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## V. ENVIRONMENTAL IMPACT ANALYSIS

### H. UTILITIES

#### 1. ENERGY CONSERVATION

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##### ENVIRONMENTAL SETTING

The Project Site is currently developed with the Los Angeles Memorial Coliseum, a multi-purpose outdoor stadium with a maximum seating capacity of 92,500 persons. Several ancillary structures are located adjacent to and surrounding the Coliseum on the Project Site. These structures include ticket booths, restroom facilities, and concession-related service buildings. The Project Site is situated within Exposition Park, which is developed with several other publicly oriented facilities, including the Los Angeles Memorial Sports Arena, the California Science Center, and the County Museum of Natural History, among others. The Project Site is served by existing infrastructure.

The majority of the Coliseum's energy demands are generated by major events. The Coliseum has hosted an average of 34 events per year over the past four calendar years (1999 through 2002) with a total average annual attendance of 837,071 persons.<sup>1</sup> Full spectator capacity at the Coliseum (92,500 persons) was not reached on any occasion during the aforementioned four-year study period, and has only been reached on infrequent occasions throughout the history of the stadium. In addition to event-related energy demands the Coliseum operates ancillary offices for day-to-day management and grounds maintenance uses. For a more detailed discussion of the parameters of the time period and attendance data utilized in this study, see Section IV.B of this report, Analytical Assumptions.

##### Electricity

Electrical utility service is currently provided to both the Project Site and the surrounding locale by the City of Los Angeles Department of Water and Power (DWP). The DWP distributes electricity to this area of the City of Los Angeles from the following facilities:

- Century Receiving Station B, located near the intersection of Central Avenue and Century Boulevard, approximately 5.0 miles southeast of the Project Site;
- Distributing Station (DS) 13, located near the intersection of Normandie Avenue and Jefferson Boulevard, approximately 0.7 miles northwest of the Project Site;

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<sup>1</sup> These 34 average annual events do not include non-ticketed events.

- Distributing Station (DS) 19, located near the intersection of San Pedro Street and Jefferson Boulevard, approximately 1.25 miles east of the Project Site; and
- Distributing Station (DS) 32, located near the intersection of Woodlawn Avenue and Vernon Avenue, approximately 1.0 miles southeast of the Project Site.

Existing electrical service facilities on the Project Site consist of two Customer Stations (CS-47 and CS-66), which are supplied from the DWP's 4.8 kilovolt (kV) distribution system, and three Industrial Stations (IS-1632, IS-1649, and IS-1946), which are supplied from the DWP's 34.5 kV distribution system. These five facilities are situated at various locations around the Coliseum. Four of these five facilities are exclusively for on-site electricity consumption, while the fifth (IS-1946) also serves other electricity loads within Exposition Park. Each facility is owned and maintained by the DWP.

During major events, electricity is consumed for a variety of uses, the most significant of these being field lighting and scoreboard and videoboard operation. Other less intensive event-associated uses of electricity on-site include public address/sound system operation, television and radio transmission equipment, internal stadium lighting (locker rooms, press box, etc.), stadium and field maintenance equipment, and food preparation. The primary electricity-consumptive on-site use not associated with Coliseum events is the daily lighting of the Coliseum Commission offices, continual security and maintenance lighting, and the operation of office equipment. It should be noted that the majority of annual on-site electricity consumption occurs during Coliseum events, an average of 34 days per year. Electricity usage on-site is reduced substantially during periods when no stadium events are being held.

Table V.H.1-1 presents total and average electricity consumption data for the Project Site over a four-year period from 1999-2002. As shown in Table V.H.1-1, an average total of approximately 2,152,982 kilowatt hours (kWh) of electricity are consumed annually on the Project Site by the existing Coliseum and its related facilities, an average of approximately 63,323 kWh per event.<sup>2</sup> As previously stated, the majority of the electricity consumed on-site is for the purpose of field lighting and scoreboard/videoboard operation.

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<sup>2</sup> Represents average annual energy consumption for both events and non-event periods divided by the average annual number of events at the Coliseum.

