



Your Partner for Green Facilities, Sustainability and Clean Technologies

ENERGY EXPENDITURE PLAN



Olympic High School

721 Ocean Park Boulevard

Santa Monica, CA 90405

P: (310) 392-2494

PREPARED FOR:

California Energy Commission
Energy Division
Local Assistance and Financing Office, MS-23
1516 Ninth Street
Sacramento, Ca 95814



PREPARED ON:
5/16/2017

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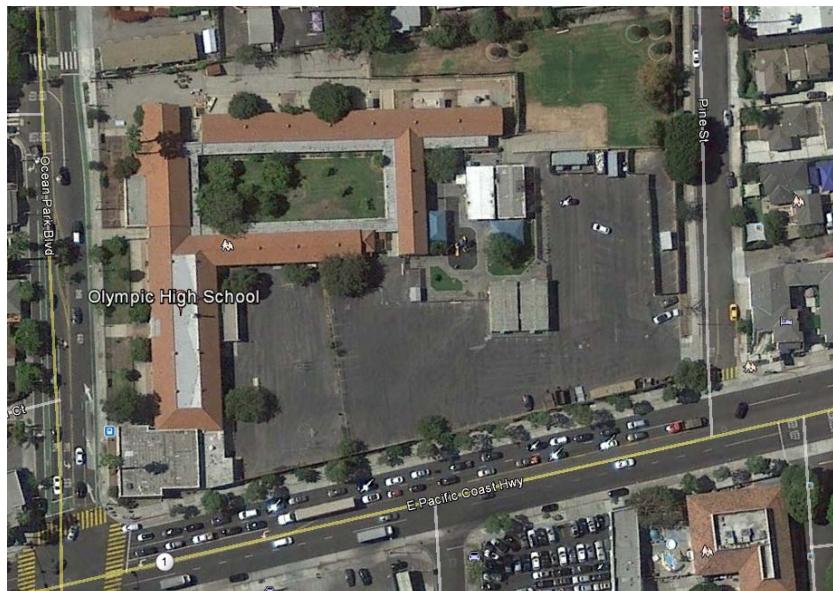
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Section 1: Facility Background

Olympic High School

Olympic High School is located at 721 Ocean Park Boulevard in Santa Monica, CA 90405. It is a high school serving approximately 91 students ranging from grades 10-12 and provides instruction using 6 permanent buildings and 4 portable buildings. Also located on site is Pine Street Preschool, which shares the facilities and utility history with Olympic High School. The total amount of occupied space is 39,333 SF. For a complete map of the campus, see Appendix A.

The campus operates on an academic calendar that begins in late August and ends in late June. Winter Break is a two week break that begins at the end of December and goes to the first week of January. Spring Break is a one week break that begins in early-April. School is in session beginning at 9:28 a.m. and continuing until 3:00 p.m., Monday through Friday. For a complete academic calendar and bell schedule, refer to Appendix A.



Utility Costs and Rate Schedules

The Olympic High School facilities receive electricity services from Southern California Edison (SCE) and gas services from SoCalGas (SCG). Monthly utility data is considered separately for each utility meter and each energy type (electricity, natural gas, propane, diesel, and water).

The following is a list of the meters associated with each energy type utilized at Olympic High School:

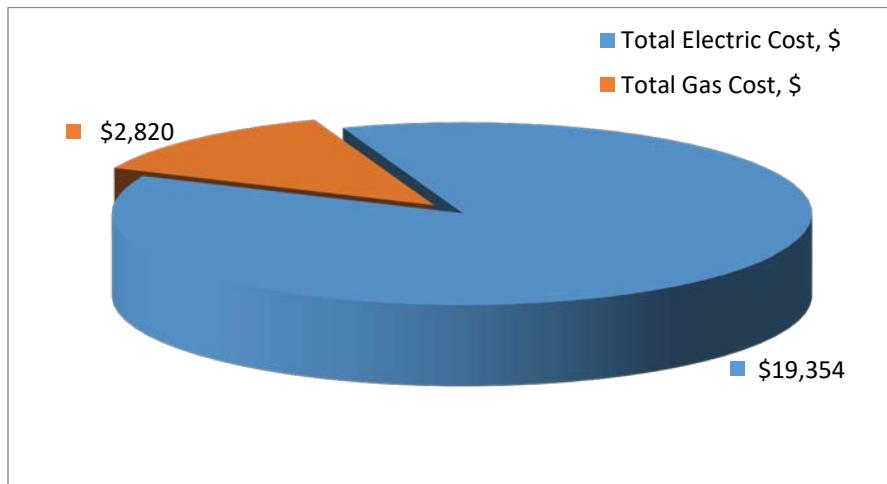
Table 1: Electric Meter Numbers and Rate Schedules

Account Number	Meter Number	Rate Schedule
3-001-1511-66	259000-072993	TOU-GS-2-A

Table 2: Gas or Propane Meter Numbers and Rate Schedules

Account Number	Meter Number	Rate Schedule
2015041200	5302718	GN-10

The utility data provided uses the data recovered from each of these meters during the period of July, 2015 to June, 2016. The cost comparison of Olympic High School's gas and electricity costs can be seen in the table below:



Benchmarking

As part of the site evaluation we determined the Energy Utilization Analysis (EUA) to provide important information about the energy usage of the school. Listed in the table below is the Benchmarking Report for Olympic High School:

Energy Use Intensity Calculator					
Electricity		Natural Gas		Other Fuels	
0.97	W/SF	0.08	Therms/SF	0.00	Gals/SF
2.78	kWh/SF	\$ 0.07	Cost/SF	\$ 0.00	Cost/SF
\$ 0.49	Cost/SF				
Energy Costs/SF/Year		\$ 0.56	Energy Use(Kbtu)/SF/Year		37.79

The main purpose of this report is to assess the current energy usage of Olympic High School. Energy consumption is analyzed compared to the site's actual weather data expressed in Cooling Degree Days (CDD) & Heating Degree Days (HDD). Graphs comparing the energy consumption to the CDD and HDD can be found in Appendix B.

