

Minnesota IN COMMON

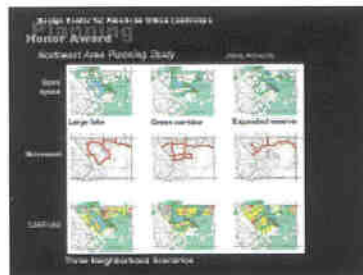


INSIDE FIRST ARTICLE IN THE SERIES CELEBRATING THE 34TH ANNUAL MASLA AWARD WINNERS

AUTHOR ADAM ARVIDSON
EXAMINES THE CHALLENGES OF
PLANNING IN THE PUBLIC REALM

BEARING TREES

PREPARING THE SOIL FOR FUTURE DESIGN



and development. In the Northwest Area Study, the Design Center for the American Urban Landscape met with neighborhoods on the edge of future development, helping them affect the physical organization of that development. The Red Rock Commuter Rail Station Area Plans, by the College of Architecture and Landscape Architecture, examines possible scenarios for redevelopment when (and if) this commuter rail line is constructed. All of these projects get out ahead of change, and can therefore effect change.

Before there are designs on the ground, there is planning and theory and data collection. Landscape architecture really begins here, with the first site analysis, the first sketch, the

first public meeting. From this baseline idea/data/collaboration, design moves forward. For the Land Cover of Northern Scott County Project, Kestrel Design Group catalogued the landscape of almost half a county and laid down baseline recommendations for land planning, greenway corridors, and development. In the Northwest Area Study, the Design Center for the American Urban Landscape met with neighborhoods on the edge of future development, helping them affect the physical organization of that development. The Red Rock Commuter Rail Station Area Plans, by the College of Architecture and Landscape Architecture, examines possible scenarios for redevelopment when (and if) this commuter rail line is constructed. All of these projects get out ahead of change, and can therefore effect change.

BEARING TREES: preparing the soil for future design

by Adam Regn Arvidson, ASLA

He rides due north on a line between sections 9 and 10. He sets a post for a quarter section and notes two bearing trees. Farther along at the section corner he makes an earthen mound, drives a charred stake into the ground, and plants osage orange seeds. He notes the surrounding landscape on his vellum tablet and spurs his horse northward to the next corner.

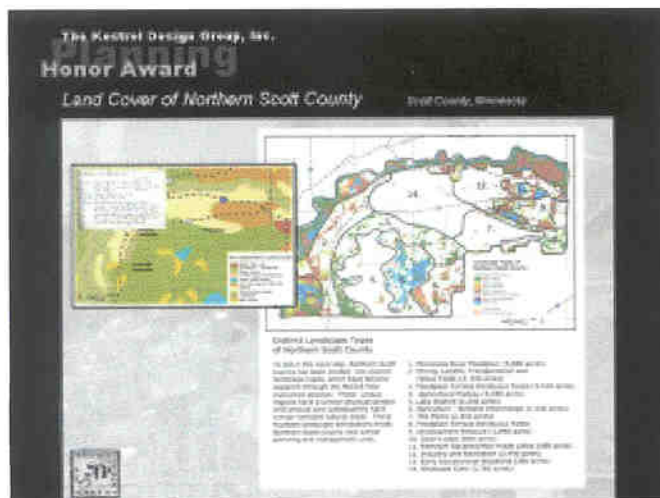
In the early 1800s the federal government required that all lands in the western territory be surveyed before sale. As a result, armed with little more than writing utensils and a standard notation format, public land surveyors of the mid 1800s created the first comprehensive site inventory of the Midwest. They located creeks, wet areas, landscape types, early roads, burial grounds, and bearing trees. One hundred fifty years later, L. Peter MacDonagh sees a lot in those brief surveyor's notes. "Here he notes two bur oaks: 5 inch diameter and 8 inch diameter," MacDonagh explains. "This means the area had frequent fire." MacDonagh is vice president of The Kestrel Design Group, Inc., which has recently completed *Land Cover of Northern Scott County, Minnesota*, a detailed assessment of ecosystems in Shakopee and two adjacent townships. To such an inventory, bearing trees are important. These specific trees were selected by the public land surveyors because they stood out from the landscape and would therefore act as waymarkers and provide guidance for later surveyors and settlers. They were the first

tangible documentation of site, and the first basis for design.

