EXHIBIT A

ATTACHMENT 1

BUDGET DETAILS

This loan is made to the City of Hayward ("Borrower") for an Energy Savings Project. The project consists of lighting systems upgrades and installing solar photovoltaic panels at the locations listed in the table below. This table summarizes the estimated project cost(s), saving(s) and simple payback(s) for the project.

Table 1 - Summary of Project Cost and Estimated Savings

Facility	Project Description	Project Specifications	Estimated Annual Energy Cost Savings	Estimated Project Installation Cost	Energy Commission Loan	Simple Payback (years)
Police Department	Lighting Retrofit	Projects specification in accordance with attached details.	$9,307	$61,809		6.6
City Hall	Lighting Retrofit	Projects specification in accordance with attached details.	$24,026	$138,765		5.8
Mission Street Parking Garage	Lighting Retrofit	Projects specification in accordance with attached details.	$25,440	$104,175		4.1
Foothill Parking Garage	Lighting Retrofit	Projects specification in accordance with attached details.	$21,109	$66,629		3.2
Fleet Maintenance Building	Lighting Retrofit	Projects specification in accordance with attached details.	$1,471	$15,350		10.4
Streets Building	29.1 kW ac Solar PV System Installed on Rooftop	Approximately (120) PV Panels each 280 watts (STC Rating) or 254 watts (PTC Rating); (5) Inverters; (1) Web-based Solar Monitoring System	$6,555	$194,978		29.7
Utilities Building	49.5 kW ac Solar PV System Installed on Rooftop	Approximately (204) PV Panels each 280 watts (STC Rating) or 254 watts (PTC Rating); (1) Inverter; (1) Web-based Solar Monitoring System	$10,278	$327,995		31.9
Grand Total			**$98,186**	**$909,701**		9.3
Energy Commission Loan Amount; Payback based on Loan Amount					**$887,152**	9.0

The Borrower shall implement all projects in Table 1. Failure to implement all projects may reduce the approved loan amount. If necessary, the reduced loan amount will be determined by multiplying the annual energy cost savings by 11 or the total project cost, whichever is less. If the Borrower has received disbursements that exceed the amount of the reduced loan, the Borrower shall refund the difference to the Energy Commission.

Foothill Blvd. Parking Garage Lighting Retrofit

Location of Existing Light Fixtures	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Fixture Replacement	Quantity	kW Savings	kWh Savings	Annual Electric Cost Savings	Notes	Control Notes
Top Deck Open Parking Lot 1A	Site Lght w/ triple 250 watt Metal Halide heads mounted at 90 degrees, 4" square 22' aluminum pole	295	4380	12	New LSI Medium LED Type 3 Site lighting head, equipped with wet and damp location 360 degree motion sensor and 350 mA bi level driver 5900 K coor temperature	12	1.9	8,252	$1,238	4 total poles with 3 heads each	
Top Deck Open Parking Lot 1B	New LED Site Lights	138	2628	12	New Medium LED Type 3 Site light head operating at 1/2 power when lot is unoccupied	12	0.8	2,176	$326		Fixtures will operate at 69 watts when no occupancy is detected, estimated to be 60% of night-time hours
Top Deck Near Stairs 2A	Site Light w/ single 250 watt Metal Halide heads mounted at 90 degrees, 4" square 14' aluminum pole	295	4380	2	New LSI Medium LED Type 3 Site lighting head, equipped with wet and damp location 360 degree motion sensor and 350 mA bi level driver 5900 K coor temperature	2	0.3	1,375	$206	2 total poles with 1 heads each	
Top Deck Near Stairs 2B	New LED Site Lights	138	2628	2	New Medium LED Type 3 Site light head operating at 1/2 power when lot is unoccupied	2	0.1	363	$54		Fixtures will operate at 69 watts when no occupancy is detected, estimated to be 60% of night-time hours
2nd & 3rd level elevators Wall Mount	Wall Mount w/ single 70 watt Metal wallpack mounted	95	4380	3	New LSI Medium LED Type FT wall mount light, equipped with wet and damp location 360 degree motion sensor and 450 mA bi level driver 5900 K coor temperature	3	0.1	618	$93	3 wall mount units	
Top Deck Near Stairs 3B	New LED Site Lights	48	2628	3	New Medium LED Type FT Site light head operating at 1/2 power when lot is unoccupied	3	0.1	189	$28		Fixtures will operate at 62.5 watts when no occupancy is detected, estimated to be 60% of night-time hours
Second Floor Covered Parking Garage	Deck mounted 175 watt Vertcal Burn Canopy Light, Guardco	215	5694	33	New High performance 4' 3 lamp F32T8 Enclosed and Gasketed Bi-Level Vaportight luminaire, broad beam Miro aluminum reflector with 1 quantity 1.18 BF instant start high efficiency ballast and 1 2 lamp 1.18 high power high efficiency ballast intergating both motion sensor and photocell control using wirelss mesh network	33	5.8	33,259	$4,989		Fixtures will operate at 38 watts when no occupancy is detected, estimated to be 65% of normal operating hours
Second Floor Covered Parking Garage	New Fixture Operating at full level with 3 F32T8 lamps on	215	3066	33	New Fixture Operating with a single lamp when wireless motion control network senses no vehicular and or pedestrian occupancy	33	3.4	10,421	$1,563	includes 7 fixtures on the ramp	Fixtures will operate at 112 watts when no occupancy is detected, estimated to be 35% of normal operating hours
Second Floor Covered Parking Garage	New Fixture Operating at with zero lamps on during daylight hours	215	3640	26	New Fixture totally off when signalled by wireless controlled photocell	26	5.6	20,348	$3,052	approximately 26 of the 33 fixtures above can be turned off entirely	Fixtures will operate at 0 watts when sufficient daylight is available turning fixture entirely off. It is estimated that these fixtures can be turned off as much as 10 hours per day.
First Floor Covered Parking Garage	Deck mounted 175 watt Vertcal Burn Canopy Light, Guardco	215	5694	31	New High performance 4' 3 lamp F32T8 Enclosed and Gasketed Bi-Level Vaportight luminaire, broad beam Miro aluminum reflector with 1 quantity 1.18 BF instant start high efficiency ballast and 1 2 lamp 1.18 high power high efficiency ballast intergating both motion sensor and photocell control using wirelss mesh network	31	5.5	31,243	$4,686		Fixtures will operate at 38 watts when no occupancy is detected, estimated to be 65% of normal operating hours
First Floor Covered Parking Garage	New Fixture Operating at full level with 3 F32T8 lamps on	215	3066	31	New Fixture Operating with a single lamp when wireless motion control network senses no vehicular and or pedestrian occupancy	31	3.2	9,790	$1,468		Fixtures will operate at 112 watts when no occupancy is detected, estimated to be 35% of normal operating hours
First Floor Covered Parking Garage	New Fixture Operating at 1/3 level with 1 F32T8 lamps	215	3640	29	New Fixture totally off when signalled by wireless controlled photocell	29	6.2	22,695	$3,404	approximately 29 of the 31 fixtures above can be turned off entirely	Fixtures will operate at 0 watts when sufficient daylight is available turning fixture entirely off. It is estimated that these fixtures can be turned off as much as 10 hours per day.
TOTALS				**217**		**217**	**33**	**140,728**	**$21,109**		

Foothill Blvd. Garage Project Cost Estimate

$66,629 Estimated System Cost w/ Sales Tax
$13,616 Estimated ETAP & PG&E Incentives
$53,013 Estimated Project Cost After Rebate
$21,109 Estimated Savings