The Baseline Energy Utilization Analysis (EUA) report compiles the monthly energy data from all meters on site. The EUA is useful in identifying critical energy consuming benchmarks like kWh/SF, kBtu/SF, and Cost/SF for each fuel type and individual school site. This report is a great resource to have for identifying the lowest energy performing schools. The report ranking will present the schools that consume the most energy when compared to others within the district or other comparable districts. The considered school is rated at 2.78 kWh/SF/yr.

The baseline EUA summary of all the meters for Olympic High School can be found in Appendix B.

Section 2: Energy Efficiency Measures (EEM) Summary

Energy savings are based on the difference between annual energy use under existing conditions and annual energy use under proposed conditions. These annual energy savings, and the corresponding annual energy cost savings, are used to determine the cost-effectiveness of the projects. Demand savings are calculated as the difference between the electricity demand of the existing equipment and electricity demand of proposed equipment. The table below shows the Energy Efficiency Measures proposed and the corresponding savings associated with them.

EEM Number	Energy Efficiency Measure	Demand Savings (kW)	Electricity Savings (kWH/yr)	Natural Gas or Fuel Savings (therms or gal/yr)	Annual Cost Savings (\$)	Rebates and Grants (\$)	Installed Measure Cost (\$)
Lighting	Lighting – Interior Fixture Retrofit - Olympic	8	15,069		\$2,667.00	\$19,000.00	\$37,391.00
Lighting	Lighting – Exterior Fixture Retrofit - Olympic	3	10,074		\$1,783.00	\$10,000.00	\$22,963.00
Lighting	Lighting – Retrofit Interior Lamps to LED - Olympic	1	2,496		\$442.00	\$0.00	\$4,569.00
Lighting	Lighting – Interior Fixture Retrofit	2	3,799		\$672.00	\$5,000.00	\$9,486.00
Lighting	Lighting – Exterior Fixture Retrofit	1	2,851		\$505.00	\$5,000.00	\$8,469.00
	Totals	15	34,289		\$6,069.00	\$39,000.00	\$82,878.00

Lighting Systems Retrofit

A significant portion of a facilities electrical costs comes from lighting, making lighting retrofits one of the quickest and simplest methods for reducing utility costs. In most cases the retrofits will result in improved light quality and reduced maintenance costs in addition to the estimated energy savings.

The method used for calculating energy savings is outlined below:

$$\text{Annual Saving, \$} = (\text{Existing Watts} - \text{New Watts}) / 1000 \times \text{Hours/Year} \times \text{Utility Rate} \times N$$

Existing Watts – Wattage rating for the existing (Baseline) light fixture

New Watts – New wattage rating for the existing light fixture

Hours/Year – Annual number of “burn-hours” (run hours for different areas; see detailed audit in Appendix C)

Utility Rate – Actual weighted composite utility rate, \\$/kWh

N – Number of light fixtures of the particular type (see below & in Appendix C for the actual quantities).

The current interior lighting systems in the Olympic High School buildings consist of a combination of 1st generation T-8, compact fluorescent, and incandescent lamps and fixtures. Following examination of the data collected, a full retrofit of the lighting system with LED lamps and fixtures is recommended.

The current exterior lighting systems in the Olympic High School buildings consist of metal halide, high pressure sodium, and 1st generation T-8 lamps and fixtures. Following examination of the data collected, a full retrofit of the lighting system with LED lamps and fixtures is recommended.

The current interior lighting systems in the Pine Street Preschool buildings consist of a combination of 1st generation T-8, compact fluorescent, and incandescent lamps and fixtures. Following examination of the data collected, a full retrofit of the lighting system with LED lamps and fixtures is recommended.

The current exterior lighting systems in the Pine Street Preschool buildings consist of high pressure sodium, incandescent, and compact fluorescent lamps and fixtures. Following examination of the data collected, a full retrofit of the lighting system with LED lamps and fixtures is recommended.

This retrofit will generate more saving, electrical demand reduction and better payback than other Energy Conservation Measures such as HVAC replacements. Upon installment of the new system, the campus will conserve 14.766 kW and 34,289 kWh per year. The cost savings per year will be approximately \$6,069.14. A full detailed audit of the current lighting system implemented in the entire campus can be found in Appendix C.

Appendix – A

School Schedules and Maps

Daily Bell Schedule and Academic Calendar

Regular Schedule

Period 1	9:28 am - 10:23 am
Period 2	10:26 am - 11:21 am
LUNCH	11:21 am - 12:06 pm
Period 3	12:09 pm - 1:04 pm
Period 4	1:07 pm - 2:02 pm
Period 5	2:05 pm - 3:00 pm

Minimum Day Schedule - *Fridays

Period 1	9:13 am - 9:53 am
Period 2	9:56 am - 10:36 am
Period 3	10:39 am - 11:19 am
Period 4	11:22 am - 12:02 pm
Period 5	12:05 pm - 12:45 pm

SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT

2016-2017 District Calendar

July 2016							Approved by the Board of Education: 3/19/15							September 2016							
M	T	W	Th	F			M	T	W	Th	F		M	T	W	Th	F				
4	5	6	7	8			1	2	3	4	5		5	6	7	8	9				
11	12	13	14	15			8	9	10	11	12		12	13	14	15	16				
18	19	20	21	22			15	16	17	18	19		19	20	21	22	23				
25	26	27	28	29	30		29	30	31				26	27	28	29	30				
October 2016							November 2016							December 2016							
M	T	W	Th	F			M	T	W	Th	F		M	T	W	Th	F				
4	5	6	7	8			1	2	3	4	5		5	6	7	8	9				
10	11	12	13	14			7	8	9	10	11		12	13	14	15	16				
17	18	19	20	21			14	15	16	17	18		19	20	21	22	23				
24	25	26	27	28	29		21	22	23	24	25		26	27	28	29	30				
January 2017							February 2017							March 2017							
M	T	W	Th	F			M	T	W	Th	F		M	T	W	Th	F				
2	3	4	5	6			1	2	3	4	5		13	14	15	16	17				
9	10	11	12	13	14		6	7	8	9	10		20	21	22	23	24				
16	17	18	19	20	21		13	14	15	16	17		27	28	29	30	31				
23	24	25	26	27	28		20	21	22	23	24										
30	31						29	30													
April 2017							May 2017							June 2017							
M	T	W	Th	F			M	T	W	Th	F		M	T	W	Th	F				
3	4	5	6	7			1	2	3	4	5		5	6	7	8	9				
10	11	12	13	14	15		8	9	10	11	12		12	13	14	15	16				
17	18	19	20	21	22		15	16	17	18	19		19	20	21	22	23				
24	25	26	27	28	29		22	23	24	25	26		26	27	28	29	30				
30	31						29	30													



Employee Work Dates:
 Sept. 1, 2016-June 30, 2017.* Classified 11-Month
 *must work 22 days in July/August, 2016
 Aug. 8, 2016-June 21, 2017: Classified 10+10
 Aug. 15, 2016-June 14, 2017: Classified 10-Month
 Aug. 17, 2016-June 9, 2017: Certificated/184 Days
 Aug. 18, 2016-June 9, 2017: Certif/CDS/183 Days
 Aug. 19, 2016-June 9, 2017: Classified School Year

Teacher Work Days: 184
Student Days: 180

 1st Semester: Aug. 22 - Dec. 23 (84 days)
 2nd Semester: Jan. 10 - June 9 (96 days)

First Day of Instruction:
 - Monday, August 22, 2016

Last Day of Instruction:
 - Friday, June 17, 2016

Certificated Staff Development Days:
 (No Students)
 - Wednesday, August 17, 2016

HOLIDAYS:

July 4: 4th of July Holiday
 Sept. 5: Labor Day Holiday
 Oct. 3: Local Holiday
 Oct. 12: Local Holiday
 Nov. 11: Veteran's Day Holiday
 Nov. 24: Thanksgiving Holiday
 Nov. 25: Legal Holiday (Admission's Day observ)

Dec. 26, 27: Winter Holidays
 Dec. 30-Jan. 2: Keiki Years Holidays
 Jan. 16: Martin Luther King Jr. Holiday

Feb. 20: Presidents' Day Holiday

April 2: Local Holiday

April 24: Legal Holiday (Lincoln's B'day observed)
 May 29: Memorial Day Holiday

SCHOOL RECESS:

Dec. 26 - Jan. 6: Winter Recess
 Apr. 3 - Apr. 14: Spring Recess

PUPIL-FREE DAYS:

Aug. 17: All Students
 Aug. 18: All Students
 Aug. 19: All Students
 Nov. 4: Elementary Student's Clink
 Jan. 9: Secondary Student's Only

MINIMUM DAYS:

TK/Kinderparent: Aug. 22, Aug. 23, 30, Nov. 7, 8, 9, 10, 23, Dec. 23, May 25, June 9

Elementary: Aug. 22, 30, Sept. 6, Nov. 7, 8, 9, 10, 23, Dec. 23, May 25, June 9

Santa Monica Middle Schools: Sept. 8, Nov. 23, Dec. 23, Mar. 31, Apr. 27, June 8, June 9, +1 discretionary

Malibu MS/HS: Sept. 8, 15, Nov. 23, Dec. 21, 22, 23, March 9, June 6, 7, 8 + 1 discretionary

Samohi: Sept. 15, Dec. 20, 21, 22, 23, Mar. 9, June 5, 6, 7, 8

Olympic HS: Sept. 20, Nov. 23, Dec. 23, May 2, June 1, 2, 5, 6, 7, 8, 9

Back to School Nights:
 Tues. Aug. 30 - Elem TK-2
 Tues. Sept. 6 - Elem 3-5
 Thurs. Sept. 8 - Middle School
 Thurs. Sept. 15 - High School
 Tues. Sept. 20 - Olympic HS

Open House Nights:
 Thurs. May 25 - Elementary
 Thurs. April 27 - SM Middle Schools
 Thurs. March 9 - Malibu MS/HS and Samohi
 Tues. May 2 - Olympic HS

Promotions/Graduations:
 Wed. June 7 - Elementary
 Fri. June 9 - Middle School
 Thurs. June 8 - MHS 2:00 pm
 Wed. May 31 - Samohi 5:30 pm
 Wed. May 31 - Olympic HS 5:30 pm

Parent Conference Days (TK-5):
 Nov. 4 - Nov. 10, 2016

Testing Dates: expected, not confirmed
 AP Testing: May 1- May 12, 2017
 STAR: April 20 - May 18, 2017
 SBAC: April 20 - May 29, 2017

