by AB 939, a state law that requires reduction in the quantity of municipal solid waste reaching local landfills.

Although not required as a mitigation measure, it is recommended that the District work with TriCities Waste Management to develop a construction debris recycling program.

Impact 4.11-5 (solid waste). Increases in solid waste from the Newark Center Project could be accommodated in the local landfill (less-than significant and no mitigation required).

Electricity and natural gas
The electric service from the site may come from Cherry Street or from the southern property line where PG&E has several vaults and an underground duct bank in a 10.5-foot public utility easement (MBT, 2004). As previously discussed, the Project would be designed to conserve resources, including energy, by utilizing a LEED-based design. The District also proposes to participate in PG&E’s Savings by Design energy conservation program.

To initiate coordination with PG&E, the District will need to make a formal request for service to PG&E (Sciatta, 2004).

Although not required as a mitigation measure, it is recommended that the District make a formal request for service and meet with PG&E to review the utility site plan and energy conservation program and determine the location for the electric service lines.

Impact 4.11-6 (electricity and natural gas). Electrical and natural gas service to the project site could be accommodated (less-than-significant and no mitigation required).

Telecommunication service
Project development would not require additional offsite telecommunications infrastructure. When available, SBC will review the Project’s site utility plan to assess
the onsite equipment that will be needed to provided telecommunication service to the campus (Lin, 2004).

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Utilities and public services impacts can all be mitigated to a less-than-significant level.
5.0 Alternatives to the Proposed Project

5.1 Introduction
The guiding principles for the selection of alternatives for analysis in this EIR are provided by the California Environmental Quality Act Guidelines (State CEQA Guidelines) Sec.15126.6, which specify that the alternatives analysis must:

- describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project;
- consider alternatives that could reduce or eliminate any significant environmental impacts of the proposed project, including alternatives that may be more costly or could otherwise impede the project’s objectives; and
- evaluate the comparative merits of the alternatives.

The focus and definition of the alternatives evaluated in this EIR are governed by the “rule of reason” in accordance with §15126.6(f) of the State CEQA Guidelines. That is, the range of alternatives presented in this EIR must permit a reasoned choice by the District decision makers. The State CEQA Guidelines require that an EIR evaluate a “No Project Alternative,” evaluate a reasonable range of alternatives to the project, identify alternatives that were initially considered but then rejected from further evaluation, and identify the “environmentally superior alternative.”

While the State CEQA Guidelines require an evaluation of alternatives, they permit the evaluation to be conducted in less detail than is done for the proposed Project. Consistent with the Guidelines, sufficient information is provided in this EIR about each alternative to allow for a meaningful evaluation, analysis, and comparison of the alternatives with the proposed Project.

The following discussion is intended to inform the public and decision-makers of feasible alternatives to the proposed Project that could be implemented to attain the basic Project objectives while substantially reducing the potentially significant effects of the Project.

5.2 Alternative 1, No Project
Under this alternative, it is assumed that no development would occur on the Project site and it would remain in an undeveloped, vacant condition. The following impacts would be anticipated under this scenario.

- **Aesthetics and Light and Glare:** No changes to the existing aesthetic character of the Project site would result since the site would remain in a vacant and undeveloped condition. No sources of light or glare would result.
- **Air Quality:** There would be no impact to air quality regarding either short-term construction impacts or long term operation of new uses on the site. Since no
vehicles would visit the site, no new sources of carbon monoxide or related pollutants would be added to the atmosphere. There would be no contribution from the Project site to ozone precursors.

