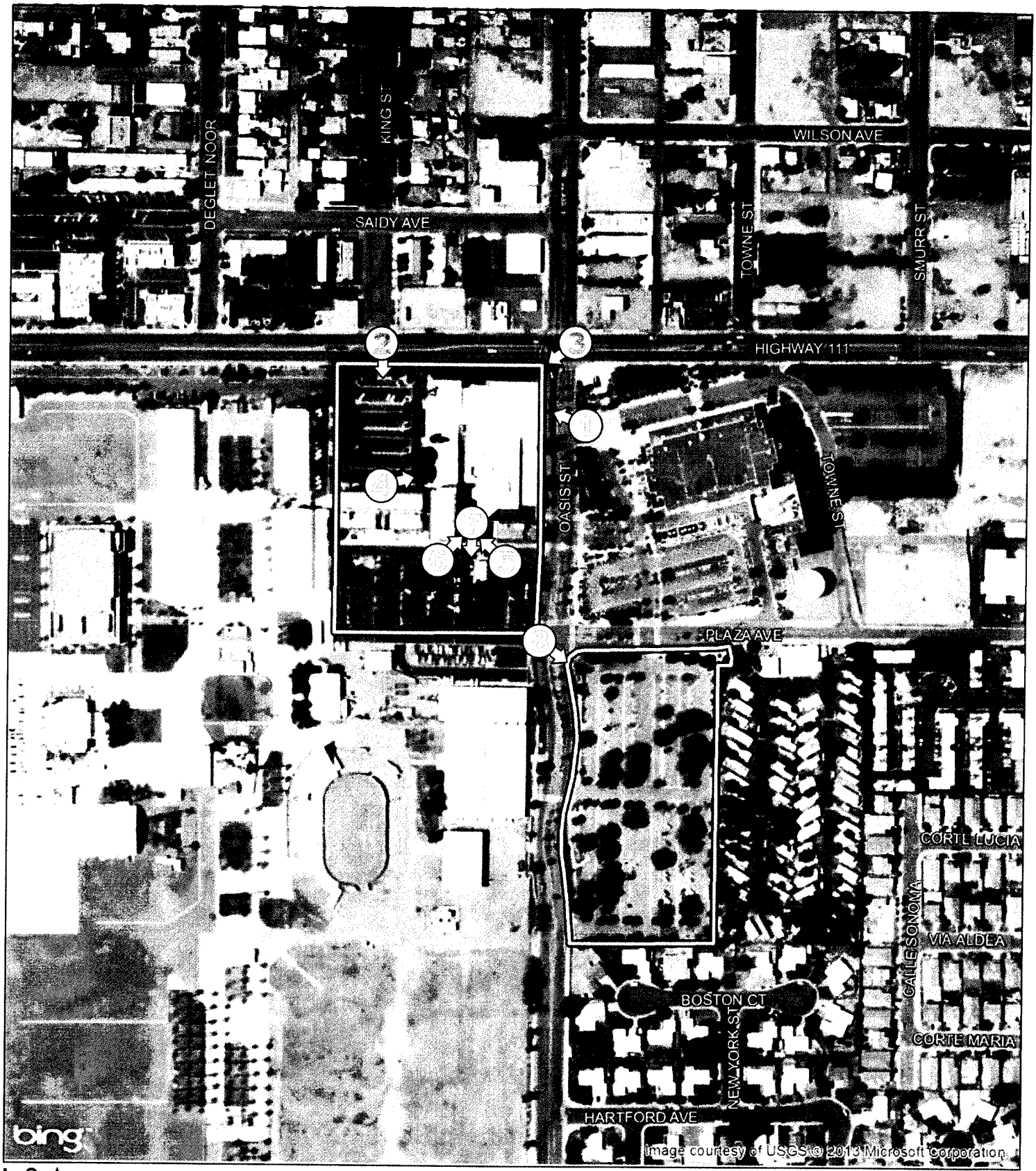

LSA

LEGEND

Project Location

Key View Points

FIGURE 3-4

0 150 300

FEET

SOURCE: Bing (c. 2010)

I:\HOK1201\G\ExistingViewKey.cdr (4/19/13)

East County Detention Center

Existing Views Key

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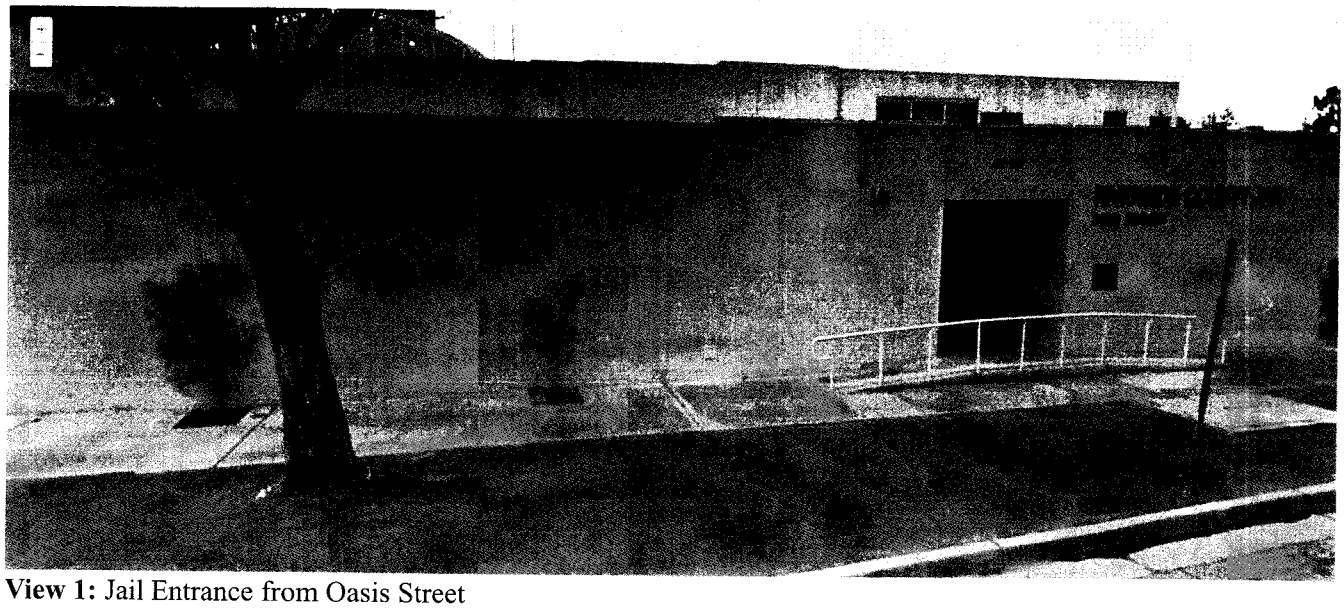

View 1: Jail Entrance from Oasis Street

View 2: County Administrative Center view from Hwy 111

LSA

FIGURE 3-5

East County Detention Center

Existing Views 1 and 2

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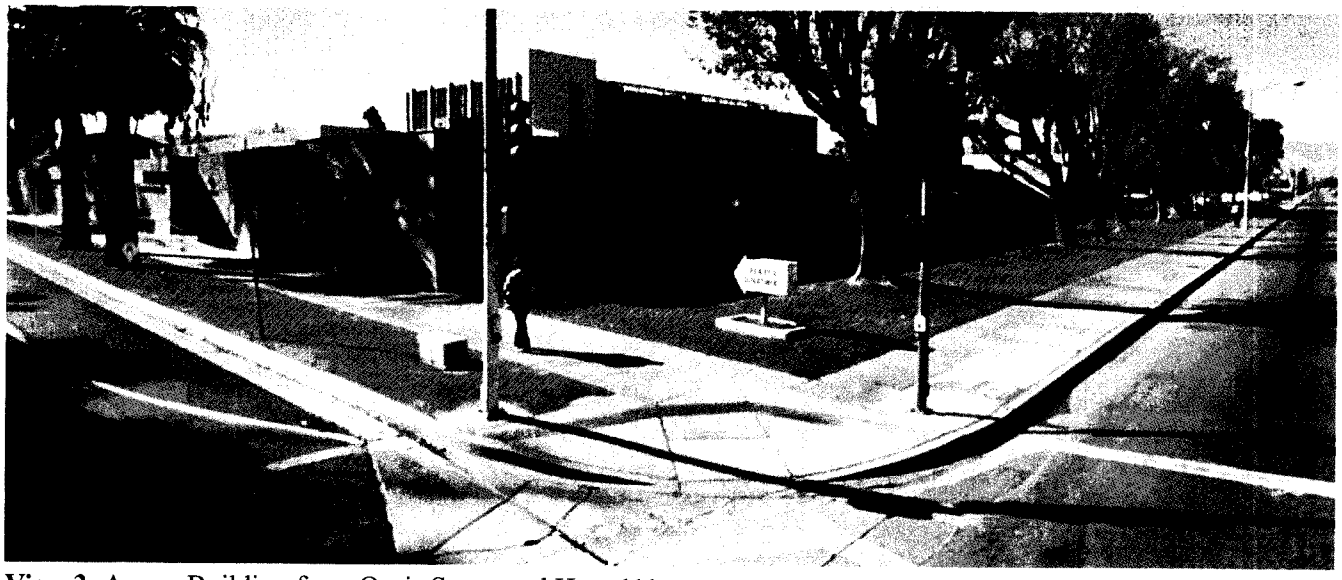
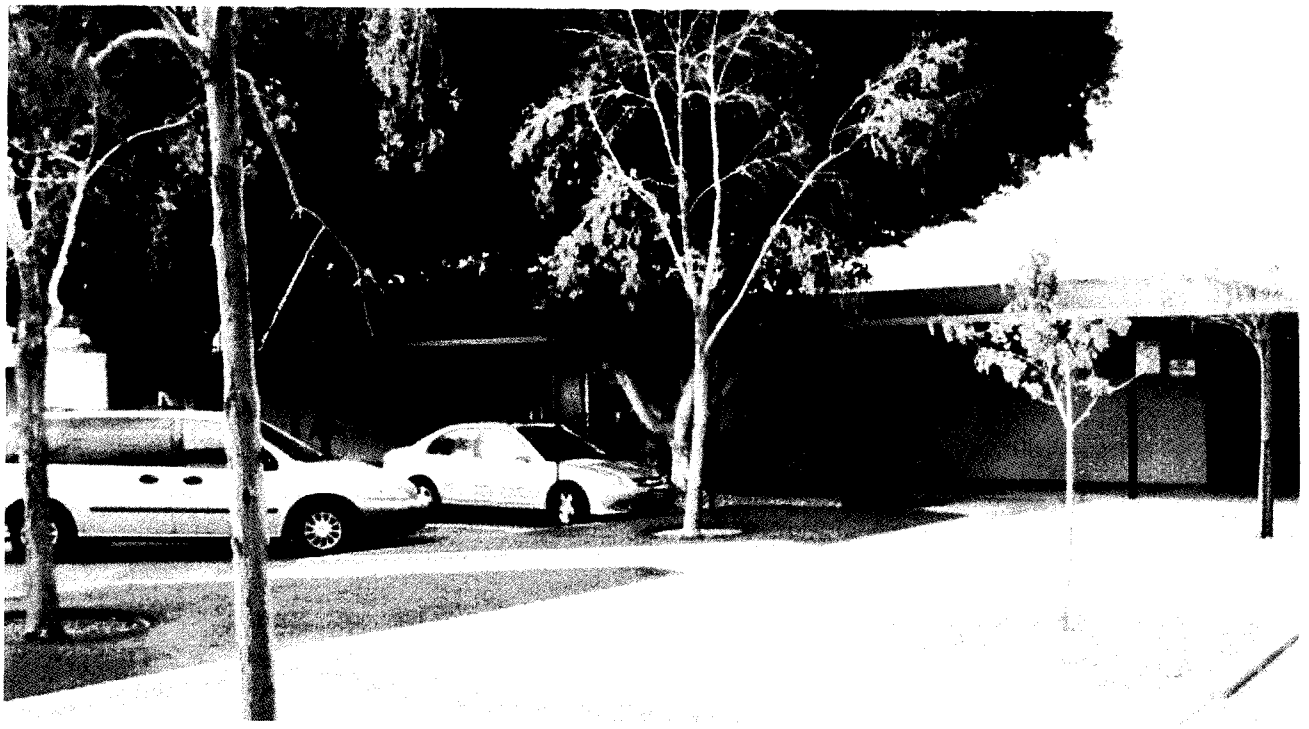


View 3: Annex Building from Oasis Street and Hwy 111



View 4: Small Claims Court from north entrance of County Administrative Center Building

LSA

FIGURE 3-6

East County Detention Center

Existing Views 3 and 4

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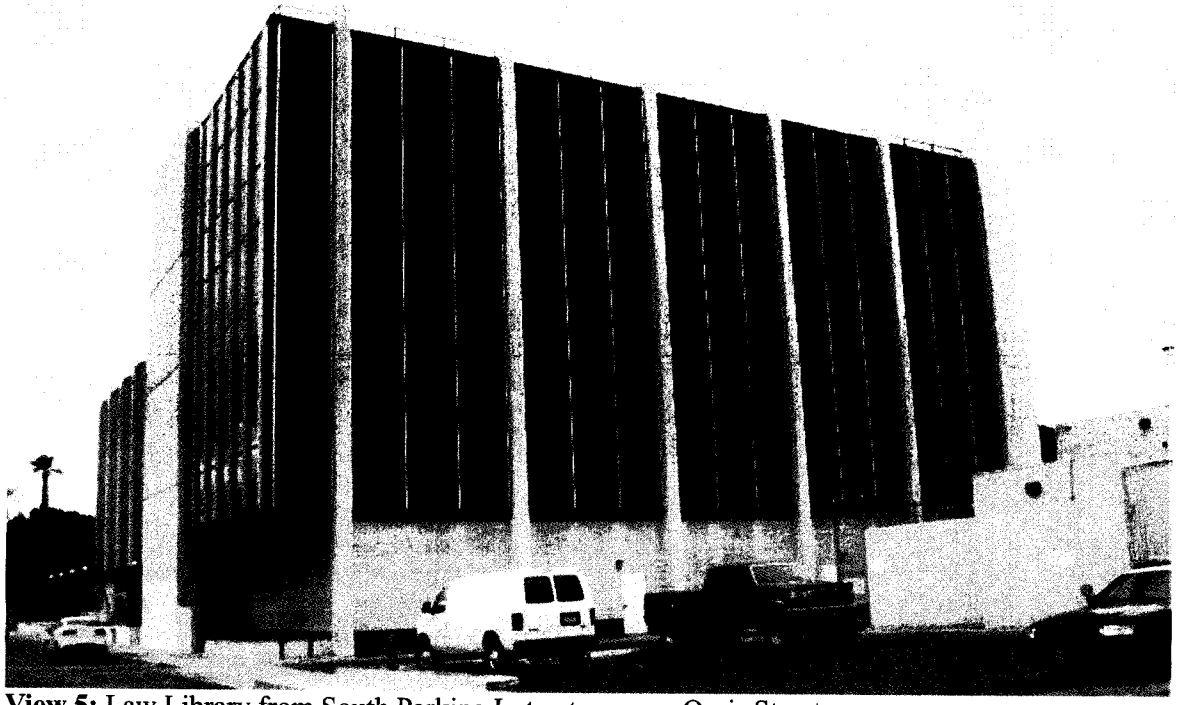
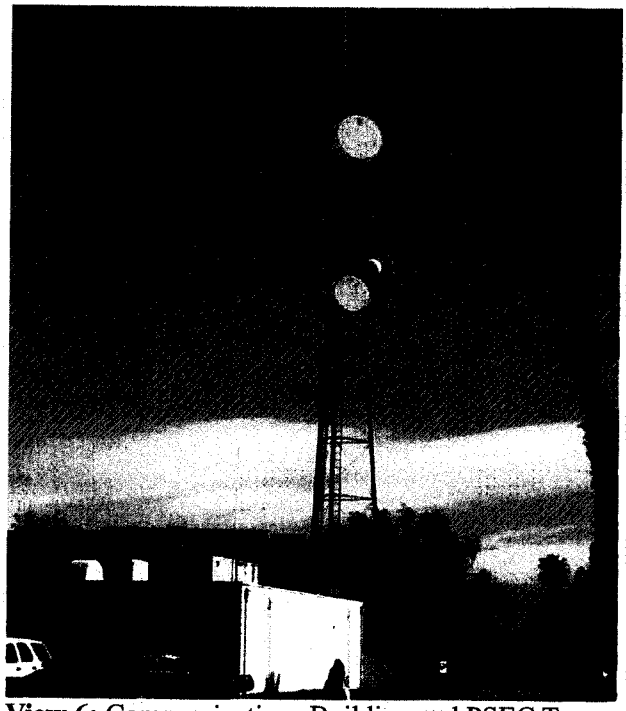


View 5: Law Library from South Parking Lot entrance on Oasis Street



View 6: Communications Building and PSEC Tower from South Parking Lot

LSA

FIGURE 3-7

East County Detention Center

Existing Views 5 and 6

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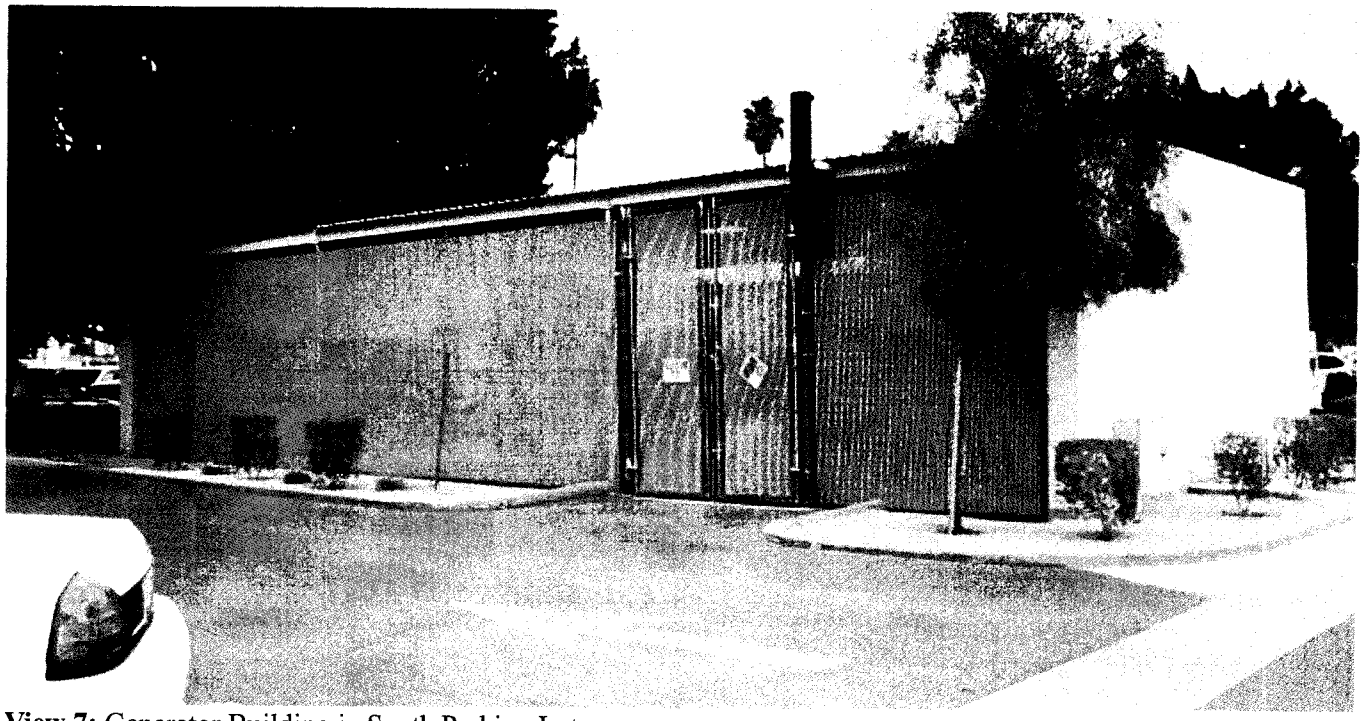
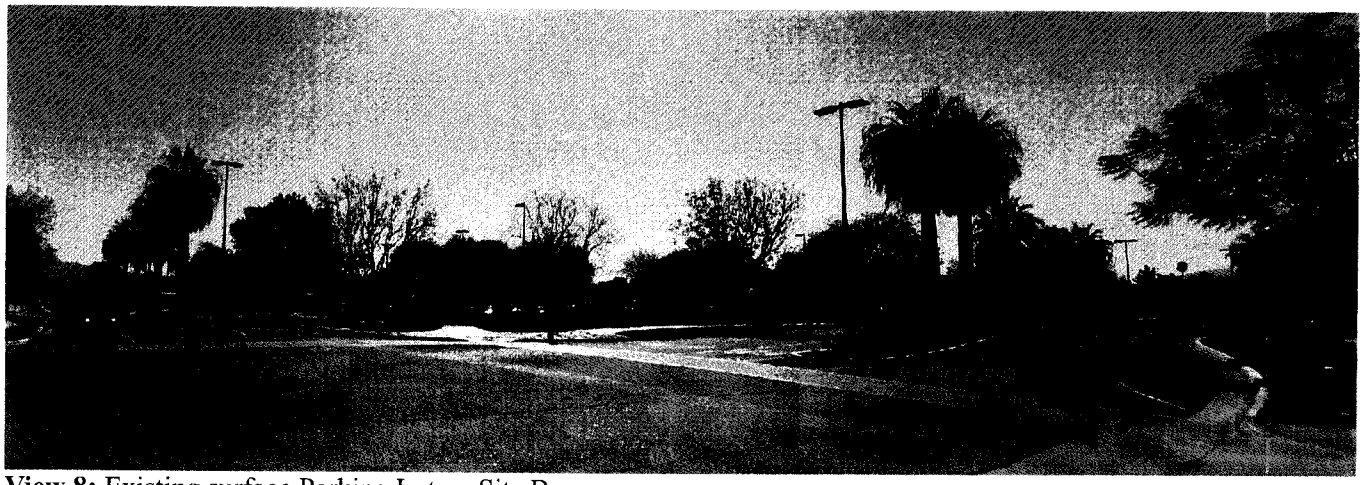


View 7: Generator Building in South Parking Lot



View 8: Existing surface Parking Lot on Site B

LSA

FIGURE 3-8

East County Detention Center

Existing Views 7 and 8

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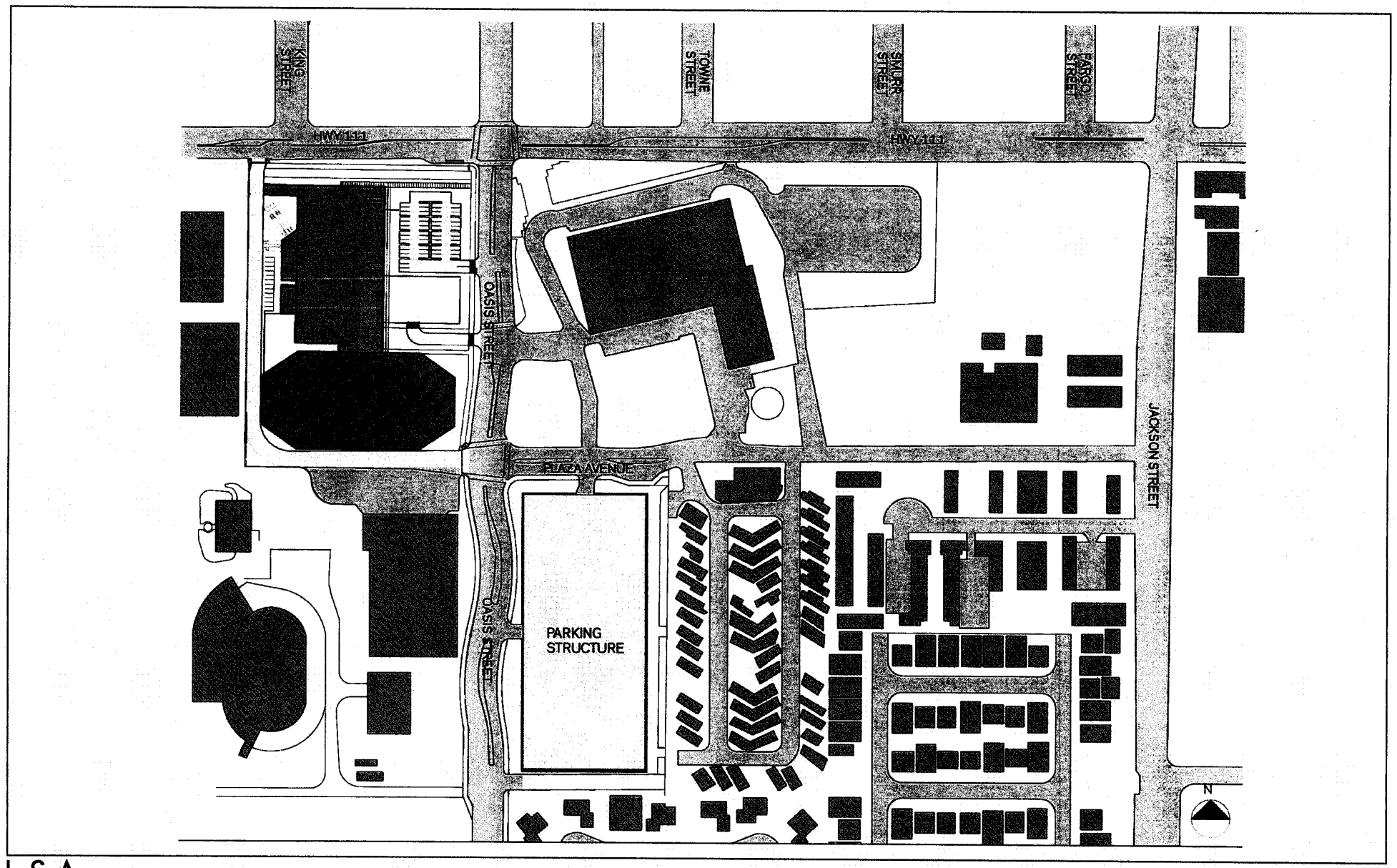