Today design is highly complex. Sites are rich with precedent and precursors: economic studies, historic commercial cores, comprehensive plans, existing landscapes and previous concepts, to name just a few. Landscape architects have the rare talent to consolidate and build upon what has come before; and they have the exciting and occasionally daunting task of creating a design out of all those precedents. Some projects, however, are precedents themselves, standing as bearing trees to future development, further study, and detailed design.

The Design Center for the American Urban Landscape (DCAUL) strives to amass and provide research and information that inform designers, developers, and public agencies how metropolitan areas can and should function and grow. In essence, DCAUL is surveying today's bearing trees – and planting a few, as well. According to Senior Research Fellow Gina Bonsignore, typically, DCAUL "prepares the soil for other people to come in and do good work to the extent they are interested." This is essentially how their work in Blaine began, culminating two years later in the *Northeast Blaine Planning Study* and a 2003 Honor Award for Planning from the Minnesota Chapter of the American Society of Landscape Architects (MASLA).

In 1999, as Blaine was updating its comprehensive plan, DCAUL facilitated a series of workshops to discuss with residents the future of the 9 square mile undeveloped northeast corner of the city. This two-month community dialog walked residents through specific topic areas related to development and natural resources. At the conclusion of the dialog, the Blaine City Council recognized that a more detailed look at the area was required. The city therefore passed its comprehensive plan, and DCAUL secured a grant from the Metropolitan Council (the Minneapolis-Saint Paul regional planning agency) to facilitate and prepare a Comprehensive Plan Amendment specifically regarding the northeast area.

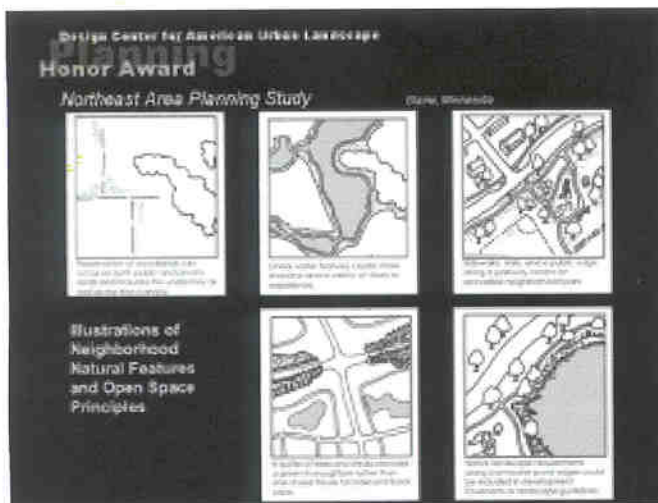


To celebrate one of the most outstanding groups of award winning projects in the history of MASLA's Annual Awards, over the rest of the year we will be presenting a series of articles that explore some of the professional and technical challenges of our profession as exemplified so well by our winners. This is the first in the series -- ed.