- **Biological Resources:** No impacts would result to existing on-site wetlands, special-status plants or animals or their respective habitats, since no development would occur.
- **Cultural Resources:** Existing underground archeological, paleontological or Native American resources on the Project site would remain undisturbed, since no grading or construction activities would occur.
- **Geology and Soils:** No excavation, grading or related impacts would occur so that erosion impacts to adjacent bodies of water would not occur. There would be no risk related to seismic shaking of on-site buildings or improvements, since none would exist.
- **Hazards:** Existing sources of soil contamination would remain within the Project area. Since no change to existing land uses would be encouraged, remediation of contaminated conditions would likely not occur or would occur at slower pace.
- **Hydrology Drainage and Water Quality:** Existing hydrologic and drainage patterns would remain unchanged so that there would be no increases in the quantity of stormwater runoff from the site. No major sources of soil erosion would be created so that surface water quality would not be degraded from present conditions.
- **Land Use:** No changes to existing land uses would occur.
- **Noise:** No changes to existing noise patterns would result since there would be no new noise generators on the site.
- **Transportation, parking and circulation:** Existing traffic generation and street patterns in the Project area would continue as currently found. Cherry Street would not be signalized at the proposed Project entrance.
- **Utilities and Public Services:** No new or increased demand would be created for new or upgraded utilities and community services, since no development would occur. Therefore, there would be no need to extend police, water, sewer, telecommunication and power facilities to the area to support new development. There would be no change in the amount of solid waste generation within the Project area.

Although fewer impacts would result under the No Project alternative, however, this Alternative is rejected since it would not allow Project objectives as outlined in Section 34 to be achieved.

### 5.3 Alternative 2, General Plan Development

Another alternative would include development of the site under the existing SI-Special Industrial General Plan land use designation. This designation, according to the Land Use Element of the General Plan, is intended to foster development of the highest standards of building design, landscaping and aesthetic standards. Land uses include businesses involves with advanced technology, commercial research and manufacturing including but not limited to biotechnology, electronics, robotics and medicine. The maximum floor area ratio (the ratio of total lot size to building floor area) is 0.35 to 1. Assuming a slightly lower floor area ratio of 0.30, a maximum of 1,058,500 square feet of special industrial space could be constructed on the 81-acre...
site. This would likely include office type use along with associated parking and landscaping uses. Due to the amount of development assumed for this alternative, the entire Project site would likely be developed.

- **Aesthetics and Light and Glare**: This alternative would convert the entire site from an undeveloped open space field to urban type uses, rather than allowing over the half of the site remain as undeveloped as proposed in the Project. More numerous sources of light and glare would be created since more buildings and parking areas would be created, which would result in a greater impact than the proposed Project. Light and glare would also likely result in a greater impact to wetland resources on the westerly portion of the site near the Union Pacific railroad tracks. With appropriate mitigation, this impact could be reduced to a less-than-significant level.

- **Air Quality**: Air quality impacts would likely be greater under Alternative 2 than the proposed Project. Short-term construction impacts related to site grading and construction activities would be greater and would last for a longer duration than the proposed project, since much more of the site would be graded. Long-term operational air quality impacts would similarly be greater than the proposed Project, since significantly more vehicle trips would be associated with industrial development. Table 6, Projects with Potentially Significant Emissions, published in the Bay Area Air Quality management District’s CEQA Guidelines, (revised 12/99) indicate that office development with more than 280,000 square feet of development would be considered to result in potentially significant cumulative air quality impacts in terms of ozone emission. It is unlikely that this impact could be reduced to a less-than-significant level, so cumulative air quality impacts associated with this alternative could be considered significant and unavoidable. Increased emissions of carbon monoxide, nitrogen dioxide, reactive organic gasses and other impacts could also be potentially significant in terms of consistency with state and federal air quality standards. Depending on the type of future use under this Alternative, a greater number of diesel trucks could visit the site, which would represent another source of air pollution not anticipated with the

- **Biological Resources**: Greater impacts to biological resources would result under Alternative 2 than the proposed Project, since a greater amount of the site would be disturbed to accommodate development. The 0.08-acre wetland located in the northeastern portion of the site would be removed and it is unlikely that replacement wetlands could be relocated on the site. Greater impacts to special-status plans and wildlife would also result. It is likely that all biological resource impacts could be reduced to a less-than-significant level.