LSA

FIGURE 3-9

N

NO SCALE

SOURCE: HOK, Feb 2013

I:\HOK1201\G\Proposed SitePlan.cdr (4/19/13)

East County Detention Center

Proposed Site Plan

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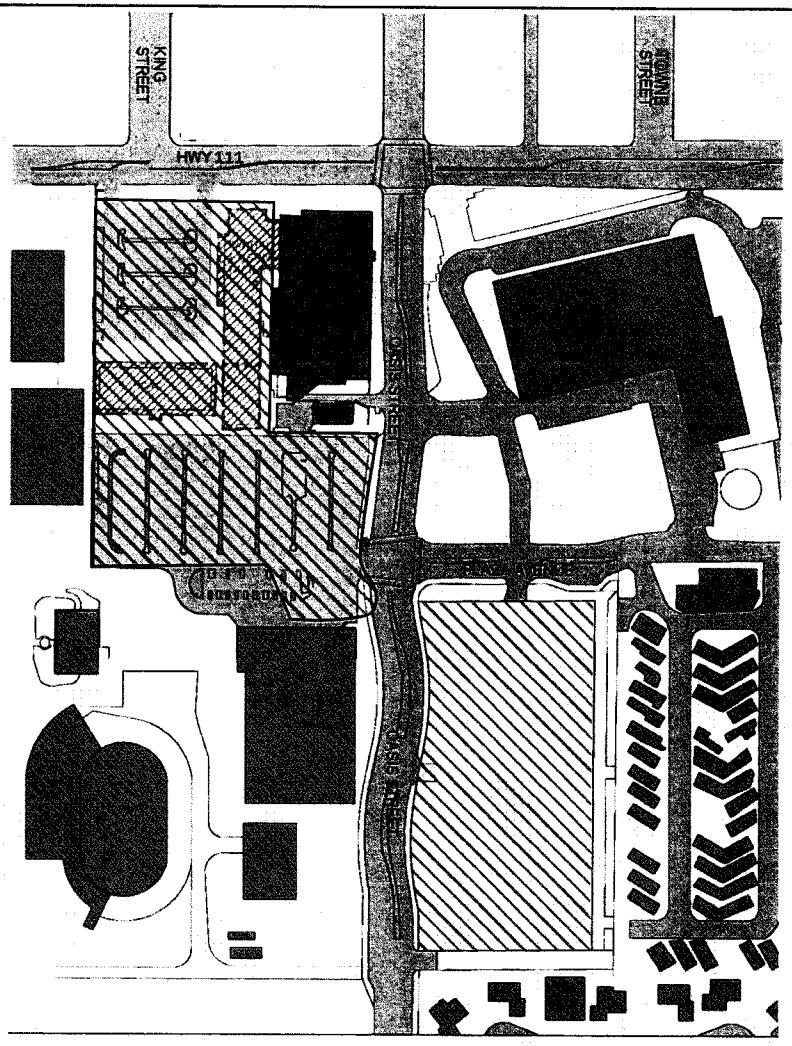
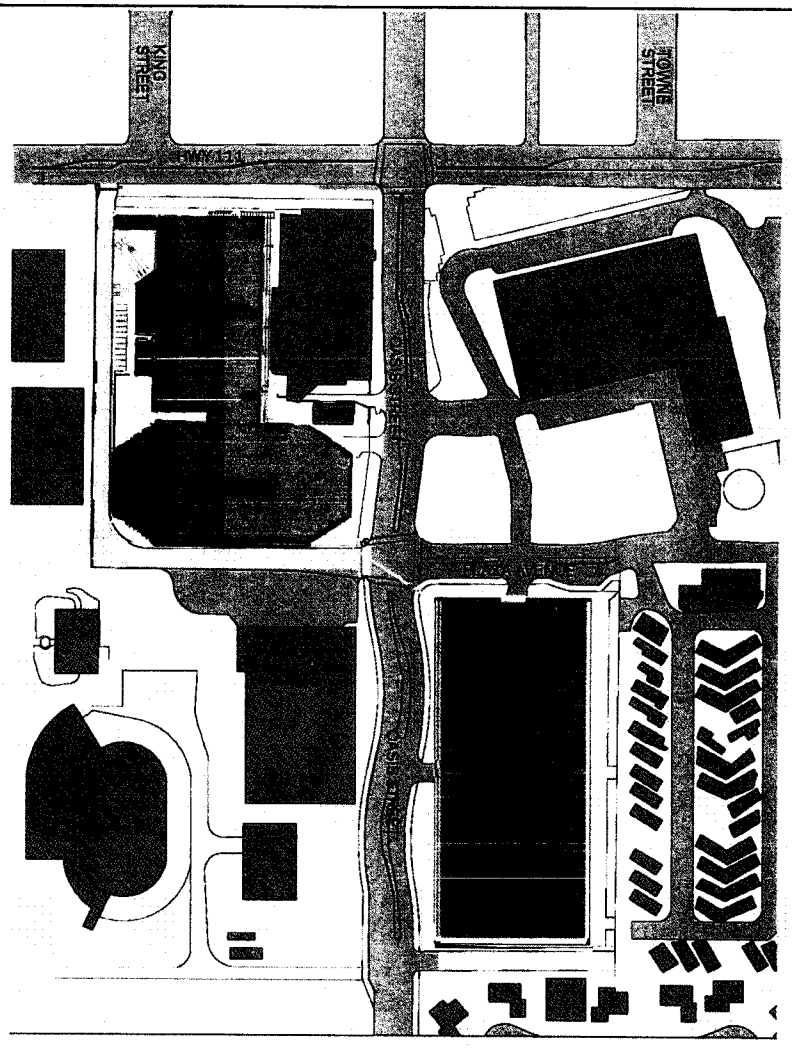


GRADING AND DEMOLITION PHASE 1



CONSTRUCTION PHASE 1

LSA

Demolition

Construction

Existing Building to remain until Phase 2

NO SCALE

SOURCE: HOK, Feb 2013

I:\HOK1201\G\Demo_Const Plan.cdr (4/30/13)

FIGURE 3-10
Sheet 1 of 2

East County Detention Center
Demolition/Construction Phasing Plan

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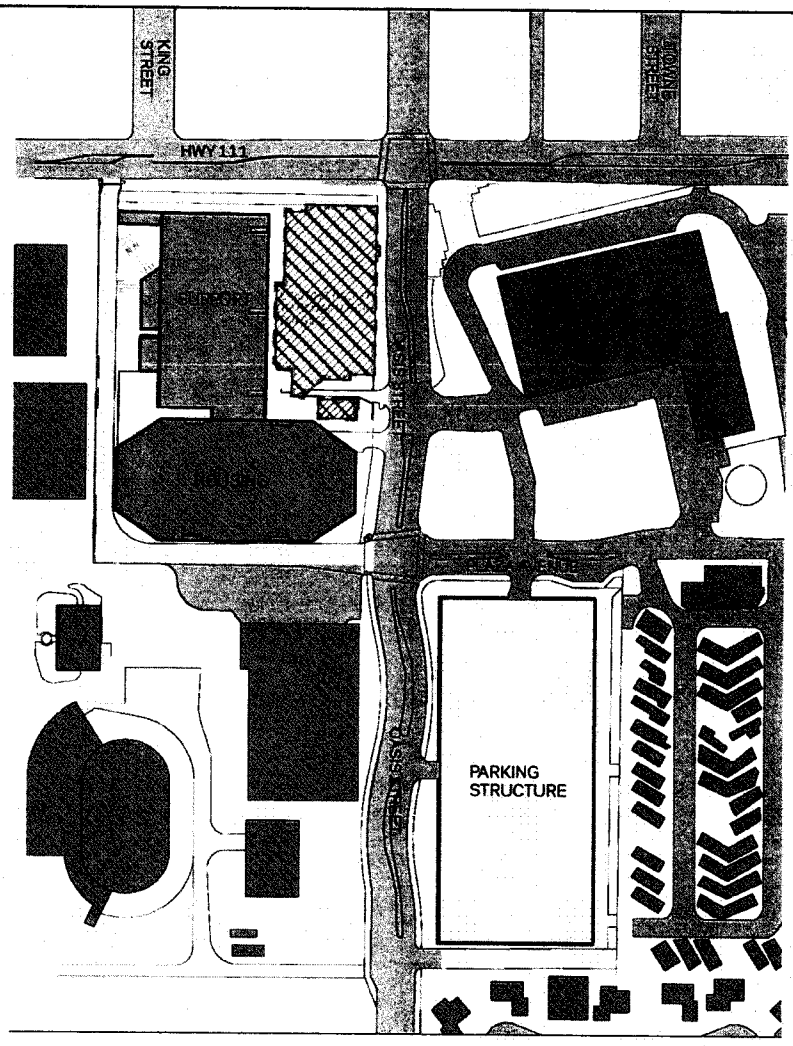
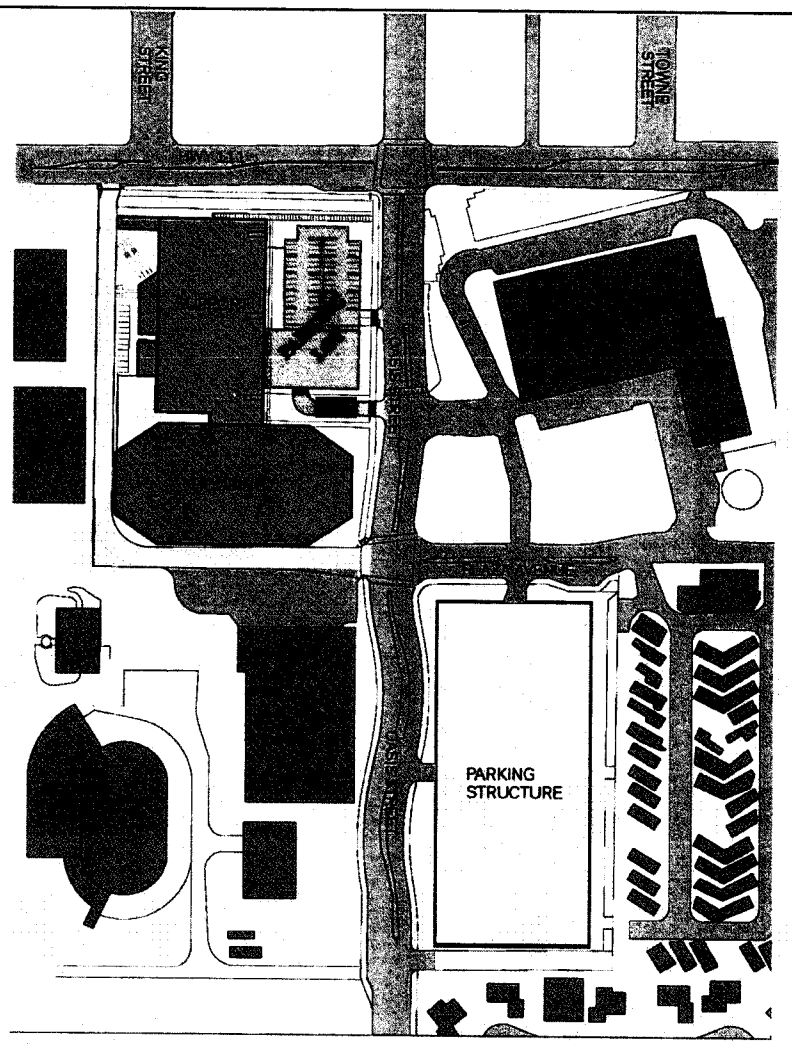


GRADING AND DEMOLITION PHASE 2



CONSTRUCTION PHASE 2

LSA

Demolition

Construction

N

NO SCALE

SOURCE: HOK, Feb 2013

I:\HOK1201\G\Demo_Const Plan.cdr (4/30/13)

FIGURE 3-10
Sheet 2 of 2

East County Detention Center
Demolition/Construction Phasing Plan

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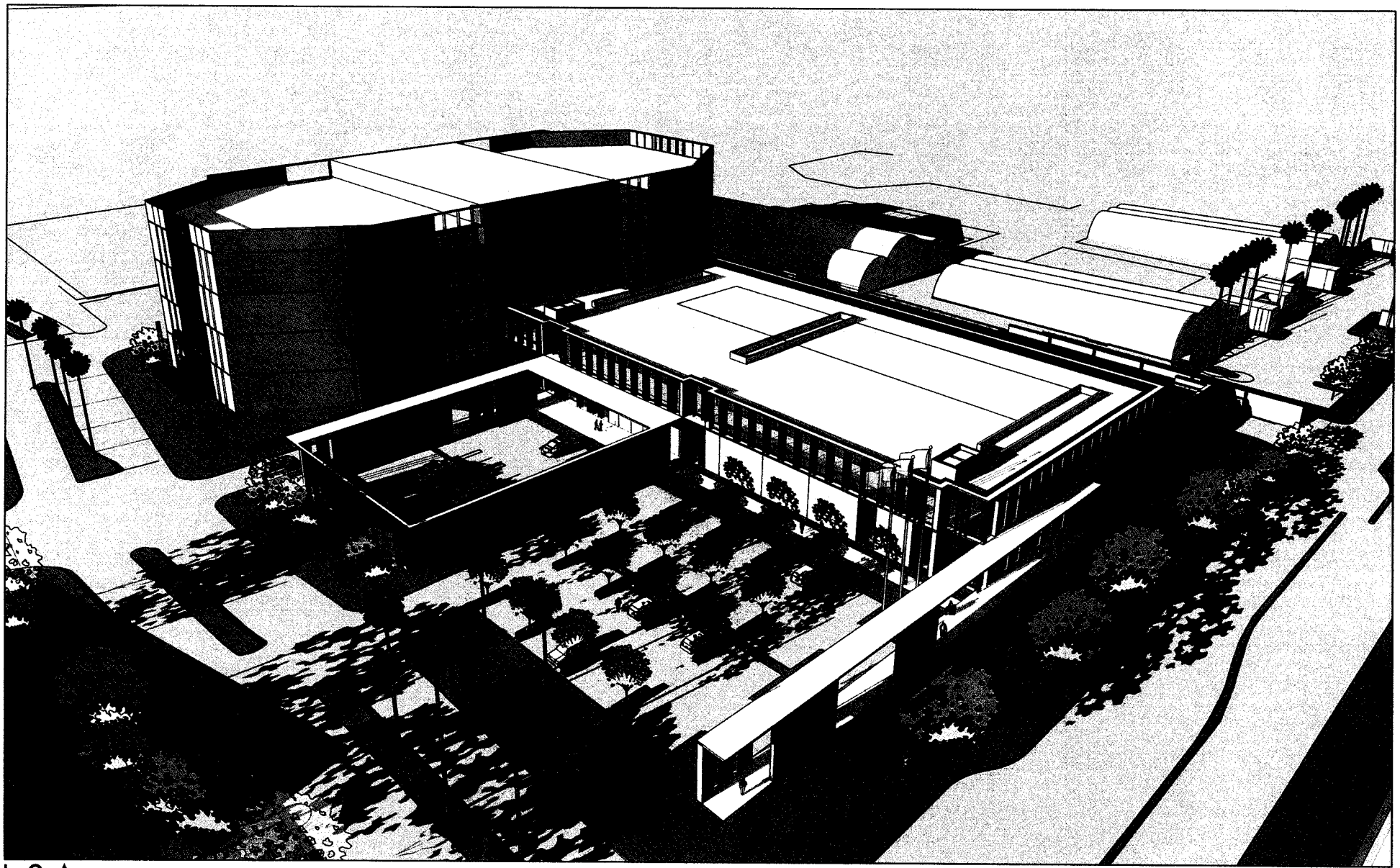

LSA

FIGURE 3-11

East County Detention Center

Proposed Site Plan Concept
Perspective Aerial

SOURCE: HOK, Feb 2013

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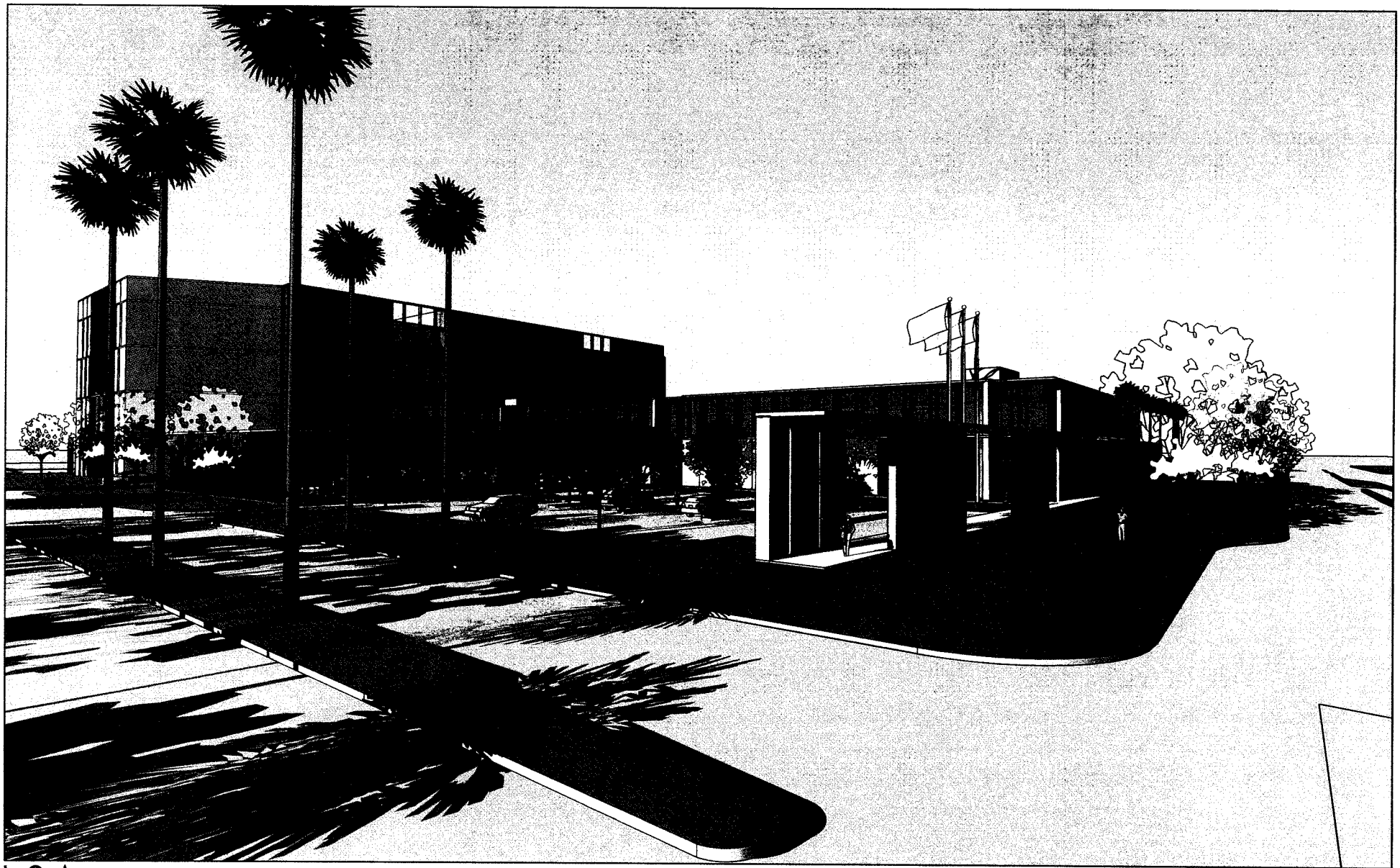

LSA

FIGURE 3-12

East County Detention Center

Proposed Site Plan Concept
Perspective Street Level

SOURCE: HOK, Feb 2013

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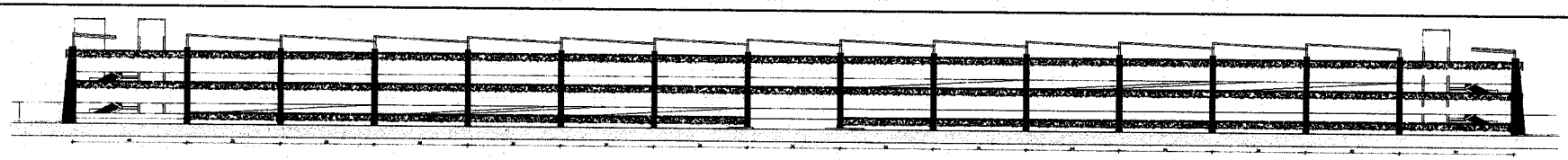
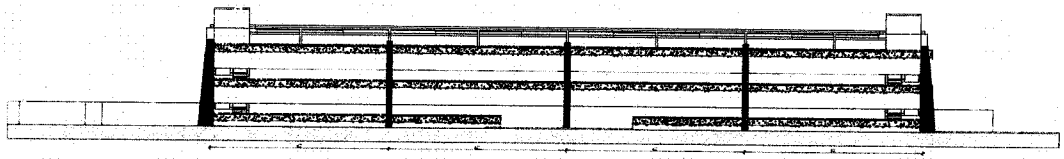
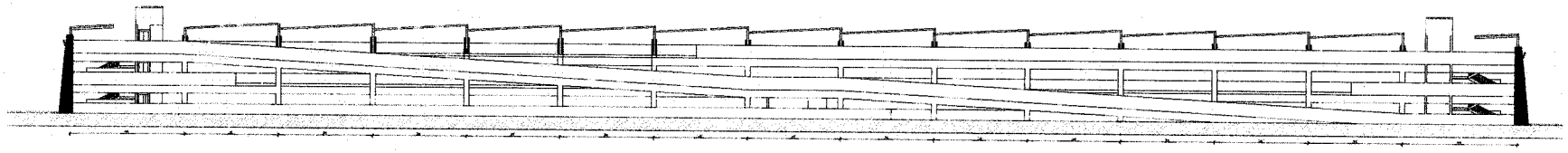