TK/Kinderpart Roundup:
 Jan. 30 - Feb. 10, 2017

Final Exams:
 Malibu MS/HS: Dec. 21-23, 2016
 June 6-8, 2017
 Samohi: Dec. 20-23, 2016
 June 5-8, 2017

Summer School:
 IIS: June 19-July 14, 2017
 Credit Recovery: June 19-Jul 21, 2017
 ESY: June 19-July 14, 2017

TK-5 Grading Periods:
 Conference: Nov. 4, 2016
 Winter Grading: Feb. 10, 2017
 Spring Grading: June 9, 2017

6-12 Grading Periods

Aug. 22 - Sept. 30, 2016
 Oct. 4 - Nov. 10, 2016
 Nov. 14 - Dec. 23, 2016
 Jan. 9 - Feb. 24, 2017
 Feb. 27 - April 28, 2017
 May 1 - June 9, 2017

Revised
3/15



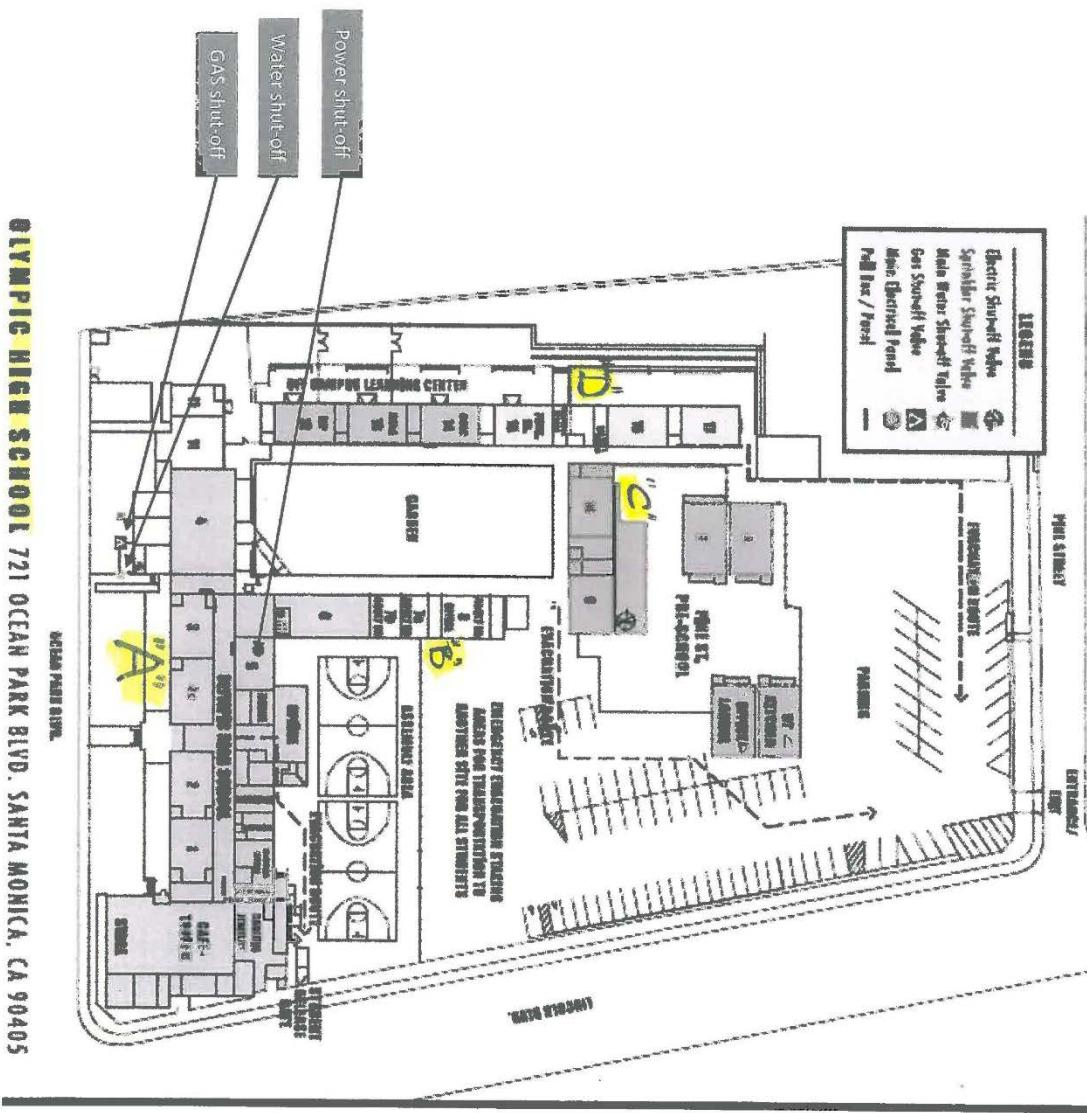
SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT



SANTA MONICA-MALIBU
OLYMPIC HIGH SCHOOL
ENERGY AUDIT REPORT

Olympic High School Map

OLYMPIC HIGH SCHOOL 721 OCEAN PARK BLVD. SANTA MONICA, CA 90405



Appendix – B

Energy Utilization Analysis

Customer Name: **Santa Monica-Malibu USD**Facility Name: **Olympic High and Adult School**

Facility Location: 721 Ocean Park Blvd., Santa Monica, CA
 Sq. Ft. (conditioned space): 39,333
Billing Period
 FROM: Jul-15
 TO: Jun-16

