DRAFT

LEED 2009 for New Construction and Major Renovations

Project Checklist

Mastic Moriches Shirley Community Library

Sustainable Sites — Possible Points: 26

Y	?	N			
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
	5		Credit 2	Development Density and Community Connectivity	5
		1	Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
	1		Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
3			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
		1	Credit 5.1	Site Development—Protect or Restore Habitat	1
		1	Credit 5.2	Site Development—Maximize Open Space	1
1			Credit 6.1	Stormwater Design—Quantity Control	1
1			Credit 6.2	Stormwater Design—Quality Control	1
		1	Credit 7.1	Heat Island Effect—Non-roof	1
	1		Credit 7.2	Heat Island Effect—Roof	1
	1		Credit 8	Light Pollution Reduction	1

Water Efficiency — Possible Points: 10

Y	?	N			
Y			Prereq 1	Water Use Reduction—20% Reduction	
		4	Credit 1	Water Efficient Landscaping	2 to 4
		2	Credit 2	Innovative Wastewater Technologies	2
2	1	1	Credit 3	Water Use Reduction	2 to 4

Energy and Atmosphere — Possible Points: 35

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
8	2	9	Credit 1	Optimize Energy Performance	1 to 19
		7	Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
		2	Credit 4	Enhanced Refrigerant Management	2
		3	Credit 5	Measurement and Verification	3
2			Credit 6	Green Power	2

Materials and Resources — Possible Points: 14

Y	?	N			
Y			Prereq 1	Storage and Collection of Recyclables	
3			Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
1	1		Credit 2	Construction Waste Management	1 to 2
		2	Credit 3	Materials Reuse	1 to 2

Materials and Resources, Continued

Y	?	N			
2			Credit 4	Recycled Content	1 to 2
2			Credit 5	Regional Materials	1 to 2
		1	Credit 6	Rapidly Renewable Materials	1
		1	Credit 7	Certified Wood	1

Indoor Environmental Quality — Possible Points: 15

Y	?	N			
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
	1		Credit 1	Outdoor Air Delivery Monitoring	1
	1		Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
		1	Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
	1		Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
	1		Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
		1	Credit 6.2	Controllability of Systems—Thermal Comfort	1
	1		Credit 7.1	Thermal Comfort—Design	1
	1		Credit 7.2	Thermal Comfort—Verification	1
		1	Credit 8.1	Daylight and Views—Daylight	1
		1	Credit 8.2	Daylight and Views—Views	1

Innovation and Design Process — Possible Points: 6

Y	?	N			
1			Credit 1.1	Innovation in Design: Specific Title	1
1			Credit 1.2	Innovation in Design: Specific Title	1
	1		Credit 1.3	Innovation in Design: Specific Title	1
	1		Credit 1.4	Innovation in Design: Specific Title	1
	1		Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1

Regional Priority Credits — Possible Points: 4

Y	?	N			
1			Credit 1.1	Regional Priority: Specific Credit	1
1			Credit 1.2	Regional Priority: Specific Credit	1
	1		Credit 1.3	Regional Priority: Specific Credit	1
		1	Credit 1.4	Regional Priority: Specific Credit	1

Y	?	N			
46	22	42	Total		Possible Points: 110

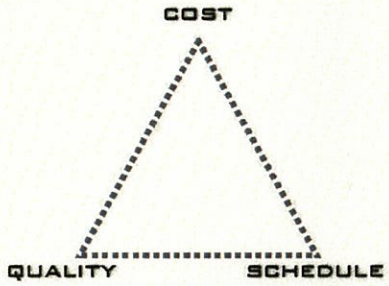
Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

SUSTAINABILITY AND THE BUILT ENVIRONMENT

Loosely defined, a "green building" is one which is healthier to its occupants and friendlier to the environment than conventional buildings. In the past, neither issue has been a priority in a construction project.

Although often over worked, the phrase "green building" has been used for more than thirty years. During the first twenty, not many "green" changes took place in the way buildings were designed and constructed.

Historically, a project's primary planning considerations have always been:



Issues such as energy efficiency or indoor environmental quality were never primary goals, but at best, after thoughts, secondary to the main focus of a project.