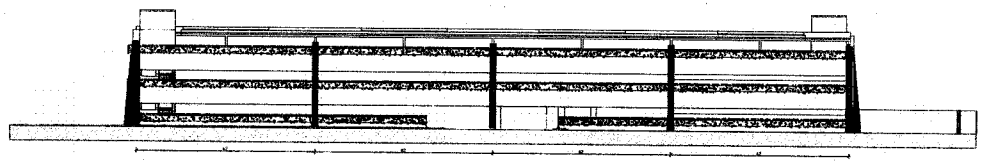
1 WEST ELEVATION



2 NORTH ELEVATION



3 EAST ELEVATION



4 SOUTH ELEVATION

LSA

FIGURE 3-13

East County Detention Center

Proposed Parking Lot Elevations

SOURCE: HOK, Feb 2013

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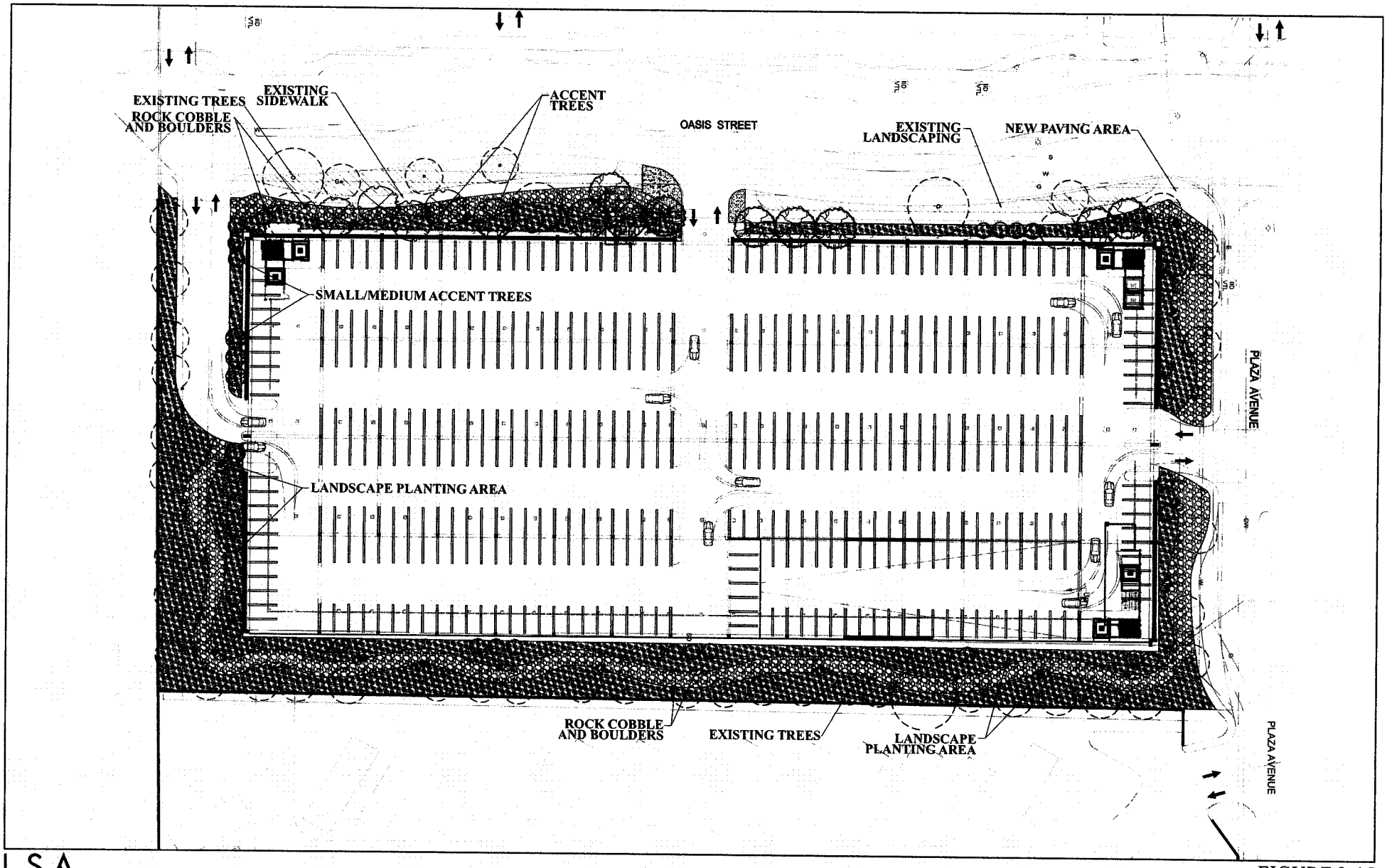

LSA

FIGURE 3-15

N

0 40 80

FEET

SOURCE: HOK, Feb 2013

I:\HOK1201\G\Site B Lndscp Pln.cdr (3/28/13)

East County Detention Center

Site B Landscape Plan

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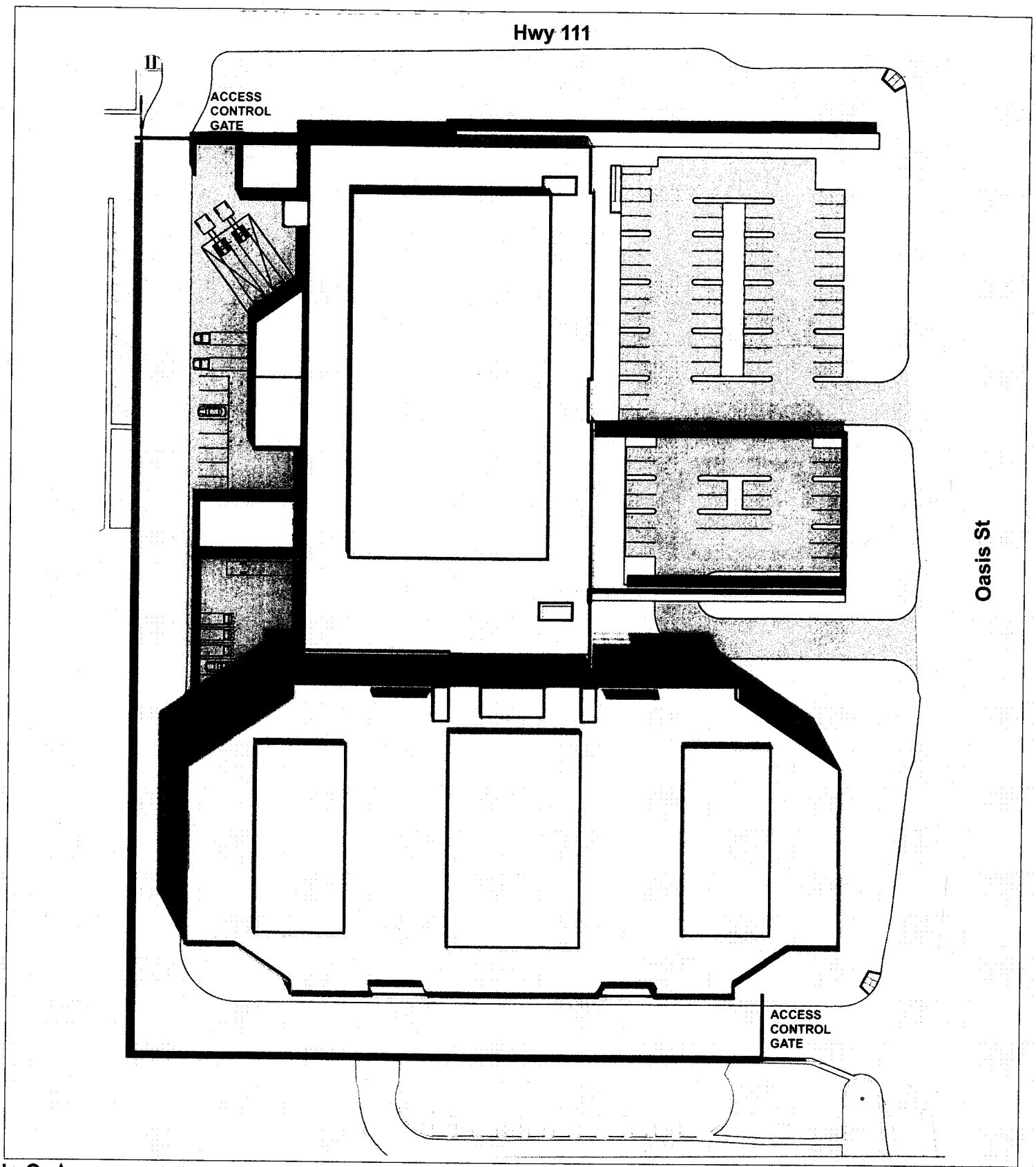

LSA

FIGURE 3-16

SOLID WALL (16' HEIGHT)

SOLID WALL (6' HEIGHT)

SOLID WITH SCREEN OPENING SALLYPORT WALL (21'-4" HEIGHT)

N

NOT TO SCALE

SOURCE: HOK, Feb 2013

I:\HOK1201\G\Prop Wall Fenc.cdr (4/19/13)

East County Detention Center

Proposed Wall/Fencing Layout

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4.0 ENVIRONMENTAL ANALYSIS

ENVIRONMENTAL TOPICS

This Draft Environmental Impact Report (DEIR) provides analysis of all environmental topics presented in the California Environmental Quality Act (CEQA) Guidelines. The following sections examine the potentially significant environmental consequences associated with implementation of the proposed project:

- 4.1: Aesthetics
- 4.2: Air Quality Analysis
- 4.3: Biological Resources
- 4.4: Climate Change
- 4.5: Cultural Resources
- 4.6: Geology and Soils
- 4.7: Hazards and Hazardous Materials
- 4.8: Hydrology and Water Quality
- 4.9: Land Use
- 4.10: Noise
- 4.11: Public Services and Utilities
- 4.12: Traffic and Circulation

FORMAT OF THE IMPACT ANALYSIS

To facilitate the analysis of each topic, a standard format was developed to analyze each topic thoroughly. This general format is presented below, with a brief discussion of the information included within each topic. Depending on the topic, there may be some minor variances in the format.

Existing Environmental Setting

This introductory section describes the existing environmental conditions related to each issue analyzed in the Environmental Impact Report (EIR). In accordance with Section 15125 of the State CEQA Guidelines, both the local and regional settings are discussed as they exist prior to implementation of the proposed project. In addition, the relevant regulatory setting is included in this section.

SIGNIFICANCE CRITERIA

Specific criteria have been identified upon which the significance of project-related potential impacts is determined. The significance criteria that are the basis of the environmental analysis contained in the EIR are derived from Appendix G of the State CEQA Guidelines; adopted local, State, and federal policies and programs that may apply; and other commonly accepted technical and nontechnical standards.

ANALYSIS OF THE PROPOSED PROJECT

This section of the EIR identifies and describes the potential impacts, both adverse and beneficial, that will result from project implementation. All project-related impacts have been clearly and adequately analyzed in accordance with Section 15126 of the State CEQA Guidelines. Impacts that have been avoided or reduced to a less than significant level are identified as "less than significant." Where an impact is found to be potentially significant based on the criteria used to analyze the project impacts, mitigation will be identified in a subsequent section. To facilitate the impact analysis, the following general outline has been utilized:

- Existing Environmental Setting
- Regulatory Setting
- Thresholds of Significance
- Analysis of Proposed Project
    - Potential Effects of Project Found to be Less than Significant
    - Potential Effects of Project Found to be Significant
- Mitigation Measures (if warranted)
- Significance Conclusion of Project on the Environmental Subject (after mitigation)

MITIGATION MEASURES

Feasible mitigation measures are prescribed to reduce to the degree possible any significant or potentially significant environmental impacts determined to be caused by the proposed project. Where a potentially significant environmental effect cannot be avoided or reduced to a less than significant level, mitigation measures that ". . . minimize significant adverse impacts . . . for each significant environmental effect identified in the EIR" have been identified and included in this section of the document, as prescribed in Section 15126 of the State CEQA Guidelines.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Each section concludes with (1) the status of the identified potentially significant impacts after the application of the mitigation and (2) whether or not impacts have been reduced to below a level of significance.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Unavoidable significant adverse impacts are those effects that either cannot be mitigated or remain significant even after mitigation. These significant effects will be identified in this section of the EIR. Prior to approval of the proposed project, the County of Riverside (County) will be required to adopt a Statement of Overriding Considerations that identifies and describes the public benefits associated with project implementation that balance acceptance of these significant unavoidable adverse impacts.

EFFECTS FOUND NOT TO BE SIGNIFICANT

As required by the State CEQA Guidelines, Section 15128, this EIR identifies the potential effects of the proposed ECDC project that are determined to be significant and adverse. The proposed project would not result in adverse impacts related to the following: Agricultural Resources, Mineral Resources, Population and Housing, and Recreational Resources. These topics are briefly discussed below along with the reasons they were determined not to be significant. These topics are not further analyzed in this EIR.

AGRICULTURAL AND TIMBER RESOURCES

The project site is on land coded as Urban and Built-up land on the State's Important Farmland Map for Riverside County.[1] There are no timber or forest resources in the project area. Therefore, the project would have no impacts to either farmland or timber resources and is not evaluated in this EIR.

MINERAL RESOURCES

The proposed project site is not within a mineral resource recovery site designated in a local General Plan, Specific Plan, or other land use plan. The project site is not shown on the State's *Aggregate Availability in California* (2006) map. The project site contains no known mineral resources that would be of value to the region or to the residents of the State of California. Therefore, the proposed project would not result in a loss of availability of a known and valuable mineral resource, nor would it result in a loss of availability of a locally important mineral resource recovery site delineated in a local General Plan, Specific Plan, or other land use plan. Therefore, this topic is not evaluated further in this EIR.

POPULATION AND HOUSING

The thresholds for population, housing, and employment impacts are as follows:

- Induce substantial population growth in an area, either directly (e.g., by proposing new residences and businesses) or indirectly (e.g., through extension of roads or other infrastructure)

[1] Riverside County Sheet 2 of 3. ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/riv10_central.pdf, accessed through the Department of Conservation's Farmland Mapping web page on February 22, 2013.

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere

The project is proposed in an area that is already developed in the City of Indio. The site is surrounded by existing land uses including residential, civic, business, and a special event venue. In addition, the project site is located on Highway 111, a major access and development corridor throughout the desert cities area. The project would provide some additional employment in the County, some of which would be local. It is estimated that approximately 470 jobs would be created with the new detention center operations. Those jobs would occur throughout the County, with the majority expected to occur in the Coachella Valley area.

Impacts to housing and population are not significant for the following reasons:

- The proposed ECDC project would not induce substantial growth because it is not expanding or extending a public service or utility that could in turn facilitate development because it is located in a previously developed urban area.
- The project would not create a large enough new job market (470 new jobs estimated) that it would attract a substantial number of people to relocate to a specific area.
- The project involves no displacement of housing or people.

Therefore, this topic will not be discussed further in this EIR.

PUBLIC FACILITIES – SCHOOLS AND LIBRARIES

The project site is presently developed with office buildings and the detention center and is not used for recreational purposes. The proposed project would not include any residential uses and, therefore, would not result in direct population growth that would increase the demand for public facilities such as schools or libraries. Because the proposed project would not cause direct population growth, there would be no additional students in the school district or increased need or demand for library services caused by the project. As previously noted in the discussion of population and housing, only 470 new jobs are expected to be created by the project and those would be expected to be spread out throughout the Coachella Valley. Therefore, no substantial secondary growth would be created by the project that would increase the need for schools and libraries.

RECREATIONAL RESOURCES

The project site is presently developed with office buildings and the detention center and is not used for recreational purposes. The proposed project would not include any residential uses and, therefore, would not result in direct population growth that would increase the demand for recreational facilities. Because the proposed project would not cause direct population growth, physical deterioration of recreational facilities would not occur due to increased facility usage as a result of project implementation. As previously noted in the discussion of population and housing, only 470 new jobs are expected to be created by the project and those would be expected to be spread out throughout the

Coachella Valley. Therefore, no substantial secondary growth would be created by the project that would increase the need for public recreational resources. In addition, the proposed project is considered self-contained in terms of recreational uses due to the Title 15 requirement to provide recreational facilities to jail inmates. In summary, the proposed project would not result in an increase in demand for public recreational facilities or require the construction or expansion of recreational facilities. Therefore, this topic is not evaluated further in this EIR.

4.1 AESTHETICS

This section provides a discussion of the existing visual and aesthetic resources on the project site and in the surrounding area, as well as an analysis of potential impacts from implementation of the proposed project. Field surveys of the project site and the immediate vicinity (areas within view of the site) were conducted to evaluate the existing setting and develop an informed assessment of the potential effects of the proposed project on visual and aesthetic resources.

4.1.1 Existing Environmental Setting

Regional Setting. The ECDC project site is located in the heart of the downtown City of Indio (City), a long-established urbanized area in the eastern Coachella Valley. The Coachella Valley area can be defined as a low and relatively flat desert basin bounded by mountainous terrain ranging from 3,000 to 9,000 feet (ft), with peaks ranging to over 11,000 ft (San Gorgonio peak) (Bureau of Land Management [BLM] 2011). The Little San Bernardino Mountains (up to 5,267 ft) are approximately 2.5 miles (mi) directly to the northeast of the project site and the Santa Rosa Mountains (Toro Peak, 8,715 ft) area is approximately 7 mi to the southwest. Further in the distance, the San Jacinto Mountains (San Jacinto Peak, 10,834 ft) are located to the west, and the Orocopia Mountains (up to 3,814 ft) and the Chocolate Mountains (up to 2,988 ft) are located southeast of the City.

The overall valley gradient is from northwest to southeast, gently sloping from the San Gorgonio Pass (approximately 2,600 ft above sea level) on the northwest to the Salton Sea with a current surface elevation of approximately 220 ft below mean sea level. The mountainous terrain surrounding the valley creates varied character to the horizon which would otherwise not be visible in from the downtown area.

Site Vicinity. The downtown area provides a mix of old and newer commercial, residential, institutional, and industrial development. Located on the central valley floor, the downtown area comprises essentially flat terrain, with various government buildings, residential neighborhoods, a mobile home park, commercial buildings, and regional fairgrounds/event space, surrounding the site. To the north of the project are Highway 111 (a major thoroughfare), a vacant lot, and one-story aging commercial structures. To the east is the three-story Larson Justice Center courthouse which has a similar institutional architectural style. To the south and west of the project site are the County of Riverside (County) Fairgrounds, which includes a sizable open area for events and several structures ranging from one- to three-stories with varied architectural styles that can be described as equestrian and conventionally styled structures.

Project Site. The ECDC project sites includes two sites and are shown in existing conditions pictures presented in Section 3.0 (Figures 3-5 to 3-8). Site A includes the existing 7.5-acre (ac) civic building site housing the jail, County Administrative Center (CAC) Building, the Law Library building, courts, and accompanying surface parking lots. Buildings on this property range in size from one- to four-stories with institutional architecture defined by large sections of flat white concrete, sharp edges, and minimal variation or depth. The four-story CAC Building and Law Library have long vertical glass sections that extend from the ground to the roof that are blue in color. The rectangular nature of these features enhances the institutional design of the project site's architectural theme. In

addition, a 105 ft communications tower is located along the eastern side of the project site along Oasis Street.

Site B is a 5.5 ac surface parking lot located across from the jail site diagonally southeast across Oasis Street, immediately south of the Larson Justice Center courthouse. Site B is a flat parking lot landscaped with a mix of young and mature ornamental trees and shrubbery dispersed along the edges and interior of the property. This vegetation provides aesthetic character and blends the site in with the adjacent properties. Site B is not in the line of site of the adjacent residential uses due to an existing 6 ft wall and mature vegetation.

The existing aesthetic quality of the project site (Sites A and B) is comparable with the character of the surrounding development. Since the existing project site contains a unique mix of land uses, having the Fairgrounds to the west and the Courthouse to the east creates an institutional district in which the project site is aesthetically conforming.

Sensitive Viewers. The project site is minimally viewable by residents within the immediate blocks to the north of Site A across Highway 111. Site B is adjacent to sensitive viewers (residences) to the east and south. However, the existing structures on Site A are not in the line of site of these sensitive viewers due to the mature vegetation in these residential areas. There is also a 6 ft block wall separating Site B from the adjacent residential parcels. Additionally, the project site (Sites A and B) is not viewable by motorists traveling on Interstate 10 (I-10) (approximately 1.25 mi from the site), which is designated as an eligible County and State Scenic Highway.

Light and Glare. The project site is located in an urbanized area and is developed with structures containing lights that are standard with the civic nature of the area. Primary intent of the existing lighting is for nighttime safety and does not represent a large source of light during the evening hours. Parking lot lighting is also standard with light poles that have downward facing fixtures consistent with the parking lots in the surrounding neighborhood.

Most of the structures on the project site are non-reflective concrete structures with the exceptions of the CAC Building and the Law Library. These four-story structures contain portions of their facades that are glass windows that extend from the first floor to the roof with no horizontal breaks. Although these sections of the building are made of glass, they do not reflect sunlight or provide a source of glare due to the darkness of the glass. Refer to Figures 3-5 and 3-7 in Chapter 3.

4.1.2 Regulatory Setting

The City of Indio's General Plan and zoning do not apply to the project because they are pre-empted by State law on property owned or leased by the County.[1] However, the following analysis was completed to show that the project is generally in compliance with the City's General Plan Goals and Policies Report, Environmental Resources Chapter. The City's General Plan 2020 requires that scenic

[1] California Government Code Sections 53090 through 53091, *Sunny Slope Water Co. v. City of Pasadena,* Cal 2d 87,98 (1934).

resources be protected from development activities in the area that could have potential negative impacts. The following policies address scenic resources:

- **OS-2:** Protect the scenic beauty of prominent natural features within the planning area.
- **CD-1:** Provide a general set of design guidelines that provide a consistent level of design in all land use designations.

The City General Plan has provided land use designations that set forth lot coverage maximums and development intensities allowed in the area. The following land use designation applies to the project site:

- **Public (P):** Under this designation, a variety of public and quasi-public facilities which support the community and are operated by government agencies, utility providers, or non-profit organizations. Intensity of the use will be determined on a case-by-case basis.

4.1.3 Methodology

This section assesses the aesthetic compatibility of the proposed project with the surrounding area and potential impacts to any sensitive views that may exist in the project vicinity.

The potential aesthetic impacts of the proposed project were further evaluated by considering factors such as the scale, mass, proportion, orientation, and landscaping/buffering associated with the design of the proposed project. In order to conduct this analysis, photographs of existing views of the project site are provided, along with photographic simulations depicting views after completion of the proposed project. The simulations are presented in Figures 4.1-1 through 4.1-6. The potential for light and glare, and shading/shadow impacts to sensitive land uses (residences) was also considered based on the proposed structure locations and proposed building heights.

The after-development simulations were prepared using a combination of the color photographs of the existing setting and computer-generated structural representations of the proposed site, grading, and landscaping plans, as well as architectural elevations of the proposed structures. Conceptual building outlines and architectural planes were developed to simulate the proposed project's shape, scale, and architectural character. With all components in place, the photographic simulations provide a reasonably accurate indication of the changes that would occur with project implementation.

4.1.4 Thresholds of Significance

The impact significance criteria used for this analysis are based primarily on Appendix G of the State CEQA Guidelines. The project may be considered to have a significant effect related to aesthetics if any of the following may occur:

- The project would have a substantial adverse effect on a scenic vista.
- The project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway.

- The project would substantially degrade the existing visual character or quality of the site and its surroundings.
- The project would create a new source of substantial light or glare that would adversely affect day- or nighttime views in the area.

4.1.5 Impacts and Mitigation Measures

Less Than Significant Impacts. The following aesthetic impacts that could result from implementation of the proposed project are considered less than significant. Again, the figures are included at the end of Section 4.1 to facilitate ease of understanding for the reader.

General Plan Policy Analysis. The City's General Plan includes policies related to aesthetics in the Land Use Element and Community Design Elements. Policy OS-2 requires scenic beauty of prominent natural features be protected. Since the proposed project is located within a developed area and would replace the existing use with a similar use and type of project, the proposed project would be consistent with this policy. Policy CD-1 establishes specific design criteria for all types of land use designations. The proposed project is being designed to be in conformance with setbacks, lighting, screening, and all other design guidelines related to the Public land use designation even though the County property is not required to comply with these policies. Therefore, the project would not result in conflicts with the policies of the City General Plan, and impacts related to this issue are considered to be less than significant.

Scenic Vistas. The project site is located in the heart of the City in a relatively flat but previously developed area. No scenic vistas have been designated in the project area. Views from the surrounding commercial and residential uses are presented and analyzed in the Visual Character section below. Based on the conclusions of that analysis, views would be altered because the proposed project would replace the existing buildings with a facility with an increased footprint. However, the proposed project is similar in height and style and would not represent an increase that would result in a substantial adverse effect. Therefore, any impact on scenic vistas or views resulting from the implementation of the proposed project would be considered less than significant.

Scenic Resources within a State Scenic Highway. There are no scenic highways designated by the City, County, or other agency in the project area or that would have views of the project site. There are no scenic resources or designated historic structures on the project site or within the project area. Highway 111 is not a designated scenic highway. I-10 throughout Riverside County is considered eligible to be a State Scenic Highway by both the County and the California Department of Transportation (Caltrans). The project site is located approximately 1.25 mi to the southwest of I-10 and is not visible from the highway. Therefore, the effects of the proposed project on scenic resources within a County or State Scenic Highway would be considered less than significant.

Visual Character. The proposed project would alter the existing visual character of the project site by replacing the existing County civic campus with a larger facility. However, there must be an additional finding that the project substantially degrades or damages a viewshed for an impact to be significant and adverse, in accordance with the thresholds defined above.