**Table V.H.1-1  
Existing Electricity Consumption**

<b>Fiscal Years</b>	<b>Average Number of Events</b>	<b>Average Annual Electricity Consumption (kWh)</b>	<b>Average Electricity Consumption per Event (kWh)</b>
1999-2002	34	2,152,982	63,323

*Source: Los Angeles Memorial Coliseum Commission, 2003.*

## Natural Gas

The Southern California Gas Company (SCG) provides natural gas to the City of Los Angeles through existing gas mains located under the streets and public right-of-ways. Natural gas service is provided in accordance with the Gas Company's policies and extension rules on file with the California Public Utilities Commission (PUC) at the time contractual agreements are made.

The State of California produces about 16 percent of the natural gas it uses. The remaining 84 percent is obtained from sources outside of the state: 46 percent from the Southwest, 28 percent from Canada, and 10 percent from the Rocky Mountain area. In the last ten years three new interstate gas pipelines were built to serve California, expanding the over one million miles of existing pipelines.<sup>3</sup> However, the availability of natural gas is based upon present conditions of gas supply and regulatory policies. As a public utility, SGC is under the jurisdiction of the California Public Utilities Commission (PUC), but can also be affected by actions of federal regulatory agencies. Should these agencies take any action that affects gas supply or the conditions under which service is available, gas service would be provided in accordance with those revised conditions.

Natural gas service is currently provided to the site by the Southern California Gas Company from an existing four-inch main under Menlo Avenue and an existing three-inch main under Hoover Street. Individual service lines run from each of these gas mains to the Coliseum structure. Other lines serve the off-site portions of Exposition Park, including the Sports Arena, from main lines under Figueroa Street and Martin Luther King Jr. Boulevard. Natural gas is currently consumed at the Coliseum for water heating; space heating in the Coliseum Commission offices, locker rooms, and press box; operation of the Olympic torch; and boiler operation. It should be noted that the majority of natural gas consumption on-site occurs during Coliseum events. Natural gas usage on-site is reduced substantially during periods when no events are scheduled. Table V.H.1-2 presents total and average natural gas consumption data for the Project Site over the four-year period from 1999-2002. As shown in Table V.H.1-2, an approximate average of 1,048,390 cubic feet (cf) of natural gas is consumed annually on the Project Site

<sup>3</sup> *California Home Page: [www.energy.ca.gov/html/calif\\_energy\\_facts.html](http://www.energy.ca.gov/html/calif_energy_facts.html), March 8, 2002.*

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**Table V.H.1-2  
Existing Natural Gas Consumption**

<b>Fiscal Years</b>	<b>Average Number of Events</b>	<b>Average Annual Natural Gas Consumption (cf)</b>	<b>Average Natural Gas Consumption per Event (cf)</b>
2000-2002	34	1,048,390	30,835
<i>Source: Los Angeles Memorial Coliseum Commission, 2003.</i>			

Coliseum. This total represents an average of 30,835 cf of natural gas consumed by the stadium per Coliseum event.<sup>4</sup>

## **ENVIRONMENTAL IMPACTS**

### **Thresholds of Significance**

Implementation of a project would create a significant impact upon electricity or natural gas resources if its demand for electricity or natural gas cannot be served by existing infrastructure and/or supply.

### **Project Impacts**

#### ***Short-Term Energy Consumption***

Energy would be consumed during the demolition, excavation and site preparation, and construction phases of the Proposed Project for grading and materials transfer by heavy-duty equipment, which is usually diesel powered. At this time, it is expected that the heavy equipment involved in the demolition, excavation and site preparation, and construction phases of the Project would include crawler-excavators, loaders, bulldozers, graders, water trucks, street sweepers, tractors, cranes, and fork lifts. In addition, dump trucks would be used to haul excavated earth and building material to disposal sites throughout the

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<sup>4</sup> Represents average total natural gas consumption for both events and non-event periods divided by the average annual number of events at the Coliseum.

construction period. It is estimated that the majority of heavy equipment use on the site would occur during the first six months of the approximately 18- to 20-month construction period. The construction contractor is currently evaluating the feasibility of recycling existing concrete building materials to be removed for use in the Proposed Project. Recycling efforts, if employed, would be accomplished on-site and may require additional equipment not presented in Table V.H.1-3, including a concrete recycling facility and a batch plant.