Key to the two-year long plan amendment process was DCAUL's assistance in helping residents better understand the existing lay of the land and how it could support development. Bonsignore and Frank Fitzgerald, another research fellow, ultimately produced, after extensive public input, schemes for the area that organized development around a variety of open space themes. Concepts for the West Meadows Neighborhood, for instance, included the Parkway Loop, which proposes a large lake and parkway system in the center of the area; the Neighborhood Network, which suggests pockets of interconnected open space interspersed with development; and the Connecting Parkway, which proposes fingers of green space reaching into and between developments. Each of these concepts considers the interface between transportation and

more ambiguous. Neckar took a detailed look at the correlation between hydrology and transportation in the preparation of *Transportation, Urban Design, and the Environment: Highway 61 and the Red Rock Corridor*, one of a series of reports commissioned by the Center for Transportation Studies (CTS). CTS is a research liaison between University of Minnesota faculty, the Minnesota Department of Transportation, and the Federal Highway Administration. Neckar sees the CTS study as a response to unfettered road building and widening in the suburbs, and examines alternate organizational systems: water and the regional rail network. These systems were considered because they are currently in place, and because they are physical, quantifiable networks that could be easily understood by designers, policymakers, engineers, and residents of the corridor. The study, however, did not include an analysis of how the regional rail structure might affect the City of Hastings, prompting Neckar to instigate and secure funding for a concurrent project: *Station Urban Design Issues: Red Rock Commuter Rail*, which received a 2003 MASLA Merit Award for Planning.

Station Urban Design Issues looks at two possible station locations within the central core of Hastings. Currently, an existing rail yard is located just south of



hydrology as a primary factor in organizing development. In this, the *Northeast Blaine Planning Study* employs precedents – bearing trees – that can be easily understood by a broad cross-section of stakeholders.

Water resonates with most people, and can be a tangible expression of larger ecosystems. According to Lance M. Neckar, Associate Dean of the College of Architecture and Landscape Architecture at the University of Minnesota (CALA), water can act “as a proxy for other environmental issues” that may be



downtown, oriented so that staging trains block traffic in the commercial core. Ultimately, Hastings would like to “flip the yard,” that is, reverse the direction in

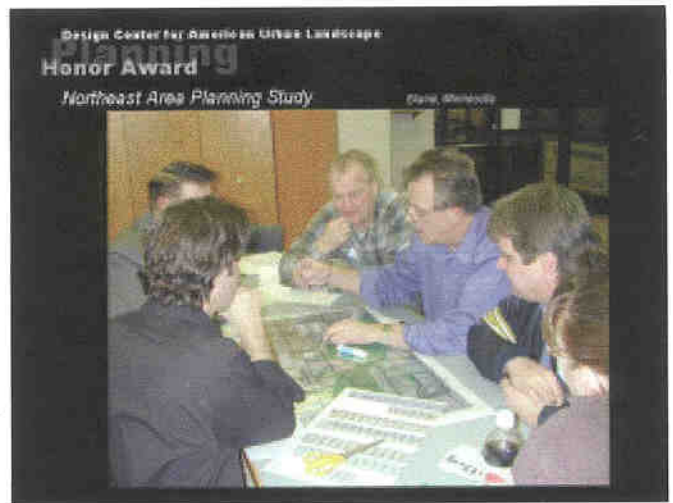
which the trains stage. This would open the door for a downtown commuter rail station located at the site of an historic rail depot. Considering that the yard may not be easily flipped, an alternate commuter rail station was examined just south of Lake Isabel near 10th Street.

Though based on sound research and technological thinking gleaned from the CTS studies, *Station Urban Design Issues* is far more than a technical document. Its axonometric drawings and character sketches illustrate, at a high level of detail, schemes for both station sites, as well as possible 2nd Street infill developments; streetscape improvements for 3rd, 4th, and Vermillion Streets; housing types; and a greenway connection between the 10th Street station and downtown Hastings. Both an historicist option and a contemporary option are offered for the downtown depot, while the design for the southern site suggests a