Visual impacts are considered potentially significant where they would contribute to a substantial, demonstrable degradation of the existing visual character or quality of a site. This determination is based on several criteria, including observer position, views, and changes in the characteristics of the views. The key factor is the extent to which the project is compatible with the character, scale, bulk, and form of the existing physical setting.

The proposed ECDC has three main components: (1) a four-level housing building for 1600 inmates (Site A); (2) a two-level support building with both secure and public spaces (Site A); and (3) a parking structure to serve the detention center and adjacent County facilities (Site B). The concept plans are shown on Figures 3-11 and 3-12, and elevations for the proposed parking lot are shown on Figure 3-13. Analysis used to determine the significance of changes to visual character was based on visual simulations created for the project and are presented in Figures 4.1-1 through 4.1-6.

Site A. Implementation of the project would increase the building footprint as compared to the existing buildings from 186,915 sf to 560,803 sf. The tallest proposed structure is the four-story Housing Building at 96 ft and is approximately the same height as the existing Law Library and CAC Building (with minor ancillary extensions [antennae, vent hoods, etc.,] above that). It is proposed to be located to the south of the site, and as far as possible from the main public viewpoint along Highway 111. This proposed building placement and arrangement on Site A was developed to concentrate the building scaling and massing toward the intersection of Oasis Street and Plaza Drive where there are no sensitive viewers. This reduces the perceived scale of the building, which is further mitigated by the two-level support building in the foreground. As shown in the visual simulations Figures 4.1-2 and 4.1-3, this stepped layer concept continues with a series of site security walls and architectural details surrounding the support building, as well as landscaping that surrounds the project site.

The proposed structures on Site A have been designed to complement and be consistent with surrounding colors and the scale of the area. The Larson Justice Center Courthouse is adjacent to the east, and the Riverside County Fairgrounds is located to the west and south. Being located adjacent to these uses provides consistency with the style and character of the area. Placement of the facility structures within an established area containing institutional uses, with applicable setbacks and landscaping along the perimeter of the project site, would substantially lessen the increased visual intrusion of the proposed project on the visual character or quality of the site or the surroundings.

Site B. As shown in Figures 4.1-5 and 4.1-6, the existing condition of Site B is currently a flat surface parking lot with mature ornamental vegetation. The proposed parking structure would be a three-level covered structure with photovoltaic (PV) panels on the roof to

generate solar energy. The parking structure would have a general height of 24 ft with an additional 20 ft for elevator housing (44 ft at the highest point) that would include over 990 spaces providing additional staff and public parking for the ECDC and other County functions in the area. As depicted in the visual simulations, the proposed parking structure represents a noticeable change from the existing character of the site. However, Site B is located adjacent to the south of the Larson Justice Center Courthouse, one block (approximately 600 ft.) away from Highway 111, and generally out of view of any major public viewsheds. Therefore, the construction of the proposed parking structure would not be visible or have the potential to change the visual character of the main public views or aesthetics of the area.

Site B is adjacent to a mobile home park to the east and residences to the south. Both residential areas have a 6 ft block wall separating Site B from the residential uses. In order to lessen the intrusion of the three-level parking structure on the adjacent residential uses, the structure has been situated on Site B to afford the maximum amount of setback to these areas (50+ ft on the east side and 70 ft on the south side), as depicted on the site plan (Figure 4.1-7). The setbacks will also allow much of the existing mature landscaping to be preserved in place lessening any visual intrusion of the parking structure. Additionally, as shown in existing site pictures (Figures 4.1-8 through 4.1-10), the surrounding neighborhood also contains mature ornamental vegetation that adds additional shielding, thereby blocking a majority of the views of the proposed parking structure from the surrounding residential areas.

Proposed Views. The following discussion addresses changes in specific public views from vantage points. The following analysis addresses whether the proposed project would cause a significant impact on the environment with regard to changes to the visual character of the project area.

Site A.

Key View 1 – Existing View. Key View 1 (Figure 4.1-2) provides an existing view of the northwest corner of the project Site A from the intersection of Highway 111 and Oasis Street from the perspective of a motorist traveling westbound on Highway 111. This view is representative of typical views of the facility frontage. Existing views include Highway 111, roadway, vehicles, pedestrians, and existing landscaping in the foreground. Middleground views include the Annex Building and additional landscaping. Background views are of the communications tower, the CAC Building, the Law Library, and sky. The visual character of Key View 1 could be described as urban with institutional development and transportation facilities.

Key View 1 – View Change Analysis. As illustrated in the after-development view on Figure 4.1-2, the foreground view of the Highway 111 and associated transportation facilities would remain. Middleground views would include the frontage of the support building and the on-site surface parking lot. Background views would include the four-story Housing Building. New structures in the

middleground view are of similar sizing and style of the existing structures. The proposed Housing Building would replace the existing CAC Building and the Law Library with a structure that is the same height and would not impose on the upward views of the horizon or sky. The most noticeable change would be to the new Housing Building that would extend further to the east than the existing building by approximately one-third of the existing size of the CAC Building and the Law Library. The communications tower and support structure will be relocated elsewhere through a separate project. Although the viewshed along the Highway 111 is considered the most viewed and sensitive area, the increase in building bulk would not substantially degrade the existing visual character or quality of the site and its surroundings because the proposed Housing Building is of similar type and style of the existing facility. Additionally, the majority of sensitive viewers, such as residential uses, are located over a block away (approximately 350 ft) with no direct views of the project site due to existing structures and vegetation. Therefore, no significant impact would result from this change.

Key View 2 – Existing View. Key View 2 (Figure 4.1-3) provides a view of the project Site A along Highway 111 in between Deglet Noor Street and King Street looking southeast at the frontage of the project site. This view is representative of typical views of the project site while traveling eastbound on Highway 111. Existing views include Highway 111, roadway, vehicles, and ornamental vegetation in the foreground. Middleground views include the parking lot, vehicles, interior ornamental landscaping, and the Annex Building. Background views are of the communications tower, the CAC Building, the Law Library, and sky. The visual character of Key View 2 could be described as urban with institutional development and transportation facilities.

Key View 2 – View Change Analysis. As illustrated in the after-development view on Figure 4.1-3, the foreground views would remain the same as the existing view. Middleground views would include the Support Building, perimeter walls, and ornamental vegetation. Background views would include the four-story Housing Building. The Support Building would alter the existing view of the site because it replaces a surface parking lot with a 52 ft structure. The proposed Housing Building would replace the existing CAC Building and the Law Library with a structure that is the same height and would not impose on the upward views of the horizon or sky. This proposed view represents a noteworthy change in the view of the existing facility. However, the structures to be constructed are of similar style and sizing as the existing and surrounding structures along this corridor. In addition, sensitive viewers, such as residential uses, from this viewpoint are over a block away and shielded from views of the site by mature vegetation and would not be visually affected by the proposed project. Therefore, no significant impact would result from this change.

Key View 3 – Existing View. Key View 3 (Figure 4.1-4) provides an existing view of the project Site A from the intersection of Oasis Street and Plaza Avenue looking northwest at Site A. This view is representative of typical views of the rear of the project site from motorist and pedestrians visiting the surrounding institutional uses such as the County Fairgrounds and the Larson Justice Center Courthouse. Existing views include Oasis Street, vehicles, and mature landscaping in the foreground. Middleground views include a surface parking lot, vehicles, mature landscaping, and the communications tower. Background views include the CAC Building, the Law Library, and sky. The visual character of Key View 3 could be described as urban with institutional development and transportation facilities.

Key View 3 – View Change Analysis. As illustrated in the after-development view on Figure 4.1-4, the foreground views would remain the same as the existing view. Middleground views would include the back side of the Housing Building. Background views would be of the sky because the existing background structures would be obstructed by the new Housing Building. Implementation of the proposed project would alter the views from this location on the CAC Building and the Law Library. The proposed Housing Building would alter the visual character because the structure would be closer to the street even though it would be of similar style and character as the existing use, surrounding Courthouse, and Fairgrounds. However, views of this location are not viewed by sensitive viewers, such as residential viewers along Plaza Avenue or further south along Oasis Street. Therefore, no significant impact would result from this change.

Site B.

Key View 4 – Existing View. Key View 4 (Figure 4.1-5) provides an existing view of the surface parking lot on Site B, looking southeast, from the perspective of a motorist or pedestrian leaving the existing south parking lot driveway next to the Law Library onto Plaza Avenue. Existing views include the intersection of Oasis Street and Plaza Avenue and median landscaping in the foreground. Middleground views include the corner of the existing surface parking lot and mature ornamental landscaping surrounding the parking lot. Background views include the internal parking lot landscaping, parking lot light poles, and the sky. The visual character of Key View 4 could be described as developed institutional and transportation facility.

Key View 4 – View Change Analysis. As illustrated in the after-development view on Figure 4.1-5, the foreground views would remain the same. Middleground views would also remain the same because the landscaping surrounding Site B would be kept intact. Background views of the internal landscaping of Site B would be altered to the three-level covered structure with PV panels on the roof and the additional elevator housing. From this vantage point, a portion of the view would be substantially altered because the surface parking lot would be replaced by a three-level parking structure. However, this view is not from a sensitive viewshed and the

proposed structure is of similar style and type as the surrounding structures on Site A, the County Fairgrounds, and the Larson Justice Center Courthouse. In addition, the parking structure would be partially obscured by the existing mature ornamental landscaping. Therefore, implementation of the proposed project would not represent a substantial degradation to the visual character or quality of the site and its surroundings. No significant impact would result from the change of this view.

Key View 5 – Existing View. Key View 5 (Figure 4.1-6) provides an existing view of the proposed project Site B from an entrance to the County Fairgrounds along Oasis Street, looking east. This view is representative of typical views of the project Site B from visitors leaving the Fairgrounds or from pedestrians walking along Oasis Street. Existing views include Oasis Street and median landscaping in the foreground. Middleground views include the corner of the existing surface parking lot and mature ornamental landscaping surrounding the parking lot. Background views include the internal parking lot landscaping, parking lot light poles, and the sky. The visual character of Key View 4 could be described as developed institutional and transportation facility.

Key View 5 – View Change Analysis. As illustrated in the after-development view on Figure 4.1-6, the foreground views would remain the same. Middleground views would include the proposed three-level parking structure and surrounding ornamental landscaping. Background views of the internal landscaping of Site B would be altered to the three-level covered structure. From this vantage point, a portion of the view would be substantially altered because the surface parking lot would be replaced by a three-level parking structure. However, this view is not from a sensitive viewshed and the proposed structure is of similar style and type as the surrounding structure on Site A, the County Fairgrounds, and the Larson Justice Center Courthouse. In addition, the parking structure would be partially obscured by the existing mature ornamental landscaping. Therefore, implementation of the proposed project would not represent a substantial degradation to the visual character or quality of the site and its surroundings. No significant impact would result from the change of this view.

Existing Residential Views of Site B. Residential uses are located adjacent to Site B to the east and to the south. As shown in Figures 4.1-8 through 4.1-10, the existing views from these residential areas toward Site B are mostly blocked by perimeter walling and existing mature ornamental landscaping that would remain after implementation of the proposed parking structure. Views 6 and 7 are looking north at the project site. Views 8 and 9 are looking west from the mobile home community to the eastern side of Site B. Views 10 and 11 show the maturity of the interior landscaping of Site B. In order to lessen the intrusion of the three-level parking structure on the adjacent residential uses, the structure has been situated on Site B to afford the maximum amount of setback to these areas (50+ ft), as depicted in Figure 4.1-7. The setbacks would also allow much of the existing mature landscaping to be

preserved in place that, when combined with the additional proposed landscaping and the existing wall, would lessen any visual intrusion or shading/shadowing from the parking structure on the mobile home park. Simulations were not provided for these views because the proposed parking structure would not rise above the tree line in most of these views and would not represent a major visual change due to the restricted views to this site. Therefore, no significant impact on existing residential view of Site B would result from implementation of the proposed project.

In summary, the proposed project would not have a significant impact on any of the Key Views presented in this analysis. With implementation of the proposed project, views of the site would be altered but the visual character and quality of the site and surrounding area would not be degraded and would be considered less than significant.

Creation of a New Source of Light and Glare Affecting Surrounding Adjacent Viewers. Light impacts are generally considered an annoyance, while impacts from glare can sometimes present safety hazards. For the purposes of this analysis, light and glare are considered to have a significant impact if the project would create substantial glare directed toward surrounding streets or if project lighting would substantially exceed established lighting standards typical in the area.

"Spill light" is defined as light that trespasses or spills out of the intended area and illuminates adjacent occupied property, and is generally considered unwanted. Spill light is measured in terms of illuminance or footcandles (fc).[1] "Glare" refers to the sensation experienced when looking into an excessively bright light source that causes a reduction in the ability to see or causes discomfort. All proposed light fixtures are designed to minimize off-site light and glare. Detailed design analysis of the lighting plan is required to ensure that project impacts are kept below or at the same level as current impacts and to ensure proper shielding and/or minimization of new light sources via the use of one or a combination of the following: (1) directional lighting; (2) minimum height of lighting standards while maintaining at-ground minimum standards for safety purposes; (3) shielded or hooded lighting fixtures where appropriate; and (4) optimal placement of lighting.

The project site would incorporate safety and security lighting along the perimeter of the facility, along the drive isles within the facility, and in the parking areas. Project lighting would provide even illumination of exterior spaces for security purposes. These areas would be lit from dusk until dawn and represent similar lighting conditions as the existing conditions.

No direct nighttime views exist from the residential development located over a block away to the north of the project Site A. Residential uses are adjacent to the east and south of Site B; however, proposed lighting would not represent a substantial increase from the existing parking lot lighting. In addition, the 50+ ft setbacks, when combined with the existing and proposed landscaping, would prevent "spill" light or substantial new sources of light. However, to ensure that lighting

[1] A footcandle is a unit of measure of the intensity of light falling on a surface, and is equal to one lumen per square foot and organelle defined with reference to a standardized candle burning at 1 ft from a given surface (Source: The American Heritage Dictionary of the English Language, Fourth Edition, Houghton Mifflin Company, 2000) .

from the proposed parking structure on Site B does not impact the existing residences adjacent to the site, Mitigation Measure AE-1 has been added to the project.

Mitigation Measure.

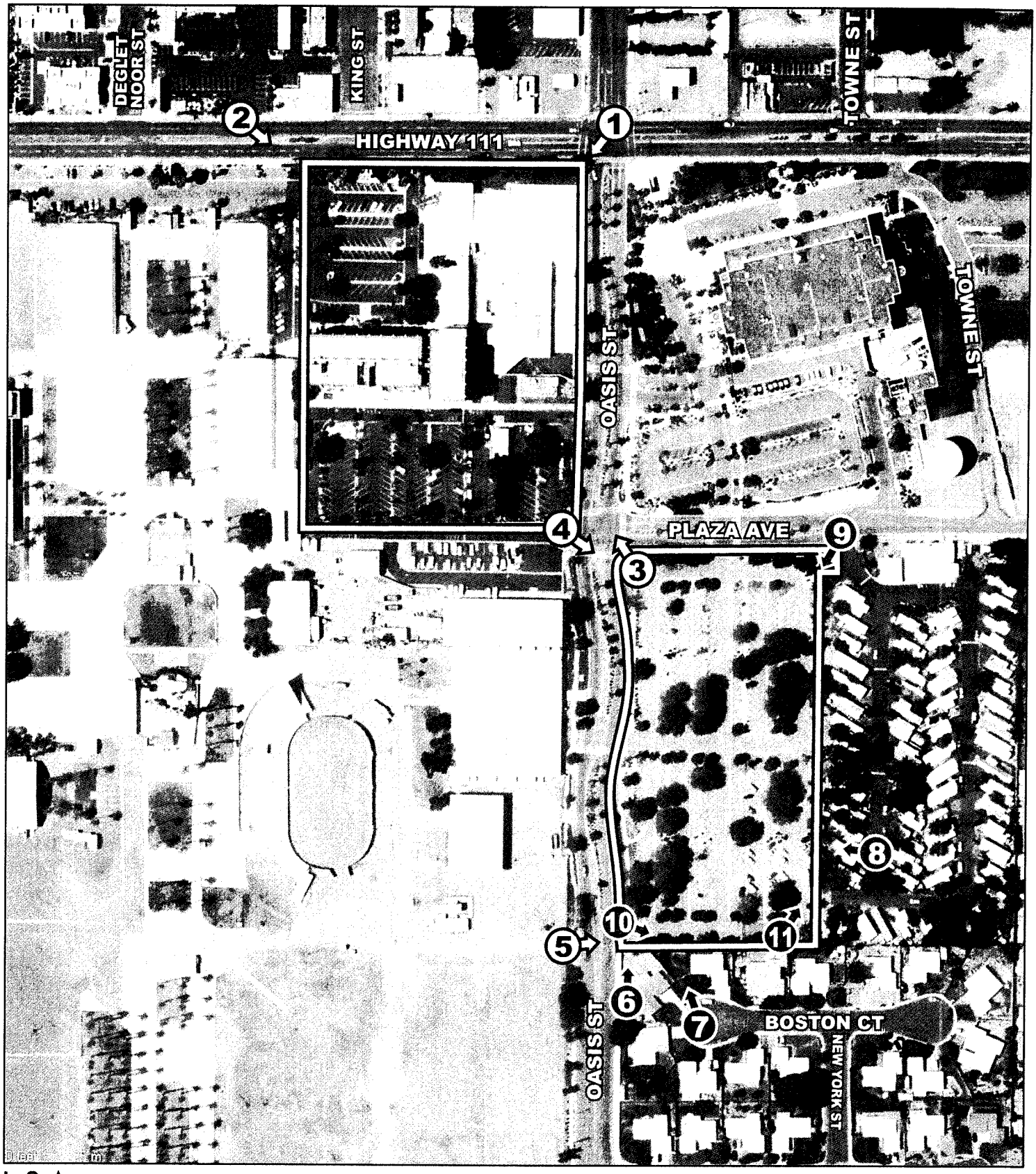
AE-1 For Site B, prior to commencement of grading activities, a detailed lighting plan shall be prepared, including a photometric study. The lighting plan shall be designed to prevent light spillage in excess of existing conditions and shall demonstrate compliance with the following measures:

- All site lighting fixtures shall be provided with a flat glass lens. Photometric calculations shall indicate the effect of the flat glass lens fixture efficiency.
- The lighting plan shall include lighting fixture types and technical specifications to direct light only to the project site and not beyond the project site boundaries.

Potentially Significant Impacts. The proposed project would replace the existing detention center and parking lot with a new larger detention center facility and parking structure. Although views related to the new structures would alter the existing look of the site, the changes do not represent impacts that are considered to be significant, as discussed in Section 4.1.5 above.

4.1.6 Level of Significance After Mitigation

No potentially significant impacts related to aesthetics or light and glare would result from the implementation of the proposed project.



LSA

LEGEND

- Project Area
- Simulation View Points
- Existing Views of Parking Lot

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SOURCE: Bing (c. 2010)

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FIGURE 4.1-1

East County Detention Center

Visual Simulation Viewpoint Key Map

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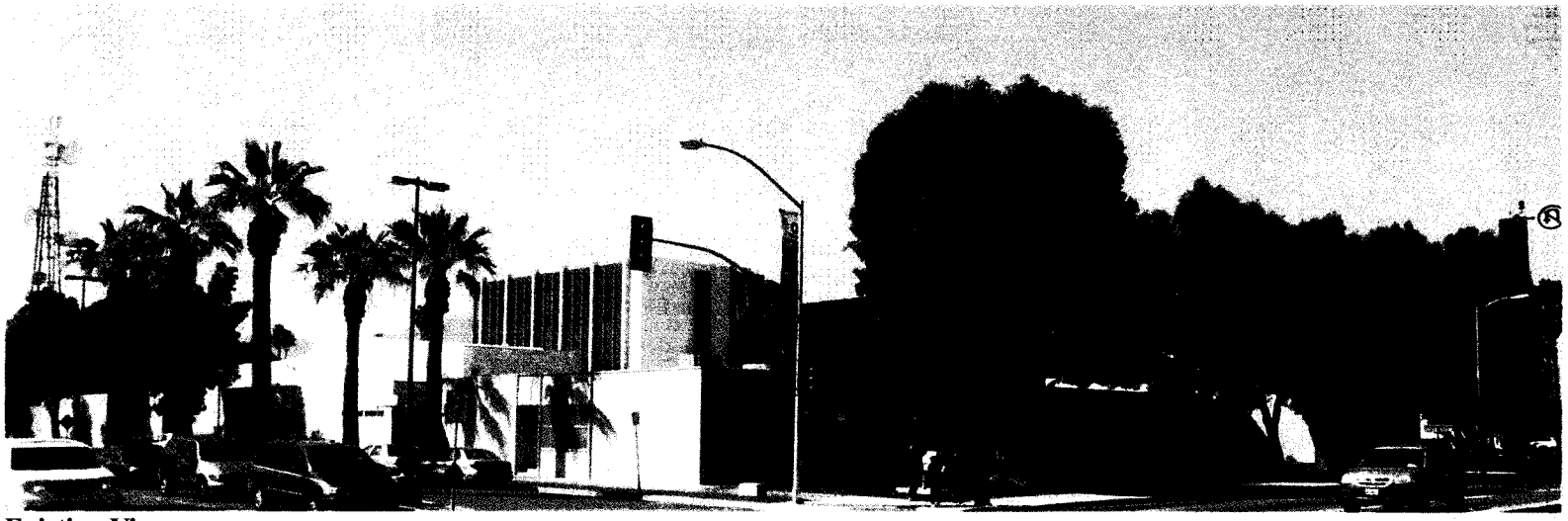
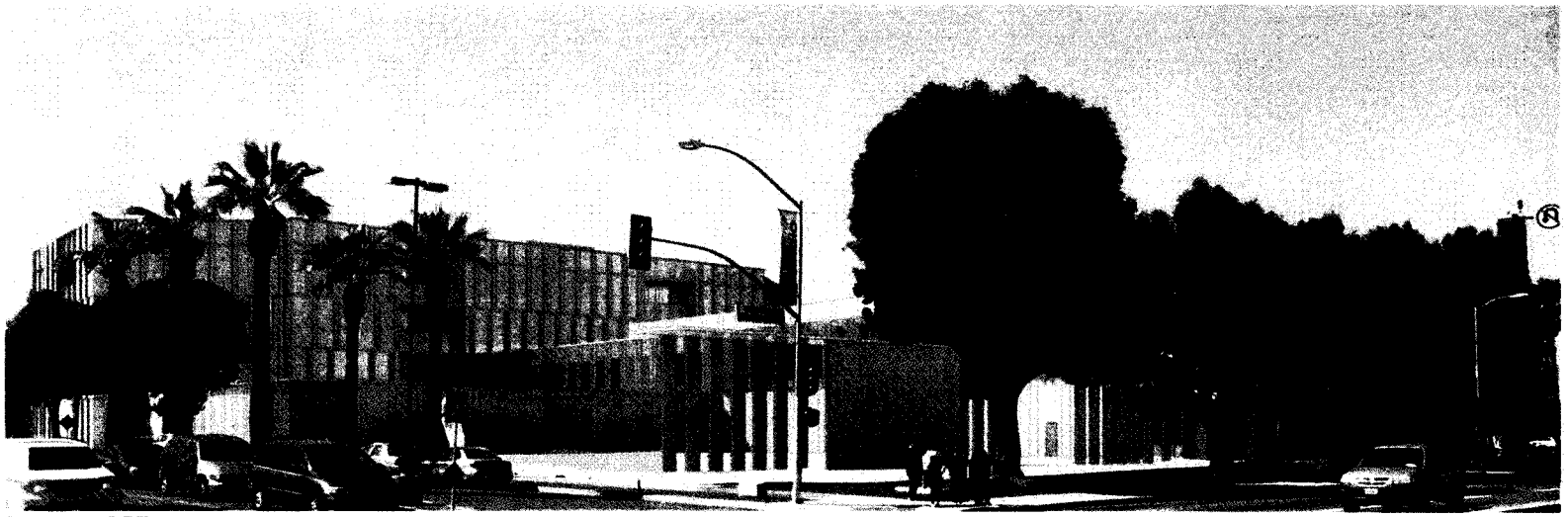


