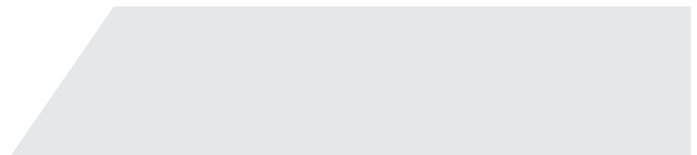




EXECUTIVE BRIEF > EDUCATION BUILDING

Building New or Renovating Your School: A Process of Evaluation

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Schools are at the heart of our communities, literally and quite often physically. The decision to repair, renovate or replace an education building is a complex one to make. Residents may be loyal to an old school that has touched their lives. Potential sites for a new school may be limited in a community, possibly inadequate for educational needs and cost is always a significant factor.

In working with school districts across Wisconsin and the Midwest, Plunkett Raysich Architects' Education Studio has gained extensive experience with this decision-making process. We are engaged by clients to provide an evaluation of a current education building as well as the costs and advantages/disadvantages associated with building a new school. What we have found common in recent school projects is two-fold. First, what other school districts have done to their schools is not a predictor of the decision to modernize or build new, even if they have similar needs. Each education building is different; the circumstances and community surrounding it are unique. Second, to be responsible stewards to the community, the school board and administrators must have thorough data and accurate analysis to use in the decision-making process.

This white paper details PRA's evaluation process, which can be used as a guide for school districts contemplating building new or renovating their facilities.

THE EVALUATION PROCESS

Faced with fluctuating student populations and advances in education, school districts are caught between the desire for a brand new facility and the ability to fund it. Passing a referendum is a lengthy and unpredictable process, whether it is for a new school or for modernization. Often, the district must thoroughly examine the costs and feasibility of modernization as part of the decision-making process. As a result, the evaluation process addresses both the existing education building and a potential new structure.

The *first step* is creation of a Facility Master Plan that details the physical requirements for achieving the curriculum plan for the school. This Master Plan provides analysis of the impact of the curriculum and student population on existing departments, the physical plant and the cost of implementation. The Space Program component is a detailed analysis of each department's current and projected space needs on a room-by-room basis, and also accounts for unassigned space such as mechanical systems rooms, elevators, stairs, corridors, restrooms and wall thickness.

The site analysis is conducted to review site traffic patterns and safety, adequacy of parking and play areas, lighting and natural features, storm water management and septic, well and municipal services. The size of the site is also examined to determine if it meets current education guidelines: a basis of ten acres, plus one additional acre per 100 students. If a new site is under consideration, the site is investigated in regards to zoning, setbacks, wetlands and flood plain restrictions, subsoil conditions, hazardous materials and availability of local utilities and transportation.

PRESENTATION OF DATA

After Plunkett Raysich Architects has completed master planning services, the *second step* to deciding whether to build new or renovate is presenting the Master Plan findings. A three-tiered approach is used to present the data, analysis, and costs in a usable format to school administrators and school boards. Costs associated with each tier are also provided.

Tier 1: Code, Health & Safety Basics are Met by the Facility

Tier 1 encompasses code, health and safety basics. This is an evaluation of the existing building's compliance with the Americans with Disabilities Act (ADA), and current building codes for fire and egress. The building is examined against current guidelines for energy efficiency, from the glazing value of windows to the insulation and roofing. The condition of the structure is evaluated,

including lighting, ventilation, condition and life expectancy of mechanical systems and the structure's adequacy for technology.

Tier 2: Curriculum Needs are Met by the Facility

Tier 2 focuses on curriculum needs and the facility's ability to support the curriculum and the efficiency of the staff and instructors. A comparative study of size, number and appropriate physical proximity of rooms is made against industry guidelines. Other factors that impact student learning are also evaluated including: lighting, acoustics, thermal comfort and accommodations for electricity and computer connectivity.

Tier 3: Higher Amenities Including Visionary Educational Goals are Met by the Facility

Tier 3 includes amenities that enable a school to provide advanced education, such as distance learning, honors, advanced placement, and additional language courses, among others. With this tier, Plunkett Raysich Architects also presents its learning on intangible factors such as the school's image, as well as community self-esteem, and architectural, historic, district and sentimental considerations.

WEIGHING THE OPTIONS

The *third step* in deciding to build new or renovate, involves applying what you have determined your needs to be from the Master Plan and feedback from the presentation to weighing community options. Communities generally use the following list of criteria when evaluating their options:

- **Educational adequacy/functional obsolescence.** With use of new technologies and innovations in instruction, some older educational buildings require extensive or total renovation in order to meet the physical needs of a district's current and future curriculum.
- **Financial advantages/disadvantages.** Modernization is not always less costly than building a new school, especially for

buildings constructed during the 1950s and 1960s. With the construction methods typically used during this era, these buildings have less maintainability and energy efficiency. Ceiling heights are often too short to easily introduce new mechanical systems; structures cannot easily be changed to comply with the ADA and other current building codes. A building's ability to accommodate future expansion should also be considered.

- **Healthiness of the building.** More attention is now focused on student health as it relates to the physical environment. Modernization of existing buildings may require removal of lead paint, asbestos and other hazardous materials.
- **Safety and security.** Modern schools must accommodate higher standards for student safety and security.
- **Sustainability.** The use of sustainable designs and materials may result in greater costs up front, but may also provide significant savings for the district and the community over the long-term.
- **Time restrictions.** The majority of renovation work on schools takes place during the summer months, when there is less impact on the student population. Major renovation may require scheduling the project over several years to complete it.

Three rules of thumb can be applied during the decision-making process. First, if the cost of modernization exceeds 50% to 75% of the cost of replacement, districts lean toward a new school. Second, if 30% to 40% of the building's infrastructure and mechanical systems have reached their life expectancy, a new school may make better sense due to the cost of the new systems and their installation. Third, it may not be feasible to bring an existing building into compliance with current codes and guidelines. The size of the classrooms, the locations of exits, the number of stairwells and other ADA accommodations can be significant factors.

A COMMUNITY DECISION

The final decision is really a balance of all of the factors previously outlined, and each community will prioritize and balance these factors differently. Because any decision reached will have a significant impact on the lives of residents for years to come, it is critical to invest time and resources in a thorough accurate evaluation process.



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