

City of Boyne City Master Plan

Vision

FOR BOYNE CITY





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Vision

FOR BOYNE CITY

Dear Mr. Reed,

Thank you for coming I had such a good time.

What I want you to do is keep the lakes as clean as you can because people might not feel comfortable with a dirty lake.

*Signed by
Devin Hickerty
4th Grade
Boyne City Elementary*

Acknowledgments

Citizens of Boyne City

A great note of appreciation goes to those in the community who took the time to participate in the development of this Master Plan. This commitment to the community will be reflected proudly in future development of the City.

City Council	Eleanor Stackus, Mayor Chuck Vondra, Mayor Pro-Tem Ron Grunch	Jerry Douglas Dan Adkison
City Manager	Michael Cain	
City Clerk	Cindy Grice	
Planning Commission	Jim Knurick, Chair Tom Neidhamer, Vice Chair Dan Adkison Gretchen Crum Chris Frasz	Jack McLeod George Ellwanger Joe St. Dennis Jane MacKenzie
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Blueprint Boyne City

COMMUNITY MEETING LIST:

Boyne City 4th Grade Classes – May 05
City Wide Public Master Plan meeting with Mark Robinson – 13 Oct 05
City Wide Public Master Plan meeting with Mark Robinson – 25 Oct 05
Boyne City Rotary Club Meeting – 21 November 05
Boyne ReMax Office staff meeting – 13 December 05
Century 21 Office staff meeting – 14 December 05
Boyne City Kiwanis Club meeting – 15 December 05
Pat O'Brien Real Estate office – 20 December 05
Boyne City Lions Club – 18 January 06
Main Street Board of Directors – 2 February 06
Recreation Committee - 27 March 2006
Wilson Twp Planning Commission – 5 April 2006
Charlevoix County Planning Commission – 12 April 06
Tip of the Mitt Watershed Council – 17 April 06
Michigan Land Use Institute – 17 May 06
Boyne City Middle School 5th & 6th Grade Classes – 1 June 2006
Emmet County New Urbanism Group – 8 June 2006
Friends of the Boyne River – 14 June 2006
Evangeline Township ZBA – 17 January 2007
Project CARE Group – 18 January 2007

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Introduction



“Change is the law of life. And those who look only to the past and present are certain to miss the future.”

—John Fitzgerald Kennedy

What is planning?

Everybody plans. People make financial plans, work plans, and even grocery lists to efficiently achieve their goals. Planning helps each of us work toward accomplishing objectives in an orderly, step-by-step fashion. It also helps a community avoid costly errors by allowing for a good look at the issues. Communities that fail to plan are like people who shop without a grocery list — they spend too much on junk food and not enough on what is actually needed.

The comprehensive planning process encourages governments to think strategically about all aspects of their community and the way these elements interact. Planning allows us to take a look at where the community has been, how it got to this point, where it wants to go, and how it can get there. Without a clear picture of the goals, policy makers must often make decisions in a manner that may not be in the best interests of local residents.

Planning encourages a community development process that initiates action rather than one that simply reacts to events. But comprehensive planning is not easy. A community must work hard to reach their vision through the plan.

Comprehensive Planning History

The comprehensive plan has its roots in the governmental reforms of the late 19th and early 20th Centuries. The U. S. Department of Commerce Advisory Committee on Planning and Zoning institutionalized comprehensive planning in the Standard Zoning Enabling Act of 1926 and the Standard City Planning Act of 1928. The Michigan law is outlined in the Municipal Planning Act (Act 285 of 1931, as amended) and the related City Zoning Act (Act 207 of 1921, as amended).

Planning 101

- Planning is an orderly, open approach to determining local needs, setting goals and priorities, and developing a guide for action.
- Planning is a concentrated effort by a community to reach a balance between the natural environment and residential, commercial, industrial and agricultural development.
- A plan is a guide for public officials and private citizens to use in making informed decisions that will affect their community.

Change is inevitable. Planning is a process that helps a community prepare for change rather than react to it. The process involves working citizens through four basic questions:

1. Where is the community now?
2. How did the community get here?
3. Where does the community want to go?
4. How does the community get there?

Planning is Not:

- **An attempt to replace market forces of supply and demand.** It helps shape and channel market forces by establishing certain guidelines or rules to manage development.
- **Action.** A plan is only a guide for action and implementation.
- **An instrument of immediate change.** Change will occur incrementally as the plan is implemented.
- **A silver bullet.** Planning provides a limited set of options for communities to slowly foster change.



Mark Robinson works with Boyne City residents on the Waterfront Master Plan.

- **Static or only conducted one time.** Good planning requires continual review of implementation successes and failures, citizen desires and the surrounding environment so that the plan can be adjusted as needed.
- **Zoning.** A comprehensive plan is a foundation and a guide; many tools can be used to implement the plan. Zoning is one of those tools.

Planning is Not Zoning

Planning is focused on the future and establishes community goals, objectives and policies regarding future use, development and conservation of land. Planning is visionary and identifies where and how citizens would like to see the physical development of the community take place.

Zoning is one tool that helps a community implement the plan. Zoning divides an area into districts, which are subject to different regulations that cover the current type and intensity of land use. A zoning ordinance defines which parcels of land belong in a particular zoning district. Planning and zoning work best together. The plan is the long-term foundation that guides today's zoning decisions.



THE PLANNING PROCESS:

- Explores diverse community opinions and fosters consensus-based decision-making that incorporates shared values.
- Takes every opportunity to gain public input.
- Teaches citizens about their shared resource base and how each component of the community is interconnected within a social web.
- Relies upon technical analysis of data, trends, maps and public input to strike a balance between different opinions.

With Effective Planning, Boyne City Can:

- **Make informed decisions.** The comprehensive planning process provides facts on existing conditions and trends and helps a community understand the potential positive and negative impacts of managing growth in different ways. This provides a basis to make informed decisions and allows Boyne City to coordinate individual developments so that they complement rather than detract from each other.
- **Develop and preserve community character.** Can anyone envision the Boyne area without the vibrant northwood's-based economy of winter sports, summer water sports, and a great outdoor environment? Planning for the physical design of Boyne City will facilitate the preservation of the cultural, economic and environmental features that help make a community a special place. Planned growth can be used as an ingredient to expand Boyne City's unique character.

- **Achieve predictability.** Good planning provides private landowners and developers with a guide that defines where and what type of development the community desires. This information allows individuals to plan for the purchase and use of property consistent with community goals.
- **Produce positive economic development.** Planning helps Boyne City retain existing businesses and industries while attracting new ones. It is often used as a tool to revitalize downtowns and create vibrant main streets. The planning process allows the Planning Commission to consider workforce, education and local infrastructure capacity, among other things, so that appropriate economic development strategies can be developed.
- **Adopt a balanced approach.** Any local government function involves political, personal, and community values. Comprehensive planning and managing future growth involve balancing the community interest and the private interest. Planning encourages a balanced approach as the community develops, thus ensuring that community rights and private property privileges are both protected.

Boyne City has a long history of master planning. As with prior master plans, this new master plan builds on the solid planning foundation established by the City.

—Daniel Reed, Planning Director

When Communities Fail to Plan Effectively, They May Experience:

- **Negative Fiscal Impacts.** Development may not always be good for the community's bottom line. It requires a plethora of services, including police, fire, sewer, water, schools, and school buses. Residential development, for example, often pays less in taxes than it demands in services. When development is low density, further from the central city, or leapfrogs across rural areas, the affect on service costs is even greater.
- **Negative Water Impacts.** Wetland loss, increased levels of impervious surface, encroachment upon environmental corridors, and paving over groundwater recharge areas all have a detrimental effect on both groundwater and surface water.
- **Possible Negative Impacts on Private Property Owners.** How would you like to have your neighbor open a junkyard? Would you prefer to live next to a single family house or a 1000-car a day drive-thru restaurant?

- **Negative Transportation Impacts.** As we move further out from where we work and play, the number of hours we log in our cars and miles traveled increases significantly. Not only do we spend more money on increased road maintenance and development, people spend more time in their cars and less with their families.
- **Negative Air Impacts.** All this time in our automobiles means we are using more fuel and spewing more emissions into the atmosphere. Cars are major contributors of carbon dioxide, which causes global warming, and a cocktail of other chemicals that lead to smog and respiratory health problems.

Planning Limitations

Planning for Boyne City's future does not come without certain costs and limitations. It will require a tremendous expenditure of social capital. If the Vision Boyne City Plan is to be realized, citizens, organizations, staff and our elected officials must spend time, energy and development in implementing the initiatives in the plan.



The abandoned cabin John and Harriet Miller claimed as their "dream" home.



A passenger train prepares to leave Boyne in 1908.



A view down Water Street, circa 1930.

A History of Boyne City

John and Harriet Miller are credited with being the area's first non-native permanent settlers. After Harriet dreamt of a bear-shaped lake with an abandoned cabin at its east end, the Millers traveled from New York and landed on the shores of Boyne on November 14, 1856. They claimed a cabin abandoned by Mormons as their home. John and his sons soon discovered a scenic stream that reminded John of a famous river in Ireland. He promptly christened it the Boyne River.

The lumbering era thrust Boyne City from its quiet beginning into a bustling industrial center. From the mid-1880s to the 1920s, the community was known as the lumber capital of northwestern Michigan. The community's population grew as people traveled to where jobs could be found. By the 1920s, the mill whistles silenced. The lumber boom was over.

Boyne City & Southeastern Railroad began bringing freight to town in 1893. The service was designed to connect Grand Rapids and Indiana to Great Lakes shipping from Boyne City's harbor. While the railroad was a critical

component in lumbering, it also found an identity as an ideal way for passengers to travel north in comfort. The railroad eventually closed in 1978.

During the city's lumber boom, a variety of businesses needed to support a thriving community were established. Many of these businesses remained after the lumber era ended. As the years have passed, the business community has evolved as much as its residents. Tourism has become a primary industry as the community draws summer residents to their second homes and for visitors who travel north for the weekend to fill lakeside cabins.

It's obvious that the Boyne area is still booming. With its schools within walking distance of downtown, diverse businesses enabling people to live, work and shop close to home, and events such as spaghetti dinners still making personal calendars, residents and visitors enjoy the value of relationships and the opportunities found in each day.



Quality of Life



Dear City Planners,

I think we should make more playgrounds. We should make a skate park. We should plant more trees by the park. We would also make a little forest for the kids to play in.

Thank you for asking us about our ideas for Boyne City.

*From,
Maurice Patrick Hanselman
4th Grade
Boyne City Elementary*

Boyne City is known for its safe, attractive and diverse neighborhoods, and its vibrant, pedestrian-friendly Downtown. Access to parks, pathways, open space, and recreational facilities are all valued as important aspects of living here.

Since its inception, Boyne City has attracted people from around the country looking for a better quality of life. These new arrivals have helped to shape the character of the city, and remain an integral part of Boyne City's past and future. The city must work to maintain a population characterized by a diversity of incomes and backgrounds as an essential component of the community's character.

By enhancing the appearance, pedestrian amenities, and distinctiveness of our city, we will foster a sense of solidarity and pride, strengthening community bonds, reduce behaviors such as crime and littering, and encourage residents to become involved in protecting the character of the city.

Community facilities, amenities, events, and aesthetics define a community's desirability and image. Boyne City offers residents a wide range of typical municipal amenities, as well as amenities and events that are less common in similar communities but add quality and variety.



What is good quality of life?

During recent meetings with the citizens of Boyne City, residents shared what they want to see in Boyne City in the 21st Century:

- Quality neighborhoods and public institutions (schools, parks, public spaces)
- Diverse cultural and art opportunities
- Clean air, fresh, safe water
- A rich neighborhood life
- The ability to move around the city easily
- Personal safety
- Accessible and affordable housing choices
- Interesting and vital public streets
- Attractive public spaces
- Beautiful, inspiring public buildings

Citizen comments focused around the following objectives:

NATURE

- Clean, open beaches
- Clear-sky sunsets
- Lack of air pollution
- Healthy bird and wildlife populations
- Lack of noise pollution
- Clean water
- Abundant biodiversity
- Control of invasive plants
- Accessible waterways for canoeing and kayaking
- Bike trails

SOCIETY

- Safe roadways
- Access to health care in Boyne City
- Low crime rates
- Community involvement by residents under 40 years old
- Stable housing prices
- Residents participating in political process
- Residents participating in community as volunteers
- Community events
- Number of senior citizens involved in community organizations and events
- Cultural events



ECONOMY

- Availability of year-round employment
- Number of people working locally; accessible shopping
- Number of year-round businesses
- Accessible public transportation
- Affordable housing units
- Allow home-based businesses
- Number of seasonal businesses

WELL-BEING

- Good health
- Personal security
- Affordable medical care
- Knowing your neighbors
- More families with children
- Property esthetics
- More places to bike and play
- Access to art and culture

The quality of life found in Boyne City is exceptional and must be retained in order to keep the lifestyle we have all come to expect. The quality of life we have in Boyne City is not guaranteed; we must work hard to keep and improve upon it.

Public Safety

One of the most fundamental functions expected from governmental regulations and services relates to the promotion of conditions which protect public "health, safety and welfare." The ability to manage crime, minimize property insurance rates and damage from hazards all contribute to aspects of public safety. In addition to the security and well-being experienced by its residents, the perception of a safe community carries a powerful economic impact in the form of the community's quality of life image to those outside the area considering new business locations or a community in which to live.

Noise

Noise is sometimes defined as “unwanted sound.” Sound which is desirable in some situations—for instance, amplified music—can become “noise” in other situations. Some types of sound—from vehicle traffic, and mechanical equipment—are generally considered undesirable in residential areas, but are accepted in other areas (such as industrial areas). Noise has been linked directly to human health and, aside from general annoyances, excessive noise is a source of discomfort, interferes with sleep, and disrupts communication and relaxation.

The preservation and enhancement of the acoustical environment relates directly to the quality of life that can be achieved in a community. By recognizing existing sources of noise pollution, taking reasonable steps to mitigate future impacts, and preventing additional sources of noise, the city will seek to achieve a more pleasant environment and a comfortable and calming community.

NOISE-SENSITIVE LAND USES

Land uses in Boyne City include varying densities of residential types, different densities and types of businesses and commercial developments, open space and recreation. The locations and densities of these land uses, in conjunction with major transportation routes, and other significant activities within Boyne City, such as construction, contribute to create the ambient noise conditions, or setting, of the area. Sensitive land uses are generally defined as locations where people reside or where the presence of noise could adversely affect the use of the land. These land uses include the school campus, the senior center, residences, the library and the recreation areas.



Because two highly utilized transportation corridors, M-75 and Lake Street, traverse the city, roadway traffic is one of the more prevalent sources of noise. Traffic noise varies in how it affects land use depending upon the type of roadway, distance of the land use from that roadway, topographical setting and other physical land features such as landscaping, walls, buildings and other structures. Some variables that affect the amount of noise emitted from a road are speed of traffic, flow of traffic and type of traffic (e.g. tractor trailers vs. cars). Another variable affecting the overall measure of noise is a perceived increase in sensitivity to vehicular noise at night.