- **Cultural Resources**: Greater impacts to archeological, paleontological and/or native American resources would result under Alternative 2 than the proposed Project, since a greater surface area of the site would be disturbed for development purposes. It is likely that such impacts could be reduced to a less-than-significant level.

- **Geology and Soils**: Greater impacts related to grading, site disturbance and erosion and exposure of people and improvements to seismic risk would occur under Alternative 2 than the proposed Project since more development would be present on the site. These impacts could be appropriately mitigated however.
• **Hazards:** Site grading and disturbance would potentially release more groundborne contaminants into the atmosphere. Also, a greater amount of development on the site would result in a greater quantity of potentially hazardous material on the site, since more building square footage and landscape areas would need to be repaired and maintained. Depending on the type of future use that could located on the site under this alternative. Greater amounts of hazardous materials could be used, transported and stored than under the proposed Project. It is likely that such hazard impacts could be mitigated to a less-than-significant level.

• **Hydrology Drainage and Water Quality:** Greater quantities of stormwater runoff would be generated under this alternative, since more impervious surfaces would be created. This could likely be mitigated through construction of onsite detention or retention basins. Similarly, there would be a higher potential for degradation of surface water due to erosion during construction and polluted runoff from parking areas and other portions of the area. This too could be mitigated by adherence to erosion control plans and implementation of Stormwater Pollution Prevention Plans.

• **Land Use:** Land use under this alternative would change the site from an undeveloped area to a business or research and development park. Since this type of land use is envisioned in the Newark General Plan, this impact would not be considered significant. Less-than-significant impacts would occur in terms of consistency of industrial uses with surrounding existing industrial use to the north and south or with the Silliman Center also to the north.

• **Noise:** Greater noise impacts would result under Alternative 2 than under the proposed Project. Greater noise impacts would relate to more construction over a longer duration than the proposed Project, a greater number of vehicles (including the possibility of trucks) visiting the site as compared to the Project, and greater noise generation from operation of on-site mechanical equipment. These impacts could likely be mitigated to a less-than-significant level.

• **Transportation, parking and circulation:** There would be greater impacts with regard to increase local and regional traffic under Alternative 2 than the proposed Project. Trip generation would be greater since significantly more square footage would be built on the site. Peak hour vehicle impacts would also be greater, since hours of operation for office and business parks would be more consistent with surrounding peak hour use of local streets. It is unknown if traffic impacts at local intersections could be mitigated to City of Newark Level of Service standards. Parking would be provided at a ratio specified in the Newark Zoning Ordinance so this would not be a significant impact. Emergency access provisions would be reviewed by the Newark Fire Department.

• **Utilities and Public Services:** Implementation of Alternative 2 would require greater use of potable water than the proposed Project due to more development on the site. Wastewater generation would similarly be greater as would demand for police and fire services. Solid waste generation would be greater under Alternative 2 due to more site development. Since the Newark General Plan has assumed this general type and amount of development on the site, all of the above utility and service impacts could be mitigated to a less-than-significant level.
Alternative 2 is rejected since it would result in greater impacts than the Proposed Project and it would not allow Project Objectives to be achieved.

5.4 Alternative 3, Reduced Campus Development
In order to consider an alternative that would reduce anticipated environmental impacts to a greater degree than envisioned in the proposed Project, Alternative 3 proposes a reduced campus alternative that assumes approximately one-half the amount of development on the site. This would include approximately 90,000 square feet of educational and related floor space, approximately 350 parking spaces and other open space and landscaping.

