

Sustainability Considerations for School Siting

From the Mansfield Sustainability Committee for the Town Council and Board of Education

August 3, 2010

This matrix addresses only the SITING issues of the school with regard to sustainability. There will be many additional sustainable DESIGN considerations once the site has been established. Most of the design considerations will be addressed by designing according to the LEED Green Building Rating System.

Site Features for Sustainability (Note: these features should be considered for renovating, replacing, and relocating)	Potential Specific Applications in Mansfield
Site is in a community-centered location and has connectivity to community amenities and public spaces.	
<ul style="list-style-type: none"> • Within walking distance of existing or planned amenities, such as retail development, other schools, community center, library, recreational fields, university, parks, open space, “heart” of the community. 	Close to future Storrs Center, Farrell Fields, Mansfield Community Center, UConn. Or close to Four Corners. Or close to Mansfield Library and Mansfield Center.
<ul style="list-style-type: none"> • Close to existing or proposed higher density neighborhoods and/or areas planned for additional residential development. 	See Mansfield zoning regs/map and Plan of Conservation and Development for higher density residential areas.
<ul style="list-style-type: none"> • Potential to share infrastructure with adjacent sites (e.g., recreation fields, library, parking, parks, swimming pool). 	EO Smith and Farrell fields, future infrastructure for Storrs Center.
<ul style="list-style-type: none"> • Potential for “co-location” - a facility on this site could meet multiple needs and be shared for complementary uses during non-school hours (e.g., senior citizens). 	
<ul style="list-style-type: none"> • School use of site achieves or complements multiple goals for the community. 	School integrates into vision and/or design for Storrs Center, additional senior housing, Mansfield Plan of Conservation and Development. Helps fulfill Mansfield 2020 vision and goals.
<ul style="list-style-type: none"> • School use of site would add value to surrounding land uses. (Also consider impact on property values of moving existing school out of neighborhood.) 	
<ul style="list-style-type: none"> • Potential for future renovations of site for education and non-educational uses (building will continue to serve the community if no longer used as a school in the future). 	Close to areas planned for commercial and community uses (e.g., Storrs Center, Four Corners).
Site is walk/bike/transit accessible.	
<ul style="list-style-type: none"> • Accessible by walkers and bikers and has existing or potential for bike/pedestrian infrastructure. 	
<ul style="list-style-type: none"> • Close to areas with greatest existing or planned concentration of neighborhoods with families, minimizing busing distance and costs. 	See Mansfield zoning regs/map and Plan of Conservation and Development for higher density residential areas.

<ul style="list-style-type: none"> • Close to existing or planned public transit for school and non-school users. 	
Site is environmentally suitable for development.	
<ul style="list-style-type: none"> • Avoids “greenfields” (previously undeveloped lands). If a greenfield is chosen, mitigate the loss through protection of other land with comparable qualities. 	
<ul style="list-style-type: none"> • Can be developed without impacting wetlands and waterbodies, floodplains, or habitat for threatened and endangered species. 	
<ul style="list-style-type: none"> • Served or serviceable by existing water and waste water infrastructure. 	
<ul style="list-style-type: none"> • Minimal impact on traffic patterns, congestion, and air quality and public safety issues related to traffic. 	
<ul style="list-style-type: none"> • Potential to minimize lot size and development footprint (LEED Neighborhood Development calls for 5 acre maximum for elementary schools). 	
<ul style="list-style-type: none"> • Redevelop existing buildings or site within an already developed area that is community-centered. 	
<ul style="list-style-type: none"> • Potential to optimize building orientation to take advantage of passive heating and cooling, natural ventilation, daylighting (i.e., elongate the building along east-west axis). 	
<ul style="list-style-type: none"> • Natural site attributes provide opportunities for outdoor learning (e.g., forested areas, streams, etc). 	
<ul style="list-style-type: none"> • Requires minimal site regrading. No steep slopes. 	
<ul style="list-style-type: none"> • Excellent environmental quality (no water or soil contamination). 	
<ul style="list-style-type: none"> • Has potential for school garden to support local food production. 	
Other considerations.	
<ul style="list-style-type: none"> • Budget for ongoing repair and maintenance to maintain usefulness and efficiency of facilities and avoid cost analysis in the future that results in “new is cheaper.” 	

Useful Sources

National Trust for Historic Preservation – Community-Centered Schools Initiative, *Helping Johnny Walk to School: Policy Recommendations for Removing Barriers to Community-Centered Schools* <http://www.preservationnation.org/issues/historic-schools/helping-johnny-walk-to-school/helping-johnny-walk-to-school.pdf>. See MN, NM, NH, CO, MD case studies on legislative and policy changes to eliminate minimum acreage requirements and bias against renovating existing schools in school construction funding decisions.

<http://www.preservationnation.org/issues/historic-schools/>

EPA school siting information http://cfpub.epa.gov/schools/top_sub.cfm?t_id=45&s_id=64

EPA *Schools for Successful Communities: An Element of Smart Growth*

http://www.epa.gov/smartgrowth/pdf/SmartGrowth_schools_Pub.pdf

See case studies at end.

Cost comparisons checklist to analyze renovating or building new school

http://www.epa.gov/smartgrowth/pdf/SmartGrowth_schools_Pub.pdf (see page 19)

EPA *Travel and Environmental Implications of Schools Siting*, http://www.epa.gov/smartgrowth/school_travel.htm

This 2003 EPA study was the first to empirically examine the relationship between school location, the infrastructure and environment around schools, transportation choices for trips to school, and impact of those choices on air pollution. It found that: school proximity matters (students with shorter distances are more likely to walk or bike), the built environment influences travel choices (students are more likely to bike in bike-friendly neighborhoods with sidewalks and bike lanes), school location impacts air emissions (centrally located schools that are walkable/bikable reduce air pollution).

US Green Building Council *LEED for Neighborhood Development Rating System*

<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148>

National Best Practices Manual for Building High Performance Schools <http://www.p2pays.org/ref/20/19494.pdf>

California Division of the State Architect's Sustainable Schools Resource,

<http://www.sustainableschools.dgs.ca.gov/SustainableSchools/sustainabledesign/siting/siting.html>