It is estimated that the Proposed Project will require the export of approximately 250,000 cubic yards of soil and debris. The demolition and excavation phases of the project are anticipated to last approximately 6 months. Assuming the use of tandem bottom dump trucks with a hauling capacity of 15 cubic yards per truck, the demolition/excavation phase of the renovation project would generate approximately 118 haul trips per day.<sup>5</sup> As shown in Table V.H.1-3, an approximate total of 58,331 gallons of diesel fuel would be consumed by heavy equipment during the construction period. In addition, it is estimated that approximately 75,000 cubic yards of new concrete would be needed on-site from local and regional suppliers. Assuming a truck capacity of 9.5 cubic yards, a round haul trip of 25 miles, and a fuel consumption rate of ten miles per gallon, it is estimated that a total of 7,895 truck trips consuming a total of 19,738 gallons of diesel fuel would be consumed, as shown in Table V.H.1-3. It is further estimated that approximately 150,000 gallons of diesel fuel will be consumed by construction equipment operating on site. Therefore, a total of 228,069 gallons of diesel fuel are estimated to be consumed during the excavation, grading, and construction process.

Additional energy usage would be associated with the construction of the Project itself, including any on-site electrical power usage for tools and other heavy equipment. Construction worker travel to and from the Project Site would also result in the additional consumption of approximately 967,648 gallons of vehicular unleaded fuel during the approximately 18- to 20-month construction period.<sup>6</sup> In addition to approximately 228,069 gallons of diesel fuel and 967,648 gallons of vehicular fuel, and an unquantifiable amount of electricity and natural gas would be consumed as a result of short-term (20-month) construction-related activities.

### **Long-Term Energy Consumption - Electricity**

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<sup>5</sup> Based on a total of 16,666 haul truck trips during a 6-month period with approximately 23.5 working days per month. Fuel consumption rates were based on a haul trip length of approximately 35 miles round trip and a fuel consumption rate of 10 miles per gallon.

<sup>6</sup> Based upon an average work day with 1,000 construction workers on-site each day over a 20-month construction period (23.5 working days per month) and a round trip commuting distance of 35 miles at an average consumption rate of 17 miles per gallon.

The Proposed Project would consist of renovating the Coliseum, reducing its maximum seating capacity from the current level of 92,500 persons to 78,000 persons. The Proposed Project would include the reconfiguration of the Coliseum's seating to provide for the addition of approximately 200 private suites

**Table V.H.1-3  
Construction Equipment Fuel Consumption**

<b>Phase/Equipment</b>	<b>Number Of Pieces/Total Fuel Consumed (Gallons)</b>
<b>Demolition Phase</b>	
Crawler-Excavators	3
Loaders	3
Bulldozers	2
<b>Excavation Phase</b>	
Crawler-Excavators	2
Loaders	4
Bulldozers	2
Graders	1
Water Trucks	2
Street Sweepers	2
<b>Construction Phase (Concrete)</b>	
Tractors	4
Loaders	2
Cranes	3
Fork Lifts	3
<b>Total From Heavy Equipment:<sup>a</sup></b>	<b>150,000 gallons</b>
Dump Trucks (Excavation Phase) <sup>b</sup>	58,331 gallons
Concrete Trucks (Construction Phase) <sup>c</sup>	19,738 gallons
<b>Total Project Diesel Fuel Consumption:</b>	<b>228,069 gallons</b>
<sup>a</sup> Assumes 10 pieces of equipment operating continuously on the site for six months (141 days) at a fuel consumption rate of 125 gallons per day per equipment piece. Source: Christopher A. Joseph & Associates, 2003.	

to be located in three levels. Additionally, expanded locker rooms, and new offices and press/media facilities would be developed as part of the Project. The Proposed Project would remove all but one of the existing outbuildings surrounding the Coliseum structure and would include the construction of two new ancillary structures, each 20,000 square feet, for retail or office use. Both ancillary structures would be operable on a day-to-day basis throughout the year.