Impacts associated with Alternative 3 would include:

- **Aesthetics and Light and Glare**: This Alternative would result in less aesthetic and light and glare impacts, since a greater amount of the Project site would remain undeveloped. These impacts could be mitigated to a less-than-significant level.
- **Air Quality**: Air quality impacts would be less than the proposed Project, since less development would occur. This would include both construction impacts and long-term operational air quality impacts. As is true with the proposed Project, air quality impacts could be mitigated to a less-than-significant level.
- **Biological Resources**: Fewer biological resource impacts would result, since less of the site would be required to be developed. Less habitat of special-status plant and wildlife would be disturbed and it is possible than existing wetlands could be avoided rather than disturbed. Biological resource impacts could be reduced to a less-than-significant level.
- **Cultural Resources**: Fewer impacts to cultural resources would result under Alternative 3 since less of the site would be disturbed for development. Similar to the Project, these impacts could be successfully mitigated.
- **Geology and Soils**: Fewer impacts would result to soil and geological resources, since less of the site would need to be disturbed to allow construction of the Newark Center. These impacts could be mitigated to a less-than-significant level.
- **Hazards**: Fewer ground borne hazardous materials would be disturbed, since less of the site would be graded to accommodate Newark center improvements. The same measure recommended for the Project would be applied to Alternative 3.
- **Hydrology Drainage and Water Quality**: Although greater stormwater runoff would result from Alternative than the No Project Alternative, less runoff would occur than under both the Project and Alternative 2. With appropriate sizing of detention or retention basins, drainage impacts would be less-than-significant. Similarly, impacts to surface water quality would be mitigated to a less-than-significant level.
- **Land Use**: A less intense impact to surrounding land uses would result under Alternative 3 since less development would occur.
- **Noise**: Implementation of Alternative 3 would result in less short-term construction noise and less long-term operational noise since less development is anticipated.
• **Transportation, parking and circulation:** Fewer vehicle trips would result under this Alternative than Alternatives 2 and 3 since less development is anticipated.
• **Utilities and Public Services:** There would be less demand for all public services and utilities under Alternative 3 than under the Project or Alternative 3 due to less development.

Although Alternative 3 would result in fewer and less intense environmental impacts than the Project, the amount of education development space required by the Project Objective would not be achieved. This alternative is therefore rejected.

### 5.5 Environmentally Superior Alternative

Section 15126 (d) (4) of the State of California CEQA Guidelines states that if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. For this Project, the No Project alternative would be the environmentally superior alternative. Under the No Project alternative, no changes would occur on the Project site, no impacts would occur to on-site wetlands and special-status species, buried cultural resources would not be disturbed, existing drainage patterns would not be changed, air quality would not be degraded, no additional vehicles would visit the site and no additional demand would be placed on utility and service systems.

However, as noted above, the No Project Alternative would not allow implementation of stated Project Objectives. Similarly, Alternative 3, that would provide for approximately one-half of the development potential on the Project site would not allow for Project Objectives to be achieved. Therefore, these Alternatives are rejected in favor of the proposed Project.
6.0 Analysis of Long-Term Effects

This section of the DEIR addresses the potential long-term effects of implementing the proposed Project, as required by CEQA.

6.1 Short-Term Uses v. Long-Term Productivity

Relationship between Local Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

CEQA mandates that all EIRs consider the relationship between short-term use of resources, such as land for development purposes, versus the long-term benefits of allowing the subject property to remain as undeveloped open space. The relationship between short-term use of environmental resources and the maintenance of long-term productivity is often one of trade-off, or of balancing social, economic, environmental and similar concerns over time. In some instances, a relatively short-term benefit may have adverse effects, with the possibility that future generations may be burdened with unwarranted social or economic costs. The opposite situation, in which long-term benefits occur at the expense of short-term impacts may also occur. The ultimate decision as to the unique balance of factors lies with the District.

The Project under consideration is the development of the Newark Center for Health Sciences & Technology. This Project would replace an existing leased facility operated by the District that is not anticipated to accommodate future student enrollment.

Short-term impacts associated with the Project would include construction-related noise, emission of dust related to grading and site preparation, potential for erosion during construction activities, generation of construction related traffic, and potential of risk of upset due to the presence of soil contamination. Potential long-term impacts would include exposure of additional people and properties to seismic risk, increased traffic and air quality emissions, increased sources of light from the site, increased consumption of utilities and public services, noise generation related to increased traffic, increased water consumption, increased storm water runoff, potential impacts to cultural resources, and visual and aesthetic impacts.

