

The Leighty Foundation: Investing in Capital Projects

The Leighty Foundation mission:

To carry on the Leighty family legacy of service and stewardship by leveraging our time and talents, as well as The Leighty Foundation financial resources, primarily in the areas of Earth Protection, Education, and Promotion of Volunteer Engagement and Philanthropy.

The Leighty Foundation (TLF) invests in grants and contributions to a variety of non-profit organizations working diligently to deal with today's problems and opportunities, to advance resilience and sustainability --- meeting our needs without compromising the ability of future generations to meet their needs.

Although not a major focus of ours, we have invested in the capital campaigns of a few non-profit organizations. Usually, the grantee had chosen the site and the architect(s), and had designed the project before they contacted The Leighty Foundation about funding.

We believe our investments in capital facilities should be consistent with, and supportive of, our interests in energy conservation and efficiency. We feel this can best be done with a focus on replacing fossil energy sources with renewable energy sources, on public transportation, and on community and land use planning to prevent loss of farmland and wildlife habitat to urban sprawl, and to avoid geophysical hazard areas like floodplains, and coastal areas endangered by sea level rise and storm severity. When we choose to consider capital project funding, we want our investment in the project to minimize long-term cost to its human users, and to Earth. Therefore, we wish to be involved, if at all, in capital projects at their earliest planning stages.

We are pleased to be able to share these thoughts with other foundations, with those considering a capital project, and with building and community design professionals. We hope to help build a mutual planning and funding interest among grantors and grantees, so that capital projects are designed and built that are increasingly more sustainable; that build long term Community. We are not professional planners or architects, and wish to learn as much from you as you may learn from us.

One of our board, Bill Leighty, is especially interested and informed in energy conservation and efficiency. He has spent time with potential grantees suggesting improvements they might make to building design. Please contact him directly, if you wish to discuss this paper or a specific project:

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Please consider these features of capital projects:

Land use:

1. Will the facility be built on redeveloped land, rather than on raw land now used, or valued, for agriculture or wildlife habitat?
2. Will the facility be built well within the urban boundary, rather than on the periphery of the community, or beyond?
3. Will the facility be built close to existing public transit routes and stops? Will staff and clients easily access the facility with transit? Will it stimulate improved transit?

Siting:

1. Does the site have an unobstructed southern exposure, except for deciduous trees, to facilitate passive or active solar gain and / or photovoltaic (PV) generation?
2. Will the facility be positioned and oriented on the land so as to take advantage of:
 - a. Passive or active solar energy for heating and daylighting and / or photovoltaic (PV) generation?
 - b. Geo or Air Exchange Heat: air, ground, or sea water-source heat pump energy for heating and cooling;
 - c. Landscaping and tree planting to shade the building, and provide garden space?
3. Will minimum site area be dedicated to parking, to encourage public transit use? What other features can be used to encourage carbon-free transport?

Building design, if the project includes a building:

(This is not an exhaustive list; it may be climate-specific.)

1. How well is the building envelope insulated? R-values of walls, roof, and windows?
2. What is calculated annual energy consumption, btu / square foot / year? How good is that?
3. Is the major fenestration (window area) oriented south-facing, and designed to capture winter solar energy and reject summer solar energy? Low-e coatings on glass? Are light shelves employed? Are deciduous trees shading the south windows?
4. Is most of the interior lighting:
 - a. LED, with high-efficiency; specular luminaires?
 - b. controlled by lighting-level sensors, to switch off or dim lights as daylight increases?
5. Do exterior building, grounds, and parking lighting use minimum energy consumption LED lamps, shielded so that all light is directed downward?
6. Does the heating, ventilating, air-conditioning (HVAC) system use a “smart” control system and heat recovery ventilators, or ventilating heat pumps, to recover energy from exhaust air?
7. Does the project include, and depend upon, a combined-heat-and-power (CHP) system for its total energy supply?
8. Will life-cycle-costs (LCC), be included in designers’ calculations? Will external costs of electric energy generation, and of other energy use, be included in the LCC analysis? These external costs include carbon dioxide (CO₂) emissions, acid rain, depletion of non-renewable resources, etc. Is the building designed to minimize LCC? Over what time period; at what discount rate?

Commissioning: How will the building, or other capital asset, be commissioned? At what intervals will it be re-commissioned? Does the potential grantee have a strategy to assure the building owner that the building envelope and lighting and HVAC equipment, systems, and controls are working together as intended, transforming the building and site into an integrated system?

We have found that our early involvement in considering a project for financial support is important. We hope that considering the above questions might nudge a capital project toward more sustainable design and function within a Community.

We imagine other charitable foundations have similar experiences and interests, and have felt similar disappointments when asked, late in a project, to fund a facility which compromises some of their other funding interests.

We wish to promote, through better design, “high-performance” buildings, which:

- ❑ Minimize “embodied energy”
- ❑ Maximize operational energy savings
- ❑ Improve comfort, health, and safety of occupants & visitors; sense of health and well-being; tangible increases in worker productivity
- ❑ Limit detrimental effects on Earth, “the environment”
- ❑ Raise expectations for the facility’s performance; create partnerships in design and construction process for environmental and economic goals.

The value of high performance buildings is easily underestimated by traditional accounting methods which fail to recognize “external” local, regional, and Earth-wide costs and benefits. “Internalizing” these external, but very real, costs and benefits is an appropriate challenge for the philanthropic, and nonprofit sectors.

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