Mission Street Parking Garage Lighting Retrofit

Location of Existing Light Fixtures	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Fixture Replacement	Quantity	kW Savings	kWh Savings	Annual Electric Cost Savings	Notes	Control Notes
Top Deck Open Parking Lot 1A	Site Light w/ dual 250 watt Metal Halide heads mounted at 180 degrees, 4" square 22' aluminum pole	295	4380	12	New LSI Medium LED Type 3 Site lighting head, equipped with wet and damp location 360 degree motion sensor and 350 mA bi level driver 5900 K coor temperature/ Model # XAM3 3 LED 119 350 CW	12	1.9	8,252	$1,238	6 total poles with 2 heads each	
Top Deck Open Parking Lot 1B	New LED Site Lights	138	2628	12	New Medium LED Type 3 Site light head operating at 1/2 power when lot is unoccupied	12	0.8	2,176	$326		Fixtures will operate at 69 watts when no occupancy is detected, estimated to be 60% of night-time hours
Top Deck Open Parking Lot 2A	Site Lght w/ triple 250 watt Metal Halide heads mounted at 180 degrees, 4" square 22' aluminum pole	295	4380	12	New LSI Medium LED Type 3 Site lighting head, equipped with wet and damp location 360 degree motion sensor and 350 mA bi level driver 5900 K coor temperature/ Model # XAM3 3 LED 119 350 CW	12	1.9	8,252	$1,238	4 total poles with 3 heads each	
Top Deck Open Parking Lot 2B	New LED Site Lights	138	2628	12	New Medium LED Type 3 Site light head operating at 1/2 power when lot is unoccupied	12	0.8	2,176	$326		Fixtures will operate at 69 watts when no occupancy is detected, estimated to be 60% of night-time hours
Top Deck Near Stairs 3A	Site Light w/ single 150 watt Metal Halide heads mounted at 90 degrees, 4" square 14' aluminum pole	190	4380	2	New LSI Medium LED Type 3 Site lighting head equipped with wet and damp location 360 degree motion sensor and 450 mA bi level driver 5900 K coor temperature	2	0.2	806	$121	2 wall mount units	
Top Deck Near Stairs 3B	New LED Site Lights	98	2628	2	New Medium LED Type 3 Site light head operating at 1/2 power when lot is unoccupied	2	0.1	258	$39		Fixtures will operate at 49 watts when no occupancy is detected, estimated to be 60% of night-time hours
Top Deck Near Stairs 4A	Wall Mount w/ single 175 watt Metal wallpack mounted	190	4380	5	New LSI Medium LED Type FT wall mount light, equipped with wet and damp location 360 degree motion sensor and 550 mA bi level driver 5900 K coor temperature	5	0.3	1,424	$214	4 wall mount units	
Top Deck Near Stairs 4B	New LED Site Lights	125	2628	5	New Medium LED Type FT Site light head operating at 1/2 power when lot is unoccupied	5	0.3	821	$123		Fixtures will operate at 62.5 watts when no occupancy is detected, estimated to be 60% of night-time hours
Second Floor Covered Parking Garage	Deck mounted 175 watt Vertcal Burn Canopy Light, Guardco	215	5694	37	New High performance 4' 3 lamp F32T8 Enclosed and Gasketed Bi-Level Vaportight luminaire, broad beam Miro aluminum reflector with 1 quantity 1.18 BF instant start high efficiency ballast and 1 2 lamp 1.18 high power high efficiency ballast intergating both motion sensor and photocell control using wirelss mesh network	37	6.5	37,290	$5,594		Fixtures will operate at 38 watts when no occupancy is detected, estimated to be 65% of normal operating hours
Second Floor Covered Parking Garage	New Fixture Operating at full level with 3 F32T8 lamps on	215	3066	37	New Fixture Operating with a single lamp when wireless motion control network senses no vehicular and or pedestrian occupancy	37	3.8	11,685	$1,753		Fixtures will operate at 112 watts when no occupancy is detected, estimated to be 35% of normal operating hours
Second Floor Covered Parking Garage	New Fixture Operating at with zero lamps on during daylight hours	215	3640	19	New Fixture totally off when signalled by wireless controlled photocell	19	4.1	14,869	$2,230	approximately 19 of the 37 fixtures above can be turned off entirely	Fixtures will operate at 0 watts when sufficient daylight is available turning fixture entirely off. It is estimated that these fixtures can be turned off as much as 10 hours per day.
First Floor Covered Parking Garage	Deck mounted 175 watt Vertcal Burn Canopy Light, Guardco	215	5694	51	New High performance 4' 3 lamp F32T8 Enclosed and Gasketed Bi-Level Vaportight luminaire, broad beam Miro aluminum reflector with 1 quantity 1.18 BF instant start high efficiency ballast and 1 2 lamp 1.18 high power high efficiency ballast intergating both motion sensor and photocell control using wirelss mesh network	51	9.0	51,400	$7,710		Fixtures will operate at 38 watts when no occupancy is detected, estimated to be 65% of normal operating hours
First Floor Covered Parking Garage	New Fixture Operating at full level with 3 F32T8 lamps on	215	3066	51	New Fixture Operating with a single lamp when wireless motion control network senses no vehicular and or pedestrian occupancy	51	5.3	16,106	$2,416		Fixtures will operate at 112 watts when no occupancy is detected, estimated to be 35% of normal operating hours
First Floor Covered Parking Garage	New Fixture Operating at with zero lamps on during daylight hours	215	3640	18	New Fixture totally off when signalled by wireless controlled photocell	18	3.9	14,087	$2,113	approximately 18 of the 51 fixtures above can be turned off entirely	Fixtures will operate at 0 watts when sufficient daylight is available turning fixture entirely off. It is estimated that these fixtures can be turned off as much as 10 hours per day.
Various Stairwells	4' 2 lamp lensed wrap with 2 F32T8 lamps & normal power ballast	60	8760	6	New 2 lamp enclosed and gasteked fixture fitted with spread beam Miro reflector bi level low power ballast and intgrated 360 degree motion sensor	6	0.1	631	$95		
Various Stairwells	New bi level 2 lamp fluorescent fixture	48	3066	6	New 2 lamp enclosed and gasketed fixture operating at 1/2 level	6	0.1	442	$66		Fixtures will operate at 38 watts when no occupancy is detected, estimated to be 35% of normal operating hours
TOTALS				**287**		**287**	**39**	**169,600**	**$25,440**		

Mission Garage Project Cost Estimate

$104,175	Estimated System Cost w/ Sales Tax
$20,040	Estimated ETAP & PG&E Incentives
$84,135	Estimated Project Cost After Rebate
$25,440	Estimated Savings

City Hall Lighting Retrofits

MAP #	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Retrofit	Unit Watts	Quantity	kW Savings	kWh Savings	Annual Electric Cost Savings	Notes	Control Notes
1,2,3	8' 4 Lamp F32T8 Cove Light Strip	112	3120	12	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	12	0.2	636	$95	Elevator lobby	
4	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	27	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	27	0.9	2,948	$442	Office	
5	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	5	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	5	0.2	484	$73	Office	
5a	Above fixture(s) on motion sensor	28	936	5	Ultrasonic ceiling mounted sensor with low voltage power pack	0	1	0.0	26	$4	Office	
6	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	8	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	8	0.2	774	$116	Office	
7	8' 4 Lamp F32T8 Light Strip	112	3120	1	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	1	0.0	53	$8	Utility room	
8	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	5	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	5	0.2	484	$73	Office	
8A	Above fixture(s) on motion sensor	28	936	5	Dual Relay Wall Motion Sensor	0	2	0.1	52	$8	Office	2 wall switches
9	8' 4 Lamp F32T8 Light Strip	112	3120	1	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	1	0.0	53	$8	Utility room	
10	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	5	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	5	0.2	484	$73	Office	
10A	Above fixture(s) on motion sensor	28	936	5	Ultrasonic ceiling mounted sensor with low voltage power pack	0	1	0.0	26	$4	Office	
11	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
11A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
12	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
12A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
13	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
13A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
14	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
14A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
15	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
15A	Above fixture(s) on motion sensor	55	3120	2	Dual Relay Wall Motion Sensor	0	1	0.1	172	$26	Office	
16	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
16A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
17	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	262	$39	Office	
17	Above fixture(s) on motion sensor	48	936	2	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Office	
18	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	18	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	18	0.6	1,966	$295	Office	
19	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
19A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
20	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
20A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
21	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
21A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
22	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	4	0.1	437	$66	Office	
22A	Above fixture(s) on motion sensor	55	936	4	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
23	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	4	0.1	437	$66	Office	
23A	Above fixture(s) on motion sensor	55	936	4	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
23B	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
23B-1	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
24	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	48	2	0.0	19	$3	Stairwell	
24a	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	24	2	0.1	552	$83	Stairwell	
25	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	4	0.1	437	$66	Office	
25A	Above fixture(s) on motion sensor	55	936	4	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
26	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
26A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
27	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	4	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	4	0.1	387	$58	Office	
27A	Above fixture(s) on motion sensor	28	936	4	Dual Relay Wall Motion Sensor	0	1	0.0	26	$4	Office	
28	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	262	$39	Office	
28A	Above fixture(s) on motion sensor	48	936	2	Ultrasonic ceiling mounted sensor with low voltage power pack	0	1	0.0	45	$7	Office	
29	4' 2 lamp F32T8 surface wrap	59	3120	2	retrofit with 2 F32T8, low power .77 ballast	48	2	0.0	69	$10	Utility room	No motion sensor
30	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	262	$39	Office	No motion sensor
31	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	48	2	0.0	19	$3	Stairwell	
31A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	24	2	0.1	552	$83	Stairwell	
32	8' 4 Lamp F32T8 Light Strip	112	3120	4	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	4	0.1	212	$32	Restroom	
32A	Above fixture(s) on motion sensor	95	936	4	Dual Relay Wall Microphonic Motion Sensor	0	1	0.1	89	$13	Restroom	
33	8' 4 Lamp F32T8 Light Strip	112	3120	3	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	3	0.1	159	$24	Restroom	
33A	Above fixture(s) on motion sensor	95	936	3	Dual Relay Wall Microphonic Motion Sensor	0	1	0.1	89	$13	Restroom	
34	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	6	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	6	0.3	786	$118	Hallway	
35	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	28	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	28	1.0	3,058	$459	Office	
35A	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	2	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	2	0.1	193	$29	Office	
36	3 F32T8 2'x4' prismatic troffer	90	3120	3	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	3	0.1	393	$59	Utility room	
36A	Above fixture(s) on motion sensor	48	936	3	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
37	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
37A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
38	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
38A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
39	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and direct indirect retrofit kit	55	4	0.1	437	$66	Office	
39A	Above fixture(s) on motion sensor	55	936	4	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
40	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	262	$39	Utility room	
40A	Above fixture(s) on motion sensor	48	936	2	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	

