

**Newton South Green Design Elements  
Using Collaborative for High Performance Schools (CHPS) Criteria**

Section	Credit	Points	Criteria Description (See CHPS Standards for complete descriptions)	Points Achieved	Comments
<b>Site</b>	Prerequisite #1	none	Code Compliance	0	Prerequisite is worded for California; This project meets the applicable equivalents for Massachusetts.
	1. Sustainable Site Selection	1.1	No farmland, flood plain, habitat, wetland, or parkland	1	Certified
		1.2	No greenfield	0	
		1.3	Central location	1	
		1.4	Joint Use	1	Facility will be well used by the community
		1.5	Joint Use of Parks	1	Recreation areas are jointly used by the community
		1.6	Reduced Footprint	1	Achieved a 1.28 FAR; a large portion of the new addition is multiple stories
	2. Transportation	2.1	Public Transportation	0	
		2.2	Bicycles	1	15% bike storage achieved
		2.3	Minimize parking	1	No new parking added (some created, more removed), and preferred parking for carpool spaces.
	Prerequisite #2	none	Controls	0	Satisfied
	3. Post Construction Water Management	3.1	Limit run-off	1	no net increase, due to added infiltrators for new construction roof areas.
		3.2	Treat Run-off	0	
	4. Exterior Design	4.1	Shade, or light colors, or open grid paving	0	
		4.2	Cool Roofs	1	75% of new roof areas are energy-star compliant
5. Light Pollution	5.1	Minimal site lighting, no spill-ove	1	Confirmed by Gerry Vary.	
<b>Water</b>	Prerequisite #1	none	Do a water use budget	0	This is a California standard. The basic idea of the standard is to ensure that regulated water use requirements are met. That is true for our project.
	1. Reduce use for landscaping	1.1	Reduce consumption by 50%	0	
		1.2	No permanent irrigation	1	There is no irrigation system on the school grounds, and none will be installed. There is minimal irrigation of the adjacent playing fields, which are controlled and administered by the Parks and Recreation Department for the entire community. Also, David T. reports that the City intends to drill a well for this use.
	2.Reduce use in the building	2.1	Reduce use for sewage conveyance with water-efficient fixtures	1	All existing fixtures are being replaced with new water-reduction fixtures.
		2.2	20% further reduction	1	Photo-cell timers on all new sinks, and flush valves
2.3		Further reduce by 30%	1	Greywater system provided; all toilets will be flushed by water which comes from the roof; not by potable water.	
<b>Energy</b>	Energy Efficiency				
	Prerequisite #1	none	MTC version: Exceed MA E Code by 20% or have energy efficient lighting with occupancy controls and economizers on packaged equipment	0	Meet prescriptively by having energy efficient lighting with occupancy controls and economizers on packaged equipment
	1. Superior Energy Performance	1.1	Reduce net energy use compared to MA Energy Code by greater than 20% (points correlate with %age)	8	Net energy use reduced by 32.6% below Code requirements. According to criteria, 8 points are earned if a project exceeds the base Code building by between 30% and 34%. Therefore, NSHS receives 8 points.
	2. Natural Ventilation	2.1	Natural Ventilation: install interlocks to turn off HVAC when windows/doors open (1 point).	0	Design team decided that it would be prohibitively expensive to install interlocks to control HVAC. However, through education, occupants should properly maintain balance of natural and mechanical ventilation.
		2.2	design 90% of space without AC (3 points).	0	The City of Newton did not want to eliminate A/C in 90% of classrooms because of anticipated summertime usage.
	3. Renewable Energy and Distributed Generation	3.1	Onsite renewable energy and distributed generation for a portion of school's energy use: Photovoltaic installation on gym	0	Based on estimated total annual PV production of 82,800 kWh, and a total annual usage of 2,172,800 kWh, the PV would only provide 3.8% of the building's electrical needs.
	P2.1. Prerequisite #2	none	Basic Installation Monitoring	0	criteria met
P2.2	None	Effective Training	0	Plans underway to hire commissioning agent and to train maintenance team	
4. Commissioning	4.1	Basic Commissioning	0	A commissioning agent is on the team, but the commissioning requirements were not in the project Specifications	
	4.2	Follow advanced commissioning requirement	0	Advanced requirements not met	
5. Energy Management System	5.1	Energy Management Systems: Control lighting, Equipment (plug loads), HVAC and hot water	0	EMS currently planned to only control HVAC. Lighting will be controlled by automatic sensors.	
<b>Materials</b>	P1.1. Recycling	0	must recycle	0	criteria met
	1. Site Waste Management	1.1	Site Waste Management: Recycle, compost and/or salvage at least 50% of construction, demolition and land clearing waste (1 point).	1	Confirmed by Paul B.
		1.2	Site Waste Management: Recycle, compost and/or salvage at least 75% of construction/demolition waste- 2 points.	0	
	2. Building Reuse	2.1	Building Reuse: maintain at least 75% of existing building structure and shell (1 point).	1	Confirmed by Paul B.
2.2		Maintain 100% of the existing building	0	Very close, but not quite 100%.	