Electrical service to the renovated Coliseum would continue to be provided by the DWP's 34.5 kV distribution system with transformation to the Coliseum's utilization voltage to take place on the Project

Site. To accomplish this, a new Industrial Station and approximately eight new Customer Stations would be located within or adjacent to the Coliseum. The Proposed Project would include the replacement and/or updating of most of the existing Coliseum's electricity-consuming facilities.

While reducing the maximum attendance capacity for any one event, the Proposed Project would increase the total number of electricity-consumptive facilities located on-site through the replacement of existing restroom and concession facilities with a greater number of new facilities, the expansion of the existing home and visiting team locker rooms, the construction of the new food service/maintenance building, the development of separate club level concession counters and lounges, the construction of approximately 200 private suites with wet bar and bathroom facilities, and more expansive press box and communication facilities. The addition of closed circuit television monitors to all concession areas, suites, and lounges; new lighting to all interior and exterior portions of the Coliseum; additional elevators located throughout the stadium; and a new sound system with auxiliary speakers in restrooms, offices, and locker rooms would also add to the existing number of electricity-consuming uses on the site. All food preparation centers in the Proposed Project would be equipped with electrical service, as would all private suites. Air conditioning would likely be provided throughout many of the enclosed portions of the Coliseum, including the private suites, concession stands, club level common areas, press box, and outlying ticket offices. In addition, ventilation of many of the semi-enclosed portions of the stadium would be provided. All of these improvements and additions would increase the number of electricity-using facilities on the site, thereby increasing the site's total electricity consumption by a corresponding amount.

Electricity consumption for the Proposed Project was estimated using the amount of electricity currently consumed on the Project Site. As seen in Table V.H.1-4, electricity consumed by the Proposed Project would be approximately 63,323 kWh per event. On event and non-event days the Proposed ancillary uses are expected to consume approximately 1,419 kWh per day. Annually, the Proposed Project will consume approximately 3.4 million kWh (based on 46 events per year and ancillary use daily throughout the year). This represents an increase of approximately 1.2 million kWh per year over existing conditions.

**Table V.H.1-4  
Proposed Project Electricity Consumption**

<b>Development</b>	<b>Average Number of Events per Year</b>	<b>Consumption Rate</b>	<b>Total Annual Consumption (kWh)</b>
Stadium	46	63,323 (kWh/event) <sup>a</sup>	2,912,858
Ancillary Office/Retail	40,000 sf	12.95 (kWh/sf/year) <sup>b</sup>	518,000
<b>Subtotal Proposed Project</b>			<b>3,430,858</b>
<b>Less Existing Electricity Consumption</b>			<b>2,152,982</b>
<b>Net Increase in Annual Electricity Consumption</b>			<b>1,277,876</b>

<sup>a</sup> *Based on average electricity consumption rate per event (for 34 annual events averaged over a four year period) provided by the Los Angeles Memorial Coliseum Commission, 2003.*