City Hall Lighting Retrofits

MAP #	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Retrofit	Unit Watts	Quantity	kW Savings	kWh Savings	Annual Electric Cost Savings	Notes	Control Notes
41	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	12	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	12	0.4	1,310	$197	Office	
42	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
42A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
43	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	4	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	4	0.1	387	$58	Office	
43A	Above fixture(s) on motion sensor	28	936	4	Dual Relay Wall Motion Sensor	0	1	0.0	26	$4	Office	
44	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	1	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	1	0.0	109	$16	Office	
44A	Above fixture(s) on motion sensor	55	936	1	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
45	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
45A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
46	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	13	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	13	0.5	1,420	$213	Office	
47	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	1	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	1	0.0	109	$16	Office	
47A	Above fixture(s) on motion sensor	55	936	1	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
48	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
48A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
49	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
49A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
50	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
50A	Above fixture(s) on motion sensor	55	936	2	Ultrasonic ceiling mounted sensor with low voltage power pack	0	1	0.1	51	$8	Office	
1	8' 4 Lamp F32T8 Cove Light Strip	112	3120	6	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	6	0.1	318	$48	Elevator lobby	
2	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	7	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	7	0.2	764	$115	Breakroom	
3	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	4	0.1	437	$66	Hallway	
4	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	48	2	0.0	19	$3	Stairwell	
4A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	24	2	0.1	552	$83	Stairwell	
5	8' 4 Lamp F32T8 Light Strip	112	3120	4	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	4	0.1	212	$32	Restroom	
5A	Above fixture(s) on motion sensor	95	936	4	Dual Relay Wall Microphonic Motion Sensor	0	1	0.1	89	$13	Restroom	
6	8' 4 Lamp F32T8 Light Strip	112	3120	4	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	4	0.1	212	$32	Restroom	
6A	Above fixture(s) on motion sensor	95	936	4	Dual Relay Wall Microphonic Motion Sensor	0	1	0.1	89	$13	Restroom	
7	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	23	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	23	0.8	2,512	$377	Office	
8	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
9	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	1	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	1	0.0	109	$16	Office	
9A	Above fixture(s) on motion sensor	55	936	1	Single Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
10	3 F32T8 2'x4' prismatic troffer	90	3120	1	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	1	0.0	131	$20	Utility room	
10A	Above fixture(s) on motion sensor	48	936	1	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
11	3 F32T8 2'x4' prismatic troffer	90	3120	1	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	1	0.0	131	$20	Utility room	
11A	Above fixture(s) on motion sensor	48	936	1	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
12	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	4	0.1	437	$66	Office	
12A	Above fixture(s) on motion sensor	55	936	4	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
13	3 F32T8 2'x4' prismatic troffer	90	3120	1	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	1	0.0	131	$20	Utility room	
13A	Above fixture(s) on motion sensor	48	936	1	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
14	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	1	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	1	0.0	109	$16	Office	
14A	Above fixture(s) on motion sensor	55	936	1	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
15	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	1	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	1	0.0	109	$16	Office	
15A	Above fixture(s) on motion sensor	55	936	1	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
16	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	1	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	1	0.0	109	$16	Office	
16A	Above fixture(s) on motion sensor	55	936	1	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
17	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	1	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	1	0.0	109	$16	Office	
17A	Above fixture(s) on motion sensor	55	936	1	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
18	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	61	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	61	2.1	6,661	$999	Office	
18A	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	14	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	14	0.4	1,354	$203	Office	
19	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	16	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	16	0.6	1,747	$262	IT Room	
19A	Above fixture(s) on motion sensor	55	936	1	Ultrasonic ceiling mounted sensor with low voltage power pack	0	3	0.2	154	$23	IT Room	
20	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	48	2	0.0	19	$3	Stairwell	
20A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	24	2	0.1	552	$83	Stairwell	
21	3 F32T8 18 cell 2'x4' parabolic troffer	86	3120	10	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	10	0.3	967	$145	IT Room	
21A	Above fixture(s) on motion sensor	55	936	10	Ultrasonic ceiling mounted sensor with low voltage power pack	0	1	0.1	51	$8	IT Room	
22	3 F32T8 2'x4' prismatic troffer	86	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	237	$36	Utility room	
22A	Above fixture(s) on motion sensor	48	936	2	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
23	3 F32T8 18 cell 2'x4' parabolic troffer	86	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	4	0.1	387	$58	IT Room	
23A	Above fixture(s) on motion sensor	55	936	4	Ultrasonic ceiling mounted sensor with low voltage power pack	0	1	0.1	51	$8	IT Room	
24	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	6	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	6	0.2	580	$87	Office	
24A	Above fixture(s) on motion sensor	55	936	6	Ultrasonic ceiling mounted sensor with low voltage power pack	0	1	0.1	51	$8	IT Room	
25	3 F32T8 2'x4' prismatic troffer	90	3120	1	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	1	0.0	131	$20	Utility room	
25A	Above fixture(s) on motion sensor	48	936	1	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
26	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	262	$39	Utility room	
26A	Above fixture(s) on motion sensor	48	936	2	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
27	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	262	$39	Utility room	
27A	Above fixture(s) on motion sensor	48	936	2	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	

City Hall Lighting Retrofits

MAP #	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Retrofit	Unit Watts	Quantity	kW Savings	kWh Savings	Annual Electric Cost Savings	Notes	Control Notes
28	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	3	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	3	0.1	328	$49	Office	
28A	Above fixture(s) on motion sensor	55	936	3	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
29	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	1	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	1	0.0	12	$2	Office	
29A	Above fixture(s) on motion sensor	48	936	1	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
30	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	3	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	3	0.1	328	$49	Office	
30A	Above fixture(s) on motion sensor	55	936	3	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
2&3	4' 2 Lamp F32T8 Cove Light Strip	112	3120	34	relamp reballast with 2F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	48	34	2.2	6,789	$1,018	Elevator lobby	
4	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	2	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	2	0.1	193	$29	Office	
5	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	9	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	9	0.3	983	$147	Office	
5A	Above fixture(s) on motion sensor	55	936	9	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
6	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	4	0.1	437	$66	Office	
7	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	7	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	7	0.2	677	$102	Office	
8	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	12	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	12	0.4	1,161	$174	Office	
9&10	4' 2 Lamp F32T8 Cove Light Strip	59	3120	26	relamp reballast with 2F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	48	26	0.3	892	$134	Council Chambers	
11	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	5	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	5	0.2	484	$73	Office	
11A	Above fixture(s) on motion sensor	28	936	5	Dual Relay Wall Motion Sensor	0	1	0.0	26	$4	Office	
12	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	262	$39	Utility room	
12A	Above fixture(s) on motion sensor	48	936	2	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
13	8' 4 Lamp F32T8 Light Strip	112	3120	2	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	2	0.0	106	$16	Restroom	
13A	Above fixture(s) on motion sensor	95	3120	2	Dual Relay Wall Microphonic Motion Sensor	0	1	0.1	296	$44	Restroom	
14	8' 4 Lamp F32T8 Light Strip	112	3120	2	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	2	0.0	106	$16	Restroom	
14A	Above fixture(s) on motion sensor	95	936	2	Dual Relay Wall Microphonic Motion Sensor	0	1	0.1	89	$13	Restroom	
15	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	3	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	48	3	0.0	29	$4	Stairwell	
15A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	3	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	24	3	0.1	828	$124	Stairwell	
16	8' 4 Lamp F32T8 Light Strip	112	3120	4	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	4	0.1	212	$32	Restroom	
16A	Above fixture(s) on motion sensor	95	936	4	Dual Relay Wall Microphonic Motion Sensor	0	1	0.1	89	$13	Restroom	
17	8' 4 Lamp F32T8 Light Strip	112	3120	4	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	4	0.1	212	$32	Restroom	
17A	Above fixture(s) on motion sensor	95	936	4	Dual Relay Wall Microphonic Motion Sensor	0	1	0.1	89	$13	Restroom	
18	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	262	$39	Utility room	
18A	Above fixture(s) on motion sensor	48	936	2	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
19	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	262	$39	Utility room	
19A	Above fixture(s) on motion sensor	48	936	2	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
20	3 F32T8 2'x4' prismatic troffer	90	3120	6	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	6	0.3	786	$118	Utility room	
20A	Above fixture(s) on motion sensor	48	936	6	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
21	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	70	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	70	2.5	7,644	$1,147	Office	
21A	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	8	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	8	0.2	774	$116	Office	
22	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	4	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	4	0.1	387	$58	Office	Sensor installed
23	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	48	2	0.0	19	$3	Stairwell	
23A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	24	2	0.1	552	$83	Stairwell	
24	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	39	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	39	1.4	4,259	$639	Office	
25	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	2	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	2	0.1	193	$29	Office	
25A	Above fixture(s) on motion sensor	28	936	2	Dual Relay Wall Motion Sensor	0	1	0.0	26	$4	Utility room	
26	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	4	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	4	0.1	387	$58	Office	
26A	Above fixture(s) on motion sensor	28	936	4	Dual Relay Wall Motion Sensor	0	1	0.0	26	$4	Utility room	
27	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	2	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	2	0.1	193	$29	Office	
27A	Above fixture(s) on motion sensor	28	936	2	Dual Relay Wall Motion Sensor	0	1	0.0	26	$4	Utility room	
28	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	3	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	3	0.1	328	$49	Office	
28A	Above fixture(s) on motion sensor	55	936	3	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
29	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
29a	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
30	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
30A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
30	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	4	0.1	437	$66	Office	
30A	Above fixture(s) on motion sensor	55	936	4	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
1	40 Watt Biax sconce	35	3120	12	relamp with FT40DL/28W/SS/IS, energy saving lamp	32	12	0.0	112	$17	Lobby Staircase-wash sconce lens	
2	4' 2 Lamp F32T8 Cove Light Strip	59	3120	18	relamp reballast with 2F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	48	18	0.2	618	$93	Elevator lobby	
4	4' 2 Lamp F32T8 Cove Light Strip	59	3120	12	relamp reballast with 2F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	48	12	0.1	412	$62	South lobby walkway	
5	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	2	retrofit with 2 F17T8, bi level .88 normal power ballast and direct indirect retrofit kit	28	2	0.1	193	$29	Office	
5A	Above fixture(s) on motion sensor	28	936	2	Ultrasonic ceiling mounted sensor with low voltage power pack	0	1	0.0	26	$4	Office	
6	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	1	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	1	0.0	97	$15	Office	
7	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	48	2	0.0	19	$3	Stairwell	
7A	2 lamp 4' F32T8 wall mount stairwell fixture	59	3120	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	24	2	0.1	218	$33	Stairwell	
8	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	12	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	12	0.4	1,310	$197	Office	
8A	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	19	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	19	0.6	1,838	$276	Office	
9	3 F32T8 2'x4' prismatic troffer	90	3120	1	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	1	0.0	131	$20	Utility room	
9A	Above fixture(s) on motion sensor	48	936	1	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
10	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	262	$39	Utility room	