Enforcement of laws concerning loud vehicles such as motorcycles, car without mufflers, loud trucks and loud radios and music emanating from vehicles is important. The police department should be educated on the negative affects of loud noises on the residences and as it relates to the quality of life in Boyne City.



AMBIENT NOISE

Industry

Industrial and manufacturing facilities are also noise producers that may affect sensitive land uses. Industrial land uses have the potential to exert a relatively high level of noise impact within their immediate operating environments. The scope and degree of noise impacts generated by industrial uses is dependent upon various critical factors, including the type of industrial activity, hours of operation and the sites' location relative to other land uses.

Most of Boyne City's industrial uses are located in Air Industrial Park and create very little noise.

Airport

The Boyne City Airport (BCA) is a municipally-owned airport that occupies approximately 88 acres of land located at the eastern end of the city just north of the schools campus. The airport houses multiple single-engine aircraft, while multi-engine aircraft visit the airport on a regular basis. Small jet service is planned for the airport.

Care must be given to protect the adjacent residents and the school campus from excessive noise. This may include berms and landscaping.

Schools

Schools can be a source of noise for neighboring residential uses. Noise-generating activities include children at play, bells and public address systems. The high school includes a stadium used for day and evening athletic events, and the use of public address/loudspeaker systems can also generate substantial noise levels during events.

Other Noise Sources

Other sources of noise include recreational boating and personal watercraft on Lake Charlevoix, snowmobiles and construction activities.

VIBRATION

As with noise, vibration can be described by both its amplitude and frequency. Amplitude may be characterized by displacement, velocity and/or acceleration. Typically, particle velocity (measured in inches or millimeters per second) and/or acceleration (measured in gravities) are used to describe vibration. Vibration can be felt outdoors, but the perceived intensity of vibration impacts are much greater indoors due to the shaking of the structure. The most common sources of vibration in Boyne City are loud music, construction equipment and large vehicles. Several land uses are especially sensitive to vibration, and therefore have a lower vibration threshold. These uses include, but are not limited to, recording studios, medical offices, the library, vibration-sensitive research operations, residential areas, schools and offices.

Lighting Issues

Light Trespass

Light trespass is “unwanted light that falls beyond the property line or area intended to be illuminated.” When introducing a new light source to an area, it is desired to limit the amount of light that spills over onto adjacent properties, in order to minimize disputes between neighbors. The fixtures should have precise optical control in order to direct the light onto the surfaces where it is desired. When possible, a fixture should be selected that is well-shielded, or has the potential to be shielded should the need arise in the future. Aiming of the fixtures is also important; floodlight aiming angles should be very precise to keep the light in the intended lighted area and out of areas where it is not wanted.

Light Pollution

Light pollution is “light that is directed upward to the sky or reflected from surfaces that interferes with astronomical observations or appreciation of the night sky.” Particles in the air, such as dust and water vapor, reflect and scatter light that is emitted into the atmosphere, resulting in light pollution or “sky glow.” One of the best ways to control light pollution is to limit the amount of light leaving a fixture from the horizontal or above. The designer should also attempt to minimize the amount of non-target illumination; that is, when projecting light upwards, the system should be designed to apply the light only to the desired object, with as little light as possible spilling out into the atmosphere. Any light reaching into the sky is wasted energy.

Appropriate Community Design

The lighting of buildings’ facades can define the urban character and image of Boyne City. For example, Las Vegas, Nevada and Williamsburg,



Bad light trespass.

Virginia are popular tourist destinations. However, they have significantly different images and characters, particularly at night.

Responsive Design

The lighting designer must not only consider the community in the design process, but also the owners of the individual building or structure. Each owner has a certain image of his or her business or organization that he or she wants to project. The lighting designer can help better portray this image by lighting the structure in an effective manner. In addition to projecting a certain image for an owner, the lighting professional must also consider maintenance of the lighting system, energy consumption and cost.

Energy

Besides maintenance, the lighting designer should also be sensitive to the amount of energy consumed by the lighting system. The selection of light fixtures, lamps, ballasts, and number of fixtures will all affect how much energy the system uses. Saving more energy not only puts more money in the pockets of the building owner, but is also an ecologically-friendly solution, which further enhances the image of the owner. The energy savings paid for the installation can have a payback in a little over one year.



DESIGN PRINCIPLES

The general objectives that are outlined can be translated into a series of practical design principles that serve as guidelines for the development of the lighting master plan and the execution of future lighting designs. In formulating these principles, it is helpful to remember that the lighting system is a means to provide or transfer visual information, relevant to these basic objectives.

Illumination (quantity of light)

Good transfer of a visual signal is not necessarily based on the absolute quantity of light, but rather uniformity and contrast. A uniformity ratio compares the average light level across a surface to the minimum value on that surface. According to the Illuminating Engineering Society of North America, the recommended uniformity ratios for an even wash is a range of between 3:1 and 6:1, average to minimum. It is only in the change or anomaly in a regular pattern that attracts attention. A change of 10:1 is considered noticeable, while 50:1 is obvious. Care must be taken not to overwhelm nearby buildings or lighting installations. “Light Wars” occur when one building owner feels that in order to be noticed, he must light his building brighter than his neighbor’s building. Then a third building owner puts twice as much light on his building, and so on. It becomes a war that everyone loses, including visitors.



An example of glare.

Limiting Glare

A common source of visual noise is glare caused by luminaries with improper beam control. Independent of illumination, glare levels make the task of seeing more difficult and produce a subtle sense of discomfort or annoyance. The lighting system should be designed to minimize glare. Glare can be broken down into two categories. First is discomfort glare. Discomfort glare causes the viewer to squint and can detract from the object being viewed. Disability glare is the second type, and a more severe condition. Disability glare can cause a total loss of vision such as looking at on-coming high beam headlights. It may not be possible to completely hide every light fixture, but efforts should be made to avoid glare. Proper fixture selection and location can help limit this potential issue.

Use of Color

The use of color can be very dramatic and playful on a building facade. It can be used to create a mood or tell a story. For example, the color projected on a building can be changed every evening to forecast the weather for the following day (yellowsun; blue-rain; whitesnow, etc.). Color has significant impacts that must be considered early in design. Just as when color is applied to interiors, surrounding color schemes must be considered to maintain an aesthetically pleasing view of the city.



Color washing of facade.



Use of Texture

Texture can give life to a facade or create a meaningful statement. Grazing a stone or brick facade can show the material and structure of a building in a manner that has never been seen before. When viewed by flat ambient daylight, a stone wall has small bumps; at night that same wall can show large, random, beautiful patterns in the stone offset.

METHODS OF ARCHITECTURAL LIGHTING

Structure lighting serves many purposes and communicates prestige, safety, symbolism and recognition. Whatever the application, distinctive, well designed lighting is one of the best ways to attract attention and make a favorable impression on the viewer. When properly applied, lighting can help enhance the intrinsic charm, beauty and utility of any setting. With the loss of natural light at night, often the identity of a structure is destroyed. Proper lighting can strengthen or subdue major elements of a building. Many dynamic possibilities exist. Nighttime lighting can be applied to a single structure or a set of structures. It can give distinction to a building, or unify the downtown. Careful coordination can create focal points with major structures and subdued lighting patterns for secondary buildings. Circulation patterns can be reinforced and the entire community unified. Well planned

nighttime lighting can make an important contribution to the success of any urban planning project. The following techniques focus on the essential methods of good structure lighting.

Floodlighting

Floodlighting is comprised of a general wash of light across a facade, utilizing a few basic methods. Floodlighting can be done from below or above a surface, and from close to or far away from it. When used correctly, it allows designers to create anything from the most dramatic, exciting statement to the most subtle impressions. A floodlight that is placed very close to a surface will graze the texture and add depth to small reveals. This can be an attractive feature on stone or brick walls where the texture is desirable and rarely seen its full glory. However, caution must be used because grazing a wall that should be flat can show any imperfections. Reflective surfaces can cause veiling reflection which can be very distracting. Large offsets in structures must be handled appropriately to prevent uncomfortable or unnatural shadows from appearing. An example of this is the human face. During the day, ambient light, typically from above, casts natural shadows. However, when a flashlight is held to a person's chin, it reveals deep eye sockets and an inverted nose shadow, giving the face an unnatural appearance.

Care must be taken in lighting building facades to create comfortable shadows. A floodlight placed farther away from a surface provides very little shadowing of textures. It is important to note that as the light is moved away from the facade, the shadows flatten and become softer. These softer, attenuated shadows give the viewer a strong impression of what the architecture looks like. This is sometimes less dramatic than grazing, but less likely to interfere with large elements on the facade.



Selective Highlighting

This technique is similar to floodlighting, but tends to use low wattage fixtures to accentuate smaller details of the structure. These smaller fixtures can easily be hidden in architectural details so they blend into the structure during the day.

Silhouette

By illuminating the interior of the building or a simple facade behind an ornate one, the building's exterior architecture is expressed through darkness. This is appropriate when a building has a unique feature when seen against a bright background. This technique is often done on facades with large porticos where the columns are silhouetted on the building face. Silhouette can be used effectively in combination with floodlighting. If one portion of a structure is floodlit, another can be seen in silhouette. This can occur if the lower level of a building has a unique roof line that stands out as a dark line against the floodlighted upper portion of the building.

Transmitted Luminance

This is similar to silhouette lighting, where the building is used as a lantern, and interior light glows through windows and other openings and defines the exterior. Facades of stores and restaurants often use this to allow potential customers to know they are open. Churches are another prime example of where transmitted luminance can be successful. Back-lighted stained glass windows can define a church's character without the need for exterior lighting.

Delineation

This technique uses a thin line of light to outline the natural form of the building, separating and simplifying its shape. Many structures have a unique outline or feature that makes the form best outlined. Several sources can be used to create this effect. Fiber optic lighting is one of

the newest and most exciting methods. Fiber optic outlining allows color changing to occur at any timed interval or manually.

Ornamental

Ornamental lighting is often applied to the surface of the structure and is unrelated to the architectural form. Neon, incandescent lamps, and fiber optics are a few of the lighting materials typically used in this technique. Ornamental lighting is often used at nightclubs, playhouses, art centers, and places that want to draw attention or create interest. The lighting can follow a specific shape or pattern, or it could be completely random. Along with fixtures that are applied to the surface, lights that project images on to the surface are also available. This can be used to draw attention to a specific building or enhance an entire neighborhood.

Combination

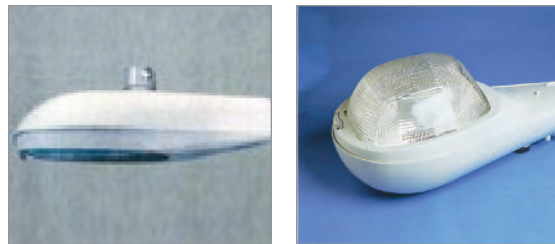
Combining two or more of the previously listed techniques often results in the best effect. A few examples may be a gentle floodlight to wash a facade and add in some selective highlighting of a few unique features. Another combination is the selective highlighting of a church steeple combined with soft floodlight of the lower structure and a strong transmitted luminance through the stained glass windows. As one can imagine, the combinations and possibilities are endless. Care must be used in combining effects. Not all techniques work well together. For example, floodlighting a facade with an ornamental or delineated feature will not work because the floodlight will wash out the other effect. Often, combining too many effects can lead to visual chaos or a cluttered look. Keep in mind, simple is often better. It is also important to understand the techniques used on neighboring structures and how they impact your structure.



The world at night.

Street Lighting

Boyer City should take immediate steps to replace the older Cobra head style street lights with the drop lens with the sharp cut off style fixture. This will have a very positive impact on the city-scape.



The fixture on the left is the preferred street lighting method to the current Cobra head style on the right.



Sustainability



Dear City Planners,

Boyne City should stay the way it is because if there was too many cars and factories it would pollute the air and water. If we got to be a big city everybody would come and visit us. Some people come here to get away from the city so if we become a big city nobody would come and visit us because they would be going into a big city again. So Boyne City should stay the way it is.

I would also like to see more parks and trees like we are doing at our school. Here at school we are talking about the environment in class and in the summer we're going to plant flowers and trees. We also have a group called the Garden Keepers.

I like Boyne City as it is now, I hope we will not change Boyne City into a Big City.

Sincerely,
Elliot Hausler
4th Grade
Boyne City Elementary

What is a sustainable community?

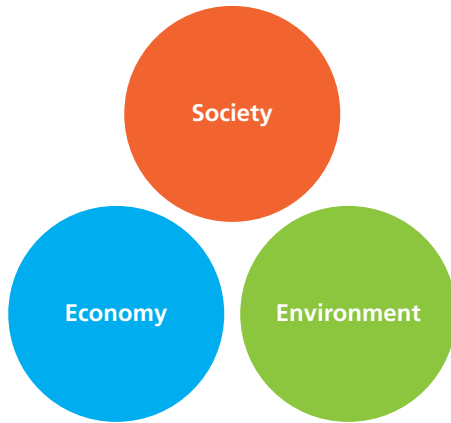
Many definitions of a sustainable community have been put forward, but they all revolve around the interconnectedness of society, economy and environment.

Sustainability is good business from social, economic, and environmental perspectives. When tied to a community's Comprehensive Plan, sustainable development can resolve successfully many key issues faced by communities today. Within the context of the built environment, sustainable development is especially effective and in a tangible way.

For example, a park can be a sustainable component of the ecology and a community focal point when it is planned not as a parcel but as a system supportive of and accessible to all kinds of living things. It can be a catch basin for stormwater runoff, a means to mitigate flooding and pollution, a centerpiece for economic development initiatives, a place of serene beauty and contemplation, and a showcase and habitat for local plant and animal species.

Sustainability is related to the quality of life in a community — whether the economic, social and environmental systems that make up the community are providing a healthy, productive, meaningful life for all community residents, present and future.

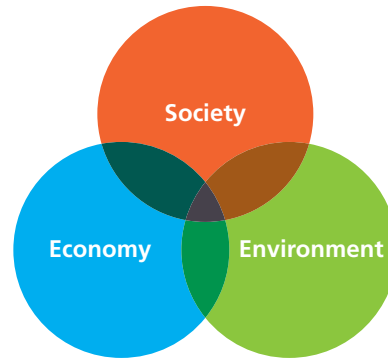
The economic, social and environmental systems that make up the community provide a healthy, productive, meaningful life for all community residents, present and future. Sustainable communities acknowledge that there are limits to the natural, social and built systems upon which we depend.



A view of community as three separate, unrelated parts.

