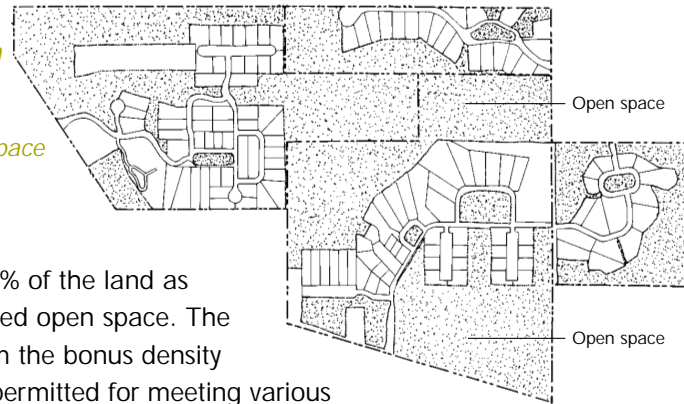


DEVELOPMENT PROCESS

One of the limiting factors in designing a conservation development for this site was the issue of wastewater treatment. The site is located in an area that the city of Lake Elmo and the Metropolitan Council did not intend to extend sewer services. Therefore, in order to cluster effectively, a common waste treatment facility was needed for the new homes in the development. After exploring the options, Bob Engstrom worked with the MN Pollution Control Agency to get authorization to install a wetland wastewater treatment system, the first in the state (there are now more than 200 systems in use or proposed in Minnesota).

Prompted by this project, the city revised its comprehensive plan, mapping environmental resources and designating several areas as part of an extensive agricultural/open space preservation district – more than 4,000 acres in area. A zoning ordinance was then adopted in 1996 that requires the developer to

An illustration of the cluster of conservation developments in the Lake Elmo region and the connected open space between them.



set aside at least 50% of the land as permanently protected open space. The Fields benefited from the bonus density that the ordinance permitted for meeting various performance standards, including preserving historic structures, establishing open space and developing trails. To ensure that the promised open space remains undeveloped, the ordinance required permanent conservation restrictions. The Fields is one of nine new developments in the city which have used the open space development option, making it one of the largest concentrations of conservation developments in the country. The Fields is bordered by adjacent conservation developments – Tana Ridge and Tamarack Farms – which combine to form a larger protected network of connected open space. (see illustration).

The open space district and projects such as The Fields have not been without their struggles and detractors. For example, although some of the smaller lots in the first phase of The Fields are the most popular with homebuyers and visitors, these smaller lots were not permitted in phase two or in many of the other conservation developments. As a result, the character of many of the projects is not substantially different from conventional development. In addition, because there was not strong guidance over which areas should be preserved, several of the developments have relatively fragmented open spaces, reducing the overall conservation benefits to the community. In spite of these issues, the efforts of Lake Elmo and projects such as The Fields remain critical models for the rest of the state.



“...potential homebuyers have demonstrated a strong desire to be part of a cohesive community that works with, rather than imposes itself on, the natural environment.”

– Land Development
Spring – Summer 1998

PROJECT STATUS

Development of the first phase of the project began in the summer of 1997 and all lots are currently sold. The second phase was opened in the fall of 1999 and all of the lots were reserved within six months.

PROJECT PARTNERS

Robert Engstrom Companies, developer and planner
Gerald Mazzara, Design Forum
Huntington Homes
J. Buxell Architecture, Ltd., architects
Landmark Homes
Minnesota Land Trust
Senn and Youngdahl, Primary builders

THE FIELDS OF ST. CROIX

THE FIELDS OF ST. CROIX is one of Minnesota’s first and finest examples of conservation development. It is also one of the more comprehensive projects in the country, thanks to its diversity of important elements: ecological restoration in the open space, historic preservation, organic agriculture, innovative stormwater and wastewater management, and architectural integrity.

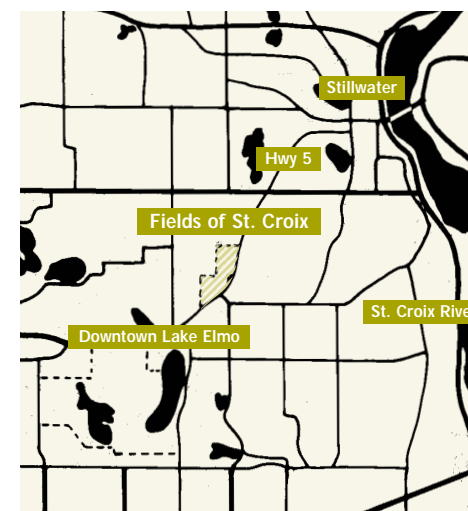
PROJECT OBJECTIVES

Located on Highway 5 between the town centers of Stillwater and Lake Elmo, The Fields of St. Croix is in an area where residents highly value the scenic and rural landscape. It is also in an area of intense development pressure. The development team and city of Lake Elmo saw conservation design as one approach to accommodate both demands.