<sup>b</sup> *Based on a usage of 365 days per year.*

In general, electricity consumption on event days at the Coliseum is not nor would it be a direct function of attendance levels, as many of the primary electricity-consumptive facilities on the site, such as lighting, scoreboard and videoboards, and air conditioning would be utilized during most events regardless of the size of the crowd present. However, it should be noted that many of these electricity-consuming uses would only be in full operation during events with sufficient attendance levels to warrant their use. For example, the number of concession stands and restrooms utilized during an event would be dependent on the attendance at that event. For the purposes of this analysis, it has been assumed that the electricity currently consumed on-site would continue to be utilized for the same purposes in the renovated stadium on event days and that the two new ancillary structures proposed would consume electricity independently, on a daily basis regardless of event days or characteristics. It is also likely that the electrical infrastructure in the renovated Coliseum would exhibit an increase in energy efficiency when compared to the existing facilities. This assumption is based upon the development of energy conservation standards established by the California Energy Commission under Title 24; standards which were not in place when the Coliseum was constructed. As stated previously, however, it is likely that the additional number of electricity-consumptive uses to be contained within the Proposed Project would more than offset any reduction in electricity use associated with improved infrastructure. The increase in electricity consumption on the site resulting from the Proposed Project would be primarily associated with the increased number of visitor facilities, such as private suites, more concessions, and the overall increase in the amount of enclosed square footage within the Coliseum, as well as the operation of a new field lighting system.

Following implementation of the Proposed Project, the majority of the peak electricity consumption periods on the site would continue to occur during Coliseum event days, which are largely confined to weekends and weekday evenings. These time periods are also off-peak periods for the areawide consumption of electricity. As a result, the ability of the DWP's regional infrastructure to deliver the peak electrical requirement to the site would not be expected to be severely affected by implementation of the Proposed Project. However, the precise number, size, and locations of any new necessary transformer stations, as well as details concerning the DWP's planned distribution system cannot be determined until the DWP has evaluated the electrical load estimates and service requirements for the Proposed Project. Additional power facilities could be required in order to serve the load growth associated with the Proposed Project. Construction of these facilities may result in some temporary secondary impacts in the forms of noise, air pollution, and traffic congestion during construction.<sup>7</sup>

Development of the Proposed Project would continue existing uses of local and regional energy resources on the Project Site. Upon completion and operation, the Proposed Project would be estimated to consume

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<sup>7</sup> *Source: Letter from Edward Karapetian, Manager of Environmental and Governmental Affairs, City of Los Angeles Department of Water and Power, December 19, 1990.*

approximately 3.4 million kWh of electricity per year, an increase of 1.2 million kWh when compared to the existing Coliseum. It has not yet been determined whether the local off-site electricity infrastructure would be able to handle the anticipated increase in yearly power consumption on the Project Site associated with implementation of the Proposed Project, but since the increase in electricity consumption will only occur approximately 46 days per year, and will be low on non-event days, the impact is expected to be less than significant. If improvements to the local distribution system are determined to be necessary by the DWP in order to serve the Project, they would be required to be implemented prior to Project completion. Such improvements however, could be made with minimal impact upon the surrounding land uses, and all property owners would be notified in advance if temporary electricity outages are expected. Impacts to electricity infrastructure and supply would be less than significant.

### **Long-Term Energy Consumption - Natural Gas**

With the development of the Proposed Project, natural gas would continue to be provided to the Project Site by the Southern California Gas Company from existing facilities in the vicinity of the site. While reducing the maximum attendance capacity for most events, the Proposed Project would increase the total number of gas-consumptive facilities located on-site through the replacement of existing concession facilities with a greater number of new facilities, the expansion of the existing home and visiting team locker rooms, the construction of the new food service/maintenance building, the development of separate club level concession counters and lounges, the construction of approximately 200 private suites with wet bar facilities, and more expansive press box facilities. All food preparation centers in the Proposed Project would be equipped with gas service. The Proposed Project would also include the construction of two new buildings, each approximately 20,000 square feet, to accommodate ancillary office or retail uses. Both ancillary structures would be operable on a day-to-day basis throughout the year. All of these improvements and additions would increase the number of gas-using facilities on the site, thereby increasing the site's total natural gas consumption by a corresponding amount. In general, gas consumption at the Coliseum is not a direct function of attendance levels, as many of the primary gas-consumptive facilities on the site, such as those associated with food preparation and water heating, would be utilized during most events regardless of the size of the crowd present. However, it should be noted that many of these gas-consuming uses would only be in full operation during events with sufficient attendance levels to warrant their use. For example, the number of concession stands and restrooms utilized during an event would be dependent on the attendance at that event.

