

5. Electricity

Existing Conditions

Service Provider

The Los Angeles Department of Water and Power (LADWP) will provide electrical service to the proposed Project. Service to the site is conveyed via three transformers located within two transformer station rooms located on Level B of the parking garage. Currently, these transformers have a service capacity of 8,500 Kilo Volt Amperes (KVA). While some service providers in California are currently experiencing an energy crisis, LADWP has not experienced the same shortages or high rate increases to compensate for such shortages. The State of California is currently studying the situation and making plans to address the shortage of energy through conservation measures, facility expansions and other means.

Existing Consumption

Currently the proposed area to be redeveloped contains a mix of land uses including office (287,701 sf), theater (148,481 sf), restaurant (144,390 sf), retail (57,316 sf), and health club (40,934 sf). Based on a total demand analysis prepared by Syska and Hennessy, Inc. (**Appendix 15**), electrical energy consumed by the existing land uses at full occupancy is approximately 11,132,680 kWh (based on the Title 24 model). A percentage of the existing capacity serving the area around the Project site is allocated to the existing land uses. Development of the proposed Project would include the removal of all existing land uses, within the area to be redeveloped, prior to construction.

Energy Conservation

As part of Title 24 of the California Code of Regulations, new buildings are required to meet the State Building Energy Efficiency Standards for energy consumption. These standards apply to residential and non-residential development and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The standards are subject to change at the discretion of local government agencies, as long as they meet or exceed the standards set forth by Title 24. The local building efficiency standards are enforced through the building and safety department. Periodic changes to Title 24 have resulted in new construction being more energy efficient.

Threshold of Significance

Based upon criteria established in the City of Los Angeles Draft CEQA Thresholds Guidelines (1998), the proposed Project would result in a significant impact if:

- The Project would require new off-site energy supply facilities and distribution infrastructure, or capacity enhancing alterations to existing facilities; and
- The needed infrastructure was not anticipated by adopted plans.

Project Impacts

The Project proposes to redevelop the existing uses with office (719,924), restaurant (30,527 sf), retail (18,318 sf) and cultural uses (10,178 sf). The consumption of energy from existing land uses will be subtracted from the proposed Project contribution as a means of accurately calculating the net change from the proposed Project. According to the total demand analysis (**Appendix 15**), the proposed Project would consume approximately 7,911,952 kWh of electrical energy (based on a Title 24 model). Development of the proposed Project would result in a net decrease of 3,220,728 kWh when compared to the existing land uses.

The LADWP has reviewed the proposed Project's load estimates and determined that no service problems are anticipated as a result of Project implementation.⁶⁰ The existing distribution system currently serving the subject property would be adequate to serve the demands of the proposed Project. The transformers would serve the proposed uses with 20,000 amps at 277/480 volt 3-phase power.

The proposed Project would result in an incremental decrease to the local and regional demand for electrical service. The decreased demand would result in a less than significant adverse impact on electrical resources.

Mitigation Measures

The proposed Project would result in a less than significant impact on energy resources. Nevertheless, the following mitigation measures would further reduce electrical demand:

U-24 The proposed Project shall comply with the energy requirements set forth in Title 24 of the California Code of Regulations.

U-25 The Project applicant shall consult with the LADWP regarding the implementation of energy conservation measures including:

- Built-in appliances, refrigerators, and space conditioning equipment that exceed the minimum efficiency levels mandated in the California Code of Regulations.
- High efficiency air conditioning controlled by a computerized energy management system in the office and retail spaces.
- Circulation of ventilation air from high-priority to low-priority areas before being exhausted thereby decreasing the volume of ventilation air required.
- Ensure that buildings are well sealed to prevent outside air infiltrating and increasing interior space conditioning loads.
- Performance check the installed space conditioning system (to be completed by the developer/installer) prior to issuance of the certificate of occupancy to ensure that energy efficiency measures incorporated into the Project operate as designed.
- Design window systems to reduce thermal gain and loss, thus reducing cooling loads during warm weather and heating loads during cool weather.
- Install fluorescent and high intensity discharge (HID) lamps, which give the highest light output per watt of electricity consumed wherever possible, including exterior fixtures.
- Install time-controlled interior and exterior public area lighting limited to that necessary for safety and security.
- Control HVAC and lighting mechanical systems with timing systems to prevent accidental or inappropriate conditioning or lighting of unoccupied areas.

Significant Project Impacts After Mitigation

The proposed Project would consume less energy than the existing uses; therefore the Project would not result in an impact on electrical resources. Implementation of the mitigation measures set forth in this section would further reduce impacts and conserve energy.

⁶⁰ Source: Thomas Lira, Los Angeles Department of Water and Power, 2001.