Elec Utility Name:			SCE			Natural Gas Utility Name:			SCG		
Account #		Meter #	Rate Schedule			Account #		Meter #	Rate Schedule		
2-07-030-4431	259000-072993	TOU-GS-2-A				6307342052	5302718	GN-10-NON-RESIDENTIAL			
0	0	0				0	0	0			
0	0	0				0	0	0			
0	0	0				0	0	0			

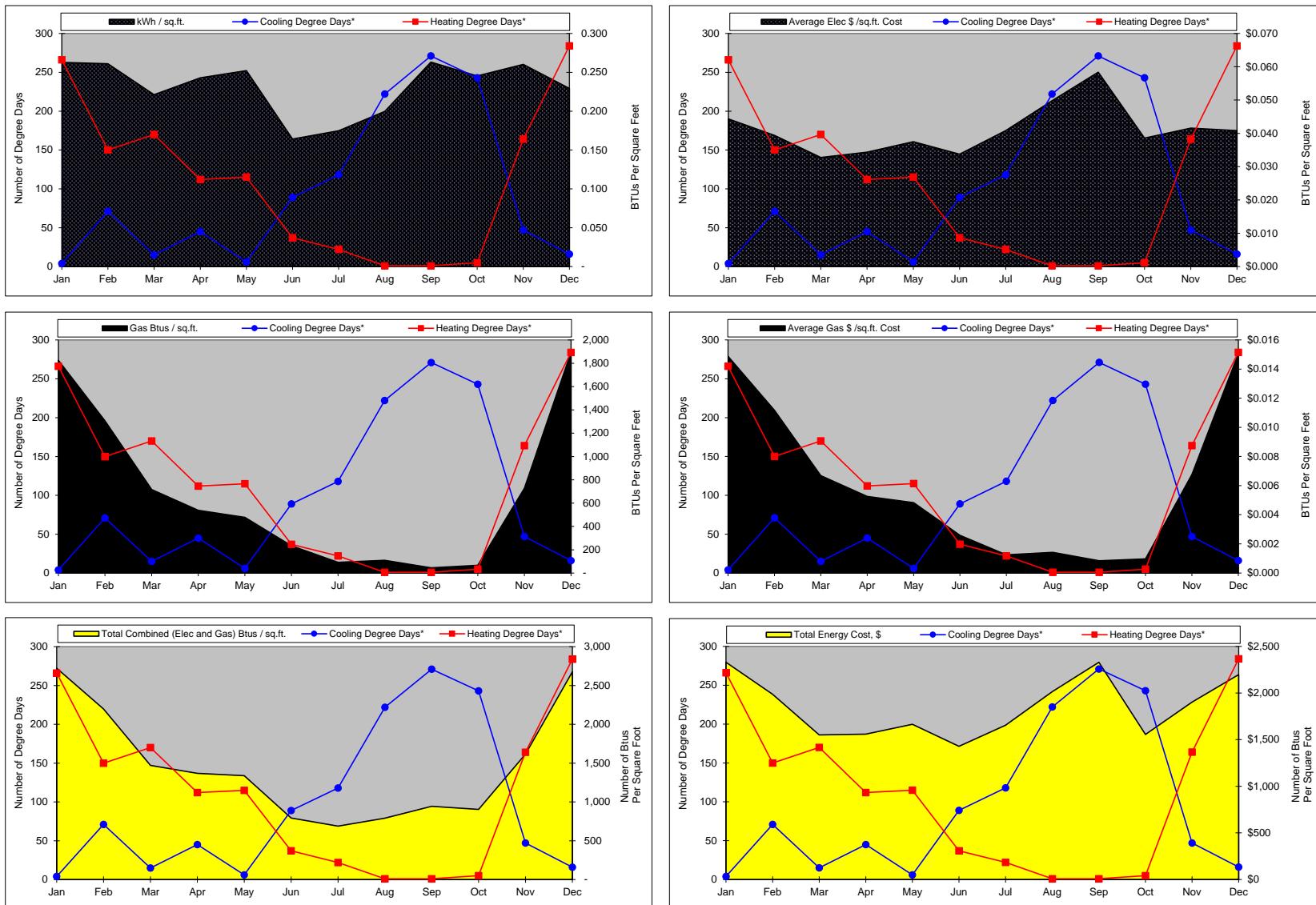
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL ANNUAL
Cooling Degree Days*	4	71	15	45	6	89	118	222	271	243	47	16	1,147
Heating Degree Days*	266	150	170	112	115	37	22	1	1	5	164	284	1,327
Days in Billing Period													
electric	29	32	30	29	32	30	29	29	32	30	33	30	365
natural gas	31	32	30	29	30	30	30	29	32	28	30	34	365
Electric Usage													
kWh per Billing Cycle	10,334	10,269	8,699	9,558	9,920	6,454	6,872	7,853	10,350	9,649	10,236	9,016	109,210
\$ for kWh Billed	\$929	\$913	\$804	\$868	\$989	\$926	\$1,222	\$1,497	\$1,794	\$1,016	\$1,042	\$912	\$12,912
Max kW Billed	54	42	32	32	32	26	29	35	38	38	45	51	38
\$ for kW Billed	\$816	\$635	\$484	\$484	\$486	\$401	\$383	\$462	\$502	\$502	\$594	\$693	\$6,442
Total Electric Cost, \$	\$1,745	\$1,548	\$1,288	\$1,352	\$1,475	\$1,327	\$1,605	\$1,959	\$2,296	\$1,518	\$1,636	\$1,605	\$19,354
Ave. Daily Electric Cost, \$	\$60	\$48	\$43	\$47	\$46	\$44	\$55	\$68	\$72	\$51	\$50	\$54	\$53
Average \$/kWh Cost	\$0.169	\$0.151	\$0.148	\$0.141	\$0.149	\$0.206	\$0.234	\$0.249	\$0.222	\$0.157	\$0.160	\$0.178	0.177
Average Elec \$/sq.ft. Cost	\$0.044	\$0.039	\$0.033	\$0.034	\$0.038	\$0.034	\$0.041	\$0.050	\$0.058	\$0.039	\$0.042	\$0.041	\$0.492
kWh / sq.ft.	0.263	0.261	0.221	0.243	0.252	0.164	0.175	0.200	0.263	0.245	0.260	0.229	2.78
Natural Gas Usage													
Therms per Billing Cycle	718	514	282	212	188	92	36	43	18	26	286	745	3,160
Total Gas Cost, \$	\$585	\$439	\$263	\$207	\$190	\$102	\$49	\$56	\$33	\$38	\$266	\$592	2,820
Ave. Daily Gas Cost, \$	\$19	\$14	\$9	\$7	\$6	\$3	\$2	\$2	\$1	\$1	\$9	\$17	8
Average \$/therm Cost	\$0.815	\$0.854	\$0.933	\$0.976	\$1.011	\$1.109	\$1.361	\$1.302	\$1.833	\$1.462	\$0.930	\$0.795	0.892
Average Gas \$/sq.ft. Cost	\$0.015	\$0.011	\$0.007	\$0.005	\$0.005	\$0.003	\$0.001	\$0.001	\$0.001	\$0.001	\$0.007	\$0.015	0.072
Gas Btus / sq.ft.	1,825	1,307	717	539	478	234	92	109	46	66	727	1,894	8,034
Total Energy Usage													
Combined (Elec and Gas) Btus / sq.ft.	2,722	2,198	1,472	1,368	1,339	794	688	791	944	903	1,615	2,676	17,510
Total Energy Cost, \$	\$2,330	\$1,987	\$1,551	\$1,559	\$1,665	\$1,429	\$1,654	\$2,015	\$2,329	\$1,556	\$1,902	\$2,197	\$22,174
Ave. Energy \$/sq.ft./period	\$0.06	\$0.05	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.05	\$0.06	\$0.04	\$0.05	\$0.06	\$0.56