The Fields of St. Croix includes two phases, each with a cluster of homes. The developed area, which occupies only 40% of the site, is located on level ground surrounding a pond and restored prairie. Mature trees on the ridge overlooking the pond have also been preserved, both in open space areas and on private lots. The development is specifically intended to:

- Protect and enhance ecological functions of the land, including its hydrology
- Preserve a functioning farmland buffer to heavily traveled State Highway 5
- Preserve the historic barn and provide resident amenities, such as trails and tot lots
- Create a neighborhood atmosphere through quality architectural and landscape design

The Fields does not just set aside the required open space; it does so with a purpose. The organic farm – Natural Harvest CSA – uses the farm fields to



produce crops. Prairie grasses and wild flowers are planted throughout much of the open space. These plantings are superior to conventional turf grasses in their habitat and stormwater functions. The open space surrounding the pond’s shoreline is left undisturbed. Some areas are dedicated to infiltrating stormwater or handling wastewater in constructed wetlands. And the large central green area has a tot lot for families to enjoy. Most of the open space areas can be appreciated visually and physically by the community via the circulation system that links the open spaces together.

SPECIFICATIONS

SITE SIZE:
241 acres

NUMBER OF UNITS:
113 single family homes;
12 attached single family

LOT SIZES:
.35 – 1 acre

OPEN SPACE:
144 acres (60%)

WASTE TREATMENT:
Wetland treatment system for each phase

WATER:
Phase one: private wells;
Phase two: city water

TRAILS:
More than three miles of interconnected pathways

NATURAL FEATURES:
Restored prairie, wetland buffers and oak savanna



WASTEWATER AND STORMWATER MANAGEMENT

Wastewater from the development is effectively treated in a series of cells planted with wetland vegetation. The constructed wetland treatment system for Phase one was the first example of such a system that was permitted by the MN Pollution Control Agency. Stormwater is managed through overland swales, infiltration devices and detention ponds planted with native vegetation. The volume of stormwater needing treatment is kept to a minimum, thanks to reduced street lengths and widths.



Photo courtesy of Engstrom Companies

CIRCULATION

Rather than being a standard width, the streets in The Fields of St. Croix are sized appropriate to their function. The streets range from 14-foot one-way lanes to 24-foot two-way streets with parking on both sides. Narrower streets help to create a neighborhood feeling, provide safer environments and reduce stormwater runoff.



Photo courtesy of Engstrom Companies

FARMLAND

More than 90 acres of farmland are preserved providing scenic buffers and areas for crop planting by Natural Harvest Farm. Natural Harvest is one of a growing number of community-supported agriculture (CSA) farms whose purpose is to establish a direct connection between customers and farmers. Managed by resident farmers at The Fields of St. Croix, it has members who pay dues and receive produce throughout the growing season.



ARCHITECTURE

Stylized Craftsman and Prairie home designs were selected that fit the desired rural aesthetic of the project. Careful design standards and review eliminated less attractive features, such as conspicuous garages that dominate the front of the homes. Front porches and other details function to help create a sense of community.



SHORELAND PRESERVATION

The open space behind the homes is centered around a pond that is ringed by a trail and restored prairie. The common open space around the pond is accessible to all residents and provides important wildlife habitat and water filtration functions.



Photo courtesy of Engstrom Companies

PRAIRIE AND OAK SAVANNA

In order to further the ecological and aesthetic benefits of the preserved open space, the developer restored extensive areas of native prairie and oak savanna. These areas provide important water infiltration and wildlife habitat functions.



PHASE ONE

HISTORIC PRESERVATION

The showplace of The Fields of St. Croix is a restored Civil War-era barn that has been adapted as a community center used for functions such as children's birthday parties and neighborhood meetings. Surrounded by large trees and farm-related activity, the barn's sunny terrace overlooks the pond and prairie below.



LANDSCAPING

One of the immediate things you notice when entering The Fields is the attention to detail with landscape planting. The development uses an extensive array of native plants, perennials and ornamental grasses to help achieve the goals of maintaining rural character and natural resource preservation.