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## **SECTION 6: OTHER CEQA CONSIDERATIONS**

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### **6.1 - Significant Unavoidable Impacts**

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CEQA Guidelines Section 15126.2(a)(b) requires an EIR to identify and focus on the significant environmental effects of the Proposed Project, including effects that cannot be avoided if the Proposed Project were implemented.

This section describes significant impacts, including those that can be mitigated but not reduced to a level of less than significant. Where there are impacts that cannot be alleviated without imposing a project alternative, their implications, and the reason why the project is being proposed, notwithstanding their effect, are described. With implementation of the proposed mitigation measures, the Project will not create any significant environmental impacts.

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### **6.2 - Growth-Inducing Impacts**

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There are two types of growth-inducing impacts that a project may have: direct and indirect. To assess the potential for growth-inducing impacts, the project's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated (CEQA Guidelines Section 15126.2[d]).

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional development of residential, commercial, or industrial uses in the same area. Also included in this category are projects that remove physical obstacles to population growth such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area. Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth or projects that indirectly induce growth may provide a catalyst for future unrelated development in an area, such as a new residential community, that requires additional commercial uses to support residents.

The Proposed Project would result in minor renovations and reconstruction of various facilities at MacArthur Park. The project would install new or relocate landscaping, install new walkways, build a new children's play area, expand use of the existing soccer field, and rehabilitate the interiors of several onsite buildings. The Project will not add new facilities or infrastructure such as pipelines that could accommodate new growth. The Proposed Project will not create a significant amount of new jobs or add to the City's population or housing stock. The Project will also not affect the regional population or housing growth projections by the Southern California Association of Governments (SCAG). Therefore, the Proposed Project will not induce growth into the Westlake portion of the City of Los Angeles.

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## 6.3 - Areas of Known Controversy

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### 6.3.1 - Background

CEQA Guidelines require an EIR to discuss areas of known controversy so that the reader can gain an appreciation of the issues still under disagreement in the CEQA process. Based on comments received during the NOP period, and input from the community during a local scoping meeting, the following are considered to be the issues that may not be fully resolved regarding the Project and affected parties:

- Choice of synthetic turf versus natural turf on the renovated soccer field;
- Choice to providing lighting on the renovated soccer field;
- Historical treatment of the planned improvements to the Signal Buildings;
- Choice to replace the Boathouse Building; and
- Relocation or replacement of historical landscaping within the park.

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## 6.4 - Cumulative Impacts

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### 6.4.1 - Background

CEQA Guidelines Section 15130 requires the consideration of cumulative impacts within an EIR when a project's incremental effect is cumulatively considerable. Cumulatively considerable means that "the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In identifying projects that may contribute to cumulative impacts, the CEQA Guidelines allow one of two options:

1. The "list approach" - a list of past, present, and reasonably foreseeable future projects, producing related or cumulative impacts, including those that are outside of the control of the lead agency; or
2. The "summary of projections" method - a summary of projections contained in an adopted General Plan or related planning document, which is designed to evaluate regional or area-wide conditions.

In accordance with CEQA Guidelines Section 15130(b), "the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, the discussion need not provide as great [a level of] detail as is provided for the effects attributable to the project alone." The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects that do not contribute to the cumulative impact.

### 6.4.2 - Approach

The Proposed Project's cumulative impacts were analyzed based on a summary of projections contained in the City of Los Angeles General Plan and the Westlake Community Plan. The main

reason for this decision is that a review of development applications revealed there are few substantial development proposals but many small administrative and minor development proposals in this area at this time. This long list of minor projects may not accurately represent the potential growth of the area (i.e., its cumulative potential). The Proposed Project will more likely be influenced by, and may exert more influence over, incremental and overall growth in the City, and especially in the Westlake area, rather than just a compilation of individual development projects in the immediate area. Therefore, the following methodology was used for each resource area listed below.

