

510 Thornall Street, Suite 170 Edison, NJ 08837

> Tel: 732.590.0122 Fax: 732.590.0129

# PORTFOLIO MANAGER / ENERGY STAR



## STATEMENT OF ENERGY PERFORMANCE Great Meadows - Central School

**Building ID: 3024773** 

For 12-month Period Ending: December 31, 20111

**Facility Owner** 

Date SEP becomes ineligible: N/A

N/A

Date SEP Generated: April 04, 2012

**Primary Contact for this Facility** 

**Facility** Great Meadows - Central School 281 Route 46

Great Meadows, NJ 07823

Year Built: 1918

Gross Floor Area (ft2): 38,000

Energy Performance Rating<sup>2</sup> (1-100) 25

Site Energy Use Summary<sup>3</sup>

Electricity - Grid Purchase(kBtu) 957,949 Natural Gas - (kBtu)4 Total Energy (kBtu) 957,949

Energy Intensity<sup>4</sup>

Site (kBtu/ft²/yr) 126 Source (kBtu/ft²/yr) 186

Emissions (based on site energy use) Greenhouse Gas Emissions (MtCO2e/year) 417

**Electric Distribution Utility** 

Jersey Central Power & Light Co [FirstEnergy Corp]

**National Median Comparison** 

National Median Site EUI 101 National Median Source EUI 149 % Difference from National Median Source EUI 25% **Building Type** K-12 School Stamp of Certifying Professional

Based on the conditions observed at the time of my visit to this building, I certify that the information contained within this statement is accurate.

Meets Industry Standards<sup>5</sup> for Indoor Environmental Conditions:

Ventilation for Acceptable Indoor Air Quality N/A Acceptable Thermal Environmental Conditions N/A Adequate Illumination N/A **Certifying Professional** N/A

- 1. Application for the ENERGY STAR must be submitted to EPA within 4 months of the Period Ending date. Award of the ENERGY STAR is not final until approval is received from EPA.

- 2. The EPA Energy Performance Rating is based on total source energy. A rating of 75 is the minimum to be eligible for the ENERGY STAR.

  3. Values represent energy consumption, annualized to a 12-month period.

  4. Values represent energy intensity, annualized to a 12-month period.

  5. Based on Meeting ASHRAE Standard 62 for ventilation for acceptable indoor air quality, ASHRAE Standard 55 for thermal comfort, and IESNA Lighting Handbook for lighting quality.

The government estimates the average time needed to fill out this form is 6 hours (includes the time for entering energy data, Licensed Professional facility inspection, and notarizing the SEP) and welcomes suggestions for reducing this level of effort. Send comments (referencing OMB control number) to the Director, Collection Strategies Division, U.S., EPA (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460.

## FOR YOUR RECORDS ONLY. DO NOT SUBMIT TO EPA.

Please keep this Facility Summary for your own records; do not submit it to EPA. Only the Statement of Energy Performance (SEP), Data Checklist and Letter of Agreement need to be submitted to EPA when applying for the ENERGY STAR.

Facility
Great Meadows - Central School
281 Route 46
Great Meadows, NJ 07823

Facility Owner

Primary Contact for this Facility

### **General Information**

Great Meadows - Central School			
Gross Floor Area Excluding Parking: (ft²) 38,000			
Year Built	1918		
For 12-month Evaluation Period Ending Date:	December 31, 2011		

**Facility Space Use Summary** 

Great Meadows - Central School				
Space Type	K-12 School			
Gross Floor Area (ft2)	38,000			
Open Weekends?	No			
Number of PCs	91			
Number of walk-in refrigeration/freezer units	1			
Presence of cooking facilities	Yes			
Percent Cooled	30			
Percent Heated	100			
Months °	N/A			
High School?	No			
School District °	N/A			

**Energy Performance Comparison** 

	Evaluation	on Periods		Comparisons	
Performance Metrics	Current (Ending Date 12/31/2011)	Baseline (Ending Date 12/31/2011)	Rating of 75	Target	National Median
Energy Performance Rating	25	25	75	N/A	50
Energy Intensity					
Site (kBtu/ft²)	126	126	79	N/A	101
Source (kBtu/ft²)	186	186	116	N/A	149
Energy Cost					
\$/year	N/A	N/A	N/A	N/A	N/A
\$/ft²/year	N/A	N/A	N/A	N/A	N/A
Greenhouse Gas Emissions					
MtCO <sub>2</sub> e/year	417	417	261	N/A	334
kgCO <sub>2</sub> e/ft²/year	11	11	7	N/A	9

More than 50% of your building is defined as K-12 School. Please note that your rating accounts for all of the spaces listed. The National Median column presents energy performance data your building would have if your building had a median rating of 50.

Notes:

- o This attribute is optional.
- d A default value has been supplied by Portfolio Manager.



## STATEMENT OF ENERGY PERFORMANCE **Great Meadows - Liberty School**

**Building ID: 3024755** 

For 12-month Period Ending: December 31, 20111

**Facility Owner** 

Date SEP becomes ineligible: N/A

N/A

Date SEP Generated: April 04, 2012

**Primary Contact for this Facility** 

**Facility** 

Great Meadows - Liberty School 334 Mountain Lake Road Great Meadows, NJ 07838

Year Built: 1973

Gross Floor Area (ft2): 44,500

Energy Performance Rating<sup>2</sup> (1-100) 44

Site Energy Use Summary<sup>3</sup>

Electricity - Grid Purchase(kBtu) 1,355,973 Natural Gas - (kBtu)4 Total Energy (kBtu) 1,355,973

Energy Intensity<sup>4</sup>

Site (kBtu/ft²/yr) 77 Source (kBtu/ft²/yr) 149

Emissions (based on site energy use) Greenhouse Gas Emissions (MtCO2e/year) 345

**Electric Distribution Utility** 

Jersey Central Power & Light Co [FirstEnergy Corp]

**National Median Comparison** 

National Median Site EUI 73 National Median Source EUI 142 % Difference from National Median Source EUI 5% **Building Type** K-12 School Stamp of Certifying Professional

Based on the conditions observed at the time of my visit to this building, I certify that the information contained within this statement is accurate.

Meets Industry Standards<sup>5</sup> for Indoor Environmental Conditions:

Ventilation for Acceptable Indoor Air Quality N/A Acceptable Thermal Environmental Conditions N/A Adequate Illumination N/A **Certifying Professional** N/A

- 1. Application for the ENERGY STAR must be submitted to EPA within 4 months of the Period Ending date. Award of the ENERGY STAR is not final until approval is received from EPA.

- 2. The EPA Energy Performance Rating is based on total source energy. A rating of 75 is the minimum to be eligible for the ENERGY STAR.

  3. Values represent energy consumption, annualized to a 12-month period.

  4. Values represent energy intensity, annualized to a 12-month period.

  5. Based on Meeting ASHRAE Standard 62 for ventilation for acceptable indoor air quality, ASHRAE Standard 55 for thermal comfort, and IESNA Lighting Handbook for lighting quality.

The government estimates the average time needed to fill out this form is 6 hours (includes the time for entering energy data, Licensed Professional facility inspection, and notarizing the SEP) and welcomes suggestions for reducing this level of effort. Send comments (referencing OMB control number) to the Director, Collection Strategies Division, U.S., EPA (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460.

## FOR YOUR RECORDS ONLY. DO NOT SUBMIT TO EPA.

Please keep this Facility Summary for your own records; do not submit it to EPA. Only the Statement of Energy Performance (SEP), Data Checklist and Letter of Agreement need to be submitted to EPA when applying for the ENERGY STAR.

Facility
Great Meadows - Liberty School
334 Mountain Lake Road
Great Meadows, NJ 07838

Facility Owner

Primary Contact for this Facility

### **General Information**

Great Meadows - Liberty School			
Gross Floor Area Excluding Parking: (ft²) 44,500			
Year Built	1973		
For 12-month Evaluation Period Ending Date:	December 31, 2011		

**Facility Space Use Summary** 

Great Meadows - Liberty School				
Space Type	K-12 School			
Gross Floor Area (ft²)	44,500			
Open Weekends?	No			
Number of PCs	96			
Number of walk-in refrigeration/freezer units	1			
Presence of cooking facilities	Yes			
Percent Cooled	30			
Percent Heated	100			
Months °	N/A			
High School?	No			
School District °	N/A			

**Energy Performance Comparison** 

	Evaluation	Evaluation Periods		Comparisons	
Performance Metrics	Current (Ending Date 12/31/2011)	Baseline (Ending Date 12/31/2011)	Rating of 75	Target	National Median
Energy Performance Rating	44	44	75	N/A	50
Energy Intensity					
Site (kBtu/ft²)	77	77	57	N/A	73
Source (kBtu/ft²)	149	149	111	N/A	142
Energy Cost					
\$/year	N/A	N/A	N/A	N/A	N/A
\$/ft²/year	N/A	N/A	N/A	N/A	N/A
Greenhouse Gas Emissions					
MtCO <sub>2</sub> e/year	345	345	256	N/A	328
kgCO <sub>2</sub> e/ft²/year	8	8	6	N/A	8

More than 50% of your building is defined as K-12 School. Please note that your rating accounts for all of the spaces listed. The National Median column presents energy performance data your building would have if your building had a median rating of 50.

Notes:

- o This attribute is optional.
- d A default value has been supplied by Portfolio Manager.



## STATEMENT OF ENERGY PERFORMANCE Great Meadows - Middle School

**Building ID: 3024756** 

For 12-month Period Ending: December 31, 20111

**Facility Owner** 

Date SEP becomes ineligible: N/A

N/A

Date SEP Generated: April 04, 2012

**Primary Contact for this Facility** 

**Facility** 

Great Meadows - Middle School

273 Route 46

Great Meadows, NJ 07838

Year Built: 1998

Gross Floor Area (ft2): 64,500

Energy Performance Rating<sup>2</sup> (1-100) 91

Site Energy Use Summary<sup>3</sup>

Electricity - Grid Purchase(kBtu) 1,563,919 Natural Gas - (kBtu)4 Total Energy (kBtu) 1,563,919

Energy Intensity<sup>4</sup>

Site (kBtu/ft²/yr) 48 Source (kBtu/ft²/yr) 105

Emissions (based on site energy use) Greenhouse Gas Emissions (MtCO2e/year) 332

**Electric Distribution Utility** 

Jersey Central Power & Light Co [FirstEnergy Corp]

**National Median Comparison** 

National Median Site EUI 79 National Median Source EUI 174 % Difference from National Median Source EUI -40% **Building Type** K-12 School Stamp of Certifying Professional

Based on the conditions observed at the time of my visit to this building, I certify that the information contained within this statement is accurate.

Meets Industry Standards<sup>5</sup> for Indoor Environmental Conditions:

Ventilation for Acceptable Indoor Air Quality N/A Acceptable Thermal Environmental Conditions N/A Adequate Illumination N/A Certifying Professional N/A

- 1. Application for the ENERGY STAR must be submitted to EPA within 4 months of the Period Ending date. Award of the ENERGY STAR is not final until approval is received from EPA.
- 2. The EPA Energy Performance Rating is based on total source energy. A rating of 75 is the minimum to be eligible for the ENERGY STAR.

- 2. The EFA Energy retromation rounding 15 based on the second state of the EFA Energy retromation annualized to a 12-month period.

  4. Values represent energy intensity, annualized to a 12-month period.

  5. Based on Meeting ASHRAE Standard 62 for ventilation for acceptable indoor air quality, ASHRAE Standard 55 for thermal comfort, and IESNA Lighting Handbook for lighting quality.

The government estimates the average time needed to fill out this form is 6 hours (includes the time for entering energy data, Licensed Professional facility inspection, and notarizing the SEP) and welcomes suggestions for reducing this level of effort. Send comments (referencing OMB control number) to the Director, Collection Strategies Division, U.S., EPA (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460.

## FOR YOUR RECORDS ONLY. DO NOT SUBMIT TO EPA.

Please keep this Facility Summary for your own records; do not submit it to EPA. Only the Statement of Energy Performance (SEP), Data Checklist and Letter of Agreement need to be submitted to EPA when applying for the ENERGY STAR.

Facility
Great Meadows - Middle School
273 Route 46
Great Meadows, NJ 07838

Facility Owner

Primary Contact for this Facility

### **General Information**

Great Meadows - Middle School			
Gross Floor Area Excluding Parking: (ft²)	64,500		
Year Built	1998		
For 12-month Evaluation Period Ending Date:	December 31, 2011		

**Facility Space Use Summary** 

Great Meadows - Middle School				
Space Type	K-12 School			
Gross Floor Area (ft2)	64,500			
Open Weekends?	No			
Number of PCs	170			
Number of walk-in refrigeration/freezer units	2			
Presence of cooking facilities	Yes			
Percent Cooled	100			
Percent Heated	100			
Months °	N/A			
High School?	No			
School District °	N/A			

**Energy Performance Comparison** 

	Evaluatio	Comparisons			
Performance Metrics	Current (Ending Date 12/31/2011)	Baseline (Ending Date 12/31/2011)	Rating of 75	Target	National Median
Energy Performance Rating	91	91	75	N/A	50
Energy Intensity					
Site (kBtu/ft²)	48	48	62	N/A	79
Source (kBtu/ft²)	105	105	136	N/A	174
Energy Cost					
\$/year	N/A	N/A	N/A	N/A	N/A
\$/ft²/year	N/A	N/A	N/A	N/A	N/A
Greenhouse Gas Emissions					
MtCO₂e/year	332	332	432	N/A	553
kgCO <sub>2</sub> e/ft²/year	5	5	7	N/A	8

More than 50% of your building is defined as K-12 School. Please note that your rating accounts for all of the spaces listed. The National Median column presents energy performance data your building would have if your building had a median rating of 50.

Notes:

- o This attribute is optional.
- d A default value has been supplied by Portfolio Manager.



510 Thornall Street, Suite 170 Edison, NJ 08837

> Tel: 732.590.0122 Fax: 732.590.0129

# FACILITIES TOTAL ANNUAL ENERGY USAGE

	Electri	Electric - Jersey Central Power & Light				
Buildings	Account Number	Annual Consumption kWh	Annual Cost	\$ / kWh		
Central Elementary	10 00 03 6106 96	276,360	\$40,402.00	\$0.146		
GM Middle School	10 00 03 6109 93	458,720	\$66,156.19	\$0.144		
Central Elementary	10 00 03 6110 82	2,040	\$401.32	\$0.197		
Liberty Elementary	10 00 03 8933 75	4,235	\$774.03	\$0.183		
Liberty Elementary	10 00 03 8934 58	391,800	\$56,924.59	\$0.145		
	TOTAL	1.133.155	\$164.658.13	\$0.145		

	Fuel Oil - Allied Oil, LLC						
Buildings	Account Number	Annual Consumption Gallons	Annual Cost	\$ / Gallon			
Central Elementary	433228	27,556	\$76,947.92	\$2.792			
Liberty Elementary	433229	15,000	\$41,150.71	\$2.743			
GM Middle School	433227	9,852	\$27,208.27	\$2.762			
	TOTAL	52,408	\$145,306.90	\$2.773			

\$309,965.03

#### GREAT MEADOWS SCHOOL DISTRICT

## FACILITIES TOTAL ANNUAL ENERGY USE

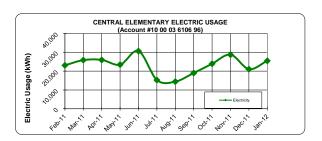
FACILITY	ELECTRIC (\$/kWh)	NATURAL GAS (\$/therm)	FUEL OIL (\$/gal)	ELECTRIC (kWh/Year)	NAT. GAS (therm/yr)	FUEL OIL (gal/yr)
Central Elementary	0.146	NA	2.792	278,400	NA	27,556
Liberty Elementary	0.145	NA	2.743	396,035	NA	15,000
GM Middle School	0.144	NA	2.762	458,720	NA	9,852

		E.U.I.								
Bldg	Bldg Size	Electric	Electric	Fuel Oil	Fuel Oil	Total	Site EUI			
	SqFt	kWh/yr	kbtu	gal/yr	kbtu	kbtu	kbtu/sqft			
Central Elementary	38,000	278,400	949,901	27,556	3,821,756	4,771,656	126			
Liberty Elementary	44,500	396,035	1,351,271	15,000	2,080,405	3,431,677	77			
GM Middle School	64,500	458,720	1,565,153	9,852	1,366,318	2,931,471	45			
			3.412		138.69					

#### FACILITIES TOTAL ANNUAL ENERGY USE

Facility Name Central Elementary
Company 281 Rt 46 Great Meadows
Account# 10 00 03 6106 96

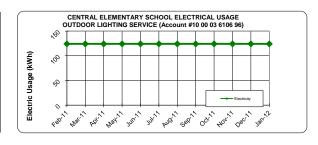
									Delivery	Supplier
Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Delivery Cost	Supplier Cost	\$/kWh	\$/kWh	\$/kWh
Electricity	kWh	1/8/2011	2/7/2011		23,040	\$2,532.10	\$1,345.63	\$0.168	\$0.110	\$0.05840
Electricity	kWh	2/8/2011	3/8/2011		25,800	\$2,835.42	\$1,293.13	\$0.160	\$0.110	\$0.05012
Electricity	kWh	3/9/2011	4/6/2011		25,920	\$2,720.30	\$1,140.91	\$0.149	\$0.105	\$0.04402
Electricity	kWh	4/7/2011	5/6/2011		23,400	\$2,155.84	\$1,074.16	\$0.138	\$0.092	\$0.04590
Electricity	kWh	5/7/2011	6/7/2011		30,600	\$2,819.18	\$1,449.54	\$0.140	\$0.092	\$0.04737
Electricity	kWh	6/8/2011	7/6/2011		15,240	\$1,404.06	\$1,015.79	\$0.159	\$0.092	\$0.06665
Electricity	kWh	7/7/2011	8/4/2011		14,400	\$1,326.67	\$744.93	\$0.144	\$0.092	\$0.05173
Electricity	kWh	8/5/2011	9/7/2011		18,960	\$1,746.78	\$999.07	\$0.145	\$0.092	\$0.05269
Electricity	kWh	9/8/2011	10/6/2011		23,880	\$2,200.06	\$1,166.45	\$0.141	\$0.092	\$0.04885
Electricity	kWh	10/7/2011	11/7/2011		28,680	\$2,642.29	\$1,201.93	\$0.134	\$0.092	\$0.04191
Electricity	kWh	11/8/2011	12/7/2011		21,000	\$1,934.73	\$1,081.94	\$0.144	\$0.092	
Electricity	kWh	12/8/2011	1/6/2012		25,440	\$2,343.79	\$1,227.30	\$0.140	\$0.092	\$0.04824
		TOTALS/AVE	RAGE		276,360	\$26,661.22	\$13,740.78	\$0.146	\$0.096	\$0.050



Facility Name Central Elementary
Company 281 Rt 46 Great Meadows
Account# 10 00 03 6106 96
Bill #1a

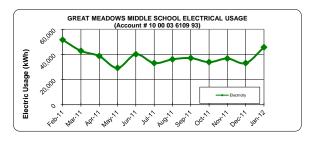
Outdoor Lighting Service

									Delivery	Supplier
Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Delivery Cost	Supplier Cost	\$/kWh	\$/kWh	\$/kWh
Electricity	kWh	1/8/2011	2/7/2011		124	\$37.48	\$11.04	\$0.39	\$0.302	\$0.08903
Electricity	kWh	2/8/2011	3/8/2011		124	\$37.48	\$11.04	\$0.39	\$0.302	\$0.08903
Electricity	kWh	3/9/2011	4/6/2011		124	\$37.48	\$11.04	\$0.39	\$0.302	\$0.08903
Electricity	kWh	4/7/2011	5/6/2011		124	\$37.48	\$11.04	\$0.39	\$0.302	\$0.08903
Electricity	kWh	5/7/2011	6/7/2011		124	\$37.48	\$11.04	\$0.39	\$0.302	\$0.08903
Electricity	kWh	6/8/2011	7/6/2011		124	\$37.48	\$11.04	\$0.39	\$0.302	\$0.08903
Electricity	kWh	7/7/2011	8/4/2011		124	\$37.48	\$11.04	\$0.39	\$0.302	\$0.08903
Electricity	kWh	8/5/2011	9/7/2011		124	\$37.48	\$11.04	\$0.39	\$0.302	\$0.08903
Electricity	kWh	9/8/2011	10/6/2011		124	\$37.48	\$11.04	\$0.39	\$0.302	\$0.08903
Electricity	kWh	10/7/2011	11/7/2011		124	\$37.48	\$11.04	\$0.39	\$0.302	\$0.08903
Electricity	kWh	11/8/2011	12/7/2011		124	\$37.48	\$11.04	\$0.39	\$0.302	
Electricity	kWh	12/8/2011	1/6/2012		124	\$37.48	\$11.04	\$0.39	\$0.302	\$0.08903
		TOTALS/AVERAGE			1,488	\$449.76	\$132.48	\$0.391	\$0.302	\$0.089



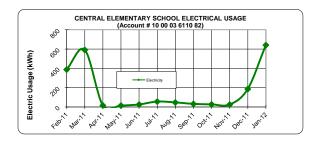
Facility Name GM Middle School Rt 46 Great Meadows Account# 10 00 03 6109 93

									Delivery	Supplier
Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Delivery Cost	Supplier Cost	\$/kWh	\$/kWh	\$/kWh
Electricity	kWh	1/8/2011	2/7/2011		51,680	\$5,679.63	\$2,753.00	\$0.16	\$0.110	\$0.0533
Electricity	kWh	2/8/2011	3/8/2011		42,880	\$4,712.51	\$2,204.99	\$0.16	\$0.110	\$0.0514
Electricity	kWh	3/9/2011	4/6/2011		38,720	\$4,063.66	\$1,798.94	\$0.15	\$0.105	\$0.0465
Electricity	kWh	4/7/2011	5/6/2011		29,280	\$2,697.57	\$1,369.90	\$0.14	\$0.092	\$0.0468
Electricity	kWh	5/7/2011	6/7/2011		40,160	\$3,699.94	\$1,816.27	\$0.14	\$0.092	\$0.0452
Electricity	kWh	6/8/2011	7/6/2011		33,120	\$3,051.35	\$1,716.57	\$0.14	\$0.092	\$0.0518
Electricity	kWh	7/7/2011	8/4/2011		36,160	\$3,331.42	\$1,477.69	\$0.13	\$0.092	\$0.0409
Electricity	kWh	8/5/2011	9/7/2011		37,120	\$3,419.87	\$1,649.54	\$0.14	\$0.092	\$0.0444
Electricity	kWh	9/8/2011	10/6/2011		33,920	\$3,125.05	\$1,565.52	\$0.14	\$0.092	\$0.0462
Electricity	kWh	10/7/2011	11/7/2011		36,800	\$3,390.38	\$1,682.25	\$0.14	\$0.092	\$0.0457
Electricity	kWh	11/8/2011	12/7/2011		33,120		\$1,602.25	\$0.14	\$0.092	
Electricity	kWh	12/8/2011	1/6/2012		45,760	\$4,215.87	\$2,080.67	\$0.14	\$0.092	\$0.0455
		TOTAL S/AV	DAGE		459 720	\$44.439.60	¢21 717 50	¢n 144	\$0.097	\$0 047



Facility Name Central Elementary
Company 281 Rt 46 Great Meadows
Account# 10 00 03 6110 82
Bill #3

									Delivery	Supplier
Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Delivery Cost	Supplier Cost	\$/kWh	\$/kWh	\$/kWh
Electricity	kWh	1/8/2011	2/7/2011		387	\$40.62	\$35.71	\$0.20	\$0.105	\$0.0923
Electricity	kWh	2/8/2011	3/8/2011		591	\$62.03	\$51.42	\$0.19	\$0.105	\$0.0870
Electricity	kWh	3/9/2011	4/6/2011		15	\$1.57	\$4.38	\$0.40	\$0.105	\$0.2920
Electricity	kWh	4/7/2011	5/6/2011		14	\$1.29	\$4.30	\$0.40	\$0.092	\$0.3071
Electricity	kWh	5/7/2011	6/7/2011		25	\$2.30	\$5.24	\$0.30	\$0.092	\$0.2096
Electricity	kWh	6/8/2011	7/6/2011		55	\$5.07	\$7.64	\$0.23	\$0.092	\$0.1389
Electricity	kWh	7/7/2011	8/4/2011		46	\$4.24	\$6.92	\$0.24	\$0.092	\$0.1504
Electricity	kWh	8/5/2011	9/7/2011		31	\$2.86	\$5.72	\$0.28	\$0.092	\$0.1845
Electricity	kWh	9/8/2011	10/6/2011		26	\$2.40	\$5.21	\$0.29	\$0.092	\$0.2004
Electricity	kWh	10/7/2011	11/7/2011		24	\$2.24	\$5.06	\$0.30	\$0.093	\$0.2108
Electricity	kWh	11/8/2011	12/7/2011		185	\$17.04	\$17.26	\$0.19	\$0.092	\$0.0933
Electricity	kWh	12/8/2011	1/6/2012		641	\$59.06	\$51.74	\$0.17	\$0.092	\$0.0807
		TOTALS/AVE	RAGE		2,040	\$200.72	\$200.60	\$0.197	\$0.098	\$0.098

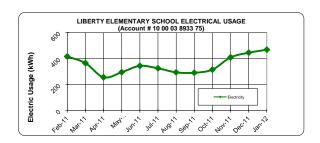


#### FACILITIES TOTAL ANNUAL ENERGY USE

Facility Name

Liberty Elementary Mountain Lake Rd, Great Meadows Company Account# 10 00 03 8933 75

									Delivery	Supplier
Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Delivery Cost	Supplier Cost	\$/kWh	\$/kWh	\$/kWh
Electricity	kWh	1/8/2011	2/7/2011		417	\$43.76	\$38.22	\$0.20	\$0.105	\$0.0917
Electricity	kWh	2/8/2011	3/8/2011		366	\$38.41	\$33.63	\$0.20	\$0.105	\$0.0919
Electricity	kWh	3/9/2011	4/6/2011		257	\$26.97	\$22.60	\$0.19	\$0.105	\$0.0879
Electricity	kWh	4/7/2011	5/6/2011		296	\$27.27	\$25.54	\$0.18	\$0.092	\$0.0863
Electricity	kWh	5/7/2011	6/7/2011		345	\$31.78	\$30.82	\$0.18	\$0.092	\$0.0893
Electricity	kWh	6/8/2011	7/6/2011		326	\$30.03	\$29.30	\$0.18	\$0.092	\$0.0899
Electricity	kWh	7/7/2011	8/4/2011		295	\$27.18	\$26.82	\$0.18	\$0.092	\$0.0909
Electricity	kWh	8/5/2011	9/7/2011		292	\$26.90	\$26.58	\$0.18	\$0.092	\$0.0910
Electricity	kWh	9/8/2011	10/6/2011		316	\$29.11	\$27.05	\$0.18	\$0.092	\$0.0856
Electricity	kWh	10/7/2011	11/7/2011		410	\$37.77	\$34.12	\$0.18	\$0.092	\$0.0832
Electricity	kWh	11/8/2011	12/7/2011		446	\$41.09	\$37.07	\$0.18	\$0.092	\$0.0831
Electricity	kWh	12/8/2011	1/6/2012		469	\$43.21	\$38.80	\$0.17	\$0.092	\$0.0827
	TOTALS/AVERAGE				4,235	\$403.48	\$370.55	\$0.183	\$0.095	\$0.087

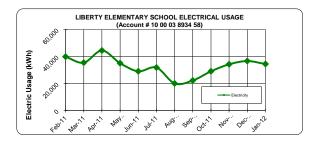


Facility Name

Liberty Elementary Mountain Lake Rd Board of Ed, Great Meadows Company

Account# 10 00 03 8934 58

									Delivery	Supplier
Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Delivery Cost	Supplier Cost	\$/kWh	\$/kWh	\$/kWh
Electricity	kWh	1/8/2011	2/7/2011		39,800	\$4,374.02	\$2,029.71	\$0.16	\$0.110	\$0.0510
Electricity	kWh	2/8/2011	3/8/2011		35,400	\$3,715.23	\$1,893.58	\$0.16	\$0.105	\$0.0535
Electricity	kWh	3/9/2011	4/6/2011		44,400	\$4,659.78	\$1,885.66	\$0.15	\$0.105	\$0.0425
Electricity	kWh	4/7/2011	5/6/2011		35,000	\$3,224.55	\$1,656.17	\$0.14	\$0.092	\$0.0473
Electricity	kWh	5/7/2011	6/7/2011		29,000	\$2,671.77	\$1,468.40	\$0.14	\$0.092	\$0.0506
Electricity	kWh	6/8/2011	7/6/2011		31,800	\$2,929.73	\$1,587.44	\$0.14	\$0.092	\$0.0499
Electricity	kWh	7/7/2011	8/4/2011		20,000	\$1,842.60	\$919.06	\$0.14	\$0.092	\$0.0460
Electricity	kWh	8/5/2011	9/7/2011		22,200	\$2,045.29	\$1,243.88	\$0.15	\$0.092	\$0.0560
Electricity	kWh	9/8/2011	10/6/2011		29,000	\$2,671.77	\$1,535.85	\$0.15	\$0.092	\$0.0530
Electricity	kWh	10/7/2011	11/7/2011		34,200	\$3,150.85	\$1,595.85	\$0.14	\$0.092	\$0.0467
Electricity	kWh	11/8/2011	12/7/2011		36,600	\$3,371.96	\$1,612.46	\$0.14	\$0.092	\$0.0441
Electricity	kWh	12/8/2011	1/6/2012		34,400	\$3,169.27	\$1,669.71	\$0.14	\$0.092	\$0.0485
		TOTALS/AVE	TOTALS/AVERAGE			\$37,826.82	\$19,097.77	\$0.145	\$0.097	\$0.049

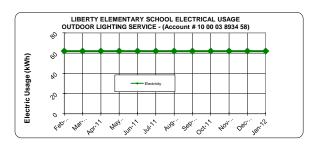


Facility Name

Liberty Elementary Mountain Lake Rd Board of Ed, Great Meadows 10 00 03 8934 58 Company

Account# Bill #5a

									Delivery	Supplier
Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Delivery Cost	Supplier Cost	\$/kWh	\$/kWh	\$/kWh
Electricity	kWh	1/8/2011	2/7/2011		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
Electricity	kWh	2/8/2011	3/8/2011		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
Electricity	kWh	3/9/2011	4/6/2011		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
Electricity	kWh	4/7/2011	5/6/2011		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
Electricity	kWh	5/7/2011	6/7/2011		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
Electricity	kWh	6/8/2011	7/6/2011		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
Electricity	kWh	7/7/2011	8/4/2011		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
Electricity	kWh	8/5/2011	9/7/2011		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
Electricity	kWh	9/8/2011	10/6/2011		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
Electricity	kWh	10/7/2011	11/7/2011		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
Electricity	kWh	11/8/2011	12/7/2011		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
Electricity	kWh	12/8/2011	1/6/2012		62	\$18.71	\$5.53	\$0.39	\$0.302	\$0.0892
	TOTALS/AVERAGE				744	\$224.52	\$66.36	\$0.391	\$0.302	\$0.089



#### FACILITIES TOTAL ANNUAL ENERGY USE

Facility Name Central Elementary
Company Allied Oil
Account# 433228
Bill #6

Energy Type	Energy Unit	End Date	Gallons	Cost	\$/gallon
Fuel Oil	Gallon	10/29/2010	5014.7	\$12,022.24	2.397
Fuel Oil	Gallon	12/8/2010	4128.3	\$10,793.03	2.614
Fuel Oil	Gallon	12/13/2010	927.4	\$2,403.36	2.592
Fuel Oil	Gallon	1/4/2011	5008.0	\$13,701.89	2.736
Fuel Oil	Gallon	1/31/2011	5003.7	\$14,413.16	2.881
Fuel Oil	Gallon	2/28/2011	4720.0	\$14,827.88	3.142
Fuel Oil	Gallon	3/29/2011	2754.0	\$8,786.36	3.190

TOTALS/AVERAGE	27,556	\$76,947.92	\$2.792

Facility Name Company Allied Oil
Account# 433229

Bill #7

Energy Type	Energy Unit	End Date	Gallons	Cost	\$/gallon
Fuel Oil	Gallon	11/4/2010	5000.0	\$12,330.00	2.466
Fuel Oil	Gallon	1/4/2011	5000.0	\$13,680.00	2.736
Fuel Oil	Gallon	2/15/2011	5000.4	\$15,140.71	3.028

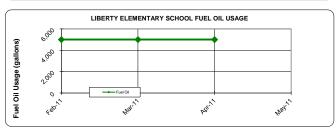
TOTALS/AVERAGE	15,000	\$41,150.71	\$2.743

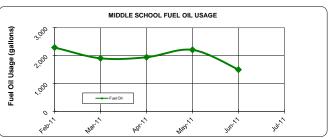
TOTALS/AVERAGE 9,852 \$27,208.27 \$2.762

Facility Name Company Account# 433227

Energy Type	Energy Unit	End Date	Gallons	Cost	\$/gallon
Fuel Oil	Gallon	9/10/2010	2292.6	\$5,088.20	2.219
Fuel Oil	Gallon	12/14/2010	1905.9	\$4,967.73	2.607
Fuel Oil	Gallon	1/14/2011	1944.3	\$5,446.96	2.802
Fuel Oil	Gallon	2/15/2011	2208.8	\$6,688.03	3.028
Fuel Oil	Gallon	4/6/2011	1500.0	\$5,017.35	3.345