Existing View



Proposed View

LSA

FIGURE 4.1-2

East County Detention Center

View 1: Highway 111/Oasis Street looking Southwest
Existing and Proposed

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Existing View

Proposed View

LSA

FIGURE 4.1-3

East County Detention Center

View 2: Highway 111 looking Southeast
Existing and Proposed

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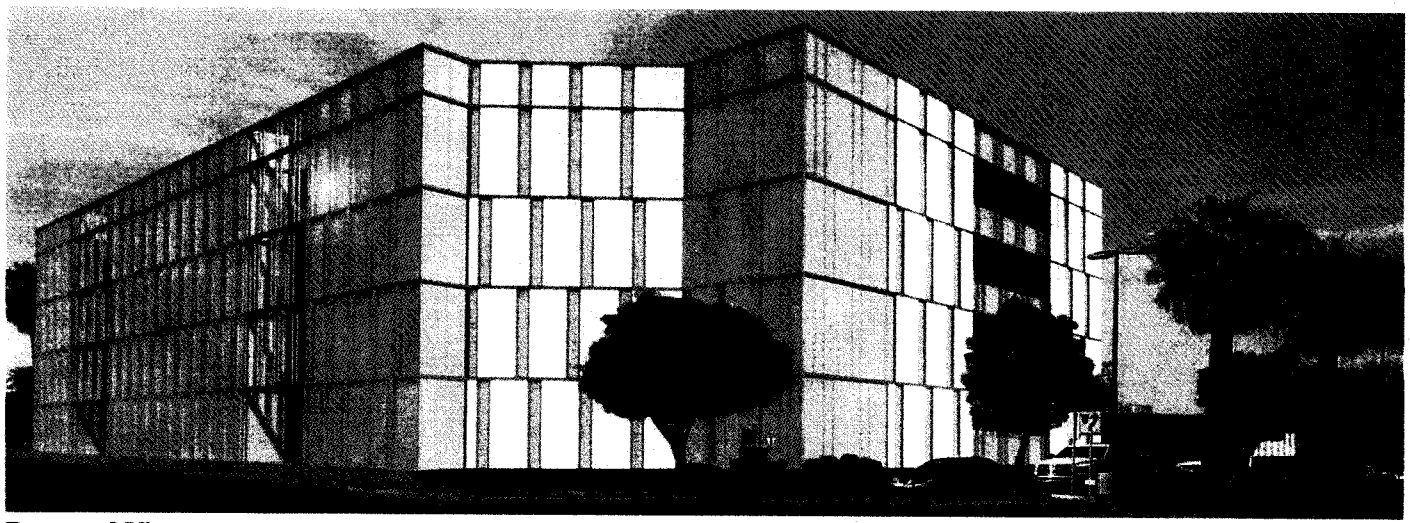
Existing View



Proposed View

LSA

FIGURE 4.1-4

East County Detention Center

View 3: Oasis Street looking Northwest
Existing and Proposed

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Existing View

Proposed View

LSA

FIGURE 4.1-5

East County Detention Center

View 4: Oasis Street/Plaza Avenue looking Southeast
Existing and Proposed

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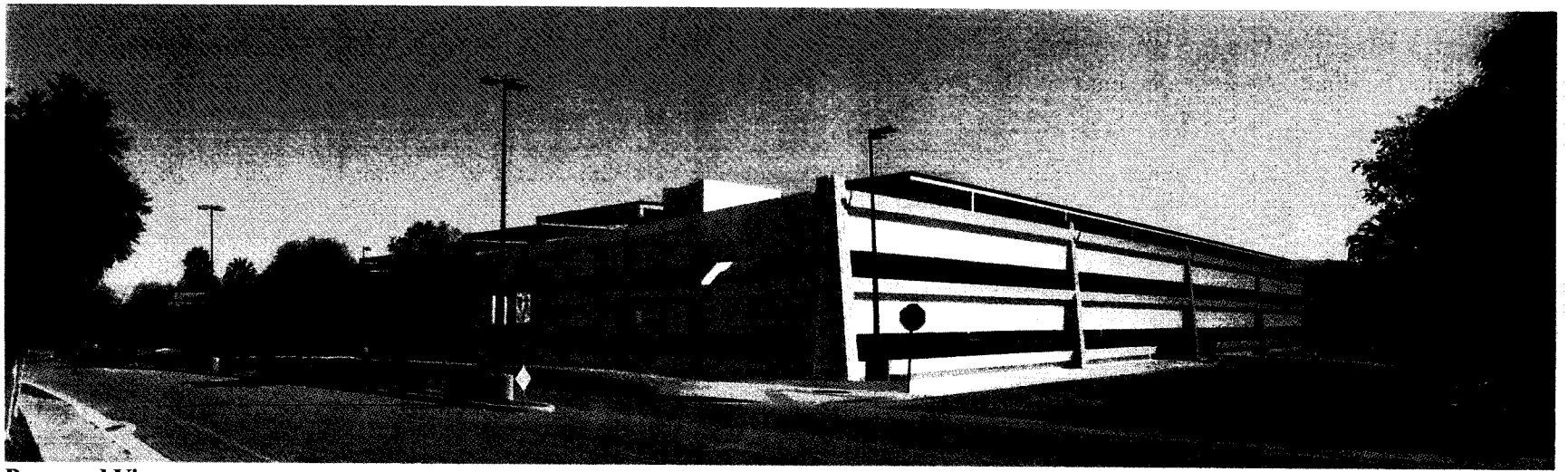
Existing View



Proposed View

LSA

FIGURE 4.1-6

East County Detention Center

View 5: Oasis Street looking Northeast
Existing and Proposed

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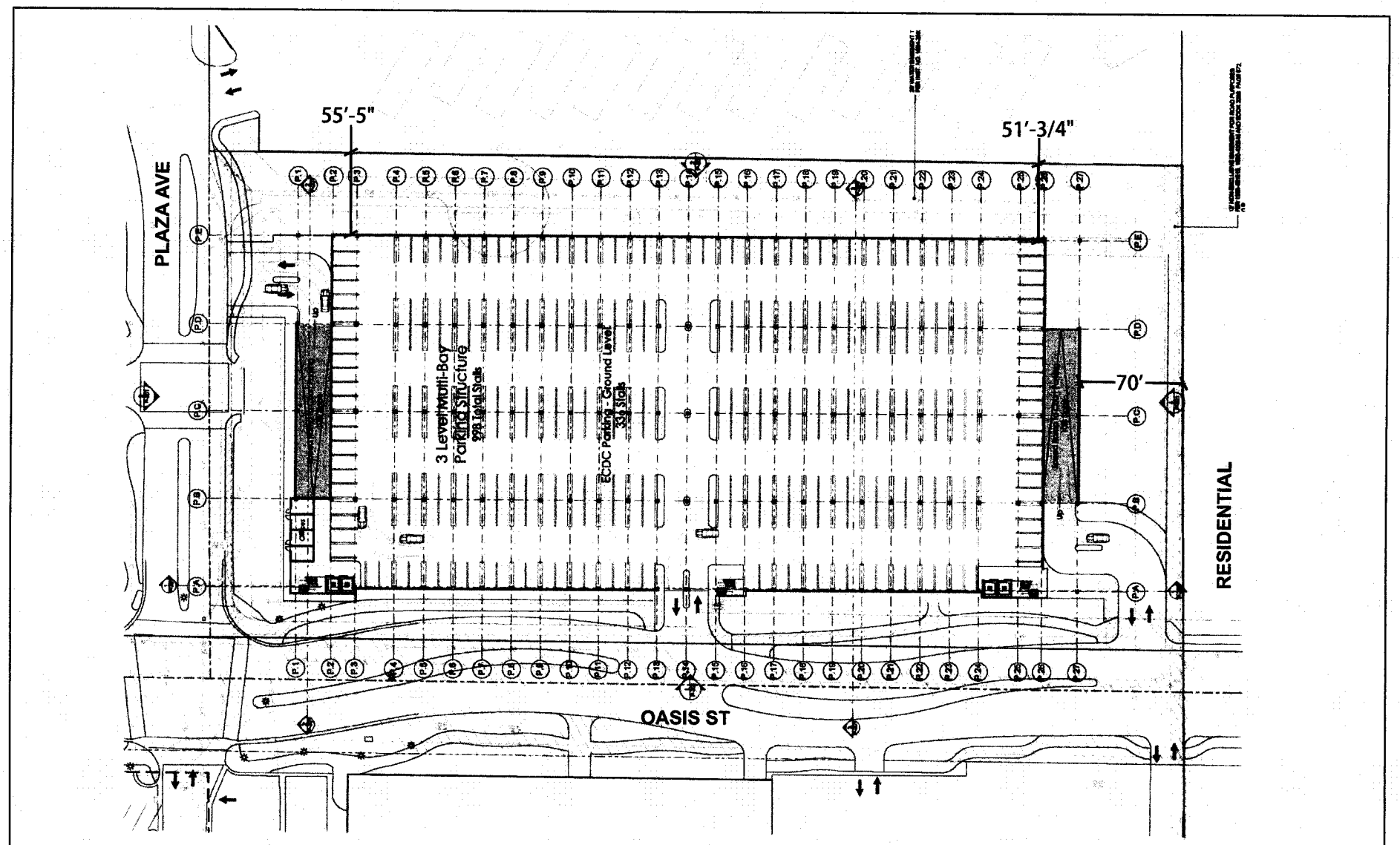

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FIGURE 4.1-7

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SOURCE: HOK, Feb 2013

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East County Detention Center

Setback Distances for Parking Lot

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View 6: View looking North at the site from the neighborhood to the South.

View 7: View looking North/Northeast at the site from the neighborhood to the South.

LSA

FIGURE 4.1-8

East County Detention Center

Existing Views 6 and 7 of Parking Lot

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View 8: View looking West at the site from the mobile home park.

View 9: View looking West/Southwest at the site from the mobile home park.

LSA

FIGURE 4.1-9

East County Detention Center

Existing Views 8 and 9 of Parking Lot

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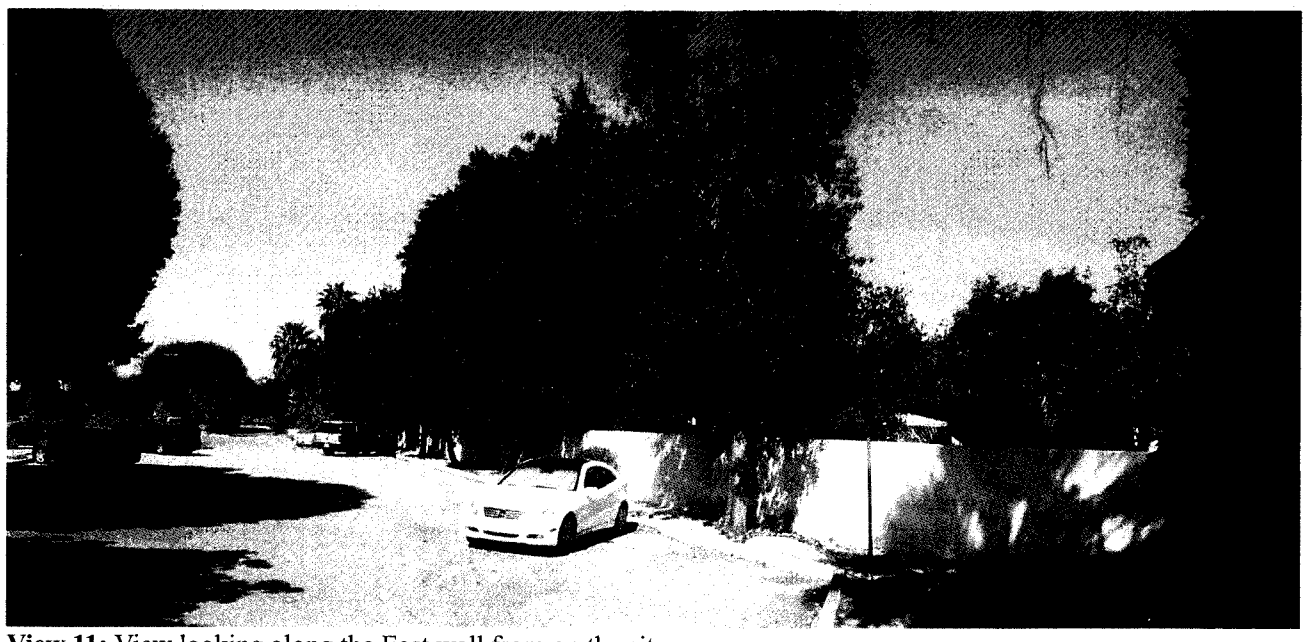
View 10: View looking at the South wall from on the site.



View 11: View looking along the East wall from on the site.

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FIGURE 4.1-10

East County Detention Center

Existing Views 10 and 11 of Parking Lot

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4.2 AIR QUALITY

This section of the EIR evaluates the potential air quality impacts associated with construction and operation of the proposed project. The air quality assessment for the proposed project includes estimating emissions associated with short-term construction and long-term operation of the proposed project. A local carbon monoxide (CO) hot spot analysis was conducted using the CALINE4 dispersion model, and the model results are included in Appendix B of this EIR (*Air Quality Analysis*, LSA Associates Inc. [LSA], April 2013). Construction and operation emissions were calculated using the CalEEMod emissions model, and the model results are also included in Appendix B of this EIR.

Greenhouse gas (GHG) emissions as a result of the proposed project are addressed later in Section 4.4, Climate Change.

4.2.1 Existing Environmental Setting

Regional Air Quality. The project site is located in the City of Indio (City) in the County of Riverside (County), within the Coachella Valley Planning Area, which is part of the Salton Sea Air Basin (SSAB, or Basin) that was part of the Southeast Desert Air Basin (SEDAB). This part of the SSAB is currently under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

Both the State of California (State) and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants. As shown in Table 4.2.A, these pollutants include ozone (O_3), CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter with a diameter of 10 microns or less (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide (H_2S), vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to setting primary and secondary AAQS, the State has established a set of episode criteria for O_3, CO, NO_2, SO_2, and PM_{10}. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Health effects are progressively more severe as pollutant levels increase from Stage One to Stage Three. An alert level is that concentration of pollutants at which initial stage control actions are to begin. An alert will be declared when any one of the pollutant alert levels is reached at any monitoring site and meteorological conditions are such that the pollutant concentrations can be expected to remain at these levels for 12 or more hours or to increase; or, in the case of oxidants, the situation is likely to recur within the next 24 hours unless control actions are taken.

Pollutant alert levels:

- **O_3:** 392 micrograms per cubic meter ($\mu g/m^3$) (0.20 parts per million [ppm]), 1-hour average
- **CO:** 17 milligrams per cubic meter (mg/m^3) (15 ppm), 8-hour average
- **NO_2:** 1,130 $\mu g/m^3$ (0.6 ppm) 1-hour average; 282 $\mu g/m^3$ (0.15 ppm) 24-hour average
- **SO_2:** 800 $\mu g/m^3$ (0.3 ppm), 24-hour average
- **Particulates, measured as PM_{10}:** 350 $\mu g/m^3$, 24-hour average

Table 4.2.A: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm (137 µg/m³)		0.075 ppm (147 µg/m³)		
Respirable Particulate Matter (PM_{10})	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		--		
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12 µg/m³		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m³)		35 ppm(40 mg/m³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	—
Nitrogen Dioxide (NO_2)[8]	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1-Hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	—	
Sulfur Dioxide (SO_2)[9]	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (for certain areas)[9]	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	24-Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[9]	—	
	3-Hour	—		—	0.5 ppm (1300 µg/m³)	
	1-Hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)	—	
Lead[10,11]	30-Day Average	1.5 µg/m³	Atomic Absorption	—	—	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³	Same as Primary Standard	
	Rolling 3-Month Average[11]	—		0.15 µg/m³		
Visibility-Reducing Particles[12]	8-Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	**No Federal Standards**		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: California Air Resources Board (June 7, 2012).

Footnotes:

1 California standards for ozone; carbon monoxide (except Lake Tahoe); sulfur dioxide (1- and 24-hour); nitrogen dioxide; suspended particulate matter - PM_{10}, $PM_{2.5}$ and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2 National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth-highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is

equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the EPA for further clarification and current federal policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] Any equivalent procedure which can be shown to the satisfaction of ARB to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

[8] To attain the 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[9] On June 2, 2010, the new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[10] The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[11] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.

[12] In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basins, respectively.

°C = degrees Celsius
ARB = California Air Resources Board
EPA = United States Environmental Protection Agency
$\mu g/m^3$ = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
ppm = parts per million
ppb = parts per billion

Table 4.2.B lists the primary sources, health effects and prevention/control methodology of the criteria air pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (EPA), these health effects will not occur unless the standards are exceeded by a large margin or for a prolonged period of time. State AAQS are more stringent than federal AAQS. Among the pollutants, O_3 and particulate matter (PM, $PM_{2.5}$, and PM_{10}) are considered regional pollutants, while the others have more localized effects.

Climate/Meteorology. Air quality in the planning area is not only affected by various emission sources (mobile, industry, etc.), but also by atmospheric conditions, such as wind speed, wind direction, temperature, and rainfall. The climate in the Coachella Valley is determined by its terrain and geographical location. The Coachella Valley is located in the northern region of the Salton Trough and is characterized by warm summer days and mild winters with low average precipitation. It is bordered by the San Jacinto, Santa Rosa and San Bernardino mountains and is part of the Whitewater watershed that drains into the Salton Sea. The highest peaks in the surrounding mountains are Mt. San Jacinto (10,804 feet [ft]) and Mt. San Gorgonio (11,499 ft). Elevations on the Valley floor range from 1600 ft above sea level at the upper end of the Valley near Palm Springs to 250 ft below sea level at the Salton Sink.

Annual temperature variations in the Coachella Valley are extreme with occasional winter lows in the mid 20s (°F) and occasional summer highs in the mid-120s (degrees Fahrenheit [°F]). The mean annual temperature is 74 °F. The Valley offers a 300 day frost free growing season with some crops grown successfully through the entire year. During the summer, the SSAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The SSAB is rarely influenced by cold air masses moving south from Canada and Alaska, because these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The SSAB averages between 3 and 7 inches of precipitation per year. The climatological station closest to the site is the Indio Fire station. The monthly average maximum temperature recorded at this station from 1894 to 2012 ranged from 70.6 °F in January to 106.9 °F in August, with an annual average maximum of 88.9 °F. The monthly average minimum temperature recorded at this station ranged from 39.2 °F in January to 77.8 °F in July, with an annual average minimum of 58.2°F. January or December is typically the coldest month, and July is typically the warmest month in this area of the Basin.

The majority of annual rainfall in the Basin occurs between August and March. Summer rainfall is minimal and is generally limited to scattered thundershowers in the eastern portion of the Basin and along the side of the mountains. The Indio Fire station monitored precipitation from 1894 to 2012. Average monthly rainfall measured during that period varied from 0.64 inch in January to 0.12 inch or less between March and August, with an annual total of 3.29 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

Seasonal winds can be a problem in some regions of the Valley. Windstorms most frequently occur in the late spring and can cause extensive damage to unprotected soils, plants, structures and vehicles. Airborne dust carried by these winds can compromise air quality and respiratory health.

Table 4.2.B: Air Pollution Sources, Effects and Control

Pollutant	Sources	Effects	Prevention and Control
Ozone (O_3)	Formed when reactive organic gases (ROG) and nitrogen oxides react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	Breathing difficulties, lung tissue damage, damage to rubber and some plastics.	Reduces motor vehicle reactive ROG and nitrogen oxide emissions through emissions standards, reformulated fuels, inspection programs, and reduced vehicle use. Limits ROG emissions from commercial operations and consumer products. Limits ROG and NO_x emissions from industrial sources such as power plants and refineries. Conserves energy.
Respirable Particulate Matter (PM_{10})	Road dust, windblown dust (agriculture) and construction (fireplaces). Also formed from other pollutants (acid rain, NO_x, SO_x, organics). Incomplete combustion of any fuel.	Increased respiratory disease, lung damage, cancer, premature death, reduced visibility, surface soiling.	Controls dust sources, industrial particulate emissions, wood burning stoves and fireplaces. Reduces secondary pollutants which react to form PM_{10}. Conserves energy.
Fine Particulate Matter ($PM_{2.5}$)	Fuel combustion in motor vehicles, equipment and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_x, SO_x, organics).	Increased respiratory disease, lung damage, cancer, premature death, reduced visibility, surface soiling.	Reduces combustion emissions from motor vehicles, equipment, industries and agriculture and residential burning. Precursor controls, like those for ozone, reduce fine particle formation in the atmosphere.
Carbon Monoxide (CO)	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Chest pain in heart patients, headaches, reduced mental alertness.	Controls motor vehicle and industrial emissions. Uses oxygenated gasoline during winter months. Conserves energy.
Nitrogen Dioxide (NO_2)	See CO.	Lung irritation and damage. Reacts in the atmosphere to form ozone and acid rain.	Controls motor vehicle and industrial combustion emissions. Conserves energy.
Lead	Metal smelters, resource recovery, leaded gasoline, deterioration of lead paint.	Learning disabilities, brain and kidney damage.	Controls metal smelters, no lead in gasoline. Replaces leaded paint with nonlead substitutes.
Sulfur Dioxide (SO_2)	Coal or oil burning power plants and industries, refineries, diesel engines.	Increased lung disease and breathing problems for asthmatics. Reacts in the atmosphere to form acid rain.	Reduces the use of high sulfur fuels (e.g., use low sulfur reformulated diesel or natural gas). Conserves energy.
Visibility-Reducing Particles	See $PM_{2.5}$	Reduced visibility (e.g., obscures mountains and other scenery), reduced airport safety, lowered real estate values, tourism discouraged.	See $PM_{2.5}$.

Table 4.2.B: Air Pollution Sources, Effects and Control

Pollutant	Sources	Effects	Prevention and Control
Sulfates	Produced by the reaction in the air of SO_2 (see SO_2 sources), a component of acid rain.	Breathing difficulties, aggravated asthma, reduced visibility.	See SO_2.
Hydrogen Sulfide	Geothermal power plants, petroleum production and refining, sewer gas.	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations).	Controls emissions from geothermal power plants, petroleum production and refining, sewers, sewage treatment plants.

Source: ARB 2013 (http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm).
ARB = California Air Resources Board
NOx = nitrogen oxides
SO_x = sulfur oxides

Air Pollution Constituents and Attainment Status. The ARB coordinates and oversees both State and federal air pollution control programs in California. The ARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the EPA and local air districts. The ARB has divided the State into 15 air basins, based on meteorological and topographical factors of air pollution. Data collected at these stations are used by the ARB and EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent 3 calendar years compared with the AAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA. The air quality data are also used to monitor progress in attaining air quality standards. Table 4.2.C lists the attainment status for criteria pollutants in the SSAB.

Table 4.2.C: Attainment Status of Criteria Pollutants in the Salton Sea Air Basin

	State	Federal
1-hour Ozone	Nonattainment	N/A
8-hour Ozone	Nonattainment	Serious Nonattainment
PM_{10}	Nonattainment	Serious Nonattainment
$PM_{2.5}$	Attainment/Unclassified	Attainment/Unclassified
CO	Attainment	Attainment/Unclassified
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment/Unclassified
Lead	Attainment	Attainment/Unclassified
All others	Attainment/Unclassified	Attainment/Unclassified

Source: ARB 2013 (http://www.arb.ca.gov/desig/desig.htm).
CO = carbon monoxide
N/A = not available
NO_2 = nitrogen dioxide
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns in diameter
SO_2 = sulfur dioxide

Ozone. O_3 (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases rather than being directly emitted. Ozone is a pungent, colorless gas typical of Southern California smog. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. Ozone levels peak during summer and early fall. The entire SSAB is designated as a nonattainment area for the State 1-hour and 8-hour ozone standards. The EPA has officially designated the status for the SSAB regarding the 8-hour ozone standard as "Serious," which means the SSAB has until 2020 to attain the federal 8-hour O_3 standard.

Particulate Matter. Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles, PM_{10}, derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and resultant exhaust from power plants and diesel buses and trucks are primarily responsible for fine particle ($PM_{2.5}$) levels. Fine particles can also be formed in the atmosphere through chemical reactions. PM_{10} can accumulate in the respiratory system and aggravate health problems such as asthma. The EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to the health effects listed in a number of recently published community epidemiological studies at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms. The entire SSAB is designated as a nonattainment area for the State PM_{10} standards. The EPA has officially designated the status for the SSAB regarding the PM_{10} standard as "Serious," which means the SSAB has until 2020 to attain the federal PM_{10} standard. The entire SSAB is designated an "Attainment/ Unclassified" area under both State and federal $PM_{2.5}$ standards.

Carbon Monoxide. CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless odorless gas that can cause dizziness, fatigue, and impairment to central nervous system functions. The entire SSAB is in attainment for the State standards for CO. The SSAB is designated as an "Attainment/Unclassified" area under the federal CO standards.