When society, economy and environment are viewed as separate, unrelated parts of a community, the community's problems are also viewed as isolated issues. Economic development councils try to create more jobs. Social needs are addressed by health care services and housing authorities. Environmental groups try to prevent and correct pollution problems. This piecemeal approach can have a number of bad side effects:

- Solutions to one problem can make another problem worse. Creating affordable housing is a good thing, but when that housing is built in areas far from workplaces, the result is increased traffic and the pollution that comes with it.
- Piecemeal solutions tend to create opposing groups. How often have you heard the argument 'If the environmentalists win, the economy will suffer and its opposing view 'If business has its way, the environment will be destroyed.'
- Piecemeal solutions tend to focus on short-term benefits without monitoring long-term results. The pesticide DDT seemed like a good solution to insect pests at the time, but the long-term results were devastating.



A view of community that shows the links among its three parts: the economic, social and environmental.

Rather than a piecemeal approach, what we need is a view of the community that takes into account the links between the economy, the environment and the society.

Human-Scale Neighborhoods

Neighborhoods dominated by the car, without a mix of uses and housing types, tend to lack both diversity and a sense of community. They consign those who drive to endless shuttle trips, and those who don't—the young and old—to dangerous and unpleasant attempts to cross busy streets. They create sprawl and inefficient forms of infrastructure.





In Human-Scale Neighborhoods, a wide mix of housing types is clustered around one or more well-defined neighborhood centers which is walkable, close to parks, commercial activity, and a range of amenities.

The neighborhood is scaled to the pedestrian, offering sufficient variety within a five to fifteen minute walk—a quarter to half mile—to sustain lively streets and gathering places. It offers a gradient of density, from open spaces to high-density.

The layout of pathways, streets, and transportation corridors minimizes conflict between walking, biking, and driving.

As neighborhoods change, small parcels of land and old buildings constantly become available for new uses. These parcels and buildings can be used to repair and renew pieces of the urban fabric and provide a better mix of housing types for residents. This revitalizes neighborhoods; makes full use of existing

infrastructure and services; increases density; and provides a sense of history, place, and cultural context.

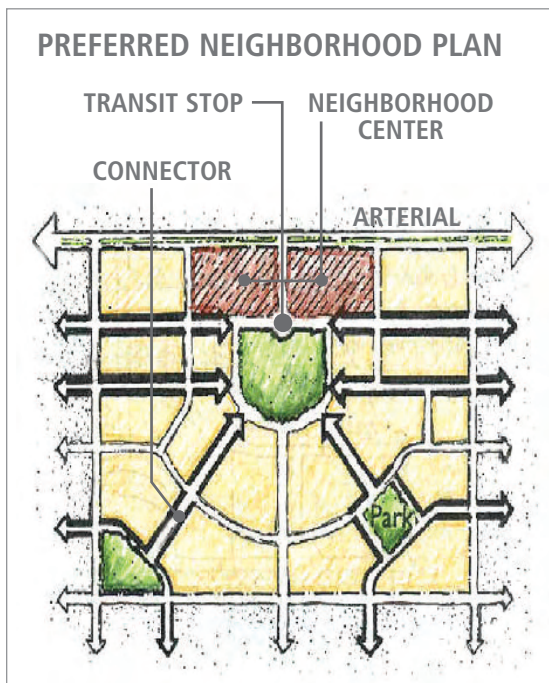
Using green building techniques to retrofit a building saves construction materials and preserves land, and can produce spaces which are healthy and vibrant. Infill, which can include small second units in backyards, duplexes, small rowhouses, and related types, offers similar advantages, but must be performed carefully, and in a way that respects the character of the neighborhood.

Land Use Planning

The way we plan the physical layout, or land use, of Boyne City is fundamental to our sustainability. Two features of land use practices over the past several decades have contributed to generate haphazard, inefficient, and unsustainable urban sprawl:

- zoning ordinances that isolate employment locations, shopping and services, and housing locations from each other
- low-density growth planning aimed at creating automobile access to increasing expanses of land

The complex problems shared by cities throughout the U.S. are evidence of the impacts of urban sprawl—increasing traffic congestion and commute times, air pollution, inefficient energy consumption and greater reliance on foreign oil, loss of open space and habitat, inequitable distribution of economic resources, and the loss of a sense of community.



Benefits of Sustainability

Across the country, sustainable development has offered practical solutions to common problems. Seattle based its highly effective recycling and waste reduction program on sustainable themes and now applies the concept in its efforts to curb sprawl, to preserve the landscape of the Cascade foothills, and to enlarge the public's role in the planning process. Boulder, Colorado created urban growth boundaries and improved transportation options to sustain its quality of life and scenic edge. Austin, Texas established a Green Builder Program to encourage the use of energy-conserving building practices. Portland, Oregon launched an initiative for carbon dioxide reduction based on sustainable changes to the built environment. And, Valmeyer, Illinois used sustainable planning practices to relocate outside the Mississippi floodplain and to mitigate future flood damage.

These communities and others demonstrate the multiple goals of sustainable development. Sustainable development can enhance a sense of place, reduce crime, mitigate natural hazards, conserve energy and resources, preserve culture and heritage, improve traffic circulation, and reduce waste. It can attract more viable economic development as competition among communities for high-quality businesses becomes more intense. Perhaps most important, it can help relate and integrate the many components of a community to achieve a synergistic whole.



Local decisions will have global impacts.

Role of the Built Environment in Sustainability

The built environment is the infrastructure, civic and service centers, parks and planned open spaces, neighborhoods, landmarks, roads and walkways, and all those public and private places that compose the community and constitute a critical frontier. It is necessary to understand the interactive relationship between people and the built environment and to unite these two elements in a way that optimizes each. The process for planning and developing a community—how the components and systems of its built environment are created, shaped, and managed—greatly influences the goals that the community can achieve. The planning and development process is an invaluable resource, one that has been vastly underused in the past. Above all, it is a management tool with great potential to aid communities in achieving their goals. This process is guided by local decision making and policy creation and implemented through the tools of the planning development process—development guidelines, comprehensive



planning, capital budgeting, zoning, subdivision regulations, and building codes. Local governments make decisions every day, based on the needs and priorities of their communities. Nearly every decision and resulting action at this level affects community form and, in turn, the community's capacity to serve complex and growing needs.

This integral relationship, as well as how the planning and development process figures in that relationship, gives rise to certain critical planning considerations. Among the numerous components and systems that must be considered during this process are: size, scale, height, and density of buildings and infrastructure; ecological considerations like flood zones and indigenous species; meteorological considerations like rainfall and high winds; the role of neighborhoods within the community; arrangement and mix of activities, land uses, developed versus open spaces and public versus private spaces; visual relationships among landmarks, streets, buildings, and other elements of the built form; presence, location, and vitality of community facilities and service centers; public transportation and pedestrian systems; the relationship among urban, suburban, and rural surroundings; and the cohesion of the region in which the community fits.

Envisioning the Sustainable Community

In Lewis Carroll's story Alice in Wonderland, Alice asks the Cheshire Cat, "Would you tell me, please, which way I ought to go from here?" The Cat answers "That depends a good deal on where you want to get to." "I don't much care where," replies Alice, only to be answered by the Cat: "Then it doesn't matter which way you go." "As long as I get somewhere," Alice added as an explanation. "Oh, you're sure to do that," said the Cat, "if you only walk long enough."

Most of America, like Alice, has known or cared little where it was going with regard to planning and development. Communities have gotten somewhere after walking, or rather driving, a long time. But "getting somewhere" is not good enough: it has, in many cases, been counterproductive and just plain bad planning. Communities need to clarify where they want to go. The clear formulation of goals and priorities is the key to sustainable success.

A sustainable community formulates goals that are rooted in a respect for both the natural environment and human nature and that call for the use of technology in an appropriate way to serve both of these resources. Without this important principle, failure is guaranteed, and with that principle go the fundamental characteristics of a sustainable community. This kind of community must, therefore, strive to achieve the following characteristics and goals:

Communities can be shaped by choice, or they can be shaped by chance. We can create the kind of community we want with a vision and a plan.

—Richard Moe, National Trust for Historic Preservation

Places a high value on quality of life. A sustainable community accepts that communities are first and foremost for people and that the primary objective of the planning and development process is to improve the quality of life of its residents, socially, economically, psychologically, and spiritually. It implements policies to achieve quality of life and does so in a fair, open, and democratic manner.

Respects the natural environment. A sustainable community recognizes its relationship to nature and sees nature's systems and components as essential to its well-being. It provides access to nature through city parks, open-space zones, and gardens. It understands the sensitive interface between the natural and built environment, develops in a way that will support and complement—not interfere with—nature, and avoids ecological disasters.

Optimizes key resources. A sustainable community takes an inventory of its human, natural, and economic resources and understands their finite quality. It ensures that forests are not overused, people are not underemployed, and the places of the built environment are not stagnant and empty. It reduces waste and reuses resources: it creates conditions in which all these resources can be used to their fullest and best potential, without harming or diminishing them.

Maintains scale and capacity. A sustainable community recognizes the importance of scale and capacity, with regard to the natural and human environment. It ensures that the environment is not overdeveloped, overbuilt, overused, or overpopulated. It recognizes the signs of tension that indicate when the environment is overstressed and can adjust its demands on the environment, to avoid pollution, natural disaster, and social disintegration.

Adopts a systems approach. A sustainable community understands that the natural and human environments make up a holistic system, comprising individual components that interrelate and affect the whole. Beaches are a part of coastal systems, families are a part of social networks, particulates and currents are a part of air systems, and bus routes are a part of transportation networks. It reviews and implements policies in light of these systems to maintain harmony and balance within the environment.

Is responsive and proactive. A sustainable community responds to changing community needs and can change or make new priorities. Whether by mitigating natural hazards, preventing crime, or attracting economic development, it does not simply react to circumstances or events but takes action to prevent threats to community well-being and to maximize good opportunities through the built environment.

Values diversity. A sustainable community understands that a cross section of the human and natural environment reveals one constant: diversity. Human diversity and biodiversity are essential to a thriving social dynamic and web of life. A sustainable community promotes and implements this truth through its policies regarding the built environment. It does not segregate or segment populations or elements of nature but integrates them into the fabric of the community.

Preserves heritage. A sustainable community values the indigenous and time-honored aspects of its culture and history. It understands that the built environment grows up through and around such traditions as the village green, the local church, the town library, and Main Street. It celebrates its past and considers it when making the changes necessary to modernize the community.



Implementing Sustainability: Goals

1. ECONOMIC VITALITY

The city's vision for economic vitality is based on contributing to the city's character and assuring that future development contributes to the city's financial base. Boyne City is committed to ensuring that all the components that contribute to the city's quality of life (affordable housing, natural environment, good schools, efficient government and excellent infrastructure) are available for residents and for future generations so that the city may continue to attract, retain and encourage growth of local businesses. Based on the city's Vision and Comprehensive Plan and Land Use Policies, the Economic Vitality Goals emphasize enhancement of the city's character, as well as its natural and built environment, all of which provide Boyne City with a unique advantage in attracting jobs and residents.

- Encourage efficient use of existing buildable lands, including vacant and redevelopable sites.
- Encourage mixed uses in designated areas.
- Encourage home occupations where their scale and character are compatible with the neighborhood.

- Ensure that land use policies and development regulations provide for a positive business climate, while protecting the environment and community quality of life.
- Provide adequate infrastructure to support economic development to meet projected growth, within constraints of local resources.
- Recognize our community as one part of a larger regional economy.
- Promote high-quality design for development.
- Ensure that the city is visually attractive to residents, visitors, and businesses.
- Provide for good schools, parks, transportation, civic buildings, and other services or amenities.
- Limit stress from noise, pollution, or traffic congestion.
- Foster a variety of businesses representing a range of services.

OVERARCHING GOAL: An economy that is competitive, diverse, and attractive to business; that maintains and expands assets and capital; that provides a variety of entry-, middle-, and high-level jobs; and that promotes the well-being of Boyne City's workforce.





2. EQUITY

Equity is one of the fundamental values that define the social component of sustainability as it is understood in the United States. Greater equity and access would not only benefit those who are now disadvantaged and underserved; it would benefit everyone in the community.

- Establish and enhance systems for generating feedback from citizens, staff and visitors about ongoing projects, violations and committees to formulate future strategies and plans.
- Identify practices or policies that may have negative impacts or create barriers for particular populations; develop coordinated strategies for addressing any issues identified.
- Broaden the concept of diversity to include services for nontraditional families in order to develop a more inclusive climate.
- Promote broader participation in community meetings and other open forums for citizens to discuss community issues.

OVERARCHING GOAL: A more equitable distribution of the positive benefits of living in Boyne City. This includes fair distribution of parks, trails, healthy environments, good healthcare, quality education, governmental decision-making, economic opportunity, and natural and cultural amenities. Encourage stakeholder collaboration and community participation rather than conflict.

3. RECREATION

Recreation goals must address the provision of facilities and activities for leisure time enjoyment by all members of the community. Both public and private resources are needed to provide a full range of recreational experiences. The community's overall health, wellness and quality of life are interrelated with the variety and availability of parks, open space and recreational opportunities that are accessible to all. Accessibility includes both physical and financial access to recreational facilities and activities. Recreation can serve to meet positive human needs and is one of the key factors in Boyne City's livability.

- Provide a safe parks and recreation system that continues to meet the community's needs for useable and accessible parks and open space.
- Maintain the existing high-quality, safe parks and recreation system.
- Identify the type of parks, park facilities and hike/bike trails lacking in the community.
- Identify funding sources for land acquisition and development.
- To promote and encourage the year 'round use of parks. A winter city design should be incorporated into park master plans.
- Enhance the visual attractiveness of the community and park system.
- Maintain all park areas in a manner that fosters community pride in the park system.
- The City of Boyne City should build, operate, and maintain a system of parks and recreational facilities that are distributed equally throughout the city.
- Develop and maintain public access to Lake Charlevoix through direct purchase and public/private partnerships.
- Build and maintain a system of public trails that provide recreational and mobility opportunities for residents.



- Provide opportunities for varied recreation activities and programs that are responsive to the needs of a wide range of Boyne City residents.
- Create and promote opportunities for private contributions and volunteerism in the acquisition, construction, operation, and maintenance of parks, trails, and recreation facilities.
- Continue to develop Veterans Park as the primary community park within the City of Boyne City. Improvements to Veterans Park shall be guided by the adopted version of the Waterfront Master Plan.
- Pursue opportunities to acquire properties adjacent to Lake Charlevoix as they become available.
- Focus on enhancing the natural qualities of the Riverside Park, in addition to expanding the trail and interpretation elements.
- Ensure that development adjacent to parks and recreation facilities is designed to minimize impacts on these parks and recreation areas and vice versa.
- Maximize where possible the retention of existing native vegetation in new parks while meeting the purpose of the park.
- Situate or buffer active play facilities in new parks and recreation facilities to protect the privacy of adjacent property.
- Design parks and recreation improvements to maximize sustainability through; the preservation of a site's natural systems, the use of recycled materials when possible, and the application of best management practices for the maintenance of land and facility improvements.
- Pursue opportunities to acquire and develop parks that take advantage of existing water views.
- Appropriately sign all parks. Signage may include interpretive and historical information.