City Hall Lighting Retrofits

MAP #	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Retrofit	Unit Watts	Quantity	kW Savings	kWh Savings	Annual Electric Cost Savings	Notes	Control Notes
10A	Above fixture(s) on motion sensor	48	936	1	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
11	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	9	0.4	1,179	$177	Utility room	
11A	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	6	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	6	0.2	580	$87	Office	
12	3 F32T8 2'x4' prismatic troffer	90	3120	4	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	4	0.2	524	$79	Utility room	
12A	Above fixture(s) on motion sensor	48	936	4	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
13	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	48	2	0.0	19	$3	Stairwell	
13A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	24	2	0.1	552	$83	Stairwell	
14	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	48	2	0.0	19	$3	Stairwell	
14A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	24	2	0.1	552	$83	Stairwell	
15	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	25	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	25	0.9	2,730	$410	Office	
16	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	6	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	6	0.2	655	$98	Office	
16A	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	1	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	1	0.0	97	$15	Office	
17	3 F32T8 2'x4' prismatic troffer	90	3120	1	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	1	0.0	131	$20	Utility room	
17A	Above fixture(s) on motion sensor	48	936	1	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
18	8' 4 Lamp F32T8 Light Strip	112	3120	4	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	4	0.1	212	$32	Restroom	
18A	Above fixture(s) on motion sensor	95	936	4	Dual Relay Wall Microphonic Motion Sensor	0	1	0.1	89	$13	Restroom	
19	8' 4 Lamp F32T8 Light Strip	112	3120	4	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	95	4	0.1	212	$32	Restroom	
19A	Above fixture(s) on motion sensor	95	936	4	Dual Relay Wall Microphonic Motion Sensor	0	1	0.1	89	$13	Restroom	
20	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
20A	Above fixture(s) on motion sensor	55	936	2	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Office	
21	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	76	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	76	2.7	8,299	$1,245	Office	
21A	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	4	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	4	0.1	387	$58	Office	
22	3 F32T8 2'x4' prismatic troffer	90	3120	1	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	1	0.0	131	$20	Utility room	
22A	Above fixture(s) on motion sensor	48	936	1	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
23	3 F32T8 2'x4' prismatic troffer	90	3120	1	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	1	0.0	131	$20	Utility room	
23A	Above fixture(s) on motion sensor	48	3120	1	Single Relay Wall Motion Sensor	0	1	0.0	150	$22	Utility room	
24	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	1	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	1	0.0	109	$16	Office	
24A	Above fixture(s) on motion sensor	55	936	1	Single Relay Wall Motion Sensor	0	1	0.1	51	$8	Utility room	
25	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	1	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	1	0.0	109	$16	Office	
25A	Above fixture(s) on motion sensor	55	3120	1	Single Relay Wall Motion Sensor	0	1	0.1	172	$26	Utility room	
26	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	4	0.1	437	$66	Office	
26A	Above fixture(s) on motion sensor	55	936	1	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Utility room	
27	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
27A	Above fixture(s) on motion sensor	55	936	1	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Utility room	
28	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	48	2	0.0	19	$3	Stairwell	
28A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	24	2	0.1	552	$83	Stairwell	
29	3 F32T8 2'x4' prismatic troffer	90	3120	2	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	2	0.1	262	$39	Utility room	
29A	Above fixture(s) on motion sensor	48	936	1	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
30	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	2	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	2	0.1	218	$33	Office	
30A	Above fixture(s) on motion sensor	55	936	1	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Utility room	
31	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	4	0.1	437	$66	Office	
31A	Above fixture(s) on motion sensor	55	936	4	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Utility room	
32	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	4	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	4	0.1	437	$66	Office	
32A	Above fixture(s) on motion sensor	55	936	4	Dual Relay Wall Motion Sensor	0	1	0.1	51	$8	Utility room	
33	3 F32T8 2'x4' prismatic troffer	90	3120	1	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	1	0.0	131	$20	Utility room	
33A	Above fixture(s) on motion sensor	48	936	1	Single Relay Wall Motion Sensor	0	1	0.0	45	$7	Utility room	
34	3 F32T8 18 cell 2'x4' parabolic troffer	90	3120	27	retrofit with 2 F32T8, bi level .88 normal power ballast and reflector retrofit kit	55	27	0.9	2,948	$442	Office	
34A	2 F32T8 9 cell 2'x2' parabolic troffer	59	3120	8	retrofit with 2 F17T8, bi level .88 normal power ballast and reflector retrofit kit	28	8	0.2	774	$116	Office	
1	8' 2F96T8 Vaportight	110	8760	8	New 8' 2 lamp F32T8 Vaprotight, Spreadbeam reflector and high power ballast	74	8	0.3	2,523	$378	Garage	
2	8' 2F96T8 strip with wireguard	110	7008	88	retrofit with 2 F32T8, 1.18 high power ballast and retrofit kit	44	88	5.8	40,702	$6,105	Garage	
3	Above fixture(s) on motion sensor	74	1752	88	Single Relay Wall Motion Sensor	44	88	2.6	4,625	$694	Garage	
4	3 F32T8 2'x4' prismatic troffer	90	8760	9	retrofit with 2 F32T8, low power ballast and specular reflector kit	48	9	0.4	3,311	$497	Garage	
TOTALS				**1,423**			**1,285**	**46.7**	**160,171**	**$24,026**		

Lighting Project Summary

$138,765	Estimated Project Cost Including Sales Tax & Disposal
$8,009	Estimated PG&E Rebate (.05/KWH)
$4,668	Estimated PG&E Rebate ($100/ PEAK KWH)
$24,026	Estimated Annual Electrical Energy Savings
$126,089	Estimated Project Cost After Rebate