Nitrogen Oxides. NO_2, a reddish-brown gas, and nitric oxide (NO), a colorless odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_X. NO_X is a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition (i.e., acid rain). NO_2 decreases lung function and may reduce resistance to infection. The entire SSAB is designated as Attainment for the State NO_2 standard and as an "Attainment/Maintenance" area under the federal NO_2 standard.

Sulfur Dioxide. SO_2 is a colorless irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight. The entire SSAB is designated as Attainment for the State SO_2 standard and as an "Attainment/Unclassified" area under the federal SO_2 standards.

Sulfates. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The entire Basin is in attainment for the State standard for sulfates.

Lead. Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the blood stream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead. The entire SSAB is designated as Attainment for the State lead standard and as an "Attainment/Unclassified" area under the federal lead standards.

Hydrogen Sulfide. Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. In 1984, an ARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance. The entire SSAB is unclassified for the State standard for H_2S.

Visibility-Reducing Particles. Visibility-reducing particles consist of suspended particulate matter, which 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, dust, and salt. The statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. The entire SSAB is unclassified for the State standard for visibility-reducing particles.

Reactive Organic Compounds. Reactive organic compounds (ROCs; also known as ROGs and volatile organic compounds [VOCs]) are formed from combustion of fuels and evaporation of organic solvents. ROCs are not defined criteria pollutants but are a prime component of the photochemical smog reaction. Consequently, ROCs accumulate in the

atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower. There is no attainment status for ROC.

Local Air Quality. The SCAQMD, together with the ARB, maintains ambient air quality monitoring stations in the Coachella Valley Area. The closest monitoring station is the Indio air quality monitoring station, which monitors three of the criteria pollutants: O_3, PM_{10}, and $PM_{2.5}$. The closest monitoring station with CO and NO_2 data is the Palm Springs station, and the closest with SO_2 data is the Calexico station.

Air quality trends identified from data collected at both air quality monitoring stations from 2009 to 2011 are listed in Table 4.2.D. From the ambient air quality data listed, it can be seen that CO, NO_2, and SO_2 levels have not exceeded the relevant federal or State standards in the past 3 years. O_3 levels in the project area exceed the State and federal standards regularly, and PM_{10} and $PM_{2.5}$ levels exceeded the State standards only occasionally.

4.2.2 Regulatory Settings

Federal Regulations/Standards. Pursuant to the Federal Clean Air Act (FCAA) of 1970, EPA established national ambient air quality standards (NAAQS). The NAAQS were established for six major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health. These standards are listed in Table 4.2.A.

Data collected at permanent monitoring stations are used by EPA to classify regions as "attainment" or "nonattainment," depending on whether the regions meet the requirements stated in the primary NAAQS. Additional restrictions are imposed on nonattainment areas by EPA. Attainment status was shown earlier in Table 4.2.C.

EPA has designated the Southern California Association of Governments (SCAG) as the Metropolitan Planning Organization (MPO) responsible for ensuring compliance with the requirements of the FCAA for the SSAB.

EPA established new NAAQS for ground-level O_3 and $PM_{2.5}$ in 1997. On May 14, 1999, the Court of Appeals for the District of Columbia Circuit issued a decision ruling that the FCAA, as applied in setting the new public health standards for O_3 and particulate matter, was unconstitutional as an improper delegation of legislative authority to EPA. On February 27, 2001, the United States Supreme Court upheld the way the government sets air quality standards under the FCAA. The court unanimously rejected industry arguments that EPA must consider financial cost as well as health benefits in writing standards. The justices also rejected arguments that EPA took too much lawmaking power from Congress when it set tougher standards for O_3 and particulate matter in 1997. Nevertheless, the court threw out EPA's policy for implementing new O_3 rules, saying that the agency ignored a section of the law that restricts its authority to enforce such rules.

In April 2003, EPA was cleared by the White House Office of Management and Budget (OMB) to implement the 8-hour ground-level ozone standard. EPA issued the proposed rule implementing the 8-hour ozone standard in April 2003. EPA completed final 8-hour nonattainment status on April 15,

Table 4.2.D: Ambient Air Quality in the Project Vicinity

Pollutant	Standard	2009	2010	2011
Carbon Monoxide (Palm Springs-Fire Station)				
Maximum 1-hr concentration (ppm)		2.3	1.6	3.0
No. days exceeded:	State: > 20 ppm/1-hr	0	0	0
	Federal: > 35 ppm/1-hr	0	0	0
Maximum 8-hr concentration (ppm)		0.67	0.56	0.65
No. days exceeded:	State: ≥9 ppm/8-hr	0	0	0
	Federal: ≥9 ppm/8-hr	0	0	0
Ozone (Indio-Jackson Street station)				
Maximum 1-hr concentration (ppm)		0.097	0.100	0.099
No. days exceeded:	State: > 0.09 ppm/1-hr	6	6	3
Maximum 8-hr concentration (ppm)		0.090	0.087	0.090
No. days exceeded:	State: > 0.07 ppm/8-hr	41	45	42
	Federal: > 0.08 ppm/8-hr	24	19	19
Particulates (PM_{10}) (Indio-Jackson Street station)				
Maximum 24-hr concentration ($\mu g/m^3$)		132.0	107.0	375.9
No. days exceeded:	State: > 50 $\mu g/m^3$	4	4	3
	Federal: > 150 $\mu g/m^3$	0	0	2
Annual arithmetic average concentration ($\mu g/m^3$)		31.8	29.7	35.4
Exceeded:	State: > 20 $\mu g/m^3$ annual avg.	Yes	Yes	Yes
	Federal: > 50 $\mu g/m^3$ annual avg.	No	No	No
Particulates ($PM_{2.5}$) (Indio-Jackson Street station)				
Maximum 24-hr concentration ($\mu g/m^3$)		27.5	16.0	35.4
No. days exceeded:	Federal: > 35 $\mu g/m^3$	0	0	1
Annual arithmetic average concentration ($\mu g/m^3$)		7.8	6.8	7.1
Exceeded:	State: > 12 $\mu g/m^3$ annual avg.	No	No	No
	Federal: > 15 $\mu g/m^3$ annual avg.	No	No	No
Nitrogen Dioxide (Palm Springs-Fire Station)				
Maximum 1-hr concentration (ppm)		0.048	0.046	0.045
No. days exceeded:	State: > 0.25 ppm/1-hr	0	0	0
Annual average concentration (ppm)		0.008	0.009	0.008
Exceeded:	Federal: > 0.053 ppm annual avg.	No	No	No
Sulfur Dioxide (Calexico-Ethel Street station)				
Maximum 24-hr concentration (ppm)		0.004	0.004	0.003
No. days exceeded:	State: > 0.04 ppm/24-hr	0	0	0
	Federal: > 0.14 ppm/24-hr	0	0	0
Annual average concentration (ppm)		0.0	0.0	0.0
Exceeded:	Federal: > 0.030 ppm annual avg.	No	No	No

Source: EPA and ARB websites, 2013.

2004. EPA revoked the 1-hour ozone standard on June 15, 2005, and lowered the 8-hour O_3 standard from 0.08 parts per million (ppm) to 0.075 ppm on April 1, 2008.

EPA issued the final $PM_{2.5}$ implementation rule in fall 2004. The EPA lowered the 24-hour $PM_{2.5}$ standard from 65 to 35 micrograms per cubic meter ($\mu g/m^3$) and revoked the annual PM_{10} standard on December 17, 2006. EPA issued final designations for the 2006 24-hour $PM_{2.5}$ standard on December 12, 2008.

State Regulations/Standards. In 1967, the California Legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus: the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board, in order to establish ARB. Since its formation, ARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems.

The California Clean Air Act of 1988 (CCAA) provides the air districts, such as SCAQMD, with the authority to manage transportation activities at indirect sources. Indirect sources of pollution are generated when multiple minor sources collectively emit a substantial amount of pollution. Examples of this would be motor vehicles at an intersection, at a mall, and on highways. SCAQMD also regulates stationary sources of pollution throughout its jurisdictional area. Direct emissions from motor vehicles are regulated by the California Air Resources Board (ARB).

The ARB identified particulate emissions from diesel-fueled engines (diesel particulate matter [DPM]) as toxic air contaminants (TACs) in August 1998. Following the identification process, ARB was required by law to determine whether there is a need for further control. In September 2000, the ARB adopted the Diesel Risk Reduction Plan (Diesel RRP), which recommends many control measures to reduce the risks associated with DPM and to achieve the goal of 85 percent DPM reduction by 2020.

Regional Air Quality Planning Framework. The 1976 Lewis Air Quality Management Act established SCAQMD and other air districts throughout the State. The FCAA Amendments of 1977 required that each state adopt an implementation plan outlining pollution control measures to attain the federal standards in nonattainment areas of the state.

The ARB is responsible for incorporating air quality management plans for local air basins into a State Implementation Plan (SIP) for EPA approval. Significant authority for air quality control within the local air basins has been given to local air districts that regulate stationary source emissions and develop local nonattainment plans.

Regional Air Quality Management Plan. The SCAQMD and the SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the SSAB. Every three years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20 year horizon. The SCAQMD adopted the 2012 AQMP in December 2012 and forwarded it to ARB for review and approval.

The 2012 AQMP incorporated the latest scientific/technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. The 2012 AQMP included the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

County of Riverside General Plan Air Quality Element. The County Air Quality Element includes the following policies related to air quality that are applicable to the proposed project.

AQ 2.2. Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.

AQ 2.3. Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution.

AQ 4.6. Require stationary air pollution sources to comply with applicable air district rules and control measures.

AQ 4.9. Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.

4.2.3 Methodology

Evaluation of air quality impacts associated with a proposed project typically includes the following:

- Determining the short-term construction air quality impacts based on SCAQMD emissions thresholds
- Determining the long-term air quality impacts, including vehicular traffic, based on SCAQMD emissions thresholds and CO concentration thresholds
- Determining the required mitigation measures to reduce both short- and long-term air quality impacts

A number of modeling tools are available to assess air quality impacts of projects. In addition, certain air districts, such as the SCAQMD, have created guidelines and requirements to conduct air quality analysis. SCAQMD's current guidelines, *CEQA Air Quality Handbook, April 1993*, were adhered to in the assessment of air quality impacts for the proposed project. The air quality models identified in the document (including an older version of the URBEMIS model) are outdated; therefore, the current model, CalEEMod Version 2011.1.1, was used to estimate project-related mobile and stationary sources emissions in this Air Quality Analysis.

The air quality analysis includes estimated emissions associated with short-term construction and long-term operation of the proposed project. Criteria pollutants with regional impacts would be emitted by project-related vehicular trips, as well as by emissions associated with stationary sources used on site. Localized air quality impacts, i.e., higher CO concentrations (CO hot spots) near intersections or roadway segments in the project vicinity, would be small and less than significant due to the generally low ambient CO concentrations (3.0 ppm for the 1-hour period and 0.67 ppm for the 8-hour period) in the project area.

The net increase in pollutant emissions determines the significance and impact on regional air quality as a result of the proposed project. The results also allow the local government to determine whether

the proposed project will deter the region from achieving the goal of reducing pollutants in accordance with the AQMP in order to comply with federal and State AAQS.

SCAQMD has developed localized significance threshold (LST) methodology that can be used to determine whether a project may generate significant adverse localized air quality impacts. LST emissions rates represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or State AAQS and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). SCAQMD's current guidelines, *Final Localized Significance Threshold Methodology* (June 2003, revised July 2008) and *Final – Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds* (October 2006), were adhered to in the assessment of air quality impacts for the proposed project.

The LST analysis is used to determine whether the daily emissions for the proposed construction activities could result in significant localized air quality impacts. The emissions of concern from construction activities are NO_X, CO, PM_{10}, and $PM_{2.5}$ combustion emissions from construction equipment and fugitive PM_{10} dust from construction site preparation activities. The primary emissions from operational activities include, but are not limited to, NO_X and CO combustion emissions from stationary sources and/or on-site mobile equipment. Off-site mobile-source emissions from the project are not included in the emissions compared to the LSTs.

4.2.4 Thresholds of Significance

The CEQA Guidelines indicate that there may be significant impacts to air quality if the proposed project is determined to:

- Conflict with or obstruct implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State AAQS
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people

The guidelines and emissions thresholds established by SCAQMD in its CEQA Handbook are used in this analysis. Emissions thresholds were established by SCAQMD based on the attainment status of the Basin with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety by EPA, these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Thresholds for Construction Emissions. Table 4.2.E shows the CEQA significance thresholds that have been established for the SSAB.

Table 4.2.E: SCAQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
ROCs	75 lbs/day	55 lbs/day
CO	550 lbs/day	550 lbs/day
NO_X	100 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
Lead	3 lbs/day	3 lbs/day

Source: *Air Quality Analysis*, LSA Associates, Inc., October 2009.
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns in diameter
ROCs = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides

Local Microscale Concentration Standards. The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emissions concentration standards for CO:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

Thresholds for Localized Significance. The SCAQMD published its *Final Localized Significance Threshold Methodology* in June 2003, recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors. LSTs represent the maximum emissions from a project site that are not expected to result in an exceedance of the national or State AAQS, as previously shown in Table 4.2.A. LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For this project, the appropriate SRA is Coachella Valley (SRA 30).[1]

In the case of CO and NO_2, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM_{10} and $PM_{2.5}$, both of which are nonattainment pollutants. For these two, the significance criteria are the

[1] www.aqmd.gov/ceqa/handbook/LST/LST.html.

pollutant concentration thresholds presented in SCAQMD Rules 403 and 1301. The Rule 403 threshold of 10.4 $\mu g/m^3$ applies to construction emissions (and would apply to operational emissions at aggregate handling facilities).

To avoid the need for every air quality analysis to perform air dispersion modeling, the SCAQMD conducted air dispersion modeling for a range of construction sites less than or equal to 5 ac in size and created look-up tables that correlate pollutant emissions rates with project size to screen out projects that are unlikely to generate enough emissions to result in a locally significant concentration of any criteria pollutant. These look-up tables can also be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required. The proposed project includes two sites, the existing 7.5 ac civic building site housing the jail, County Administrative Center (CAC) Building, the Law Library building, courts, and accompanying surface parking lots and the 5.5 ac surface parking lot located across from the jail site diagonally southeast across Oasis Street, immediately south of the Larson Justice Center courthouse.

LST thresholds for construction emissions depend on the details of the construction operations. Thus, the LST thresholds used in this report are described in the construction impacts section. For operational emissions, the localized significance for a project larger than 5 ac can be determined by performing the screening-level analysis before using the dispersion modeling because the screening-level analysis is more conservative, and if no exceedance of the screening-level thresholds is identified, then the chance of operational LST exceeding concentration standards is small. Therefore, for a conservative approach, the LST screening thresholds for 5 ac are used in this analysis for operational emissions.

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. The closest existing residential uses are a mobile home park to the east and residences to the south of the parking structure. Using the LST thresholds for receptors at 80 ft from a 5 ac site for this project would result in a conservative analysis because project operational emissions would be emitted over an area larger than a 5 ac site. Therefore, the following emissions thresholds apply during project operations:

- 304 pounds per day (lbs/day) of NO_X
- 2,292 lbs/day of CO
- 4.0 lbs/day of PM_{10}
- 2.0 lbs/day of $PM_{2.5}$

4.2.5 Impacts and Mitigation Measures

Less Than Significant Impacts. The following impacts that could result from implementation of the proposed project were evaluated and determined to be less than significant.

County of Riverside General Plan Air Quality Element Policy Analysis. The County's General Plan includes policies related to air quality that are related to the proposed project (refer to Section 4.2.2). The proposed project is compliant with all of the applicable General Plan policies. Therefore,

the project would not result in conflicts with the policies in the General Plan Air Quality Element, and would not incur any physical impacts related to policy consistency.

The project has landscaping incorporated into the design and would preserve existing landscaping near the sensitive receptors to the east and south of Site B. The project would be implemented in compliance with all SCAQMD rules and regulations.

Air Quality Management Plan Consistency. A consistency analysis determination plays an essential role in local agency project review by linking local planning and unique individual projects to the AQMP in the following ways: it fulfills the CEQA goal of fully informing local agency decision makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are fully addressed, and it provides the local agency with ongoing information, assuring local decision makers that they are making real contributions to clean air goals defined in the most current AQMP. The most current applicable AQMP for the project area is the 2012 SCAQMD AQMP.

For a project in the SSAB to be consistent with the AQMP, the pollutants emitted from the project must not exceed the air district's significance thresholds or cause a significant impact to air quality. If feasible mitigation measures can be implemented to reduce the project's impact level from significant to less than significant under CEQA, the project is considered to be consistent with the AQMP.

As discussed under Operational Impacts, the proposed project would not significantly contribute to or cause deterioration of existing air quality; therefore, mitigation measures are not required for the long-term operation of the project. Hence, the proposed project is considered to be consistent with the County General Plan and the SCAG forecast, and is therefore consistent with the AQMP.

Construction Impacts. Construction activities produce combustion emissions from various sources such as site grading, utility engines, on-site heavy-duty construction vehicles, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from construction activities envisioned on site would vary daily as construction activity levels change. Implementation of the project would include both demolition of existing structures and parking lots and construction of the new facilities. The proposed ECDC project is estimated to take approximately 36 months to complete. Construction would commence with demolition of the Law Library, CAC Building, and connector corridor to the existing jail in November 2013. The ECDC project would be completed with demolition of the old jail and construction of the on-site parking lot on the northeast corner of the detention center site in November 2016. Table 4.2.F lists the construction phases and estimated durations. Table 4.2.G lists the anticipated equipment to be used for each phase.

The most recent version of the CalEEMod model (Version 2011.1.1) was used to calculate construction emissions, as shown in Table 4.2.H. The emissions shown are the combination of the on- and off-site emissions. Table 4.2.H lists a representative set of emission sources that represent a peak day during the various construction years. As shown, construction equipment/vehicle emissions of criteria pollutants would remain below the SCAQMD emission thresholds. The Building Construction and the Architectural Coating phases are expected to overlap without any exceedances. Details of the emission factors and other assumptions are included in the Air Quality Analysis in Appendix B.

Table 4.2.F: Construction Schedule

Construction Phase	Number of Days
Demolition	20
Building Construction	740
Architectural Coating	350
Paving	20

Source: Project Design.

Table 4.2.G: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	1	8	81	0.73
	Excavators	3	8	157	0.57
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	Welders	1	8	46	0.45
Architectural Coating	Air Compressors	1	6	78	0.48
Paving	Pavers	2	8	89	0.62
	Paving Equipment	2	8	82	0.53
	Rollers	2	8	84	0.56

Source: Project Plans and CalEEMod Defaults.
ARB = California Air Resources Board

Table 4.2.H: Short-Term Regional Construction Emissions

	Total Regional Pollutant Emissions, lbs/day							
Construction Phase	ROG	NO_X	CO	SO_2	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Demolition	9.8	81	48	0.08	10	3.9	0.02	3.9
Building Construction	10	56	70	0.11	6.1	3.0	0.09	2.9
Architectural Coating	56	3.2	8.4	0.01	1.0	0.25	0.01	0.25
Paving	4.7	28	22	0.03	0.2	2.4	0	2.4
Peak Daily Emissions	66	81	79	0.12	14		3.9	
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**		**55**	
Significant Emissions?	**No**	**No**	**No**	**No**	**No**		**No**	

Source: LSA Associates, Inc., April 2013.
Note: The emission rates shown are from the CalEEMod output tables listed as "Mitigated Construction," even though the only mitigation measures that have been applied to the analysis are construction emission control measures required by SCAQMD.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides

City of Indio Policies and Regulations. The City of Indio's General Plan and zoning do not apply to the project because they are pre-empted by State law on property owned or leased by the County.[1] However, the following policies are provided to show that the project is generally in compliance with the City's General Plan Goals and Policies Report, Environmental Resources Chapter.

City of Indio General Plan – 2020. The City of Indio General Plan policies relevant to biological resources are set forth below.

- **Goal BIO-1-2:** Preserve and protect sensitive plant and wildlife resources within the Planning Area.
- **Policy BIO-1.1:** Protect and preserve the desert fan palm oases located in the southern slopes of the Indio Hills.
- **Policy BIO-1.2:** Protect upland habitat in the Indio Hills area.
- **Policy BIO-1.3:** Encourage the protection/enhancement of native habitats throughout the Planning Area.
- **Policy BIO-1.4:** Work with public and private entities in educating the general public as to the importance of the Coachella Valley ecosystem.
- **Policy BIO-1.5:** Support the efforts of the Coachella Valley Fringe-Toed Lizard Habitat Conservation Plan.

City of Indio Municipal Code – Protection of City Trees. The City of Indio Municipal Code Chapter 98 requires a permit in order to plant, remove, cut, prune, root prune, apply pesticides, or otherwise disturb any City tree or shrubs. Also, it is the responsibility of the Human Services Commission to serve as the City's Tree Advisory Board and afford protection to trees with special significance to be deemed Heritage Trees.

4.3.3 Methodology

Literature Review. The literature review provides a baseline from which to evaluate the biological resources potentially occurring on the project site, as well as the surrounding area. A compilation of sensitive plant and wildlife species recorded in the vicinity of the site was derived from CDFW's California Natural Diversity Database (CNDDB), a sensitive species and plant community account database. The CNDDB searches were based on the *Indio, California (3311662)* USGS 7.5-minute topographic quadrangles and the eight quadrangles surrounding it. Additional quadrangles include *La Quinta (3311663), Myoma (3311673), West Berdoo Canyon (3311672), Rockhouse Canyon (3311671), Thermal Canyon (3311661), Martinez Mtn. (3311653), Valerie (3311652), and Mecca (3311651).* Federal register listings, protocols, and species data provided by USFWS and CDFW were reviewed in conjunction with anticipated federal and State-listed species potentially occurring in the vicinity.

[1] California Government Code Sections 53090 through 53091, *Sunny Slope Water Co. v. City of Pasadena,* Cal 2d 87,98 (1934).

Site Assessment. A site assessment was conducted to determine the general habitat type present on the property. As a fully developed facility located within the central portion of the City, site photos and aerial mapping were utilized to make conclusions regarding the site's biological resources.

4.3.4 Thresholds of Significance

The California Environmental Quality Act (CEQA) Guidelines define "significant effect on the environment" as a "substantial or potentially substantial adverse change in the environment." The CEQA Guidelines further indicate that there may be significant impacts to biological resources if the proposed project is determined to:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW 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 CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (CWA), through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.

4.3.5 Impacts and Mitigation Measures

Less than Significant Impacts. The following impacts to biological resources that could result from implementation of the project are considered less than significant.

Candidate, Sensitive, or Special-Status Plant Species.

Sensitive Plant Species. The entire project site is developed and only contains nonnative ornamental plants. No impacts to sensitive plant species would occur. No mitigation is required.

Sensitive Natural Communities/Jurisdictional Areas. The entire project site is developed and does not contain area that is qualifies as jurisdictional waters, wetlands or riparian

habitat. Therefore, no impacts to jurisdictional areas would occur and no mitigation is required.

Movement and Migration. The project site is fully developed and located within the central portion of the City of Indio. Therefore, no portions of the project site are located within, or contribute to, any existing functioning regional wildlife corridor areas or linkages. Therefore, no impacts would occur, and no mitigation is required.

Local Protection Policies or Ordinances. As previously stated, the City of Indio's local policies do not apply to the project because they are pre-empted by state law on property owned or leased by the County. Additionally, no Heritage Trees have been identified on the site and much of the perimeter trees located on City property would likely be retained. Therefore no impacts related to local policies would result from the implementation of the proposed project. No mitigation is required.

Conflict with Conservation Plans. Because the proposed project does not lie within the CVMSHCP Conservation Area, no significant impacts are anticipated that would jeopardize the conservation goals of the CVMSHCP.

Potentially Significant Impacts. The following impacts to biological resources that could result from implementation of the project are considered potentially significant.

Candidate, Sensitive, or Special-Status Wildlife Species.

Sensitive Bat Species. The project site is completely developed, but does contain palm trees and architectural features on the existing buildings that may provide suitable habitat for one or more of five sensitive bat species identified in the special-status species database search for this area. Due to the regular use and continued occupancy of the buildings, bats roosts are not expected to be present. However, as a precautionary measure, bat surveys will be conducted prior to construction of the proposed project. Implementation of Mitigation Measure BR-1 would mitigate impacts to bat species to a less than significant level.

Nesting Birds. There is suitable avian roosting and nesting habitat throughout the project site due to the presence of mature landscape trees and shrubs on both project Site A and Site B. It is anticipated that the interior vegetation of Site A and Site B would be removed but that the perimeter landscaping would be retained to the highest extent possible. If the clearance of vegetation occurs during the avian nesting season (January 15–August 31), a preconstruction nesting bird survey should be conducted prior to any vegetation or ground disturbance activities. Implementation of Mitigation Measure BR-2 would mitigate impacts to nesting birds to a less than significant level.