- Developers shall be required to develop and dedicate trails in new development in accordance with the adopted parks, trails and recreation plans, and consistent with applicable city development standards.
- Route and design trails to maximize sustainability through the preservation of a site's natural systems, the use of recycled materials when possible, and the application of best management practices for the maintenance of land and facility improvements.
- Consider establishing an "Adopt-a-Park" or "Adopt-a-Trail" program to assist in the operation and maintenance of facilities.
- Foster "walkable," and "bikeable" close-knit neighborhoods.

OVERARCHING GOAL: Create or enhance within Boyne City a positive sense of local identity and individual belonging, which promotes respect among neighbors, increases everyone's feelings of safety and security, and provides abundant cultural and recreational opportunities.



4. GOOD GOVERNMENT

Local Government is set to play a key role in the sustainability effort. By looking out for the long term of the city and not short term is in a position of implementing a strategy of sustainability. As new facilities are needed the long term should be addressed, such as durability for the long run (less repairs), high energy efficiency (to keep costs down), walkability (can residents and employees easily access the new public facility). Access is important to encourage citizen input.

Good Government Goals:

- Preserve and enhance our environmental, economic and social realms to promote a sustainable Boyne City.
- Improved Customer Services—by positioning the city to provide the highest level of customer service to city residents and the community at large.
- Prepared Workforce—enable and support the development of a prepared and successful employee workforce that is aligned with organizational priorities.

- Fiscal Responsibility—optimize the streamlining of organizational processes to ensure quality services and fiscal responsibility.
- Expand Use of Technology—by capitalizing on technology to improve service and increase efficiency, ensuring public and employee safety, exercising appropriate environmental stewardship and providing greater information access.
- Strengthen Partnership—by building a strategic network of partnerships that aims at bettering community life, eliminating redundant services and stretching the value of the taxpayer's dollar.
- Recruit skilled workers for the future workforce. To work effectively and cost efficiently, we must recruit and retain the best workers the area has to offer.
- Give city employees the skills to do their jobs. The need for life-long learning and skill development is a common theme in modern business. It should apply to city workers as well.
- Hold workers accountable for their work. City employees need to know what to do and how to do it. Then they should be held accountable for their performance.

OVERARCHING GOAL: A system of governing that is efficient, effective, trustworthy, and responsible to citizens and their needs; and that actively promotes good citizenship and effective participation in decision-making.



5. DECENT HOUSING

Enhance Boyne City's vitality as a community at the center of the region's housing market by providing housing of different types, tenures, density, sizes, costs, and locations that accommodate the needs, preferences, and financial capabilities of current and future households.

A single-family home on a medium or large lot is not for everyone. Many people want other housing options, perhaps because they don't want to maintain a large home and property, are planning to move soon, can't afford a large home, don't need so much space, or want to be in a more walkable, urban environment.

The vast majority of residential neighborhoods in the county and the region are good places to live. Sometimes, however, neighborhoods do fall into disrepair. To stop decline of older housing before it happens, residential neighborhoods should be properly maintained and protected.

Integrated and well-designed neighborhoods provide usable open space, promote walking, create a sense of community, reduce the cost of services, and reduce travel time.

Decent Housing Goals:

- Provide a mix of land uses to create a variety of housing choices and opportunities.
- Create a range of housing opportunities and choices.
- Maintain and conserve existing homes and neighborhoods.
- Promote walkable and well-designed residential developments
- Encourage more units of affordable housing for residents.
- Support housing for people with special needs.
- Reduce the costs of infrastructure, such as overly wide roads.
- Enforce/create property maintenance and housing codes.
- Allow Granny-flats and "Tiny Homes" on owner occupied lots.

OVERARCHING GOAL: A variety of desirable housing options for all residents of Boyne City, at every income level.



6. HEALTHY PEOPLE

Pull together a group of neighbors and ask them, “What would our community look like if it were a really healthy place to live?” Chances are, their responses will not be focused strictly on health and health care. What makes a healthy community:

- A clean and safe environment.
- A diverse and vibrant economy.
- Good housing for all.
- People who respect and support each other.
- A place that promotes and celebrates its cultural and historical heritage.
- A place where citizens and government share power.
- A place that has affordable health care for all.
- A place that has good schools.
- A place that has and supports strong families.
- Plan parks and open space areas and recreational opportunities within neighborhoods.
- Provide a safe park and recreation system that continues to meet the community’s needs for useable and accessible park and open space.
- Create walkable neighborhoods.
- Create a bicycle friendly community.

GOAL: The highest opportunity for all residents and visitors to be healthy, with equal access to high-quality parks, trails, and other recreational infrastructure. All projects will be scrutinized for ways to minimize exposure to health risks.

7. EFFICIENT TRANSPORTATION AND LAND USE

When we require services or recreation, most of us have little choice but to drive. The lack of choice in transportation and land use is likely to be an increasing problem as the population ages and becomes less able to live in auto-dependent locations.

There are alternatives to continuing sprawling land use patterns and automobile dependence. Boyne City should maintain its traditional land use patterns, which mix housing, jobs, shopping, services, and other uses in the same areas and at higher densities, thus providing sufficient ridership for transit and allowing people to walk and bicycle to destinations. Make it a priority to decrease vehicle miles traveled per capita, increase transit use, bicycling and walking.



- Establish a “complete transportation” policy which includes sidewalks, streets and bike lanes when streets are reconstructed or developed/constructed.
- Integrate land use planning with infrastructure development.
- Encourage redevelopment of infill and “under invested” areas.
- Create a bikeway/sidewalk/greenway network that is an integral part of the transportation system and provides an alternative means of transportation and recreation.
- Develop a transportation system that respects and enhances the natural and built environment.
- Develop a long-range plan for the establishment of a rail system.
- Provide for the long-range aviation needs of the area by improving the efficiency, effectiveness and safety at the Boyne City Airport.
- Support an open, inclusive and participatory transportation planning process.
- Promote land use patterns and transit-oriented design standards that support walking, bicycling and public transit and reduce the number and length of automobile trips.
- Design streets that are safe, efficient and

effectively move vehicular traffic, accommodate pedestrians and bicyclists and have minimum negative environmental impacts.

- Fully support the efforts of the Charlevoix County Transit Authority.
- Improve the city Airport.

GOAL: A choice of efficient, convenient, safe, and affordable transportation and land use options, providing access to jobs, shopping, parks, city schools, the airport, and the waterfront. Provide a variety of transportation choices including pedestrian-friendly neighborhoods.

8. NATURAL RESOURCES AND ECOLOGICAL INTEGRITY

Boyne City has a great natural variety, from Lake Charlevoix to the hardwood uplands, wetlands, Boyne River and the Avalanche Preserve.

Unfortunately, much of our natural heritage has been damaged, some of it for centuries, as we have dumped waste on the land, the lake and in the wetlands, allowed human development to encroach on the habitat of other species, and spewed pollutants into our air and water. The residents of Boyne City have come to recognize the value of what we are losing. These actions will show economic payoffs, as the quality of our parks improves and property values rise with the cleaner environment.

People live in Boyne City and visit the city because of the Quality of Life we have here. That Quality of Life is directly attributable to the natural resource base that exists here. But as inappropriate development happens in wetlands, view corridors, and steep slopes we will lose forever what makes Boyne City special. Our beaches are also a significant resource, and have provided summer relaxation to people from all over the region for more than a century. While the wetlands were viewed largely as a barrier in the past, they are now recognized as



important breeding grounds for aquatic animals and water filtration systems for the Boyne River and Lake Charlevoix. We have allowed significant degradation of these resources over the past century, particularly in the last few decades. Many of the wetlands have been filled and destroyed, losing all of the economic and societal benefits that come from them.

OVERARCHING GOAL: Maintain a unique sense of place by respecting local cultural and natural environmental features.

- Preserve open space, natural beauty, and critical environmental areas.
- Plan for green infrastructure, including greenways and corridors connecting larger preserved areas.

9. MINIMAL POLLUTION AND WASTE

City government will need to lead our community by example. We need to be dedicated to waste reduction and environmental sustainability through our own operations. The city is in a much better position to educate and encourage their residents and businesses to practice waste reduction strategies everyday. For decades Boyne City had a reputation as an industrial city. Today that has changed and we now have the opportunity to be a leader in environmental protection.

GOAL: Minimize the generation and accumulation of pollution and waste; maximize the use of efficient, clean, and sustainable energy sources; and increase consumer choices for ecologically friendly products.



Social and Economic Conditions



Dear Mr. Reed,
I wish Boyne City had a dinosaur
museum.

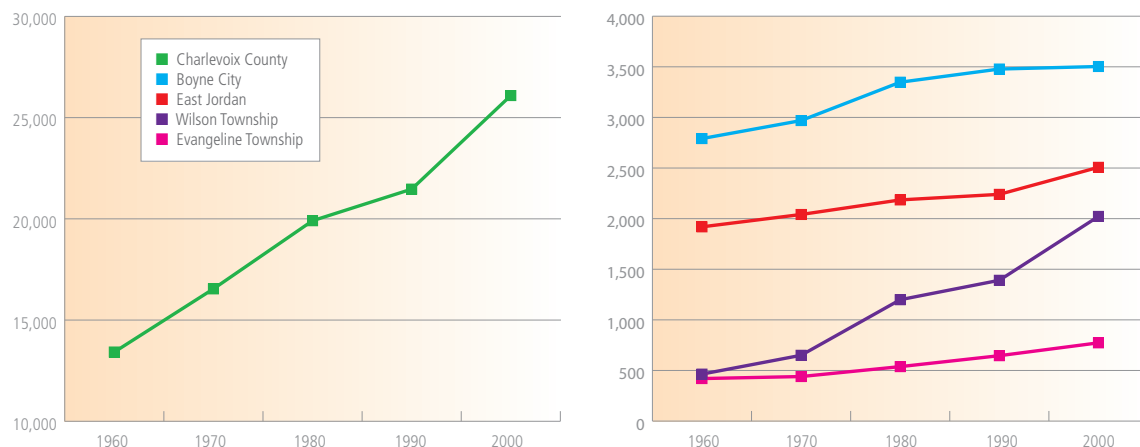
Tate
First Grade
Boyne City Elementary

Population

The 2000 Census showed that Charlevoix County had a population of 26,090. Similar to other counties in the region, Charlevoix County has continued to experience strong growth over the past four decades (Figure 1). From 1960 to 2000 the county population has almost doubled from 13,421 to 26,090. Of the 12,669 persons that were added over the last 40 years, the largest increase was over the last decade. From 1990 to 2000 the county population increased by 4,622 for a population increase of 21 percent. While this population increase was the largest influx of persons into the county over the past century, only 0.5 percent of the increase was attributable to additional persons in the City of Boyne City.

The City of Boyne City has maintained relatively slow growth over the past 70 years. Since 1960 the city has increased by 25 percent (706 persons). The largest increase for the city during this time was between 1970 and 1980 when the city grew by 13 percent (379 persons) While the county had the largest increase in population over the last decade the city grew by less than 1 percent (25 persons).

FIGURE 1: POPULATION 1960-2000



While population in Boyne City has remained relatively constant the city has experienced increased pressures on city infrastructure and services due to the growth of the surrounding municipalities. Since 1990, the total population of the four townships adjacent to Boyne City increased by 30.2 percent (1,613 persons). Of these townships, Wilson and Eveline had the fastest growth at 45.5 percent (631 persons) and 41.8 percent (460 persons), respectively. Figure 2 shows the percentage of population change from 1990 to 2000 of mainland Charlevoix County municipalities.

Seasonal Population

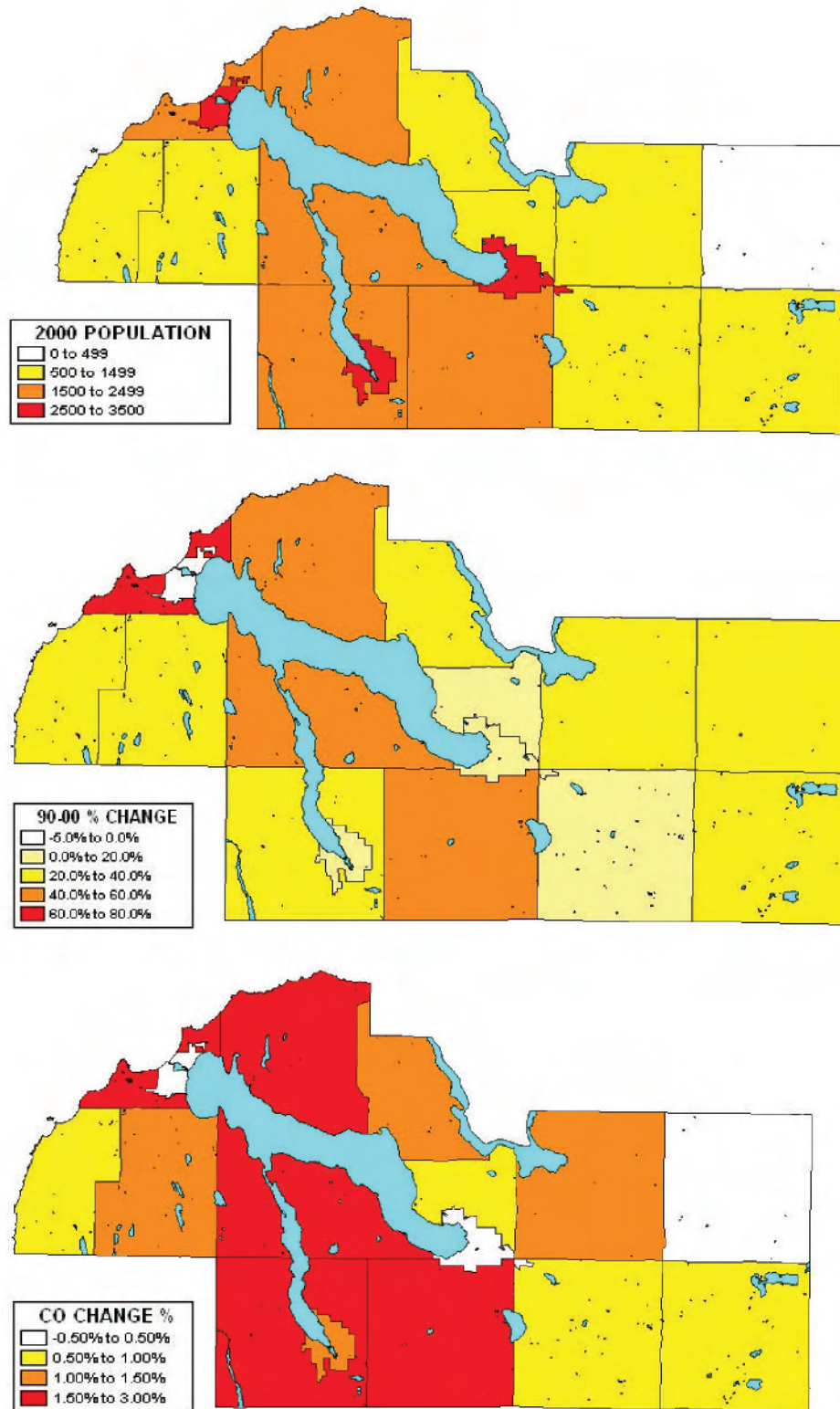
Obtaining accurate numbers of seasonal residents and tourists is difficult. Because the U.S. Census is conducted each decade in April, the numbers only reflect those persons who live in the county on a year 'round basis.