		CE	NTRAL EL	EMENTAR	у ѕснооі	FUEL OIL	USAGE		
(su	e'aa 1			•					
Fuel Oil Usage (gallons)	*000							•	
Oil Us	2,000		V		-	Fuel Oil			
Fue	480.	Mar.	PQt.	. 4/5	And	July 1	Aus	o, ee	5.,







510 Thornall Street, Suite 170 Edison, NJ 08837

> Tel: 732.590.0122 Fax: 732.590.0129

# EQUIPMENT & LIGHTING INVENTORY LIST

#### CENTRAL ELEMENTARY SCHOOL

#### EQUIPMENT LIST

						Air Handling	Units - AH	Us						
Bldg	Tag#	Location	Area Serving	Equipment	Mfg	Model	Quantity	Cooling Technology	Supply Air CFM	Fan HP	Cooling Capacity (Tons)	Heating Technology	Age	Estimated Service Life
Central School	UV-Steam	Classrooms	Orig & 1960	Unit Ventilator	NA	NA	15	None	1000	NA	NA	Steam	>25	15
Central School	UV-Steam	Gymnasium	Gymnasium	Unit Ventilator	NA	NA	2	None	NA	NA	NA	Steam	>25	15
Central School	UV-HW	Classrooms	1968 & 1988	Unit Ventilator	NA	NA	10	None	NA	NA	NA	Hot Water	24	15
Central School	UV-HW	Cafeteria	Cafeteria	Unit Ventilator	NA	NA	4	None	NA	NA	NA	Hot Water	24	15
Central School	AH-1	Mechanical Closet	Main Office	Air Handling Unit	Trane	B1V718A100E0	1	DX	NA	1/4	NA	Hot Water	25	15
Central School	AH-2	Mechanical Closet	Nurses Area	Air Handling Unit	Trane	B1V718A100E1	1	DX	NA	NA	NA	Hot Water	25	15
Central School	AC-	2nd Floor Class & Comp Rm	2nd Floor Class & Comp Rm	Ductless Split AC	Fujitsu	NA	6	DX	NA	NA	NA	NONE	NA	15
Central School	WAC-	Various	Various	Window AC Units	Various	Various	5	DX	NA	NA	NA	NONE	NA	10
Central School	EF-	Roof	Bldg Exhaust	Exhaust Fans	Various	Various	26	NA	NA	NA	NA	NONE	NA	25
Central School	ACCU-	Roof	AH-1& AH-2	Air Cooled Condensing Unit	NA	NA	2	NA	NA	NA	2	NONE	25	20

Boilers												
Bldg	Tag#	Location	Area Serving	Equipment	Mfg	Model	Quantity	Fuel	SV Capacity (Lbs/Hr)	Object Capacity (Lbs/Hr)	Age	Estimated Service Life
Central School	B-1	MER	Bldg	Steam Boiler	Weil McLain	NA	1	Fuel Oil	4,275	3,792	51	30
Central School	B-2	MER	Bldg	Steam Boiler	HB Smith	450 Mills	1	Fuel Oil	4,350	3,490	44	30

Heat Exchangers										
Bldg	Tag#	Location	Area Serving	Equipment	Input	Output	Quantity			
Central School	HX-1	MER	1968 Wing	Shell & Tube	Steam	Hot Water	1			
Central School	HX-2	MER	1988 Wing	Shell & Tube	Steam	Hot Water	1			

	Heating Hot Water Pumps											
Bldg	Tag#	Location	Area Serving	Equipment	Motor Mfg	Motor Model	Quantity	GPM	Head ft	HP	VFD?	Estimated Service Life
Central School	P-1,2	MER	1968 Wing	HW Pumps	Bell & Gossett	M98559	2	NA	NA	2	NO	20
Central School	P-3,4	MER	1988 Wing	HW Pumps	NA	NA	2	NA	NA	1	NO	10

١	Domestic Hot Water Heaters											
	Bldg	Tag#	Location	Area Serving	Equipment	Quantity	Mfg	Model	Fuel	Gal	Recovery (GPH)	Estimated Service Life
	Central School	DHW-1	MER	Bldg	DHW Heater	1	Bock Water Heaters, Inc.	71E	Fuel Oil	68	177	15

	Other Mechanical Equipment												
	Bldg	Tag#	Location	Area Serving	Equipment	Quantity	Mfg	Model	Fuel	Input Btuh	Output Btuh	Age	Notes
[	Central School	Comp-1	MER	Pneumatics	Air Compressor	1	Speedaire	NA	Elect	NA	NA	NA	3/4 HP Motor

	Kitchen Eq	uipment Inventor	ry List	
Bldg	EQUIPMENT	MODEL#	MANUFACTURE R	QUANTITY
Central School	Snack Machine	NA	NA	1
Central School	Soda Machine	NA	NA	1
Central School	Elect. Oven/Stove	NA	Vulcan	1
Central School	Stacked Oven	NA	Blodgett	2
Central School	3 Door Refrigerator	NA	Traulsen	1
Central School	Warming Rack	NA	MasterBilt	1
Central School	Booster Heater	NA	Hatco	1
Central School	Reach In Cooler	SM34N	Beverage Air	1
Central School	Reach In Freezer	R10S100	ATH	1
Central School	Walk-in Cooler	NA	NA	1

#### GREAT MEADOWS REGIONAL SCHOOL DISTRICT

#### LIBERTY ELEMENTARY SCHOOL

#### **EQUIPMENT LIST**

	Air Handling Units - AHUs												
Bldg	Tag#	Location	Area Serving	Equipment	Mfg	Model	Quantity	Cooling Technology	Supply Air CFM	Heating Technology	Age	Estimated Service Life	
Liberty School	AH-1	MER	Office Areas	Air Handling Unit	NA	NA	1	DX	NA	HHW	25	15	
Liberty School	UV-Ceiling	Classrooms	100 Wing	Unit Ventilator	Nesbit	NA	10	None	NA	HHW	NA	15	
Liberty School	UV-Ceiling	Nurse Station	Nurse Station	Unit Ventilator	Nesbit	NA	1	DX	NA	HHW	NA	15	
Liberty School	UV-Ceiling	Classrooms	Old Library	Unit Ventilator	Nesbit	NA	2	DX	NA	HHW	NA	15	
Liberty School	UV-Ceiling	Multi-Purpose Room	Multi-Purpose Room	Unit Ventilator	Nesbit	NA	4	None	3500 / 1800 OA	HHW	NA	15	
Liberty School	UV-Ceiling	Classrooms	200 Wing	Unit Ventilator	Nesbit	NA	6	None	NA	HHW	NA	15	
Liberty School	UV-Ceiling	Classrooms	New Library	Unit Ventilator	Nesbit	NA	2	DX	NA	HHW	NA	15	
Liberty School	UV-Floor	Classrooms	300 Wing	Unit Ventilator	Nesbit	NA	4	None	NA	HHW	NA	15	
Liberty School	ACCU-	Roof	Library Uvs	Air Cooled Condensing Unit	Trane	BTD	4	DX	NA	NA	25	20	
Liberty School	ACCU-	Roof	AH-1	Air Cooled Condensing Unit	Trane	BTD	1	DX	NA	NA	25	20	
Liberty School	ACCU-	Roof	Nurse Station UV	Air Cooled Condensing Unit	Trane	BTD	1	DX	NA	NA	25	20	
Liberty School	EF-	Roof	Bldg Exhaust	Exhaust Fans	Various	Various	30	NA	NA	NA	NA	25	

	Boilers												
Bldg	Tag#	Location	Area Serving	Equipment	Mfg	Model	Quantity	Fuel	Output (MBH)	Age	Estimated Service Life		
Liberty School	B-1	MER	Bldg	Hot Water Boiler	Weil McLain	H-894WF	1	Fuel Oil - 2	2,028	39	35		
Liberty School	B-2	MER	Bldg	Hot Water Boiler	Weil McLain	BI-988SW	1	Fuel Oil - 2	2,900	25	35		

	Heating Hot Water Pumps													
Bldg	Tag#	Location	Area Serving	Equipment	Motor Mfg	Motor Model	Quantity	GPM	Head ft	HP	Efficiency	Motor RPM	VFD?	Estimated Service Life
Liberty School	P-1,2	MER	100 Wing	HW Pump	Century	SC-213-FGA-6	2	NA	NA	3	84.0%	1740	No	20
Liberty School	P-3,4	MER	200 Wing	HW Pump	Marathon	SVE56T17	2	NA	NA	3/4	NA	1725	No	10
Liberty School	P-5,6	MER	300 Wing	HW Pump	Baldor	34F12	2	NA	NA	3/4	NA	3450	No	10

	Domestic Hot Water Heaters												
Bldg	Tag#	Location	Area Serving	Equipment	Quantity	Mfg	Model	Fuel	Gal	Age	Estimated Service Life		
Liberty School	DHW-1	MER	Bldg	DHW Heater	1	Bock	73E	Fuel Oil - 2		NA	15		

Other Mechanical Equipment											
Bldg	Tag#	Location	Area Serving	Equipment	Quantity	Notes					
Liberty School	Comp-1	MER	Pneumatics	Air Compressor	1	1/2 HP motor					

#### GREAT MEADOWS REGIONAL SCHOOL DISTRICT

#### GREAT MEADOWS MIDDLE SCHOOL

#### EQUIPMENT LIST

	Air Handling Units - AHUs																	
Bldg	Tag#	Location	Area Serving	Equipment	Mfg	Model	Quantity	Cooling Technology	Supply Air CFM	Static Pressure w.c.	Fan HP	Cooling Capacity (MBH)	Heating Technology	Heating Capacity (MBH)	GPM	Age	Estimated Service Life	Efficiency
Middle School	UV-1	Various	Classrooms	WSHP Unit Vent	AAF	AR-24RC	8	WSHP	800	NA	1/8	26.2	Water Source/ Elect.	19	6	14	19	14 EER
Middle School	UV-2	Various	Classrooms	WSHP Unit Vent	AAF	AR-40RC	16	WSHP	1000	NA	1/8	41.3	Water Source/ Elect.	33	10	14	19	14.6 EER
Middle School	UV-3	Various	Classrooms	WSHP Unit Vent	AAF	AR-30RC	4	WSHP	800	NA	1/8	30.1	Water Source/ Elect.	23	7.5	14	19	14.3 EER
Middle School	UV-4	Various	Classrooms	WSHP Unit Vent	AAF	AR-48RC	8	WSHP	1300	NA	1/4	47.3	Water Source/ Elect.	35	12	14	19	13.8 EER
Middle School	UV-5	Various	Classrooms	WSHP Unit Vent	AAF	AR-54RC	2	WSHP	1300	NA	1/4	53.3	Water Source/ Elect.	41	10	14	19	13.4 EER
Middle School	RHP-1,2	Roof	Gym	Rooftop Unit	ClimateMaste r	RE15	2	WSHP	5400	1	3	224	Water Source/ Elect.	228	36	14	19	13 EER
Middle School	RHP-3	Roof	Stage	Rooftop Unit	ClimateMaste r	RE05	1	WSHP	2100	0.5	1 1/2	59	Water Source/ Elect.	72.8	12	14	19	13 EER
Middle School	HRU-1	Roof	Café	Heat Recovery Unit	HeatEx	5000-1C	1	NA	6365	0.375	5	NA	NA	NA	NA	14	19	NA
Middle School	HRU-2	Roof	Gym	Heat Recovery Unit	HeatEx	RHXC-1C-27	1	NA	22345	0.375	15	NA	NA	NA	NA	14	19	NA
Middle School	HRU-3	Roof	Child Study	Heat Recovery Unit	HeatEx	5000-1B	1	NA	2530	0.5	1 1/2	NA	NA	NA	NA	14	19	NA
Middle School	MAU-1	NA	Kitchen Hood	Make Up Air Unit	ICE	BMA-E	1	NONE	3400	1	1 1/2	NA	Electric	150	NA	14	15	NA
Middle School	EF-	Roof	Bldg Exhaust	Exhaust Fans	Various	Various	13	NA	NA	NA	NA	NA	NONE	NA	NA	14	25	NA
Middle School	HP-	Various	Café , Corridors, Offices	Water Source Heat Pump	McQuay	ccw	16	WSHP	Various	NA	NA	Various	Water Source/ Elect.	NA	NA	14	19	NA

	Boilers												
Bldg	Tag#	Location	Area Serving	Equipment	Mfg	Model	Quantity	Fuel	Input (MBH)	Output (MBH)	Age	Efficiency	Estimated Service Life
Middle School	B-1	MER	Building	Water Tube Boiler	Cleaver Brooks	FLX-250	1	Fuel Oil-2	2,500	2,000	15	80%	25

Heat Exchangers												
Bldg	Tag#	Location	Area Serving	Equipment	Input	Output	Quantity					
Middle School	HEX-1	MER	CT-1	Water to Water Exchanger	NA	NA	1					

I	Cooling Tower											
[	Bldg	Tag#	Location	Area Serving	Equipment	Mfg	Quantity	Model	Tons	# Cells	Fan HP	VFD?
I	Middle School	CT-1	On Grade	HEX-1	Cooling Tower	Marley	1	NC2011	200	1	7.5	NO

	Water Pumps													
Bldg	Tag#	Location	Area Serving	Equipment	Motor Mfg	Motor Model	Quantity	GPM	Head ft	HP	Efficiency	Motor RPM	VFD?	Estimated Service Life
Middle School	P-1, 2	MER	Water Source Loop	End Suction	Baldor	324T	2	630	135	40	90.2%	1760	Yes	20
Middle School	P-3,4	CLG MER	Cooling Tower	End Suction	Baldor	215T	2	500	55	10	85.5%	1725	No	20
Middle School	P-5	MER	Boiler	Circulator	Emerson	P63CJ	1	150	20	1 1/2	NA	1725	No	10

	Domestic Hot Water Heaters												
Bldg	Tag#	Location	Area Serving	Equipment	Quantity	Mfg	Model	Fuel	Input (gph)	Gross Output	Age	Estimated Service Life	
Middle School	DHW-1	MER	Building	Domestic HW	1	Weil McLain	A/B- WGO-9	Fuel Oil	2.55	295000	10	15	

	Kitchen Equi	pment Inventory	List	
Bldg	EQUIPMENT	MODEL#	MANUFACTU RER	QUANTITY
Middle School	Refrigerator	NA	TRUE	1
Middle School	Reach In Cooler	NA	AHT	1
Middle School	Reach in Refrigerator	780	Powers	1
Middle School	Double Door Refrigerator/ Warming Cabinet	NA	Victory	1
Middle School	Booster Heater	S-36	Hatco	1
Middle School	Stacked Oven	NA	Blodgett	2
Middle School	Elect. Oven/Stove	NA	Vulcan	1
Middle School	Walk-in Cooler	Duracool	Hartford	1
Middle School	Walk-in Freezer	Duracool	Hartford	1
Middle School	Snack Machine	NA	NA	2
Middle School	Soda Machine	NA	NA	2



## LIGHTING RETROFIT SUMMARY FOR GREAT MEADOWS CENTRAL ELEMENTARY SCHOOL

BUILDING INFO	RMATION		EXISTING	FIXTUR	ES	P	ROPOS	ED FIXTU	RES			SAV	/INGS					FINANCIA		
BUILDING	SQ. FT.	PRE TOTAL FIXT. QTY	PRE TOTAL FIXT. WATTS	PRE ANNUAL KWH CONSUM PTION	PRE WATTS / SQ. FT	POST TOTAL FIXT. QTY	POST TOTAL FIXT. WATTS	POST ANNUAL KWH CONSUMP TION	POST WATTS / SQ. FT	WATTS SAVED	ANNUAL KWH SAVED	ANNUAL KWH SAVED WITH SENSORS	ANNUAL SAVINGS \$ FIXT.	ANNUAL SAVINGS \$ SENSORS	ANNUAL SAVINGS \$ TOTAL	CO2 REDUCTION (TONS)	NJ SMART START REBATE \$	INSTALLED COST \$ (WITH MARKUP)	SIMPLE PAYBACK YEARS	SIMPLE PAYBACK YEARS (W/O REBATES)
GREAT MEADOWS CENTRAL ELEMENTARY SCHOOL	38,000	533	60,652	124,496	1.60	533	32,028	51,338.8	0.84	28,624	73,158	15,310	\$10,681	\$2,235	\$12,916	24.2	\$9,080	\$62,424	4.1	4.8

15%	PERCENTAGE OF REBATES IN TOTAL INSTALLED COST
41%	PERCENTAGE OF CONSUMPTION COMPARE TO EXISTING STATE
45%	EXISTING PERCENTAGE OF LIGHTING ENERGY CONSUMPTION OF THE WHOLE BUILDING
18%	PROPOSED PERCENTAGE OF LIGHTING ENERGY CONSUMPTION OF THE WHOLE BUILDING



LIGHTING UPGRADE PROJECT CUSTOMER: GREAT MEADOWS SCHOOLS BLDG. CODE: FACILITY SQ. FT. DATE OF AUDIT:

LINE x LINE DETAIL FACILITY: GREAT MEADOWS CENTRAL ELEMENTARY SCHOOL GW-CENTR-ES 38,000 2/13/2012

Doi	ne-Tech, Inc		ELEMENTARY 3C					ELEMENTARY GOTIOGE																						
	:	SPACE DESCRIPTION	EX	ISTING F	FIXTURES						REPLACE	MENT FIXT	TURES								ENEF	RGY ANALY	/SIS			COST ANALYSIS			REBATES	
					PRE	PRE	DEFAULT ANNUAL		PRE			POST			POST	ANNUAL	ANII	OST NUAL	WATTS	TOTAL		ANNUAL	ANNUAL	TOTAL ANNUAL\$ SAVINGS / LINE	MATERIAL	TOTAL	TOTAL			TOTAL
LINI	PRINT NUMBER	SPACE DESCRIPTION	PRE FIXTURE DESCRIPTION	PRE FIXT.	WATTS	TOTAL WATTS	HOURS	PRE ANNUAL	AVERAGE FOOT	PROPOSED FIXTURE DESCRIPTION	POST FIXT.	WATTS	ANNUAL HOURS	SENSOR TYPE	TOTAL WATTS	HOURS	ANNUAL		SAVED	WATTS SAVED	ANNUAL HOURS	KWH SAVED	SAVED -	(INCLUDING SENSORS)	COST	LABOR COST	COST	REBATE /	REBATE /	REABATE
				QTY	FIXT.	/ LINE	2000	KWH	- CANDELS		QTY	FIXT.	SAVED		/ LINE	2000	KWH 0		FIXT.	/ LINE	SAVED	FROM FIXT.	OCC	\$0.146	LINE	PER LINE	REBATES	FIXT.	SENSOR	LINE
1	1FL - KTN	KITCHEN	2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1)	7	73	511	2000	1022	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	7	42			294	2000		588	31	217	0	434	0	\$63.36	\$501	\$182	\$613	\$10	\$0	\$70
2	1FL - KTN	RESTROOM IN KITCHEN	Energy Efficient Magnetic Ballast	1	120	120	360	43	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	1	30			30	360		11	90	90	0	32	0	\$4.73	\$13	\$0	\$22	\$0	\$0	\$0
			Incandescent Fixture w/ (2) 60w Incandescent Lamps	'	60	180	2000	360	0	Relamp w/ (2) 15 watt Compact Fluorescent Screw-In Incandescent Fixture w/ 15w Screw-In Compact Fluorescent	1	15			45			90		135	0	270	0	\$39.42	\$20	\$9		\$0	\$0	\$0 ***
3	1FL - KTN	KITCHEN HOODS	Incandescent Fixture w/ (1) 60w Incandescent Lamp						0	Lamp Incandescent Fixture w/ 15w Screw-In Compact Fluorescent	3					2000			45		0		0	•		\$26	\$46		**	\$0
4	1FL - KTN	STORAGE IN KITCHEN	Incandescent Fixture w/ (1) 60w Incandescent Lamp 4' Strip Fluorescent w/ (1) F40T12/40w Lamp & (1)	1	60	60	360	22	0	Lamp Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-	1	15			15	360	5	5	45	45	0	16	U	\$2.37	\$7	\$9	\$15	\$0	\$0	\$0
5	1FL - KTN	STORAGE IN KITCHEN	Standard Magnetic Ballast 8' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2)	1	57	57	360	21	0	Power High Efficiency Ballast Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-	1	22			22	360	8	8	35	35	0	13	0	\$1.84	\$31	\$17	\$39	\$10	\$0	\$10
6	1FL - CAF	CAFETERIA	Energy Efficient Magnetic Ballasts  4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1)	21	146	3066	2000	6132	38	Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	21	84	400	Ceiling	1764	1600		822	62	1302	400	3,310	706	\$586.22	\$1,472	\$572	\$1,799	\$10	\$35	\$245
7	1FL - CAF	CAFETERIA	Energy Efficient Magnetic Ballast	3	73	219	2000	438	0	Power High Efficiency Ballast	3	42			126	2000	252 2	252	31	93	0	186	0	\$27.16	\$117	\$78	\$165	\$10	\$0	\$30
8	1FL - BRR	BOY'S RESTROOM BY KITCHEN	1'x4' Recessed Troffer w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	2	42	84	3000	252	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low- Power High Efficiency Ballast	2	22			44	3000	132 1	132	20	40	0	120	0	\$17.52	\$62	\$52	\$94	\$10	\$0	\$20
9	1FL - BRR	BOY'S RESTROOM BY KITCHEN	1'x8' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	73	73	3000	219	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power HE Ballast, Silver Reflector Kit	1	42			42	3000	126 1	26	31	31	0	93	0	\$13.58	\$65	\$35	\$90	\$10	\$0	\$10
10	1FL - JC	CUSTODIAN'S STOERAGE IN BOY'S RESTROOM	Incandescent Fixture w/ (1) 75w Incandescent Lamp	1	75	75	360	27	0	Relamp w/ (1) 19 watt Compact Fluorescent Screw-In	1	19			19	360	7	7	56	56	0	20	0	\$2.94	\$10	\$9	\$19	\$0	\$0	\$0
11	1FL - BRR	BOY'S RESTROOM BY KITCHEN	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	4	42	168	3000	504	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low- Power High Efficiency Ballast	4	22			88	3000	264 2	264	20	80	0	240	0	\$35.04	\$125	\$69	\$154	\$10	\$0	\$40
12	1FL - GRR	GIRL'S RESTROOM BY KITCHEN	1'x4' Recessed Troffer w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	4	42	168	3000	504	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low- Power High Efficiency Ballast	4	22			88	3000	264 2	264	20	80	0	240	0	\$35.04	\$125	\$104	\$189	\$10	\$0	\$40
13	1FL - GRR	GIRL'S RESTROOM BY KITCHEN	4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	4	42	168	3000	504	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low- Power High Efficiency Ballast	4	22			88	3000	264 2	264	20	80	0	240	0	\$35.04	\$125	\$69	\$154	\$10	\$0	\$40
14	1FL - 119	SMALL CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	6	146	876	2000	1752	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	6	42			252	2000	504 5	504	104	624	0	1,248	0	\$182.21	\$429	\$156	\$465	\$20	\$0	\$120
15	1FL - 119A- RR	RESTROOM IN CLASS	Incandescent Fixture w/ (2) 60w Incandescent Lamps	1	120	120	360	43	0	Relamp w/ (2) 15 watt Compact Fluorescent Screw-In	1	30			30	360	11	11	90	90	0	32	0	\$4.73	\$13	\$9	\$22	\$0	\$0	\$0
16	1FL - 114	CLASS	8' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	9	146	1314	2000	2628	42	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low- Power High Efficiency Ballast	9	84	810	Ceiling	756	1190	1512 9	900	62	558	810	1,728	612	\$341.75	\$816	\$260	\$951	\$10	\$35	\$125
17	1FL - 111	CLASS	8' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	6	146	876	2000	1752	0	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low- Power High Efficiency Ballast	6	84	810	Ceiling	504	1190	1008 6	600	62	372	810	1,152	408	\$227.83	\$653	\$182	\$740	\$10	\$35	\$95
18	1FL - 111	CLASS	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	3	73	219	2000	438	40	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	3	42			126	2000	252 2	252	31	93	0	186	0	\$27.16	\$117	\$78	\$165	\$10	\$0	\$30
19	1FL - 113	CLASS	8' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2)	6	146	876	2000	1752	0	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-	6	84	810	Ceiling	504	1190	1008 6	600	62	372	810	1,152	408	\$227.83	\$653	\$182	\$740	\$10	\$35	\$95
20	1FL - 113	CLASS	Energy Efficient Magnetic Ballasts  4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1)	3	73	219	2000	438	0	Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	3	42			126	2000	252 2	252	31	93	0	186	0	\$27.16	\$117	\$78	\$165	\$10	\$0	\$30
21	1FL - 112	CLASS	Energy Efficient Magnetic Ballast  8' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2)	6	146	876	2000	1752	0	Power High Efficiency Ballast Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-	6	84	810	Ceiling	504	1190	1008 6	600	62	372	810	1,152	408	\$227.83	\$653	\$182	\$740	\$10	\$35	\$95
22	1FL - 112	CLASS	Energy Efficient Magnetic Ballasts 4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1)	3	73	219	2000	438	0	Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	3	42		J J	126	2000		252	31	93	0	186	0	\$27.16	\$117	\$78	\$165	\$10	\$0	\$30
23	1FL - CDR-1	CORRIDOR-1	Energy Efficient Magnetic Ballast 2'x2' Recessed Troffer w/ (4) F20T12 Lamps & (2)	1	112	112	3000	336	10	Power High Efficiency Ballast Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-	1	28			28	3000		84	84	84	0	252	0	\$36.79	\$52	\$17	\$49	\$20	\$0	\$20
24	1FL - CDR-1	CORRIDOR-1	Standard Magnetic Ballasts 4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1)	4	42	168	3000	504	0	Power High Efficiency Ballast, 2'x2' Silver Reflector Kit Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-	4	22			88	3000		264	20	80	0	240	0	\$35.04	\$125	\$69	\$154	\$10	\$0	\$40
25			Energy Efficient Magnetic Ballast 1'x4' Recessed Troffer w/ (1) F40T12/34w Lamp & (1)		42	336	3000	1008	0	Power High Efficiency Ballast Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-	0	22			176	3000		528	20	160	0	480	0	\$70.08		\$208	\$378	\$10	\$0	\$80
	1FL - CDR-1	CORRIDOR-1	Energy Efficient Magnetic Ballast 4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1)	8	42				0	Power High Efficiency Ballast Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-	8				88			— I L			0		0	·	\$250				\$0	\$40
26	1FL - CDR-2	CORRIDOR-2	Energy Efficient Magnetic Ballast 1'x4' Recessed Troffer w/ (1) F40T12/34w Lamp & (1)	4		168	3000	504	0	Power High Efficiency Ballast Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-	4	22				3000		264	20	80	0	240	0	\$35.04	\$125	\$69	\$154	\$10	\$0	
27	1FL - CDR-2	CORRIDOR-2	Energy Efficient Magnetic Ballast 3' Undercabinet Fluorescent w/ (2) F25T8 Lamp & (1)	13		546	3000	1638	0	Power High Efficiency Ballast	13	22			286	3000		358	20	260	0	780	0	\$113.88	\$406	\$338	\$614	\$10	\$0	\$130
28	1FL - CDR-2	DISPLAY IN CORRIDOR-2	Electronic Ballast 8' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2)	2	46	92	3000	276	0	None Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-	2	46			92	3000		276	0	0	0	0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0
29	1FL - LBRY	SMALL LIBRARY	Energy Efficient Magnetic Ballasts	2	146	292	2000	584	0	Power High Efficiency Ballast Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-	2	84			168	2000	336 3	336	62	124	0	248	0	\$36.21	\$109	\$52	\$141	\$10	\$0	\$20
30	1FL - LBRY	SMALL LIBRARY	8' Wrap Fluorescent w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	1	112	112	2000	224	0	Power High Efficiency Ballast	1	84			84	2000	.00	68	28	28	0	56	0	\$8.18	\$55	\$26	\$71	\$10	\$0	\$10
31	1FL - SRG	BOOK STORAGE	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	58	58	2000	116	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	1	42			42	2000	84 8	84	16	16	0	32	0	\$4.67	\$39	\$26	\$55	\$10	\$0	\$10
32	1FL - CR	COPY ROOM	4'x4' Recessed Troffer w/ (8) F40T12/34w Lamps & (4) Energy Efficient Magnetic Ballasts	2	292	584	2000	1168	0	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low- Power High Efficiency Ballast, (2) 2x4 Silver Reflector Kit	2	84			168	2000	336 3	336	208	416	0	832	0	\$121.47	\$187	\$104	\$251	\$20	\$0	\$40
33	1FL - SRG	STORAGE IN CORRIDOR -2	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	58	116	360	42	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	2	42			84	360	30 3	30	16	32	0	12	0	\$1.68	\$78	\$52	\$110	\$10	\$0	\$20
34	1FL - OFC	MS HART - PHYS. ED.	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	58	116	2000	232	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	2	42			84	2000	168 1	68	16	32	0	64	0	\$9.34	\$78	\$52	\$110	\$10	\$0	\$20
35	1FL - CDR-3	CORRIDOR-3	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	3	146	438	3000	1314	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	3	42			126	3000	378 3	378	104	312	0	936	0	\$136.66	\$215	\$78	\$233	\$20	\$0	\$60
36	1FL - CDR-3	MAIN VESTIBULE IN CORRIDOR-3	2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	6	73	438	3000	1314	13	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	6	42			252	3000	756 7	756	31	186	0	558	0	\$81.47	\$429	\$156	\$525	\$10	\$0	\$60
37	1FL - CDR-3	CORRIDOR-3	2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	11	73	803	3000	2409	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	11	42			462	3000	1386 13	386	31	341	0	1,023	0	\$149.36	\$787	\$286	\$963	\$10	\$0	\$110
38	1FL - 120	CLASS	1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps one un top of other with sylver reflector & (1) Energy	2	73	146	2000	292	25-26	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	2	42			84	2000	168 1	68	31	62	0	124	0	\$18.10	\$78	\$52	\$110	\$10	\$0	\$20
39	1FL - 120	RESTROOM IN CLASS	2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard Magnetic Ballast	1	56	56	360	20	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast	1	28			28	360	10	10	28	28	0	10	0	\$1.47	\$31	\$26	\$47	\$10	\$0	\$10
40	1FL - 120	CLASS	2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	9	105	945	2000	1890	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	9	42	810	Ceiling	378	1190	756 4	150	63	567	810	1,440	306	\$254.97	\$969	\$260	\$1,014	\$20	\$35	\$215
41	1FL - 118	CLASS	1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps one	2	73	146	2000	292	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	2	42			84	2000	168 1	68	31	62	0	124	0	\$18.10	\$78	\$52	\$110	\$10	\$0	\$20
42	1FL - 118	RESTROOM IN CLASS	un top of other with sylver reflector & (1) Energy 2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard	1	56	56	360	20	0	Power High Efficiency Ballast  Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-	1	28			28	360		10	28	28	0	10	0	\$1.47	\$31	\$26	\$47	\$10	\$0	\$10
43	1FL - 118	CLASS	Magnetic Ballast 2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2)	9	105	945	2000	1890	0	Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	9	42	810	Ceiling	378	1190		150	63	567	810	1,440	306	\$254.97	\$969	\$260	\$1,014	\$20	\$35	\$215
44	1FL - 119	CLASS	Energy Efficient Magnetic Ballasts  1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps one	2	73	146	2000	292	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	2	42	2.3	9	84	2000		168	31	62	0	124	0	\$18.10	\$78	\$52	\$110	\$10	\$0	\$20
45	1FL - 119	RESTROOM IN CLASS	un top of other with sylver reflector & (1) Energy 2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard	1	56	56	360	292	0	Power High Efficiency Ballast Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-	1	28			28	360		10	28	28	0	10	0	\$1.47	\$31	\$26	\$47	\$10	\$0	\$10
			Magnetic Ballast 2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2)							Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	1		940	Ceilin -																
46	1FL - 119	CLASS	Energy Efficient Magnetic Ballasts 1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps one	9	105	945	2000	1890	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	9	42	810	Ceiling	378	1190		150	63	567	810	1,440	306	\$254.97	\$969	\$260	\$1,014	\$20	\$35	\$215
47	1FL - 117	CLASS	un top of other with sylver reflector & (1) Energy  2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard	2	73	146	2000	292	0	Power High Efficiency Ballast Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-	2	42			84	2000		68	31	62	0	124	0	\$18.10	\$78	\$52	\$110	\$10	\$0	\$20
48	1FL - 117	RESTROOM IN CLASS	Magnetic Ballast  2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2)	1	56	56	360	20	0	Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/72 Elec. Low-	1	28			28	360		10	28	28	0	10	0	\$1.47	\$31	\$26	\$47	\$10	\$0	\$10
49	1FL - 117	CLASS	Energy Efficient Magnetic Ballasts  1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps one	9	105	945	2000	1890	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	9	42	810	Ceiling	378	1190		150	63	567	810	1,440	306	\$254.97	\$969	\$260	\$1,014	\$20	\$35	\$215
50	1FL - 115	CLASS	un top of other with sylver reflector & (1) Energy	2	73	146	2000	292	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	2	42			84	2000	168 1	68	31	62	0	124	0	\$18.10	\$78	\$52	\$110	\$10	\$0	\$20

Dome-Tech, Inc. | "Building Performance - Delivered" | 510 Thornall St., Suite 170, Edison, NJ 08837