1. Would the project together with other foreseeable projects create a significant cumulative effect? If yes, proceed to the next question. If no, the Proposed Project and other foreseeable projects would not have a significant cumulative effect.
2. Would the project by itself cause a significant effect? If so, is the effect cumulatively considerable? If yes, proceed to the next question. If no, the project would not have a cumulatively considerable contribution.
3. If the effect is cumulatively considerable, can it be mitigated to a less than cumulatively considerable level? If yes, the project would not have a cumulatively considerable impact. If no, the project would have a cumulative considerable contribution.

**General Plan Buildout Projections**

The City’s total planning area encompasses 468 square miles and SCAG projects the City will have 1,637,435 housing units and a population of 4,309,625 residents by 2030 (SCAG 2004). By comparison, the Westlake Community Plan area encompasses 1,900 acres (3.17 square miles) and currently has 37,441 housing units (mostly in multiple unit buildings) and a population of 117,884 residents (City Planning Department 2006 estimates). The Westlake area of the City is bounded by the 110 Freeway on the east, the 101 Freeway on the north, Hoover Street on the west, and the I-10 Freeway on the south. The park is also situated along the Wilshire Corridor that extends west from the downtown area. The Westlake Community Plan was originally approved in February of 1991 but was amended most recently in 1997. Tables 6-1 and 6-2 summarize the growth projections for the Westlake Community Plan area and the City of Los Angeles as a whole based on regional projections prepared by SCAG. As shown in these tables, the growth of housing and population in the Westlake area is projected to lag behind the City of Los Angeles as a whole (0.8% compared to 1.1%, respectively).

**Table 6-1: Westlake Community Plan Growth**

1990 Baseline Year		2010 Horizon Year (based on SCAG Projections)		Average Annual Change (1990 – 2010)	
Housing	Population	Housing	Population	Housing	Population
31,840	106,974	36,973	124,040	+0.8%	+0.8%
Source: Westlake Community Profile					

**Table 6-2: City of Los Angeles Growth**

1990 Baseline Year		2010 Horizon Year (based on SCAG Projections)		Average Annual Change (1990 – 2010)	
Housing	Population	Housing	Population	Housing	Population
1,203,052	3,485,398	1,474,514	4,306,564	+1.1%	+1.2%
Source: Westlake Community Profile					

**6.4.3 - Geographic Scope**

Table 6-3 below lists the geographic scope, or study area, considered in this cumulative analysis by environmental issue, per CEQA Guidelines Section 15130 (b).

**Table 6-3: Geographic Scope of Cumulative Analysis by Resource**

Resource	Cumulative Analysis Study Area
Aesthetics, Light, and Glare	The Westlake Community Plan area for views and glare, and the Wilshire Corridor for nighttime lighting levels.
Air Quality and Greenhouse Gas Emissions	The South Coast Air Basin for criteria pollutants, California, the U.S., and the world for greenhouse gas emissions and global climate change influences
Biological Resources	The Westlake Community Plan area
Cultural Resources	The City of Los Angeles and this portion of Los Angeles County as a whole
Geology, Soils, and Seismicity	The City of Los Angeles and this portion of Los Angeles County as a whole
Hazards and Hazardous Materials	The City of Los Angeles and this portion of Los Angeles County as a whole
Hydrology and Water Quality	The Los Angeles Basin and its relationship to surrounding drainage channels and basins.
Land Use and Planning	The Westlake Community Plan area.
Noise	The Westlake Community Plan area.
Population and Housing	The City in relation to the Southern California Association of Governments (SCAG).
Public Services and Recreation	The City as a whole.
Transportation and Circulation	The City as a whole and this portion of the Metropolitan Transportation Agency (MTA).
Utility Systems	The University District Specific Plan area in particular but the City as a whole in terms of system limits.
Source: Michael Brandman Associates and City Parks staff, 2007.	

