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Education: Environmental Corridors and E-Ways

Professor Phil Lewis, Jr. is a landscape architect and director of the Marshall Erdman Academy for Sustainable Design in Madison, WI. In his book, Tomorrow By Design, he outlines his life's work devoted to developing a process for sustainable design on a regional scale. He views design as a fundamentally interdisciplinary process stimulated by an ethical imperative of Long Term Universalism—preserving the present landscape for future generations to enjoy. A vital aspect of this process involves educating and communicating to the public principles of sustainable design in order to promote awareness and can affect policymaking decisions that would allow implementation of such design. Lewis advocates a system he believes can be applied anywhere and supports his teachings with case studies of the ways in which his ideas have been applied in Wisconsin and in Madison. He begins by first establishing where to build and where not to build with a concept he calls “environmental corridors”. After having identified the typically linear patterns that encompass natural and cultural features of a region, Lewis promotes using these corridors as educational tools to demonstrate to the public the need for sustainable design, to cultivate appreciation for local treasures through eco-tourism, and to instill in the public an interest in preserving nature.

Protecting Landscape Resources

Lewis conveys the importance of Landscape Resources as physical resources possessing intrinsic (natural) and/or extrinsic (man-made adaptations) values. This analysis emphasizes that the landscape affects how people see, feel, and reflect upon what they can do in natural and man-modified landscapes as “recreating the mind...and serving the body”. However, current practices overemphasize extrinsic values (and poorly designed ones at that) at the expense of intrinsic values whereas both intrinsic and well-designed extrinsic resources are important to the full enjoyment of the Wisconsin landscape; the great task is to achieve balanced development between these values. “Balanced development” involves reintroducing intrinsic values in urban areas and protecting the most outstanding intrinsic values of rural areas while ensuring that the man-made values are developed in harmony with these resources. This great task is dependent on a greater awareness of these landscape resources by everyone.

The Wisconsin Outdoor Recreation Act (a penny-a-pack cigarette tax which raised \$50 million) provided an opportunity to observe and record the many values in the Wisconsin landscape that make it an outstanding recreation state. This planning program identified, observed, and plotted intrinsic and extrinsic values on county and state-wide mapping. Once these intrinsic and extrinsic values have been identified, "professional" judgment can render a quality interpretation of the individual resource as excellent, good, substandard, etc. For example, the soil scientist can identify the many soils that will provide good crops as well as those that can be expected to withstand heavy recreational traffic. The wildlife expert can identify quality wetlands for wildlife habitat while the

architectural historian can identify man-made structures with historical quality...and so on until we have exhausted the number of professions studying the physical qualities of the landscape. To each of these many experienced professionals, there are compelling reasons to preserve the values known to them for the present and future beauty and utility of the Wisconsin landowners.

The years of research to develop a better understanding and use of their particular resource within each profession should not go unheeded. An effort to understand each other's responsibilities should be encouraged in our age of narrowing specialties. It has been the past and present taxpayers' willingness to provide the classrooms, the research laboratories and the extensional activities that has provided us with the opportunity to evaluate quality within these many classified resources.

The Outdoor Recreation Act had the primary goal of not only rediscovering the many landscape resources in terms of parks, play, recreation and fun, but it was also--as an inventory conducted by the Recreation Division of the state's Department of Resource Development--concerned with identifying, preserving and wisely developing state-wide and county-wide landscape patterns that provide a source of strength, spiritual health and wisdom for the individual.

Identifying Environmental Corridors

Environmental Corridors are linear patterns of water, wetland, and steep topography (12% grade and higher) that include Rims, Slopes, and Surfaces, all of which should be protected. To assure as many Wisconsin citizens as possible an opportunity to traverse the Wisconsin rims along bridal, hiking, bicycle trails or parkways, certain controls over rim development should be considered. "Rims" of slope offer the best opportunity to observe and contemplate the "surface" resources. Most "surfaces" are bracketed by slope. Since slope is subject to various degrees of erosion, it should be protected and stabilized to prevent silting and pollution on the "surface" resources below. "Surfaces" of water, wetlands, flood plains, and sandy soils are in most cases enclosed by varying degrees of slope.