Police Department Lighting Retrofits

MAP #	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Retrofit	Quantity	kW Savings	kWh Savings	Annual Electric Savings	Notes	Control Notes
1	4' 2 Lamp F32T8 Hooded Industrial	59	800	6	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	6	0.1	53	$7	Penthouse Mechanical	
2	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	2	New bi level stairwell fixture with motion sensor, 2 F32T8 low power ballast	2	0.0	19	$3	Stairwell	
2A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	2	0.1	552	$74	Stairwell	
3	4 F32T8 2'x4' prismatic troffer	112	4004	4	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	4	0.2	625	$84	Chief's secty. office	
3A	Above fixture(s) on motion sensor	73	1201	4	Single Relay Wall Motion Sensor-Microphonic	1	0.1	88	$12	Chief's secty. office	
4	4' 2 Lamp F32T8 Wrap Vanity	59	4004	1	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	1	0.0	44	$6	Restroom	
4a	Above fixture(s) on motion sensor	48	1201	1	Single Relay Wall Motion Sensor	1	0.0	58	$8	Chief's secty. office	
5	4 F32T8 2'x4' prismatic troffer	112	4004	4	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	4	0.2	625	$84	Chief's office	
5A	Above fixture(s) on motion sensor	73	1201	4	Single Relay Wall Motion Sensor-Microphonic	1	0.1	88	$12	Chief's office	
6	4 F32T8 2'x4' prismatic troffer	112	4004	1	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	1	0.0	156	$21	conference room	sensor exists
7	4' 2 Lamp F32T8 Wrap Vanity	59	4004	1	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	1	0.0	44	$6	Restroom	
7A	Above fixture(s) on motion sensor	48	1201	1	Single Relay Wall Motion Sensor-Microphonic	1	0.0	58	$8	Restroom	
8	Dual 15 watt incandescent exit sign	30	8760	1	New 2 watt LED Green Exit sign with battery back up	1	0.0	245	$33	Exit Location	
9	2 F32T8 2'x4' prismatic troffer	59	4004	9	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	9	0.1	396	$53	Personnel Training	
10	4' 2 Lamp F32T8 Hooded Industrial	59	4004	1	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	1	0.0	44	$6	Penthouse Mechanical	
10A	Above fixture(s) on motion sensor	48	1201	1	Single Relay Wall Motion Sensor	1	0.0	58	$8	Server Room	4 square switch plate
11	Dual 15 watt incandescent exit sign	30	8760	1	New 2 watt LED Green Exit sign with battery back up	1	0.0	245	$33	Exit Location	
12	2 F32T8 2'x4' prismatic troffer	59	4004	3	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	3	0.0	132	$18	Office #211	
12A	Above fixture(s) on motion sensor	48	1201	3	Single Relay Wall Motion Sensor	1	0.0	58	$8	Office #211	
13	4 F32T8 2'x4' prismatic troffer	112	4004	4	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	4	0.2	625	$84	Office #207	
13A	Above fixture(s) on motion sensor	73	1201	4	Single Relay Wall Motion Sensor	1	0.1	88	$12	Office #207	
14	4 F32T8 2'x4' prismatic troffer	112	4004	4	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	4	0.2	625	$84	Office #209	
14A	2 F32T8 2'x2' prismatic troffer	73	4004	1	relamp reballast with 2F17 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast and install 2 lamp reflector retrofit kit	1	0.0	164	$22	Office #209	
14B	Above fixture(s) on motion sensor	324	1201	1	Single Relay Wall Motion Sensor	1	0.3	389	$52	Office #209	
15	1 lamp F40T12 surface strip	48	8760	1	relamp reballast with 1F32 T8 800 high lumen lamps, low power factor ballast high efficiency ballast	1	0.0	201	$27	Elevator cab	
16	2 lamp F32T8 surface vanity wrap	59	4004	1	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	1	0.0	44	$6	#203 Women's restroom	
16a	Above fixture(s) on motion sensor	48	1201	1	Single Relay Wall Motion Sensor	1	0.0	58	$8	#203 Women's restroom	
17	3 F32T8 2'x4' prismatic troffer	88	4004	1	retrofit with 2 F32T8, low power ballast Miro reflector retrofit kit	1	0.0	160	$21	#200 Crime Prevention	
17A	Above fixture(s) on motion sensor	48	1201	1	Single Relay Wall Motion Sensor	1	0.0	58	$8	#200 Crime Prevention	
18	4' 2 Lamp F32T8 Hooded Industrial	59	4004	1	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	1	0.0	44	$6	Supply room	
18A	Above fixture(s) on motion sensor	48	1201	1	Single Relay Wall Motion Sensor	1	0.0	58	$8	Supply room	
19	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, normal power ballast Miro reflector retrofit kit	2	0.1	456	$61	Sgt. Koller office	
19A	Above fixture(s) on motion sensor	55	1201	2	Single Relay Wall Motion Sensor	1	0.1	66	$9	Sgt. Koller office	
20	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, normal power ballast Miro reflector retrofit kit	2	0.1	456	$61	#206	
20A	Above fixture(s) on motion sensor	55	1201	2	Single Relay Wall Motion Sensor	1	0.1	66	$9	#206	
21	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, normal power ballast Miro reflector retrofit kit	2	0.1	456	$61	#208	
21A	Above fixture(s) on motion sensor	55	1201	2	Single Relay Wall Motion Sensor	1	0.1	66	$9	#208	
22	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, normal power ballast Miro reflector retrofit kit	2	0.1	456	$61	#210	Leave 1 light on
22A	Above fixture(s) on motion sensor	55	1201	2	Single Relay Wall Motion Sensor	1	0.1	66	$9	#210	
23	4 F32T8 2'x4' prismatic troffer	112	4004	4	retrofit with 2 F32T8, normal power ballast Miro reflector retrofit kit	4	0.2	913	$122	#212	
23A	Above fixture(s) on motion sensor	55	1201	4	Ceiling mount Ultrasonic sensor	1	0.1	66	$9	#212	
24	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, normal power ballast Miro reflector retrofit kit	2	0.1	456	$61	#214	
24A	Above fixture(s) on motion sensor	55	1201	2	Single Relay Wall Motion Sensor	1	0.1	66	$9	#214	
25	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, normal power ballast Miro reflector retrofit kit	2	0.1	456	$61	#215	
25A	Above fixture(s) on motion sensor	55	1201	2	Single Relay Wall Motion Sensor	1	0.1	66	$9	#215	

Police Department Lighting Retrofits

MAP #	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Retrofit	Quantity	kW Savings	kWh Savings	Annual Electric Savings	Notes	Control Notes
26	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, normal power ballast Miro reflector retrofit kit	2	0.1	456	$61	#216	
27	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#218	
27A	Above fixture(s) on motion sensor	48	1201	2	Single Relay Wall Motion Sensor	1	0.0	58	$8	#218	
28	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#220	
29	2 F32T8 2'x4' prismatic troffer	59	1201	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	26	$4	#222-Interview room	
30	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#224	
30A	Above fixture(s) on motion sensor	48	1201	2	Single Relay Wall Motion Sensor	1	0.0	58	$8	#224	
31	2 F32T8 2'x4' prismatic troffer	59	4004	8	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	8	0.1	352	$47	#226	
31A	Above fixture(s) on motion sensor	48	1201	8	Ceiling mount Ultrasonic sensor	1	0.0	58	$8	#226	
32	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#228	
32A	Above fixture(s) on motion sensor	48	1201	2	Single Relay Wall Motion Sensor	1	0.0	58	$8	#228	
33	2 F32T8 2'x4' prismatic troffer	59	4004	4	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	4	0.0	176	$24	Assembly Aegis Training	
33A	Above fixture(s) on motion sensor	48	1201	4	Single Relay Wall Motion Sensor	1	0.0	58	$8	Assembly Aegis Training	
34	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	1	New bi level stairwell fixture with motion sensor, 2 F32T8 low power ballast	1	0.0	10	$1	Stairwell	
34A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	1	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	1	0.0	276	$37	Stairwell	
35	2 F32T8 2'x4' prismatic troffer	59	4004	4	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	4	0.0	176	$24	Narcotics	
35A	Above fixture(s) on motion sensor	48	1201	4	Dual Relay Wall Motion Sensor	1	0.0	58	$8	Narcotics	
36	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	Disptach Supervisor	
36A	Above fixture(s) on motion sensor	48	1201	2	Dual Relay Wall Motion Sensor	1	0.0	58	$8	Disptach Supervisor	
37	2 F20T12 angled vanity wrap	56	4004	1	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	1	0.0	32	$4	Dispatch Breakroom	
38	2 F32T8 2'x4' prismatic troffer	59	4004	8	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	8	0.1	352	$47	Large Conference Room	
38A	Above fixture(s) on motion sensor	48	1201	8	Dual Relay Wall Motion Sensor	1	0.0	58	$8	Large Conference Room	
39	Dual 15 watt incandescent exit sign	30	8760	2	New 2 watt LED Green Exit sign with battery back up	2	0.1	491	$66	Exit Location	
40	4 F32T8 2'x4' prismatic troffer	112	4004	4	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	4	0.2	625	$84	#230	
40A	Above fixture(s) on motion sensor	73	1201	4	Single Relay Wall Motion Sensor	1	0.1	88	$12	#230	
41	4 F32T8 2'x4' prismatic troffer	112	4004	4	retrofit with 2 F32T8, normal power ballast Miro reflector retrofit kit	4	0.2	913	$122	#219	
41A	Above fixture(s) on motion sensor	55	1201	4	Single Relay Wall Motion Sensor	1	0.1	66	$9	#219	
42	8' 4 lamp F32T8 surface mount	112	4004	1	retrofit with 4 F32T8, low power ballast	1	0.0	68	$9	Radio Transmitter	
42A	Above fixture(s) on motion sensor	95	1201	1	Single Relay Wall Motion Sensor	1	0.1	114	$15	#219	
43	2 F32T8 2'x4' prismatic troffer	59	4004	1	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	1	0.0	44	$6	Rear hallway	
43A	Above fixture(s) on motion sensor	48	1201	1	Single Relay Wall Motion Sensor	1	0.0	58	$8	Rear hallway	
44	2 F32T8 2'x4' prismatic troffer	59	4004	12	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	12	0.1	529	$71	Technology Services	
44A	Above fixture(s) on motion sensor	48	1201	12	Ceiling mount Ultrasonic sensor	1	0.0	58	$8	Technology Services	
45	2 F32T8 2'x2' opaque lensed troffer	59	4004	44	relamp reballast with 2F17 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast and install 2 lamp reflector retrofit kit	44	1.2	4,757	$637	Office #209	
46	6 F32T8 4'x4' opaque lensed troffer	171	4004	34	relamp reballast with 4 F32 T8 800 high lumen lamps, .88 low power factor 4 Lamp high efficiency ballast and install 4 lamp reflector retrofit kit	34	2.0	8,032	$1,076	Office #209	
47	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	1	New bi level stairwell fixture with motion sensor, 2 F32T8 low power ballast	1	0.0	10	$1	Stairwell	
47A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	1	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	1	0.0	276	$37	Stairwell	
47A	Dual 15 watt incandescent exit sign	30	8760	1	New 2 watt LED Green Exit sign with battery back up	1	0.0	245	$33	Exit Location	
48	2 F32T8 2'x4' prismatic troffer	59	8760	9	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	9	0.1	867	$116	Ground floor break room	
48A	Above fixture(s) on motion sensor	48	2628	9	Ceiling mount Ultrasonic sensor	1	0.0	126	$17	Ground floor break room	