#### **6.4.4 - Cumulative Impact Analysis**

##### **Aesthetics, Light, and Glare**

The analysis area for evaluation of cumulative impacts to aesthetic resources includes views of the Los Angeles Basin and the San Gabriel Mountains to the north on clear days. The park offers pleasant views of open space (grass, fields, the lake) in an otherwise highly urbanized setting. The Westlake area of the City is largely built out with developed multi-family, commercial, and industrial uses. Therefore, the planned park improvements will not contribute to cumulative aesthetic impacts relative to views or glare. The project will incrementally contribute to increased lighting at night by installing light standards for the renovated soccer field. These will slightly increase nighttime lighting levels, but light levels along this portion of the Wilshire Corridor are already moderate to high due to its urban setting. The design of the planned lighting, plus implementation of the recommended mitigation measures, will make it so the Proposed Project does not make a significant contribution to cumulatively considerable lighting impacts.

##### **Air Quality**

The analysis area for evaluation of cumulative impacts to air quality includes the South Coast Air Basin, which is identical to the boundaries of the SCAQMD. The air basin covers the counties of Orange, Los Angeles, Imperial, and Ventura, Riverside, and Los Angeles, which includes the City of Los Angeles. Due to the poor air quality and level of planned growth, the City's General Plan EIR found that buildout of the City would have cumulatively considerable air quality impacts. The analysis of air quality impacts in Section 4.2 of this DEIR concluded that the project would not make significant contributions to this cumulative impact either over the short-term (i.e., during construction) over the long-term (i.e., during use of the renovated park improvements). Air quality impacts were considered to be less than significant on a project level, and will not make significant contributions to cumulatively considerable air quality impacts over the long-term.

##### **Biological Resources**

The analysis area for evaluation of cumulative impacts to biological resources includes the Westlake Community Plan area and this western portion of the City. The project area is highly urbanized with no natural drainage channels and no significant areas of vacant or undisturbed land. MacArthur Park represents the largest "open" land in the area, and it is a developed urban park. The park contains no significant biological resources (in terms of listed or sensitive species) although it does contain extensive turf and landscaped planter areas that do support some amount of wildlife tolerant of human activity (e.g., songbirds, waterfowl, small mammals). Planned growth in this area will therefore not have cumulatively considerable impacts on biological resources, and the improvements associated with the Proposed Project will not make any significant contribution to this impact.

##### **Cultural Resources**

The analysis area for evaluation of cumulative impacts to cultural resources includes the entire City as outlined in the Los Angeles General Plan. The project vicinity represents an area with prehistoric settlement by several Native American groups prior to Spanish and Mexican settlement, and then

American settlement during the mid-nineteenth century. The project area is highly urbanized and has been extensively disturbed to a considerable depth, both by creation of the park as well as by development of the surrounding private land. Planned growth in this area is not expected to impact archaeological or paleontological resources due to previous disturbance. MacArthur Park does contain a number of historic resources, as does the Westlake community in general (e.g., residence and business buildings in excess of 50 years in age). The planned improvements, with implementation of the recommended mitigation measures, will not create significant impacts to historical resources. Similarly, development within the surrounding area must comply with the City's extensive procedures regarding documentation and development sensitive to historic resources. With implementation of these City procedures, future growth will not have cumulatively considerable impacts relative to cultural resources.

### **Geology, Soils, and Seismicity**

The analysis area for evaluation of cumulative impacts to geology, soils, and seismicity includes this portion of Los Angeles County due to the presence of numerous regional faults, including the well known San Andreas Fault. Future growth will introduce additional residences, businesses, residents, and workers into this area, and all of these will be subject to moderate to severe groundshaking in a major seismic event. This regional impact is considered cumulatively considerable due to its potential severity and the number of people and structures it could affect. However, this potential impact can be reduced to less than significant levels by the implementation of applicable building design and construction methods. The improvements of the Proposed Project that involve structures will comply with applicable seismic codes and building standards. Therefore, the Proposed Project will not make a significant contribution to cumulatively considerable impacts relative to geology, soils, and seismicity.