Mitigation Measures.

BR-1 **Preconstruction Bat Surveys.** Project implementation shall avoid disturbance to the maternity roosts of special-status bats during the breeding season. No more than 2 weeks in advance of any demolition or construction activity involving concrete breaking or similarly noisy or intrusive activities that would commence during the breeding season (March 1 through August 31), the County of Riverside (County) shall procure the services of a qualified bat biologist and shall conduct predemolition surveys of all potential special-status bat breeding habitat in the vicinity of the planned activity. If active roosts are identified during preconstruction surveys, a Bat Protection Plan shall be prepared and implemented in consultation with the California Department of Fish and Wildlife (CDFW). The plan will determine the location and size of the construction buffer areas and establish any further actions necessary to prevent the disturbance or destruction of special-status bat species.

BR-2 **Biological Monitor for Migratory Bird Nesting**. Prior to the issuance of construction contracts, the County shall procure the services of a qualified biologist to ensure compliance with the Migratory Bird Treaty Act. Raptors are included in migratory bird species that may nest in large ornamental trees within the proposed project area during the avian nesting season (January 15 – August 31). Potential impacts to raptors and other nesting birds should be avoided by removing or trimming trees between September 1 and January 14, which is outside of the avian nesting season. . If construction is necessary during the avian nesting period, a preconstruction survey for active nests should be conducted prior to the removal of any vegetation. If an active nest is observed within the vicinity, a minimum buffer of 250 feet from the nest will need to be delineated to ensure that no direct impacts will occur to nesting raptors. The buffer will be delineated by roping or taping off the boundaries of construction and shall remain in place until the nest is either abandoned or the young have fledged. A qualified biologist would be required to closely monitor the nest until it is determined that the nest is no longer active, at which time vegetation removal and/or ground disturbance could continue. Vegetation removal and/or ground disturbance activities within the vicinity of the nest may commence at the discretion of the biological monitor.

4.3.6 Level of Significance after Mitigation

Implementation of Mitigation Measures BR-1 and BR-2 would reduce any potential impacts to biological resources to less than significant levels.

4.4 CLIMATE CHANGE

This section of the EIR evaluates the potential global climate change (GCC) effects due to greenhouse gases (GHGs) associated with construction and operation of the proposed project. The air quality assessment in Appendix B of this EIR (*Air Quality Analysis*, LSA Associates Inc. [LSA], April 2013) for the proposed project includes the discussion and modeling regarding GHGs.

Increasing public awareness and general scientific consensus that GCC is occurring have placed a new focus on the California Environmental Quality Act (CEQA) as a potential means of addressing a project's GHG emissions. CEQA requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects considered for approval. GCC can be considered an "effect on the environment," and an individual project's incremental contribution to GCC can have a cumulatively considerable environmental impact.

Land use projects may contribute to GCC in ways that would be experienced worldwide, with some specific effects potentially felt in California. However, no scientific study has established a direct causal link between individual land use project impacts and GCC.

Cumulative impacts are the collective impacts of one or more past, present, or future projects that, when combined, result in adverse changes to the environment. Climate change is a global environmental problem in which: (1) any given development project contributes only a small portion of any net increase in GHGs, and (2) global growth overall is continuing to contribute large amounts of GHGs across the world. No individual project would result in a significant adverse impact on GCC or an environmental impact resulting from GCC. Therefore, this section addresses GCC primarily as a cumulative impact.

This section begins by providing general background information on climate change and meteorology. It then discusses the regulatory framework for GCC, provides data on the existing global climate setting, and evaluates potential global GHG emissions associated with the proposed project. Modeled project emissions are estimated based on the land uses proposed as part of the project, vehicle data, and project trip generation, among other variables. The section then evaluates whether the project could cause a cumulatively considerable contribution to GCC by conflicting with the implementation of GHG reduction measures under Assembly Bill (AB) 32 or other State regulations. The information and analysis provided in this section rely primarily on the Climate Action Team (CAT) 2006 Final Report, Intergovernmental Panel on Climate Change (IPCC) Assessment Reports, various California Air Resources Board (ARB) staff reports, and other related GCC documents that provide background information on the impacts of GHG emissions.

4.4.1 Existing Environmental Setting

The following discussion provides an overview of GCC, its causes, and its potential effects. The regulatory framework relating to GCC is also summarized.

Global Climate Change. GCC is the observed change in the average temperature of the Earth's atmosphere and oceans over time. GCC is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (such as precipitation

or wind) that last for an extended period of time. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures.

Climate change refers to any change in measures of weather (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from natural factors, such as changes in the sun's intensity; natural processes within the climate system, such as changes in ocean circulation or human activities, such as the burning of fossil fuels, land clearing, or agriculture. The primary observed effect of GCC has been a rise in the average global tropospheric[1] temperature of 0.36 degrees Fahrenheit (°F) per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling shows that further warming could occur, which would induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of California could include higher sea levels, drier or wetter weather, changes in ocean salinity, changes in wind patterns, or more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones. Specific effects in California might include a decline in the Sierra Nevada snowpack, erosion of California's coastline, and seawater intrusion in the Delta.

Global surface temperatures have risen by 1.33°F ± 0.32°F over the last 100 years (1906 to 2005). The rate of warming over the last 50 years is almost double that over the last 100 years.[2] The latest projections, based on state-of-the art climate models, indicate that temperatures in California are expected to rise 3–10.5°F by the end of the century.[3] The prevailing scientific opinion on climate change is that "most of the warming observed over the last 50 years is attributable to human activities."[4] Increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. The observed warming effect associated with the presence of GHGs in the atmosphere (from either natural or human sources) is often referred to as the greenhouse effect.[5]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced GCC are:[6]

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1 The troposphere is the zone of the atmosphere characterized by water vapor, weather, winds, and decreasing temperature with increasing altitude.

2 Intergovernmental Panel on Climate Change (IPCC), 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.

3 California Climate Change Center, 2006. Our Changing Climate. Assessing the Risks to California. July.

4 IPCC, *Climate Change 2007: The Physical Science Basis*, http://www.ipcc.ch.

5 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the amount of heat that escapes, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

6 The greenhouse gases listed are consistent with the definition in Assembly Bill (AB) 32 (Government Code 38505), as discussed later in this section.

pollutant concentration thresholds presented in SCAQMD Rules 403 and 1301. The Rule 403 threshold of 10.4 $\mu g/m^3$ applies to construction emissions (and would apply to operational emissions at aggregate handling facilities).

To avoid the need for every air quality analysis to perform air dispersion modeling, the SCAQMD conducted air dispersion modeling for a range of construction sites less than or equal to 5 ac in size and created look-up tables that correlate pollutant emissions rates with project size to screen out projects that are unlikely to generate enough emissions to result in a locally significant concentration of any criteria pollutant. These look-up tables can also be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required. The proposed project includes two sites, the existing 7.5 ac civic building site housing the jail, County Administrative Center (CAC) Building, the Law Library building, courts, and accompanying surface parking lots and the 5.5 ac surface parking lot located across from the jail site diagonally southeast across Oasis Street, immediately south of the Larson Justice Center courthouse.

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Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. The closest existing residential uses are a mobile home park to the east and residences to the south of the parking structure. Using the LST thresholds for receptors at 80 ft from a 5 ac site for this project would result in a conservative analysis because project operational emissions would be emitted over an area larger than a 5 ac site. Therefore, the following emissions thresholds apply during project operations:

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Peak Daily Emissions	66	81	79	0.12	14		3.9	
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**		**55**	
Significant Emissions?	**No**	**No**	**No**	**No**	**No**		**No**	

Source: LSA Associates, Inc., April 2013.
Note: The emission rates shown are from the CalEEMod output tables listed as "Mitigated Construction," even though the only mitigation measures that have been applied to the analysis are construction emission control measures required by SCAQMD.
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lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides

Construction-Related Localized Significance. The SCAQMD has issued guidance on applying CalEEMod modeling results to LST analyses. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 4.2.I shows acres disturbed per each 8-hour day for key construction equipment provided by SCAQMD. This information is used to determine the maximum daily disturbed acreage for the demolition and building construction phases (the architectural coating and paving phases use so little equipment by comparison that they are not included in here) for comparison to LSTs.

Table 4.2.I: Equipment-Specific Grading Rates

Equipment Type	Acres per 8 hr Day	Demolition		Construction	
		Pieces of Equipment	Acres Disturbed	Pieces of Equipment	Acres Disturbed
Crawler Tractor	0.5	3	1.5	0	0
Graders	0.5	0	0	0	0
Rubber-Tired Dozers	0.5	2	1	0	0
Scrapers	1	0	0	0	0
Tractors/Loaders/Backhoes	0	0	0	3	0
Total Acres Disturbed		**2.5**		**0**	

Source: CalEEMod User Guide Appendix A and project plans.
hr = hour

As shown in Table 4.2.J, the construction phase with the greatest daily emissions is the demolition phase; thus, the proposed project would result in a maximum of 2.5 ac disturbed on any one day, and LSTs for a 2.5 ac site are applicable for the project.

Table 4.2.J: Short-Term Construction LST Impacts

Emissions Sources	NO_X	CO	PM_{10}	$PM_{2.5}$
On-site demolition emissions	71	43	5.1	3.5
LST Thresholds	**210**	**1,465**	**8.2**	**5.5**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., April 2013.
Source Receptor Area: Coachella Valley, 2.5 acres, 25-meter (80-foot) distance
CO = carbon monoxide
LST = local significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to air quality. There are existing residential uses adjacent to the project site. Table 4.2.J shows that the emissions of these pollutants on the peak day of construction would not result in concentrations of pollutants at nearby residences or other sensitive receptors that are at or above the SCAQMD thresholds of significance.

Architectural Coatings. Architectural coatings contain VOCs that are similar to ROCs and are part of the O_3 precursors. Based on the project plans, it is estimated that the application of architectural coatings on the proposed buildings would result in no more than approximately 66 lbs of VOC per day during the coating phase. These emissions would occur during the building construction period. It is expected that the peak daily emissions from building construction would be 10 lbs of VOC per day. Therefore, the total daily VOC emissions of 66 lbs of VOC would be less than the SCAQMD VOC threshold of 75 lbs/day.

Construction Odors. Heavy-duty equipment in the project area during construction would emit odors. However, the construction activity would cease to occur after individual construction is completed. No other sources of objectionable odors have been identified for the proposed project, and no mitigation measures are required.

SCAQMD Rule 402 regarding nuisances states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property." The proposed uses are not anticipated to emit any objectionable odors. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of the proposed project.

Construction-Related Health Risks. The only toxic air pollution emissions in any significant quantity associated with the construction of the project would occur from diesel-powered equipment exhaust. While there may be other toxic substances in use on site, compliance with State and federal handling regulations will control emissions to below a level of significance. The Office of Environmental Health Hazard Assessment (OEHHA) currently describes the health risk from diesel exhaust entirely in terms of the amount of DPM that is emitted, and that it would have carcinogenic and chronic effect; however, no short-term acute effect is recognized.

Health risks are determined by defining the exposure of sensitive receptors such as homes, schools, hospitals, etc., to toxic air contaminants. Thus, there is a relationship between proximity of the source of the emissions to the sensitive receptor. The nature of the mobile equipment used in construction operations is that mobile equipment only operates in one location a short time (weeks or months) relative to the length of time required for carcinogenic and chronic health impacts (decades).

Table 4.2.H, shown earlier, indicates that the peak daily exhaust PM_{10} emissions rates during construction are expected to be 3.9 lbs/day during the brief demolition phase and 3.0 lbs/day during the 3-year building construction phase. These represent the highest daily combination of all diesel equipment spread over the construction site. To determine the health risk from these emissions to nearby residents, an emissions rate representing the mean level over the entire construction period is needed. However, there is insufficient information to determine this rate accurately. For purposes of this screening-level health risk assessment, an emissions rate of

50 percent of the peak building construction phase rate (1.5 lbs/day) is considered conservative. For this simplistic screening analysis, the emissions from all construction equipment are modeled as if they are all located in one place and don't move for the entire 4 years. All of these parameters are deliberately higher than expected so that the risk levels will not be underestimated.

Following published OEHHA health risk techniques,[1] potential impacts from DPM during project construction are shown in Table 4.2.K. Note that the health risk is below the cancer threshold of 10 in 1 million and the chronic threshold of 1.0; therefore, both health risks would be less than significant.

Table 4.2.K: Screening Health Risk Results

Distance (feet)	Inhalation Cancer Risk No. in a Million	Inhalation Chronic Risk Factor
80	5.1	0.078
100	4.5	0.070
110	4.1	0.063
130	3.8	0.058
150	3.5	0.053
Health Risk Thresholds	10	1.0

Source: LSA Associates, Inc. April 2013.

Naturally Occurring Asbestos. The proposed project is located in Riverside County, which is not among the counties that are found to have serpentine and ultramafic rock in their soils. Therefore, the potential risk for naturally occurring asbestos (NOA) during project construction is small and less than significant.

Operational/Long-Term Air Quality Impacts. Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The proposed project would result in net increases in both stationary and mobile (project-related vehicular trips) source emissions. Based on the project traffic study, long-term operational emissions associated with the proposed project, calculated with the CalEEMod model, are shown in Table 4.2.L. Area sources include architectural coatings, consumer products, and landscaping. Energy sources include natural gas consumption for heating and electricity for the lighting in the buildings and at the parking area. Table 4.2.L shows that the increase of all criteria pollutants as a result of the proposed project would be less than the corresponding SCAQMD daily emission thresholds. Therefore, project-related long-term air quality impacts would be less than significant and no mitigation measures would be required.

[1] OEHHA, *Air Toxics Hot Spots Program Risk Assessment Guidelines,* August 2003, Appendix D, *Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Vehicles.*

Table 4.2.L: Long-Term Regional Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	20	0.32	27	0	0.15	0.15
Energy Sources	0.12	1.0	0.44	0.01	0.08	0.08
Mobile Sources	7.6	33	61	0.09	10	1.1
Total Project Emissions	**28**	**34**	**88**	**0.1**	**10**	**1.3**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., April 2013.
CO = carbon monoxide
CO_2 = carbon dioxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROCs = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides

Operational Localized Significance. Table 4.2.M shows the calculated emissions for the proposed operational activities compared with the appropriate LSTs. The LST analysis only includes on-site sources; however, the CalEEMod model outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table 4.2.M include all on-site project-related stationary sources and 5 percent of the project-related new mobile sources, which is an estimate of the amount of project-related new vehicle traffic that would occur on site. Considering the total trip length included in the CalEEMod model, the 5 percent assumption is conservative.

Table 4.2.M: Long-Term Operational LST Impacts

Emissions Sources	NO_X	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions	2.0	30	0.65	0.21
LST Thresholds	**304**	**2,292**	**4.0**	**2.0**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., April 2013.
Source Receptor Area: Coachella Valley, 5 acres, 25 meter distance, on-site traffic 5 percent of total
CO = carbon monoxide
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Table 4.2.M shows that the operational emission rates would not exceed the LST thresholds for receptors at 25 meters. Therefore, the proposed operational activity would not result in a localized significant air quality impact.

Operational Odors. The creation of odors associated with the operation of ECDC is not anticipated. On occasion, the backup generators may create odors associated with the diesel fuel. However, the generators are not located near the sensitive receptors next to Site B. Given the

distance between Site A and these sensitive receptors, odors are expected to have fully dissipated. No mitigation is necessary.

Operational/Long-Term Microscale (CO Hot Spot) Analysis. Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase in local areas as a result of the proposed project. The primary mobile source pollutant of local concern is CO, which is a direct function of vehicle idling time and, thus, traffic flow conditions. CO transport is extremely limited; it disperses rapidly with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations proximate to a congested roadway or intersection may reach unhealthful levels affecting local sensitive receptors (residents, school children, the elderly, hospital patients, etc.). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Palm Springs Station, the closest station with complete monitored CO data, showed a highest recorded 1-hour concentration of 3.0 ppm (State standard is 20 ppm) and a highest 8-hour concentration of 0.7 ppm (State standard is 9 ppm) during the past 3 years (see Table 4.2.D).

The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis. Because the ambient CO concentrations are much lower than the corresponding federal and State CO standards, the small amount of project-related new vehicular traffic is not expected to result in CO levels, when added to the low ambient CO levels that exceed the federal or State CO standards. The CALINE4 model was used to calculate the CO concentrations in combination with the peak turn volumes at the intersections most affected by project-related traffic in the project vicinity. CALINE4 model printouts are included in the Air Quality Analysis in Appendix B.

Consistent with the project traffic impact analysis report, this air quality analysis considers the project scenarios for the with and without project scenarios under the existing, opening year, and future (2013, 2016, and 2035, respectively) conditions.

Tables 4.2.N, 4.2.O, and 4.2.P list the CO concentrations and intersections most affected by project-related traffic in the project vicinity for the existing without/with project, 2016 without project/with project, and 2035 without project/with project scenarios, respectively. Project-related changes in CO concentrations would be 0.1 ppm or less under all with project scenarios, and all CO concentrations would remain well below their respective State and federal standards. Because no CO hot spots would occur, the proposed project would not have a significant impact on local air quality for CO, and no mitigation measures would be required.

Table 4.2.N: Existing CO Concentrations Without and With Project Traffic

Intersection	Distance from Road Centerline to Maximum CO Concentration Without/With Project (m)	Without/With Project 1-Hour CO Concentration (ppm)	Project-Related 1-Hour CO Concentration Increase (ppm)	Without/With Project 8-Hour CO Concentration (ppm)	Project-Related 8-Hour CO Concentration Increase (ppm)	Exceeds State Standards	
						1-Hour (20 ppm)	8-Hour (9 ppm)
Monroe Street and Highway 111	17 / 17	2.6 / 2.6	0.0	1.3 / 1.3	0.0	No	No
	17 / 17	2.5 / 2.5	0.0	1.3 / 1.3	0.0	No	No
	17 / 17	2.5 / 2.5	0.0	1.3 / 1.3	0.0	No	No
	17 / 17	2.5 / 2.5	0.0	1.3 / 1.3	0.0	No	No
Arabia Street and Highway 111	10 / 14	2.4 / 2.5	0.1	1.2 / 1.3	0.1	No	No
	12 / 10	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	12 / 12	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	10 / 12	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
Driveway 1-King Street and Highway 111	8 / 8	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	8 / 8	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	10 / 10	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	14 / 14	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
Driveway 2 and Highway 111	7 / 7	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	7 / 7	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	8 / 8	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	10 / 10	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
Oasis Street and Requa Avenue	12 / 12	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	12 / 12	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	12 / 12	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	12 / 12	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
Oasis Street and Highway 111	14 / 14	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	14 / 14	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	14 / 14	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	14 / 14	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
Oasis Street and Court House-Driveway-Driveway 4	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
Oasis Street and Plaza Avenue	8 / 8	1.9 / 2.0	0.1	0.8 / 0.9	0.1	No	No
	10 / 10	1.9 / 2.0	0.1	0.8 / 0.9	0.1	No	No
	8 / 14	1.9 / 2.0	0.1	0.8 / 0.9	0.1	No	No
	10 / 14	1.9 / 2.0	0.1	0.8 / 0.9	0.1	No	No
Oasis Street and PS Driveway	7 / 7	1.9 / 2.0	0.1	0.8 / 0.9	0.1	No	No
	8 / 8	1.9 / 1.9	0.0	0.8 / 0.8	0.0	No	No
	7 / 7	1.9 / 1.9	0.0	0.8 / 0.8	0.0	No	No
	8 / 8	1.9 / 1.9	0.0	0.8 / 0.8	0.0	No	No
Oasis Street and Dr. Carreon Boulevard	14 / 14	2.2 / 2.2	0.0	1.1 / 1.1	0.0	No	No
	14 / 14	2.2 / 2.2	0.0	1.1 / 1.1	0.0	No	No
	14 / 14	2.1 / 2.1	0.0	1.0 / 1.0	0.0	No	No
	14 / 14	2.1 / 2.1	0.0	1.0 / 1.0	0.0	No	No

Source: LSA Associates, Inc., April 2013.
Note: Includes ambient 1-hour concentration of 1.7 ppm and ambient 8-hour concentration of 0.7 ppm. Measured at the Fs-590 Racquet Club Avenue, Palm Springs, California, Air Quality Station in Riverside County.
CO = carbon monoxide
Hr = hour
m = meters
ppm = parts per million
PS = parking structure

Table 4.2.O: 2016 CO Concentrations Without and With Project Traffic

Intersection	Distance from Road Centerline to Maximum CO Concentration Without/With Project (m)	Without/With Project 1-Hour CO Concentration (ppm)	Project-Related 1-Hour CO Concentration Increase (ppm)	Without/With Project 8-Hour CO Concentration (ppm)	Project-Related 8-Hour CO Concentration Increase (ppm)	Exceeds State Standards	
						1-Hour (20 ppm)	8-Hour (9 ppm)
Monroe Street and Highway 111	17 / 17	2.5 / 2.6	0.1	1.3 / 1.3	0.0	No	No
	17 / 17	2.5 / 2.6	0.1	1.3 / 1.3	0.0	No	No
	17 / 17	2.5 / 2.5	0.0	1.3 / 1.3	0.0	No	No
	17 / 17	2.4 / 2.5	0.1	1.2 / 1.3	0.1	No	No
Arabia Street and Highway 111	10 / 10	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	12 / 12	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	14 / 14	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	14 / 14	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
Driveway 1-King Street and Highway 111	14 / 14	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	8 / 8	2.3 / 2.3	0.0	1.1 / 1.1	0.0	No	No
	8 / 8	2.3 / 2.3	0.0	1.1 / 1.1	0.0	No	No
	8 / 8	2.3 / 2.3	0.0	1.1 / 1.1	0.0	No	No
Driveway 2 and Highway 111	8 / 10	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	10 / 10	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	10 / 8	2.4 / 2.3	-0.1	1.2 / 1.1	-0.1	No	No
	8 / 7	2.3 / 2.3	0.0	1.1 / 1.1	0.0	No	No
Oasis Street and Requa Avenue	12 / 12	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	12 / 12	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	12 / 12	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	12 / 12	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
Oasis Street and Highway 111	14 / 14	2.4 / 2.4	0.0	1.2 / 1.2	0.0	No	No
	14 / 14	2.3 / 2.4	0.1	1.1 / 1.2	0.1	No	No
	14 / 14	2.3 / 2.4	0.1	1.1 / 1.2	0.1	No	No
	14 / 14	2.3 / 2.3	0.0	1.1 / 1.1	0.0	No	No
Oasis Street and Court House-Driveway-Driveway 4	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
Oasis Street and Plaza Avenue	8 / 8	1.9 / 2.0	0.1	0.8 / 0.9	0.1	No	No
	10 / 10	1.9 / 2.0	0.1	0.8 / 0.9	0.1	No	No
	8 / 10	1.9 / 2.0	0.1	0.8 / 0.9	0.1	No	No
	10 / 14	1.9 / 2.0	0.1	0.8 / 0.9	0.1	No	No
Oasis Street and PS Driveway	7 / 7	1.9 / 2.0	0.1	0.8 / 0.9	0.1	No	No
	8 / 8	1.9 / 2.0	0.1	0.8 / 0.9	0.1	No	No
	7 / 8	1.9 / 1.9	0.0	0.8 / 0.8	0.0	No	No
	8 / 7	1.9 / 1.9	0.0	0.8 / 0.8	0.0	No	No
Oasis Street and Dr. Carreon Boulevard	14 / 14	2.1 / 2.1	0.0	1.0 / 1.0	0.0	No	No
	14 / 14	2.1 / 2.1	0.0	1.0 / 1.0	0.0	No	No
	14 / 14	2.1 / 2.1	0.0	1.0 / 1.0	0.0	No	No
	14 / 14	2.1 / 2.1	0.0	1.0 / 1.0	0.0	No	No

Source: LSA Associates, Inc., April 2013.
Note: Includes ambient 1-hour concentration of 1.7 ppm and ambient 8-hour concentration of 0.7 ppm. Measured at the Fs-590 Racquet Club Avenue, Palm Springs, California, Air Quality Station in Riverside County.
CO = carbon monoxide
Hr = hour
m = meters
ppm = parts per million
PS = parking structure