Police Department Lighting Retrofits

MAP #	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Retrofit	Quantity	kW Savings	kWh Savings	Annual Electric Savings	Notes	Control Notes
49	2 F32T8 2'x4' prismatic troffer	59	8760	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	193	$26	Ground floor break room	
49A	Above fixture(s) on motion sensor	48	2628	2	Ceiling mount Ultrasonic sensor	1	0.0	126	$17	Ground floor break room	
50	1 F32T8 2'x2' recessed prismatic lensed troffer	37	8760	7	relamp reballast with 1F17 T8 800 high lumen lamps, 1.18 high power factor high efficiency ballast and install 1 lamp F17 retrofit kit	7	0.1	920	$123	Southwest Hallway	
50A	1 F32T8 1'x4' surface prismatic lensed	37	8760	12	relamp reballast with 1F32 T8 800 high lumen lamps, .77 low power factor high efficiency ballast	12	0.1	1,261	$169	Southwest Hallway	
51	1 F32T8 1'x4' surface prismatic lensed	37	8760	4	relamp reballast with 1F32 T8 800 high lumen lamps, .77 low power factor high efficiency ballast	4	0.0	420	$56	Rear Men's locker room	
51A	Above fixture(s) on motion sensor	25	2628	2	Highbay sensor	1	0.0	66	$9	Rear Men's locker room	
51	2 F17T8 1'x2' surface prismatic lensed	33	8760	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	228	$31	Rear Men's locker room	
51A	2 F32T8 1'x4' surface prismatic lensed	59	8760	9	New 1 lamp F32T8 angled or flush mount wrap , high power ballast, Miro reflector	9	0.2	1,656	$222	Rear Men's locker room	
51B	Above fixture(s) on motion sensor	38	2628	1	Single Relay Wall Motion Sensor	1	0.0	100	$13	Ground floor break room	Note: sensor to control 1 fixture at entrance to locker room
52	Dual 15 watt incandescent exit sign	30	8760	1	New 2 watt LED Green Exit sign with battery back up	1	0.0	245	$33	Exit Location	
53	1 F32T8 2'x2' recessed prismatic lensed troffer	37	8760	5	relamp reballast with 1F17 T8 800 high lumen lamps, 1.18 high power factor high efficiency ballast and install 1 lamp F17 retrofit kit	5	0.1	657	$88	SouthEast Hallway	
54	4' 2 Lamp F32T8 Hooded Industrial	59	800	1	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	1	0.0	9	$1	Custodian Room	
55	2 F32T8 1'x4' surface prismatic lensed	59	8760	15	New 1 lamp F32T8 angled or flush mount wrap , high power ballast, Miro reflector	15	0.3	2,759	$370	Mat room	
55A	Above fixture(s) on motion sensor	38	2628	15	Highbay sensor	1	0.0	100	$13	Mat room	
56	Dual 15 watt incandescent exit sign	30	8760	1	New 2 watt LED Green Exit sign with battery back up	1	0.0	245	$33	Exit Location	
57	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	Leslie Hally's office	No Access, estimate
57A	Above fixture(s) on motion sensor	48	1201	2	Dual Relay Wall Motion Sensor	1	0.0	58	$8	Leslie Hally's office	
58	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#123	No Access, estimate
58A	Above fixture(s) on motion sensor	48	1201	2	Dual Relay Wall Motion Sensor	1	0.0	58	$8	#123	
59	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#127	No Access, estimate
59A	Above fixture(s) on motion sensor	48	1201	2	Dual Relay Wall Motion Sensor	1	0.0	58	$8	#127	
60	4 F32T8 2'x4' prismatic troffer	112	4004	9	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	9	0.4	1,405	$188	#131	
60A	Above fixture(s) on motion sensor	73	1201	9	Single Relay Wall Motion Sensor- Microphonic	1	0.1	88	$12	#131	
61	2 F32T8 2'x2' opaque lensed troffer	59	8760	8	relamp reballast with 2F17 T8 800 high lumen lamps, .77 low power factor 2 Lamp high efficiency ballast and install 2 lamp reflector retrofit kit	8	0.3	2,313	$310	Hallway	
62	2 lamp 4' F32T8 wall mount stairwell fixture	59	876	1	New bi level stairwell fixture with motion sensor, 2 F32T8 low power ballast	1	0.0	10	$1	Stairwell	
62A	2 lamp 4' F32T8 wall mount stairwell fixture	59	7884	2	Retrofit with new 2 F32T8 , bi level low power ballast , ultrasonic motion sensor	2	0.1	552	$74	Stairwell	
63	4' 2 Lamp F32T8 Hooded Industrial	59	800	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	18	$2	Radio Charge	
64	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#134	
64A	Above fixture(s) on motion sensor	48	1201	2	Dual Relay Wall Motion Sensor	1	0.0	58	$8	#134	
65	4 F32T8 2'x4' prismatic troffer	112	4004	4	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	4	0.2	625	$84	Traffic #137	
65A	Above fixture(s) on motion sensor	55	1201	4	Ceiling mount Ultrasonic sensor	1	0.1	66	$9	Traffic #137	
66	4 F32T8 2'x4' prismatic troffer	112	4004	1	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	1	0.0	156	$21	Next to #134	
66A	2 F32T8 2'x2' prismatic troffer	59	4004	1	relamp reballast with 2F17 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast and install 2 lamp reflector retrofit kit	1	0.0	108	$14	Next to #134	
66B	Above fixture(s) on motion sensor	105	1201	1	Dual Relay Wall Motion Sensor	1	0.1	126	$17	Next to #134	
67	1 F32T8 2'x2' recessed prismatic lensed troffer	37	4004	2	relamp reballast with 1F17 T8 800 high lumen lamps, 1.18 high power factor high efficiency ballast and install 1 lamp F17 retrofit kit	2	0.0	120	$16	Hallway Near #123	
68	2 F32T8 2'x4' prismatic troffer	59	4004	10	relamp only, fixtures on dimming ballast and circuit	10	0.0	0	$0	#123A- Com1	
68A	2 F32T8 2'x2' prismatic troffer	59	4004	1	relamp reballast with 2F17 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast and install 2 lamp reflector retrofit kit	1	0.0	108	$14	#123A- Com1	
69	2 F32T8 2'x4' prismatic troffer	59	4004	4	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.0	-112	-$15	Across from COM#1	REMOVE 2 OF 4 EXISTING FIXTURES, INSTALL 2 NEW 2'X4' TILES

