

Design, Construction and Retrofit Strategies												
Lighting	Quantity of Time that Measure will be in place (years)	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
High Efficiency Lighting Systems (T-8, T-5, CFL, LED ...)	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ 25,000	24,691	24,691
Daylight Sensors	10	\$ -	-	\$ 10,000	14,815	\$ 10,000	14,815	\$ 10,000	14,815	\$ 10,000	14,815	148,148
Outdoor Lighting	15	\$ -	-	\$ 50,000	49,383	\$ 50,000	49,383	\$ 50,000	49,383	\$ 25,000	24,691	469,136
Occupancy Sensors	10	\$ -	-	\$ 25,000	37,037	\$ 25,000	37,037	\$ 25,000	37,037	\$ 25,000	37,037	370,370
Daylight Harvesting	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
HVAC	Quantity of Time that Measure will be in place	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Efficient Boilers (near condensing)	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
High Efficiency Boilers (condensing)	15	\$ 950,000	2,467,292	\$ 500,000	1,298,575	\$ 700,000	1,818,005	\$ 650,000	1,688,147	\$ 775,000	2,012,791	28,373,860
High-efficiency boiler burners	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Geothermal	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Heat recovery/enthalpy wheels	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Economizers	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Energy efficient HVAC systems	30	\$ 500,000	79,165	\$ 500,000	79,165	\$ 350,000	55,415	\$ 450,000	71,248	\$ 425,000	67,290	1,088,516
Energy efficient Rooftop units	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
High Efficiency Domestic Hot Water	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Efficient Chillers and Controls	25	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
High-efficiency motors	20	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
VFD	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Demand Ventilation	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Entrance Heater Controls	20	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Controls	Quantity of Time that Measure will be in place	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Building Automation Systems - New	10	\$ 20,000	15,833	\$ 20,000	15,833	\$ 50,000	39,582	\$ 50,000	39,582	\$ 50,000	39,582	379,991
Building Automation Systems - Upgrade	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Building Envelope	Quantity of Time that Measure will be in place	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Glazing	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Increased Wall Insulation	50	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
New Roof	25	\$ 740,000	68,850	\$ 500,000	46,520	\$ 500,000	46,520	\$ 500,000	46,520	\$ 500,000	46,520	809,453
New Windows	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Treatments	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Shading Devices	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Design, Construction and Retrofit Strategies Total		\$ 2,210,000	2,631,140	\$ 1,605,000	1,541,327	\$ 1,685,000	2,060,757	\$ 1,735,000	1,946,733	\$ 1,835,000	2,267,418	31,664,166

Operations and Maintenance Strategies												
Policy and Planning	Quantity of Time that Measure will be in place (years)	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
New school design/construction guidelines and specifications	5	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Day and Night Temperature Guidelines for all Schools	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Night time blackout of sites	Interior	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
	Exterior	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Procures only Energy Star certified appliances	5	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Daylight Harvesting (servicing)	3	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Demand Ventilation (servicing)	3	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Energy Audits	Quantity of Time that Measure will be in place	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Walk Through Audit	5	\$ -	-	\$ 2,500	30	\$ -	-	\$ 2,500	30	\$ -	-	178
Engineering Audit	5	\$ -	-	\$ -	-	\$ 20,000	237	\$ -	-	\$ 20,000	237	950
Other (Describe)			-		-		-		-		-	-
Real Time Monitoring	Quantity of Time that Measure will be in place	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Real-time energy data for operators to identify and diagnose building issues	5	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Operations and Maintenance Strategies Total		\$ -	-	\$ 2,500	30	\$ 20,000	237	\$ 2,500	30	\$ 20,000	237	1,128

Conservation Goal - LDSB

	FY2013
Total Building Area (includes portables) (m ²)	131,359
Total Building Area (includes portables) (ft ²)	1,413,983
Energy Consumption for the board (ekWh)	36,378,240

Enter from UCD - use square meters
 Enter from UCD - use square feet
 Enter from UCD

1 ft² = 0.0929 m²

	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Appendix B; Design, Construction and Retrofit Strategies Total	\$ 2,210,000	2,631,140	\$ 1,605,000	1,541,327	\$ 1,685,000	2,060,757	\$ 1,735,000	1,946,733	\$ 1,835,000	2,267,418	31,664,166
Appendix C; Operations and Maintenance Strategies Total	\$ -	0	\$ 2,500	30	\$ 20,000	237	\$ 2,500	30	\$ 20,000	237	1,128
Appendix D; Occupant Behaviour Strategies Total	\$ 1,500	12,363	\$ 1,500	12,363	\$ 1,500	12,363	\$ 1,500	12,363	\$ 1,500	12,363	185,440
TOTAL	\$ 2,211,500	2,643,503	\$ 1,609,000	1,553,720	\$ 1,706,500	2,073,358	\$ 1,739,000	1,959,125	\$ 1,856,500	2,280,018	31,850,734
Percentage reduction		7		4		6		5		6	17.51087129
Conservation Goal (ekWh/m ²)		20.12		11.83		15.78		14.91		17.36	242.47
Conservation Goal (ekWh/ft ²)		1.869543732		1.098825137		1.466324476		1.385536839		1.612479683	22.525546