In 2000 the Census demonstrated that 28 percent of the housing units in the county were seasonal and 20 percent of the units in the city were seasonal.

A rough estimate of the number of seasonal residents can be calculated by multiplying the number of seasonal housing units by the average number of persons per household. Using this method a county seasonal population increase of 10,889 persons is estimated and for the city of Boyne City an additional 902 persons are estimated. Seasonal residents, therefore, added another 41 percent to the county's population for a total of 36,979 persons and increased the city population by almost 26 percent to 4,405 persons. This figure does not include those seasonal visitors or tourists staying in area motels, campgrounds or family homes.



FIGURE 2: CHARLEVOIX COUNTY POPULATION CHANGE



Age Distribution

2000 Census data shows that 42.1 percent of Charlevoix County's population was 45 years old or older, a 5.5 percent increase since 1990 (Table 1). The breakdown of the county's population by age grouping shows a significant shift in the 25-44 and the 45-64 age groups from 1990 to 2000. The percentage of those in the 45-64 age group grew by 3.4 percent while the 25-44 age group declined by 3.8 percent. Since the total population increased by 709 persons between 1990 and 2000 and the population of people over 45 grew by 1,944 persons during the same time period, the shift towards an older population is most likely due to the existing residents getting older.

TABLE 1: POPULATION BY AGE FOR CHARLEVOIX COUNTY AND BOYNE CITY

Age	# Charlevoix County	%	# Boyne City	%
Under 5	1,691	6.5%	228	6.5%
5-17	5,072	19.4%	696	19.8%
18-24	1,688	6.5%	260	7.4%
25-44	7159	27.4%	998	28.5%
45-64	6586	25.2%	769	22.0%
65+	3,894	14.9%	552	15.8%
Median Age	39.1		37.9	

Source: U.S. Census Bureau

Disability Status

Data shown on Table 2, gives an indication of how many disabled people reside in Charlevoix County and Boyne City. A person was classified as having a disability if they had a sensory disability, physical disability, mental disability, self-care disability, going outside the home disability or an employment disability.

TABLE 2: DISABILITY STATUS BOYNE CITY AND CHARLEVOIX COUNTY - 2000

Local Units	Disabled persons 5-20	% disabled 5-20	Disabled persons 21-64	% disabled 21-64	% of disabled 21-64 employed	Disabled persons 65+	% disabled 65+
Boyne City	42	5.5%	286	15.1%	47.2%	243	44.2%
Charlevoix Co.	501	8.5%	2,546	17.6%	60.5%	1,497	40.1%

*Disability of civilian non-institutionalized persons.

Source: U.S. Census Bureau



Race and Ethnic Composition

Information found below on Table 3 shows that the county and the city have had a very small minority population and that situation has changed relatively little over the last 10 years. From 1990 to 2000, the minority population in Charlevoix County increased from 2 to 3.5 percent. Probably the biggest factor in the increase was that the 2000 Census was the first time respondents were given the opportunity to choose more than one race category. This new designation was responsible for 34 percent of the total minority population. The growth in the minority population does not appear to represent an influx of new residents, but is more likely due to those who previously classified themselves as white selecting two or more races in the 2000 Census.

TABLE 3: POPULATION BY RACE AND HISPANIC ORIGIN FOR 2000

	Charlevoix County		Boyne City	
	#	% of Total Pop	#	% of Total Pop
Total	26,090	100	3,503	100
White	25,128	96.3	3,395	96.9
Black	45	0.2	4	0.1
Am. Indian	403	1.5	40	1.1
Asian	59	0.2	6	0.2
Other Race	104	0.4	14	0.4
Two or More Races*	312	1.2	42	1.2
Hispanic or Latino Origin**	272	1.0	26	0.7
Total Minority***	923	3.5	106	3.0

* Census 2000 gave respondents the opportunity to choose more than one race category.

** Persons of Hispanic or Latino Origin may be of any race.

*** Excludes Hispanic or Latino Origin

Source: U.S. Census Bureau

The largest numbers of disabled persons in the county were between the ages of 20 - 64 (3,511), and of the people in this group, 45.3 percent were employed. This compares with employment of 77.7 percent of people with no disability. The 65 and over age group had the highest percentage of persons with disability with almost one out of every two having some type of disability (45.5%).

Educational Attainment

Since 1990 Boyne City has made noteworthy increases in educational attainment as shown by Table 4. The number of people who were 25 and older who had a high school diploma or higher increased from 75.8 percent to 87.4 percent with many more people obtaining some type of college degree. The number of persons that obtained Associate degrees increased by 134 percent and the number of persons obtain a Bachelors degree or a graduate degree increased by 60 percent and 86 percent, respectively.

Other encouraging news shown by the 2000 Census was the marked decrease in the numbers of persons who only completed 9th to 12th grade and had no diploma and those who had less than a 9th grade education. Respectively, these groups had 63 percent and 36 percent decreases.

TABLE 4: BOYNE CITY EDUCATIONAL ATTAINMENT 1990 & 2000

Degree	1990		2000	
	Number	Percent	Number	Percent
Less than 9th grade	238	10.6%	89	3.9%
9th to 12th no Diploma	306	13.6%	197	8.7%
High School Diploma	857	38.1%	853	37.5%
Some college no degree	482	21.5%	457	20.1%
Associates	103	4.6%	241	10.6%
Bachelors	194	8.6%	311	13.7%
Graduate or Professional	67	3.0%	125	5.5%

Source: U.S. Census Bureau



Income and Poverty

Income and poverty statistics for Boyne City and Charlevoix County show that although the median income in the city has increased by 30 percent, it is still considerably lower than the state. The gap has narrowed somewhat from 29 percent less in 1990 to 18 percent less in 2000 (Table 5).

TABLE 5: MEDIAN FAMILY INCOME FOR BOYNE CITY AND CHARLEVOIX COUNTY: 1990 & 2000

Year	Boyne City	Charlevoix Co.	State
1990	\$33,795*	\$38,427*	\$47,569*
1999	\$44,096	\$46,260	\$53,457

*In 1999 dollars

Source: U.S. Bureau of the Census

From 1990 to 2000 the poverty rate in Boyne City dropped by 10 percent for families with children and by 19.6 percent for individuals (Table 6). The poverty rate for families with a female householder with no husband present increased by 18.4 percent

TABLE 6: POVERTY STATUS FOR BOYNE CITY: 1990 & 2000

Category	1990		2000	
	Number	Percent	Number	Percent
Families	93	9.8	81	8.9
Families with no husband	38	21.6	45	26.8
Individuals	506	14.6	407	11.8

Source: U.S. Census Bureau

Poverty characteristics in Table 7 show that the economic distress in two sub-groupings, female-headed households with dependent children and the elderly.

TABLE 7: POVERTY RATES FOR BOYNE CITY AND CHARLEVOIX COUNTY: 1990 & 2000

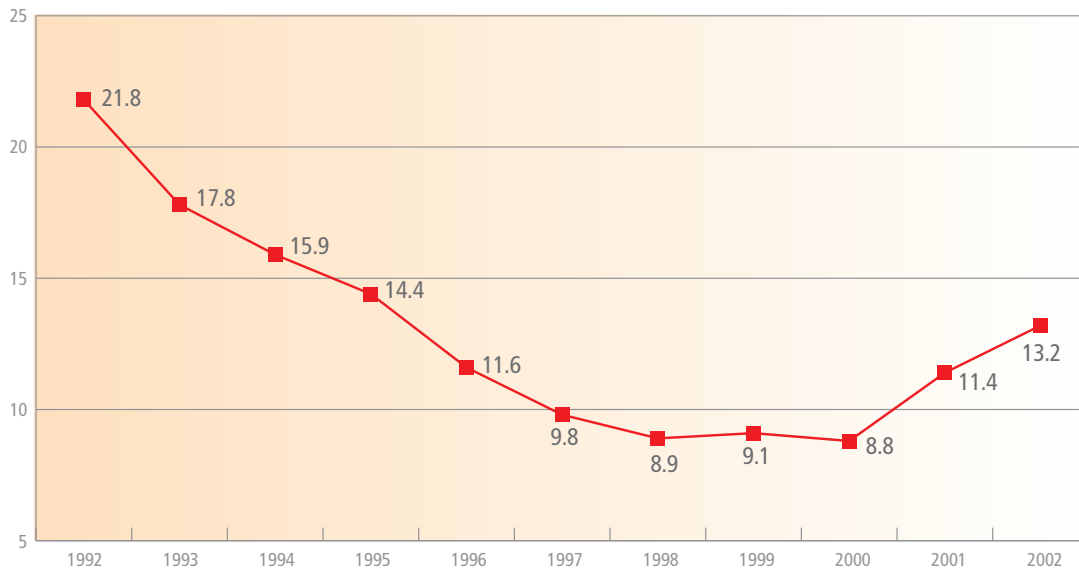
	Females With Children < 18 Below Poverty					Age 65 and Over Below Poverty				
	1990		2000		% Change	1990		2000		% Change
Municipality	#	%	#	%		#	%	#	%	
Boyne City	38	33.0%	45	26.8%	+18.4%	62	10.9%	37	6.7	-40.3%
Charlevoix Co.	174	37.7%	163	25.6%	-6.3%	378	12.7%	222	5.9%	-41.3%

Source: U.S. Census Bureau

Employment and Unemployment

Boyne City's economy has improved significantly in the last decade. Figure 3 shows that the county's unemployment rate has fallen over 8 points from since 1992. The unemployment rate peaked in 1992 at 21.8 percent and gradually over the next 8 years fell to a low of 8.8 percent (2000 annual average). Similar to the state and national employment trends, the unemployment rate has increased several points since 2000 but is still significantly better than 10 years ago.

FIGURE 3: BOYNE CITY UNEMPLOYMENT RATE: 1992-2002



Source: Michigan Department of Career Development Employment Service Agency Office of Labor Market Information - LAUS Data



Housing Characteristics

Housing characteristics for Boyne City and Charlevoix County are found in Table 8.

TABLE 8: BOYNE CITY AND CHARLEVOIX COUNTY HOUSING CHARACTERISTICS 2000

Municipality	Total Housing Units	Total Occupied Housing Units	% Owner Occupied	% Renter Occupied	Total Vacant Housing Units	% Seasonal*	% Vacant Owner	% Vacant Renter
Boyne City	1,935	1,468	75.6%	24.4%	467	19.6%	0.5%	7.5%
Charlevoix Co.	15,370	10,400	81.1%	18.9%	4,970	28.6%	1.3%	6.7%

*Figure shows the seasonal housing units as a percentage of the unit's total housing units.

Source: U.S. Census Bureau

As shown by the 2000 Census, the City of Boyne City has a significant number of seasonal residents as nearly 20 percent of the total housing units in the city are seasonal units. In comparison, 5.5 percent of the housing units in the City of East Jordan are designated as seasonal whereas 30.7 percent of the housing units in the City of Charlevoix are seasonal.

Table 9 shows the age of the housing units in the City of Boyne City. Generally speaking, the older a housing unit is the more likely it is to be in need of rehabilitation. As a rule of thumb, any housing unit that is older than 50 years may be in need of at least some rehabilitation, if not a great deal of renovation. Data from the 2000 Census indicates that 37.8 percent of the homes in the city were constructed prior to 1960. While many of the older homes in the city are beautiful, historic and well kept homes, several are in need of repair and renovation.

TABLE 9: BOYNE CITY AGE OF HOUSING STOCK

Year Structure Built	1939 or Earlier	1940-1959	1960-1969	1970-1979	1980-1989	1990-2000
Number	506	226	276	314	262	354
Percent	26.1%	11.7%	14.2%	16.2%	13.5%	18.2%

Source: U.S. Census Bureau

The percentage of household income spent on housing costs is often looked at in order to measure the possible need for additional affordable housing stock. Data found in Table 10 shows the percentage of household income spent on owner occupied housing in the City of Boyne City.

TABLE 10: BOYNE CITY HOME OWNERSHIP COSTS AS PERCENTAGE OF HOUSEHOLD INCOME

	<15%	15-19.9%	20-24.9%	25-29.9%	30-34.9%	>35%
Number of Units	377	187	157	97	34	99
Percent of Total	39.1%	19.4%	16.3%	10.1%	3.5%	10.3%

Source: U.S. Census Bureau

TABLE 11: STATISTICAL COMPARISONS

People	Boyne City	United States
Population	3,332	293,635,400
Pop. Density	887.1	80
Pop. Change	-3.17%	5.88%
Median Age	38.2	37.6
Household Size	2.32	2.58
Race		
White	98.01%	77.53%
Black	0.00%	12.35%
Asian	0.17%	3.58%
American Indian	1.38%	0.89%
Other	0.44%	5.65%
Hispanic	0.68%	12.73%
Family		
Married, w/children	22.90%	27.90%
Married, no children	27.79%	31.04%
Single, w/children	9.21%	9.43%
Single, no children	4.74%	30.05%
Divorced	15.59%	7.64%
Separated	0.84%	2.82%
Widowed	6.48%	7.42%
Now Married	55.08%	57.73%
Never Married	22.01%	24.39%
Cost of Living		
Overall	87.6	100
Food	103	100
Housing	60.5	100
Utilities	90.1	100
Health	95.8	100
Transportation	110.4	100
Miscellaneous	105.3	100



Managing Our Land



Dear City Planners,

I've noticed that around the Boyne City that there's a lot of trash including in ponds, lakes, streams and rivers. So maybe we should put a little sign and say no littering. I think that there should be some more recycling more garbage cans in the park. And can there be a little more gardens in other schools?

Sincerely,
Alina M. Droll
4th Grade
Boyne City Elementary

This plan envisions Boyne City as a city where...

... the **downtown** is a distinctly urban place serving as the core of the community's educational, economic and cultural center. Downtown Boyne City is a high density, mixed-use growth center that has blended the need for concentrated and efficient development with a respect for the city's architectural heritage and natural environment. Vacant and underutilized land and buildings have been adaptively reused for housing, shops and offices. An integrated system of regional and local public transit, bicycle routes, and pedestrian paths are increasingly competitive with individual automobiles as the preferred mode of travel, thus reducing the need for single-passenger automobiles. Downtown Boyne City is also a neighborhood-offering housing for a range of income levels and household types, everyday services and employment opportunities.