As demonstrated in Section 4.0 of the DEIR, each of the above are considered less-than-significant impacts or can be mitigated to a less-than-significant level.
6.2 Significant Irreversible Environmental Changes and Irretrievable Commitment of Resources

The approval and construction of the proposed Project would indirectly result in irretrievable commitment and use of energy and non-renewable resources for construction and operation of the Center, including such resources as sand and gravel, lumber and other forest products, asphalt, petrochemicals and metals. The level and amount of commitment of such resources is commensurate with similar development projects undertaken in the Bay Area and throughout California and the nation. In the long-term, future facilities constructed as part of the proposed Project would also use electrical and natural gas energy for heating and cooling. Again, this use of energy resources would be subject to current building regulations mandating energy conservation and would be similar in nature to other development projects in the Bay Area.

6.3 Growth Inducing Impacts of the Proposed Project

All EIRs must consider the potential growth inducement of projects. A project is generally considered to be growth inducing if it will foster economic or population growth or will cause the construction of new housing, either directly or indirectly, within a given geographic area. Projects which remove obstacles to population growth are also deemed to be growth inducing. Increases in population may strain existing community services or utility systems, so consideration must be given to this impact. The characteristics of a project that may encourage or facilitate other growth activities which could significantly affect the environment, either individually or cumulatively, must also be discussed.

Although the Project is exempt from City of Newark land use controls, the Newark City Council adopted a resolution finding the Project is consistent with the Newark General Plan. The Project is located in an area that is planned for growth. Infrastructure improvements including water, wastewater, storm drain, electrical and telephone lines are installed and were designed to provide adequate capacity for the development of the area including the Project site. The Project is proposed by the District in response to current increases in student enrollment as well as future enrollment increases as a result of population growth in the Bay Area.

6.4 Cumulative Impacts

Cumulative impacts are those which taken individually may be minor but, when combined with similar impacts associated with existing development, proposed development projects and planned but not built projects, have the potential to generate more substantial impacts. CEQA requires that cumulative impacts be evaluated when they are significant and that the discussion describe the severity of the impacts and the estimated likelihood of their occurrence. CEQA also states that the discussion of cumulative impacts contained in an EIR need not be as detailed as that provided for the Project alone. Cumulative impacts may be addressed using one of two methods:
• a listing of past, present and reasonable anticipated future and probable projects, within or adjacent to the community containing the Project site, which could produce related or cumulative impacts; or
• a summary of projections contained in the adopted General Plan or related planning documents, such as a previously certified EIR, that evaluated regional environmental impacts of a number of projects within a given geographic area.

For purposes of this EIR the second approach has been chosen to address cumulative impacts. Future conditions identified in the City of Newark General Plan EIR were used as the basis of cumulative impacts in this DEIR.

A summary of expected cumulative impacts follows

• **Aesthetics and Light and Glare:** Limited cumulative impacts on aesthetic resources would occur, including incremental increases in light and glare. However, since the site is located in a substantially suburbanized area with existing sources of light and glare, cumulative impacts are considered less than significant.

• **Air Quality:** Cumulative air quality impacts are addressed in Section 4.2.

• **Biological Resources:** The proposed Project could contribute to cumulative loss of wetlands, vernal pools, and to individual species of vernal pool tadpole shrimp, California tiger salamander, burrowing owl, nesting raptors and their respective habitats. Cumulative impacts to the following special-status plant species: alkali milkvetch, Congdon’s tarplant, Contra Cost gold fields, dwarf downingia, hairless popcorn flower and prostrate navarretia. These impacts are potentially significant and mitigation is provided as set forth in Section 4.3 of the DEIR. With adherence to the mitigation measures in this section, impacted wetlands could be relocated on the site and replacement habitat would be provided for special-status plant and animal habitat so that any potential cumulative impacts would be less-than-significant.