Cumulative Impacts

Implementation of all related projects would result in the consumption of approximately 46,245,874 kWh per year. Calculation of this number is based upon generation rates obtained from the South Coast Air Quality Management District, CEQA Air Quality Handbook, April 1993, Table A9-11-A, Electricity Usage Rate, as shown in **Table V.N.5-1**. The addition of the proposed Project would decrease the annual energy consumption to 43,025,146 kWh. The electrical load imposed by the proposed Project and the related project list is within the capacity of the LADWP. All projects included under the related project list would be required to incorporate energy conservation measures into their design and function, and no shortfalls in service area growth are expected by the LADWP. Therefore, cumulative impacts on the provision of electrical services are anticipated to be less than significant.

Table V.N.5-1
Energy Consumption from Related Projects

	Use	Consumption Rate (kWh/unit/year)	Total Energy Consumed (kWh/year)
1.	770,000 sf office	12.95/sf	9,971,500
	21,000 sf retail	13.55/sf	284,550
2.	UCLA		
	2000 beds Southwest Campus Housing (1)	5,626.5/du	5,626,500
	296,700 sf Northwest Campus Phase II	11.55/sf	3,426,885
	1,500 Space Intramural Field Parking	N/A	N/A
	191,900 sf Physics and Astronomy Building	11.55/sf	2,216,445
	95,000 sf Luck Research Center	11.55/sf	1,097,250
	California NanoSystems Institute*	N/A	N/A
	1,000 sf Health Science Seismic Renovation	11.55/sf	11,550
3.	8,912 sf Whole Foods Supermarket	13.55/sf	120,758
4.	115,000 sf Shopping Center	13.55/sf	1,558,250
	350 du Apartments	5,626.5/du	1,969,275
5.	105 du Condominium	5,626.5/du	590,783
6.	6 pu Gas Station*	N/A	N/A
7.	74,653 sf Office Building	12.95/sf	966,756
8.	Fast Food Restaurant w/Drive Thru*	N/A	N/A
9.	360,000 sf Fox Studio Expansion	10.5/sf	3,780,000
10.	14,800 sf High School Building Renovation	11.55/sf	170,940
11.	Private School*	12.95/sf	N/A
12.	7,600 sf Office	12.95/sf	98,420
13.	74,000 sf Office	12.95/sf	958,300
14.	168,000 sf Office	12.95/sf	2,175,600
15.	34 du Condominium	5,626.5/du	191,301
16.	64 du Senior Housing	5,626.5/du	360,096
17.	Convenience Market*	N/A	N/A
18.	34,000 sf Cultural Center	4.35/sf	147,900
19.	20 du Condominium	5,626.5/du	112,530
20.	5,000 sf Retail	13.55/sf	67,750
21.	15,000 sf Retail	13.55/sf	203,250
22.	28,300 sf Office	12.95/sf	366,485
	16,700 sf Retail	13.55/sf	226,285
23.	82,000 sf Office	12.95/sf	1,061,900
	38,000 sf Shopping Center	13.55/sf	514,900
24.	80 du Senior Housing	5,626.5/du	450,120
25.	16 du Condominium	5,626.5/du	90,024
26.	23 du Condominium	5,626.5/du	129,410
27.	32,000 sf Medical Office	12.95/sf	414,400
28.	133 rm Hotel*	9.95/sf	N/A
29.	16 du Condominium	5,626.5/du	90,024
30.	152,646 sf Retail Office	13.55/sf	2,068,353
31.	10 du Condominium	5,626.5/du	56,265
32.	41,500 sf Office	12.95/sf	537,425
33.	23 du Condominium	5,626.5/du	129,410
34.	10 du Condominium	5,626.5/du	56,265
35.	6 du Condominium	5,626.5/du	33,759

Table V.N.5-1 (Cont.)
Energy Consumption from Related Projects

	Use	Consumption Rate (kWh/unit/year)	Total Energy Consumed (kWh/year)
36.	15,000 sf Retail	13.55/sf	203,250
	15,000 sf Office	12.95/sf	194,250
37.	4,900 sf Commercial/Retail	13.55/sf	66,395
38.	2.5 Miles Santa Monica Blvd Transit Project*	N/A	N/A
39.	71,000 sf Westfield Shoppingtown Century City	13.55/sf	962,050
40.	-10,000 sf Commercial	13.55/sf	-135,500
	19 du Condominium	5626.5/du	106,904
41.	85,367 sf Office	12.95/sf	1,105,503
42.	122,200 sf Harvard Westlake Middle School	11.55/sf	1,411,410
43.	6,711 trips CCNSP Replacement Trips*	N/A	N/A
		Total	46,245,874
		Net Project Consumption	-3,220,728
		Cumulative Total	43,025,146
* Site of use not available.			
Source: South Coast Air Quality Management District, CEQA Air Quality Handbook, April 1993, Table A9-11-A, Electricity Usage Rate			