Adjacent lands paralleling the environmental corridor can be termed corridor fringe areas. The protection of the corridors and the encouragement of new patterns of development beyond a buffer zone within the fringe areas ensures the growth and stability of the tax base of these counties over a longer period of time. It is the corridor quality that attracts development in the first place. Loss to single rows of cabins and other unplanned physical development alternatively obliterates quality and may necessitate extensive and expensive rehabilitation by future generations.

The environmental corridors can readily be mapped with GIS technology and surveying. In Wisconsin, after the corridors were documented, Prof. Lewis and his team conducted statewide research on what people considered the most important natural and cultural features of their region. He then plotted these features with a series of icons overlaid on the original environmental corridor map. The state-wide field checks in Wisconsin and Illinois indicated that 80-90% of the values esteemed by the public lie within these corridors. Therefore, these patterns are profoundly important to our relationship with the environment and should be respectfully treated as such. Corridors are protected through a combination of (1) land acquisition, (2) land-use regulation and (3) policies to avoid utility service extensions that support inappropriate urban development in the corridors.

Developed wisely by all levels of government, the farmer and the urbanite, these corridors (that can be identified in any region) can serve as a county and statewide landscape foil to an ever advancing urban landscape of brick, steel, glass and asphalt, diminishing the conformity and boredom that need not become synonymous with the landscape resource. Enjoyment of our natural and cultural heritage is meaningful to the present generation. Through whetted perception, careful planning, and sound environmental design, our heritage and its extensive corridor variety can continue to be enjoyed by future generations.

Education

It is generally conceded that if environmental quality is to be achieved, public reeducation to new sustainable design options is essential. Public participation in community classes, seminars, and demonstration projects is needed, as is an overview of resource opportunities for planning generalists who oversee the work of specialists. Environmental quality (including the environment of people as part of the environmental system) is the basic long-term goal and criterion of regional design; it is not a minor hurdle or passing expedient.

Perhaps even more than other regional design components, communication (and correspondingly education) must be interdisciplinary. It must inform by creatively, and graphically portraying a region's natural and cultural resources and options for the future. Most importantly, these efforts must understand the various individual interests of their audiences in order to appeal to these unique motivations to convey the truly universal incentive in protecting the environment.

An alternative to degradation and eventual rehabilitation is protection of corridor qualities through better design guidelines, use of legislation, and participation of individuals and organizations in corridor protection programs. Clubs, agencies, and organizations now contribute to conserving, protecting, and wisely developing our various landscape resource values. By demonstrating that the values held by all lie within a common corridor pattern, we encourage an integrated effort by all.

The second phase of the state planning program in the department of Resource Development is and implementation phase in which existing and potential forms of needed legislation can be evaluated such as through better guidelines. For example, the Division of Design and Recreation in the Department of Resource Development is concentrating on various design standards that could be utilized in corridor fringe areas.

Establishing E-Ways

The extensive studies of Wisconsin's outstanding natural and cultural features provide clear guidelines that those planning for protection and growth should know, understand, and use. Dane County took advantage of this information in its planning for the Madison-Capital City area. The county desired to protect the corridor clearly identified by the studies with a recreational path. This guide way sought to connect, preserve, and showcase the area's natural and cultural heritage. Such a corridor was clearly identifiable on the maps marking the desired "surfaces" that constitute an environmental corridor as well as by the cultural value icons lying therein. The Dane County E-Way represents what a city has done in protecting and developing one of the major environmental

corridors identified in the statewide inventory. The E-Way now can demonstrate to any community how to protect and enhance their own environmental corridor.