... **Lake Charlevoix and the Boyne River**, are protected and cherished as valuable natural and economic assets of the community. The downtown waterfront offers a dynamic mix of year-round recreational, cultural, commercial, and residential uses, and is physically and architecturally integrated into the downtown and surrounding neighborhoods. Commercial development on the waterfront complements and enhances other commercial districts in the city. Public access and circulation is provided by an integrated system of regional and local public transit, ferries and shuttles, bicycle routes, and pedestrian paths. The shorelines outside of the downtown and along the river have a network of protected conserved lands including natural areas offering habitat and travel corridors for wildlife, trails and bike paths for passive recreation and agriculture. The ecology and natural and cultural history of the shoreline are protected and interpreted for the public. The city's unique **natural systems and open spaces** are identified and protected through a combination of public acquisition, stewardship, and creative site planning, and function as vital components of the city's infrastructure and economy.

By nearly every definition, Boyne City is a city, however, at a smaller, Michigan scale. Boyne City has modest buildings; most remain under three to four stories; an important airport and public transit; schools, offices, restaurants, hotels, banks and shops—yet still only around 3,500 residents. Boyne City is also, in many ways, a traditional Michigan village in both form and function. The City is compact and serves as a central place of commerce, housing, education, industry and government. People know local shop owners, and often encounter family and friends throughout their daily travels. This description as both city and village is the essence of what makes Boyne City such an attractive place to live, work and visit.

Boyne City exemplifies the metaphor of the “urban village” - “a shorthand way of describing the *feel* we want from our cities.” It is not so much a location, but the *feeling* of a place—its personality. Urban villages aren’t built—they evolve.

Boyne City’s character and sense of place is widely celebrated - both locally and statewide. The city’s character has evolved over time by respecting historical development patterns and architecture; cultivating “community” in our neighborhoods; protecting valuable natural, historic and recreational resources; developing lively cultural events, resources and activities; and putting the needs of City residents above the desires of visitors. However, as Boyne City has continued to evolve, we must meet the challenges of accommodating future populations without destroying our character.

Nurturing Boyne City’s human scale, social character, and sense of place while encouraging future growth and development is the primary objective of the City through the implementation of this Plan.

Imagine, for a moment, our remaining unbuilt landscapes and rural community character “gradually disappearing under the blanket of conventional development.” We value our unique landscapes too much to allow them to be “cleared, graded, and converted to standard subdivisions” and generally uninspired development. In pursuing the longterm goals expressed in our vision for Boyne City’s future, we have an ethical obligation to the land. This obligation, or “land ethic,” applies to everyone—not just to the government or to nonprofit organizations, but to private landowners as well.

Aldo Leopold tells us:

Whatever may be the equation for men and land, it is improbable that we as yet know all its terms. The answer, if there is any, seems to be in a land ethic, or some other force which assigns more obligation to the private landowner. The land ethic simply enlarges the boundaries of the community to include soils, waters, plants and animals, or collectively: the land.

A land ethic, then, reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of the land. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserve this capacity. It is inconceivable to me that an ethical relation to land can exist without love, and a high regard for its value. By value, I of course mean something far broader than mere economic value; I mean value in the philosophical sense.

A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.



Growth Areas

Boyne City expects, and welcomes, continued growth and development over the next several years—primarily in the form of infill, adaptive re-use and redevelopment. In an effort to facilitate future growth, and to continue to encourage urban densities and use patterns, the City will seek to concentrate future higher-density development activity primarily into the downtown core, existing traditional neighborhoods and M-75.

However, “downtown” Boyne City must also serve as a residential area. The City is working hard to encourage additional housing downtown in order to bring people closer to places of work and shopping. Adding housing makes more efficient use of space and public facilities, lessens the need for automobiles and parking, and adds vitality and an improved level of security in the evening. Downtown housing must accommodate (in both affordability and type) all income groups in order to ensure a diversity of residents.

The City will continue to attract and support a range of retail and office development in the downtown—diverse in both type and scale. Our priority is to serve the needs and interests of Boyne City residents, and we must take care not to make the downtown an exclusive attraction for tourists and visitors. Community-oriented shopping and services (i.e. general merchandise, grocery, pharmacy, hardware, post office, daycare, etc.) must be available to meet the needs of the people who work and live here. Boyne City’s downtown should also include a successful arts and entertainment venue. Opportunities for growth and expansion of this sector are seen as an important downtown development strategy that should benefit all residents. Finally, parking



continues to challenge the vision for additional development downtown, and the City will continue to encourage creative solutions. Examples include placing parking within structures that include street-front retail or office space, or underground whenever the topography of the site makes it advantageous.

The Downtown must remain an active and attractive place to visit, live, shop and work. Key elements for future downtown development include:

- Buildings that provide a mix of uses including housing on upper floors and higher activity uses on the ground floor which liven the street;
- Target areas for future public parking developed in collaboration with private development;
- Creation of a transportation management association to coordinate and collaborate on transportation demand management programs and initiatives;
- Housing opportunities of mixed types and for mixed incomes;
- Adaptive reuse of historic buildings and redevelopment of underutilized sites;
- Development patterns and densities that favor public transportation and an excellent transportation system that serves residents, businesses and cultural facilities by frequent, accessible and comfortable service;

- Pedestrian and bicycle routes throughout the area and into adjoining neighborhoods including well-marked and convenient pedestrian crossings and wide sidewalks; and,
- Amenities including pocket parks, street trees, flower boxes, street furniture, public art, bike parking, bus shelters, etc.

Downtown Waterfront

Since the mid 1800's, Boyne City's harbor and downtown waterfront have been an important commercial, scenic and recreational attraction, and community resource. The Lake Charlevoix waterfront is the city's premier gateway, and an asset that cannot be duplicated or replaced.

The waterfront is a public resource, and the public's use and enjoyment of this resource is the City's highest concern. Direct access by the public to the water is encouraged to the greatest extent possible. Circulation patterns in this area must emphasize access for pedestrians, bikes and public transit, and include strong linkages into adjacent neighborhoods. The continued use of precious waterfront land for surface parking is strongly discouraged. In May of 2006, the City adopted the *Waterfront Master Plan* for the City's Waterfront which further outlines Boyne City's desires for the Waterfront.

Land Use Classifications

RESIDENTIAL

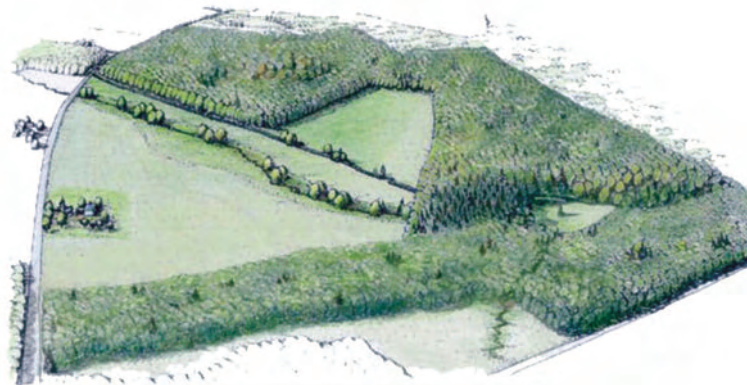
Large Lot Residential—The principal purpose of the Large Lot Residential zone is to provide land in the community for a rural residential type of lifestyle yet still be in the City. This lifestyle is one of a full range of lifestyles offered in Boyne City. In addition to single-family houses, this category also provides for parks, day care, civic and institutional uses, such as churches.

Residential Open-Space—Open space/cluster provision is a means of varying the usual pattern of development. Known under a variety of names—open space development, clustering or cluster development, conservation development, open space zoning or rural clustering—this option is a technique that encourages grouping homes in those areas of a development site that are best suited for development. Large parts of a site are permanently protected open space, protected by a restoration covenant or deeded to a non-profit land trust or the City.

Advantages:

- Provides opportunities for creative, quality design and preservation of open space.
- Creates larger areas of open space rather than just lot-by-lot development.
- Preserves natural features, advances environmental protection, improves drainage, and provides for better housing sites.
- Allows greater administrative discretion and negotiation between the developer and community.
- Reduces development costs by maintaining overall residential density developed over a smaller area.

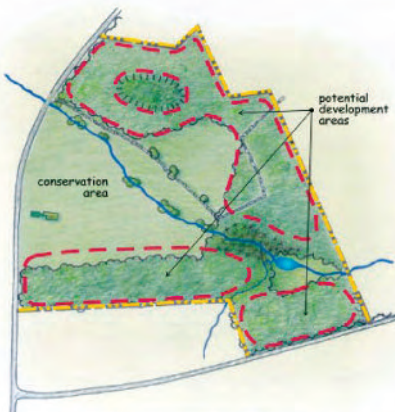
It should also be noted that the benefits of open space design can be amplified when it is combined with other better site design techniques such as narrow streets, open channels and alternative turnarounds



Site before development.



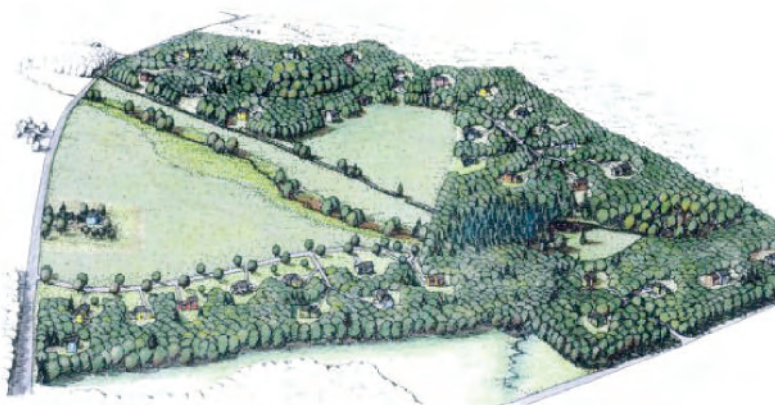
Identifying primary conservation areas.



Identifying potential development areas.



Identifying secondary conservation areas.



Site with conservation design.

Traditional Neighborhood District—The Traditional Neighborhood District promotes the creation and restoration of diverse, walkable, compact, vibrant, neighborhoods.

The Traditional Residential category builds upon the historic single-family residential pattern that is reflected in Boyne City's existing neighborhoods. Its purpose is to create identifiable, well-organized, neighborhoods that are interconnected with each other to form a community. "Traditional" neighborhood development areas are intended to encourage a variety of housing types and prices. While anticipated to contain primarily single-family detached housing, some attached housing units may be considered.

1. Walkability—Pedestrian friendly street design (buildings close to street; porches, windows & doors; tree-lined streets; on street parking; hidden parking lots; garages to the rear; narrow, slow speed streets).
2. Connectivity—Interconnected street grid network disperses traffic & eases walking. A hierarchy of narrow streets, boulevards, and alleys. High quality pedestrian network and public realm makes walking pleasurable.
3. Mixed Housing—A range of types, sizes and prices in closer proximity.



Apartment Communities will be architecturally pleasing and neighborhood oriented.

4. Quality Architecture & Urban Design—Emphasis on beauty, aesthetics, human comfort, and creating a sense of place; Special placement of civic uses and sites within community.
5. Smart Transportation—Pedestrian-friendly design that encourages a greater use of bicycles, rollerblades, scooters, and walking as daily transportation.
6. Sustainability—Minimal environmental impact of development and its operations. Eco-friendly technologies, respect for ecology and value of natural systems.
Energy efficiency.
Less use of finite fuels.
More local production.
More walking, less driving.
7. Quality of Life—Taken together these add up to a high quality of life well worth living, and create places that enrich, uplift, and inspire the human spirit.

Multiple Family—The Multiple Family District should be part of the surrounding community, not separate from. The architecture should be "community" oriented. Parking should be well screened. The main goal here is to offer a high quality of life for the residents.



Solid institutional walls should be avoided.



Neighborhood Commercial—This Plan introduces the concept of the “Neighborhood Commercial District” (NCD) to encourage small-scale commercial and mixed-use development in convenient neighborhood locations.

The purpose of the Neighborhood Commercial District is to provide for the establishment of local centers for convenient retail or service outlets which deal directly with the customer for whom the goods or services are furnished. These centers are to provide services and goods primarily for the surrounding neighborhoods and are not intended to draw customers from the entire region. Emphasis should be placed on convenience and pedestrian and bicycle access. The center should be designed to eliminate any nuisance or incompatibility with surrounding land uses.

The Neighborhood Commercial corner store should be on a “corner” except in rare circumstances.

If they are to be successful, they must be within walking distance of nearby residents. They also need to be designed and scaled to serve the surrounding neighborhood; therefore, a “one size fits all” approach to density or uses may not be appropriate. Each site will be evaluated for its ability to serve such a function, and appropriate zoning changes will be developed on a case-by-case basis.



Industry—This classification provides for freestanding sites and campus/complex development accommodating flexible uses of space. Uses include research and development activities, light industrial uses, office uses, high-tech uses, and distribution uses.

Community Recreation—This classification is for improved and unimproved park facilities, including neighborhood, community, and Greenway/Bikeway/Pedestrian Links. This classification covers those areas provided as part of a larger use, in between uses, or along transportation routes that serve to connect parks, recreation, and open space into a unified network of facilities.



COMMUNITY SERVICE

Boyer City's schools and public services areas play an important role in the city's economy and overall vitality. Not only do they provide valuable jobs in the city, they serve educational, recreational, government needs of the area, attract new and expanded business to the region, and broaden cultural opportunities within the city. In order to compete in their respective missions, they must continue to change and grow over time. Some Community Service areas may pose impacts on adjoining

residential neighborhoods. Issues such as noise, parking, traffic, housing costs and neighborhood character are of concern. Certain services that are critical to the operation of the city such as snow plowing, storage of salt, composting and waste disposal should be heavily buffered from surrounding residential areas by the city. These areas include areas that the City of Boyer City encouraged residential development near city owned sites without creating robust buffers. (see map)





PROFESSIONAL OFFICE

Office development in Boyne City will fit into the surroundings and be built to the same bulk and outward appearance. The predominate building material shall be brick and masonry. Boyne City will ensure that compatibility between the Office area development and surrounding neighborhoods is buffered and that performance standards are set to minimize harmful effects of excessive noise, light, glare, and other adverse environmental impacts.

HISTORICAL GATEWAY MIXED USE DISTRICT

This land use category is intended to encourage commercial uses, small-scale retail shopping, entertainment uses, convenience stores, office, and personal and business service uses. Residences may be located on upper floors of commercial buildings. Building heights should generally not exceed three stories, except where it can be demonstrated that additional height will not alter the historic character of the downtown. Brick, stone and masonry will be the primary building materials in this district to give a sense of permanence.

MARINA

The marina areas along Boyne City's waterfront play an important role in the economic, recreation and transportation needs of the city. In the future these areas may play an increasing role in bulk transportation and passenger travel much as it did in the past.

SENIOR CAMPUS

Land dedicated and owned by the Boyne City Housing Commission to be developed into a full-service senior community with a range of housing types and services.



MEDICAL

Land dedicated to the advancement of the medical arts. The Medical Zone will provide Boyne City residents with medical and related services in town without have to travel to Charlevoix , Petoskey or other areas for care.