Table 4.2.P: 2035 CO Concentrations Without and With Project Traffic

Intersection	Distance from Road Centerline to Maximum CO Concentration Without/With Project (m)	Without/With Project 1-Hour CO Concentration (ppm)	Project-Related 1-Hour CO Concentration Increase (ppm)	Without/With Project 8-Hour CO Concentration (ppm)	Project-Related 8-Hour CO Concentration Increase (ppm)	Exceeds State Standards	
						1-Hour (20 ppm)	8-Hour (9 ppm)
Monroe Street and Highway 111	17 / 17	2.1 / 2.1	0.0	1.0 / 1.0	0.0	No	No
	17 / 17	2.1 / 2.1	0.0	1.0 / 1.0	0.0	No	No
	17 / 17	2.1 / 2.1	0.0	1.0 / 1.0	0.0	No	No
	17 / 17	2.1 / 2.1	0.0	1.0 / 1.0	0.0	No	No
Arabia Street and Highway 111	10 / 10	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	12 / 12	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	12 / 12	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	10 / 10	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
Driveway 1-King Street and Highway 111	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
Driveway 2 and Highway 111	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	7 / 7	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	7 / 7	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	8 / 8	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
Oasis Street and Requa Avenue	12 / 12	1.8 / 1.8	0.0	0.8 / 0.8	0.0	No	No
	12 / 12	1.8 / 1.8	0.0	0.8 / 0.8	0.0	No	No
	12 / 12	1.8 / 1.8	0.0	0.8 / 0.8	0.0	No	No
	12 / 12	1.8 / 1.8	0.0	0.8 / 0.8	0.0	No	No
Oasis Street and Highway 111	14 / 14	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	14 / 14	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	14 / 14	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
	14 / 14	2.0 / 2.0	0.0	0.9 / 0.9	0.0	No	No
Oasis Street and Court House-Driveway-Driveway 4	8 / 8	1.8 / 1.8	0.0	0.8 / 0.8	0.0	No	No
	8 / 8	1.8 / 1.8	0.0	0.8 / 0.8	0.0	No	No
	8 / 8	1.8 / 1.8	0.0	0.8 / 0.8	0.0	No	No
	8 / 8	1.8 / 1.8	0.0	0.8 / 0.8	0.0	No	No
Oasis Street and Plaza Avenue	8 / 8	1.8 / 1.8	0.0	0.8 / 0.8	0.0	No	No
	10 / 10	1.8 / 1.8	0.0	0.8 / 0.8	0.0	No	No
	10 / 8	1.7 / 1.8	0.1	0.7 / 0.8	0.1	No	No
	8 / 10	1.7 / 1.8	0.1	0.7 / 0.8	0.1	No	No
Oasis Street and PS Driveway	7 / 7	1.7 / 1.8	0.1	0.7 / 0.8	0.1	No	No
	8 / 8	1.7 / 1.8	0.1	0.7 / 0.8	0.1	No	No
	7 / 8	1.7 / 1.7	0.0	0.7 / 0.7	0.0	No	No
	8 / 7	1.7 / 1.7	0.0	0.7 / 0.7	0.0	No	No
Oasis Street and Dr. Carreon Boulevard	14 / 14	1.9 / 1.9	0.0	0.8 / 0.8	0.0	No	No
	14 / 14	1.9 / 1.9	0.0	0.8 / 0.8	0.0	No	No
	14 / 14	1.9 / 1.9	0.0	0.8 / 0.8	0.0	No	No
	14 / 14	1.9 / 1.9	0.0	0.8 / 0.8	0.0	No	No

Source: LSA Associates, Inc., April 2013.
Note: Includes ambient 1-hour concentration of 1.7 ppm and ambient 8-hour concentration of 0.7 ppm. Measured at the Fs-590 Racquet Club Avenue, Palm Springs, California, Air Quality Station in Riverside County.
CO = carbon monoxide
Hr = hour
m = meters
ppm = parts per million
PS = parking structure

Potentially Significant Impacts. The following impacts that could result from implementation of the proposed project were evaluated and determined to be potentially significant.

Fugitive Dust. Fugitive dust emissions are generally associated with land clearing, exposure of soils to the air and wind, and cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and weather conditions at the time of construction.

Construction emissions can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. The proposed project will be required to comply with SCAQMD Rules 402 and 403 to control fugitive dust. There are a number of feasible control measures that can be reasonably implemented to significantly reduce PM_{10} emissions from construction. Although Table 4.2.H shows that construction vehicle emissions related to particulate matter would remain below thresholds, the model assumes the application of required dust control measures enumerated in Mitigation Measures AQ-1 and AQ-2. Compliance with these required Mitigation Measures would reduce PM_{10} emissions and ensure that impacts related to fugitive dust are less than significant.

Mitigation Measures.

AQ-1 The project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. As such, the following fugitive dust suppression measures shall be included in the construction contract and shall be performed by the contractor. South Coast Air Quality Management District (SCAQMD) Rule 403.1 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Applicable Rule 403.1 dust suppression techniques are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the particulate matter with a diameter of 10 microns or less [PM_{10}] component). Compliance with these rules would reduce impacts on nearby sensitive receptors.

The applicable Rule 403.1 measures are as follows:

- All new man-made deposits of bulk material shall be stabilized within 24 hours of making such bulk material deposits. Stabilization procedures shall include one or more of the following:
  - Application of water to at least 70 percent of the surface area of any bulk material deposits at least three times for each day that there is evidence of wind driven fugitive dust; or
  - Application of chemical stabilizers in sufficient concentration so as to maintain a stabilized surface for a period of at least 6 months; or

  - Installation of wind breaks of such design so as to reduce maximum wind gusts to less than 25 miles per hour (mph) in the area of the bulk material deposits.
- All new deposits of bulk material originating from off-site undisturbed natural desert areas shall be stabilized within 72 hours. Stabilization procedures shall include one or more of the following:
  - Application of water to at least 70 percent of the surface area of any bulk material deposits at least three times for each day that there is evidence of wind driven fugitive dust; or
  - Application of chemical stabilizers in sufficient concentration so as to maintain a stabilized surface for a period of at least 6 months; or
- At least one of the control actions specified in Rule 403, Table 2, for the source category "Inactive Disturbed Surface Areas" shall be implemented to minimize wind driven fugitive dust from disturbed surface areas at such time when active operations have ceased for a period of at least 20 days.
- Written daily records shall be compiled to document the specific actions taken to comply with Rule 403.1. Such records shall be retained for not less than three years and shall be made available to the Executive Officer upon request. Additionally, if an on-site anemometer is used, written records shall be compiled that contain:
  - Location, vendor, model, and serial number of the anemometer;
  - The time of occurrence of any wind gust in excess of 25 mph during hours of active operations;
  - The actions taken to comply with the provisions of Rule 403.1 paragraphs (d)(5) and (i)(3), as applicable.

AQ-2 The following additional dust suppression measures in the SCAQMD *California Environmental Quality Act (CEQA) Air Quality Handbook* shall be included in the construction contract and shall be performed by the contractor. Additionally, the County of Riverside shall identify a monitor for the length of the construction phase to ensure that the contractor performs these measures that are included to further reduce the likelihood of air quality impacts:

- Revegetate disturbed areas as quickly as possible.
- Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph.
- Sweep all streets once per day if visible soil materials are carried to adjacent streets (recommend water sweepers with reclaimed water).
- Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash trucks and any equipment leaving the site.
- Pave, water, or chemically stabilize all on-site roads as soon as is feasible.

- Minimize at all times the area disturbed by clearing, grading, earthmoving, or excavation operations.

4.2.6 Level of Significance after Mitigation

The mitigation measures identified above would reduce potentially significant impacts related to air quality to a less than significant level. As shown in Table 4.2.H, the above mitigation measures would reduce emissions of PM_{10} and $PM_{2.5}$.

4.3 BIOLOGICAL RESOURCES

This section provides a discussion of the existing biological resources within the project site and an analysis of potential impacts to biological resources from implementation of the proposed ECDC project. The analysis in this section is based on the expert biological evaluation of aerial mapping, consultation of local and regional plans and resources, and analysis of relevant literature and data. Database searches of the special-status species that have the potential to occur in the vicinity and on the project site are provided in Appendix C.

4.3.1 Existing Conditions

Study Area. The proposed ECDC project site is located in the central portion of the City of Indio (City), located in the central Coachella Valley, which extends southeastward from the San Gorgonio Pass to the Salton Sea region. The site can be found on the *Indio, California,* United States (U.S.) Geological Survey (USGS) 7.5-minute topographic quadrangle map. The site is relatively level and is approximately 11 feet (ft) below mean sea level (bmsl).

Land Uses and Disturbance. The immediate area surrounding the project site is urban and includes various government buildings, residential, a mobile home park, commercial buildings and regional fairgrounds/event space surrounding the site. The project includes two sites, Site A, the existing 7.5-acre (ac) civic building site housing the jail, the County Administrative Center (CAC) Building, the Law Library building, courts, and accompanying surface parking lots; and Site B, the 5.5 ac surface parking lot located across from the jail site diagonally southeast across Oasis Street, immediately south of the Larson Justice Center courthouse. Both sites have been completely developed by the existing structures and parking lots for many years and, in addition to the developed area, the two sites have mature ornamental vegetation as landscaping, devoid of any native plant species.

Plant Communities. One habitat type/plant community occurs within the project site: Urban/ Developed. Areas considered Urban/Developed have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas of usually nonnative plants that often require irrigation. Urban/Developed areas occur within limited portions surrounding the perimeter of the project site, as well as dispersed throughout the parking lot areas.

Wildlife. The project site is located within an urbanized area close to downtown Indio. Based on aerial surveillance and site photos, the only vegetation or potential supporting habitat for wildlife species would be the ornamental landscaping on the two sites. Based on previous research and field surveys of similar vegetation types, it can be determined that wildlife species consistent with urbanized areas would be present. Wildlife likely to be present on the project site would be mourning dove (*Zenaida macroura*), western scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), yellow-rumped warbler (Dendroica coronate), California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*),

and California ground squirrel (*Spermophilus beecheyi*), and other common species typically found in urbanized areas..

Special-Interest Species.

Plants. The project site has been fully developed and contains only nonnative ornamental plants that are regularly maintained. Due to the lack of native habitat, no sensitive plant species were determined to occur on the site.

Wildlife. Although the site is devoid of native habitat, the existing structures and ornamental palm trees on the project site have the potential to provide roosting sites for sensitive bat species. Specifically, the four-story Law Library and CAC Building have ledges and corners along the architectural facade that could provide bat roosting areas. The project site contains approximately 35-40 Mexican fan palm trees (*Washingtonia robusta*). The following five sensitive bat species were identified in the database searches: pallid bat (*Antrozous pallidus*), western yellow bat (*Lasiurus xanthinus*), pocketed free-tailed bat (*Nyctinomopos femorosaccus*), spotted bat (*Euderma maculatum*), and western mastiff bat (*Eumops perotis californicus*). No other sensitive wildlife species were determined to have a potential to occur on the site.

Nesting Birds. The project site contains suitable nesting habitat for a number of common and sensitive avian species protected under the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code.

Wildlife Movement Corridors/Linkages. No portions of the proposed project site are located within a Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) Conservation Area; therefore, the project does not contribute to any existing functioning wildlife corridor areas or Linkage Systems identified by the CVMHSCP or other designated habitat areas.

Jurisdictional Waters and Wetlands. Since the entire project site is developed and surrounded by an urbanized community, neither Site A nor Site B would contain areas to be considered jurisdictional waters and/or wetlands by the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), or the California Department of Fish and Wildlife (CDFW).

4.3.2 Regulatory Setting

Federal Policies and Regulations.

Federal Endangered Species Act. The U. S. Fish and Wildlife Service (USFWS) administers the Federal Endangered Species Act (FESA), which provides a process for listing species as either threatened or endangered, and methods of protecting listed species. FESA defines as "endangered" any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is a species that is likely to become

endangered in the near future. A "proposed" species is one that has been officially proposed by USFWS for addition to the federal threatened and endangered species list. Section 9 of FESA prohibits take of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. The presence of any federally threatened or endangered species in a project area generally imposes severe constraints on development of that area, particularly if development would result in take of the species or its habitat. Under the regulations of FESA, USFWS may authorize take when it is incidental to, but not the purpose of, an otherwise lawful act.

Migratory Bird Treaty Act of 1918. The MBTA makes it unlawful to pursue, capture, kill, or possess, or attempt to do the same, to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the U.S., Great Britain, Mexico, Japan, and the countries of the former Soviet Union.

State Policies and Regulations.

California Endangered Species Act. The CDFW administers the California Endangered Species Act (CESA). The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

Sections 3503 and 3511 of the California Fish and Game Code. CDFW administers the California Fish and Game Code. There are particular sections of the Code that are applicable to natural resource management. For example, Section 3503 of the Code states it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3511 of the Code lists fully protected bird species, where CDFW is unable to authorize the issuance of permits or licenses to take these species.

Local Policies and Regulations.

CVMSHCP. The CVMSHCP is a comprehensive, multijurisdictional Habitat Conservation Plan focusing on conservation of species and their associated habitats in the Coachella Valley region of the County of Riverside (County). The overall goal of the CVMSHCP is to maintain and enhance biological diversity and ecosystem processes within the region while allowing for future economic growth. The City of Indio lies within the CVMSHCP area; however, because the project site is located within the developed central portion of the City, the policies and regulations of the CVMSHCP do not apply to the proposed project.

City of Indio Policies and Regulations. The City of Indio's General Plan and zoning do not apply to the project because they are pre-empted by State law on property owned or leased by the County.[1] However, the following policies are provided to show that the project is generally in compliance with the City's General Plan Goals and Policies Report, Environmental Resources Chapter.

City of Indio General Plan – 2020. The City of Indio General Plan policies relevant to biological resources are set forth below.

- **Goal BIO-1-2:** Preserve and protect sensitive plant and wildlife resources within the Planning Area.
- **Policy BIO-1.1:** Protect and preserve the desert fan palm oases located in the southern slopes of the Indio Hills.
- **Policy BIO-1.2:** Protect upland habitat in the Indio Hills area.
- **Policy BIO-1.3:** Encourage the protection/enhancement of native habitats throughout the Planning Area.
- **Policy BIO-1.4:** Work with public and private entities in educating the general public as to the importance of the Coachella Valley ecosystem.
- **Policy BIO-1.5:** Support the efforts of the Coachella Valley Fringe-Toed Lizard Habitat Conservation Plan.

City of Indio Municipal Code – Protection of City Trees. The City of Indio Municipal Code Chapter 98 requires a permit in order to plant, remove, cut, prune, root prune, apply pesticides, or otherwise disturb any City tree or shrubs. Also, it is the responsibility of the Human Services Commission to serve as the City's Tree Advisory Board and afford protection to trees with special significance to be deemed Heritage Trees.

4.3.3 Methodology

Literature Review. The literature review provides a baseline from which to evaluate the biological resources potentially occurring on the project site, as well as the surrounding area. A compilation of sensitive plant and wildlife species recorded in the vicinity of the site was derived from CDFW's California Natural Diversity Database (CNDDB), a sensitive species and plant community account database. The CNDDB searches were based on the *Indio, California (3311662)* USGS 7.5-minute topographic quadrangles and the eight quadrangles surrounding it. Additional quadrangles include *La Quinta (3311663), Myoma (3311673), West Berdoo Canyon (3311672), Rockhouse Canyon (3311671), Thermal Canyon (3311661), Martinez Mtn. (3311653), Valerie (3311652), and Mecca (3311651).* Federal register listings, protocols, and species data provided by USFWS and CDFW were reviewed in conjunction with anticipated federal and State-listed species potentially occurring in the vicinity.

[1] California Government Code Sections 53090 through 53091, *Sunny Slope Water Co. v. City of Pasadena,* Cal 2d 87,98 (1934).

Site Assessment. A site assessment was conducted to determine the general habitat type present on the property. As a fully developed facility located within the central portion of the City, site photos and aerial mapping were utilized to make conclusions regarding the site's biological resources.

4.3.4 Thresholds of Significance

The California Environmental Quality Act (CEQA) Guidelines define "significant effect on the environment" as a "substantial or potentially substantial adverse change in the environment." The CEQA Guidelines further indicate that there may be significant impacts to biological resources if the proposed project is determined to:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW 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 CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (CWA), through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.

4.3.5 Impacts and Mitigation Measures

Less than Significant Impacts. The following impacts to biological resources that could result from implementation of the project are considered less than significant.

Candidate, Sensitive, or Special-Status Plant Species.

Sensitive Plant Species. The entire project site is developed and only contains nonnative ornamental plants. No impacts to sensitive plant species would occur. No mitigation is required.

Sensitive Natural Communities/Jurisdictional Areas. The entire project site is developed and does not contain area that is qualifies as jurisdictional waters, wetlands or riparian

habitat. Therefore, no impacts to jurisdictional areas would occur and no mitigation is required.

Movement and Migration. The project site is fully developed and located within the central portion of the City of Indio. Therefore, no portions of the project site are located within, or contribute to, any existing functioning regional wildlife corridor areas or linkages. Therefore, no impacts would occur, and no mitigation is required.

Local Protection Policies or Ordinances. As previously stated, the City of Indio's local policies do not apply to the project because they are pre-empted by state law on property owned or leased by the County. Additionally, no Heritage Trees have been identified on the site and much of the perimeter trees located on City property would likely be retained. Therefore no impacts related to local policies would result from the implementation of the proposed project. No mitigation is required.

Conflict with Conservation Plans. Because the proposed project does not lie within the CVMSHCP Conservation Area, no significant impacts are anticipated that would jeopardize the conservation goals of the CVMSHCP.

Potentially Significant Impacts. The following impacts to biological resources that could result from implementation of the project are considered potentially significant.

Candidate, Sensitive, or Special-Status Wildlife Species.

Sensitive Bat Species. The project site is completely developed, but does contain palm trees and architectural features on the existing buildings that may provide suitable habitat for one or more of five sensitive bat species identified in the special-status species database search for this area. Due to the regular use and continued occupancy of the buildings, bats roosts are not expected to be present. However, as a precautionary measure, bat surveys will be conducted prior to construction of the proposed project. Implementation of Mitigation Measure BR-1 would mitigate impacts to bat species to a less than significant level.

Nesting Birds. There is suitable avian roosting and nesting habitat throughout the project site due to the presence of mature landscape trees and shrubs on both project Site A and Site B. It is anticipated that the interior vegetation of Site A and Site B would be removed but that the perimeter landscaping would be retained to the highest extent possible. If the clearance of vegetation occurs during the avian nesting season (January 15–August 31), a preconstruction nesting bird survey should be conducted prior to any vegetation or ground disturbance activities. Implementation of Mitigation Measure BR-2 would mitigate impacts to nesting birds to a less than significant level.

Mitigation Measures.

BR-1 **Preconstruction Bat Surveys.** Project implementation shall avoid disturbance to the maternity roosts of special-status bats during the breeding season. No more than 2 weeks in advance of any demolition or construction activity involving concrete breaking or similarly noisy or intrusive activities that would commence during the breeding season (March 1 through August 31), the County of Riverside (County) shall procure the services of a qualified bat biologist and shall conduct predemolition surveys of all potential special-status bat breeding habitat in the vicinity of the planned activity. If active roosts are identified during preconstruction surveys, a Bat Protection Plan shall be prepared and implemented in consultation with the California Department of Fish and Wildlife (CDFW). The plan will determine the location and size of the construction buffer areas and establish any further actions necessary to prevent the disturbance or destruction of special-status bat species.

BR-2 **Biological Monitor for Migratory Bird Nesting**. Prior to the issuance of construction contracts, the County shall procure the services of a qualified biologist to ensure compliance with the Migratory Bird Treaty Act. Raptors are included in migratory bird species that may nest in large ornamental trees within the proposed project area during the avian nesting season (January 15 – August 31). Potential impacts to raptors and other nesting birds should be avoided by removing or trimming trees between September 1 and January 14, which is outside of the avian nesting season. . If construction is necessary during the avian nesting period, a preconstruction survey for active nests should be conducted prior to the removal of any vegetation. If an active nest is observed within the vicinity, a minimum buffer of 250 feet from the nest will need to be delineated to ensure that no direct impacts will occur to nesting raptors. The buffer will be delineated by roping or taping off the boundaries of construction and shall remain in place until the nest is either abandoned or the young have fledged. A qualified biologist would be required to closely monitor the nest until it is determined that the nest is no longer active, at which time vegetation removal and/or ground disturbance could continue. Vegetation removal and/or ground disturbance activities within the vicinity of the nest may commence at the discretion of the biological monitor.

4.3.6 Level of Significance after Mitigation

Implementation of Mitigation Measures BR-1 and BR-2 would reduce any potential impacts to biological resources to less than significant levels.

4.4 CLIMATE CHANGE

This section of the EIR evaluates the potential global climate change (GCC) effects due to greenhouse gases (GHGs) associated with construction and operation of the proposed project. The air quality assessment in Appendix B of this EIR (*Air Quality Analysis*, LSA Associates Inc. [LSA], April 2013) for the proposed project includes the discussion and modeling regarding GHGs.

Increasing public awareness and general scientific consensus that GCC is occurring have placed a new focus on the California Environmental Quality Act (CEQA) as a potential means of addressing a project's GHG emissions. CEQA requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects considered for approval. GCC can be considered an "effect on the environment," and an individual project's incremental contribution to GCC can have a cumulatively considerable environmental impact.

Land use projects may contribute to GCC in ways that would be experienced worldwide, with some specific effects potentially felt in California. However, no scientific study has established a direct causal link between individual land use project impacts and GCC.

Cumulative impacts are the collective impacts of one or more past, present, or future projects that, when combined, result in adverse changes to the environment. Climate change is a global environmental problem in which: (1) any given development project contributes only a small portion of any net increase in GHGs, and (2) global growth overall is continuing to contribute large amounts of GHGs across the world. No individual project would result in a significant adverse impact on GCC or an environmental impact resulting from GCC. Therefore, this section addresses GCC primarily as a cumulative impact.

This section begins by providing general background information on climate change and meteorology. It then discusses the regulatory framework for GCC, provides data on the existing global climate setting, and evaluates potential global GHG emissions associated with the proposed project. Modeled project emissions are estimated based on the land uses proposed as part of the project, vehicle data, and project trip generation, among other variables. The section then evaluates whether the project could cause a cumulatively considerable contribution to GCC by conflicting with the implementation of GHG reduction measures under Assembly Bill (AB) 32 or other State regulations. The information and analysis provided in this section rely primarily on the Climate Action Team (CAT) 2006 Final Report, Intergovernmental Panel on Climate Change (IPCC) Assessment Reports, various California Air Resources Board (ARB) staff reports, and other related GCC documents that provide background information on the impacts of GHG emissions.

4.4.1 Existing Environmental Setting

The following discussion provides an overview of GCC, its causes, and its potential effects. The regulatory framework relating to GCC is also summarized.

Global Climate Change. GCC is the observed change in the average temperature of the Earth's atmosphere and oceans over time. GCC is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (such as precipitation

or wind) that last for an extended period of time. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures.

Climate change refers to any change in measures of weather (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from natural factors, such as changes in the sun's intensity; natural processes within the climate system, such as changes in ocean circulation or human activities, such as the burning of fossil fuels, land clearing, or agriculture. The primary observed effect of GCC has been a rise in the average global tropospheric[1] temperature of 0.36 degrees Fahrenheit (°F) per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling shows that further warming could occur, which would induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of California could include higher sea levels, drier or wetter weather, changes in ocean salinity, changes in wind patterns, or more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones. Specific effects in California might include a decline in the Sierra Nevada snowpack, erosion of California's coastline, and seawater intrusion in the Delta.

Global surface temperatures have risen by 1.33°F ± 0.32°F over the last 100 years (1906 to 2005). The rate of warming over the last 50 years is almost double that over the last 100 years.[2] The latest projections, based on state-of-the art climate models, indicate that temperatures in California are expected to rise 3–10.5°F by the end of the century.[3] The prevailing scientific opinion on climate change is that "most of the warming observed over the last 50 years is attributable to human activities."[4] Increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. The observed warming effect associated with the presence of GHGs in the atmosphere (from either natural or human sources) is often referred to as the greenhouse effect.[5]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced GCC are:[6]

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1 The troposphere is the zone of the atmosphere characterized by water vapor, weather, winds, and decreasing temperature with increasing altitude.

2 Intergovernmental Panel on Climate Change (IPCC), 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.

3 California Climate Change Center, 2006. Our Changing Climate. Assessing the Risks to California. July.

4 IPCC, *Climate Change 2007: The Physical Science Basis*, http://www.ipcc.ch.

5 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the amount of heat that escapes, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

6 The greenhouse gases listed are consistent with the definition in Assembly Bill (AB) 32 (Government Code 38505), as discussed later in this section.