For the purposes of this analysis, it has been assumed that the natural gas currently consumed on-site would continue to be used for the same purposes under the Proposed Project. The additional ancillary structures would slightly increase the use of natural gas on the site. Since development of the Project would include the replacement and/or modernization of much of the gas delivery infrastructure, as well as of the gas-utilizing fixtures within the Coliseum, it has been assumed that the natural gas infrastructure in the renovated Coliseum would exhibit an increase in energy efficiency when compared to the existing

facilities. This assumption is based upon the development of energy conservation standards established by the California Energy Commission under Title 24; standards which were not in place when the Coliseum was constructed. However, it is likely that the additional number of gas-consumptive uses to be contained within the Proposed Project would more than offset any reduction in the use of natural gas to be associated with the installation of improved infrastructure.

Natural gas consumption by the Proposed Project was estimated using the amount of electricity currently consumed on the Project Site and projecting an increase in up to 12 additional football games per year. As seen in Table V.H.1-5, natural gas consumed by the Proposed Project would be approximately 33,835 cf per event. The proposed ancillary uses would consume approximately 2,630 cf of natural gas per day. Annually, the Proposed Project would be anticipated to consume approximately 2.3 million cf (based on stadium consumption during 46 events per year and ancillary use daily throughout the year). This represents an increase of approximately 1.3 million cf of natural gas per year over existing conditions.

**Table V.H.1-5  
Proposed Project Natural Gas Consumption**

<b>Development</b>	<b>Average Number of Events per Year</b>	<b>Consumption Rate</b>	<b>Total Annual Consumption (cf)</b>
Stadium	46	30,835 (cf/event) <sup>a</sup>	1,418,410
Ancillary Office/Retail	40,000 sf	2 (cf/sf/month)	960,000
<b>Proposed Natural Gas Consumption</b>			<b>2,378,410</b>
<b>Less Existing Natural Gas Consumption</b>			<b>1,048,390</b>
<b>Net Increase in Annual Natural Gas Consumption</b>			<b>1,330,020</b>
<p><sup>a</sup> Based on average natural gas consumption rate per event provided by the Los Angeles Memorial Coliseum Commission, 2003. Source: Christopher A. Joseph &amp; Associates, 2003.</p>			

Following implementation of the Proposed Project, the majority of the natural gas consumption on the site would continue to occur during Coliseum event days, which are largely confined to weekends and weekday evenings. These time periods are also off-peak periods for the areawide consumption of natural gas. As a result of off-peak hour use, the ability of the Southern California Gas Company's regional infrastructure to deliver the peak natural gas requirement to the site would not be expected to be severely affected by implementation of the Proposed Project. If it is determined that off-site gas delivery system improvements are necessary to serve the anticipated Project peak load of 33,835 cf per event, they would be required to be implemented prior to Project completion.

## **CUMULATIVE IMPACTS**

Development and implementation of the related projects within the study area would result in the consumption of approximately 405,713 kWh of electricity and approximately 1,110,387 cf of natural gas per day (based on stadium consumption during 46 days per year and related project and ancillary structures consumption daily throughout the year), as shown in Tables V.H.1-6 and V.H.1-7. Although the cumulative impact of the identified related projects may require the installation of additional electrical and/or natural gas distribution facilities, service availability, and thus the extent of any potential locally occurring cumulative impacts on utility service, would necessarily be determined through the environmental review process for each individual project. The construction of any power distribution facilities required in association with any related project may cause limited local short-term impacts in the forms of unavoidable noise, air pollution, and traffic congestion during construction. Even so, it is not expected that the development of these projects would represent a level of use of regional energy resources that could result in a significantly adverse cumulative impact.

## **MITIGATION MEASURES**

No significant impacts upon electricity or natural gas resources or infrastructure systems have been identified, thus no mitigation measures are required. Nevertheless, the LADWP recommends the following measures be incorporated into the final design as feasible, to reduce the Project's demands for energy resources.