### **Hazards and Hazardous Materials**

The analysis area for evaluation of cumulative impacts to hazards and hazardous materials includes the Westlake Community Plan area identified in the Los Angeles General Plan and the City as a whole. Future growth will incrementally increase the amount of hazardous materials utilized in this area (i.e., stored, transported, or handled). The area is highly urbanized and does not face major threats from flooding, aircraft accidents, wildfires, etc. As long as new development complies with applicable regulations regarding hazardous materials, there should be no cumulatively considerable impacts from growth in this regard. Similarly, construction of the planned park improvements will not make significant contributions to risks or hazards to the surrounding community, including hazardous materials, because of the type of improvements planned.

### **Hydrology and Water Quality**

The analysis area for evaluation of cumulative impacts to hydrology and water quality includes the Westlake Community Plan area identified in the Los Angeles General Plan, as well as the City as a whole. MacArthur Park contains a man-made lake that is lined with concrete. The lake and the park have no natural drainage channels, inlets, or outlets. Additional development, both within the City

and the community plan area, will result in additional excavation activities, new buildings, and further intensification of land use, which could potentially impact hydrology and water quality in the area. Construction of the planned park improvements according to the proposed mitigation measures will not make significant contributions to regional impacts related to flooding or water quality. With the design of the project and recommended mitigation measures, the water-related impacts will be less than significant and thus the project will not have a cumulatively considerable impact regarding hydrology and water quality.

### **Land Use**

The analysis area for evaluation of cumulative impacts to land use includes the Westlake Community Plan area. The park is designated as Open Space, and the proposed improvements are consistent with that designation. The DEIR concluded that the Project would not have any adverse land use impacts. The Westlake area is largely built out and no substantial new development is planned, although growth projections show slow, steady growth, especially in average household sizes, through 2010. However, since the Proposed Project has no land use impacts, it will not make a significant contribution to cumulatively considerable land use impacts.

### **Noise**

The analysis area for evaluation of cumulative noise impacts encompasses the ambient noise environment around the park site, as well as surrounding roadways in the Westlake Community Plan area. The Proposed Project is not expected to create a significant increase in either short-term or long-term traffic volumes on surrounding streets or freeways. In addition, planned improvements of the Project will not generate significant additional noise over existing levels, since the areas planned for improvement are already being used (e.g., Signal Building, boathouse, soccer field). Park uses are relatively quiet, and the park is in a highly urbanized setting, so the planned improvements will not make a significant contribution to any cumulatively considerable noise impacts from future growth in the surrounding area.

### **Population and Housing**

The analysis area for evaluation of cumulative impacts to population and housing encompasses the City of Los Angeles and Southern California within the jurisdiction of the SCAG. Since the Proposed Project will not add any housing or businesses to the City, it will not cause any increases in population or housing. Therefore, the Project cannot make any significant contributions to cumulatively considerable impacts from regional growth relative to population or housing projections.

### **Public Services**

The analysis area for evaluation of cumulative impacts to public services and recreation includes the entire City of Los Angeles. Construction of the proposed park improvements would incrementally increase the need for police and fire services, and would produce beneficial impacts on recreation by adding facilities and rehabilitating existing facilities at MacArthur Park. The park has a police sub-

station and a City fire station is located two blocks east of the park. The site has good to excellent access for emergency vehicles due to the surrounding roadways, multiple access points, and many paths and maintenance roads on the site. For these reasons, the Proposed Project will not make a significant contribution to any cumulatively considerable impacts relative to public services.

### **Traffic and Circulation**

The analysis area for evaluation of cumulative impacts to transportation includes the Westlake Community Plan area identified in the Los Angeles General Plan, and the City as a whole. The DEIR estimated the Project would only generate an incremental amount of traffic, on the order of 50 additional vehicle trips per day, and most additional users of the park would probably access it via public transportation, walking, or by bicycle. Since the Proposed Project would not generate significant amounts of traffic, it will not make a significant contribution to any cumulatively considerable impacts relative to traffic or circulation.