LIGHTING UPGRADE PROJECT CUSTOMER: GREAT MEADOWS SCHOOLS BLDG. CODE: FACILITY SQ. FT. DATE OF AUDIT:

LINE x LINE DETAIL FACILITY: GREAT MEADOWS CENTRAL ELEMENTARY SCHOOL GW-CENTR-ES 38,000 2/13/2012

DOIL	ie-lech, inc.																										
	S	PACE DESCRIPTION	EX	ISTING F	FIXTURES					REPLACE	MENT FIXT	TURES				<del>, , , , , , , , , , , , , , , , , , , </del>			ENERGY	ANALYSIS			COST ANALYSIS	3		REBATES	
LINE	PRINT NUMBER	SPACE DESCRIPTION	PRE FIXTURE DESCRIPTION	PRE FIXT. QTY	WAIIS	PRE TOTAL WATTS / LINE	DEFAULT ANNUAL HOURS PRE ANNU. KWH		E PROPOSED FIXTURE DESCRIPTION S	POST FIXT. QTY	POST WATTS / FIXT.	ANNUAL HOURS SAVED	SENSOR TYPE	POST TOTAL WATTS - / LINE	ANNUAL HOURS 2000	POST ANNUAL KWH WITH OCC SENSO	L WATTS SAVED / FIXT.		ANNUAL HOURS SAVED F	IUAL ANNUA WH KWH VED SAVEI OM WITH XT. OCC	TOTAL ANNUAL\$ SAVINGS / LINE (INCLUDING SENSORS) \$0.146	MATERIAL COST PER LINE	TOTAL LABOR COST PER LINE	TOTAL COST AFTER REBATES	REBATE / FIXT.	REBATE / SENSOR	TOTAL REABATE / LINE
51	1FL - 115	RESTROOM IN CLASS	2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard	1	56	56	360 20	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast	1	28			28	360	10 10	28	28	0	0 0	\$1.47	\$31	\$26	\$47	\$10	\$0	\$10
52	1FL - 115	CLASS	Magnetic Ballast  2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2)	9	105	945	2000 1890	34-38	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	9	42	810	Ceiling	378	1190	756 450	63	567	810 1	140 306	\$254.97	\$969	\$260	\$1,014	\$20	\$35	\$215
53	1FL - 116	CLASS	Energy Efficient Magnetic Ballasts  1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps one un top of other with sylver reflector & (1) Energy	2	73	146	2000 292	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	2	42			84	2000	168 168	31	62	0	24 0	\$18.10	\$78	\$52	\$110	\$10	\$0	\$20
54	1FL - 116	RESTROOM IN CLASS	2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard Magnetic Ballast	1	56	56	360 20	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast	1	28			28	360	10 10	28	28	0	0 0	\$1.47	\$31	\$26	\$47	\$10	\$0	\$10
55	1FL - 116	CLASS	2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	9	105	945	2000 1890	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2/x4' Silver Reflector Kit	9	42	810	Ceiling	378	1190	756 450	63	567	810 1	140 306	\$254.97	\$969	\$260	\$1,014	\$20	\$35	\$215
56	1FL - NURSE	NURSE	2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	6	105	630	2000 1260	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2/x4' Silver Reflector Kit	6	42			252	2000	504 504	63	378	0	56 0	\$110.38	\$429	\$156	\$465	\$20	\$0	\$120
57	1FL - NURSE	NURSE	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	2	73	146	2000 292	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	2	28			56	2000	112 112	45	90	0	80 0	\$26.28	\$104	\$35	\$99	\$20	\$0	\$40
58	1FL - NURSE	NURSE	4' Vanity Luminaire w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	73	146	2000 292	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	2	42			84	2000	168 168	31	62	0	24 0	\$18.10	\$78	\$52	\$110	\$10	\$0	\$20
59	1FL - NURSE	STORAGE IN NURSE	Incandescent Fixture w/ (1) 60w Incandescent Lamp	2	60	120	360 43	0	Incandescent Fixture w/ 15w Screw-In Compact Fluorescent	2	15			30	360	11 11	45	90	0	2 0	\$4.73	\$13	\$17	\$30	\$0	\$0	\$0
60	1FL - WRR	WOMEN'S RESTROOM	2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard Magnetic Ballast	1	56	56	3000 168	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast	1	28			28	3000	84 84	28	28	0	34 0	\$12.26	\$31	\$26	\$47	\$10	\$0	\$10
61	1FL - MRR	MEN'S RESTROOM	2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard Magnetic Ballast	1	56	56	3000 168	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast	1	28			28	3000	84 84	28	28	0	34 0	\$12.26	\$31	\$26	\$47	\$10	\$0	\$10
62	1FL - SRG	STORAGE	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	73	73	360 26	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	1	42			42	360	15 15	31	31	0	1 0	\$1.63	\$39	\$26	\$55	\$10	\$0	\$10
63	1FL - MO	MAIN OFFICE	2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	6	105	630	2000 1260	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	6	42			252	2000	504 504	63	378	0	56 0	\$110.38	\$429	\$156	\$465	\$20	\$0	\$120
64	1FL - MO	KITCHEN IN MAIN OFFICE	1'x4' Recessed Troffer w/ (2) F40T12/34w Lamps one un top of other with sylver reflector & (1) Energy	1	73	73	2000 146	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	1	42			42	2000	84 84	31	31	0	62 0	\$9.05	\$39	\$26	\$55	\$10	\$0	\$10
65	1FL - MO	CONFERENCE ROOM	2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	105	210	2000 420	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	2000	168 168	63	126	0	52 0	\$36.79	\$143	\$52	\$155	\$20	\$0	\$40
66	1FL - MO	PRINCIPAL'S OFFCIE	2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	105	210	2000 420	32	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	2000	168 168	63	126	0	52 0	\$36.79	\$143	\$52	\$155	\$20	\$0	\$40
67	1FL - CDR-4	CORRIDOR-4	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	73	146	3000 438	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	2	42			84	3000	252 252	31	62	0	86 0	\$27.16	\$78	\$52	\$110	\$10	\$0	\$20
68	1FL - CDR-4	CORRIDOR-4	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	5	88	440	3000 1320	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	5	42			210	3000	630 630	46	230	0	90 0	\$100.74	\$358	\$130	\$413	\$15	\$0	\$75
69	1FL - STAGE	STAGE	Incandescent Fixture w/ (1) 60w Incandescent Lamp	1	60	60	2000 120	0	Incandescent Fixture w/ 15w Screw-In Compact Fluorescent Lamp	1	15			15	2000	30 30	45	45	0	0 0	\$13.14	\$7	\$9	\$15	\$0	\$0	\$0
70	1FL - 101	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	12	88	1056	2000 2112	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008 600	46	552	810 1	512 408	\$280.39	\$1,183	\$338	\$1,306	\$15	\$35	\$215
71	1FL - 102	CLASS	8' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	8	146	1168	2000 2336	44	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low- Power High Efficiency Ballast	8	84	810	Ceiling	672	1190	1344 800	62	496	810 1	536 544	\$303.77	\$762	\$234	\$881	\$10	\$35	\$115
72	1FL - 102	CLASS STORAGE	Incandescent Fixture w/ 9w Screw-In Compact Fluorescent Lamp	1	9	9	360 3	0	None	1	9			9	360	3 3	0	0	0	0 0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0
73	1FL - BRR	BOY'S RESTROOM	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	112	224	3000 672	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	3000	252 252	70	140	0	20 0	\$61.32	\$143	\$52	\$165	\$15	\$0	\$30
74	1FL - JC	CUSTODIAN'S CLOSET	Incandescent Fixture w/ (1) 100w Incandescent Lamp	1	100	100	360 36	0	Relamp w/ (1) 27 watt Compact Fluorescent Screw-In, Rewire Existing HID fixtre	1	27			27	360	10 10	73	73	0	26 0	\$3.84	\$7	\$9	\$15	\$0	\$0	\$0
75	1FL - GRR	GIRL'S RESTROOM	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	112	224	3000 672	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	3000	252 252	70	140	0	20 0	\$61.32	\$143	\$52	\$165	\$15	\$0	\$30
76	1FL - GYM	GYM	HID High Bay Fixture w/ (1) 400w Metal Halide Lamp & Ballast	8	455	3640	2000 7280	16-20	New 2'x4' Singlepoint-Mount High Bay w/ (6) F54T5HO Lamps & (3) 2/54 T5 Elec. HO Ballasts, Wire Guard, Occupancy Sensor	8	351	810	Ceiling	2808	1190	5616 3342	104	832	810 3	938 2274	\$907.09	\$3,120	\$14	\$2,299	\$100	\$35	\$835
77	1FL - LBRY	LIBRARY	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	11	88	968	2000 1936	51-52	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2/x4' Silver Reflector Kit	11	42			462	2000	924 924	46	506	0 1	012 0	\$147.75	\$787	\$286	\$908	\$15	\$0	\$165
78	1FL - 104 1FL - GYM	LIBRARY	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast 4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1)	12		1056	2000 2112		Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	12	42			504	2000	1008 1008	46	552		104 0	\$161.18	\$858	\$312	\$990	\$15	\$0	\$180
79	OFC 1FL - GYM	OFFICE IN GYM	Energy Efficient Magnetic Ballast  4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1)	2	73	146	2000 292		Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	2	42			84	2000	168 168	31	62	0	24 0	\$18.10	\$78	\$52	\$110	\$10	\$0	\$20
80	SRG # 1 1FL - GYM	CHAIR STORAGE IN GYM	Energy Efficient Magnetic Ballast  4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1)	2	73	146	360 53		Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	2	42			84	360	30 30	31	62	0	22 0	\$3.26	\$78	\$52	\$110	\$10	\$0	\$20
81	SRG #2	STORAGE # 2 IN GYM	Energy Efficient Magnetic Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1)	2	73	146	360 53	0	Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	2	42			84	360	30 30	31	62		2 0	\$3.26	\$78	\$52	\$110	\$10	\$0	\$20
82	1FL - CDR-5	CORRIDOR-5	Electronic Ballast 2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1)	8	88	704	3000 2112		Power High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	8	42			336	3000	1008 1008	_	368		104 0	\$161.18	\$572	\$208	\$660	\$15	\$0	\$120
83	1FL - 108A	STORAGE	Energy Efficient Magnetic Ballast  8' Strip Fluorescent w/ (2) F96T12/65w Lamps & (1)	5	73	365	360 131		Power High Efficiency Ballast, 2'x4' Silver Reflector Kit  New 8' Strip Fixture w/ (2) F28T8 Lamps & (1) 2/32 Elec. High-	5	42			210	360	76 76	31	155		66 0	\$8.15	\$358	\$130	\$438	\$10	\$0	\$50
84	1FL - 107	CUSTODIAN'S OFFICE	Energy Efficient Magnetic Ballast 4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1)	1	123	123	3000 369		Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	1	65			65	3000	195 195	58	58		74 0	\$25.40	\$74	\$52	\$116	\$10	\$0	\$10
85	1FL - 107	CUSTODIAN'S OFFICE  CUSTODIAN'S OFFICE	Energy Efficient Magnetic Ballast 4' Strip Fluorescent w/ (2) F32T8 Lamps & (1)	1	73	73	3000 219		Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	1	42			42	3000	126 126	31 16	31		8 0	\$13.58	\$39	\$26	\$55 \$55	\$10	\$0 \$0	\$10
86	1FL - 107	COSTODIAN'S OFFICE  COMPUTER CLASS	Electronic Ballast 8' Wrap Fluorescent w/ (8) FO32T8 Lamps & (2)	6	58 224	58 1344	3000 174 2000 2688		Power High Efficiency Ballast Relamp & Reballast w/ (8) F28T8 Lamps & (2) 4/32 Elec. Low-	6	42 186	810	Ceiling	42 1116	3000 1190	126 126 2232 1328	-	16 228		8 0 860 904	\$7.01 \$330.53	\$39 \$980	\$26 \$338	\$55 \$1,223	\$10 \$10	\$35	\$10 \$95
88	1FL - 108	CLASS	Electronic Ballasts 8' Wrap Fluorescent w/ (8) FO32T8 Lamps & (2)	6	224	1344	2000 2688		Power High Efficiency Ballasts Relamp & Reballast w/ (8) F28T8 Lamps & (2) 4/32 Elec. Low-	6	186	810	Ceiling	1116	1190	2232 1328	_	228		360 904 360 904	\$330.53 \$330.53	\$980	\$338	\$1,223 \$1,223	\$10	\$35	\$95 \$95
89	1FL - 109	CLASS	Electronic Ballasts 8' Wrap Fluorescent w/ (8) F40T12/34w Lamps & (4)		292	1752	2000 2688		Power High Efficiency Ballasts Relamp & Reballast w/ (8) F28T8 Lamps & (2) 4/32 Elec. Low-	6	186	810	Ceiling	1116	1190	2232 1328	_	636		176 904	\$330.53 \$449.67	\$980	\$338	\$1,223	\$10	\$35	\$95 \$95
90	1FL - 107	CLASS	Energy Efficient Magnetic Ballasts 4' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2)	2	146	292	2000 584		Power High Efficiency Ballasts Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-	2	84	0.10	Joining	168	2000	336 336	62	124		48 0	\$36.21	\$109	\$52	\$1,223	\$10	\$0	\$20
90	1FL - 107	STORAGE IN CLASS	Energy Efficient Magnetic Ballasts Incandescent Fixture w/ (1) 60w Incandescent Lamp	1	60	60	360 22		Power High Efficiency Ballast Incandescent Fixture w/ 15w Screw-In Compact Fluorescent	1	15			15	360	5 5	45	45		6 0	\$36.21	\$109	\$52 \$9	\$141	\$10	\$0 \$0	\$20
92	1FL - SRG	STORAGE ON CORRIDOR	Incandescent Fixture w/ (1) 60w Incandescent Lamp	1	60	60	360 22		Lamp Incandescent Fixture w/ 15w Screw-In Compact Fluorescent	1	15			15	360	5 5	45	45		6 0	\$2.37	\$7	\$9	\$15	\$0	\$0	\$0
93	1FL - BRR	BOY'S RESTROOM	Incandescent Fixture w/ 13w Screw-In Compact	2	13	26	3000 78		Lamp None	2	13			26	3000	78 78	0	0	0	0 0	\$0.00	\$0	\$0	\$15	\$0	\$0	\$0
94	1FL - MRR	MEN'S RESTROOM	Fluorescent Lamp Incandescent Fixture w/ (2) 60w Incandescent Lamps	1	120	120	3000 76		Relamp w/ (2) 15 watt Compact Fluorescent Screw-In	1	30			30	3000	90 90	90	90		70 0	\$39.42	\$13	\$9	\$22	\$0	\$0	\$0
95	1FL - GRR	GIRL'S RESTROOM	Incandescent Fixture w/ (1) 60w Incandescent Lamp		60	120	3000 360		Incandescent Fixture w/ 15w Screw-In Compact Fluorescent	2	15			30	3000	90 90	45	90		70 0	\$39.42	\$13	\$17	\$30	\$0	\$0	\$0
96	1FL - GRR	GIRL'S RESTROOM	Incandescent Fixture w/ 13w Screw-In Compact	1	13	13	3000 39		Lamp None	1	13			13	3000	39 39	0	0	0	0 0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0
97	1FL	BOOK ROOM	Fluorescent Lamp Incandescent Fixture w/ (1) 60w Incandescent Lamp	1	60	60	2000 120		Incandescent Fixture w/ 15w Screw-In Compact Fluorescent	1	15			15	2000	30 30	45	45		00 0	\$13.14	\$7	\$9	\$15	\$0	\$0	\$0
98	1FL - 106	CLASS	8' Wrap Fluorescent w/ (8) F40T12/34w Lamps & (4)	6	292	1752	2000 3504		Lamp  Relamp & Reballast w/ (8) F28T8 Lamps & (2) 4/32 Elec. Low- Power High Efficiency Ballasts	6	186	810	Ceiling	1116	1190	2232 1328	-	636		176 904	\$449.67	\$980	\$338	\$1,223	\$10	\$35	\$95
99	1FL - 106	RESTROOM IN CLASS	Energy Efficient Magnetic Ballasts  Incandescent Fixture w/ (2) 60w Incandescent Lamps	1	120	120	360 43	0	Relamp w/ (2) 15 watt Compact Fluorescent Screw-In	1	30			30	360	11 11	90	90	0	12 0	\$4.73	\$13	\$9	\$22	\$0	\$0	\$0
100	1FL - 106	STORAGE	Incandescent Fixture w/ 13w Screw-In Compact Fluorescent Lamp	1	13	13	2000 26	0	None	1	13			13	2000	26 26	0	0	0	0 0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0
			. Idorescent Earlip																								



LIGHTING UPGRADE PROJECT CUSTOMER: GREAT MEADOWS SCHOOLS BLDG. CODE: FACILITY SQ. FT. DATE OF AUDIT:

LINE x LINE DETAIL FACILITY: GREAT MEADOWS CENTRAL ELEMENTARY SCHOOL GW-CENTR-ES 38,000 2/13/2012

Dome-	lech, Inc.																		_										
	SF	PACE DESCRIPTION	EX	ISTING F	FIXTURES						REPLACEM	MENT FIXT	URES								ENE	RGY ANALYSIS			COST ANALYSIS	3		REBATES	
LINE	PRINT NUMBER	SPACE DESCRIPTION	PRE FIXTURE DESCRIPTION	PRE FIXT. QTY	PRE WATTS / FIXT.	PRE TOTAL WATTS / LINE	DEFAULT ANNUAL HOURS 2000	PRE - ANNUAL KWH	PRE AVERAGE FOOT - CANDELS	PROPOSED FIXTURE DESCRIPTION	POST FIXT. QTY	POST WATTS / FIXT.	ANNUAL HOURS SAVED	SENSOR TYPE	POST TOTAL WATTS - / LINE	ANNUAL HOURS 2000	POST ANNUAL KWH	POST ANNUAL KWH WITH OCC SENSOR	WATTS SAVED / FIXT.	TOTAL WATTS SAVED / LINE	ANNUAL HOURS SAVED	KWH I SAVED S. FROM V	IUAL SAVINGS / LINE (INCLUDING SENSORS) TH CC \$0.146	MATERIAL COST PER LINE	TOTAL LABOR COST PER LINE	TOTAL COST AFTER REBATES	REBATE / FIXT.	REBATE / SENSOR	TOTAL REABATE / LINE
101 1	FL - WRR	WOMEN'S RESTROOM	Incandescent Fixture w/ (2) 60w Incandescent Lamps	1	120	120	3000	360	0	Relamp w/ (2) 15 watt Compact Fluorescent Screw-In	1	30			30	3000	90	90	90	90	0	270	0 \$39.42	\$13	\$9	\$22	\$0	\$0	\$0
102	1FL - 110	CLASS	8' Wrap Fluorescent w/ (8) F40T12/34w Lamps & (4) Energy Efficient Magnetic Ballasts	6	292	1752	2000	3504	52	Relamp & Reballast w/ (8) F28T8 Lamps & (2) 4/32 Elec. Low- Power High Efficiency Ballasts	6	186	810	Ceiling	1116	1190	2232	1328	106	636	810	2,176	04 \$449.67	\$980	\$338	\$1,223	\$10	\$35	\$95
103	1FL - 105	CLASS	8' Wrap Fluorescent w/ (8) FO32T8 Lamps & (2) Electronic Ballasts	3	224	672	2000	1344	0	Relamp & Reballast w/ (8) F28T8 Lamps & (2) 4/32 Elec. Low- Power High Efficiency Ballasts	3	186	810	Ceiling	558	1190	1116	664	38	114	810	680	52 \$165.27	\$653	\$182	\$770	\$10	\$35	\$65
104	1FL - 105	CLASS	8' Wrap Fluorescent w/ (8) F40T12/34w Lamps & (4) Energy Efficient Magnetic Ballasts	3	292	876	2000	1752	0	Relamp & Reballast w/ (8) F28T8 Lamps & (2) 4/32 Elec. Low- Power High Efficiency Ballasts	3	186	810	Ceiling	558	1190	1116	664	106	318	810	1,088	52 \$224.83	\$653	\$182	\$770	\$10	\$35	\$65
	FL - CUST. OFFICE	CUSTODIAN'S OFFICE -LEVEL 1.5	4' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	73	73	3000	219	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	1	42			42	3000	126	126	31	31	0	93	0 \$13.58	\$39	\$26	\$55	\$10	\$0	\$10
	FL - CUST. OFFICE	CUSTODIAN'S OFFICE -LEVEL 1.5	8' Strip Fluorescent w/ (2) F96T12/65w Lamps & (1) Energy Efficient Magnetic Ballast	2	123	246	3000	738	0	New 8' Strip Fixture w/ (2) F28T8 Lamps & (1) 2/32 Elec. High- Power High Efficiency Ballast	2	65			130	3000	390	390	58	116	0	348	0 \$50.81	\$148	\$104	\$232	\$10	\$0	\$20
107 1	.5FL - SW	STAIRS TO CUSTODIAN'S OFFICE	Incandescent Fixture w/ (1) 60w Incandescent Lamp	1	60	60	3000	180	0	Incandescent Fixture w/ 15w Screw-In Compact Fluorescent Lamp	1	15			15	3000	45	45	45	45	0	135	0 \$19.71	\$7	\$9	\$15	\$0	\$0	\$0
108	2FL - SW	STARIWELL	8' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	1	146	146	3000	438	0	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low- Power High Efficiency Ballast	1	84			84	3000	252	252	62	62	0	186	0 \$27.16	\$55	\$26	\$71	\$10	\$0	\$10
109	2FL - CDR	CORRIDOR ON 2ND FLOOR	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	5	88	440	3000	1320	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	5	42			210	3000	630	630	46	230	0	690	0 \$100.74	\$358	\$130	\$413	\$15	\$0	\$75
110	2FL - CDR	CORRIDOR ON 2ND FLOOR	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	3	73	219	3000	657	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	3	42			126	3000	378	378	31	93	0	279	0 \$40.73	\$117	\$78	\$165	\$10	\$0	\$30
111 2	.5FL - SRG	STORAGE ON 2.5 LEVEL	4' Wrap Fluorescent w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	146	292	360	105	0	Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low- Power High Efficiency Ballast	2	84			168	360	60	60	62	124	0	45	0 \$6.52	\$109	\$52	\$141	\$10	\$0	\$20
112	2FL - 201	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	12	88	1056	2000	2112	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008	600	46	552	810	1,512	08 \$280.39	\$1,183	\$338	\$1,306	\$15	\$35	\$215
113	2FL - 202	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	12	88	1056	2000	2112	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008	600	46	552	810	1,512	08 \$280.39	\$1,183	\$338	\$1,306	\$15	\$35	\$215
114	2FL - 203	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	8	88	704	2000	1408	60-61	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	8	42			336	2000	672	672	46	368	0	736	0 \$107.46	\$572	\$208	\$660	\$15	\$0	\$120
115	2FL - 203	STORAGE IN CLASS	Incandescent Fixture w/ (1) 60w Incandescent Lamp	1	60	60	360	22	0	Incandescent Fixture w/ 15w Screw-In Compact Fluorescent Lamp	1	15			15	360	5	5	45	45	0	16	0 \$2.37	\$7	\$9	\$15	\$0	\$0	\$0
116	2FL - 204	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	12	88	1056	2000	2112	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008	600	46	552	810	1,512	08 \$280.39	\$1,183	\$338	\$1,306	\$15	\$35	\$215
117	2FL - 205	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	12	88	1056	2000	2112	30-31	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008	600	46	552	810	1,512	08 \$280.39	\$1,183	\$338	\$1,306	\$15	\$35	\$215
118	2FL - SW	STAIRWELL	4' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	73	73	3000	219	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	1	42			42	3000	126	126	31	31	0	93	0 \$13.58	\$39	\$26	\$55	\$10	\$0	\$10
119	B - BSMT	VESTIBULE BEFORE BOILER ROOM	4' Wrap Fluorescent w/ (1) F40T12/34w Lamp & (1) Energy Efficient Magnetic Ballast	1	42	42	8760	368	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low- Power High Efficiency Ballast	1	22			22	8760	193	193	20	20	0	175	0 \$25.58	\$31	\$26	\$47	\$10	\$0	\$10
120	B - OFC	RUSSELL'S OFFICE	2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2) Electronic Ballasts	2	112	224	2000	448	58	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	2000	168	168	70	140	0	280	0 \$40.88	\$143	\$52	\$165	\$15	\$0	\$30
121	B - OFC	RUSSELL'S OFFICE	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	58	116	2000	232	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	2000	168	168	16	32	0	64	0 \$9.34	\$143	\$52	\$175	\$10	\$0	\$20
122 B	- RR-OFC	RESTROOM IN RUSSELL'S OFFICE	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	1	32	32	360	12	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low- Power High Efficiency Ballast	1	22			22	360	8	8	10	10	0	4	0 \$0.53	\$31	\$17	\$39	\$10	\$0	\$10
123	B - BOE	BOE OFFICE - NEXT ROOM TO RUSSELL'S OFC.	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	9	146	1314	2000	2628	77-111	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	9	42	810	Ceiling	378	1190	756	450	104	936	810	2,178	06 \$362.72	\$969	\$260	\$1,014	\$20	\$35	\$215
124	B - BOE	BOE OFFICE # 2 - ACROSS THE CORRIDOR	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	10	146	1460	2000	2920	41-110	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	10	42	810	Ceiling	420	1190	840	500	104	1040	810	2,420	40 \$403.02	\$1,040	\$286	\$1,091	\$20	\$35	\$235
125	B - BOE	STORAGE IN OFFICE	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	1	32	32	360	12	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low- Power High Efficiency Ballast	1	22			22	360	8	8	10	10	0	4	0 \$0.53	\$31	\$17	\$39	\$10	\$0	\$10
126	B - BOE	C.MOZAK'S OFFICE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	7	146	1022	2000	2044	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	7	42			294	2000	588	588	104	728	0	1,456	0 \$212.58	\$501	\$182	\$543	\$20	\$0	\$140
127 5	B - BORM	BOILER ROOM IN SUB-BASEMENT LEVEL	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast	1	32	32	8760	280	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low- Power High Efficiency Ballast	1	22			22	8760	193	193	10	10	0	88	0 \$12.79	\$31	\$17	\$39	\$10	\$0	\$10
128	B - BORM	BOILER ROOM IN SUB-BASEMENT LEVEL	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	58	174	8760	1524	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	3	42			126	8760	1104	1104	16	48	0	420	\$61.39	\$117	\$78	\$165	\$10	\$0	\$30
129 5	B - BORM	BOILER ROOM IN SUB-BASEMENT LEVEL	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	4	58	232	8760	2032	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	4	42			168	8760	1472	1472	16	64	0	561	0 \$81.85	\$156	\$104	\$220	\$10	\$0	\$40
130	SB - M. SP	MAINTENANCE SHOP IN BOILER ROOM	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	58	116	8760	1016	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	2	42			84	8760	736	736	16	32	0	280	\$40.93	\$78	\$52	\$110	\$10	\$0	\$20
131	B - SRG	STORAGE NEXT TO BOILER ROOM	4' Wrap Fluorescent w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	58	116	360	42	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	2	42			84	360	30	30	16	32	0	12	0 \$1.68	\$78	\$52	\$110	\$10	\$0	\$20
132	EXT	EXTRERNAL LIGHTING	Incandescent Fixture w/ (2) 60w Incandescent Lamps	6	120	720	900	648	0	Relamp w/ (2) 15 watt Compact Fluorescent Screw-In	6	30			180	900	162	162	90	540	0	486	0 \$70.96	\$78	\$52	\$130	\$0	\$0	\$0
133	EXT	EXTRERNAL LIGHTING	HID Flood Fixture w/ (1) 250w High Pressure Sodium	2	295	590	900	531	0	New Fixture w/ (1) 165w ICETRON Induction Lamp & Induction Ballast, Universal Voltage	2	165			330	900	297	297	130	260	0	234	0 \$34.16	\$702	\$208	\$770	\$70	\$0	\$140
134	EXT	EXTRERNAL LIGHTING	Incandescent Fixture w/ (1) 60w Incandescent Lamp	2	60	120	900	108	0	Incandescent Fixture w/ 15w Screw-In Compact Fluorescent Lamp	2	15			30	900	27	27	45	90	0	81	0 \$11.83	\$13	\$17	\$30	\$0	\$0	\$0
135	EXT	EXTRERNAL LIGHTING	HID Fixture w/ (1) 100W High Pressure Sodium Wallpack	2	130	260	900	234	0	New Wall Pack Fixture w/ (1) 70w ICETRON Induction Lamp & Induction Ballast, Universal Voltage	2	70			140	900	126	126	60	120	0	108	0 \$15.77	\$650	\$104	\$614	\$70	\$0	\$140
136	EXT	EXTRERNAL LIGHTING	HID Fixture w/ (1) 100W High Pressure Sodium Wallpack	4	130	520	900	468	0	New Wall Pack Fixture w/ (1) 70w ICETRON Induction Lamp & Induction Ballast, Universal Voltage	4	70			280	900	252	252	60	240	0	216	0 \$31.54	\$1,300	\$208	\$1,228	\$70	\$0	\$280
137	EXT	EXTRERNAL LIGHTING	Incandescent Fixture w/ 15w Screw-In Compact Fluorescent Lamp	1	15	15	900	14	0	None	1	15			15	900	14	14	0	0	0	0	0 \$0.00	\$0	\$0	\$0	\$0	\$0	\$0
138	EXT	EXTRERNAL LIGHTING	HID Pole Mounted Box Fixture w/ (1) 250w High Pressure Sodium	5	295	1475	900	1328	0	New Fixture w/ (1) 165w ICETRON Induction Lamp & Induction Ballast, Universal Voltage	5	165			825	900	743	743	130	650	0	585	0 \$85.41	\$1,755	\$520	\$1,925	\$70	\$0	\$350
				533		60,652		124,496			533				32,028		66,649	51,339		28,624	21,460	73,158 1	310 \$12,916	\$46,292	\$15,207	\$52,418			\$9,080

Dome-Tech, Inc. | "Building Performance - Delivered" | 510 Thornall St., Suite 170, Edison, NJ 08837



## LIGHTING RETROFIT SUMMARY FOR GREAT MEADOWS LIBERTY ELEMENTARY SCHOOL

BUILDING INFO	RMATION		EXISTING	G FIXTURE	S		PROPOS	ED FIXTURE	S			SA	/INGS				F	INANCIAL		
BUILDING	SQ. FT.	PRE TOTAL FIXT. QTY	PRE TOTAL FIXT. WATTS	PRE ANNUAL KWH CONSUM PTION	PRE WATTS / SQ. FT	POST TOTAL FIXT. QTY	POST TOTAL FIXT. WATTS	POST ANNUAL KWH CONSUMP TION	POST WATTS / SQ. FT	WATTS SAVED	ANNUAL KWH SAVED	ANNUAL KWH SAVED WITH SENSORS	ANNUAL SAVINGS \$ FIXT.	ANNUAL SAVINGS \$ SENSORS	ANNUAL SAVINGS \$ TOTAL	CO2 REDUCTION (TONS)	NJ SMART START REBATE \$	INSTALLED COST \$ (WITH MARKUP)	SIMPLE PAYBACK YEARS	SIMPLE PAYBACK YEARS (W/O REBATES)
GREAT MEADOWS LIBERTY ELEMENTARY SCHOOL	44,500	668	93,412	189,624	2.10	668	37,676	57,753.8	0.85	55,736	131,870	20,304	\$19,121	\$2,944	\$22,065	43.6	\$15,238	\$82,179	3.0	3.7

19%	PERCENTAGE OF REBATES IN TOTAL INSTALLED COST
30%	PERCENTAGE OF CONSUMPTION COMPARE TO EXISTING STATE
48%	EXISTING PERCENTAGE OF LIGHTING ENERGY CONSUMPTION OF THE WHOLE BUILDING
4070	EXISTING FERGENTAGE OF EIGHTING ENERGY GONGOWN HON OF THE WHOLE BOILDING
15%	PROPOSED PERCENTAGE OF LIGHTING ENERGY CONSUMPTION OF THE WHOLE BUILDING



LIGHTING UPGRADE PROJECT CUSTOMER: GREAT MEADOWS SCHOOLS BLDG. CODE: FACILITY SQ. FT. DATE OF AUDIT:

LINE x LINE DETAIL FACILITY: GREAT MEADOWS LIBERTY ELEMENTARY SCHOOL GM-LIBER-ES 44,500 2/13/2012

001	ne reen, me		EXISTING FIXTURES																											
	S	PACE DESCRIPTION	E	EXISTING	FIXTURES	3				RI	EPLACE	MENT FIXT	URES								ENEF	RGY ANALY	YSIS		С	OST ANALYSI	S		REBATES	
					PRE	PRE	DEFAULT ANNUAL		PRE			POST			POST	ANNUAL		POST ANNUAL	WATTS	TOTAL		ANNUAL	ANNUAL	TOTAL ANNUAL\$ SAVINGS / LINE	MATERIAL	TOTAL	TOTAL			TOTAL
LINE	PRINT NUMBER	SPACE DESCRIPTION	PRE FIXTURE DESCRIPTION	PRE FIXT.	WATTS	TOTAL WATTS	HOURS	PRE ANNUAL	AVERAGE FOOT	PROPOSED FIXTURE DESCRIPTION	POST FIXT.	WATTS	ANNUAL HOURS	SENSOR TYPE	TOTAL WATTS	HOURS	POST ANNUAL	KWH WITH	SAVED	WATTS SAVED	ANNUAL HOURS	KWH SAVED	KWH SAVED	(INCLUDING SENSORS)	COST PER	LABOR COST	COST	REBATE /	,	REABATE
	NOWIBER			QTY	FIXT.	/ LINE	2000	KWH	- CANDELS		QTY	FIXT.	SAVED	1172	/ LINE	2000	KWH	осс	FIXT.	/ LINE	SAVED	FROM FIXT.	WITH	\$0.145	LINE	PER LINE	REBATES	FIXT.	SENSOR	LINE
			2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1)							Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-								SENSOR												
1	CDR-1	CORRIDOR-1	Energy Efficient Magnetic Ballast	12	73	876	3000	2628	18-21	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42			504	3000	1512	1512	31	372	0	1,116	0	\$161.82	\$858	\$312	\$1,050	\$10	\$0	\$120
2	301	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	12	146	1752	2000	3504	94-95	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008	600	104	1248	810	2,904	408	\$480.31	\$1,183	\$338	\$1,246	\$20	\$35	\$275
3	302	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	8	146	1168	2000	2336	75	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	8	42			336	2000	672	672	104	832	0	1,664	0	\$241.28	\$572	\$208	\$620	\$20	\$0	\$160
4	303	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	8	146	1168	2000	2336	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	8	42			336	2000	672	672	104	832	0	1,664	0	\$241.28	\$572	\$208	\$620	\$20	\$0	\$160
5	304	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	12	146	1752	2000	3504	45	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008	600	104	1248	810	2,904	408	\$480.31	\$1,183	\$338	\$1,246	\$20	\$35	\$275
6	CDR-1	CORRIDOR-1	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U	2	73	146	3000	438	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-	2	28			56	3000	168	168	45	90	0	270	0	\$39.15	\$104	\$35	\$99	\$20	\$0	\$40
7	MC	MEDIA CENTER	Lamps & (1) Energy Efficient Magnetic Ballast 8' Strip Fluorescent w/ (4) F40T12/34w Lamps & (2)	11	146	1606	2000	3212	0	Power High Efficiency Ballast, 2'x2' Silver Reflector Kit Relamp & Reballast w/ (4) F28T8 Lamps & (1) 4/32 Elec. Low-	11	84	400	Ceiling	924	1600	1848	1478	62	682	400	1,734	370	\$304.96	\$926	\$598	\$1,379	\$10	\$35	\$145
	MC	MEDIA CENTER	Energy Efficient Magnetic Ballasts 2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2)		112	896		1792	0	Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-		42		Coming	336	2000	672	672		560	0	1,120	0	\$162.40	\$572	\$208	\$660	\$15		\$120
0			Electronic Ballasts 2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2)	0			2000			Power High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	0								70		U									
9	MC	MEDIA CENTER	Energy Efficient Magnetic Ballasts	19	146	2774	2000	5548	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	19	42	400	Ceiling	798	1600	1596	1277	104	1976	400	4,271	319	\$665.61	\$1,684	\$520	\$1,789	\$20	\$35	\$415
10	MC	MEDIA CENTER	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	1	73	73	2000	146	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	1	28			28	2000	56	56	45	45	0	90	0	\$13.05	\$52	\$17	\$49	\$20	\$0	\$20
11	MC	MEDIA CENTER	Incandescent Fixture w/ (1) 60w Incandescent PAR 38 Lamp	13	60	780	2000	1560	0	Relamp w/ (1) 20 watt Compact Fluorescent Screw-In, w/ PAR38 Reflector	13	18			234	2000	468	468	42	546	0	1,092	0	\$158.34	\$203	\$113	\$224	\$7	\$0	\$91
12	CDR-2	CORRIDOR-2	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	20	73	1460	3000	4380	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	20	28			560	3000	1680	1680	45	900	0	2,700	0	\$391.50	\$1,040	\$347	\$987	\$20	\$0	\$400
13	209	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	11	146	1606	2000	3212	34	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	11	42	810	Ceiling	462	1190	924	550	104	1144	810	2,662	374	\$440.28	\$1,112	\$312	\$1,169	\$20	\$35	\$255
14	209	CLASS	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U	1	73	73	2000	146	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-	1	28			28	2000	56	56	45	45	0	90	0	\$13.05	\$52	\$17	\$49	\$20	\$0	\$20
15	210	CLASS	Lamps & (1) Energy Efficient Magnetic Ballast 2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2)	11	146	1606	2000	3212	0	Power High Efficiency Ballast, 2'x2' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	11	42	810	Ceiling	462	1190	924	550	104	1144	810	2,662	374	\$440.28	\$1,112	\$312	\$1,169	\$20	\$35	\$255
16	210	CLASS	Energy Efficient Magnetic Ballasts 2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U	1	73	73	2000	146	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit  Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-	1	28	4.0	g	28	2000	56	56	45	45	0	90	0	\$13.05	\$52	\$17	\$49	\$20		\$20
16			Lamps & (1) Energy Efficient Magnetic Ballast 2'x4' Recessed Troffer w/ (4) FO32T8 Lamps & (2)	<u>'</u>					-	Power High Efficiency Ballast, 2'x2' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	<u>'</u>										0		-							
17	208	CLASS	Electronic Ballasts 2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U	1	112	112	2000	224	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-	1	42			42	2000	84	84	70	70	0	140	0	\$20.30	\$72	\$26	\$83	\$15		\$15
18	208	CLASS	Lamps & (1) Energy Efficient Magnetic Ballast	2	73	146	2000	292	0	Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	2	28			56	2000	112	112	45	90	0	180	0	\$26.10	\$104	\$35	\$99	\$20	\$0	\$40
19	208	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	13	146	1898	2000	3796	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	13	42	810	Ceiling	546	1190	1092	650	104	1352	810	3,146	442	\$520.34	\$1,255	\$364	\$1,324	\$20	\$35	\$295
20	211/212	CLASS (COMBINED 211+212)	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	14	146	2044	2000	4088	43	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	14	42	810	Ceiling	588	1190	1176	700	104	1456	810	3,388	476	\$560.36	\$1,326	\$390	\$1,401	\$20	\$35	\$315
21	211/212	CLASS (COMBINED 211+212)	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	2	73	146	2000	292	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	2	28			56	2000	112	112	45	90	0	180	0	\$26.10	\$104	\$35	\$99	\$20	\$0	\$40
22	207	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2)	14	146	2044	2000	4088	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	14	42	810	Ceiling	588	1190	1176	700	104	1456	810	3,388	476	\$560.36	\$1,326	\$390	\$1,401	\$20	\$35	\$315
23	207	CLASS	Energy Efficient Magnetic Ballasts 2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U	1	73	73	2000	146	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-	1	28			28	2000	56	56	45	45	0	90	0	\$13.05	\$52	\$17	\$49	\$20	\$0	\$20
24	GRR	GIRL'S RESTROOM IN CORRIDOR-2	Lamps & (1) Energy Efficient Magnetic Ballast 2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1)	4	73	292	3000	876	0	Power High Efficiency Ballast, 2'x2' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	4	42			168	3000	504	504	31	124	0	372	0	\$53.94	\$286	\$104	\$350	\$10	\$0	\$40
2.			Energy Efficient Magnetic Ballast 2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U						0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit  Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-		28					84	84	45		0	135	0							\$20
25	GRR	GIRL'S RESTROOM IN CORRIDOR-2	Lamps & (1) Energy Efficient Magnetic Ballast 2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2)	1	73	73	3000	219	0	Power High Efficiency Ballast, 2'x2' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	1				28	3000				45	0		0	\$19.58	\$52	\$17	\$49	\$20		
26	JC	CUSTODIAN'S CLOSET IN CORRIDOR-2	Energy Efficient Magnetic Ballasts	1	105	105	360	38	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	1	42			42	360	15	15	63	63	0	23	0	\$3.29	\$72	\$26	\$78	\$20	\$0	\$20
27	EL	ELECTRICAL ROOM	2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	1	105	105	360	38	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	1	42			42	360	15	15	63	63	0	23	0	\$3.29	\$72	\$26	\$78	\$20	\$0	\$20
28	BRR	BOY'S RESTROOM	2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	4	73	292	3000	876	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	4	42			168	3000	504	504	31	124	0	372	0	\$53.94	\$286	\$104	\$350	\$10	\$0	\$40
29	BRR	BOY'S RESTROOM	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	1	73	73	3000	219	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	1	28			28	3000	84	84	45	45	0	135	0	\$19.58	\$52	\$17	\$49	\$20	\$0	\$20
30	214	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	14	146	2044	2000	4088	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	14	42	810	Ceiling	588	1190	1176	700	104	1456	810	3,388	476	\$560.36	\$1,326	\$390	\$1,401	\$20	\$35	\$315
31	214	CLASS	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U	2	73	146	2000	292	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	2	28			56	2000	112	112	45	90	0	180	0	\$26.10	\$104	\$35	\$99	\$20	\$0	\$40
32	214	KILM ROOM	Lamps & (1) Energy Efficient Magnetic Ballast 2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2)	1	146	146	360	53	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	1	42			42	360	15	15	104	104	0	37	0	\$5.43	\$72	\$26	\$78	\$20	\$0	\$20
33	SRG		Energy Efficient Magnetic Ballasts 2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2)	3	146	438	2000	876	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	3	42			126	2000	252	252	104	312	0	624	0	\$90.48	\$215	\$78	\$233	\$20		\$60
		·	Energy Efficient Magnetic Ballasts 8' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1)	-					-	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	-										-			·						
34	DISPL.	DISPLAY IN CORRIDOR-2	Energy Efficient Magnetic Ballast 2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U	2	73	146	3000	438	0	Power High Efficiency Ballast  Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-	2	42			84	3000	252	252	31	62	0	186	0	\$26.97	\$78	\$52	\$110	\$10		\$20
35	CDR-3	CORRIDOR-3	Lamps & (1) Energy Efficient Magnetic Ballast	4	73	292	3000	876	18-19	Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	4	28			112	3000	336	336	45	180	0	540	0	\$78.30	\$208	\$69	\$197	\$20	\$0	\$80
36	CDR-3	CORRIDOR-3	2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	6	73	438	3000	1314	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	6	42			252	3000	756	756	31	186	0	558	0	\$80.91	\$429	\$156	\$525	\$10	\$0	\$60
37	210	CONFERENCE ROOM # 1	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	3	146	438	2000	876	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	3	42			126	2000	252	252	104	312	0	624	0	\$90.48	\$215	\$78	\$233	\$20	\$0	\$60
38	0	BOOK STORAGE	2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	105	210	360	76	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	360	30	30	63	126	0	45	0	\$6.58	\$143	\$52	\$155	\$20	\$0	\$40
39	0	TV ROOM	2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	105	210	2000	420	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	2000	168	168	63	126	0	252	0	\$36.54	\$143	\$52	\$155	\$20	\$0	\$40
40	116	NURSE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2)	13	146	1898	2000	3796	64	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	13	42	810	Ceiling	546	1190	1092	650	104	1352	810	3,146	442	\$520.34	\$1,255	\$364	\$1,324	\$20	\$35	\$295
41		RESTROOM IN NURSE	Energy Efficient Magnetic Ballasts 2' Vanity Fixture w/ (2) F20T12 Lamps & (1) Standard	1	56	56	360	20	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-	1	28			28	360	10	10	28	28	0	10	0	\$1.46	\$31	\$26	\$47	\$10		\$10
			Magnetic Ballast	<u> </u>					-	Power High Efficiency Ballast	<u>.</u>							-			-									
42	116	RESTROOM IN NURSE	Incandescent Fixture w/ (1) 60w Incandescent Lamp 2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2)	1	60	60	360	22	0	Incandescent Fixture w/ 15w Screw-In Compact Fluorescent Lamp  Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	1	15			15	360	5	5	45	45	0	16	0	\$2.35	\$7	\$9	\$15	\$0		\$0
43	112	CLASS	Energy Efficient Magnetic Ballasts	1	105	105	2000	210	0	Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	1	42			42	2000	84	84	63	63	0	126	0	\$18.27	\$72	\$26	\$78	\$20		\$20
44	MRR	MEN'S RESTROOM	2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	2	73	146	3000	438	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	3000	252	252	31	62	0	186	0	\$26.97	\$143	\$52	\$175	\$10	\$0	\$20
45	MRR	MEN'S RESTROOM	4' Vanity Luminaire w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	1	73	73	3000	219	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast	1	42			42	3000	126	126	31	31	0	93	0	\$13.49	\$39	\$26	\$55	\$10	\$0	\$10
46	MP	MP/GYM	HID High Bay Fixture w/ (1) 1000w Metal Halide Lamp & Ballast	16	1080	17280	2000	34560	73-88	New 8' Industrial Fixture w/ (12) F54T5HO Lamps & (6) 2/54 T5 Elec. HO Ballasts, Wire Gaurd, Poly Lens	16	726	810	Ceiling	11616	1190	23232	13823	354	5664	810	20,737	9409	\$4,371.16	\$10,725	\$3,354	\$10,844	\$200	\$35	\$3,235
47	SRG-1	CHAIR STORAGE	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	2	146	292	360	105	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	360	30	30	104	208	0	75	0	\$10.86	\$143	\$52	\$155	\$20	\$0	\$40
48	SRG-2	STORAGE-2	8' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1)	2	73	146	360	53	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-	2	42			84	360	30	30	31	62	0	22	0	\$3.24	\$78	\$52	\$110	\$10	\$0	\$20
49	SRG-2	STORAGE-2	Energy Efficient Magnetic Ballast 4' Strip Fluorescent w/ (1) F40T12/34w Lamp & (1)	1	42	42	360	15	0	Power High Efficiency Ballast Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power	1	22			22	360	8	8	20	20	0	7	0	\$1.04	\$31	\$17	\$39	\$10		\$10
			Energy Efficient Magnetic Ballast 8' Strip Fluorescent w/ (2) F40T12/34w Lamps & (1)	<u>'</u>					0	High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-							-	45			-	·	-							
50	SRG-2	STORAGE-2	Energy Efficient Magnetic Ballast	1	73	73	360	26	0	Power High Efficiency Ballast	1	42			42	360	15	15	31	31	0	11	0	\$1.62	\$39	\$26	\$55	\$10	\$0	\$10

Dome-Tech, Inc. | "Building Performance - Delivered" | 510 Thornall St., Suite 170, Edison, NJ 08837



LIGHTING UPGRADE PROJECT CUSTOMER: GREAT MEADOWS SCHOOLS BLDG. CODE: FACILITY SQ. FT. DATE OF AUDIT:

LINE x LINE DETAIL FACILITY: GREAT MEADOWS LIBERTY ELEMENTARY SCHOOL GM-LIBER-ES 44,500 2/13/2012

Part		
Part	NALYSIS	REBATES
No.     No.     No.     No.     No.   No	OR COST ST AFTER	REBATE / REBATE / TOTAL REABATE / / / REBATE / / LINE
No.	3 \$86	\$7 \$0 \$35
Foundation   Property Company Company   Property Company Com	2 \$580	\$10 \$0 \$60
Fig.	3 \$165	\$10 \$0 \$30
St. NTI		\$0 \$0 \$0
Fig.   Company		\$0 \$0 \$0
Position		\$10 \$0 \$20
Correct   Corr		\$10 \$0 \$20 \$20 \$0 \$200
Part   READNO ROCK    Part		\$0 \$0 \$0
Entroy   Company   Compa		\$20 \$0 \$160
Part   Compact		\$15 \$0 \$15
CDR-6   DISPLAY IN CORRIDOR-5   Incandescent Fluture w(1) (1) 0w Incandescent Lamp   3   60   180   3000   540   0   Incandescent Fluture w(15w Screw-In Compact Fluturescent Lamp   3   15   45   3000   135   135   45   135   0   405   0   \$58.73   \$20   \$35.94	5 \$78	\$20 \$0 \$20
Second   County   C	5 \$46	\$0 \$0 \$0
65   J.C   CUSTODIAN'S CLOSET IN CORRIDORS   6" Stip Floorescent W(2) FADT 1/2/34w Lamps & (1)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (1)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (1)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (1)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (1)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (1)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (1)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (1)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)   2/32 Elec. Low Power High Efficiency Belasts w (2) FADT 1/2/34w Lamps & (2)	4 \$350	\$10 \$0 \$40
Energy Efficient Magnetic Ballast	4 \$220	\$10 \$0 \$40
Energy Efficient Magnetic Ballasts    2	6 \$330	\$10 \$0 \$60
HOURS) Incandescent rixure w(1) 60w Incandescent Lamp 3 60 160 200 300 0 Incandescent Fixture w(1) 60w Incandescent Lamp 3 15 45 200 30 30 45 133 0 270 0 \$3.91.5 \$2.00 \$3.91.5 \$3.00 \$3.91.5 \$3.91.5 \$3.00 \$3.91.5 \$3	8 \$1,246	\$20 \$35 \$275
70 MO RESTROOM IN MAIN OFFICE 2' Vanity Fixture w/ (2) F20712 Lamps & (1) Standard 1 56 56 360 20 0 Relamp & Reballast w/ (2) F1778 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast 1 1 56 56 360 20 0 Incandescent Fixture w/ (1) 60w Incandescent Lamp 1 60 60 360 22 0 Incandescent Fixture w/ (1) 60w Incandescent Lamp 1 1 50 15 360 5 5 45 45 0 16 0 \$2.35 \$7 \$8 \$7 \$8 \$7 \$9 \$8 \$9 \$9 \$9 \$9 \$9 \$9 \$9 \$9 \$9 \$9 \$9 \$9 \$9	5 \$46	\$0 \$0 \$0
Magnetic Ballast 1 36 36 20 0 Power High Efficiency Ballast 1 26 28 360 10 10 20 31.46 351 352 351 351 352 351 351 351 351 351 351 351 351 351 351	\$15	\$0 \$0 \$0
72 MO STORAGE IN MAIN OFFICE 2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) 9 146 1314 360 473 97-98 Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Sliver Reflector Kit 9 42 378 360 136 136 136 136 136 136 136 136 136 136		\$10 \$0 \$10
72 NV NURSE 2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) 8 146 1168 2000 2336 0 Relamps & (1) 2/32 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballasts w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballast w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Efficiency Ballast w/ (2) F28T8 Lamps & (3) 2/47 Elec. Low-Power High Eff		\$0 \$0 \$0
Polymer (a) Energy (b) Energy (c)		\$20 \$0 \$180
74 N-RR RESTROOM IN NURSE 2' Vanity Fixture w/(2) FixTB Lamps & (1) Standard 1 56 56 360 20 0 Relamp & Reballast w/ (2) FixTB Lamps & (1) 2/17 Elec. Low- 1 28 360 10 10 28 28 0 10 0 \$1.46 \$31 \$\$\$\$\$		\$20 \$0 \$160 \$10 \$0 \$10
75 N-RR RESTROOM IN NURSE Incandescent Fixture w/ (1) 60w Incandescent Lamp 1 60 60 360 22 0 Incandescent Lamp 1 15 15 360 5 5 45 45 0 16 0 \$2.35 \$7 \$		\$0 \$0 \$0
76 SPG STORAGE IN CORRIDOR 8' Wrap Fluorescent w/ (2) F40T12/34w Lamps & (1) 4 73 202 360 105 0 Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- 4 42 168 360 60 60 31 124 0 45 0 \$6.47 \$156 \$1		\$10 \$0 \$40
77 FCV FACILITY ROOM 2'x4' Recessed Troffer w/ (3) F40T12/34w Lamps & (2) 6 105 630 2000 1260 47.48 Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- 6 42 252 2000 504 504 63 378 0 756 0 \$10.62 \$420 \$1.05		\$20 \$0 \$120
For FACULTY ROOM (VENDING MACHINES AREA)  FOR FACULTY ROOM (VENDING MACH	4 \$310	\$20 \$0 \$80
79 102 CLASS 2'x4' Recessed Troffer W (4) F40T12/34W Lamps & (2) 18 146 2628 2000 5256 115-117 Relamp & Relamp	4 \$1,711	\$20 \$35 \$395
80 102 RESTROOM IN CLASS Incandescent Fixture w/ (1) 60w Incandescent Lamp 1 60 60 360 22 0 Incandescent Fixture w/ 15w Screw-in Compact Fluorescent Lamp 1 15 360 5 5 45 45 0 16 0 \$2.35 \$7 \$1	\$15	\$0 \$0 \$0
81 103 CLASS 2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) 17 146 2482 2000 4964 0 Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit 17 42 810 Ceiling 714 1190 1428 850 104 1768 810 4,114 578 \$680.44 \$1,541 \$4	8 \$1,634	\$20 \$35 \$375
82 103 CLASS 2'X2' Recessed Troffer W/ (2) FB40T12/34w 6"-U 1 73 73 2000 146 0 Relamp & Reballast W/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- 1 28 2000 56 56 45 45 0 90 0 \$13.05 \$52 \$1	7 \$49	\$20 \$0 \$20
83 103 RESTROOM IN CLASS Incandescent Fixture w/ (1) 60w Incandescent Lamp 1 60 60 360 22 0 Incandescent Fixture w/ 15w Screw-In Compact Fluorescent Lamp 1 15 360 5 5 45 45 0 16 0 \$2.35 \$7 \$	\$15	\$0 \$0 \$0
84 104 CLASS 2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) 17 146 2482 2000 4964 75 Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballasts, 2x4' Silver Reflection Ballasts, 2x4' Silver Refl		\$20 \$35 \$375
85 104 CLASS 2'x2' Recessed Troffer w( /2) F840T12/34w 6'-U 1 73 73 2000 146 0 Relamps & (1) 2/17 Elec. Low- 1 28 28 2000 56 56 45 45 0 90 0 \$13.05 \$52 \$1		\$20 \$0 \$20
60 WKK WOWEN SESTROOM Energy Efficient Magnetic Ballast 1 73 73 3000 219 0 Power High Efficiency Ballast 1 42 42 3000 120 120 31 31 0 93 0 \$13.49 \$339 \$22		\$10 \$0 \$10
87 WRR WOMEN'S RESTROOM Energy Efficient Magnetic Ballast 2 73 146 3000 438 0 Power High Efficiency Ballast, 2'x4' Silver Reflector Kit 2 42 84 3000 252 252 31 62 0 186 0 \$26.97 \$14.3 \$55		\$10 \$0 \$20
86 SKG STORAGE Energy Efficient Magnetic Ballast 2 73 146 360 33 0 Power High Efficiency Ballast, 2'x4' Silver Reflector Kit 2 42 84 360 30 30 31 62 0 22 0 \$3.24 \$143 \$50 \$60 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$1		\$10 \$0 \$20 \$10 \$0 \$30
69 BKR B013 RE31ROUM Energy Efficient Magnetic Ballast 3 73 219 3000 697 0 Power High Efficiency Ballast, 2'x4' Silver Reflector Kit 3 42 126 3000 376 376 31 93 0 279 0 \$40.40 \$213 \$97 \$97 \$97 \$97 \$97 \$97 \$97 \$97 \$97 \$97		\$10 \$0 \$30 \$10 \$0 \$10
90 JC CUSTODIAN'S RCUM Energy Efficient Magnetic Ballast 1 73 73 360 26 0 Power High Efficiency Ballast, 2'x4' Silver Reflector Kit 1 42 42 360 15 15 31 31 0 11 0 \$1.02 \$7.2 \$2.0 \$2.0 \$2.0 \$2.0 \$2.0 \$2.0 \$2.0 \$2		\$0 \$0 \$0
92 105 CIASS 2'x4 Recessed Troffer w/ (4) F40T12'/34w Lamps & (2) 17 146 2492 2000 4064 0 Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- 17 42 810 Colling 714 1100 1479 850 104 1759 850 444 579 850 444 579		\$20 \$35 \$375
93 105 CLASS 2'X2' Recessed Troffer w/ (2) FB40T12/34w 6"-U 1 73 73 2000 146 0 Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- 1 28 2000 56 56 45 45 0 00 0 \$13.05 \$52 \$1		\$20 \$0 \$20
94 GRP GIRL'S RESTROOM 2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) 4 73 202 3000 876 0 Relamps & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- 4 42 168 3000 504 504 31 124 0 372 0 \$53.04 \$286 \$11		\$10 \$0 \$40
Energy Efficient Magnetic Ballast	8 \$1,634	\$20 \$35 \$375
96 106 CLASS 2'X2' Recessed Troffer w. (2) FB40T12/34w 6'-U 1 73 73 2000 146 0 Relamps & Reballast w. (2) F17T8 Lamps & (1) Energy Efficient Magnetic Ballast 1 73 73 2000 146 0 Power High Efficiency Ballast x. (2) Silver Reflector Kit 1 28 28 2000 56 56 45 45 0 90 0 \$13.05 \$52 \$1	7 \$49	\$20 \$0 \$20
97 111 KINDERGARDEN 2'44' Recesses Troffer w(4) F40T12'34w Lamps & (2) 20 146 292 2000 5840 0 Relamp & (1) 2798T8 Lamps & (1) 2792 Effective Kit 20 42 810 Ceiling 840 1190 1680 1000 104 2080 810 4,840 680 \$800.52 \$1,755 \$5	6 \$1,866	\$20 \$35 \$435
98 111 KINDERGARDEN 2'X2' Recessed Troffer W. (2) FB40712/34w 6"-U 2 73 146 2000 292 0 Relamp & Reballast W. (2) F1718 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast, 2'X2' Silver Reflector Kit 2 28 56 2000 112 112 45 90 0 180 0 \$26.10 \$104 \$35.00 \$35	5 \$99	\$20 \$0 \$40
99 111 STORAGE IN 111 2'X4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) 1 73 73 360 26 0 Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'X4' Silver Reflector Kit 1 42 42 360 15 15 31 31 0 11 0 \$1.62 \$72 \$2.00 \$1.62 \$72 \$2.00 \$1.62 \$1.6	\$ \$	\$20 \$0 \$40

Dome-Tech, Inc. | "Building Performance - Delivered" | 510 Thornall St., Suite 170, Edison, NJ 08837

2 of 3



LIGHTING UPGRADE PROJECT CUSTOMER: GREAT MEADOWS SCHOOLS BLDG. CODE: FACILITY SQ. FT. DATE OF AUDIT:

LINE x LINE DETAIL

FACILITY: GREAT MEADOWS LIBERTY
ELEMENTARY SCHOOL

GM-LIBER-ES 44,500 2/13/2012

DOI	ne-rech, inc	•								ELLINENTANT GOTTOGE																				
	S	PACE DESCRIPTION		EXISTING	FIXTURES						REPLAC	EMENT FI	IXTURES								ENE	ERGY ANAL	YSIS			COST ANALYS	IS		REBATES	
LINE	PRINT NUMBER	SPACE DESCRIPTION	PRE FIXTURE DESCRIPTION	PRE FIXT. QTY	PRE WATTS / FIXT.	PRE TOTAL WATTS / LINE	DEFAULT ANNUAL HOURS 2000	PRE ANNUAL KWH	PRE AVERAGE FOOT - CANDELS	PROPOSED FIXTURE DESCRIPTION	POST FIXT. QTY	POST WATT / FIXT.	TS HOURS	SENSOR TYPE	POST TOTAL WATTS / LINE	ANNUAL HOURS	POST ANNUAL KWH	POST ANNUAL KWH WITH OCC SENSOR	WATTS SAVED / FIXT.	TOTAL WATTS SAVED / LINE	ANNUAL HOURS SAVED	ANNUAL KWH SAVED FROM FIXT.	ANNUAL KWH SAVED WITH OCC	TOTAL ANNUAL\$ SAVINGS / LINE (INCLUDING SENSORS) \$0.145	MATERIAL COST PER LINE	TOTAL LABOR COST PER LINE	TOTAL COST AFTER REBATES	REBATE / FIXT.	REBATE / SENSOR	TOTAL REABATE / LINE
100	111	RESTROOM IN 111	Incandescent Fixture w/ (1) 60w Incandescent Lamp	1	60	60	360	22	0	Incandescent Fixture w/ 15w Screw-In Compact Fluorescent Lamp	1	15			15	360	5	5	45	45	0	16	0	\$2.35	\$7	\$9	\$15	\$0	\$0	\$0
101	107	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	17	146	2482	2000	4964	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	17	42	810	Ceiling	714	1190	1428	850	104	1768	810	4,114	578	\$680.44	\$1,541	\$468	\$1,634	\$20	\$35	\$375
102	107	CLASS	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	1	73	73	2000	146	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	1	28			28	2000	56	56	45	45	0	90	0	\$13.05	\$52	\$17	\$49	\$20	\$0	\$20
103	110	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	17	146	2482	2000	4964	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	17	42	810	Ceiling	714	1190	1428	850	104	1768	810	4,114	578	\$680.44	\$1,541	\$468	\$1,634	\$20	\$35	\$375
104	110	CLASS	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	1	73	73	2000	146	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	1	28			28	2000	56	56	45	45	0	90	0	\$13.05	\$52	\$17	\$49	\$20	\$0	\$20
105	108	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	17	146	2482	2000	4964	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	17	42	810	Ceiling	714	1190	1428	850	104	1768	810	4,114	578	\$680.44	\$1,541	\$468	\$1,634	\$20	\$35	\$375
106	108	CLASS	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	1	73	73	2000	146	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	1	28			28	2000	56	56	45	45	0	90	0	\$13.05	\$52	\$17	\$49	\$20	\$0	\$20
107	109	CLASS	2'x4' Recessed Troffer w/ (4) F40T12/34w Lamps & (2) Energy Efficient Magnetic Ballasts	17	146	2482	2000	4964	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	17	42	810	Ceiling	714	1190	1428	850	104	1768	810	4,114	578	\$680.44	\$1,541	\$468	\$1,634	\$20	\$35	\$375
108	109	CLASS	2'x2' Recessed Troffer w/ (2) FB40T12/34w 6"-U Lamps & (1) Energy Efficient Magnetic Ballast	1	73	73	2000	146	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low- Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	1	28			28	2000	56	56	45	45	0	90	0	\$13.05	\$52	\$17	\$49	\$20	\$0	\$20
109	CDR-4	CORRIDOR-4	2'x4' Recessed Troffer w/ (2) F40T12/34w Lamps & (1) Energy Efficient Magnetic Ballast	20	73	1460	3000	4380	16	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low- Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	20	42			840	3000	2520	2520	31	620	0	1,860	0	\$269.70	\$1,430	\$520	\$1,750	\$10	\$0	\$200
110	EXT	EXTERIOR	Relamp w/ (1) 20 watt Compact Fluorescent Screw-In, w/ PAR38 Reflector	2	18	36	900	32	0	None	2	18			36	900	32	32	0	0	0	0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0
111	EXT	EXTERIOR	Incandescent Fixture w/ (1) 60w Incandescent PAR 38 Lamp	1	60	60	900	54	0	Relamp w/ (1) 20 watt Compact Fluorescent Screw-In, w/ PAR38 Reflector	1	18			18	900	16	16	42	42	0	38	0	\$5.48	\$16	\$9	\$17	\$7	\$0	\$7
112	EXT	EXTERIOR	HID Wall Mounted Fixture w/ (1) 100w High Pressure Sodium	13	130	1690	900	1521	0	New Wall Pack Fixture w/ (1) 70w ICETRON Induction Lamp & Induction Ballast, Universal Voltage	13	70			910	900	819	819	60	780	0	702	0	\$101.79	\$4,225	\$676	\$3,991	\$70	\$0	\$910
113	EXT	EXTERIOR	Incandescent Fixture w/ (1) 60w Incandescent Lamp	10	60	600	900	540	0	Incandescent Fixture w/ 15w Screw-In Compact Fluorescent Lamp	10	15			150	900	135	135	45	450	0	405	0	\$58.73	\$65	\$87	\$152	\$0	\$0	\$0
				668		93,412		189,624			668				37,676		78,058	57,754		55,736	17,810	131,870	20,304	\$22,065	\$61,077	\$19,881	\$65,720			\$15,238

Dome-Tech, Inc. | "Building Performance - Delivered" | 510 Thornall St., Suite 170, Edison, NJ 08837 www.dome-tech.com



## LIGHTING RETROFIT SUMMARY FOR GREAT MEADOWS MIDDLE SCHOOL

BUILDING INFOR	RMATION		EXISTIN	G FIXTURE	S		PROP	OSED FIXTURES				SAV	/INGS							
BUILDING	SQ. FT.	PRE TOTAL FIXT. QTY	PRE TOTAL FIXT. WATTS	PRE ANNUAL KWH CONSUM PTION	WAIIS	POST TOTAL FIXT. QTY	POST TOTAL FIXT. WATTS	POST ANNUAL KWH CONSUMPTION	POST WATTS / SQ. FT	WATTS SAVED	ANNUAL KWH SAVED	ANNUAL KWH SAVED WITH SENSORS	ANNUAL SAVINGS \$ FIXT.	ANNUAL SAVINGS \$ SENSORS	ANNUAL SAVINGS \$ TOTAL	CO2 REDUCTION (TONS)	NJ SMART START REBATE \$	INSTALLED COST \$ (WITH MARKUP)	SIMPLE PAYBACK YEARS	SIMPLE PAYBACK YEARS (W/O REBATES)
GREAT MEADOWS MIDDLE SCHOOL	64,500	946	98,981	185,041	1.53	946	57,887	90,298.2	0.90	41,094	94,743	19,810	\$13,643	\$2,853	\$16,496	31.3	\$20,440	\$142,097	7.4	8.6