Police Department Lighting Retrofits

MAP #	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Retrofit	Quantity	kW Savings	kWh Savings	Annual Electric Savings	Notes	Control Notes
69A	Above fixture(s) on motion sensor	73	1201	2	Dual Relay Wall Motion Sensor	1	0.1	88	$12	Across from COM#1	
70	1 F32T8 2'x2' recessed prismatic lensed troffer	37	4004	5	relamp reballast with 1F17 T8 850 high lumen lamps, 1.18 high power factor high efficiency ballast and install 1 lamp F17 retrofit kit	2	0.0	120	$16	Hallway Near COM#1	
71	2 F32T8 2'x4' prismatic troffer	59	4004	4	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.0	-112	-$15	#138 Report writing	REMOVE 2 OF 4 EXISTING FIXTURES, INSTALL 2 NEW 2'X4' TILES
71A	Above fixture(s) on motion sensor	73	1201	2	Dual Relay Wall Motion Sensor	1	0.1	88	$12	#138 Report writing	
71B	4 F32T8 2'x4' prismatic troffer	112	4004	1	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	1	0.0	156	$21	#138 Report writing	
71C	2 F32T8 2'x2' prismatic troffer	59	4004	1	relamp reballast with 2F17 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast and install 2 lamp reflector retrofit kit	1	0.0	108	$14	#138 Report writing	
72	2 F32T8 2'x4' prismatic security troffer	59	8760	49	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	49	0.5	4,722	$633	Jail cells, common hallways, etc.	
73	4 F32T8 2'x4' prismatic security troffer	112	8760	1	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	8	0.1	1,191	$160	Jail cells, common hallways, etc.	
74	4' 2 Lamp F32T8 Hooded Industrial	59	4380	4	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	4	0.0	193	$26	Sally Port	
74A	Above fixture(s) on motion sensor	48	1314	2	Dual Relay Wall Motion Sensor	4	0.2	252	$34	Sally Port	
75	4' 2 Lamp F32T8 Hooded Industrial	59	8760	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	193	$26	Jail Office w/ monitors	
76	1 F32T8 2'x2' recessed prismatic lensed troffer	37	8760	10	relamp reballast with 1F17 T8 850 high lumen lamps, 1.18 high power factor high efficiency ballast and install 1 lamp F17 retrofit kit	10	0.2	1,314	$176	Hallway near Jail	
77	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.1	312	$42	#132, HPOA	
77A	Above fixture(s) on motion sensor	73	1201	2	Single Relay Wall Motion Sensor	1	0.1	88	$12	#132, HPOA	
78	4 F32T8 2'x4' prismatic troffer	112	4004	1	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.1	312	$42	#132, HPOA	
78A	Above fixture(s) on motion sensor	73	1201	1	Single Relay Wall Motion Sensor	1	0.1	88	$12	#130 Crime Prevention	
79	Dual 15 watt incandescent exit sign	30	4004	2	New 2 watt LED Green Exit sign with battery back up	2	0.1	224	$30	Exit Location	
80	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#128	
80A	Above fixture(s) on motion sensor	48	1201	2	Single Relay Wall Motion Sensor	1	0.0	58	$8	#128	
81	2 F32T8 2'x4' prismatic troffer	59	4004	6	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	6	0.1	264	$35	#126	
81A	Above fixture(s) on motion sensor	48	1201	6	Single Relay Wall Motion Sensor	3	0.1	173	$23	#126	
82	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.1	312	$42	#124	
82A	Above fixture(s) on motion sensor	73	1201	2	Single Relay Wall Motion Sensor	1	0.1	88	$12	#124	
83	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#122	
83A	Above fixture(s) on motion sensor	48	1201	2	Single Relay Wall Motion Sensor	1	0.0	58	$8	#122	
84	1 F32T8 2'x2' recessed prismatic lensed troffer	37	4004	7	relamp reballast with 1F17 T8 800 high lumen lamps, 1.18 high power factor high efficiency ballast and install 1 lamp F17 retrofit kit	7	0.1	420	$56	Hallway near Jail	
85	2 F32T8 2'x4' prismatic troffer	59	1201	8	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	4	-0.1	-67	-$9	#118	REMOVE 2 OF 4 EXISTING FIXTURES, INSTALL 2 NEW 2'X4' TILES
85A	Above fixture(s) on motion sensor	73	1201	8	Single Relay Wall Motion Sensor	1	0.1	88	$12	#118	
86	2 F32T8 2'x4' prismatic troffer	59	4004	4	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.0	-112	-$15	#116	REMOVE 2 OF 4 EXISTING FIXTURES, INSTALL 2 NEW 2'X4' TILES
86A	Above fixture(s) on motion sensor	73	1201	4	Single Relay Wall Motion Sensor	1	0.1	88	$12	#116	
87	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#114-Juvenille Cell	
88	2 F32T8 2'x4' prismatic troffer	59	4004	4	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.0	-112	-$15	#112	REMOVE 2 OF 4 EXISTING FIXTURES, INSTALL 2 NEW 2'X4' TILES
88A	Above fixture(s) on motion sensor	73	1201	4	Single Relay Wall Motion Sensor	1	0.1	88	$12	#112	
89	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#108	
89A	Above fixture(s) on motion sensor	48	1201	2	Single Relay Wall Motion Sensor	1	0.0	58	$8	#108	
90	2 F32T8 2'x4' prismatic troffer	59	4004	2	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.0	-112	-$15	#106	
90A	Above fixture(s) on motion sensor	73	1201	2	Single Relay Wall Motion Sensor	1	0.1	88	$12	#106	
91	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.1	312	$42	#110	
91A	Above fixture(s) on motion sensor	73	1201	2	Dual Relay Wall Motion Sensor	1	0.1	88	$12	#110	
92	4 F32T8 2'x4' prismatic troffer	112	4004	4	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	4	0.2	625	$84	conference room	
92A	Above fixture(s) on motion sensor	73	1201	4	Single Relay Wall Motion Sensor	1	0.1	88	$12	conference room	
93	2 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.1	312	$42	H120	Low light levels-added light, Wall switch OK

Police Department Lighting Retrofits

MAP #	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Retrofit	Quantity	kW Savings	kWh Savings	Annual Electric Savings	Notes	Control Notes
94	2 F32T8 2'x4' prismatic troffer	59	8760	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	193	$26	Hallway	Wall switch OK
95	2 F32T8 2'x4' prismatic troffer	59	4004	11	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	11	0.1	484	$65	#5150	
96	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#151	
97	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#152	
98	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#153	
99	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	#154	
100	2 F32T8 2'x4' prismatic troffer	59	8760	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	193	$26	Hallway	
101	2 F32T8 4' surface mount	59	800	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	18	$2	Storage	
102	3' 2 Lamp F32T8 Wrap Vanity	42	4004	1	relamp reballast with 2F25 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	1	0.0	24	$3	Men's Restroom	
103	3' 2 Lamp F32T8 Wrap Vanity	42	4004	1	relamp reballast with 2F25 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	1	0.0	24	$3	Women's Restroom	
104	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.1	312	$42	Evidence room	
104A	Above fixture(s) on motion sensor	73	1201	2	Single Relay Wall Motion Sensor-Microphonic	1	0.1	88	$12	Evidence room	
105	2 F32T8 2'x2' prismatic troffer	59	4004	2	relamp reballast with 1 F32T8 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast	2	0.1	216	$29	Desk	
106	2 F32T8 2'x2' prismatic troffer	59	4004	8	relamp reballast with 2F17 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast and install 2 lamp reflector retrofit kit	8	0.2	865	$116	Ground floor -open office/ back wall	
107	4' 1 lamp F32T8 prismatic in tandem pairs of 4	112	4004	4	relamp reballast with 1 F32T8 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast	4	0.1	272	$36	Ground floor -open office/ Perimeter	
107A	4' 1 lamp F32T8 prismatic in tandem pairs of 2	59	4004	2	relamp reballast with 1 F32T8 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast	2	-0.1	-288	-$39	Ground floor -open office/ Perimeter	
107B	4' 1 lamp F32T8 prismatic-Single	30	4004	4	relamp reballast with 1 F32T8 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast	4	0.0	80	$11	Ground floor -open office/ Perimeter	
107B	2' 1 lamp F17T8 prismatic-Single	18	4004	4	relamp reballast with 1 F17T8 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast	4	0.0	48	$6	Ground floor -open office/ Perimeter	
108	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.1	312	$42	Copy Room	
109	4 F32T8 4'x4' prismatic troffer	112	4004	10	relamp reballast with 4F32 T8 850 high lumen lamps, low power factor .77 high efficiency ballast	10	0.2	681	$91	Behind front counter	
110	2 F40 Biax 2'x2' prismatic troffer	85	4004	2	relamp reballast with 2F17 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast and install 2 lamp reflector retrofit kit	2	0.1	424	$57	Interview room	
111	2 F32T8 2'x2' prismatic troffer	85	4004	2	relamp reballast with 2F17 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast and install 2 lamp reflector retrofit kit	2	0.1	424	$57	Miscellaneous Office	
112	2 F32T8 2'x2' prismatic troffer	59	4004	12	relamp reballast with 2F17 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast and install 2 lamp reflector retrofit kit	12	0.3	1,297	$174	Open office	
113	1 F32T8 2'x2' recessed prismatic lensed troffer	37	4004	5	relamp reballast with 1F17 T8 850 high lumen lamps, 1.18 high power factor high efficiency ballast and install 1 lamp F17 retrofit kit	5	0.1	300	$40	Miscellaneous Perimeter area	
114	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	Room 100D	
115	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	Room 100C	
115A	Above fixture(s) on motion sensor	48	1201	2	Single Relay Wall Motion Sensor	1	0.0	58	$8	Room 100C	
116	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	Room 100B	
117	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	Room 100A	
118	1 F32T8 2'x2' recessed prismatic lensed troffer	37	4004	8	relamp reballast with 1F17 T8 850 high lumen lamps, 1.18 high power factor high efficiency ballast and install 1 lamp F17 retrofit kit	8	0.1	480	$64	Hallway	
119	Dual 15 watt incandescent exit sign	30	8760	1	New 2 watt LED Green Exit sign with battery back up	1	0.0	245	$33	Exit Location	
120	2 F32T8 2'x4' prismatic troffer	59	4004	1	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	1	0.0	44	$6	Message room	
120A	Above fixture(s) on motion sensor	48	1201	2	Single Relay Wall Motion Sensor	1	0.0	58	$8	Message room	
121	2 F32T8 1'x4' surface prismatic lensed	59	4004	3	New 1 lamp F32T8 angled or flush mount wrap , high power ballast, Miro reflector	3	0.1	252	$34	Women's Locker	
121A	Above fixture(s) on motion sensor	38	1201	3	Single Relay Wall Motion Sensor-Microphonic	1	0.0	46	$6	Women's Locker	