### **Agricultural and Mineral Resources**

The site does not contain significant agricultural or mineral resources, so construction of the planned park improvements will not make significant contributions to any cumulatively considerable impacts regarding long-term loss of these resources from the Los Angeles Basin.

### **Utility Systems**

The Proposed Project will tie into existing City utility systems, and the planned improvements are not anticipated to consume significant amounts of water, electricity, or natural gas, or generate significant amounts of wastewater or solid waste. The City will follow its own guidelines regarding water and energy conservation when implementing this project. Therefore, the Proposed Project will not make significant contributions to cumulatively considerable impacts on utility systems that may occur with growth.

### **Summary**

Regional growth may eventually result in a number of cumulatively considerable impacts, including traffic, air quality, water consumption, water quality, and energy consumption. However, the Proposed Project will not make significant contribution to any of these cumulatively considerable impacts either during construction or from use of the planned improvements.

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## **6.5 - Energy Conservation**

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Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted AB 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the

adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F of the CEQA Guidelines. Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. For the reasons set forth below, this EIR concludes that the Proposed Project will not result in the wasteful, inefficient, and unnecessary consumption of energy, will not cause the need for additional natural gas or electrical-energy producing facilities, and, therefore, will not create a significant impact on energy resources.

### **6.5.1 - Regulatory Setting**

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the U.S. EPA are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. On the State level, the California Public Utilities Commission (CPUC) and the CEC are two agencies with authority over different aspects of energy. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields. As set forth above, the CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards. California is exempt under federal law from setting State fuel economy standards for new on-road motor vehicles. Some of the more relevant federal and State energy-related laws and plans are discussed below.

#### **Federal Energy Policy and Conservation Act**

The Federal Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the United States Department of Transportation, is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 miles per gallon. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is not determined for each individual vehicle model; rather, compliance is determined on the basis of each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. The Corporate Average Fuel Economy (CAFE) program,

which is administered by U.S. EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The U.S. EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the United States Department of Transportation is authorized to assess penalties for noncompliance. In the course of its over thirty-year history, this regulatory program has resulted in vastly improved fuel economy throughout the nation's vehicle fleet.

### **Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)**

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) such as SANBAG were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process for specific projects would then address these policies. Another requirement was to consider the consistency of transportation planning with federal, State, and local energy goals. Through this requirement, energy consumption was expected to become a decision criterion, along with cost and other values that determine the best transportation solution.

### **The Transportation Equity Act for the 21st Century (TEA-21)**

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

### **State of California Energy Plan**

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators, and encouraging urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

## **Title 24, Energy Efficiency Standards**

Title 24, which was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, provides energy efficiency standards for residential and nonresidential buildings. According to the CEC, since the energy efficiency standards went into effect in 1978, it is estimated that California residential and nonresidential consumers have reduced their utility bills by at least \$15.8 billion. The CEC further estimates that by 2011, residential and nonresidential consumers will save an additional \$43 billion in energy costs.

In 2005, the CEC adopted new energy efficiency standards. All projects that apply for a building permit on or after October 2005 must adhere to the new 2005 standards. A copy of the 2005 Energy Efficiency Standards may be reviewed online at [www.energy.ca.gov/title24/2005standards/index/html](http://www.energy.ca.gov/title24/2005standards/index/html). The 2005 Energy Efficiency Standards may also be reviewed at the Energy Efficiency Division, California Energy Commission, 1516 Ninth Street, MS-29, Sacramento, CA 95814-5512.