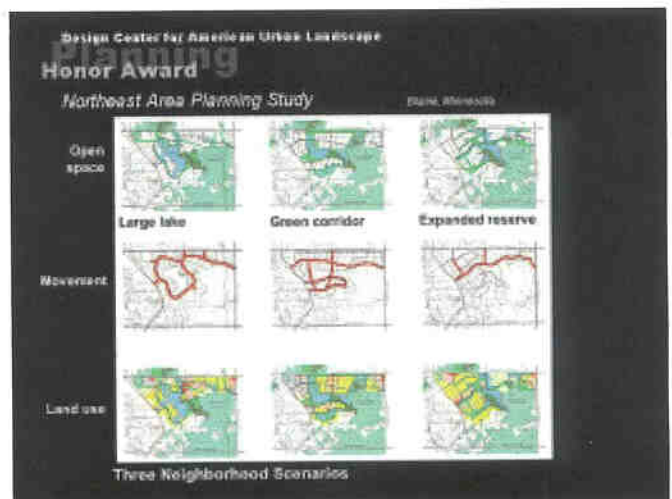
hanging garden irrigated by runoff from cars parked in the ramp. The latter concept effectively reintegrates the examination of stormwater-as-urban-organizing-principle that Neckar had begun in the CTS study. This and similar applications of pure data are designed to, in Neckar's words, "depoliticize the issues" regarding parking, streets, and water, while still offering an alternative to "the standard argument on congestion" which is to build more road lanes, a particularly costly option in a metropolitan area blessed with numerous rivers.

Even armed with sketches rendered in painstaking detail, however, Neckar still insists the document is



technical. During the process, CALA worked with the city, but never got involved in presenting the findings – or designs – to the community as a whole. Neckar believes that there may be a few "hot issues," but, since the design is based on technical research, its principles will be generally accepted. He adds that sometimes a project can get bogged down in public participation, and that it can be "interesting to front-load the discussion with well-grounded design, instead of charetting from day one." This theory stands in stark contrast to DCAUL's work in Blaine, where public participation was a constant throughout the process.

Beginning with the comprehensive plan dialog and continuing through the adoption of the plan amendment, the citizens of Blaine had opportunities, at least monthly, to comment, complain, criticize, and claim a stake in the outcome. DCAUL began the plan amendment process with two participatory workshops. In the natural resources workshop, small



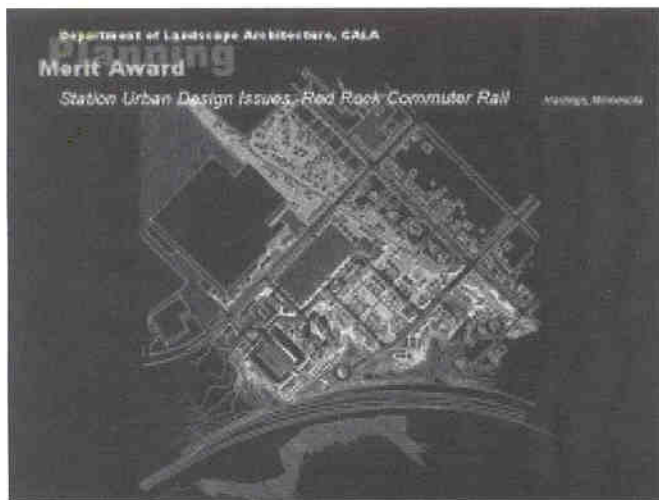
groups of participants were given idealized open space blobs (wildlife corridors at optimal widths, recommended community park sizes, etc.) and asked to place them on aerial photographs of the project site. In the development workshop, DCAUL prepared “density chips” emblazoned with images of a variety of actual developments in the region. These were designed to tangibly illustrate the characters of different housing intensities. At the conclusion of each workshop, DCAUL summarized each group’s work.

“Then people got nervous,” recalls Bonsignore. The sight of immediate development potential divided the participants roughly into three camps: those that wanted to sell their land and opposed any actions, such as open space designation, that would devalue it; those that believed purely in free market forces, as long as developers would bear all development costs; and those that did not want to see any change. Bonsignore notes that, at this point, “the public process began to deteriorate, but the buy-in by the

planning a project in the area. This clear signal of the inevitability of development, coupled with a real assessment of impacts, brought citizens back to the table. The end result was a continued, though less intense, community process which arrived at open space based concepts for the four distinct neighborhoods in the northeast area.