Professor Lewis proposed the 21-mile E-way to demonstrate how a community's existing natural and cultural resources could be identified and accentuated to elevate environmental, ecological, and aesthetic planning decisions to a higher priority within the community development decision-making process and to provide a permanent recreationally enjoyable corridor system for its residents' use. It was designed by the University of Wisconsin Environmental Awareness Center through funding from the National Endowment of the Arts as a community-wide system that would link many of Madison's natural and cultural features, providing the city with an environmental awareness way for the city, county, and state. "E-way" refers to the system's educational, ecological, esthetic, exercise and environmental attributes. The E-way unifies the area's prominent educational, ecological, and environmental characteristics. Its basic framework consists of existing roads, streets, walkways, and open space systems connected in a loop system that includes a diversity of land uses. It incorporates many of Madison's most prominent landmarks while much of our remaining native landscape lies in the corridor. The E-way has proven to be an effective tool to promote local awareness and knowledge of the area's natural and cultural resources. Its trail provides a means by which people can see and enjoy many local treasures while simultaneously informing the public concerning how and where development should take place in the future. It generates understanding of how the landscape can look and function best.

After the successful completion of the E-way, private funds were raised to build the Lussier Family Heritage Center. The center offers campgrounds, conference rooms, offices for the park system and the Dane County Historical Society, and an excellent vantage point for bird-watching. The Heritage Center is currently seeking funding to implement exhibits in its interior that offer an opportunity to tell the story of the region from its geological history through the formation of the E-Way. The proposed exhibits would display the region in a historical context as well as emphasizing the land, water, climate, biological productivity, and natural beauty that have made this site continually attractive to people. The five exhibit themes are Visitor Orientation, Dane County History and Culture, the E-Way, Native Americans in Dane County, and Dane County Resources. They provide a place where visitors can experience first-hand and explore locally focused, wide-ranging information illustrating what is specific and unique to our area assembled in one place; by promoting public awareness of these features, the center attempts to evoke a sense of local pride or, at least, to encourage people to protect and cherish their surroundings.

Outcomes and Criticism

While the E-way's intentions are admirable, its implementation has had a mixed outcome. Its trail provides a means by which people can see and enjoy many local treasures while simultaneously informing the public concerning how and where development should take place in the future, and it generates understanding of how the landscape can look and function best. This project took 20 years to implement (in partnership with the Dane County Parks) which indicates resistance but eventual victory. It is most commonly referred to as the "Capital City Trail", which implies a loss of some of its original purposes; moreover while awareness material exists, it does not reach a broad

audience, and though widely used but remains unrecognized as sustainable. Moreover, the minimal infrastructure installed provides access to only a small part of the entire preserved land. Yet, the E-way represents the outcome of local grassroots efforts that can be applied anywhere. Also, Madison is widely known for its recreational (biking) trails to which the E-Way contributes, and the land remains widely respected and protected since this project perpetuates an overall reverence for nature as a respite from and alternative to urbanism. It does an excellent job of bringing people who would not ordinarily do so to experience nature because it is so accessible and integrated into the city. Parts of the E-way include sites and cultural attractions in downtown Madison; its scope is not limited to that of a nature preserve therefore it can appeal to a wider audience.

The Heritage Center presents even more of a disparity between intention and outcome. Without the exhibits, the Heritage Center is rarely recognized for its original purpose, but is instead viewed as a corporate conference center. However, the area around the center is used for bird watching, hiking, and camping all of which execute the E-Way's intents, and the space now exists for if/when funds do eventually arrive.

Improving upon the E-Way model is difficult as the means by which this could be accomplished is its end: public awareness. A national-level organization that actively promoted the adoption of Professor Lewis's Regional Design Process could catalyze the adoption of the E-Way model for every state. As the National Endowment of the Arts has only recently recognized Regional Design as a field, this large-scale advocacy is a possibility now more than ever. The supreme difficulty in such a project is the need to convince the public of its priority and subsequently raising funds. However, the more E-ways that exist, the greater are the opportunities for this type of necessary public education. Furthermore, I think the E-way could be improved with something as simple as marketing, especially by developing signage just to label all the sites to make the public aware of its existence and presence in the city. I think the major downfall of this concept is the fact that its success is so reliant on its own goal. A more effective (or at least a more easily-implemented) project would be something that circumvents the initial need to educate the public for the sake of its own implementation but still is effective in education once established. For this reason, I think the E-way and Heritage Center's alternate uses are currently highlighted while its greater purpose (sustainability) will be realized in the future.

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