Because the adoption of Title 24 post-dates the adoption of AB 1575, it has generally been the practice throughout the State that compliance with Title 24 (as well as compliance with the litany of federal and State regulations discussed above) ensures that projects will not result in the inefficient, wasteful, and unnecessary consumption of energy. As is the case with other uniform building codes, Title 24 is designed to provide certainty and uniformity throughout the State while ensuring that the efficient and non-wasteful consumption of energy is carried out through design features. Large infrastructure transportation projects that cannot adhere to Title 24 design-build performance standards may, depending on the circumstances, undertake a more involved assessment of energy conservation measures in accordance with some of the factors set forth in Appendix F of the CEQA Guidelines. As an example, pursuant to the California Department of Transportation CEQA implementation procedures and FHWA Technical Advisory 6640.8A, a detailed energy study is generally only required for large-scale infrastructure projects. However, for the vast majority of residential and nonresidential projects, adherence to Title 24 is deemed necessary to ensure that no significant impacts occur with respect to the inefficient, wasteful, and unnecessary consumption of energy. As a further example, the adoption of federal vehicle fuel standards, which have been continually improved since their original adoption in 1975, have also protected against the inefficient, wasteful, and unnecessary use of energy.

According to the CEC, reducing energy use has been a benefit to all. Building owners save money, Californians have a more secure and healthy economy, the environment is less negatively impacted, and our electrical system can operate in a more stable state. The 2005 Standards (for residential and nonresidential buildings) are expected to reduce the growth in electricity use by 479 gigawatt-hours per year (GWh/y) and reduce the growth in natural gas use by 8.9 million therms per year (therms/y). The savings attributable to new nonresidential buildings are 143 GWh/y of electricity savings and 0.5 million therms. Additional savings result from the application of the Standards on building alterations. In particular, requirements for cool roofs, lighting, and air distribution ducts are expected

to save about 175 GWh/y of electricity. These savings are cumulative, doubling in two years, tripling in three, etc. Table 6-4 provides a summary of the electricity savings envisioned by the 2005 standards.

**Table 6-4: Statewide Electricity Savings Projected From the 2005 Standards**

Category	2001 Standard (GWh)	2005 Standard (GWh)	Savings (GWh)	Percent Reduction
Lighting	861.6	777.5	84.1	9.8
Heating	38.8	36.9	1.9	4.9
Cooling	537.5	501.5	35.9	6.7
Fans	424.7	403.6	21.1	5.0
<b>Total</b>	<b>1,862.6</b>	<b>1,719.5</b>	<b>143.0</b>	<b>7.7</b>
GWh = Gigawatt hours Source: California Energy Commission, 2005.				

Since the California 2000–2001 electricity crisis, the CEC has placed more and more emphasis on demand reductions. Changes in 2001 (following the electricity crisis) reduced electricity demand (for newly constructed residential and nonresidential buildings) by about 110.3 megawatts (MW) each year. Newly constructed nonresidential buildings account for 44 MW of these savings. Like energy savings, demand savings accumulate each year. The 2005 Standards are expected to reduce electric demand by another 180 MW each year. Table 6-5 provides a summary of the demand savings envisioned by the 2005 standards.

**Table 6-5: Demand Savings Projected From the 2005 Standards**

Category	2001 Standard (MW)	2005 Standard (MW)	Savings (MW)	Percent Reduction
Lighting	157.9	142.6	15.3	9.7
Heating	3.6	3.5	0.1	2.2
Cooling	276.7	253.1	23.6	8.5
Fans	79.7	74.6	5.0	6.3
<b>Total</b>	<b>517.9</b>	<b>473.9</b>	<b>44.0</b>	<b>8.5</b>
Notes: MW = Megawatts Source: California Energy Commission, 2005.				

In many parts of the world, the wasteful and poorly-managed use of energy has led to oil spills, acid rain, smog, and other forms of environmental pollution that have ruined the natural beauty people seek to enjoy. California is not immune to these problems, but the CEC-adopted appliance standards, building standards, and utility programs that promote efficiency and conservation have gone a long

way toward maintaining and improving environmental quality. Other benefits include reduced destruction of natural habitats, which, in turn, helps protect animals, plants, and natural systems.