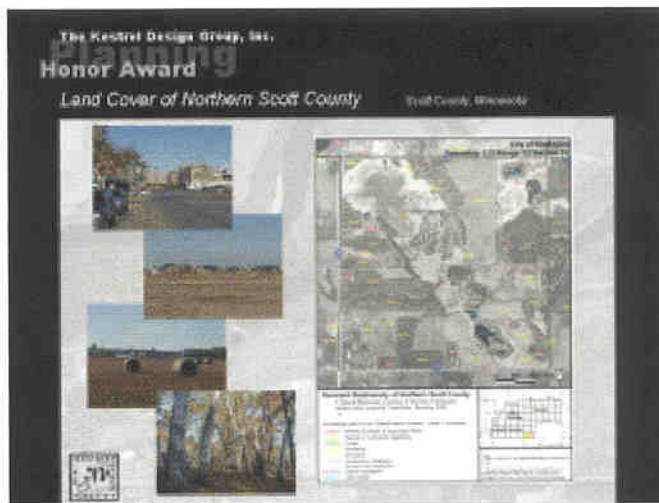
Both the *Northeast Blaine Planning Study* and *Station Urban Design Issues* are bearing trees because of where they stop. Neither puts development on the ground. Both set forth principles, concepts, and sound technical background that will help their cities work with developers to achieve consensus designs that consider key community factors, such as public desires and future infrastructure improvements. “The potential of a station is going to be a component of planning,” predicts John Grossman, Director of the Hastings Housing and Redevelopment Authority. He underlines the importance of CALA’s work, in that it provided “the first real study of how [the station] might look, how it might function, how it will affect the community.” The groundwork, therefore, has been laid – for development, redevelopment, road reconstruction, enhancement of natural systems, and continued public involvement. Bearing trees are in place.

Both the Blaine and Hastings studies, however, though they are precursors to continued design, rely on ecological baselines – precursors of their own. “For us to make intelligent decisions on the land, we need to have good base information,” offers Peter MacDonagh. It is true that landscape architects, planners, architects, and other design professionals rely on accurate, understandable, factual base



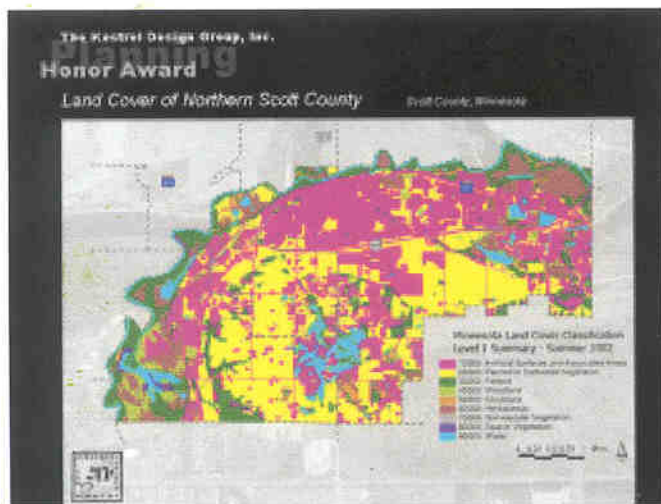
City Council improved,” prompting the city to resolve that all infrastructure costs for future development would be paid by the developers. This caused the advocates of the status quo to fight the process openly.

In order to revalidate the process and re-ground it in fact, DCAUL performed a generalized environmental assessment study to address the impacts of the 1700 homes that had been theoretically placed on the site. Almost simultaneously, a prospective developer began



information when creating even their first concepts. Truly the land itself gives rise to landscape architecture, but the land has been changed so drastically and continues to change so quickly that the very definition of native ecosystems can be debated – except when there are Public Land Survey Notes and someone to interpret them.