14%	PERCENTAGE OF REBATES IN TOTAL INSTALLED COST
49%	PERCENTAGE OF CONSUMPTION COMPARE TO EXISTING STATE
40%	EXISTING PERCENTAGE OF LIGHTING ENERGY CONSUMPTION OF THE WHOLE BUILDING
20%	PROPOSED PERCENTAGE OF LIGHTING ENERGY CONSUMPTION OF THE WHOLE BUILDING



LIGHTING UPGRADE PROJECT CUSTOMER: GREAT MEADOWS SCHOOLS BLDG. CODE: FACILITY SQ. FT. DATE OF AUDIT:

LINE x LINE DETAIL FACILITY: GREAT MEADOWS MIDDLE SCHOOL GM-MS 64,500 2/13/2012

Part	Dome-Tech, Inc.  SPACE DESCRIPTION		ic.	EVICTING ENTINES																										
Part			SPACE DESCRIPTION	EXIST	ING FIXT	TURES					REPL	ACEMENT	FIXTURES	3								ENERGY A	IALYSIS		(	COST ANALYSI	s		REBATES	
	LINE	PRINT NUMBER	SPACE DESCRIPTION	PRE FIXTURE DESCRIPTION		WATTS /	TOTAL WATTS /	ANNUAL HOURS	ANNUAL	AVERAGE FOOT	PROPOSED FIXTURE DESCRIPTION	FIXT.	WATTS /	HOURS		TOTAL WATTS /		POST ANNUAL KWH	NUAL XWH VITH OCC	SAVED /	VATTS AN SAVED H	NUAL KV DURS SAV	H KWH ED SAVE OM WITH	SAVINGS / LINE (INCLUDING SENSORS)	COST PER	COST PER	COST AFTER	1	1	1
March   Marc								2000									2000	SE	NSOR					90.144						
No.	1	CDR-1	CORRIDOR-1 (407-401)	Ballast	29	58	1682	3000	5046	24-25		29	42			1218	3000	3654 3	654	16	464	0 1,3	92 0	\$200.45	\$2,074	\$754	\$2,538	\$10	\$0	\$290
No.   Column   Colu	2	CDR-1	CORRIDOR-1 (BETWEEN RESTROOMS)	Lamps & Electronic Ballast	3	54	162	3000	486	0		3	54			162	3000	486	186	0	0	0 (	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0
No.   Continue	3	408	CLASS	Ballast	12	88	1056	2000	2112	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008	500	46	552	310 1,5	12 408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
Part	4	409	CLASS	Ballast	12	88	1056	2000	2112	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008	000	46	552	310 1,5	12 408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
Mathematical Continue of the	5	407	CLASS	Ballast	12	88	1056	2000	2112	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008	000	46	552	310 1,5	12 408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
No.   Column   Colu	6	406	CLASS	Ballast	12	88	1056	2000	2112	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008	500	46	552	310 1,5	12 408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
Part	7	MRR	MEN'S RESTROOM	Ballast	3	58	174	3000	522	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	3	42			126	3000	378	378	16	48	0 14	4 0	\$20.74	\$215	\$78	\$263	\$10	\$0	\$30
Part	8	WRR	WOMEN'S RESTROOM	Ballast	3	58	174	3000	522	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	3	42			126	3000	378	378	16	48	0 14	4 0	\$20.74	\$215	\$78	\$263	\$10	\$0	\$30
Mathematical Continues   Mathematical Contin	9	405	S.G.I.	Ballast	5		440	2000	880	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	5				210	2000	420	120	46	230	0 46	0 0	\$66.24	\$358	\$130	\$413	\$15	\$0	\$75
No.   Column   Colu	10			Ballast	1					0	High Efficiency Ballast	1										_		·					**	
Second   S	11	SRG	LARGE STORAGE	Ballast	2			360	42	0	High Efficiency Ballast	2	42			84	360	30	30	16	32	0 1	2 0	\$1.66	\$78	\$52	\$110	\$10	\$0	
1	12			Ballast	12					0	High Efficiency Ballast, 2'x4' Silver Reflector Kit				Ů															
Second Column	13			Ballast						0	High Efficiency Ballast, 2'x4' Silver Reflector Kit				_				-	-										
Part	14			Ballast						0	High Efficiency Ballast, 2'x4' Silver Reflector Kit				5															
Second	15			Ballast						0	High Efficiency Ballast, 2'x4' Silver Reflector Kit													·				·		
Part	16			Ballast	12					0	High Efficiency Ballast, 2'x4' Silver Reflector Kit				Ů				— H											
	17			Ballast	12					56-62	High Efficiency Ballast, 2'x4' Silver Reflector Kit									.0				,						
Column   C	18			Ballast	15					0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	15		810	Ceiling															
Column   C	19			Ballast	5					0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	5								-				·						
Column   C	20			Ballast	14					55-56	High Efficiency Ballast, 2'x4' Silver Reflector Kit	14		810	Ceiling					-										
Part	21			Ballast	ь					0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	6												·						
Part	22			Ballast	30					0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	30							_	-	480								**	
	24				12					0		12		910	Coiling					-	552			·	7.				*	
Part   Class   Color	25			Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic						0														·						
Part   Dec   Control   C	26			Bandot	12					0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power													·		<u> </u>				
March   March   State   March   Marc	27			Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	12					0	3 ,				Ů															·
Column   C	28			Dallast	3					0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	3		810	Cennig															
25   10   10   10   10   10   10   10   1	29				3					0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	3								16				·		***				
20   20   20   20   20   20   20   20	30			2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	5					0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	5		810	Ceilina					46				·					7.	
2   SPG	31			4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic	1					0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	1								16							<del>                                     </del>			
39   CLASS   29F Recount Trefer in [9-22] Early 5   19-22]   19-22	32		STORAGE	Dandot	2	58	116	360	42	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	2	42			84	360	30	30	16	32	0 1	2 0	\$1.66		\$52			\$0	
Second   Carbon   Part   Carbon   Part   Carbon   Carbo	33	310	CLASS		12	88	1056	2000	2112	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	12	42	810	Ceiling	504	1190	1008	500	46	552	310 1,5	12 408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
State   CLASS   224 Recessed From (v) [F2774 Lamps 4 (1) Excross   12   88   1056   200   2112   0   Refulence (sheep)   124   24   810   Celegy   544   110   1008   600   46   552   610   5.52   600   5.52   600   5.52   600   5.52   600   5.52   600   5.52   600   5.52   600   5.52   600   6.52   60	34	311	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	12	88	1056	2000	2112	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	12	42	810	Ceiling	504	1190	1008	600	46	552	310 1,5	12 408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
Dec	35	303	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	12	88	1056	2000	2112	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	12	42	810	Ceiling	504	1190	1008	600	46	552	310 1,5	12 408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
17   12   12   12   13   13   13   14   15   15   15   15   15   15   15	36	304	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	12	88	1056	2000	2112	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	12	42	810	Ceiling	504	1190	1008	600	46	552	310 1,5	12 408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
Second   CLASS   2'M Recessed Traffer w (3)   5'TEX Lamps & (1)   Exercise   12   46-40   Relating & (2)   EXT Lamps & (1)   Exercise   14   48   122   200   2464   0   Relating & (2)   EXT Lamps & (1)   Exercise   14   42   810   Celling   588   1190   1176   700   48   644   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   8322   44   810   1,764   476   1,764	37	312A+B	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	12	88	1056	2000	2112	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	12	42	810	Ceiling	504	1190	1008	500	46	552	310 1,5	12 408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
29 313 CLASS	38	301	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	12	88	1056	2000	2112	45-49	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	12	42	810	Ceiling	504	1190	1008	600	46	552	310 1,5	12 408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
40 SRG STORAGE IN CORRIDOR 3 4 **Industrial Hoofs w(2) FASTE Lamps & (1) Electronic Ballists**  41 J.C. CUSTODIAN'S CLOSET 4 **Industrial Hoofs w(2) FASTE Lamps & (1) Electronic Ballists**  42 CDR-3 CORRIDOR-3 2**IR Research Trifler w(2) FASTE Lamps & (1) Electronic Ballists**  43 CDR-3 SMALL STARAGE TO DRESSING 4 **STARAGE TO DRESSING A **Industrial Hoofs w(2) FASTE Lamps & (1) Electronic Ballists**  44 CDR-3 MAN LOBBY (PART OF CORRIDOR-3) 2**IR Research Trifler w(2) FASTE Lamps & (1) Electronic Ballists**  45 CDR-3 MAN LOBBY (PART OF CORRIDOR-3) 1**S Printer Mooring Date w(4) FASTE Lamps & (1) Electronic Ballists**  46 CDR-3 MAN LOBBY (PART OF CORRIDOR-3) 1**S Printer Mooring Date w(4) FASTE Lamps & (1) Electronic Ballists**  47 CDR-3 WESTBULLE BY MAN LOBBY (PART OF CORRIDOR-3) 1**S Printer Mooring Date w(4) FASTE Lamps & (1) Electronic Ballists**  48 110 CDR-3 WESTBULLE BY MAN POFFICE DATE DATE DATE DATE DATE DATE DATE DAT	39	313	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	14	88	1232	2000	2464	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	14	42	810	Ceiling	588	1190	1176	700	46	644	310 1,7	64 476	\$322.64	\$1,326	\$390	\$1,471	\$15	\$35	\$245
4 D.C. CUSTODIANS CLOSET 4 Notwarfal Hood w(2) F3278 Lamps & (1) Electronic Bullst M (2) F3278 Lamps & (1) Electro	40	SRG	STORAGE IN CORRIDOR -3	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic	1	58	58	360	21	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	1	42			42	360	15	15	16	16	0 6	0	\$0.83	\$39	\$26	\$55	\$10	\$0	\$10
CDR-3 CORRIDOR-3	41	JC	CUSTODIAN'S CLOSET	4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic	1	58	58	360	21	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	1	42			42	360	15	15	16	16	0 6	0	\$0.83	\$39	\$26	\$55	\$10	\$0	\$10
43 CDR-3 SMALL STARCASE TO DREESING A STOP Fluorescent W (2) F3278 Lamps & (1) Electronic Balast R (2) P378 Lamps & (1) P3	42	CDR-3	CORRIDOR-3		38	58	2204	3000	6612	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	38	42			1596	3000	4788 4	788	16	608	0 1,8	24 0	\$262.66	\$2,717	\$988	\$3,325	\$10	\$0	\$380
44 CDR-3 MAIN LOBBY (PART OF CORRIDOR-3) 2*4' Recessed Troffer wi (2) F3278 Lamps & (1) Electronic Ballast Main LOBBY (PART OF CORRIDOR-3) 2*4' Recessed Troffer wi (2) F3278 Lamps & (1) Electronic Ballast Main LOBBY (PART OF CORRIDOR-3) 4*4' Recessed Troffer wi (2) F3278 Lamps & (1) Electronic Ballast Main LOBBY (PART OF CORRIDOR-3) 4*4' Recessed Troffer wi (2) F3278 Lamps & (1) Electronic Ballast Main LOBBY (PART OF CORRIDOR-3) 4*5 with Part of the Main Lobby (PART OF CORRIDOR-3) 4*5 with Part of the Ma	43	CDR-3			1	58	58	3000	174	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	1	42			42	3000	126	126	16	16	0 4	0	\$6.91	\$39	\$26	\$55	\$10	\$0	\$10
45   CDR-3   MAIN LOBBY (PART OF CORRIDOR-3)   1'x8' Pendant Mounted Box w' (4) F032T8 Lamps & (1)   6   112   672   3000   2016   0   Relamp & Reballast w' (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power HE   6   42   42   500   5120	44	CDR-3		2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	6	58	348	3000	1044	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	6	42			252	3000	756	756	16	96	0 28	8 0	\$41.47	\$429	\$156	\$525	\$10	\$0	\$60
46 CDR-3 MAIN LOBBY (PART OF CORRIDOR-3) 1'x4' Pendant Mounted Box w/ (2) F3278 Lamps & (1) 2 58 116 3000 348 0 Relamp & Reballast w/ (1) F2878 Lamp & (1) 2/32 Elec. Low-Power HE 2 22 1 132 36 72 0 216 0 \$31.10 \$91 \$69 \$130 \$36 \$72 \$0 \$30 \$30 \$30 \$30 \$30 \$30 \$30 \$30 \$30	45	CDR-3	MAIN LOBBY (PART OF CORRIDOR-3)		6	112	672	3000	2016	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power HE	6	42			252	3000	756	756	70	420	0 1,2	60 0	\$181.44	\$390	\$208	\$478	\$20	\$0	\$120
47 CDR-3 VESTIBULE BY MAIN OFFICE New 2'x2' Recessed Troffer w/ (2) FB031T8 Lamps & (1) 5 58 290 3000 870 0 Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power 5 28 140 3000 420 420 30 150 0 450 0 \$64.80 \$260 \$87 \$272 \$15 \$0 \$75 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10	46	CDR-3	MAIN LOBBY (PART OF CORRIDOR-3)	1'x4' Pendant Mounted Box w/ (2) F32T8 Lamps & (1)	2	58	116	3000	348	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 2/32 Elec. Low-Power HE	2	22			44	3000	132	132	36	72	0 2	6 0	\$31.10	\$91	\$69	\$130	\$15	\$0	\$30
48 110 CLASS 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power Ballast w/ (2) F28T8 Lamps & (	47	CDR-3	VESTIBULE BY MAIN OFFICE	New 2'x2' Recessed Troffer w/ (2) FB031T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast	5	58	290	3000	870	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power	5	28			140	3000	420	120	30	150	0 45	0 0	\$64.80	\$260	\$87	\$272	\$15	\$0	\$75
49 109 FACULTY ROOM 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic 12 58 696 2000 1392 0 Relamp & Reballasts w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power 12 42 50 384 0 \$55.30 \$858 \$312 \$1.050 \$10 \$0 \$120 \$120 \$120 \$120 \$120 \$120 \$	48	110	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	15	88	1320	2000	2640	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	15	42	810	Ceiling	630	1190	1260	750	46	690	310 1,8	90 510	\$345.69	\$1,398	\$416	\$1,554	\$15	\$35	\$260
50 FLPM FLECTBIOL POOM 4'Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic 1 22 22 9760 102 102 102 10 10 0 98 0 \$12.61 \$21 \$1.00	49	109	FACULTY ROOM		12	58	696	2000	1392	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	12	42			504	2000	1008 1	800	16	192	0 38	4 0	\$55.30	\$858	\$312	\$1,050	\$10	\$0	\$120
	50	EL-RM	ELECTRICAL ROOM		1	32	32	8760	280	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High	1	22			22	8760	193	193	10	10	0 8	0	\$12.61	\$31	\$17	\$39	\$10	\$0	\$10



LIGHTING UPGRADE PROJECT CUSTOMER: GREAT MEADOWS SCHOOLS BLDG. CODE: FACILITY SQ. FT. DATE OF AUDIT:

LINE x LINE DETAIL FACILITY: GREAT MEADOWS MIDDLE SCHOOL GM-MS 64,500 2/13/2012

Dome-Tech, Inc.  SPACE DESCRIPTION		ic.																												
		SPACE DESCRIPTION	EXISTI	NG FIXT	TURES					REPL	ACEMEN	T FIXTURE	s								ENER	SY ANALYS	SIS			COST ANALYSI	s		REBATES	
LINE	PRINT NUMBER	SPACE DESCRIPTION	PRE FIXTURE DESCRIPTION	PRE FIXT. QTY	PRE WATTS / FIXT.	PRE TOTAL WATTS / LINE	DEFAULT ANNUAL HOURS	PRE ANNUAL KWH	PRE AVERAGE FOOT - CANDELS	PROPOSED FIXTURE DESCRIPTION	POST FIXT. QTY	POST WATTS / FIXT.	ANNUAL HOURS SAVED	SENSOR TYPE	POST TOTAL WATTS / LINE	ANNUAL HOURS	POST ANNUAL KWH	POST ANNUAL KWH WITH OCC SENSOR	WATTS SAVED / FIXT.	TOTAL WATTS SAVED / LINE	ANNUAL HOURS SAVED	ANNUAL KWH SAVED FROM FIXT.	ANNUAL KWH SAVED WITH OCC	TOTAL ANNUAL\$ SAVINGS / LINE (INCLUDING SENSORS) \$0.144	MATERIAL COST PER LINE	TOTAL LABOR COST PER LINE	TOTAL COST AFTER REBATES	REBATE / FIXT.	REBATE / SENSOR	TOTAL REABATE / LINE
E1	GYM	SMALL STAIRCASE TO STAGE	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic	1	32	32	3000	96	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High	-1	22			22	3000	66	66	10	10	0	30	0	\$4.32	\$31	\$17	\$39	\$10	\$0	\$10
			Ballast HID High Bay Fixture w/ (1) 400w Metal Halide Lamp &	10						Efficiency Ballast New 2'x4' Singlepoint-Mount High Bay w/ (6) F54T5HO Lamps & (3) 2/54											-		0						**	
52	STAGE	STAGE	Ballast HID High Bay Fixture w/ (1) 400w Metal Halide Lamp &		455	4550	2000	9100	21-33	T5 Elec. HO Ballasts, Wire Guard, Occupancy Sensor  New 2'x4' Singlepoint-Mount High Bay w/ (6) F54T5HO Lamps & (3) 2/54	10	351			3510	2000		7020	104	1040	0	2,080	0	\$299.52	\$3,900	\$1,040	\$3,940	\$100	\$0	\$1,000
53	GYM	GYM	Ballast 4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic	20	455	9100	2000	18200	0	T5 Elec. HO Ballasts, Wire Guard, Occupancy Sensor Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	20	351	810	Ceiling	7020	1190		8354	104	2080	810	9,846	5686	\$2,236.67	\$7,800	\$2,080	\$7,845	\$100	\$35	\$2,035
54	0	WEIGHT ROOM	Ballast  4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic	4	58	232	2000	464	0	High Efficiency Ballast Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High	4	42			168	2000		336	16	64	0	128	0	\$18.43	\$156	\$104	\$220	\$10	\$0	\$40
55	GLR	GIRL'S LOCKER ROOM - VESTIBULE	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	1	32	32	2000	64	0	Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	1	22			22	2000	44	44	10	10	0	20	0	\$2.88	\$31	\$17	\$39	\$10	\$0	\$10
56	GLR	GIRL'S LOCKER ROOM - MAIN AREA	Ballast	6	58	348	2000	696	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	6	42			252	2000	504	504	16	96	0	192	0	\$27.65	\$429	\$156	\$525	\$10	\$0	\$60
57	GLR	GIRL'S LOCKER ROOM	Incandescent Fixture w/ (1) 60w Incandescent Lamp	3	60	180	2000	360	0	Incandescent Fixture w/ 15w Screw-In Compact Fluorescent Lamp Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	3	15			45	2000	90	90	45	135	0	270	0	\$38.88	\$20	\$26	\$46	\$0	\$0	\$0
58	GLR-OFC	OFFICE IN GIRL'S LOCKER ROOM	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	2	88	176	2000	352	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	2000	168	168	46	92	0	184	0	\$26.50	\$143	\$52	\$165	\$15	\$0	\$30
59	BLR	BOY'S LOCKER ROOM - VESTIBULE	4' Strip Fluorescent w/ (1) F32T8 Lamp & (1) Electronic Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	1	32	32	2000	64	0	Relamp & Reballast w/ (1) F28T8 Lamp & (1) 1/32 Elec. Low-Power High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	1	22			22	2000	44	44	10	10	0	20	0	\$2.88	\$31	\$17	\$39	\$10	\$0	\$10
60	BLR	BOY'S LOCKER ROOM - MAIN AREA	Ballast	6	58	348	2000	696	31	High Efficiency Ballast, 2'x4' Silver Reflector Kit	6	42			252	2000	504	504	16	96	0	192	0	\$27.65	\$429	\$156	\$525	\$10	\$0	\$60
61	BLR	BOY'S LOCKER ROOM	Incandescent Fixture w/ (1) 60w Incandescent Lamp	3	60	180	2000	360	0	Incandescent Fixture w/ 15w Screw-In Compact Fluorescent Lamp  Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	3	15			45	2000	90	90	45	135	0	270	0	\$38.88	\$20	\$26	\$46	\$0	\$0	\$0
62	BLR-OFC	OFFICE IN BOY'S LOCKER ROOM	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast 4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic	2	88	176	2000	352	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	2	42			84	2000	168	168	46	92	0	184	0	\$26.50	\$143	\$52	\$165	\$15	\$0	\$30
63	GYM SRG # 2	2 GYM STORAGE # 2	Ballast  4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic  Ballast	3	58	174	360	63	0	High Efficiency Ballast	3	42			126	360	45	45	16	48	0	17	0	\$2.49	\$117	\$78	\$165	\$10	\$0	\$30
64	STAGE SRG	STAGE STORAGE # 1	Ballast	5	58	290	360	104	0	Relamp & Reballast W (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast	5	42			210	360	76	76	16	80	0	29	0	\$4.15	\$195	\$130	\$275	\$10	\$0	\$50
65	STAGE SRG	STAGE STORAGE # 2	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	3	58	174	360	63	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit  Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	3	42			126	360	45	45	16	48	0	17	0	\$2.49	\$215	\$78	\$263	\$10	\$0	\$30
66	WRR	WOMEN'S RESTROOM	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast 4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic	3	58	174	3000	522	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit  Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	3	42			126	3000		378	16	48	0	144	0	\$20.74	\$215	\$78	\$263	\$10	\$0	\$30
67	JC	CUSTODIAN'S CLOSET	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	1	58	58	360	21	0	High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	1	42			42	360	15	15	16	16	0	6	0	\$0.83	\$39	\$26	\$55	\$10	\$0	\$10
68	MRR	MEN'S RESTROOM	Ballast	2	58	116	3000	348	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	2	42			84	3000		252	16	32	0	96	0	\$13.82	\$143	\$52	\$175	\$10	\$0	\$20
69	206	CLASS	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	18	88	1584	2000	3168	38-48	High Efficiency Ballast, 2'x4' Silver Reflector Kit  Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	18	42	810	Ceiling	756	1190		900	46	828	810	2,268	612	\$414.82	\$1,612	\$494	\$1,801	\$15	\$35	\$305
70	207	CLASS	Ballast	12	88	1056	2000	2112	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit	12	42	810	Ceiling	504	1190	1008	600	46	552	810	1,512	408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
71	209	STORAGE / BAND ROOM	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	4	58	232	360	84	0	Relamp & Reballast W (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast W (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	4	42			168	360	60	60	16	64	0	23	0	\$3.32	\$286	\$104	\$350	\$10	\$0	\$40
72	209 REC/MECHA	OFFICE ON STAGE	Ballast  4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic	2	58	116	2000	232	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	2	42			84	2000	168	168	16	32	0	64	0	\$9.22	\$143	\$52	\$175	\$10	\$0	\$20
73	N	RECEIVING / MECHANICAL ROOM	Ballast 4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic	9	58	522	8760	4573	0	High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	9	42			378	8760		3311	16	144	0	1,261	0	\$181.65	\$351	\$234	\$495	\$10	\$0	\$90
74	WAR	MINI-WAREHOUSE	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	3	58	174	3000	522	0	High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	3	42			126	3000		378	16	48	0	144	0	\$20.74	\$117	\$78	\$165	\$10	\$0	\$30
75	WRR-FCY	WOMEN'S RESTROOM	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	1	58	58	3000	174	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	1	42			42	3000	126	126	16	16	0	48	0	\$6.91	\$72	\$26	\$88	\$10	\$0	\$10
76	MRR-FCY	MEN'S RESTROOM	Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	1	58	58	3000	174	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	1	42			42	3000		126	16	16	0	48	0	\$6.91	\$72	\$26	\$88	\$10	\$0	\$10
77	111A+B	CLASS 111 A+B SECTIONS	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	12	88	1056	2000	2112	0	High Efficiency Ballast, 2/x4 Silver Reflector Kit  Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	12	42	810	Ceiling	504	1190		600	46	552	810	1,512	408	\$276.55	\$1,183	\$338	\$1,306	\$15	\$35	\$215
78	AV	AUDIO / VISUAL	Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	2	58	116	2000	232	0	High Efficiency Ballast, 2/x4 Silver Reflector Kit  Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	2	42			84	2000	168	168	16	32	0	64	0	\$9.22	\$143	\$52	\$175	\$10	\$0	\$20
79	CR	COPY ROOM	Ballast New 2'x2' Recessed Troffer w/ (2) FB031T8 Lamps & (1)	9	88	792	2000	1584	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power	9	42	810	Ceiling	378	1190	756	450	46	414	810	1,134	306	\$207.41	\$969	\$260	\$1,059	\$15	\$35	\$170
80	MC	MEDIA CENTER	2/32 Elec. Normal-Power High Efficiency Ballast HID Downlight Fixture w/ (1) 100w Metal Halide Lamp &	30	58	1740	2000	3480	0	High Efficiency Ballast, 2'x2' Silver Reflector Kit	30	28	400	Ceiling	840	1600	1680	1344	30	900	400	2,136	336	\$355.97	\$1,885	\$546	\$1,946	\$15	\$35	\$485
81	MC	CIRCLE	Ballast New 2'x2' Recessed Troffer w/ (2) FB031T8 Lamps & (1)	20	120	2400	2000	4800	50-54	None  Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power	20	120			2400	2000		4800	0	0	0	0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0
82	MO	MAIN OFFICE	2/32 Elec. Normal-Power High Efficiency Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	18	58	1044	2000	2088	54	High Efficiency Ballast, 2'x2' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	18	28	810	Ceiling	504	1190		600	30	540	810	1,488	408	\$273.09	\$1,261	\$338	\$1,294	\$15	\$35	\$305
83	MO	MAIN OFFICE	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic		58	116	2000	232	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	2	42			84	2000	168	168	16	32	0	64	0	\$9.22	\$143	\$52	\$175	\$10	\$0	\$20
84	MO-RR	RESTROOM IN MAIN OFFICE	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	1	58	58	360	21	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	1	42			42	360	15	15	16	16	0	6	0	\$0.83	\$72	\$26	\$88	\$10	\$0	\$10
85	MO-IT PO	IT OFFCIE (NORMAL HOURS)	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	4	58 58	232 174	2000	464 348	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	4	42 42			168	2000		336 252	16	64	0	128	0	\$18.43	\$286	\$104	\$350	\$10	\$0 \$0	\$40 \$30
86		PRINCIPAL'S OFFICE	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	3	58				0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	3	42				2000			16	48		96	0	\$13.82	\$215	\$78	\$263	\$10		\$30
87	CONF. R.	CONFERENCE ROOM	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	3		174	2000	348	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	3				126	2000		252	16	48	0	96	0	\$13.82	\$215	\$78	\$263	\$10	\$0	
88	IT-SERVER MO-OFC	SERVER ROOM (STORAGE)  OFFICE IN MAIN OFFICE	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	1	58 58	58 174	360 2000	21 348	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	2	42 42			126	360 2000	15 252	15 252	16 16	16 48	0	6 96	0	\$0.83 \$13.82	\$72 \$215	\$26 \$78	\$88 \$263	\$10 \$10	\$0 \$0	\$10 \$30
89	NURSE	NURSE	Ballast 2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic	3	58	638	2000	1276	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	11	42	810	Ceiling	462	1190		550	16	176	810	726	374	\$13.82 \$158.46		\$78	\$1,279	\$10	\$0	\$30
90	N-RR	RESTROOM IN NURSE OFFICE	Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	11	88	88	360	32	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	- ''	42	810	Celling	402	360	15	15	46	46	0	17	0	\$2.38	\$1,112	\$26	\$83	\$10	\$0	\$145
91	105		Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	12	88	1056	2000	2112	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit  Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	12	42	810	Ceiling	504			600			810		-	\$2.56	\$72	\$338				\$215
92	ME	COMPUTER CLASS  MECHANICAL ROOM	Ballast 4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic	12	58	1056	8760	1524	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	12	42	010	Ceiling	126	1190 8760		1104	46 16	552 48	0	1,512 420	408	\$276.55	\$1,183 \$117	\$338 \$78	\$1,306 \$165	\$15 \$10	\$35 \$0	\$215
93	ME	MECHANICAL ROOM # 2	Ballast 4' Industrial Hood w/ (2) F32T8 Lamps & (1) Electronic	2	58	116	8760	1016	0	High Efficiency Ballast Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	3	42			84	8760		736	16	32	0	280	0	\$40.37	\$117	\$78	\$165	\$10	\$0	\$30
94	CST	CHILD STUDY TEAM	Ballast New 2'x2' Recessed Troffer w/ (2) FB031T8 Lamps & (1)	13	58	754	2000	1508	0	High Efficiency Ballast Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power	13	28			364	2000		736	30	390	0	780	0	\$112.32	\$676	\$225	\$706	\$10	\$0	\$195
90	CR	COPY ROOM	2/32 Elec. Normal-Power High Efficiency Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	4	88	352	2000	704	0	High Efficiency Ballast, 2'x2' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	13	42			168	2000		336	46	184	0	368	0	\$112.32	\$286	\$104	\$330	\$15	\$0	\$195
97	OFC	OFFICE # 1 IN CST	Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	4	88	352	2000	704	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	4	42			168	2000		336	46	184	0	368	0	\$52.99	\$286	\$104	\$330	\$15	\$0	\$60
98	OFC	OFFICE # 1 IN CST	Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	4	88	352	2000	704	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	4	42			168	2000		336	46	184	0	368	0	\$52.99	\$286	\$104	\$330	\$15	\$0	\$60
99	OFC	OFFICE # 3 IN CST	Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	4	88	352	2000	704	0	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power	4	42			168	2000		336	46	184	0	368	0	\$52.99	\$286	\$104	\$330	\$15	\$0	\$60
100	CONF. R.	CONFERENCE ROOM IN CST	Ballast 2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic	4	88	352	2000	704	62	High Efficiency Ballast, 2'x4' Silver Reflector Kit Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec, Low-Power	4	42			168	2000		336	46	184	0	368	0	\$52.99	\$286	\$104	\$330	\$15	\$0	\$60
700	2 3 14.	TIME THE THE PROPERTY OF	Ballast		- 55	002			Ü-2	High Efficiency Ballast, 2'x4' Silver Reflector Kit					.00	_000	200		.0		Ü	-00	Ü	ţ02.00	\$200	7.07	2000	ψ.3	#**	700



LIGHTING UPGRADE PROJECT CUSTOMER: GREAT MEADOWS SCHOOLS BLDG. CODE: FACILITY SQ. FT. DATE OF AUDIT:

LINE x LINE DETAIL FACILITY: GREAT MEADOWS MIDDLE SCHOOL GM-MS 64,500 2/13/2012

Dor	ne-Tech, In	c.	LINE X LINE DETAIL				<u></u>			GREAT MEADOWS MIDDLE SCHOOL		GIVI-IVI	,		04,0				2/13/2	.012										
		SPACE DESCRIPTION	EXIST	NG FIXTU	JRES					REPLA	ACEMEN	T FIXTURE	s								ENER	GY ANALY	rsis			COST ANALYSI	s		REBATES	
LINE	PRINT NUMBER	SPACE DESCRIPTION	PRE FIXTURE DESCRIPTION	PRE FIXT. QTY	PRE WATTS /	PRE TOTAL WATTS	DEFAULT ANNUAL HOURS	PRE ANNUAL KWH	PRE AVERAGE FOOT	PROPOSED FIXTURE DESCRIPTION	POST FIXT. QTY	POST WATTS /	ANNUAL HOURS SAVED	SENSOR TYPE	POST TOTAL WATTS	ANNUAL HOURS	POST ANNUAL KWH	POST ANNUAL KWH WITH	WATTS SAVED /	TOTAL WATTS SAVED	ANNUAL HOURS SAVED	ANNUAL KWH SAVED FROM	ANNUAL KWH SAVED WITH	TOTAL ANNUAL\$ SAVINGS / LINE (INCLUDING SENSORS)	MATERIAL COST PER	TOTAL LABOR COST PER	TOTAL COST AFTER	REBATE / FIXT.	REBATE / SENSOR	TOTAL REABATE /
				<b>Q</b> 11	FIXT.	LINE	2000	K.IIII	CANDELS		Q11	FIXT.	OAVED		LINE	2000	KWII	OCC SENSOR	FIXT.	LINE	OAVED	FIXT.	occ	\$0.144	LINE	LINE	REBATES	· ixii	CENTON	LINE
101	X-HALL	MAIN HALL BETWEEN GYM AND DINNING	New 2'x2' Recessed Troffer w/ (2) FB031T8 Lamps & (1) 2/32 Elec. Normal-Power High Efficiency Ballast	21	58	1218	3000	3654	36-43	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast, 2'x2' Silver Reflector Kit	21	28			588	3000	1764	1764	30	630	0	1,890	0	\$272.16	\$1,092	\$364	\$1,141	\$15	\$0	\$315
102	X-VEST.	MAIN HALL - VETIBULE (DOOR # 13)	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	58	116	3000	348	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	3000	252	252	16	32	0	96	0	\$13.82	\$143	\$52	\$175	\$10	\$0	\$20
103	DR	DINNING AREA/CAFFETERIA	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	33	88	2904	2000	5808	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	33	42	400	Ceiling	1386	1600	2772	2218	46	1518	400	3,590	554	\$596.85	\$2,685	\$884	\$3,039	\$15	\$35	\$530
104	KTN	KITCHEN	2'x4' Recessed Troffer w/ (3) F32T8 Lamps & (1) Electronic Ballast	14	88	1232	2000	2464	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	14	42			588	2000	1176	1176	46	644	0	1,288	0	\$185.47	\$1,001	\$364	\$1,155	\$15	\$0	\$210
105	KTN	HOODS	2' Vapor-Tight Wrapw/ (2) FO17T8 Lamps & (1) Electronic Ballast	4	34	136	2000	272	0	Relamp & Reballast w/ (2) F17T8 Lamps & (1) 2/17 Elec. Low-Power High Efficiency Ballast	4	28			112	2000	224	224	6	24	0	48	0	\$6.91	\$125	\$69	\$154	\$10	\$0	\$40
106	KTN-RR	RESTROOM IN KITCHEN	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	58	58	360	21	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	1	42			42	360	15	15	16	16	0	6	0	\$0.83	\$72	\$26	\$88	\$10	\$0	\$10
107	KTN	LOCKER ROOM IN KITCHEN	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	58	58	360	21	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	1	42			42	360	15	15	16	16	0	6	0	\$0.83	\$72	\$26	\$88	\$10	\$0	\$10
108	KTN	KITCHEN CORRIDOR	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	58	116	2000	232	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	2000	168	168	16	32	0	64	0	\$9.22	\$143	\$52	\$175	\$10	\$0	\$20
109	KTN SRG	STORAGE # 1 IN KITCHEN	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	58	58	360	21	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	1	42			42	360	15	15	16	16	0	6	0	\$0.83	\$72	\$26	\$88	\$10	\$0	\$10
110	KTN SRG	STORAGE # 2 IN KITCHEN	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	2	58	116	360	42	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	2	42			84	360	30	30	16	32	0	12	0	\$1.66	\$143	\$52	\$175	\$10	\$0	\$20
111	KTN-OFC	OFFICE IN KITCHEN	2'x4' Recessed Troffer w/ (2) F32T8 Lamps & (1) Electronic Ballast	1	58	58	2000	116	0	Relamp & Reballast w/ (2) F28T8 Lamps & (1) 2/32 Elec. Low-Power High Efficiency Ballast, 2'x4' Silver Reflector Kit	1	42			42	2000	84	84	16	16	0	32	0	\$4.61	\$72	\$26	\$88	\$10	\$0	\$10
112	EXT	EXTERNAL LIGHTING	HID Fixture w/ (1) 100W High Pressure Sodium Wallpack	46	130	5980	900	5382	0	New Wall Pack Fixture w/ (1) 70w ICETRON Induction Lamp & Induction Ballast, Universal Voltage	46	70			3220	900	2898	2898	60	2760	0	2,484	0	\$357.70	\$14,950	\$2,392	\$14,122	\$70	\$0	\$3,220
113	EXT	PHOTO-CELL WITH LIGHT	Compact Fluorescent Wall Pack Fixture w/ (2) 13w Compact Fluorescent Lamps & Magnetic Ballast	14	30	420	900	378	0	None	14	30			420	900	378	378	0	0	0	0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0
114	EXT	PARKING LIGHTS	HID Pole Mounted Box Fixture w/ (1) 250w High Pressure Sodium	11	295	3245	900	2921	0	New Fixture w/ (1) 165w ICETRON Induction Lamp & Induction Ballast, Universal Voltage	11	165			1815	900	1634	1634	130	1430	0	1,287	0	\$185.33	\$3,861	\$1,144	\$4,235	\$70	\$0	\$770
115	EXT	PARKING LIGHTS	HID Pole Mounted "Shoe Box" Style Fixture w/ (2) 250w High Pressure Sodium	22	590	12980	900	11682	0	New Fixture w/ (2) 165w ICETRON Induction Lamp & Induction Ballast, Universal Voltage	22	330			7260	900	6534	6534	260	5720	0	5,148	0	\$741.31	\$14,300	\$3,432	\$16,192	\$70	\$0	\$1,540
				946		98,981		185,041			946				57,887		110,109	90,298		41,094	27,530	94,743	19,810	\$16,496	\$109,079	\$30,836	\$119,475			\$20,440

3 of 3



510 Thornall Street, Suite 170 Edison, NJ 08837

> Tel: 732.590.0122 Fax: 732.590.0129

# **ECM LIST**

#### ECM Measures by Payback

														Gross	Implementatio	n Costs	Net I	mplementatio	n Costs	
									Annual	Annual	I otal	i otai			internai	Litecycle		internai	Litecycle	
					Gross			Net	Energy	Oper.	Annual	Annual			Rate of	Savings		Rate of	Savings	
	Energy Conservation Measures	Bull Prove			Installation Costs*	Rebates/	Avoided	Implementation	Cost	Cost	Cost	Cost	Measure Life	Pay Back	Return (IRR)	(NPV)	Pay Back	• •	(NPV)	CO2
	(ECM)	Buildings		Savings kW Gallons	Costs	Incentive	Cost	Costs	Savings	Savings	Savings*	Savings	Yrs	(Gross) Yrs	(Gross)	(Gross)	(Net) Yrs	(Net)	(Net)	Savings Tons
1.0	Loop Water Pump TOD Optimization	Great Meadows Middle School	20,600	0 Gallons	\$ 600	\$0	\$0	\$ 600	\$ 2.970	\$0	\$ 2.970	\$ 2.970	25	0.2	495%	\$51,117	0.2	495%	\$51,117	7
		Great Meadows Middle School	38,900	0	\$ 2,180	\$0 \$0	\$0	\$ 2.180	¥ = 30 · 0	\$0 \$0	\$ 5,600	\$ 5,600	25	0.2	257%	\$95,334	0.2	495% 257%	\$95,334	13
	SEER Upgrade	Central Elementary	2.180	0	\$ 4,020	\$370	\$2.820	\$ 2,180		\$0 \$0	\$ 3,000	\$ 320	25	12.6	6%	\$95,334 \$1.552	2.6	39%	\$4,742	13
3.0	SEER Upgrade	Liberty Elementary	16.200	0	\$ 38,900	\$2,800	\$34,400	\$ 1.700	\$ 2.350	\$0	\$ 2.350	\$ 2.350	25	16.6	3%	\$2,021	0.7	138%	\$39,221	5
4.0	UV Time of Day Optimization	Central Elementary	11,300	0	\$ 2,120	\$2,000	\$0	\$ 1,700		\$0	\$ 1,640	\$ 1,640	25	1.3	77%	\$26,438	1.3	77%	\$26,438	4
	Insulate DHW Piping	Central Elementary  Central Elementary	0	20	\$ 2,120	\$0 \$0	\$0	\$ 2,120	¥ 1,010	\$0 \$0	\$ 1,640	\$ 1,640	25	1.7	60%	\$26,438 \$945	1.7	60%	\$26,438 \$945	0
5.0		Liberty Elementary	0	220	\$ 980	\$0 \$0	\$0	\$ 980		\$0 \$0	\$ 650	\$ 650	25	1.7	66%	\$10,339	1.7	66%	\$945 \$10.339	1
0.0	Insulate DHW Piping	Central Elementary	0	420	\$ 2,900	\$0	\$0	\$ 2.900	\$ 1.210	\$0	\$ 1,210	\$ 1,210	25	2.4	42%	\$10,339	2.4	42%	\$10,339	2
	Steam Trap Survey and Replacement Winterize Window A/C's	Central Elementary  Central Elementary	0	60	\$ 2,900	\$0	\$0	\$ 2,900	\$ 1,210	\$0	\$ 1,210	\$ 1,210	25	2.4	42%	\$18,170	2.4	42%	\$2,550	0
_			3.470	0	\$ 1,360	\$0	\$0	\$ 1.360		\$0 \$0	\$ 510	\$ 510	25	2.4	37%	\$2,550	2.4	37%	\$7,521	1
8.0	Vending Machine Power Management		6.950	0	, , , , , ,	\$0 \$0	\$0 \$0	7 .,		\$0 \$0		\$ 1.000	25 25			. , .		37%	- /-	2
	Vending Machine Power Management	Great Meadows Middle School	0,000	0	\$ 2,720 \$ 1,360	7.		Ψ 2,120	. ,	7.7	Ψ 1,000	4 1,000	-	2.7	37%	\$14,693	2.7	0.70	\$14,693	2
0.0	Vending Machine Power Management	Liberty Elementary	3,470		Ψ 1,000	\$0	\$0	* .,	\$ 500	\$0	\$ 500	\$ 500	25	2.7	37%	\$7,347	2.7	37%	\$7,347	1
	Repair/Replace Loop Pump VFD	Great Meadows Middle School	21,700	0	\$ 10,500	\$0 \$15.200	\$0	\$ 10,500	\$ 3,130	\$0 \$0	\$ 3,130	\$ 3,130	25	3.4	30%	\$44,003	3.4	30%	\$44,003	7
10.0	Lighting Fixture Upgrade	Liberty Elementary	152,000	0	\$ 82,200	4.0,-00	\$0	\$ 67,000	\$22,100	7.7	\$ 22,100	\$ 22,100	25	3.7	27%	\$470,300		33%	\$485,500	0
	Lighting Upgrade	GM Middle School	94,700	0	\$ 142,000	\$20,400	\$0	\$ 122,000	\$16,500	\$0	\$ 16,500	\$ 16,500	25	8.6	11%	\$270,500	7.4	13%	\$290,500	0
	Lighting Upgrade	Central Elementary	73,200	0	\$ 62,400	\$9,080	\$0	\$ 53,300	\$12,900	\$0	\$ 12,900	\$ 12,900	25	4.8	20%	\$260,100	4.1	24%	\$269,200	0
11.0	Computer Monitor Upgrade	Central Elementary	6,170	0	\$ 4,380	\$0	\$0	\$ 4,380	\$ 900	\$0	\$ 900	\$ 900	25	4.9	20%	\$11,292	4.9	20%	\$11,292	2
	Computer Monitor Upgrade	Great Meadows Middle School	13,100	0	\$ 9,280	\$0	\$0	\$ 9,280	\$ 1,880	\$0	\$ 1,880	\$ 1,880	25	4.9	20%	\$23,457	4.9	20%	\$23,457	4
	Computer Monitor Upgrade	Liberty Elementary	6,910	0	\$ 4,900	\$0	\$0	\$ 4,900	\$ 1,000	\$0	\$ 1,000	\$ 1,000	25	4.9	20%	\$12,513	4.9	20%	\$12,513	2
	Cooling Tower Fan VFD	Great Meadows Middle School	9,740	0	\$ 7,230	\$0	\$0	\$ 7,230		\$0	\$ 1,400	\$ 1,400	25	5.2	19%	\$17,148	5.2	19%	\$17,148	3
13.0	Water Conservation Measures	Central Elementary	0	20	\$ 390	\$0	\$0	\$ 390		\$0	\$ 60	\$ 60	25	6.5	15%	\$655	6.5	15%	\$655	0
		Great Meadows Middle School	0	30	\$ 520	\$0	\$0	\$ 520	\$ 80	\$0	\$ 80	\$ 80	25	6.5	15%	\$873	6.5	15%	\$873	0
	Water Conservation Measures	Liberty Elementary	0	30	\$ 260	\$0	\$0	\$ 260	\$ 80	\$0	\$ 80	\$ 80	25	3.3	31%	\$1,133	3.3	31%	\$1,133	0
		Central Elementary	0	170	\$ 2,800	\$0	\$0	\$ 2,800	\$ 480	\$0	\$ 480	\$ 480	25	5.8	17%	\$5,558	5.8	17%	\$5,558	1
15.0	Computer Power Management	Central Elementary	2,700	0	\$ 2,280	\$0	\$0	\$ 2,280	\$ 390	\$0	\$ 390	\$ 390	25	5.8	17%	\$4,511	5.8	17%	\$4,511	1
	Computer Power Management	Great Meadows Middle School	2,910	0	\$ 2,450	\$0	\$0	\$ 2,450	\$ 420	\$0	\$ 420	\$ 420	25	5.8	17%	\$4,864	5.8	17%	\$4,864	1
	Computer Power Management	Liberty Elementary	1,480	0	\$ 1,250	\$0	\$0	\$ 1,250	\$ 210	\$0	\$ 210	\$ 210	25	6.0	16%	\$2,407	6.0	16%	\$2,407	0
16.0	Premium Efficiency Motors	Great Meadows Middle School	1,010	0	\$ 2,640	\$180	\$1,460	\$ 1,000	\$ 150	\$0	\$ 150	\$ 150	25	17.6	3%	-\$28	6.7	14%	\$1,612	0
17.0	Replace Boilers	Liberty Elementary	0	1,960	\$ 192,000	\$0	\$140,000	\$ 52,000	\$ 5,640	\$0	\$ 5,640	\$ 5,640	25	34.0	-2%	-\$93,790	9.2	10%	\$46,210	11
18.0	Upgrade Window Air Conditioner Unit	Central Elementary	840	0	\$ 1,200	\$0	\$0	\$ 1,200	\$ 120	\$0	\$ 120	\$ 120	25	10.0	9%	\$890	10.0	9%	\$890	0
19.0	Walk-In Controllers	Central Elementary	320	0	\$ 680	\$80	\$0	\$ 600	\$ 50	\$0	\$ 50	\$ 50	25	13.6	5%	\$191	12.0	7%	\$271	0
	Walk-In Controllers	Great Meadows Middle School	630	0	\$ 1,370	\$150	\$0	\$ 1,220	\$ 90	\$0	\$ 90	\$ 90	25	15.2	4%	\$197	13.6	5%	\$347	0
	Walk-In Controllers	Liberty Elementary	630	0	\$ 1,370	\$150	\$0	\$ 1,220	\$ 90	\$0	\$ 90	\$ 90	25	15.2	4%	\$197	13.6	5%	\$347	0
20.0	Weatherstripping Perimeter Doors	Central Elementary	0	10	\$ 570	\$0	\$0	\$ 570	\$ 30	\$0	\$ 30	\$ 30	25	19.0	2%	-\$48	19.0	2%	-\$48	0
21.0	Upgrade Boilers and Convert to HHW	Central Elementary	0	3,910	\$ 455,000	\$0	\$197,000	\$ 258,000	\$11,200	\$0	\$ 11,200	\$ 11,200	25	40.6	-3%	-\$259,973	23.0	1%	-\$62,973	23
	Replace Boilers	Central Elementary	0	1,430	\$ 197,000	\$0	\$0	\$ 197,000	\$ 4,100	\$0	\$ 4,100	\$ 4,100	25	48.0	-5%	-\$125,606	48.0	-5%	-\$125,606	8
			0	0	\$ -	\$0	\$0	\$ -	\$ -	\$0	\$ -	\$ -	25	#DIV/0!	0%	\$0	#DIV/0!	0%	\$0	0
_																				
	Totals	TOTALS	491,110	0 6,850	\$1,045,320	\$ 48,410	\$375,680	\$ 621,610	\$95,880	\$0	\$ 95,880	\$ 95,880	25	10.9	0.1	\$624,253	6.5	15%	\$1,047,963	202



510 Thornall Street, Suite 170 Edison, NJ 08837

> Tel: 732.590.0122 Fax: 732.590.0129

# **ECM COSTS & CALCULATION**

N/N	DESCRIPTION OF	UNIT	QTY	MAT	ERIAL	LAE	BOR	TOTAL
IN/IN	WORK	UNIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL	TOTAL
1	ULF Toilet	EA	0	220	-	75	-	-
2	ULF Urinal	EA	0	350	-	125	-	-
3	Waterless Urinals	EA	0	500	-	125	-	-
4	Aerators	EA	30	8	240	5	150	390
5	Automatic Faucet w/ IR Sensors	EA	0	280	-	50	-	-
6	Showerheads	EA	0	21	-	10	-	-
	Other Estimated Implementation Costs							

Water Conservation - Central

TOTAL	\$	390
SUB-TOTAL		390
O&P 0	%	-
ASBESTOS ABATEMENT		-
DIRECT COST		390
PAYMENT & PERFORMANCE BOND 0	%	-
SUB-TOTAL SUB-TOTAL		390
CONTINGENCY 0	%	-
ASBESTOS CONTINGENCY 0	%	-
SUB-TOTAL		390
ASBESTOS DESIGN & AIR MONITORING, TESTING		-
IC FEE 0.0	0%	-
SUB-TOTAL		390
INTEREST DURING CONSTRUCTION 0	%	-
TOTAL	\$	390

	Inc	rease Pipe	Insulation -	Central					
N/N	DESCRIPTION OF	UNIT	QTY		ERIAL		BOR	TOT	AL
	WORK			PER UNIT	TOTAL	PER UNIT	TOTAL		
1	Install Pipe Insulation - Cellular Glass, 1" Wall 1-1/2" Pipe	lf	10	3.07	31	4.04	40	<u> </u>	71
2	Install Pipe Insulation - Cellular Glass, 1" Wall 2" Pipe	lf		5.15	-	5.40	-	<u> </u>	-
3	Install Pipe Insulation - Cellular Glass, 1" Wall 3" Pipe	lf	-	5.25	-	5.70	-		-
4	Install Pipe Insulation - Cellular Glass, 1" Wall 5" Pipe	If	-	8.00	-	7.45	-		-
5					-		-		-
	Other Estimated Implementation Costs			•					27
	TOTAL					•	•	\$	98
	SUB-TOTAL								71

TOTAL	\$ 98
SUB-TOTAL	71
O&P 15%	11
ASBESTOS ABATEMENT	-
DIRECT COST	82
PAYMENT & PERFORMANCE BOND 0%	-
SUB-TOTAL	82
CONTINGENCY 20%	16
ASBESTOS CONTINGENCY 0%	-
SUB-TOTAL	98
ASBESTOS DESIGN & AIR MONITORING, TESTING	-
IC FEE 0.0%	-
SUB-TOTAL	98
INTEREST DURING CONSTRUCTION 0%	-
TOTAL	\$ 98

0%

\$ 196,970

		Boiler Up	grade - Cer	ntral				
N/N	DESCRIPTION OF	UNIT	QTY	MAT	ERIAL	LAE	BOR	TOTAL
IN/IN	WORK	UNIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL	TOTAL
1	2,500 MBH Oil Steam Boiler	ea	2	48,000	96,000	10,000	20,000	116,00
2	Demo Existing Boilers	ea	2	0	-	2,776	5,552	5,55
3	Piping Modifications	ls	2	4,000	8,000	6,000	12,000	20,000
	Other Estimated Implementation Costs							55,41
	TOTAL							\$ 196,970
	SUB-TOTAL							141,55
	O&P						15%	21,23
	ASBESTOS ABATEMENT							-
	DIRECT COST							162,78
	PAYMENT & PERFORMANCE BOND						0%	-
	SUB-TOTAL							162,78
	CONTINGENCY						10%	16,27
	ASBESTOS CONTINGENCY						0%	-
	SUB-TOTAL							179,063
	ASBESTOS DESIGN & AIR MONITORING, TESTING							-
	IC FEE						10.0%	17,90
	SUB-TOTAL							196,970

TOTAL

INTEREST DURING CONSTRUCTION

•	Boiler Upgrad	le and Stea	m to HHW C	Conversion -	Central			•	
N/N	DESCRIPTION OF	UNIT	QTY	MAT	ERIAL	LAE	BOR		TOTAL
IN/IN	WORK	UNIT	QIY	PER UNIT	TOTAL	PER UNIT	TOTAL		TOTAL
1	2,500 MBH Condensing Boiler -Oil	EA	2	46,250	92,500	10,000	20,000		112,500
2	Demo Existing Boilers	EA	2	0	-	2,776	5,552		5,552
3	Boiler Room Piping Modifications	LS	2	4,000	8,000	6,000	12,000		20,000
4	Copper Distribution HWS & HWR Piping (avg 1")	LF	4,250	12.8	54,400	6.2	26,350		80,750
5	New Unit Ventilators	EA	17	3,450	58,650	603	10,251		68,901
6	New HHW Distribution Pumps (2x 10HP)	EA	2	4,250	8,500	460	920		9,420
7	10% Misc	LS	1		-		-		29,712
	Other Estimated Implementation Costs								127,956
	TOTAL							\$	454,790
	SUB-TOTAL								326,835
	O&P						15%		49,025
	ASBESTOS ABATEMENT								-
	DIRECT COST								375,86
	PAYMENT & PERFORMANCE BOND						0%		-
	SUB-TOTAL								375,86
	CONTINGENCY						10%		37,586
	ASBESTOS CONTINGENCY						0%		-
	SUB-TOTAL								413,447
	ASBESTOS DESIGN & AIR MONITORING, TESTING								-
	IC FEE						10.0%		41,345
	SUB-TOTAL								454,79°
	INTEREST DURING CONSTRUCTION						0%		-
								_	

TOTAL

Total SmartStart Rebate Avoided Cost 454,791

196,970

	Winterize Window A/C Units - Central										
N/N	DESCRIPTION OF	UNIT	QTY	MATI	ERIAL	LAI	BOR	TO	TAL		
IN/IN	WORK	UNIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL	10	IAL		
1	Install Insulated Cover	each	5	40.37	202	28.00	140		342		
2		each			-		-		-		
	Other Estimated Implementation Costs								68		
	TOTAL							\$	410		
	SUB-TOTAL								342		

TOTAL	\$	410
SUB-TOTAL SUB-TOTAL		342
O&P	20%	68
ASBESTOS ABATEMENT		-
DIRECT COST		410
PAYMENT & PERFORMANCE BOND	0%	-
SUB-TOTAL SUB-TOTAL		410
CONTINGENCY	0%	-
ASBESTOS CONTINGENCY	10%	-
SUB-TOTAL SUB-TOTAL		410
ASBESTOS DESIGN & AIR MONITORING, TESTING		-
IC FEE	0.0%	-
SUB-TOTAL		410
INTEREST DURING CONSTRUCTION	0%	-
TOTAL	\$	410
NJ SmartStart Rebate	\$	-

	v	Vindow AC	Upgrade -	Central					
N/N	DESCRIPTION OF	UNIT	QTY	MATI	ERIAL	LABOR		т	OTAL
IN/IN	WORK	UNIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL		OTAL
1	New Window AC Units	EA	5	220	1,100	20	100		1,200
2		EA			-		-		-
	Other Estimated Implementation Costs	•							-
	TOTAL							\$	1,200
	SUB-TOTAL								1,200
	O&P						0%		-
	ASBESTOS ABATEMENT								-
	DIRECT COST								1,200
	PAYMENT & PERFORMANCE BOND						0%		-
	SUB-TOTAL								1,200
	CONTINGENCY						0%		-
	ASBESTOS CONTINGENCY						0%		-
	SUB-TOTAL								1,200
	ASBESTOS DESIGN & AIR MONITORING, TESTING								-
	IC FEE						0.0%		-
	SUB-TOTAL								1,200
	INTEREST DURING CONSTRUCTION						0%		-
	TOTAL							\$	1,200

N 1 / N 1	DESCRIPTION OF	UNIT (	0.77./	MATE	ERIAL	LABOR			
N/N	WORK	UNII	QTY	PER UNIT	TOTAL	PER UNIT	TOTAL	IC	DTAL
1	Walk In Cooler Power Management	EA	1	604	604	80	80		6
2		EA					-		
	Other Estimated Implementation Costs								
	TOTAL							\$	(
	SUB-TOTAL								6
	O&P						0%		
	ASBESTOS ABATEMENT								
	DIRECT COST						00/		(
	PAYMENT & PERFORMANCE BOND						0%		,
	SUB-TOTAL CONTINGENCY						0%		6
	ASBESTOS CONTINGENCY						0%		
	SUB-TOTAL						0%		(
	ASBESTOS DESIGN & AIR MONITORING, TESTING								,
	IC FEE						0.0%		
	SUB-TOTAL						0.070		(
	INTEREST DURING CONSTRUCTION						0%		
	TOTAL							\$	(
						1	NJSS Rebate	\$	

	Vendi	ng Machine	Power Mg	gmt - Central					
N/N	DESCRIPTION OF	UNIT	QTY	MATI	ERIAL	LAE	BOR	-	TOTAL
IN/IN	WORK	UNIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL		IOIAL
1	Soda VendMiser	EA	1	179	179	500	500		67
2	Snack VendMiser	EA	1	179	179	500	500		67
3		EA			-		-		-
	Other Estimated Implementation Costs					•			-
	TOTAL SUB-TOTAL							\$	<b>1,3</b> 5
	O&P ASBESTOS ABATEMENT						0%		-
	DIRECT COST								1,3
	PAYMENT & PERFORMANCE BOND SUB-TOTAL						0%		1,3
	CONTINGENCY						0%		-
	ASBESTOS CONTINGENCY SUB-TOTAL						0%		- 1,3
	ASBESTOS DESIGN & AIR MONITORING, TESTING								-
	IC FEE						0.0%		-
	SUB-TOTAL								1,3
	INTEREST DURING CONSTRUCTION TOTAL						0%	\$	1,3

	Door Weatherization - Central										
N/N	N/N DESCRIPTION OF UNIT QTY MATERIAL LABOR										
	WORK	OIVII	QII	PER UN	ΙT	TOTAL	PER UNIT	TOTAL	TOTAL		
1	Door Weatherstripping	Ea	3	\$ 2	2	\$ 65	\$ 170	\$ 510	\$	575	
	Other Estimated Implementation Costs										

Other Estimated implementation costs		-
TOTAL		\$ 575
SUB-TOTAL		575
O&P	0%	-
ASBESTOS ABATEMENT	SF	-
DIRECT COST		575
PAYMENT & PERFORMANCE BOND	0%	-
SUB-TOTAL		575
CONTINGENCY	0%	-
Engineering Fees	0%	-
Architectural fees for Renovation	0%	-
ASBESTOS CONTINGENCY	0%	-
SUB-TOTAL		575
ASBESTOS DESIGN & AIR MONITORING, TESTING		-
IC FEE	0.0%	-
SUB-TOTAL		575
INTEREST DURING CONSTRUCTION	0%	-
TOTAL		\$ 575

	Replace CF								
N/N	DESCRIPTION OF	UNIT	QTY	MATERIAL		LABOR		-	OTAL
IN/IN	WORK	UNIT	Q i	PER UNIT	TOTAL	PER UNIT	TOTAL	1 '	OTAL
1	17" Flat Screen Monitors	EA	25	175	4,375	-	-		4,37
2		EA			-		-		-
	Other Estimated Implementation Costs								-
	TOTAL							\$	4,3
	SUB-TOTAL								4,3
	O&P						0%		-
	ASBESTOS ABATEMENT								-
	DIRECT COST								4,3
	PAYMENT & PERFORMANCE BOND						0%		-
	SUB-TOTAL								4,3
	CONTINGENCY						0%		-
	ASBESTOS CONTINGENCY						0%		-
	SUB-TOTAL								4,3
	ASBESTOS DESIGN & AIR MONITORING, TESTING								-
	IC FEE						0.0%		-
	SUB-TOTAL								4,3
	INTEREST DURING CONSTRUCTION						0%		-
	TOTAL							\$	4,3

	Computer	Power Mar	nagement	System - Cent	tral				
N/N	DESCRIPTION OF	UNIT	QTY	MATERIAL		LABOR		Τ.	TOTAL
IN/IN	WORK	UNIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL		IOIAL
1	Computer Programmng	EA	91	25	2,275	-	-		2,275
2		EA			-		-		-
	Other Estimated Implementation Costs	•							-
	TOTAL							\$	2,275
	SUB-TOTAL								2,275
	O&P						0%		-
	ASBESTOS ABATEMENT								-
	DIRECT COST								2,275
	PAYMENT & PERFORMANCE BOND						0%		-
	SUB-TOTAL								2,27
	CONTINGENCY						0%		-
	ASBESTOS CONTINGENCY						0%		-
	SUB-TOTAL								2,275
	ASBESTOS DESIGN & AIR MONITORING, TESTING								-
	IC FEE						0.0%		-
	SUB-TOTAL								2,275
	INTEREST DURING CONSTRUCTION						0%		-
	TOTAL							\$	2,275

				LSTIIVII/ CTE					
	Steam	Trap Mainte	nance Prog	gram - Centra	al				
N/N	DESCRIPTION OF	UNIT	QTY	MAT	ERIAL	LAE	BOR	т	OTAL
IN/IN	WORK	UNIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL		JIAL
1	Survey	BLDG	1	0	0	1694	1694		1,694
2	Replace Steam Trap	EA	1	180	180	38.5	38.5		219
	Other Estimated Implementation Costs								991
	TOTAL							\$	2,903
	SUB-TOTAL								1,913
	O&P						15%		287
	ASBESTOS ABATEMENT								
	DIRECT COST								2,199
	PAYMENT & PERFORMANCE BOND						0%		-
	SUB-TOTAL						000/		2,199
	CONTINGENCY						20%		440
	ASBESTOS CONTINGENCY						10%		-
	SUB-TOTAL								2,639
	ASBESTOS DESIGN & AIR MONITORING, TESTING						40.00/		-
	IC FEE SUB-TOTAL						10.0%		264 2,903
	INTEREST DURING CONSTRUCTION						0%		2,903
	TOTAL						0%	\$	2,903

- No information was available regarding exact quantity of steam traps throughout the facility
   Cost/savings are based off an estimated 5 steam traps
   Cost/savings assume a 10% trap failure rate
   Steam plant operates 2271 hours per year

### COST ESTIMATE

0%

2,124

	UV	TOD Opti	mization -	Central					
N/N	DESCRIPTION OF	UNIT	QTY	MAT	ERIAL	LAE	BOR	TOTAL	
14/14	WORK	OIVII	QII	PER UNIT	TOTAL	PER UNIT	TOTAL	TOTAL	
1	7 Day Timeclock	UNIT	2	300	600	135	270	8	70 190
2	1" Electrical Conduit	LF	100	5	500	4	400	9	00
4	20% Mics.		-		-		-	3	54
	TOTAL							\$ 2,1	24
	SUB-TOTAL							2,1	24
	O&P						0%	-	
	ASBESTOS ABATEMENT							-	
	DIRECT COST							2,1	24
	PAYMENT & PERFORMANCE BOND						0%	-	
	SUB-TOTAL							2,1	24
	CONTINGENCY						0%	-	
	ASBESTOS CONTINGENCY						0%	-	
	SUB-TOTAL							2,1	24
	ASBESTOS DESIGN & AIR MONITORING, TESTIN	IG							
	IC FEE						0.0%	-	
	SUB-TOTAL							2.1	24

INTEREST DURING CONSTRUCTION

TOTAL

	Garage Door Replacement - Central										
N/N	DESCRIPTION OF	UNIT	QTY	MATE	ERIAL	LAE	BOR		OTAL		
IN/IN	WORK	UNIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL	IOIAL	OTAL		
1	Commercial Garage Door	each	1	2306.25	2,306	129.75	130		2,436		
	Other Estimated Implementation Costs								365		
	TOTAL NJ SmartStart Rebate							\$ \$	2,801 -		

### SEER Upgrade - Central

			LLIK Opgic	ade - Gentrai						
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL			LABOR			TOTAL
IN/IN		UNIT	QII	PER UNIT	High Eff Inc.	TOTAL	PER UNIT	TOTAL	'	OTAL
1	DX Cooling and Heat Pump (2 ton)	EA	2	830	200	2,060	240	480		2,540
2	Ref. Piping, Etc	LS	2		150	300		-		508
	Other Estimated Implementation Costs									975
	TOTAL								\$	4,023
	SUB-TOTAL									3,048
	O&P							20%		610
	ASBESTOS ABATEMENT									-
	DIRECT COST									3,658
	PAYMENT & PERFORMANCE BOND							0%		-
	SUB-TOTAL									3,658
	CONTINGENCY							10%		366
	ASBESTOS CONTINGENCY							0%		-
	SUB-TOTAL									4,023
	ASBESTOS DESIGN & AIR MONITORING, TESTING									-
	IC FEE							0.0%		-
	SUB-TOTAL									4,023
	INTEREST DURING CONSTRUCTION							0%		-
	TOTAL								\$	4,023
	Total SmartStart Rebate								\$	368
	Avoided Cost								\$	2,825

### CALCULATIONS

### SEER Upgrade

### **Central Elementary**

Central Elementary	
1. Price of #2 Fuel Oil, \$/gal	\$2.870
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.146
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA
	-

	Proposed Standard Condition	Proposed High Eff. System	Savings
Total Tons	4	4	
SEER	8.0	14.3	
Annual Run Hours	1,031	1,031	
Annual Peak Demand Reduction (kW)	0.8	0.5	0.36
Annual kWh	4,949	2,769	2,180
Annual Cost and Savings, \$	\$ 723	\$ 404	\$ 318

- 1. Cost per kWh and therm prices taken from "# Constants" sheet.
- 2. Run hours based on bin data and time of day factor.

3. See Sample Calculations below

Tag	Mfg	Model	Tons	Run Hrs	Cooling Load Factor	Standard SEER Btu / Wh	Standard Unit kWh	Hi Eff SEER Btu / Wh	Hi Eff Unit kWh	kWh Saved	\$/kWh	Annual Savings \$\$
ACCU-1	NA	NA	2	1,031	80%	8.0	2,474	14.3	1,384	1,090	\$0.146	\$ 15
ACCU-2	NA	NA	2	1,031	80%	8.0	2,474	14.3	1,384	1,090	\$0.146	\$ 15
Total			4				4,949		2,769	2,180		\$ 31

#### Factor Study

- 4.. ASHRAE 90.1-1989 Referenced for baseline SEER/EER
- 5. Proposed SEER/EER Ratings taken from Lennox Strategos Series

# CALCULATIONS

### **UV TIMECLOCKS**

### **Central Elementary**

1. Price of #2 Fuel Oil, \$/gal	\$2.870
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.146
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed System	Savings
Annual Run Hours	6,257	2,086	4,171
Annual Electric Use (kWh)	16,882	5,627	11,255
Annual Cost and Savings, \$	\$ 2,465	\$ 822	\$ 1,643

<sup>1.</sup> Daily run hours are reduced from 24 hours to 8 hours.