Many experts believe that burning fossil fuel is a major contributor to global warming; carbon dioxide is being added to an atmosphere already containing 25 percent more than it did two centuries ago. Carbon dioxide and other greenhouse gases create an insulating layer around the Earth that leads to global climate change. CEC research shows that most of the sectors of the State economy face significant risk from climate change, including agriculture, forests, and the natural habitats of a number of indigenous plants and animals.

Scientists recommend that actions be taken to reduce emissions of carbon dioxide and other greenhouse gases. While adding scrubbers to power plants and catalytic converters to cars are steps in the right direction (both of which are currently enforced as part of existing regulatory schemes), the use of energy-efficient standards can be effective actions to limit the carbon dioxide that is emitted into the atmosphere. According to the CEC, using energy efficiently in accordance with Title 24 Energy Efficiency standards is a proven, far-reaching strategy that can and does present an important contribution to the significant reduction of greenhouse gases.

In fact, the National Academy of Sciences has urged the country to follow California's lead on such efforts, and has recommended that nationwide energy efficiency building codes modeled after Title 24 be adopted. The CEC's Title 24 program has played a vital and perhaps one of the most important roles in maximizing energy efficiency and preventing the wasteful, inefficient, and unnecessary use of energy throughout the State.

The 2005 Energy Efficiency Standards include the following:

- Time Dependent Valuation (TDV). Source energy was replaced with TDV energy. TDV energy values energy savings greater during periods of likely peak demand, such as hot summer weekday afternoons, and values energy savings less during off-peak periods. TDV gives more credit to measures such as daylighting and thermal energy storage that are more effective during peak periods.
- New Federal Standards. Coincident with the 2005 Standards, new standards for water heaters and air conditioners took effect. These changes affect all residential buildings, but also affect many nonresidential buildings that use water heaters and/or residential-size air conditioners.
- New Lighting in Historic Buildings. The exception to the Standards requirements for historic buildings has changed for lighting requirements so that only those historic or historic replica components are exempt.
- Cool Roofs. The nonresidential prescriptive standards require cool roofs—high-reflectance, high-emittance roof surfaces or exceptionally high-reflectance and low-emittance surfaces—in

all low-slope applications. The cool-roof requirements also apply to roof replacements for existing buildings.

- Acceptance Requirements. Basic “building commissioning,” at least on a component basis, is required for electrical and mechanical equipment that is prone to improper installation.
- Demand Control Ventilation. Controls that measure CO<sub>2</sub> concentrations and vary outside air ventilation are required for spaces such as conference rooms, dining rooms, lounges, and gyms.
- T-bar Ceilings. Placing insulation directly over suspended ceilings is not permitted as a means of compliance, except for limited applications.
- Relocatable Public School Buildings. Special compliance approaches are added for relocatables so they can be moved anywhere statewide.
- Duct Efficiency. R-8 duct insulation and duct sealing with field verification is required for ducts in unconditioned spaces in new buildings. Duct sealing is also required in existing buildings when the air conditioner is replaced. Performance method may be used to substitute a high-efficiency air conditioner in lieu of duct sealing.
- Indoor Lighting. The lighting power limits for indoor lighting are reduced in response to advances in lighting technology.
- Skylights for Daylighting in Buildings. The prescriptive standards require that skylights with controls to shut off the electric lights are required for the top story of large, open spaces (spaces larger than 25,000 feet with ceilings higher than 15 feet).
- Thermal Breaks for Metal Building Roofs. Continuous insulation or thermal blocks at the supports are required for metal building roofs.
- Efficient Space Conditioning Systems. A number of measures are required that improve the efficiency of heating, ventilation, and air conditioning (HVAC) systems, including variable-speed drives for fan and pump motors greater than 10 horsepower, electronically-commutated motors for series fan boxes, better controls, efficient cooling towers, and water-cooled chillers for large systems.
- Unconditioned Buildings. New lighting standards—lighting controls and power limits—apply to unconditioned buildings, including warehouses and parking garages. Lighting power tradeoffs are not permitted between conditioned and unconditioned spaces.
- Compliance Credits. Procedures are added for gas cooling, underfloor ventilation.
- Lighting Power Limits. The Standards set limits on the power that can be used for outdoor lighting applications such as parking lots, driveways, pedestrian areas, sales canopies, and car lots. The limits vary by lighting zones or ambient lighting levels. Lighting power tradeoffs are not permitted between outdoor lighting and indoor lighting.