1. During the design process, the applicant should consult with the Los Angeles Department of Water and Power, Efficiency Solutions Business Group, regarding possible energy efficiency measures. The applicant shall incorporate measures to meet or, if possible, exceed minimum efficiency standards for Title XXIV of the California Code of Regulations.

## **LEVEL OF SIGNIFICANCE AFTER MITIGATION**

While the Proposed Project's impact upon electricity and natural gas resources and infrastructure would be less than significant prior to mitigation, implementation of the mitigation measure listed above would serve to further reduce the Project's demand for energy resources.

**Table V.H.1-6  
Estimated Electricity Consumption by Related Projects**

<b>Land Use</b>	<b>Size</b>	<b>Consumption Rate (kilowatt hours/year) <sup>a</sup></b>	<b>Total (kilowatt hours/day)</b>
Apartment	179 du	5,172/du	2,536
Community Facility/Clinic	78,840 sf	17,100/1,000 sf	3,694
Elementary/Junior High School	1,211,403 sf	12,200/1,000 sf	203
High School	1,815,581 sf	12,200/1,000 sf	232
Light Industrial	700,000 sf	12,200/1,000 sf	23,397
Market/Grocery	8,720 sf	55,200/1,000 sf	1,319
Multi-Use Development	6,914,165 sf	15,300/1,000 sf	289,827
Museum	1,128,000 sf	12,200/1,000 sf	37,703
Office	447,500 sf	17,100/1,000 sf	20,965
Parking Facility	2,400 spaces	--	0
Restaurant	17,443 sf	47,600/1,000sf	2,275
Retail	107,370 sf	15,300/1,000 sf	4,501
Storage	7,910 sf	5,300/1,000 sf	115
Theater <sup>b</sup>	33,420 sf	12,200/1,000 sf	1,117
University	440,000 sf	12,200/1,000 sf	14,707
Wholesale Trade Space	215,000 sf	5,300/1,000 sf	3,122
<b>Cumulative Total</b>			<b>405,713</b>
<sup>a</sup> Based on rates provided by the SCAQMD, CEQA Air Quality Handbook, 1993. <sup>b</sup> Used Pacific Theaters Seat Rate (1 seat= 20 sf). <u>Notes:</u> du = dwelling unit sf = square feet Source: Christopher A. Joseph & Associates, 2003.			

**Table V.H.1-7  
Estimated Natural Gas Consumption by Related Projects**

<b>Land Use</b>	<b>Size</b>	<b>Consumption Rate (cubic feet/month) <sup>a</sup></b>	<b>Total (cubic feet/day)</b>
Apartment	179 du	4,011.5/du	23,935
Community Facility/Clinic	78,840 sf	2,000/1,000 sf	5,256
Elementary/Junior High School	1,211,403 sf	2,000/1,000 sf	80,760
High School	1,815,581 sf	2,000/1,000 sf	121,038
Light Industrial	700,000 sf	2,000/1,000 sf	46,667
Market/Grocery	8,720 sf	2,900/1,000 sf	843
Multi-Use Development	6,914,165 sf	2,900/1,000 sf	668,369
Museum	1,128,000 sf	2,000/1,000 sf	75,200
Office	447,500 sf	2,000/1,000 sf	29,833
Parking Facility	2,400 spaces	--	0
Restaurant	17,443 sf	2,900/1,000sf	1,686
Retail	107,370 sf	2,900/1,000 sf	10,379
Storage	7,910 sf	2,000/1,000 sf	527
Theater <sup>b</sup>	33,420 sf	2,000/1,000 sf	2,228
University	440,000 sf	2,000/1,000 sf	29,333
Wholesale Trade Space	215,000 sf	2,000/1,000 sf	14,333
<b>Cumulative Total</b>			<b>1,110,387</b>
<sup>a</sup> Based on rates provided by the SCAQMD, CEQA Air Quality Handbook, 1993. <sup>b</sup> Used Pacific Theaters Seat Rate (1 seat= 20 sf). <u>Notes:</u> du = dwelling unit sf = square feet Source: Christopher A. Joseph & Associates, 2003.			