

ARCHITECTURAL NOTEBOOK

Architecture and the Importance of Site Planning

By Rosemary McMonigal, McMonigal Architects

It seemed like a simple, straightforward residential project until I walked beneath some 150 year old trees and saw a wall built a century ago of hand-cleared fieldstone.

"This is the only spot for our house," my client explained, "and we need room to play volleyball."

Yes, we considered slashing through for a building site. After

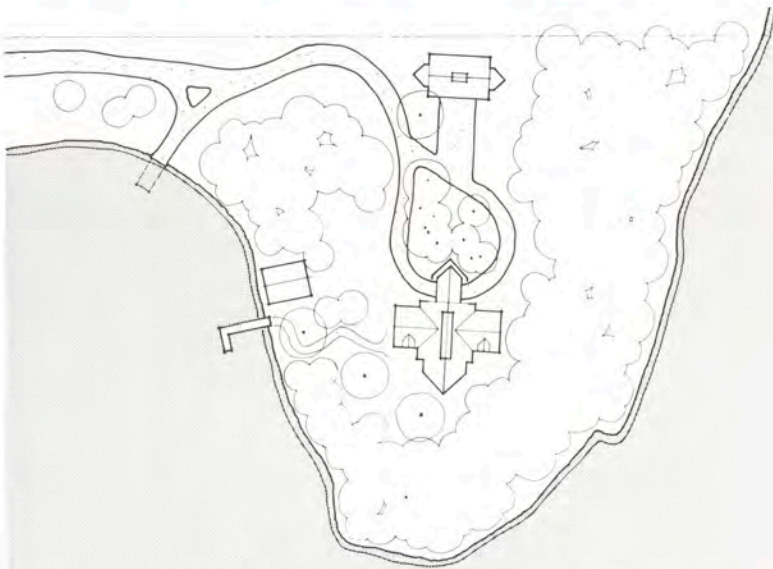
terms of slope, size, vehicular access or proportions. A closer look reveals a unique character and a diversity of challenges on any site.

The process of site planning allows us to understand the site in detail.

The process begins by gathering facts of property lines and angles, topography, zoning requirements (setbacks, height, lot coverage, parking, ease-

sites in terms of climatic concerns particular to the house's region. Within Minnesota the temperature, winds, snow, rain and humidity vary considerably. Each site has its own microclimate of conditions. On a site outside of Stillwater, we were faced with a long drive to the building site. We installed a temporary drive in the fall and reviewed the snow drift patterns during the winter. The result was a slightly shifted drive, a change in two turns and reduced snow plowing for the life of the house. Studying the sun's seasonal variation in altitude, azimuth and the average hours of daily sun allows us to evaluate in-

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Site challenges on this Lake Vermilion site included rock outcropping, significant slope, heavy tree cover and wind from across the lake.

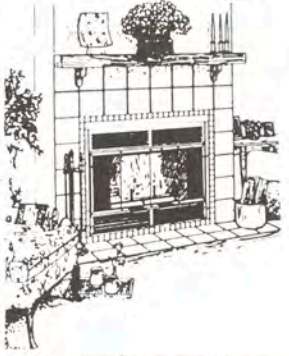
all, Minnesota has plenty of old trees and stone walls. But we didn't. The house was built where sun washes the rooms, where the views are spectacular and with yard space for everyone. Best of all, behind the house we can still walk under the canopy of trees and lean on that stone wall.

Houses that we design evolve from their sites. The shape of the house, how the house is placed on the site and the transition between interior and exterior spaces are unique to each project. Frequently, sites are called "challenging" in

ments, etc.), drainage, utilities and soil conditions. These parameters form the basis for site planning. The client's program of needs is analyzed and evaluated with the site, in order to determine their compatibility. A client approached us to evaluate some wooded sites which had enough slope for a walk-out lower level. In more discussion, the client decided that they did not want a finished lower level. For the same price, two flat lots were purchased allowing a buffer of exterior space around the house. Site planning includes evaluating

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terior and exterior spaces, amount of openness within the house, heat gain and loss, and placement of activities relative to sunrise and sunset in summer and winter months. The large overhangs of Prairie-style houses evolved to respond to the Midwestern climate by shading the direct summer sun while allowing the lower winter sun to pass below the overhang. Porches facing southwest were developed in early settler housing to shade the house from hot afternoon sun.

A house needs to respond to the shape of the site, both proportions and slope. We have designed houses to fit sites ranging from 45 degree slopes to sites so flat that drainage seemed impossible. Manipulating the site to a predetermined house plan is not an acceptable form of site planning. A recent client described their narrow city lot, paused and said they want to explore a New Orleans shotgun-style house as a balance to their site. People are becoming more aware of a gentle, natural fit between

house and site.

The geology of a site forms the design. The soils type, elevation of the water table, depth to foundation bearing capacity, erosion potential and drainage all affect the design and economics of a project. On Lake Vermilion we are designing a house around the native rock outcropping. We integrated one area of rocks as a center focal point in a courtyard between the house and garage. A part of architecture is preserving the old things in our world as well as building new.

Building a house on a treeless lot is an opportunity to plant windbreaks, woodlands and native plants in an effort to restore a bit of nature. This takes time, generations to grow some magnificent trees. Given this time frame, clearing land of plants and trees for thoughtless housing tracts is offensive. If we are presented with a wooded site it is important to respect and preserve the vegetation whenever possible. Trees offer protection from the

wind, help to isolate noise, provide privacy, shade and cool our houses, reduce runoff by absorbing rainfall, provide cover for wildlife, and the list goes on.

Researching historical, cultural and community factors helps to place the site in its context. A site may have archaeological value, an old foundation may be preserved for site character or an earlier landfill may clue us to additional site work. The compatibility of the project is analyzed with the surrounding area and land use.

The client, architect, landscape architect and builder are involved in the site planning process. Together we can produce architecture that respects the spirit of the land and preserves those old stone walls and trees.

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