3. See Sample Calculations Below

. See Sample Calculation	is below						
Unit	Area Served	CFM	Load Factor	Existing TOD Factor	Proposed TOD Factor	Estima	ited Savings
UV-1-31	CLASSROOMS	1/6	0.7	6257	2086	\$	11,255
Hours of Operation	On	Off	Hrs/Day				
Existing	0	24	24				
Proposed	8	16	8				
.There is no demand red	uction for this measure						

<sup>4.</sup> There is no demand reduction for this measure

<sup>2.</sup> Assumed Fans are equipped with Motors of HP listed in calculation table

<sup>5.</sup> No rebates or other financial incentives were available for this measure

#### **CALCULATIONS**

#### Increase insulation on DHW piping

#### Central Elementary

1. Price of #2 Fuel Oil, \$/gal	\$2.870
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.146
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed Condition	Savings
Annual Energy Consumption (gals)	28	5	22
Annual Op Cost	\$ 79	\$ 15	\$ 64

- Assume DHW temperature of 120F
   Assume average ambient boiler room temperature of 75F.
- 3. There is no demand reduction for this measure
  4. No rebates or other finanical incentives were available for this measure
- 5. See Sample Calculation Below

	Existing Pipe or Tube Size				Proposed			1
				Pipe or Tube Size			Total	
	2"	1-1/2"	4"	2"	1-1/2"	4"		Savings
Length of Uninsulated DHW Pipe (Ft)	0	10	0	0	10	0	10	
Inches of insulation	0	0	0	1	1	1		
Btu losses, per foot, per hour	46	37		8	7			
Annual Btu losses	0	3,241,200	0	0	613,200	0		
Annual Fuel losses (gals)	0	28	0	0	5	0		22
Annual Operating Cost, \$	\$0	\$79	\$0	\$0	\$15	\$0		\$64
Total Cost and Savings, \$	\$0	\$79	\$0	\$0	\$15	\$0		\$64

# CALCULATIONS

# Steam Trap Survey and Replacement

# Central Elementary

1. Price of #2 Fuel Oil, \$/gal	\$2.870
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.146
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed System	Savings
Annual steam trap loss, gals	422	0	422
Annual Natural Gas Cost and Savings, \$	\$ 1,211	\$ -	\$ 1,211

Replace Leaking Steam Traps

Number of Steam Traps	5
Transcr or eleant Trape	
Failure Rate	10%
Number of Leaking Traps	1
Size of Orifice (inches diameter)	0.253
Steam Flow Reduction Through Orifice (based on	
condensate flow)	33%
Average Steam Pressure (psig)	6
Latent Heat of Steam at Avg Pressure (Btu/lbm)	953
Annual Steam Plant Operating Hours	2,271
Heating Plant Efficiency	80%
Natural Gas Cost, \$/gal	\$2.87
Steam Loss Through Trap(s) (lbs/hr)	21.52
Annual Steam Loss (lbs)	48,869
Annual Fuel Savings (gals)	422
Annual Fuel Savings	\$1,210.78

### CALCULATIONS

#### 

	Existing Condition	Proposed System	Sa	vings
R-Value of Window A/C Uncovered and Covered	0.9	3.4		
Air Leakage of Window A/C Uncovered and Covered (CFM)	294.1	250.0		44
Annual heating loss, gal	297	238		59
Annual Natural Gas Cost and Savings, \$	\$ 853	\$ 684	\$	168
Annual Electric Cost and Savings, \$	\$ -	\$ -	\$	-
Annual Cost and Savings, \$	\$ 853	\$ 684	\$	168

### CALCULATIONS

0.616

#### **VENDING MACHINE POWER MANAGEMENT SYSTEM**

Central Elementary	
Price of #2 Fuel Oil, \$/gal	\$2.870
Price of City Water, \$/1000 gallons	\$0.000
Price of Electricity, \$/kWh (blended rate)	\$0.146
Price of the Demand of Electricity, \$/kW/month	\$0.000
Price of Natural Gas, \$/therm	NA

	Existing Condition		posed ystem	Savings
Soda Machine Power Consumption	100%		56%	44%
Soda Machine Annual Op Cost	\$ 844	\$	371	473
Run Hours	5,256		5,256	
Soda Annual Energy Consumption (kWh)	5,782		2,544	3,238
Snack Machine Power Consumption	100%		56%	44%
Annual Op Cost	\$ 61	\$	27	34
Run Hours	5,256		5,256	
Annual Energy Consumption (kWh)	420		185	235
Total Annual Energy Consumption (kWh)	6,202		2,729	3,473
Annual Cost and Savings, \$	\$ 906	\$	398	\$ 507

<sup>1.</sup> Run hours based on fan motors being run 8760 hrs

Utility Unit Costs		
Flectrical Unit Cost	\$/kwh	

Electrical Unit Cost, \$/kwh	\$0.146
Soda Machine Count Snack Machine Count Annual Run-Time Factor	1 1 60%
Almaarkan Time Lactor	0070

# VendMiser Installation Savings

Soda Machine Power Consumption, kw	1.10
Annual Savings %	56%
Electrical Unit Cost, \$ per kilowatt-hour	\$0.146
Annual Energy Savings	\$473

# VendMiser Installation Savings

Snack Machine Power Consumption, kw	0.08
Annual Savings %	56%
Electrical Unit Cost, \$ per kilowatt-hour	\$0.146
Annual Energy Savings	\$34

# **Economics Summary**

kWh Savings	3,473
Estimated Annual Savings	\$507
Vendmiser Unit Cost	\$179
Total Installation Cost (\$500/unit)	\$1,000
Total Vendmiser Cost (ECM)	\$1,358
Simple Payback, Years	2.68

### CALCULATIONS

# Lighting Upgrade Central Elementary 1. Price of #2 Fuel Oil, \$/gal \$2.870 2. Price of City Water, \$/1000 gallons \$0.000 3. Price of Electricity, \$/kWh (blended rate) \$0.146 4. Price of the Demand of Electricity, \$/kW/month \$0.000 5. Price of Natural Gas, \$/therm NA

	Existing	Proposed	Savings
	Condition	Condition	Javings
Total # Fixtures	533	533	•
Total Fixture Watts	60,652	32,028	28,624
Annual Lighting kWh	124,496	51,339	73,158
Additional Sensor Savings	-	15,310	15,310
Annual Operating Cost and Savings, \$	\$ 18,176	\$ 5,260	\$ 12,916

### CALCULATIONS

# Replace CRT Monitors with Flat Screens

#### Central Elementary

1. Price of #2 Fuel Oil, \$/gal	\$2.870
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.146
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas. \$/therm	NA

	Existing Condition	Proposed System	Savings
Number of WS/PCs	25	25	
Annual Electric Usage and Savings (kWh)	8,640	2,471	6,170
Annual Cost and Savings, \$	\$ 1,261	\$ 361	\$ 901

- 1. Estimated 25 workstations in the computer lab
- 2. Estimated 30% savings per workstation / PC  $\,$
- 3. There is no demand reduction for this measure
- 4. No rebates or other financial incentives were available for this measure

<u>Usage</u>	CRT	Flat Screen
Hours awake/day	10	10
Days per year	180	180
Awake kWh consumption	270	90
Hours asleep/day	14	14
Days per year	180	180
Asleep kWh consumption	75.6	8.82
Total kWh/ year	345.6	98.82
Cost/ year	\$50.46	\$14.43
Savings/year		\$36.03
# computers	25	25
Total kWh/ year	8640	2470.5
Cost/ year	\$1,261.44	\$360.69
Savings/year		\$900.75

# **CALCULATIONS**

# **Water Conservation**

# **Central Elementary**

1. Price of #2 Fuel Oil, \$/gal	\$2.870
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.146
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	isting ndition	oposed System	S	avings
Annual Consumption (gals)	54,000	43,200		10,800
Annual Hot Water Consumption (gals)	26,561	21,249		5,312
Annual Fuel Oil Consumption (gal)	107	86		21
Annual Water Cost and Savings (\$)	\$ -	\$ -	\$	-
Annual Fuel Oil Cost and Savings (\$)	\$ 307	\$ 246	\$	61
Annual Cost and Savings, \$	\$ 307	\$ 246	\$	61

Full Time Occupants	Transient Visitors
124	0
124	0
30	
10	
30	
0	
180	
	Occupants  124  124  30  10  30  0

Total Students

# **CALCULATIONS**

# **Replace Garage Door**

# Central Elementary

1. Price of #2 Fuel Oil, \$/gal	\$2.870
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.146
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

		sting dition	Proposed System		Savings		
R-Value of Door	(	0.9		3.9			
Annual heating loss, gals	2	214		47		166	
Annual cooling energy loss, kWh						0	
Annual Natural Gas Cost and Savings, \$	\$	613	\$	135	\$		478
Annual Electric Cost and Savings, \$	\$	-	\$	-	\$		-
Annual Cost and Savings, \$	\$	613	\$	135	\$		478

#### CALCULATIONS

# Computer Power Management Central Elementary 1. Price of #2 Fuel Oil, \$/gal \$2.870 2. Price of City Water, \$/1000 gallons \$0.000 3. Price of Electricity, \$/kWh (blended rate) \$0.146 4. Price of the Demand of Electricity, \$/kW/month \$0.000 5. Price of Natural Gas, \$/therm NA

	Existing Condition	Proposed System	Savings
Number of WS/PCs	91	91	
Annual Electric Usage and Savings (kWh)	8,993	6,295	2,698
Annual Cost and Savings, \$	\$ 1,313	\$ 919	\$ 394

- 1. Estimated 91 workstations throughout the building (Comp Rooms and Classrooms)
- 2. Estimated 30% savings per workstation / PC
- 3. There is no demand reduction for this measure
- 4. No rebates or other financial incentives were available for this measure

Usage	CRT	Flat Screen
Hours awake/day	10	10
Days per year	180	180
Awake kWh consumption		90
Awake KWII Consumption	210	90
Hours asleep/day	14	14
Days per year	180	180
Asleep kWh		
consumption	75.6	8.82
Total kWh/ year	345.6	98.82
Cost/ year	\$50.46	\$14.43
Savings/year		\$36.03
# computers	91	91
Total kWh/ year	31449.6	8992.62
Cost/ year	\$4,591.64	\$1,312.92
Savings/year		\$3,278.72
Existing Elec. Use per PC (kWh)	00.00	
Existing Elec. Use	98.82	
(kWh)	8992.62	\$1,312.92
% Savings	30%	
Proposed Elec. Use		
(kWh)	6,295	
<u>Savings</u>		
Estimated Savings Per		
Unit (kWh)	29.6	
Total Usage Savings	2,698	
Cost per Unit (\$/kWh)	\$0.146	
Total Cost Savings	\$394	
	<b>A</b>	
Unit Equipment Cost	\$25	
Equipment Cost	\$2,275	
Simple Payback		
(years)	5.78	
(years)	5.76	

# CALCULATIONS

# Replace Boilers with Higher Efficiency Boilers

# Central Elementary

1. Price of #2 Fuel Oil, \$/gal	\$2.870
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.146
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed System	Savings
Heating Boiler Fuel Consumption, gal	30,013	28,583	1,429
Heating Boiler Fuel Cost	\$ 86,141	\$ 82,039	\$ 4,102

#### **CALCULATIONS**

### SAVINGS FROM REPLACING WINDOW AC UNITS

### Central Elementary

1. Price of #2 Fuel Oil, \$/gal	\$2.870
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.146
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed System	Savings
Total Number of Units	5	5	
Number of Inefficient Units	5	5	
Capacity per Unit, Tons	1.50	1.50	
Total Capacity, Tons	7.5	7.5	
Assumed Efficiency, SEER	9.1	10.8	
Total Hours of Normal Operation, hrs	1,147	1,147	
Cooling Load Factor	47%	47%	
Annual Cooling Production, ton-hours	4,043	4,043	
Annual Cooling Load, kBTU	48,518	48,518	
Annual Peak Demand Reduction (kW)	0.8	0.7	0.12
Annual Electrical Consumption, kWh	5,332	4,492	839
Annual Cost and Savings, \$	\$ 778	\$ 656	\$ 123

- 1. Assume existing systems runs when outside air temperature (OAT) is above 65F during building occupied hours.
- 2. Both conditions are simulated with non-programmable thermostats.
- 3. Load factor calculation represents the percentage of time when the unit operates at full load.
- 4. It is assumed that the old systems have a 10% derated efficiency of 9.1 SEER.
- 5. Assume the new units have an efficiency of 10.8 EER.
- $6. \ Coincidence\ Factor\ for\ peak\ kW\ reduction\ taken\ from\ Maryland\ Public\ Utility\ Commission:\ Appendix\ A\ Measure\ Analysis\ Spreadsheet$
- 7. No rebates or other financial incentives were available for this measure

#### **CALCULATIONS**

#### WALK-IN FREEZER & COOLER EVAPORATOR FAN CONTROL

## **Central Elementary**

1. Price of #2 Fuel Oil, \$/gal	\$2.870
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.146
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Savings
Evaporator Fan Savings (kWh)	222
Compressor Operations Savings (kWh)	95
Annual Peak Demand Reduction (kW)	-
Annual Energy Consumption Savings (kWh)	317
Annual Cost and Savings, \$	\$ 46

- 1. Run hours based on continuous operation.
- 2. See Sample Calculation Below
- 3. No Demand Savings Calculated For This ECO.

#### **CALCULATIONS**

#### SAVINGS FROM WEATHERSTRIPPING DOORS

#### Central Elementary

Price of #2 Fuel Oil, \$/gal	\$2.870
Price of City Water, \$/1000 gallons	\$0.000
Price of Electricity, \$/kWh (blended rate)	\$0.146
Price of the Demand of Electricity, \$/kW/month	\$0.000
Price of Natural Gas, \$/therm	NA

#### **Double Doors**

	Existing Condition	Proposed System	Savings
Number of Doors	3	3	
Estimated Infiltration Rate per Door, CFM	39	10	
Annual Cooling Infiltration Hours, OAT > 80F	207	207	
Annual Heating Infiltration Hours, OAT < 65F	1,157	1,157	
Annual Cooling Electrical Consumption, kWh	-	-	0
Annual Heating Load, kBTU	1,623	406	
Annual Heating Oil Consumption, gals	16	4	12
Annual Cost and Savings, \$	\$ 45	\$ 11	34

- 1. Infiltration rate was calculated according to ASHRAE Fundamentals 2005 Door Leakage Rate Equation F27.12
- 2. Estimated hours of infiltration was based on all hours below 65F for the region.
- 3. It is assumed that each door has a leakage area of 31.5 square inches (7 linear feet by 0.125 in). Vestibule doors are not included.
- 4. A 60% load factor was used when calculating the existing leakage rate.
- 5. Assume all AHUs have an supply air temperature of 55F in the summer and 80F in the winter.
- 6. The average outside air temperature below 55F is 38.3F.
- 7. Assume the heating system has an efficiency of 75%
- 8. New weatherstripping is assumed to reduce inflitration by 80%.
- 9. There is no demand reduction for this measure
- 10. No rebates or other financial incentives were available for this measure

#### CALCULATIONS

## Replace Boilers with Higher Efficiency Boilers

# Central Elementary

1. Price of #2 Fuel Oil, \$/gal	\$2.870
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.146
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed System	Savings
Heating Boiler Fuel Consumption, gal	30,013	26,098	3,915
Heating Boiler Fuel Cost	\$ 86,141	\$ 74,905	\$ 11,236

#### COST ESTIMATE

#### Water Conservation - Liberty

N/N	DESCRIPTION OF	UNIT	QTY	MATERIAL		LABOR		TOTAL
	WORK	UNIT		PER UNIT	TOTAL	PER UNIT	TOTAL	TOTAL
1	ULF Toilet	EA	0	220	-	75	-	-
2	ULF Urinal	EA	0	350	-	125	-	-
3	Waterless Urinals	EA	0	500		125	-	-
4	Aerators	EA	20	8	160	5	100	260
5	Automatic Faucet w/ IR Sensors	EA	0	280	-	50	-	-
6	Showerheads	EA	0	21	-	10	-	-
	Other Estimated Implementation Costs	-			•			-

TOTAL	\$ 260
SUB-TOTAL	260
O&P	-
ASBESTOS ABATEMENT	-
DIRECT COST	260
PAYMENT & PERFORMANCE BOND 0%	-
SUB-TOTAL	260
CONTINGENCY 0%	-
ASBESTOS CONTINGENCY 0%	-
SUB-TOTAL	260
ASBESTOS DESIGN & AIR MONITORING, TESTING	-
IC FEE 0.0%	-
SUB-TOTAL	260
INTEREST DURING CONSTRUCTION 0%	-
TOTAL	\$ 260

#### COST ESTIMATE

#### Increase Pipe Insulation - Liberty

N/N	DESCRIPTION OF	UNIT	QTY	MATERIAL		LABOR		TOTAL
	WORK	UNIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL	TOTAL
1	Install Pipe Insulation - Cellular Glass, 1" Wall 1-1/2" Pipe	lf	100	3.07	307	4.04	404	711
2	Install Pipe Insulation - Cellular Glass, 1" Wall 2" Pipe	lf		5.15	-	5.40	1	1
3	Install Pipe Insulation - Cellular Glass, 1" Wall 3" Pipe	lf	-	5.25	-	5.70	1	1
4	Install Pipe Insulation - Cellular Glass, 1" Wall 5" Pipe	lf	-	8.00	-	7.45	-	=
5					-		-	-
Other Estimated Implementation Costs								270

TOTAL	\$ 981
SUB-TOTAL	711
O&P 15%	107
ASBESTOS ABATEMENT	-
DIRECT COST	818
PAYMENT & PERFORMANCE BOND 0%	-
SUB-TOTAL SUB-TOTAL	818
CONTINGENCY 20%	164
ASBESTOS CONTINGENCY 0%	-
SUB-TOTAL SUB-TOTAL	981
ASBESTOS DESIGN & AIR MONITORING, TESTING	-
IC FEE 0.0%	-
SUB-TOTAL	981
INTEREST DURING CONSTRUCTION 0%	-
TOTAL	\$ 981

Boiler Upgrade - Liberty

N/N	DESCRIPTION OF	UNIT Q	UNIT QTY	MATERIAL		LABOR		TOTAL
	WORK		QII	PER UNIT	TOTAL	OTAL PER UNIT TOTAL		IOIAL
1	2,500 MBH Condensing Boiler -Oil	ea	2	46,250	92,500	10,000	20,000	112,500
2	Demo Existing Boilers	ea	2	0	-	2,776	5,552	5,552
3	Piping Modifications	ls	2	4,000	8,000	6,000	12,000	20,000
	Other Estimated Implementation Costs							54,047

Other Estimated Implementation Costs	54,047
TOTAL	\$ 192,100
SUB-TOTAL	138,052
O&P 15%	20,708
ASBESTOS ABATEMENT	-
DIRECT COST	158,760
PAYMENT & PERFORMANCE BOND 0%	-
SUB-TOTAL	158,760
CONTINGENCY 10%	15,876
ASBESTOS CONTINGENCY 0%	-
SUB-TOTAL	174,636
ASBESTOS DESIGN & AIR MONITORING, TESTING	-
IC FEE 10.0%	17,464
SUB-TOTAL	192,099
INTEREST DURING CONSTRUCTION 0%	-
TOTAL	\$ 192,099
Total SmartStart Rebate	
Avoided Cost	\$ 140,130

#### COST ESTIMATE

	Walk-	In Power N	lanageme	nt - Liberty					
N/N	DESCRIPTION OF	UNIT	QTY	MATERIAL		LAB	Т	OTAL	
IN/IN	WORK	UNII	QII	PER UNIT	TOTAL	PER UNIT	TOTAL	- 1	OTAL
1	Walk In Cooler Power Management	EA	2	604	1,208	80	160		1,368
2		EA			-		-		-
	Other Estimated Implementation Costs								-
	TOTAL SUB-TOTAL							\$	<b>1,368</b> 1,368
	O&P ASBESTOS ABATEMENT						0%		-
	DIRECT COST PAYMENT & PERFORMANCE BOND						0%		1,368
	SUB-TOTAL								1,368
	CONTINGENCY ASBESTOS CONTINGENCY						0% 0%		-
	SUB-TOTAL ASBESTOS DESIGN & AIR MONITORING, TESTING								1,368
	IC FEE						0.0%		-
	SUB-TOTAL INTEREST DURING CONSTRUCTION						0%		1,368 -
	TOTAL							\$	1,368
							NJSS Rebate	\$	150

TOTAL

\$

1,218

	Vendin	g Machine	Power Mg	mt - Liberty					
	DECODINE OF				-DIAI	1.45	000		
N/N	DESCRIPTION OF WORK	UNIT	QTY	PER UNIT	ERIAL TOTAL	LAB PER UNIT	TOTAL	TC	TAL
1	Soda VendMiser	EA	1	179	179	500	500		679
2	Snack VendMiser	EA	1	179	179	500	500		679
3		EA			-		-		
	Other Estimated Implementation Costs			•		•			-
	TOTAL SUB-TOTAL							\$	<b>1,358</b> 1,358
	O&P ASBESTOS ABATEMENT						0%		-
	DIRECT COST PAYMENT & PERFORMANCE BOND SUB-TOTAL						0%		1,358 - 1,358
	CONTINGENCY ASBESTOS CONTINGENCY						0% 0%		-
	SUB-TOTAL ASBESTOS DESIGN & AIR MONITORING, TESTING								1,358 -
	IC FEE SUB-TOTAL						0.0%		- 1,358
	INTEREST DURING CONSTRUCTION TOTAL						0%	\$	- 1,358

#### COST ESTIMATE

#### Computer Power Management

N/N	DESCRIPTION OF	UNIT	QTY	MATERIAL		LA	TOTAL		
IN/IN	WORK	UNIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL	TOTAL	
1	Computer Programmng	EA	50	25	1,250	-	-	1,250	
2		EA			-		-	-	
	Other Estimated Implementation Costs	-	-	•				-	

Other Estimated implementation costs		
TOTAL		\$ 1,250
SUB-TOTAL		1,250
O&P	0%	-
ASBESTOS ABATEMENT		-
DIRECT COST		1,250
PAYMENT & PERFORMANCE BOND	0%	-
SUB-TOTAL		1,250
Computer Power Management	0%	-
ASBESTOS CONTINGENCY	0%	-
SUB-TOTAL		1,250
ASBESTOS DESIGN & AIR MONITORING, TESTING		-
IC FEE	0.0%	-
SUB-TOTAL		1,250
INTEREST DURING CONSTRUCTION	0%	-
TOTAL		\$ 1,250

#### **COST ESTIMATE**

#### Replace CRT Monitors with Flat Screens - Liberty LABOR DESCRIPTION OF MATERIAL N/N UNIT QTY TOTAL PER UNIT TOTAL WORK PER UNIT TOTAL 17" Flat Screen Monitors EΑ 28 1 175 4,900 4,900 EΑ Other Estimated Implementation Costs TOTAL SUB-TOTAL 4,900 4,900 O&P 0% ASBESTOS ABATEMENT **DIRECT COST** 4,900 PAYMENT & PERFORMANCE BOND 0% 4,900 SUB-TOTAL CONTINGENCY 0% ASBESTOS CONTINGENCY 0% SUB-TOTAL 4,900 ASBESTOS DESIGN & AIR MONITORING, TESTING IC FEE 0.0% SUB-TOTAL 4,900 INTEREST DURING CONSTRUCTION

TOTAL

0%

4,900

#### **COST ESTIMATE**

#### SEER Upgrade - Liberty

N/N	DESCRIPTION OF	UNIT	QTY		MATERIAL	LABOR		
14/14	WORK		QII	PER UNIT	High Eff Inc.	TOTAL	PER UNIT	TOTAL
1	DX Cooling and Heat Pump (2 ton)	EA	2	830	200	2,060	240	480
2	DX Cooling and Heat Pump (2.5 ton)	EA	2	865	250	2,230	282	564
3	DX Cooling and Heat Pump (25 ton)	EA	1	14,300	2,500	16,800	2,432	2,432
4	Ref. Piping, Etc	LS	1		150	150		-

Other Estimated Implementation Costs
TOTAL
SUB-TOTAL O&P 20% ASBESTOS ABATEMENT **DIRECT COST** PAYMENT & PERFORMANCE BOND 0% SUB-TOTAL CONTINGENCY 10% ASBESTOS CONTINGENCY 0% SUB-TOTAL ASBESTOS DESIGN & AIR MONITORING, TESTING IC FEE 0.0% SUB-TOTAL INTEREST DURING CONSTRUCTION 0% TOTAL **Total SmartStart Rebate** 

Avoided Cost

#### CALCULATIONS

#### **SEER Upgrade**

#### **Liberty Elementary**

1. Price of #2 Fuel Oil, \$/gal	\$2.882
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.145
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Proposed Standard Condition	Proposed High Eff. System	Savings
Total Tons	34	34	
SEER	8.0	14.0	
Annual Run Hours	1,031	1,031	
Annual Peak Demand Reduction (kW)	7.0	4.3	2.68
Annual kWh	42,065	25,867	16,197
Annual Cost and Savings, \$	\$ 6,099	\$ 3,751	\$ 2,349

- 1. Cost per kWh and therm prices taken from "# Constants" sheet.
- 2. Run hours based on bin data and time of day factor.
- 3. See Sample Calculations below

Tag	Mfg	Model	Tons	Run Hrs	Cooling Load Factor	Standard SEER Btu / Wh	Standard Unit kWh	Hi Eff SEER Btu / Wh	Hi Eff Unit kWh	kWh Saved	\$/kWh	Sa	nnual avings \$\$
ACCU-1	Trane	BTD730A	2.5	1,031	80%	8.0	3,093	14.3	1,730	1,363	\$0.145	\$	198
ACCU-2	Trane	BTD730A	2.5	1,031	80%	8.0	3,093	14.3	1,730	1,363	\$0.145	\$	198
Total			34				42,065		25,867	16,197		\$	2,349

Factor Study

- 4.. ASHRAE 90.1-1989 Referenced for baseline SEER/EER
- 5. Proposed SEER/EER Ratings taken from Lennox Strategos Series

#### CALCULATIONS

#### Increase insulation on DHW piping

1. Price of #2 Fuel Oil, \$/gal	\$2.882
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.145
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Proposed Condition Condition		
Annual Energy Consumption (gals)	276	52	224
Annual Op Cost	\$ 796	\$ 151	\$ 646

- Assume DHW temperature of 120F
   Assume average ambient boiler room temperature of 75F.
- 3. There is no demand reduction for this measure
- 4. No rebates or other finanical incentives were available for this measure

		Existing			Proposed			
		Pipe or Tube Size	)		Pipe or Tube Size	Total	1	
	2"	1-1/2"	4"	2"	1-1/2"		Savings	
Length of Uninsulated DHW Pipe (Ft)	0	100	0	0	100	0	100	
Inches of insulation	0	0	0	1	1	1		
Btu losses, per foot, per hour	46	37		8	7			
Annual Btu losses	0	32,412,000	0	0	6,132,000	0		
Annual Fuel losses (gals)	0	276	0	0	52	0		224
Annual Operating Cost, \$	\$0	\$796	\$0	\$0	\$151	\$0		\$646
Total Cost and Savings, \$	\$0	\$796	\$0	\$0	\$151	\$0		\$646

0.616

#### **VENDING MACHINE POWER MANAGEMENT SYSTEM**

Liberty Eleme	ntary
---------------	-------

Price of #2 Fuel Oil, \$/gal	\$2.882
Price of City Water, \$/1000 gallons	\$0.000
Price of Electricity, \$/kWh (blended rate)	\$0.145
Price of the Demand of Electricity, \$/kW/month	\$0.000
Price of Natural Gas, \$/therm	NA

	cisting ndition	posed vstem	Savings
Soda Machine Power Consumption	100%	56%	44%
Soda Machine Annual Op Cost	\$ 838	\$ 369	469
Run Hours	5,256	5,256	
Soda Annual Energy Consumption (kWh)	5,782	2,544	3,238
Snack Machine Power Consumption	100%	56%	44%
Annual Op Cost	\$ 61	\$ 27	34
Run Hours	5,256	5,256	
Annual Energy Consumption (kWh)	420	185	235
Total Annual Energy Consumption (kWh)	6,202	2,729	3,473
Annual Cost and Savings, \$	\$ 899	\$ 396	\$ 504

<sup>1.</sup> Run hours based on fan motors being run 8760 hrs

			sts

Electrical Unit Cost, \$/kwh	\$0.145

Soda Machine Count	1
Snack Machine Count	1
Annual Run-Time Factor	60%

#### VendMiser Installation Savings

Soda Machine Power Consumption, kw	1.10	
Annual Savings %	56%	
Electrical Unit Cost, \$ per kilowatt-hour	\$0.145	
Annual Energy Savings	\$469	

#### **VendMiser Installation Savings**

Snack Machine Power Consumption, kw	0.08
Annual Savings %	56%
Electrical Unit Cost, \$ per kilowatt-hour	\$0.145
Annual Energy Savings	\$34

#### **Economics Summary**

Economics Cammary	
kWh Savings	3,473
Estimated Annual Savings	\$504
Vendmiser Unit Cost	\$179
Total Installation Cost (\$500/unit)	\$1,000
Total Vendmiser Cost (ECM)	\$1,358
Simple Payback, Years	2.70

#### CALCULATIONS

# \$2.882 \$0.000

1. Price of #2 Fuel Oil, \$/gal	\$2.882
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.145
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed Condition	Savings
Total # Fixtures	668	668	-
Total Fixture Watts	93,412	37,676	55,736
Annual Lighting kWh	189,624	57,754	131,870
Additional Sensor Savings	-	20,304	20,304
Annual Operating Cost and Savings, \$	\$ 27,495	\$ 5,430	\$ 22,065

#### **CALCULATIONS**

#### **Replace CRT Monitors with Flat Screens**

1. Price of #2 Fuel Oil, \$/gal	\$2.882
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.145
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas. \$/therm	NA

	Existing Condition	Proposed System	Savings
Number of WS/PCs	28	28	
Annual Electric Usage and Savings (kWh)	9,677	2,767	6,910
Annual Cost and Savings, \$	\$ 1,403	\$ 401	\$ 1,002

- 1. Estimated 28 workstations in the computer lab
- 2. Estimated 30% savings per workstation / PC
- 3. There is no demand reduction for this measure
- 4. No rebates or other financial incentives were available for this measure

<u>Usage</u>	<u>CRT</u>	Flat Screen
Hours awake/day	10	10
Days per year	180	180
Awake kWh consumption	270	90
Hours asleep/day	14	14
Days per year	180	180
Asleep kWh consumption	75.6	8.82
Total kWh/ year	345.6	98.82
Cost/ year	\$50.11	\$14.33
Savings/year		\$35.78
# computers	28	28
Total kWh/ year	9676.8	2766.96
Cost/ year	\$1,403.14	\$401.21
Savings/year		\$1,001.93

#### **CALCULATIONS**

Transient

Visitors 0

0

#### **Water Conservation**

#### **Liberty Elementary**

•	
1. Price of #2 Fuel Oil, \$/gal	\$2.882
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.145
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed System	Savings
Annual Consumption (gals)	66,600	54,000	12,600
Annual Hot Water Consumption (gals)	33,629	26,904	6,726
Annual Fuel Oil Consumption (gal)	136	108	27
Annual Water Cost and Savings (\$)	\$ -	\$ -	\$ -
Annual Fuel Oil Cost and Savings (\$)	\$ 391	\$ 313	\$ 78
Annual Cost and Savings, \$	\$ 391	\$ 313	\$ 78

	Full Time Occupants	
Estimated Male Occupants	157	
Estimated Female Occupants	157	
Estimated Toilets	20	
Estimated Urinals	7	
Estimated Lavatory Sinks	20	
Estimated Showers	0	
Estimated Appicable Days (Total Work days assumed)	180	

Total Students

#### **Computer Power Management**

1. Price of #2 Fuel Oil, \$/gal	\$2.882
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.145
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed System	Savings
Number of WS/PCs	50	50	
Annual Electric Usage and Savings (kWh)	4,941	3,459	1,482
Annual Cost and Savings, \$	\$ 716	\$ 502	\$ 215

- 1. Estimated 50 workstations throughout the building (Comp Rooms and Classrooms)
- 2. Estimated 30% savings per workstation / PC
- 3. There is no demand reduction for this measure
- 4. No rebates or other financial incentives were available for this measure

<u>Usage</u>	CRT	Flat Screen
Hours awake/day	10	10
Days per year	180	180
Awake kWh consumption	270	90
Hours asleep/day	14	14
Days per year	180	180
Asleep kWh		
consumption	75.6	8.82
T-4-1130/le/	0.45.0	00.00
Total kWh/ year	345.6	98.82
Cost/ year	\$50.11	\$14.33
Savings/year		\$35.78
# computers	50	50
Total kWh/ year	17280	4941
Cost/ year	\$2,505.60	\$716.45
Savings/year		\$1,789.16
Existing Elec. Use per PC (kWh)	98.82	
Existing Elec. Use (kWh)	4941	\$716.45
% Savings	30%	
Proposed Elec. Use (kWh)	3,459	
<u>Savings</u>		
Estimated Savings Per Unit (kWh)	29.6	
Total Usage Savings	1,482	
Cost per Unit (\$/kWh)	\$0.145	
Total Cost Savings	\$215	
Unit Equipment Cost	\$25	
Equipment Cost	\$1,250	
	,	
Simple Payback (years)	5.82	

#### CALCULATIONS

# Replace Boilers with Higher Efficiency Boilers

1. Price of #2 Fuel Oil, \$/gal	\$2.882
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.145
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed System	Savings
Heating Boiler Fuel Consumption, gal	15,014	13,056	1,958
Heating Boiler Fuel Cost	\$ 43,274	\$ 37,629	\$ 5,644

#### **CALCULATIONS**

#### WALK-IN FREEZER & COOLER EVAPORATOR FAN CONTROL

1. Price of #2 Fuel Oil, \$/gal	\$2.882
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.145
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Sa	vings
Evaporator Fan Savings (kWh)		444
Compressor Operations Savings (kWh)		190
Annual Peak Demand Reduction (kW)		-
Annual Energy Consumption Savings (kWh)		634
Annual Cost and Savings, \$	\$	92

- 1. Run hours based on continuous operation.
- 2. See Sample Calculation Below
- 3. No Demand Savings Calculated For This ECO.