* Notes:

- 1) Heating degree days and cooling degree days are based on 65 F.
- 2) Heating degree days and cooling degree days are based on Santa Monica weather data.

Customer: Santa Monica-Malibu USD
Building: Olympic High and Adult School

Energy Used from: Jul-15
to: Jun-16



Utility-Olympic High and Santa Monic Adult
Gas-Ele Charts
5/12/2017

Appendix – C

Lighting Systems Audit

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SANTA MONICA-MALIBU
OLYMPIC HIGH SCHOOL
ENERGY AUDIT REPORT

School Distri Santa Monica-Malibu USD - LED Option
 Address: 0
 0
 School: OLYMPIA HIGH
 School Addr: 721 OCEAN PARK BLVD.
 0

cost per kwh

0.177

LED Option

23.99 12.04 53,269.37 25,630.43 27,638.94 \$ 4,892.09

ORIGINAL AUDIT ID#	LED Option													23.99	12.04	53,269.37	25,630.43	\$ 4,892.09
	INTERIOR/EXTERIOR	SCHOOL DISTRICT	SCHOOL	ROOM	LIGHTING CODE (EXISTING)	ECM	PROPOSED FIXT QTY	EXIST WATT	PROP WATT	EXIST OPER HRS	PROP OPER HRS	EXISTING KW	PROPOSED KW	EXISTING KWH	PROPOSED KWH	SAVED KWH	ANN SAVINGS	
1988	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	ADMINISTRATION	T8-4'-32W-4L-EB/ISN-X-X	(LED)4L 12T8/4F/850/DIR, 97740 (1) QHE4X32UNV/ISN	9	112	64	2185	2185	1.008	0.576	2202.48	1258.56	943.92	\$ 167.07	
1989	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	ADMINISTRATION	T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DIR, 97740 (1) QHE2X32UNV/ISN	5	59	32	2185	2185	0.295	0.16	644.575	349.6	294.975	\$ 52.21	
1990	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	ADMINISTRATION	CF/2P-DOUB-26W-2L-MB-X-X	(LED)2L GREEN CREATIVE 2PIN LED DIRect or BYPass	3	66	11	2185	2185	0.198	0.033	432.63	72.105	360.525	\$ 63.81	
1991	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		T8-4'-32W-4L-EB/ISN-X-X	(LED)4L 12T8/4F/850/DIR, 97740 (1) QHE4X32UNV/ISN	6	112	64	2000	2000	0.672	0.384	1344	768	576	\$ 101.95	
1992	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		T8-4'-32W-13W-2L-MB-X-X	(LED)2L GREEN CREATIVE 2PIN LED DIRect or BYPass	1	28	11	2000	2000	0.028	0.011	56	22	34	\$ 6.02	
1993	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		T8-4'-32W-4L-EB/ISN-X-X	(LED)4L 12T8/4F/850/DIR, 97740 (1) QHE4X32UNV/ISN	6	112	64	2000	2000	0.672	0.384	1344	768	576	\$ 101.95	
1994	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DIR, 97740 (1) QHE2X32UNV/ISN	1	59	32	2000	2000	0.059	0.032	118	64	54	\$ 9.56	
1995	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		CF/S-TWST-23W-1L-SELF-X-X	(LED)1L GREEN CREATIVE 12A19G4DIM/840 (16177) (1)	1	23	12	2000	2000	0.023	0.012	46	24	22	\$ 3.89	
1996	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		I/S-A19-60W-1L-NONE-X-X	(LED)1L GREEN CREATIVE A19 9W E26 4000K 850 LM	1	60	9	2000	2000	0.06	0.009	120	18	102	\$ 18.05	
1997	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		I/S-A19-60W-1L-NONE-X-X	(LED)1L GREEN CREATIVE A19 9W E26 4000K 850 LM	1	60	9	2000	2000	0.06	0.009	120	18	102	\$ 18.05	
1998	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		T8-4'-32W-4L-EB/ISN-X-X	(LED)4L 12T8/4F/850/DIR, 97740 (1) QHE4X32UNV/ISN	6	112	64	2000	2000	0.672	0.384	1344	768	576	\$ 101.95	
1999	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DIR, 97740 (1) QHE2X32UNV/ISN	1	59	32	2000	2000	0.059	0.032	118	64	54	\$ 9.56	
2000	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		CF/S-TWST-23W-1L-SELF-X-X	(LED)1L GREEN CREATIVE 12A19G4DIM/840 (16177) (1)	1	23	12	2000	2000	0.023	0.012	46	24	22	\$ 3.89	