DOWNTOWN CORE

The downtown and historic core is the focal point of Boyne City with retail, office, residential, and public uses, supported by a transportation system that creates a pedestrian-friendly atmosphere, provides improved access for local businesses and enhances the streetscape.

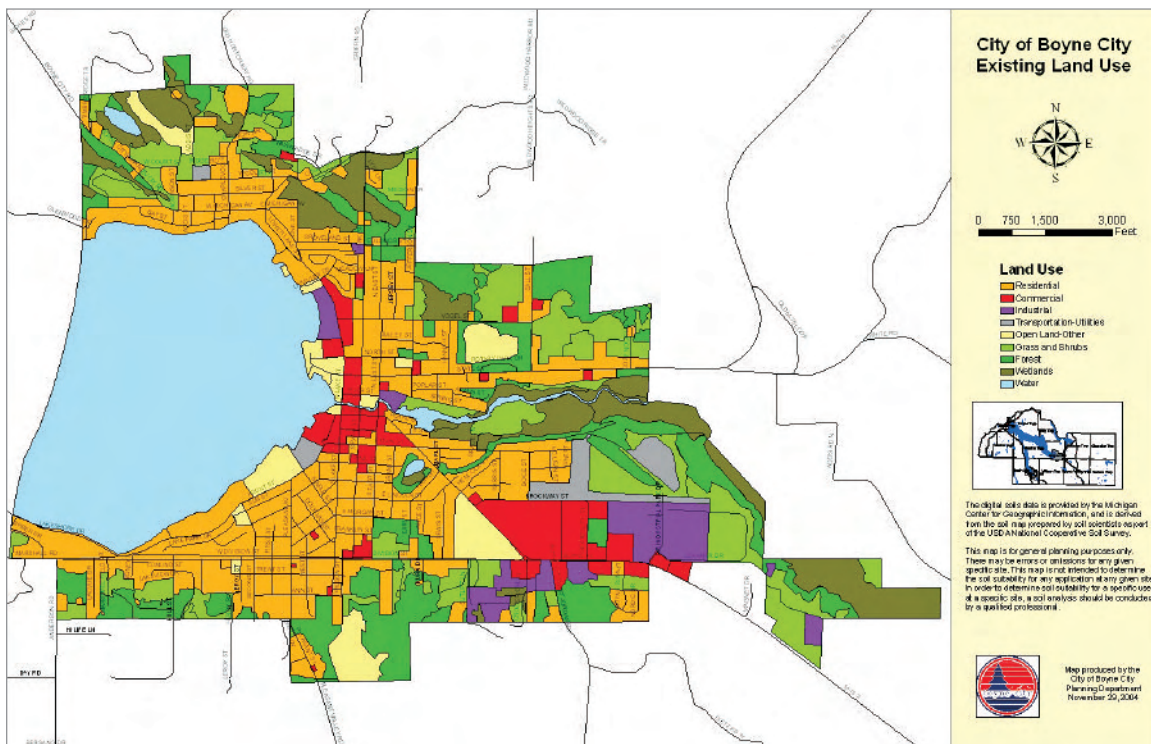
This plan promotes mixed-use development in the Downtown Core to reinforce the unique identity and attractive pedestrian environment.

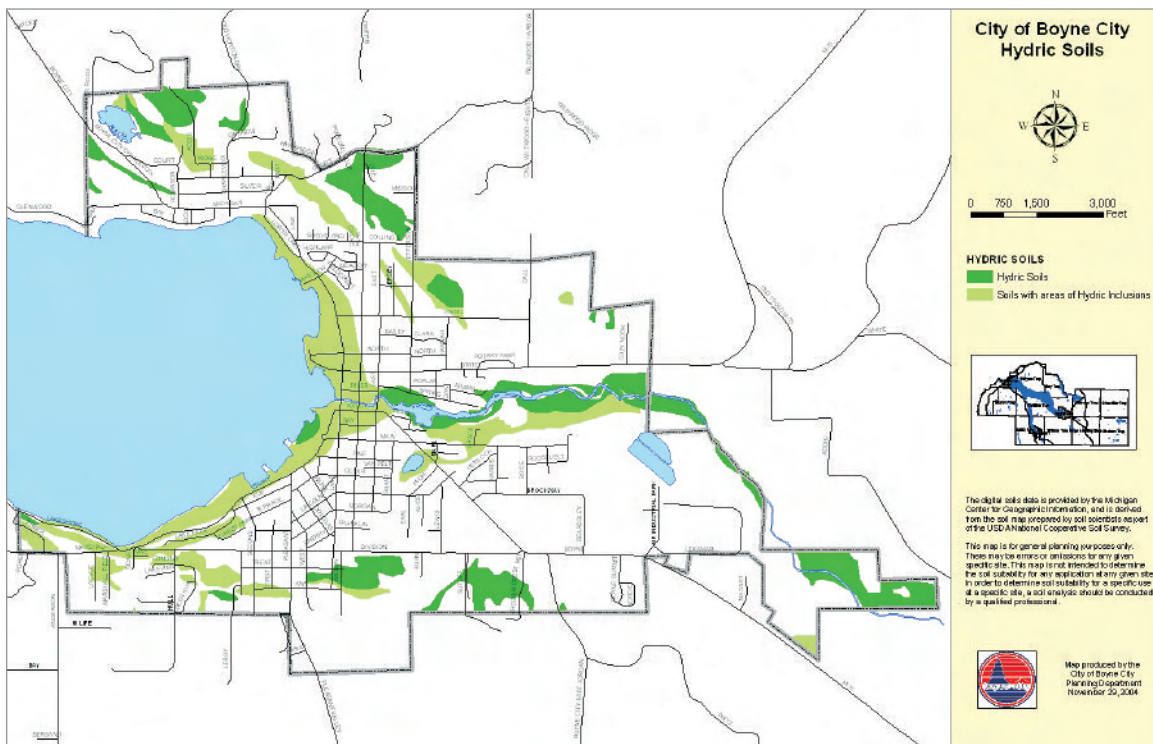
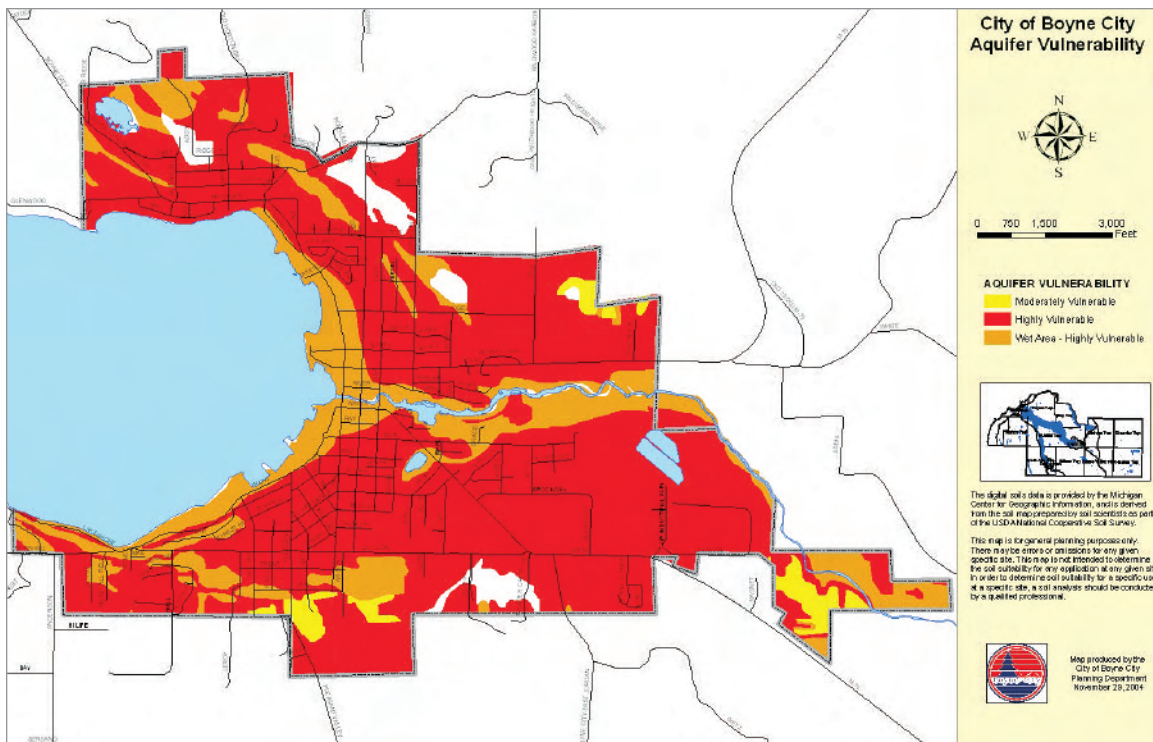
GENERAL COMMERCIAL

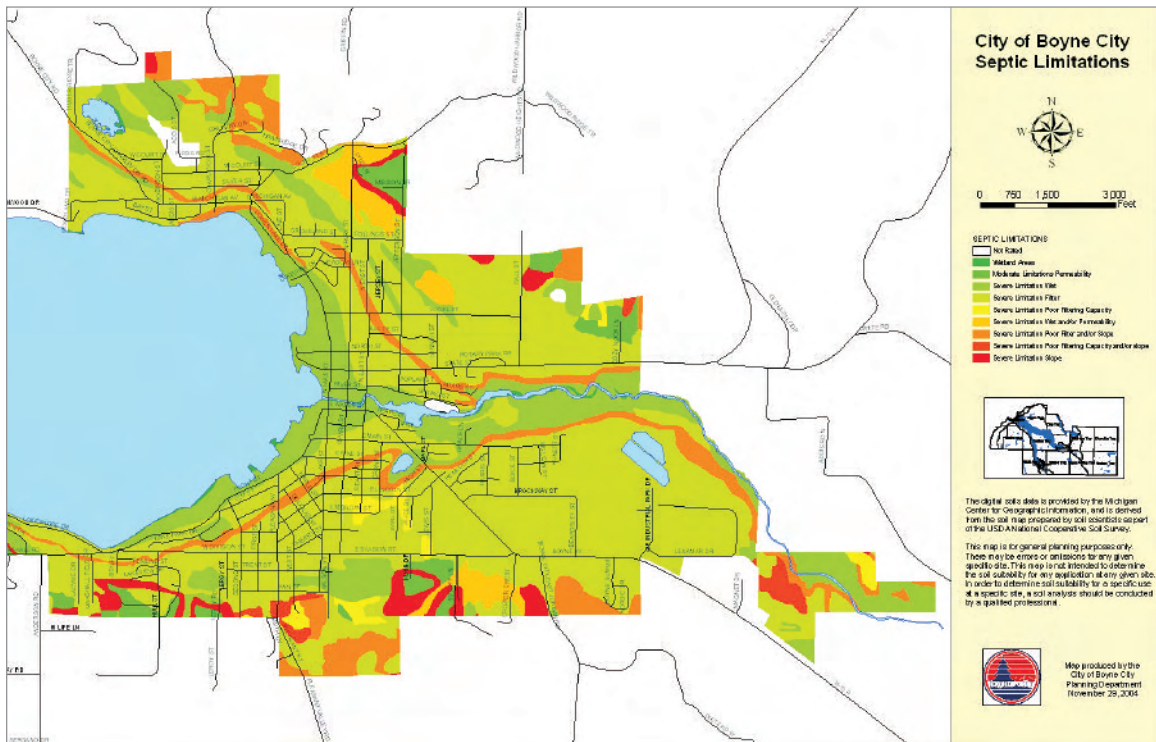
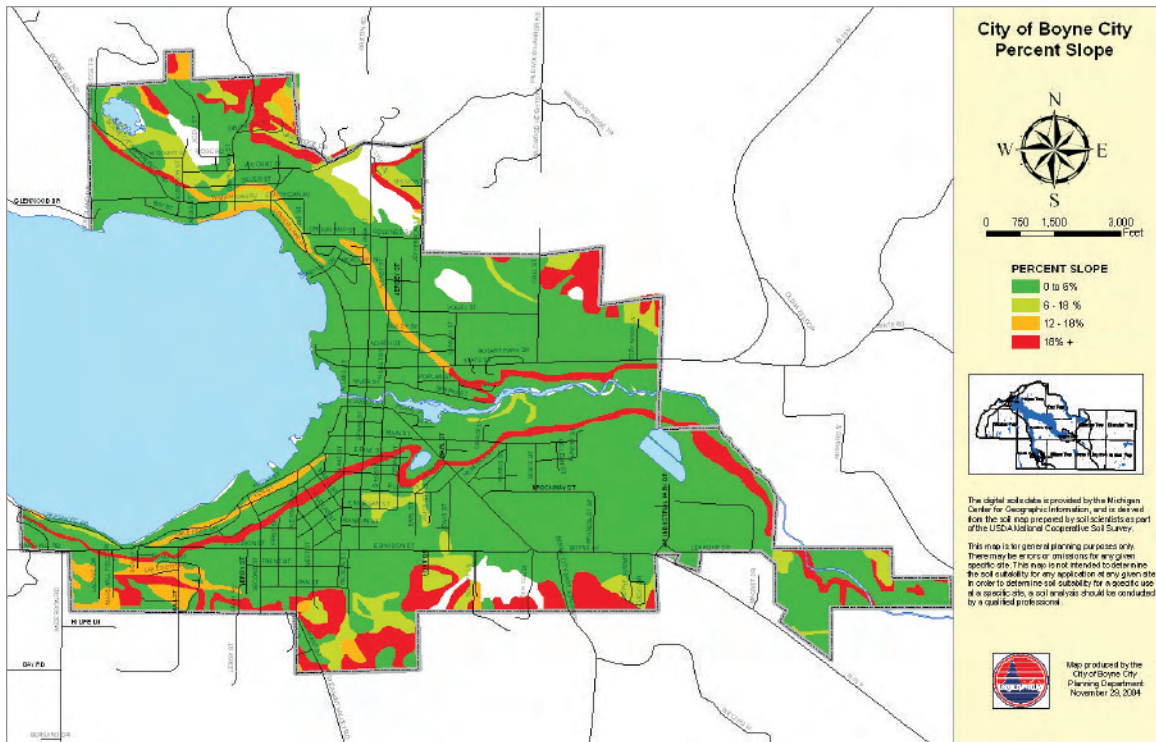
The General Commercial category is designed to provide a location for more intense retail that will serve the broader community or region. It may include, but is not limited to, general retail and office, larger retail centers, and regional centers. Pedestrian connections and bicycle parking facilities are an important design feature to this district. Buildings will be as close as possible to the road frontage with parking on the side.