- Shielding. Luminaires in hardscape areas larger than 175 watts are required to be cutoff luminaires, which will save energy by reducing glare.
- Bi-level Controls. In some areas, outdoor lighting controls are required, including the capability to reduce lighting levels to 50 percent.
- Lighting Power Limits. Lighting power limits (or alternative equipment efficiency requirements) apply to externally and internally illuminated signs used either indoors or outdoors.

Pursuant to the California Building Standards Code and the Title 24 Energy Efficiency Standards, the City will review the design and construction components of the project's Title 24 compliance when specific building plans are submitted.

### 6.5.2 - Energy Requirements of the Proposed Project

Short-term construction and long-term operational energy consumption are discussed below.

#### Short-Term Construction

The EPA regulates non-road diesel engines. The EPA has no formal fuel economy standards for nonroad (e.g., construction) diesel engines but does regulate diesel emissions, which indirectly affects fuel economy. In 1994, the EPA adopted the first set of emission standards (Tier 1) for all new nonroad diesel engines greater than 37 kilowatts (50 horsepower). The Tier 1 standards were phased in for different engine sizes between 1996 and 2000, reducing NO<sub>x</sub> emissions from these engines by 30 percent. EPA has since adopted more stringent emission standards for NO<sub>x</sub>, hydrocarbons, and particulate matter from new nonroad diesel engines. This program includes the first set of standards for nonroad diesel engines less than 37 kW. It also phases in more stringent "Tier 2" emission standards from 2001 to 2006 for all engine sizes and adds yet more stringent "Tier 3" standards for engines between 37 and 560 kW (50 and 750 hp) from 2006 to 2008. These standards will further reduce nonroad diesel engine emissions by 60 percent for NO<sub>x</sub> and 40 percent for PM from Tier 1 emission levels. In 2004, EPA issued the Clean Air Nonroad Diesel Rule. This rule will cut emissions from nonroad diesel engines by more than 90 percent, and it will take effect beginning in 2008 and will be fully phased in by 2014. These emission standards are intended to promote advanced clean technologies for nonroad diesel engines that improve fuel combustion, but they also result in slight decreases in fuel economy.

City Parks staff has indicated the planned park improvements will be made as funds and staff time are available to complete the various projects, including installation of artificial turf on the soccer field. While it is possible all the improvements could be made in a relatively short amount of time (i.e., concurrent), it is most likely they will be spread over a 1-2 year period.

There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region. Therefore, it is

expected that construction fuel consumption associated with the Proposed Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

## **Long-Term Operations**

### ***Transportation Energy Demand***

Vehicle fuel efficiency is regulated at the Federal level. Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 miles per gallon. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is not determined for each individual vehicle model: rather, compliance is determined on the basis of each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States.

The planned improvements of the Proposed Project are not expected to generate significant amounts of additional vehicular traffic on City streets. In addition, parking on the site is extremely limited, and most park users access the park via public transit, walking, or on bicycle.

### **Building Energy Demand**

The Proposed Project is expected to consume an additional 50,000 kWh of electricity per year and an incremental amount of natural gas on an annual basis (see Section 4.2, Air Quality), mainly due to lighting of the renovated soccer field. In addition to compliance with Title 24, the state energy code, the City of Los Angeles has enacted its own energy conservation programs, and applicable measures from that program will be implemented as part of the Proposed Project.