2001	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		I/S-A19-60W-1L-NONE-X-X	(LED)1L GREEN CREATIVE A19 9W E26 4000K 850 LM	1	60	9	2000	2000	0.06	0.009	120	18	102	\$ 18.05	
2002	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		T8-4'-32W-4L-EB/ISN-X-X	(LED)4L 12T8/4F/850/DIR, 97740 (1) QHE4X32UNV/ISN	2	112	64	2000	2000	0.224	0.128	448	256	192	\$ 33.98	
2003	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DIR, 97740 (1) QHE2X32UNV/ISN	6	59	32	2000	2000	0.354	0.192	708	384	324	\$ 57.35	
2004	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DIR, 97740 (1) QHE2X32UNV/ISN	1	59	32	2000	2000	0.059	0.032	118	64	54	\$ 9.56	
2005	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		CF/S-TWST-23W-1L-SELF-X-X	(LED)1L GREEN CREATIVE 12A19G4DIM/840 (16177) (1)	1	23	12	2000	2000	0.023	0.012	46	24	22	\$ 3.89	
2006	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		I/S-A19-60W-1L-NONE-X-X	(LED)1L GREEN CREATIVE A19 9W E26 4000K 850 LM	1	60	9	2000	2000	0.06	0.009	120	18	102	\$ 18.05	
2007	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DIR, 97740 (1) QHE2X32UNV/ISN	2	59	32	2000	2000	0.118	0.064	236	128	108	\$ 19.12	
2008	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		CF/P-SING-13W-2L-MB-X-X	(LED)2L GREEN CREATIVE 2PIN LED DIRect or BYPass	1	28	11	2000	2000	0.028	0.011	56	22	34	\$ 6.02	
2009	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN		I/S-A19-60W-1L-NONE-X-X	(LED)1L GREEN CREATIVE A19 9W E26 4000K 850 LM	1	60	9	2000	2000	0.06	0.009	120	18	102	\$ 18.05	
2010	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	1A	T8-4'-32W-4L-EB/ISN-X-X	(LED)4L 12T8/4F/850/DIR, 97740 (1) QHE4X32UNV/ISN	3	112	64	2000	2000	0.336	0.192	672	384	288	\$ 50.98	
2011	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	RESTROOMS	T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DIR, 97740 (1) QHE2X32UNV/ISN	5	59	32	2000	2000	0.295	0.16	590	320	270	\$ 47.79	
2012	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	CAFETORIUM	T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DIR, 97740 (1) QHE2X32UNV/ISN	32	59	32	1696	1696	1.888	1.024	3202.048	1736.704	1465.344	\$ 259.37	
2013	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	CAFETORIUM	T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DIR, 97740 (1) QHE2X32UNV/ISN	12	59	32	1696	1696	0.708	0.384	1200.768	651.264	549.504	\$ 97.26	
2014	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	CAFETORIUM	CF/P-DOUB-26W-2L-MB-X-X	(LED)2L GREEN CREATIVE 2PIN LED DIRect or BYPass	4	66	11	1696	1696	0.264	0.044	447.744	74.624	373.12	\$ 66.04	
2015	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	CAFETORIUM	H/S-R38-75W-1L-NONE-X-X	(LED)1L GREEN CREATIVE 12.5PAR30G4DIM940FL40.	12	75	13	1696	1696	0.9	0.15	1526.4	254.4	1272	\$ 225.14	
2016	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	CAFETORIUM	CF/P-SING-13W-2L-MB-X-X	(LED)2L GREEN CREATIVE 2PIN LED DIRect or BYPass	4	28	11	1696	1696	0.112	0.044	189.952	74.624	115.328	\$ 20.41	
2017	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	CAFETORIUM	T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DIR, 97740 (1) QHE2X32UNV/ISN	12	59	32	1696	1696	0.708	0.384	1200.768	651.264	549.504	\$ 97.26	
2018	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721 OCEAN	CAFETORIUM	T8-4'-32W-4L-EB/ISN-X-X	(LED)4L 12T8/4F/850/DIR, 97740 (1) QHE4X32UNV/ISN	4	112	64	1696	1696	0.448	0.256	759.808	434.176	325.632	\$ 57.64	
2019	INTERIOR	NTA MONICA-MALIBU	OLYMPIA HIGH 721															