Police Department Lighting Retrofits

MAP #	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Retrofit	Quantity	kW Savings	kWh Savings	Annual Electric Savings	Notes	Control Notes
122	4' 1 lamp F32T8 prismatic-Single	30	4004	6	relamp reballast with 1 F32T8 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast	6	0.0	120	$16	Room 111C	
122A	4 F32T8 2'x4' prismatic troffer	112	4004	1	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	1	0.0	156	$21	Room 111C	
122B	2 F32T8 2'x2' prismatic troffer	85	4004	1	relamp reballast with 2F17 T8 800 high lumen lamps, .77 low power factor 4 Lamp high efficiency ballast and install 2 lamp reflector retrofit kit	1	0.1	212	$28	Room 111C	
122C	Above fixture(s) on motion sensor	255	1201	1	Single Relay Wall Motion Sensor-Microphonic	2	0.5	613	$82	Room 111C	
123	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.1	312	$42	Room 107 CD Storage	
123A	Above fixture(s) on motion sensor	73	1201	2	Single Relay Wall Motion Sensor-Microphonic	1	0.1	88	$12	Room 107 CD Storage	
124	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.1	312	$42	Room 105	
124A	Above fixture(s) on motion sensor	73	1201	2	Single Relay Wall Motion Sensor-Microphonic	1	0.1	88	$12	Room 105	
125	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.1	312	$42	Room 103	
125A	Above fixture(s) on motion sensor	73	1201	2	Single Relay Wall Motion Sensor-Microphonic	1	0.1	88	$12	Room 103	
126	4 F32T8 2'x4' prismatic troffer	112	4004	2	retrofit with 2 F32T8, high power ballast Miro reflector retrofit kit	2	0.1	312	$42	Room 101	
126A	Above fixture(s) on motion sensor	73	1201	2	Single Relay Wall Motion Sensor-Microphonic	1	0.1	88	$12	Room 101	
127	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	Communication	
127A	Above fixture(s) on motion sensor	48	1201	2	Single Relay Wall Motion Sensor	1	0.0	58	$8	Communication	
128	2 F32T8 1'x4' surface prismatic lensed	59	4004	3	New 1 lamp F32T8 angled or flush mount wrap , high power ballast, Miro reflector	3	0.1	252	$34	Women's Room	
128A	Above fixture(s) on motion sensor	38	1201	3	Single Relay Wall Motion Sensor-Microphonic	1	0.0	46	$6	Women's Room	
129	2 F32T8 1'x4' surface prismatic lensed	59	4004	3	New 1 lamp F32T8 angled or flush mount wrap , high power ballast, Miro reflector	3	0.1	252	$34	Men's Room	
129A	Above fixture(s) on motion sensor	38	1201	3	Single Relay Wall Motion Sensor-Microphonic	1	0.0	46	$6	Women's Room	
130	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	Interview room #1	
131	2 F32T8 2'x4' prismatic troffer	59	4004	2	relamp reballast with 2F32 T8 800 high lumen lamps, low power factor .77 high efficiency ballast	2	0.0	88	$12	Interview room #2	
TOTALS				**814**		**668**	**17.8**	**69,453**	**$9,307**		

Lighting Project Summary

$61,809	Estimated Project Cost Including Sales Tax & Disposal
$3,473	Estimated PG&E Rebate (.05/KWH)
$1,780	Estimated PG&E Rebate ($100/ PEAK KWH)
$56,556	Estimated Project Cost After Rebate
$9,307	Estimated Annual Electrical Energy Savings

Fleet Equipment Vehicle Maintenance Center Light Retrofit

Location of Existing Light Fixtures	Existing Fixture	Unit Watts	Annual Hours	Quantity	Proposed Fixture Replacement	Unit Watts	Quantity	kW Savings	kWh Savings	Annual Electric Cost Savings	Notes	Control Notes
Mechanics Bay #1 (West End)	6 qty. 250 watt Vertical Burn Low Bay Metal Halide Pendant Hung Canopy Light	1770	3120	1	Remove existing 250 watt HID fixtures and Install 8 qty 8' 4 lamp and 4 qty 4' 2 lamp F32T8 Industrial fixtures fitted with Miro aluminum normal beam reflectors and high power ballasts	1444	1	0.3	1,017	$153	Fixtures to be reconfigured in front and to the sides of each automitive bay to improve light penetration and vertical foot-candles on the task	No motion sensors and or controls will be installed on new fixtures
Mechanics Bay #2 (West End)	6 qty. 250 watt Vertical Burn Low Bay Metal Halide Pendant Hung Canopy Light	1770	3120	1	Remove existing 250 watt HID fixtures and Install 8 qty 8' 4 lamp and 4 qty 4' 2 lamp F32T8 Industrial fixtures fitted with Miro aluminum normal beam reflectors and high power ballasts	1444	1	0.3	1,017	$153	Fixtures to be reconfigured in front and to the sides of each automitive bay to improve light penetration and vertical foot-candles on the task	No motion sensors and or controls will be installed on new fixtures
Mechanics Bay #3 (Middle)	6 qty. 250 watt Vertical Burn Low Bay Metal Halide Pendant Hung Canopy Light	1770	3120	1	Remove existing 250 watt HID fixtures and Install 8 qty 8' 4 lamp and 4 qty 4' 2 lamp F32T8 Industrial fixtures fitted with Miro aluminum normal beam reflectors and high power ballasts	1444	1	0.3	1,017	$153	Fixtures to be reconfigured in front and to the sides of each automitive bay to improve light penetration and vertical foot-candles on the task	No motion sensors and or controls will be installed on new fixtures
Mechanics Bay #4 East End)	6 qty. 250 watt Vertical Burn Low Bay Metal Halide Pendant Hung Canopy Light	1770	3120	1	Remove existing 250 watt HID fixtures and Install 8 qty 8' 4 lamp and 4 qty 4' 2 lamp F32T8 Industrial fixtures fitted with Miro aluminum normal beam reflectors and high power ballasts	1444	1	0.3	1,017	$153	Fixtures to be reconfigured in front and to the sides of each automitive bay to improve light penetration and vertical foot-candles on the task	No motion sensors and or controls will be installed on new fixtures
Mechanics Bay #5 East End)	6 qty. 250 watt Vertical Burn Low Bay Metal Halide Pendant Hung Canopy Light	1770	3120	1	Remove existing 250 watt HID fixtures and Install 8 qty 8' 4 lamp and 4 qty 4' 2 lamp F32T8 Industrial fixtures fitted with Miro aluminum normal beam reflectors and high power ballasts	1444	1	0.3	1,017	$153	Fixtures to be reconfigured in front and to the sides of each automitive bay to improve light penetration and vertical foot-candles on the task	No motion sensors and or controls will be installed on new fixtures
Storage Bay #6 East End)	6 qty. 250 watt Vertical Burn Low Bay Metal Halide Pendant Hung Canopy Light	1770	3120	1	Remove existing 250 watt HID fixtures and Install 5 qty 8' 6 lamp lamp F32T8 Industrial fixtures fitted with Miro aluminum normal beam reflectors and high power ballasts	1444	1	0.3	1,017	$153	New Lights to be turned near work bench to provide illumination on task	No motion sensors and or controls will be installed on new fixtures
Rear Storage Bay and Upstairs #7	5 qty. 250 watt Vertical Burn Low Bay Metal Halide Pendant Hung Canopy Light	1475	3120	1	Remove 5 existing 250 watt HID fixtures and Install 2 qty 8' 4 lamp F32T8 Industrial fixtures fitted with Miro aluminum normal beam reflectors and high power ballasts in rear of shop	288	1	1.2	3,703	$556	Fixtures to be reconfigured in front and to the sides of each automitive bay to improve light penetration and vertical foot-candles on the task	No motion sensors and or controls will be installed on new fixtures
TOTALS				**7**			**7**	**3.1**	**9,806**	**$1,471**		

Fleet Maintenance Project Cost Estimate

$15,350	Estimated System Cost w/ Sales Tax
$816	Estimated Rebate (KW & KWH)
$14,534	Estimated Project Cost After Rebate
$1,471	Estimated Savings