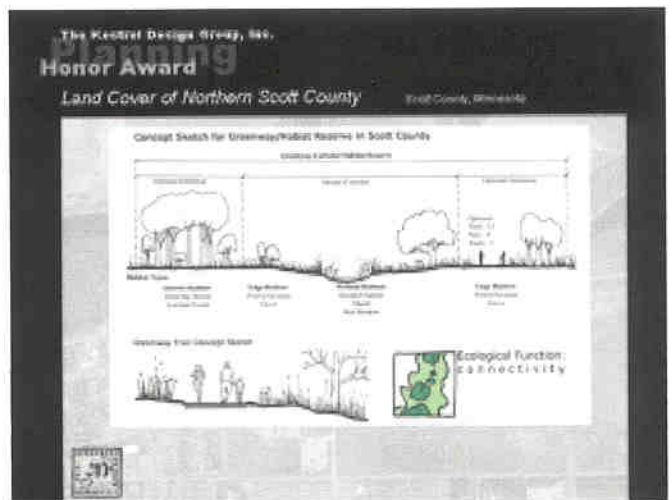
Scott County, Minnesota, ranks 8th in the nation in speed of development. It is growing faster than any county in the Midwest or Northeast. Much of the development has been facilitated by the construction and subsequent improvement of US 169, which links Shakopee and other southwestern suburbs with the urban core of Minneapolis and Saint Paul. Shakopee itself sits on the southern banks of the Minnesota



River, within an historic mosaic of floodplain forest, prairie, and oak savannah that is being increasingly developed for housing and industry. Northern Scott County, if it hopes to preserve any of its ecological diversity, needs sound policies for development areas and open space protection, and, in the words of MacDonagh, “we can’t make policy based on what our feelings are.” The Kestrel Design Group, therefore, convinced the City of Shakopee and two adjacent townships to undertake a natural resources inventory, and helped secure a Minnesota Department of Natural Resources Metro Greenways Grant to pay for that inventory. The resultant assessment, *Land Cover of Northern Scott County, Minnesota*, is a recipient of a 2003 MASLA Honor Award for Planning.

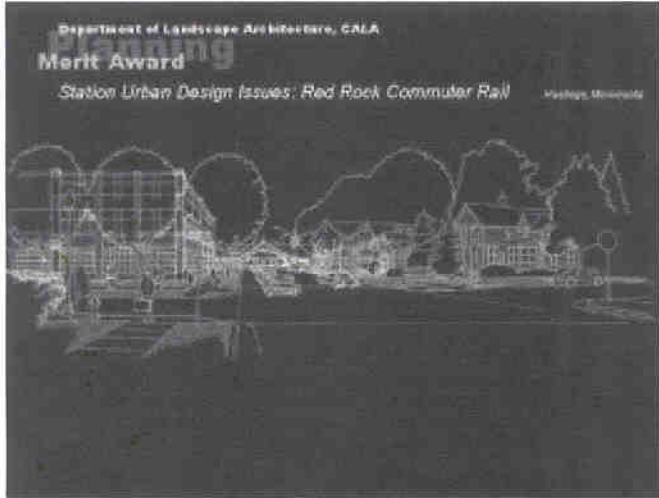
Kestrel utilized those original Public Survey notes

from the 1850s to establish an understanding of the historical baseline in the project area; but more immediately useful was the Minnesota Land Cover Classification System (MLCCS). This methodology assigns a five digit code to land cover types ranging from parking lots to pristine riparian wetlands. “It’s like a zip code for land cover,” offers MacDonagh. The first digit of an MLCCS code deals with broad landscape categories, and following digits offer successively finer detail regarding ecosystem type, infiltration capability, and presence of invasive species. Using this classification system, Kestrel delineated the boundaries of various land cover types on aerial photographs, and digitized them into a geographic information systems (GIS) application for analysis. They then “ground-truthed” these initial boundaries by visiting sites and examining their characteristics, finally giving each land cover “polygon” a unique zip code based on its overall land cover type. GIS allowed MacDonagh and his team to easily examine and manipulate the quantifiable land cover data they had amassed. Using this data, they were able to create summary tables and maps of northern Scott County’s ecological – and constructed – landscape.