• **Cultural Resources:** Potential impacts to cultural resources are not considered cumulative.

• **Geology and Soil:** Potential impacts to geology and soils are not considered cumulative.

• **Water and Hydrology:** No cumulative drainage and stormwater runoff impacts are anticipated, since the Project would not be allowed by the City to increase historic flows.

• **Hazards:** Potential impacts to hazards are not considered cumulative.

• **Land Use:** Potential land use impacts are not considered cumulative.

• **Noise:** No cumulative noise impacts are anticipated.

• **Transportation, parking and circulation:** Cumulative impacts to transportation are addressed in Section 4.10.

• **Utilities and Public Services:** There would be less-than-significant cumulative impacts to utility and service providers because existing nearby uses are presently served with fire, energy, telecommunication and solid waste services. Extensions of City police, water systems and wastewater collection systems would be required to serve new development, however, such extensions are also anticipated to be less-than-significant.
6.5 Significant and Unavoidable Environmental Impacts

Unavoidable significant adverse impacts are those impacts that cannot be mitigated to a less-than-significant level. CEQA requires decision-makers to balance the benefits of a proposed project against its unavoidable impacts in considering whether to approve the underlying project. If the benefits of the proposed project outweigh the anticipated unavoidable impacts, the adverse environmental impacts may be considered acceptable by the Lead Agency. To approve the project without significantly reducing or eliminating an adverse impact, the Lead Agency must make a Statement of Overriding Consideration supported by the information in the record.

The Project would not result in any significant and unavoidable environmental impacts. All Project impacts can be reduced to a less than significant level with implementation of the mitigation measures recommended in this DEIR.
7.0 Organizations and Persons Consulted

7.1 Persons and Organizations

EIR Preparers

The following individuals participated in the preparation of this document.

Jerry Haag, Urban Planner, Project manager  
Patricia Jeffrey, AICP, assistant Project manager  
Tim Lacy, LSA Associates, biological resources  
George Nickelson, PE, Omni Means, traffic and transportation  
Peter Galloway, Omni Means, traffic and transportation  
Donald Ballanti, air quality  
Mike Toy, PE, Charles Salter Associates, acoustics  
Christopher White, Balance Hydrologics, hydrology and water quality  
Edward Ballman, PE, Balance Hydrologics, flooding  
Jane Maxwell, report graphics

Ohlone District Staff

Dr. Douglas Treadway, President/Superintendent  
Deanna Walston, Vice President/Business Services  
Dr. James Wright, Vice President/Instruction  
Dr. Lisa Waits/Vice President/Student Services  
Donald Eichelberger, Stegemen and Kastner, Inc., Bond Program Project Manager  
Simon Barros, Director of Facilities

Newark Center Design Team

Karen Cribbins-Kuklin, MBT Architects, Principal-in-Charge  
Susan Seastone, MBT Architects, project manager  
Stevens Williams, MBT Architects, project designer  
Christopher Guillard, CMG, landscape architect  
Ken Olcott, Sandis Humber Jones, civil engineering  
Robert Rees, Fehr & Peers, circulation design

Other Agencies and Organizations Contacted

City of Newark Public Works Department-Soren Fajeau, Engineer  
City of Newark-Planning Division-John Becker, Community Development Director & Richard Fujikawa, Assistant Planner  
City of Newark Fire Department-Mike Preston, Chief, Holly Guier, Fire Department
7.2 References

The following documents, in addition to those included in the Appendix, were used in the preparation of this DEIR.

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8.0 Appendices
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Appendix 8.2
Response to Notice of Preparation
Appendix 8.3
Initial Study
Appendix 8.4
Air Quality Analysis
Appendix 8.5
Cultural Resources Report
Appendix 8.6
Preliminary Geotechnical Report
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Traffic Report