This approach had led to a poor report card for the built environment and the increasing use of bywords such as "sick building syndrome", "climate change" and many more. In fact, buildings consume or are responsible for the following:

- 40% of climate change problems
- 40% of the contents of our landfills is composed of construction debris (demolition waste is not included in the figure)
- 40% of all energy produced
- 25% of potable water consumed
- 25% of all mined materials used
- An unhealthy indoor environment which often contains high levels of carbon dioxide, mold and voc's (volatile organic compounds) in the building materials and low levels of natural daylight

Most people spend an average of over 20 hours a day indoors. The combined impact of the many negative effects of the last item listed above on human health and performance is not yet fully understood. Recently, a $25 million facility was built at Syracuse University (Center for Excellence) to provide a laboratory where human performance as a function of indoor environmental quality could be studied.

It was only about ten years ago that a fundamental change in the approach to producing a building slowly began to take place. The goal was to produce buildings that addressed the deficiencies listed above. The formation of the US Green Building Council led to the development of LEED (Leadership in Energy

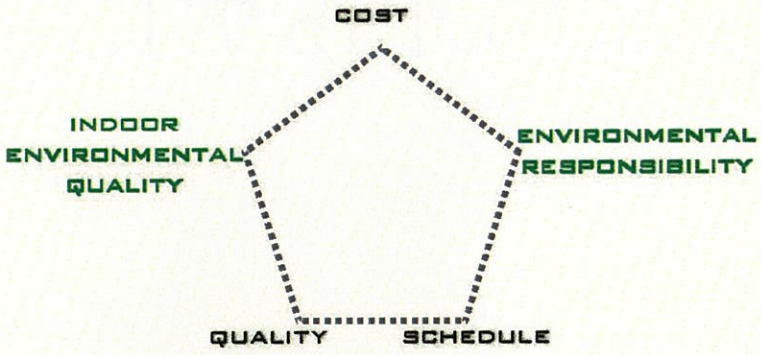
and Environmental Design), a metric for qualifying a project in terms of sustainable issues.

This process provided a way to recognize both the building and the team that produced it for their effort and achievement. The exponential rate of growth of these high performance buildings during the last ten years has resulted in over 5% of all new projects pursuing some level of LEED certification and an industry with a "green component" projected to have been approximately $60 billion in 2010.

Since 2003, when we received our LEED Professional Accreditation, we have been active in this change in the industry, and are proud to have been participants in six of these "high performance" projects. Thus far, three (Westhampton Free Library, Amityville Village Hall, and Westhampton Beach Village Hall) have achieved a gold certification level.

Through experiences on these projects, we have learned that the move toward sustainability in the industry is primarily driven by a change in the mindset of those who design, build, use, operate and maintain buildings.

The list of potential project considerations has been changed as follows:



This mind set change involves getting a project's stakeholders to focus on all five issues as opposed to only the original three.

These stakeholders can be classified into several categories:

- Owner
- Occupant/Operator/Staff
- Maintenance Personnel
- Designers
- Municipal Officials
- Constructors
- Members of the Public

Since over the short and long term, all these entities have much to contribute regarding the overall effectiveness of a building in meeting the needs of its occupants and owners, it only follows that each must be actively involved in a collaborative and integrative effort from initial conception through completion.

In addition, this process promotes "buy in" by all of the "stakeholders". We have found this approach to be a very effective consensus building tool. As a result, the budget and schedule breaking change orders to contractors during

construction are, for the most part, eliminated. This experience has proven to us that green buildings do not in fact cost more than conventional ones.

Although there have been many specific changes to different areas of building technology over the years, this change in mindset to the "integrative design" approach, described above, when carried out using the principals of "dynamic planning", affects the entire process.

Dynamic planning, as applied to a building project, is a process in which the preliminary design is produced by the simultaneous efforts of all of the stakeholders. Each individual's issues and concerns are reviewed and prioritized by the group for inclusion (or not) in the preliminary conceptual design of a project. This is a fundamental change from past practice.

Historically, after an initial review of a project's needs, design professionals designed buildings and turned the plans over to construction people. After the completion of construction, the contractors turned the building over to the building users, operators and maintenance people. With little interaction amongst all of the stakeholders during the design and construction phases, this process has and continues to result in less than successful projects. Change orders, cost over runs, missed schedules, construction defects, and post construction complaints by building occupants are often the result.

After having been involved in several hundred projects prior to the last eight years, we are very excited about the change in the industry and have been eager to help promote it.

In addition to presenting at the annual USGBC Convention (Greenbuild) on the subject "Getting a Green Project Done", we are proud to have been asked to contribute to a recently published book on the subject *The Integrative Design Guide to Green Building.* (7 Group and Bill Reed). We strongly urge anyone who is about to begin a construction project to read this book.

Albert Einstein's definition of insanity was doing something over and over and expecting a different result. Continuing to design and build buildings without a fundamental change in approach risks being included in this description.