#### COST ESTIMATES

#### Water Conservation - GMMS

N/N	DESCRIPTION OF	UNIT	QTY	MAT	ERIAL	LAE	BOR	TOTA	ΔI
14/14	WORK	01411	α	PER UNIT	TOTAL	PER UNIT	TOTAL	1017	
1	ULF Toilet	EA	0	220	-	75	-		-
2	ULF Urinal	EA	0	350	-	125	-		-
3	Waterless Urinals	EA	0	500	-	125	-		-
4	Aerators	EA	40	8	320	5	200		520
5	Automatic Faucet w/ IR Sensors	EA	0	280	-	50	-		-
6	Showerheads	EA	0	21	-	10	-		-
	Other Estimated Implementation Costs								-
	TOTAL							\$	520
	SUB-TOTAL								520
	O&P						0%		-
	ASBESTOS ABATEMENT								-
	DIRECT COST								520
	PAYMENT & PERFORMANCE BOND						0%		-
	SUB-TOTAL								520
	CONTINGENCY						0%		-
	ASBESTOS CONTINGENCY						0%		-
	SUB-TOTAL								520
	ASBESTOS DESIGN & AIR MONITORING, TESTING								-
	IC FEE						0.0%		-
	SUB-TOTAL								520
	INTEREST DURING CONSTRUCTION						0%		-
	TOTAL							\$	520

	Wa	alk-In Power	Managen	nent - GMMS				
N/N	DESCRIPTION OF	UNIT	QTY		ERIAL		BOR	TOTAL
	WORK	0	α	PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Walk In Cooler Power Management	EA	2	604	1,208	80	160	1,368
2		EA			-		-	-
	Other Estimated Implementation Costs							-
	TOTAL SUB-TOTAL							\$ <b>1,368</b> 1,368
	O&P ASBESTOS ABATEMENT						0%	-
	DIRECT COST							1,368
	PAYMENT & PERFORMANCE BOND SUB-TOTAL						0%	1,368
	CONTINGENCY						0%	
	ASBESTOS CONTINGENCY SUB-TOTAL						0%	1,368
	ASBESTOS DESIGN & AIR MONITORING, TESTING IC FEE						0.0%	-
	SUB-TOTAL INTEREST DURING CONSTRUCTION						0%	1,368
	TOTAL							\$ 1,368

NI/NI	DESCRIPTION OF	UNIT	OTV	MAT	ERIAL	LAB	OR	TOTAL
N/N	WORK	UNII	QTY	PER UNIT	TOTAL	PER UNIT	TOTAL	TOTAL
1	Soda VendMiser	EA	2	179	358	500	1,000	1,35
2	Snack VendMiser	EA	2	179	358	500	1,000	1,358
3		EA			-		-	-
	Other Estimated Implementation Costs							-
	TOTAL SUB-TOTAL							\$ <b>2,71</b> 0 2,710
	O&P ASBESTOS ABATEMENT						0%	-
	DIRECT COST							2,71
	PAYMENT & PERFORMANCE BOND SUB-TOTAL						0%	2,71
	CONTINGENCY						0%	-,
	ASBESTOS CONTINGENCY SUB-TOTAL ASBESTOS DESIGN & AIR MONITORING, TESTING						0%	2,71
	IC FEE SUB-TOTAL						0.0%	2,71
	INTEREST DURING CONSTRUCTION TOTAL						0%	\$ 2,71
							NJSS Rebate	\$ 15

N/N	DESCRIPTION OF	UNIT QTY MATERIAL LABOR		OR	T	OTAL			
N/IN	WORK	UNIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL	] ''	JIAL
1	17" Flat Screen Monitors	EA	53	175	9,275	-	-		9,27
2		EA			-		-		-
	Other Estimated Implementation Costs								-
	TOTAL							\$	9,27
	SUB-TOTAL								9,27
	O&P						0%		-
	ASBESTOS ABATEMENT								-
	DIRECT COST								9,2
	PAYMENT & PERFORMANCE BOND						0%		-
	SUB-TOTAL								9,2
	CONTINGENCY						0%		-
	ASBESTOS CONTINGENCY						0%		-
	SUB-TOTAL								9,2
	ASBESTOS DESIGN & AIR MONITORING, TESTING								-
	IC FEE						0.0%		-
	SUB-TOTAL								9,2
	INTEREST DURING CONSTRUCTION						0%		-
	TOTAL							\$	9,2

	R	eplace Loo	n Water VI	ED - GMMS					
		cpiace Loo	p trate: ti	D CIIIIIO					
N/N	DESCRIPTION OF	UNIT	QTY	MATI	ERIAL	LAE	BOR		TOTAL
IN/IN	WORK	ONIT	QII	PER UNIT	TOTAL	PER UNIT	TOTAL		TOTAL
1	VFD, 40 Hp	EA	1	4,879	4,879	1,350	1,350		6,229
2	Commissioning VFD	HR	8		-	200	1,600		1,600
2	BMS Programming	HR	8		-	120	960		960
	Other Estimated Implementation Costs								1,758
	TOTAL							\$	10,547
	SUB-TOTAL								8,789
	O&P						20%		1,758
	ASBESTOS ABATEMENT DIRECT COST								10,547
	PAYMENT & PERFORMANCE BOND						0%		10,547
	SUB-TOTAL						070		10,547
	CONTINGENCY						0%		-
	ASBESTOS CONTINGENCY						0%		-
	SUB-TOTAL								10,547
	ASBESTOS DESIGN & AIR MONITORING, TESTING								-
	IC FEE						0.0%		-
	SUB-TOTAL								10,547
	INTEREST DURING CONSTRUCTION						0%	•	-
	TOTAL							\$	10,547

	Install	VFDs on Co	ooling Tow	er Fans - GM	MS			
NI/NI	DESCRIPTION OF	UNIT	OTV	MATE	ERIAL	LAB	BOR	TOTAL
N/N	WORK	UNII	QTY	PER UNIT	TOTAL	PER UNIT	TOTAL	TOTAL
1	VFD, 7.5 Hp	EA	2	1,875	3,750	670	1,340	5,0
2	Electrical, #10 wiring	Ft	60	2	107	2	118	2
3	Electrical, conduit galvanized metal 1"	Ft	60	3	172	4	238	4
4	Commissioning, vavles & VFD	LS	2		-	150	300	3
	Other Estimated Implementation Costs							1,2
	TOTAL SUB-TOTAL O&P ASBESTOS ABATEMENT DIRECT COST PAYMENT & PERFORMANCE BOND SUB-TOTAL CONTINGENCY ASBESTOS CONTINGENCY SUB-TOTAL ASBESTOS DESIGN & AIR MONITORING, TESTING IC FEE SUB-TOTAL						20% 0% 0% 0%	\$ 7,2 6,0 1,2 7,2 7,2 7,2 7,2
	INTEREST DURING CONSTRUCTION TOTAL						0% NJSS Rebate	\$ 7,2
							TOTAL	\$ 7,2

	Premiu	ım Efficien	cy Motor l	Jpgrade -GMN	MS			
N/N	DESCRIPTION OF	UNIT	QTY	MAT	ERIAL	LABOR		TOTAL
IN/IN	WORK	UNII	QIY	PER UNIT	TOTAL	PER UNIT	TOTAL	TOTAL
1	10 HP Premium Efficiency Motor	EA	2	984	1,968	115	230	2,1
	Other Estimated Implementation Costs							4
	TOTAL SUB-TOTAL O&P						20%	\$ <b>2</b> ,
	ASBESTOS ABATEMENT DIRECT COST							2,
	PAYMENT & PERFORMANCE BOND  SUB-TOTAL  CONTINGENCY						0% 0%	2,
	ASBESTOS CONTINGENCY SUB-TOTAL						0%	2,
	ASBESTOS DESIGN & AIR MONITORING, TESTING IC FEE SUB-TOTAL						0.0%	2,
	INTEREST DURING CONSTRUCTION TOTAL						0%	\$ 2,
							NJSS Rebate	\$
							TOTAL	\$ 2,

		Pump	TOD - GN	MMS					
N/N	DESCRIPTION OF	UNIT	QTY MATERIAL LABOR		BOR	TC	TOTAL		
IN/IN	WORK	ONIT	3	PER UNIT	TOTAL	PER UNIT	TOTAL	10	JIAL
1	Programming	HR	4	0	-	150	600		60
2					-		-		-
	Other Estimated Implementation Costs								-
	TOTAL							\$	6
	SUB-TOTAL								6
	O&P						0%		-
	ASBESTOS ABATEMENT								-
	DIRECT COST								6
	PAYMENT & PERFORMANCE BOND						0%		-
	SUB-TOTAL								6
	CONTINGENCY						0%		-
	ASBESTOS CONTINGENCY						0%		-
	SUB-TOTAL								6
	ASBESTOS DESIGN & AIR MONITORING, TESTING								-
	IC FEE						0.0%		-
	SUB-TOTAL								6
	INTEREST DURING CONSTRUCTION						0%		-
	TOTAL							\$	6

N/N	DESCRIPTION OF	UNIT	QTY	MATE	ERIAL	LABOR		т/	OTAL
IN/IN	WORK	UNII	QII	PER UNIT	TOTAL	PER UNIT	TOTAL	10	JIAL
1	Programming	Ea	29	0	-	75	2,175		2,17
2					-		-		-
	Other Estimated Implementation Costs					•			-
	TOTAL SUB-TOTAL							\$	<b>2,17</b> 2,17
	O&P ASBESTOS ABATEMENT						0%		-
	DIRECT COST						201		2,17
	PAYMENT & PERFORMANCE BOND SUB-TOTAL						0%		2,17
	CONTINGENCY ASBESTOS CONTINGENCY						0% 0%		-
	SUB-TOTAL						0,3		2,17
	ASBESTOS DESIGN & AIR MONITORING, TESTING IC FEE						0.0%		-
	SUB-TOTAL INTEREST DURING CONSTRUCTION						0%		2,17
	TOTAL						U%	•	2,17

#### COST ESTIMATES

	Con	nputer Pow	er Manage	ment - GMMS	3				
N/N	DESCRIPTION OF	UNIT	QTY	MAT	ERIAL	LA	BOR	Ι,	OTAL
IN/IN	WORK	UNII	QIT	PER UNIT	TOTAL	PER UNIT	TOTAL	'	UTAL
1	Computer Programmng	EA	98	25	2,450	-	-		2,450
2		EA			-		-		-
	Other Estimated Implementation Costs								-
	TOTAL							\$	2,450
	SUB-TOTAL								2,450
	O&P						0%		-
	ASBESTOS ABATEMENT								-
	DIRECT COST								2,450
	PAYMENT & PERFORMANCE BOND						0%		-
	SUB-TOTAL								2,450
	Computer Power Management						0%		-
	ASBESTOS CONTINGENCY						0%		-
	SUB-TOTAL								2,450
	ASBESTOS DESIGN & AIR MONITORING, TESTING								-
	IC FEE						0.0%		-
	SUB-TOTAL								2,450
	INTEREST DURING CONSTRUCTION						0%		-
	TOTAL							\$	2,450

#### HP SCHEDULES

#### GM Middle School

1. Price of #2 Fuel Oil, \$/gal	\$2.788
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.144
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas. \$/therm	NA

	Existing Condition	Proposed System	Savings
Average Annual Run Hours	3,965	2,600	1,365
Annual Electric Use (kWh)	202,244	163,363	38,882
Annual Cost and Savings, \$	\$ 29,123	\$ 23,524	\$ 5,599

- 1. Daily run hours are reduced from typically 15 hours to 10 hours.
- 2. Assumed Fans are equipped with Motors of HP listed in calculation table
- 3. See Sample Calculations Below

					Proposed TOD		
Unit	Area Served	CFM	Load Factor	Existing TOD Factor	Factor	Estimat	ed Savings
HP-1	B Hall	1/6	0.7	3965	2600	\$	119
HP-2	C Hall	1/6	0.7	3965	2600	\$	119
Hours of Operation	On	Off	Hrs/Day				
Existing	7.25	22.25	15				
Proposed	7	17	10				

- 4. There is no demand reduction for this measure
- 5. No rebates or other financial incentives were available for this measure

#### CALCULATIONS

#### **Loop Water Pump TOD Optimization**

#### GM Middle School

1. Price of #2 Fuel Oil, \$/gal	\$2.788
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.144
4. Price of the Steam, \$/mlbs	\$0.000
5. Price of Natural Gas. \$/therm	NA

	Existing Condition	Proposed System	Savings
Annual Run Hours	3,120	2,340	780
Annual Electric Use (kWh)	82,573	61,930	20,643
Annual Cost and Savings, \$	\$ 11.890	\$ 8.918	\$ 2.973

						ESTIMAT TII		LOAD F	ACTOR (%)		CTRIC TION (kWh)	SAV	INGS	Peak Demand Reduction
TAG	LOCATION	SERVICES	HP	RPM	EFF (%)	EXIST. HRS	PROP. HRS	EXISTING	PROPOSED	EXISTING	PROPOSED	kWh	\$	kW
P-1	MER	Loop Pumps	40	1,750	90.2%	1,560	1,170	100.0%	100.0%	41,286	30,965	10,322	\$ 1,486	4.6
P-2	MER	Loop Pumps	40	1,750	90.2%	1,560	1,170	100.0%	100.0%	41,286	30,965	10,322	\$ 1,486	4.6
-											TOTAL	20,643	\$ 2,973	9.3

<sup>1.</sup> Daily run hours are reduced from typically hours to hours.

<sup>2.</sup> Assumed Fans are equipped with Motors of HP listed in calculation table

<sup>3.</sup> See Sample Calculations Below

#### CALCULATIONS

#### Repair/Replace Loop Pump VFD

#### GM Middle School

1. Price of #2 Fuel Oil, \$/gal	\$2.788
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.144
4. Price of the Steam, \$/mlbs	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed System	Savings
Annual Electric Use (kWh)	61,930	40,224	21,705
Annual Cost and Savings, \$	\$ 8,918	\$ 5,792	\$3,126

						-	TED RUN ME	LOAD F	ACTOR (%)		CTRIC PTION (kWh)	SAV	INGS	Peak Demand Reduction
TAG	LOCATION	SERVICES	HP	RPM	EFF (%)	EXIST. HRS	PROP. HRS	EXISTING	PROPOSED	EXISTING	PROPOSED	kWh	\$	kW
P-1	MER	Loop Pumps	40	1,750	90.2%	1,170	1,170	100.0%	75.0%	30,965	20,112	10,853	\$1,563	6.5
P-2	MER	Loop Pumps	40	1,750	90.2%	1,170	1,170	100.0%	75.0%	30,965	20,112	10,853	\$1,563	6.5
	_					,							,	
											TOTAL	21,705	\$3,126	13.0

VENDING MACHI	NE POWER M	ANAGEMENT SYSTEM
GM Middle School		
Price of #2 Fuel Oil, \$/gal	\$2.788	
Price of City Water, \$/1000 gallons	\$0.000	
Price of Electricity, \$/kWh (blended rate)	\$0.144	
Price of the Demand of Electricity, \$/kW/month	\$0.000	
Price of Natural Gas, \$/therm	NA	

	xisting endition	posed ystem	Savings
Soda Machine Power Consumption	100%	56%	44%
Soda Machine Annual Op Cost	\$ 1,665	\$ 733	932
Run Hours	5,256	5,256	
Soda Annual Energy Consumption (kWh)	11,563	5,088	6,475
Snack Machine Power Consumption	100%	56%	44%
Annual Op Cost	\$ 121	\$ 53	68
Run Hours	5,256	5,256	
Annual Energy Consumption (kWh)	841	370	471
Total Annual Energy Consumption (kWh)	12,404	5,458	6,946
Annual Cost and Savings, \$	\$ 1,786	\$ 786	\$ 1,000

<sup>1.</sup> Run hours based on fan motors being run 8760 hrs

	osts

Electrical Unit Cost, \$/kwh \$0.144 Soda Machine Count Snack Machine Count Annual Run-Time Factor

**VendMiser Installation Savings** Soda Machine Power Consumption, kw Annual Savings % Electrical Unit Cost, \$ per kilowatt-hour Annual Energy Savings

1.10 56% \$0.144 0.616

VendMiser Installation Savings Snack Machine Power Consumption, kw Annual Savings % Electrical Unit Cost, \$ per kilowatt-hour Annual Energy Savings

0.08 56% \$0.144

Economics Summary kWh Savings Estimated Annual Savings Vendmiser Unit Cost Total Installation Cost (\$500/unit) Total Vendmiser Cost (ECM) 6,946 \$1,000 \$179 \$2,000 Simple Payback, Years

# Lighting Upgrade GM Middle School 1. Price of #2 Fuel Oil, \$/gal \$2.788 2. Price of City Water, \$/1000 gallons \$0.000 3. Price of Electricity, \$/kWh (blended rate) \$0.144 4. Price of the Demand of Electricity, \$/kW/month 5. Price of Natural Gas, \$/therm NA

	Existing Condition	Proposed Condition	Savings
Total # Fixtures	946	946	-
Total Fixture Watts	98,981	57,887	41,094
Annual Lighting kWh	185,041	90,298	94,743
Additional Sensor Savings	-	19,810	19,810
Annual Operating Cost and Savings \$	\$ 26.646	\$ 10.150	\$ 16.496

Replace CRT Monitors with Flat Scree					
GM Middle School					
1. Price of #2 Fuel Oil, \$/gal	\$2.788				
2. Price of City Water, \$/1000 gallons	\$0.000				
3. Price of Electricity, \$/kWh (blended rate)	\$0.144				
4. Price of the Demand of Electricity, \$/kW/month	\$0.000				
5. Price of Natural Gas, \$/therm	NA				

	Existing Condition	Proposed System	Savings
Number of WS/PCs	53	53	
Annual Electric Usage and Savings (kWh)	18,317	5,237	13,079
Annual Cost and Savings, \$	\$ 2,638	\$ 754	\$ 1,883

- 1. Estimated 53 workstations in the computer lab
- Estimated 30% savings per workstation / PC
   There is no demand reduction for this measure
- 4. No rebates or other financial incentives were available for this measure

Usage	CRT	Flat Screen
Hours awake/day	10	10
Days per year	180	180
Awake kWh consumption	270	90
Hours asleep/day	14	14
Days per year	180	180
Asleep kWh consumption	75.6	8.82
Total kWh/ year	345.6	98.82
Cost/ year	\$49.77	\$14.23
Savings/year		\$35.54
# computers	53	53
Total kWh/ year	18316.8	5237.46
Cost/ year	\$2,637.62	\$754.19
Savings/year		\$1,883.42

#### CALCULATIONS

#### 

5. Price of Natural Gas, \$/therm

NA

	E	cisting	Pro	Proposed		
		ndition	System		S	avings
Annual Consumption (gals)		66,600		54,000		12,600
Annual Hot Water Consumption (gals)		33,415		26,732		6,683
Annual Fuel Oil Consumption (gal)		135		108		27
Annual Water Cost and Savings (\$)	\$	-	\$		\$	-
Annual Fuel Oil Cost and Savings (\$)	\$	376	\$	301	\$	75
Annual Cost and Savings, \$	\$	376	\$	301	\$	75

	Full Time Occupants	Transient Visitors
Estimated Male Occupants	156	0
Estimated Female Occupants	156	0
Estimated Toilets	40	
Estimated Urinals	13	
Estimated Lavatory Sinks	40	
Estimated Showers	0	
Estimated Appicable Days (Total Work days assumed)	180	

Tota	I Students
	212

Computer Power Management					
GM Middle School					
1. Price of #2 Fuel Oil, \$/gal	\$2.788				
2. Price of City Water, \$/1000 gallons	\$0.000				
3. Price of Electricity, \$/kWh (blended rate)	\$0.144				
4. Price of the Demand of Electricity, \$/kW/month	\$0.000				
5. Price of Natural Gas, \$/therm	NA				

	Existing Condition	Proposed System	Savings
Number of WS/PCs	98	98	
Annual Electric Usage and Savings (kWh)	9,684	6,779	2,905
Annual Cost and Savings, \$	\$ 1,395	\$ 976	\$ 418

- 1. Estimated 98 workstations throughout the building (Comp Rooms and Classrooms)
- 2. Estimated 30% savings per workstation / PC
- 3. There is no demand reduction for this measure
- 4. No rebates or other financial incentives were available for this measure

	1	
Usage	CRT	Flat Screen
Hours awake/day	10	10
Days per year	180	180
Awake kWh consumption	270	90
Hours asleep/day	14	14
Days per year	180	180
Asleep kWh consumption	75.6	8.82
Total kWh/ year	345.6	98.82
Cost/ year	\$49.77	\$14.23
Savings/year		\$35.54
# computers	98	98
Total kWh/ year	33868.8	9684.36
Cost/ year	\$4,877.11	\$1,394.55
Savings/year		\$3,482.56
Existing Elec. Use per PC (kWh)	98.82	
Existing Elec. Use (kWh)	9684.36	\$1,394.55
% Savings	30%	
Proposed Elec. Use (kWh)	6,779	
<u>Savings</u> Estimated Savings Per Unit		
(kWh)	29.6	
Total Usage Savings Cost per Unit (\$/kWh)	2,905 \$0.144	
Total Cost Savings	\$418	
Unit Equipment Cost	\$25	
Equipment Cost	\$2,450	
Simple Payback (years)	5.86	

#### CALCULATIONS

## WALK-IN FREEZER & COOLER EVAPORATOR FAN CONTROL

GM Middle School	
1. Price of #2 Fuel Oil, \$/gal	\$2.788
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.144
4. Price of the Demand of Electricity, \$/kW/month	\$0.000
5. Price of Natural Gas, \$/therm	NA

	S	avings
Evaporator Fan Savings (kWh)		444
Compressor Operations Savings (kWh)		190
Annual Peak Demand Reduction (kW)		
Annual Energy Consumption Savings (kWh)		634
Annual Cost and Savings, \$	\$	91

Run hours based on continuous operation.
 See Sample Calculation Below
 No Demand Savings Calculated For This ECO.

#### CALCULATIONS

#### SAVINGS FROM PREMIUM EFFICIENCY MOTORS

#### GM Middle School

5. Price of Natural Gas, \$/therm

1. Price of #2 Fuel Oil, \$/gal	\$2.788
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.144
4 Price of the Demand of Electricity \$/kW/month	\$0.000

					ESTIMATED RUN TIME		FULL LOAD NOMINAL ELECTRIC CONSUMPTION (kWh)		I SAVINGS I		NJCE REBATE	Peak Demand Reduction		
TAG	LOCATION	SERVICES	HP	RPM	AVG HRS	LOAD FACTOR	EXISTING	PROPOSED	EXISTING	PROPOSED	kWh	\$	\$	kW
CT-1	COOLING MER	COOLING TOWER	10	1,800	2,135	50%	85.5%	91.7%	7,451	6,947	504	\$ 73	\$ 90	0.2
CT-2	COOLING MER	COOLING TOWER	10	1,800	2,135	50%	85.5%	91.7%	7,451	6,947	504	\$ 73	\$ 90	0.2
										TOTAL	1,008	\$ 145	\$ 180	0.3

- 1. Existing equipment data listed in italics were estimated due to unavailable information.
- 2. The Load Factor takes into consideration multiple pump operation
- 3. Only the major motors were sampled for this calculations.
- 4. Run hours base on combined summer and winter bin hours
- 5. Coincidence Factor for peak kW reduction taken from United Illuminated Company: 2005 Coincidence Factor Study

NA

6. Load factors are estimated

#### CALCULATIONS

#### **Cooling Tower Fan VFD**

#### GM Middle School

1. Price of #2 Fuel Oil, \$/gal	\$2.788
2. Price of City Water, \$/1000 gallons	\$0.000
3. Price of Electricity, \$/kWh (blended rate)	\$0.144
4. Price of the Steam, \$/mlbs	\$0.000
5. Price of Natural Gas, \$/therm	NA

	Existing Condition	Proposed System	Savings
Annual Electric Use (kWh)	13,895	9,025	4,870
Annual Cost and Savings, \$	\$ 2,001	\$ 1,300	\$ 701

						-	TED RUN ME	LOAD F	ACTOR (%)		CTRIC TION (kWh)	ION (kWh) SAVINGS		Peak Demand Reduction
TAG	LOCATION	SERVICES	HP	RPM	EFF (%)	EXIST. HRS	PROP. HRS	EXISTING	PROPOSED	EXISTING	PROPOSED	kWh	\$	kW
CT-1	COOLING MER	COOLING TOWER	10	1,800	91.7%	2,135	2,135	100.0%	75.0%	13,895	9,025	4,870	\$ 701	1.6
CT-2	COOLING MER	COOLING TOWER	10	1,800	91.7%	2,135	2,135	100.0%	75.0%	13,895	9,025	4,870	\$ 701	1.6
											TOTAL	9,740	\$1,403	3.2



510 Thornall Street, Suite 170 Edison, NJ 08837

> Tel: 732.590.0122 Fax: 732.590.0129

# **RENEWABLES CALCULATIONS**

PV System Summary for Central Elemen	tary
System Capacity, kW-dc (maximum utilization of roof space)	93 kW dc
Annual Electric Generation, kWh of AC electricity produced	98,010 kWh
Total Annual Facility Electric Use, kWh	278,400 kWh
% of Total Annual Usage	35%
All-In Cost of Electric Year 1	\$0.146 / kWh
Annual Electric Cost Savings	\$14,310
Estimated SREC Value (Year 1):	\$200 / SREC
Estimated Year 1 SREC Revenue:	\$19,595
System Installed Cost	\$511,440
Simple Payback	23.9
IRR (25 Years)	0%
Equivalent Annual CO2 Emission Reduction (tons per year) <sup>1</sup>	32 tons/yr
Equivalent Cars Removed From Road Annually <sup>2</sup>	6
Equivalent Acres of Trees Planted Annually <sup>3</sup>	9

<sup>1.</sup> Estimated CO2 Emissions Rate: 0.66 lbs/kWh

emission factor (lbs/kWh) 0.661 Site Energy Use, kWh 278,400 roof

<sup>2.</sup> EPA Estimate: 11,560 lbs CO2 per car

<sup>3.</sup> EPA Estimate: 7,333 lbs CO2 per acre of trees planted

PV System Summary for Liberty Element	ary
System Capacity, kW-dc (maximum utilization of roof space)	130 kW dc
Annual Electric Generation, kWh of AC electricity produced	136,737 kWh
Total Annual Facility Electric Use, kWh	396,035 kWh
% of Total Annual Usage	35%
All-In Cost of Electric Year 1	\$0.145 / kWh
Annual Electric Cost Savings	\$19,827
Estimated SREC Value (Year 1):	\$200 / SREC
Estimated Year 1 SREC Revenue:	\$27,338
System Installed Cost	\$713,523
Simple Payback	24.1
IRR (25 Years)	0%
Equivalent Annual CO2 Emission Reduction (tons per year) <sup>1</sup>	45 tons/yr
Equivalent Cars Removed From Road Annually <sup>2</sup>	8
Equivalent Acres of Trees Planted Annually <sup>3</sup>	12

<sup>1.</sup> Estimated CO2 Emissions Rate: 0.66 lbs/kWh

emission factor (lbs/kWh) 0.661 Site Energy Use, kWh 396,035 roof

<sup>2.</sup> EPA Estimate: 11,560 lbs CO2 per car

<sup>3.</sup> EPA Estimate: 7,333 lbs CO2 per acre of trees planted

PV System Summary for GM Middle Scho	ool
System Capacity, kW-dc (maximum utilization of roof space)	197 kW dc
Annual Electric Generation, kWh of AC electricity produced	207,996 kWh
Total Annual Facility Electric Use, kWh	458,720 kWh
% of Total Annual Usage	45%
All-In Cost of Electric Year 1	\$0.144 / kWh
Annual Electric Cost Savings	\$29,951
Estimated SREC Value (Year 1):	\$200 / SREC
Estimated Year 1 SREC Revenue:	\$41,585
System Installed Cost	\$1,085,370
Simple Payback	24.2
IRR (25 Years)	0%
Equivalent Annual CO2 Emission Reduction (tons per year) <sup>1</sup>	69 tons/yr
Equivalent Cars Removed From Road Annually <sup>2</sup>	12
Equivalent Acres of Trees Planted Annually <sup>3</sup>	19

<sup>1.</sup> Estimated CO2 Emissions Rate: 0.66 lbs/kWh

emission factor (lbs/kWh) 0.661 Site Energy Use, kWh 458,720 roof

<sup>2.</sup> EPA Estimate: 11,560 lbs CO2 per car

<sup>3.</sup> EPA Estimate: 7,333 lbs CO2 per acre of trees planted

## **PV System Summary for the Great Meadows School District**

	Central	Liberty	Middle	TOTAL
System Capacity, kW-dc (maximum utilization of roof space)	93 kW dc	130 kW dc	197 kW dc	420 kW dc
Annual Electric Generation, kWh of AC electricity produced	98,010 kWh	136,737 kWh	207,996 kWh	442,744 kWh
Total Annual Facility Electric Use, kWh	278,400 kWh	396,035 kWh	458,720 kWh	1,133,155 kWh
% of Total Annual Usage	35%	35%	45%	39%
All-In Cost of Electric Year 1	\$0.146 / kWh	\$0.145 / kWh	\$0.144 / kWh	\$0.145 / kWh
Annual Electric Cost Savings	\$14,310	\$19,827	\$29,951	\$64,198
Estimated SREC Value (Year 1):	\$200 / SREC	\$200 / SREC	\$200 / SREC	\$200 / SREC
Estimated Year 1 SREC Revenue:	\$19,595	\$27,338	\$41,585	\$88,518
System Installed Cost	\$511,440	\$713,523	\$1,085,370	\$2,310,333
Simple Payback	23.9	24.1	24.2	24.1
IRR (25 Years)	0%	0%	0%	0%
Equivalent Annual CO2 Emission Reduction (tons per year) <sup>1</sup>	32 tons/yr	45 tons/yr	69 tons/yr	146 tons/yr
Equivalent Cars Removed From Road Annually <sup>2</sup>	6	8	12	25
Equivalent Acres of Trees Planted Annually <sup>3</sup>	9	12	19	40

<sup>1.</sup> Estimated CO2 Emissions Rate: 0.66 lbs/kWh

<sup>2.</sup> EPA Estimate: 11,560 lbs CO2 per car

<sup>3.</sup> EPA Estimate: 7,333 lbs CO2 per acre of trees planted

Central Elementary: Wind Turbine Economics						
Building Ground Mount Ground						
	Integrated	5 kW	50 kW			
Gross Installation Cost Estimate	\$325,000	\$312,000	\$250,000			
Annual Energy Savings	\$5,418	\$8,551	\$16,129			
Simple Payback	60.0 yrs.	36.5 yrs.	15.5 yrs.			
System Capacity	20 kW	52 kW	50 kW			
Annual Avoided Energy Use	37,108 kWh	58,567 kWh	110,472 kWh			
Annual Avoided CO2 Emissions, Tons	13	20	39			
% of Annual Electric Use*	13.3%	21.0%	39.7%			
*Central Elementary: 278400 kWh/Year.						

Liberty Elementary: Wind Turbine Economics						
	Building Integrated	Ground Mount 5 kW	Ground Mount 50 kW			
Gross Installation Cost Estimate	\$325,000	\$312,000	\$250,000			
Annual Energy Savings	\$5,381	\$8,492	\$16,018			
Simple Payback	60.4 yrs.	36.7 yrs.	15.6 yrs.			
System Capacity	20 kW	52 kW	50 kW			
Annual Avoided Energy Use	37,108 kWh	58,567 kWh	110,472 kWh			
Annual Avoided CO2 Emissions, Tons	13	20	39			
% of Annual Electric Use*	9.4%	14.8%	27.9%			
*Liberty Elementary: 396035 kWh/Year.						

GM Middle School: Wind Turbine Economics						
	Ground Mount					
	Integrated	5 kW	50 kW			
Gross Installation Cost Estimate	\$325,000	\$312,000	\$250,000			
Annual Energy Savings	\$5,344	\$8,434	\$15,908			
Simple Payback	60.8 yrs.	37.0 yrs.	15.7 yrs.			
System Capacity	20 kW	52 kW	50 kW			
Annual Avoided Energy Use	37,108 kWh	58,567 kWh	110,472 kWh			
Annual Avoided CO2 Emissions, Tons	13	20	39			
% of Annual Electric Use*	8.1%	12.8%	24.1%			
*GM Middle School: 458720 kWh/Year.						