School Dist: Santa Monica-Malibu USD - LED Option
 Address: 0
 0
 School: PINE STREET PRESCHOOL
 School Add: 731 PINE ST.
 0

cost per kwh 0.177

ORIGINAL AUDIT ID#	LED Option											5.69	2.88	13,021.01	6,371.02	6,649.98	\$ 1,177.05	
	INTERIOR/ EXTERIOR	SCHOOL DISTRICT	SCHOOL	ROOM	LIGHTING CODE (EXISTING)	ECM	PROPOSED FIXT QTY	EXIST WATT	PROP WATT	EXIST OPER HRS	PROP OPER HRS	EXISTING KW	PROPOSED KW	EXISTING KWH	PROPOSED KWH	SAVED KWH	ANN SAVINGS	
2054	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	10 T8-4'-32W-4L-EB/ISN-X-X	(LED)4L 12T8/4F/850/DI, 97740 (1) QHE4X32UNV/ISN	6	112	64	2100	2100	0.672	0.384	1411.2	806.4	604.8	\$ 107.05	
2055	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	10 T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DI, 97740 (1) QHE2X32UNV/ISN	2	59	32	2100	2100	0.118	0.064	247.8	134.4	113.4	\$ 20.07	
2056	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	10 CF/2P-SING-13W-2L-MB-X-X	(LED)2L GREEN CREATIVE 2PIN LED DIRect or BYPass 5.5P	1	28	11	2100	2100	0.028	0.011	58.8	23.1	35.7	\$ 6.32	
2057	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	10 I/S-A19-60W-1L-NONE-X-X	(LED) 1L GREEN CREATIVE A19 9W E26 4000K 850 LM DIM	1	60	9	1816	1816	0.06	0.009	108.96	16.344	92.616	\$ 16.39	
2058	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	10 CF/2P-DOUB-26W-2L-MB-X-X	(LED)2L GREEN CREATIVE 2PIN LED DIRect or BYPass 5.5P	1	66	11	1816	1816	0.066	0.011	119.856	19.976	99.88	\$ 17.68	
2059	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	9 T8-4'-32W-4L-EB/ISN-X-X	(LED)4L 12T8/4F/850/DI, 97740 (1) QHE4X32UNV/ISN	6	112	64	1816	1816	0.672	0.384	1220.352	697.344	523.008	\$ 92.57	
2060	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	9 T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DI, 97740 (1) QHE2X32UNV/ISN	1	59	32	1816	1816	0.059	0.032	107.144	58.112	49.032	\$ 8.68	
2061	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	9 CF/2P-SING-13W-2L-MB-X-X	(LED)2L GREEN CREATIVE 2PIN LED DIRect or BYPass 5.5P	1	28	11	1816	1816	0.028	0.011	50.848	19.976	30.872	\$ 5.46	
2062	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	9 I/S-A19-60W-1L-NONE-X-X	(LED) 1L GREEN CREATIVE A19 9W E26 4000K 850 LM DIM	1	60	9	1816	1816	0.06	0.009	108.96	16.344	92.616	\$ 16.39	
2063	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI B	T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DI, 97740 (1) QHE2X32UNV/ISN	11	59	32	1816	1816	0.649	0.352	1178.584	639.232	539.352	\$ 95.47	
2064	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI A	T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DI, 97740 (1) QHE2X32UNV/ISN	11	59	32	1816	1816	0.649	0.352	1178.584	639.232	539.352	\$ 95.47	
2065	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI C	T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DI, 97740 (1) QHE2X32UNV/ISN	11	59	32	1816	1816	0.649	0.352	1178.584	639.232	539.352	\$ 95.47	
2066	INTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI D	T8-4'-32W-2L-EB/ISN-X-X	(LED)2L 12T8/4F/850/DI, 97740 (1) QHE2X32UNV/ISN	11	59	32	1816	1816	0.649	0.352	1178.584	639.232	539.352	\$ 95.47	
2067	EXTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	PINE STREET EXTER	I/S-A19-60W-1L-NONE-X-X	(LED)NEW DECO WALLPACK CUTOFF VINCI-20-50-UNV-BZ	2	60	20	3650	3650	0.12	0.04	438	146	292	\$ 51.68
2068	EXTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	PINE STREET EXTER	CF/2P-DOUB-13W-1L-MB-X-X	(LED)NEW DECO 20W PORCHLIGHT WALLPACK D411-LED	2	15	20	3650	3650	0.03	0.04	109.5	146	-36.5	\$ (6.46)
2069	EXTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	PINE STREET EXTER	HPS-MED-150W-1L-CWA-X-X	(LED)1L GREEN CREATIVE 98W HID/840/277/EX39 COB-BY	3	188	98	3650	3650	0.564	0.294	2058.6	1073.1	985.5	\$ 174.43
2070	EXTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	PINE STREET EXTER	HPS-MOG-250W-1L-CWA-X-X	(LED)NEW DECO MEDIUM FLOOD D211-LED-60-50-UNV-T3	1	295	60	3650	3650	0.295	0.06	1076.75	219	857.75	\$ 151.82
2071	EXTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	PINE STREET EXTER	HPS-MED-100W-1L-CWA-X-X	(LED)NEW DECO MEDIUM WALLPACK D414-LED-40-50-UNV	1	138	40	3650	3650	0.138	0.04	503.7	146	357.7	\$ 63.31
2072	EXTERIOR	NTA MONICA-MALIBU	PINE STREET PRESCHOOL	731 PI	PINE STREET EXTER	HPS-MED-150W-1L-CWA-X-X	(LED)NEW DECO MEDIUM FLOOD D211-LED-80-50-UNV-T4	1	188	80	3650	3650	0.188	0.08	686.2	292	394.2	\$ 69.77



2.817 6,650 \$ 1,177.05

6,649.982 \$ 1,177.05