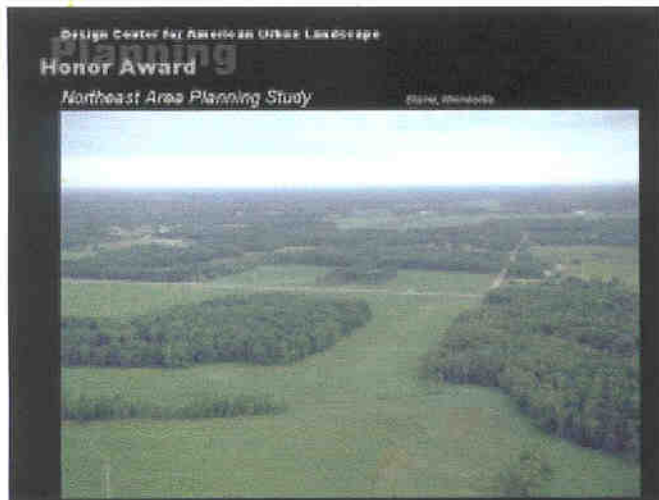


Land Cover of Scott County goes on to delineate “land cover neighborhoods,” which consolidate a patchwork of highly detailed land cover types into broader, more easily understandable groupings. In these neighborhoods, the similarities between certain land cover types are emphasized, creating larger areas – such as the Plains, or the Lake District – that are easier to read on a map. The hope is that the idea of these neighborhoods will instill a greater

understanding of and, therefore, investment in the local ecology. In essence, the document wants to help residents see the bearing trees — and recognize their value.



“We have just touched the surface of how this document will serve the community, not just from an historical perspective, but also in land planning for the future,” states Mark McQuillan, Shakopee’s Director of Natural Resources. To him, the study helps the city identify areas where there should be a greater emphasis on preservation. “The threat of



development is really the driving force,” he states, and, as a result, “we need to take a broader, more global approach to policies.” In fact, the title of the report, *Land Cover of Northern Scott County*, is designed to be apolitical, describing a region rather than a city or neighborhood. This global view has led directly to a subsequent project currently underway to master plan a system of greenways to re-link upland

ecosystems (and neighborhoods) back to the Minnesota River.

Subsequent planning in Shakopee indicates that this bearing tree has already borne fruit, and it is no exception. Hastings’ John Grossman sees the importance of the Red Rock study in the context of immediate redevelopment. Prospective developers will be made aware of the station plans and asked to work with the city on the overall implementation of those plans – even in the absence of the station itself. In Blaine, the plan amendment has been adopted by the City Council, and a developer is currently working on concepts with the *Northeast Blaine Planning Study* in hand. Gina Bonsignore concedes, however, that nothing ensures the schemes will prevail. The planners have been given a tool to negotiate with developers and a plan to regulate the quadrant, but it remains inherently vague.

Such is the nature of the bearing tree: it points the way to the next corner but does not stand directly on the section line. Bearing trees do not force detours unless the next designer, builder, planner, or surveyor takes a moment to notice them, document their location, and, most importantly, discern and utilize their teachings. Understandably, they can be seen as a mere obstruction: inconveniently in the way of 1800s farming, annoyingly contradictory to economics and personal preferences in new millennium design projects. They do, however say a lot about soils, hydrology, and history. Just as literal bearing trees gave Peter MacDonagh a head start on his understanding of local ecosystems, figurative bearing trees can offer a heads up on the natural systems, economics, and community culture surrounding any landscape architectural project. Find them. They are out there, just off the section line, probably in plain view.

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