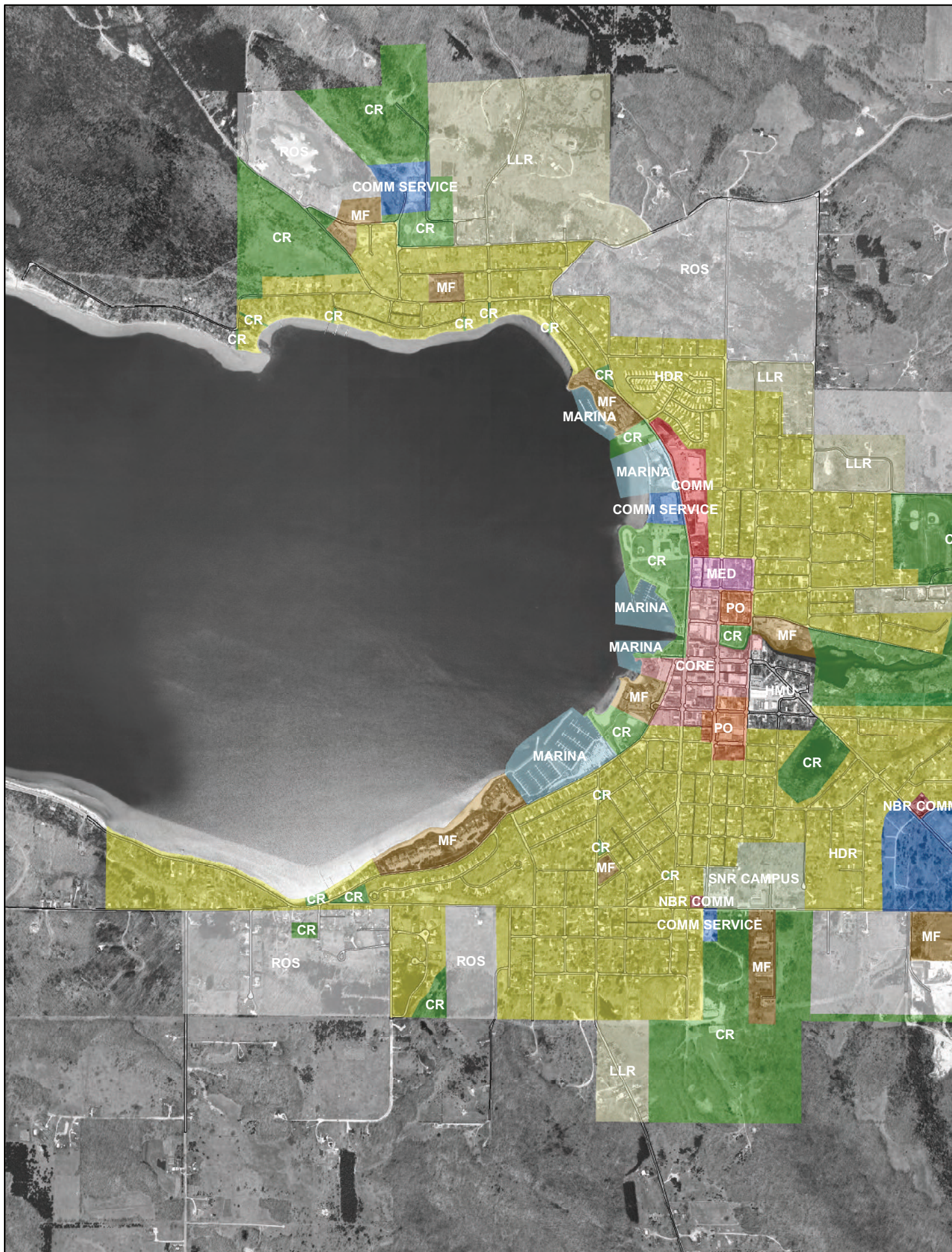


Boyne City residents have always enjoyed the out-of-doors.









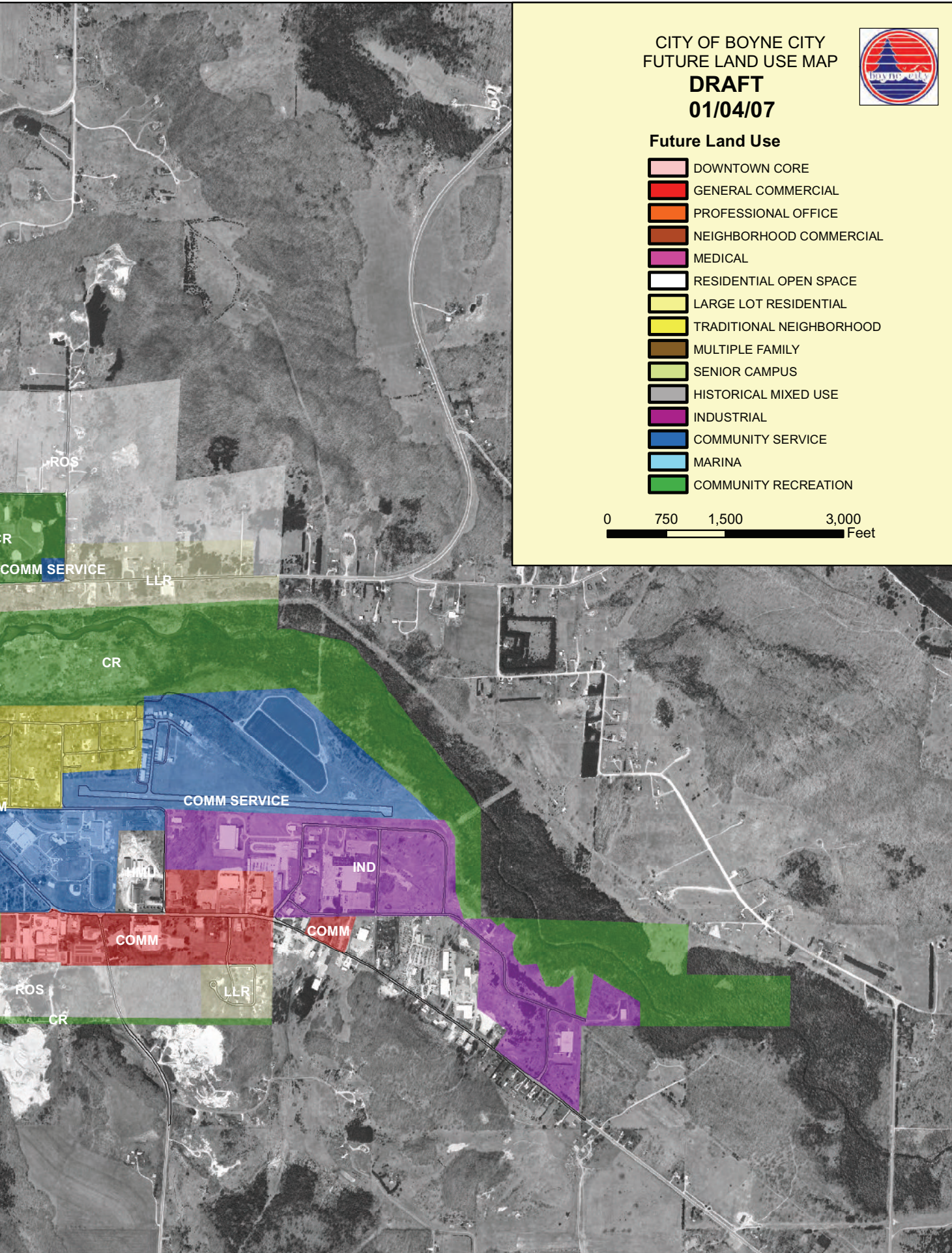
CITY OF BOYNE CITY
FUTURE LAND USE MAP
DRAFT
01/04/07



Future Land Use

-  DOWNTOWN CORE
-  GENERAL COMMERCIAL
-  PROFESSIONAL OFFICE
-  NEIGHBORHOOD COMMERCIAL
-  MEDICAL
-  RESIDENTIAL OPEN SPACE
-  LARGE LOT RESIDENTIAL
-  TRADITIONAL NEIGHBORHOOD
-  MULTIPLE FAMILY
-  SENIOR CAMPUS
-  HISTORICAL MIXED USE
-  INDUSTRIAL
-  COMMUNITY SERVICE
-  MARINA
-  COMMUNITY RECREATION

0 750 1,500 3,000
Feet





Built Environment



Dear City Planner,

I love to ride my bike around my block and see all the nature around us. I'm excited to share my ideas with you for Boyne City in the future. In 20 years I want Boyne City to be filled with nature preserves. I really want less stores and more nature. In 10 - 30 years I want Boyne City to be more of a nature preserve than a city. I want it to be well known for nature!

From,
Emily Lindsay
4th Grade
Boyne City Elementary

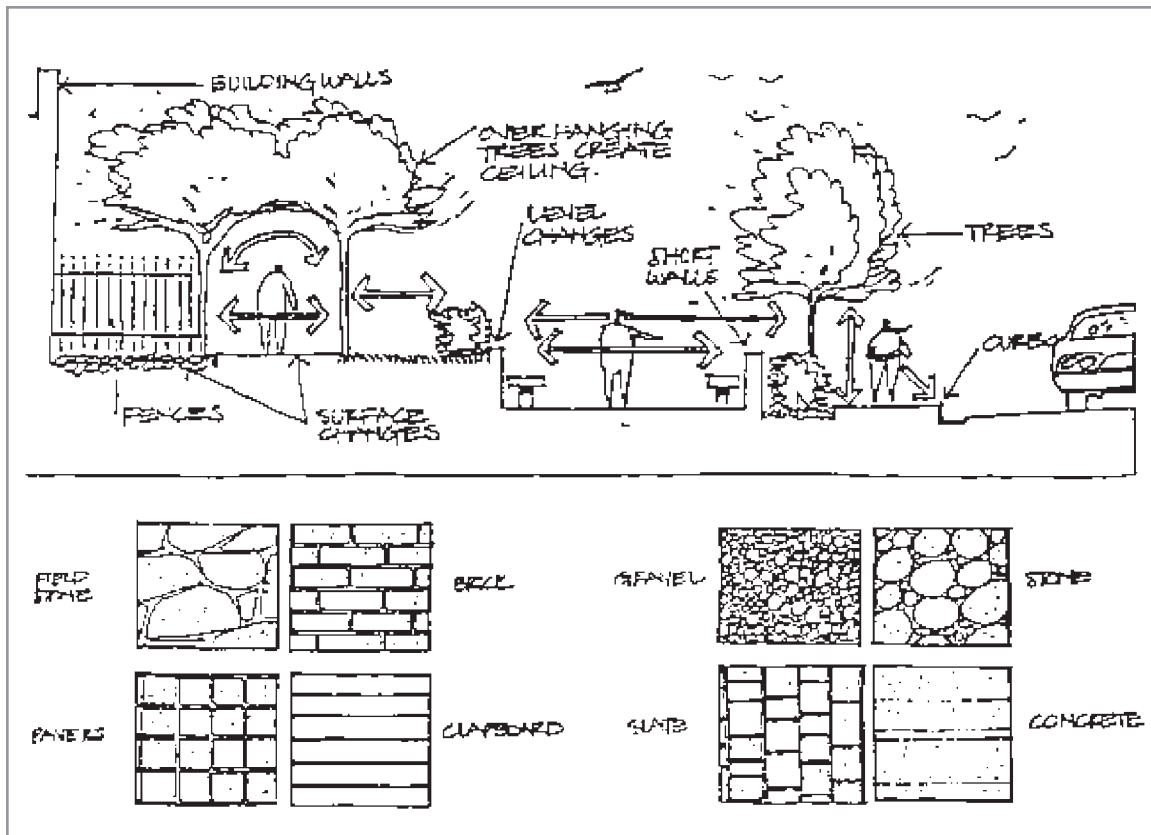
This Plan Envisions Boyne City as a City Where...

Boyne City's built environment reflects a legacy of an architectural heritage, moderately scaled buildings, and high quality urban design. The unique design characteristics of our neighborhoods have been retained, while new construction and public investment respect the city's historic character and demonstrates high quality architecture, while effectively meeting the demand for continued growth. In higher density areas, buildings are closer to the street, with parking underneath or in a nearby structure. All buildings and public facilities are welcoming to people with disabilities. Both new construction and renovations to older buildings illustrate a commitment to sustainable development practices with the use of green building materials and energy efficient design. The streetscape is clean, well maintained and lined with shade trees. Overhead utilities have been relocated underground, and excessive street lighting has been eliminated. Important view corridors and scenic vistas have been retained, and developed areas are complemented by open spaces, parks, and natural areas.

Boyne City's built environment—it's buildings and structures, and how they relate to the city's landscapes, layout, and history—make Boyne City the special place it is. The city has a rich architectural legacy, set within an exceptional natural setting that provides the foundation to our vital economy, human-scale environment, and high quality of life. As Boyne City continues to grow, we must conserve and build upon this legacy through careful planning and high quality urban design.

The built environment plays a vital role in how Boyne City is perceived by residents and visitors alike. The built form is the first indication of a neighborhood's character, as experienced and seen by people traveling to and through the area. If the urban form of Boyne City is not desirable or attractive, it is unlikely visitors will want take the time to find out what assets the neighborhood might have to offer. Moreover, residents of Boyne City itself confront the built form on a daily basis. Whereas people have a tendency to think of "urban design" as relating exclusively to aesthetic issues, factors such as broken sidewalks and poor pedestrian connections might make it difficult for neighborhood residents to enjoy their own community and to be able to function

efficiently within its boundaries. Preservation of a neighborhood's built heritage can also offer visual reminders of the past, which, in turn, can serve to bolster pride in a shared community heritage. In this way, proper and innovative management of the built environment play a vital role in the economic, social, and even political vitality of Boyne City.



Pedestrian flow and walkway materials play an important part in the built environment concept.



Respecting Our Natural Setting

With Lake Charlevoix to the west, Boyne Mountain to the east and the embrace of the Boyne River through our downtown, Boyne City is blessed with an outstanding setting. Throughout the city—at the end of streets, from parks, offices, and homes—significant views are provided of the lake, river, forested and natural areas, and prominent building landmarks. Boyne City is in the fortunate position of being able to blend urban amenities with a beautiful natural setting. The city must take full advantage of this setting by identifying and protecting view corridors and important scenic views for all to enjoy—today and tomorrow. A plan for identifying and protecting views of important visual landmarks and landscapes from public vantage points must be undertaken as the city contemplates opportunities for future higher-density development. Boyne City's built environment must be respectful of the city's natural environment.

A City Built for People

Boyne City is a city built for people to experience on foot. Its buildings, streets, and layout are at such a scale that people feel comfortable in the built environment. Most places are within walking distance. Buildings do not overwhelm the landscape or the streetscape. Throughout much of the city, distant views are limited only by topography and vegetation. Buildings offer a personal connection to the street. To maintain this scale and character:

- Most buildings in high density areas should be no taller than four to five stories, and should make the most effective use of the site. Building height is based on its location (both individual site and context) and function.
- Mixed-use development should occur in concentrated areas within walking distance of higher densities.
- In higher density areas, buildings should be closer to the street, with uses and entrances at the street level that invite pedestrian activity. Transitions between high-density and low-density areas should be gradual. Access to light and air is maintained, while care is taken not to cast large shadows over nearby buildings and alter wind patterns.
- Buildings and public amenities should be designed with Boyne City's northern climate in mind, and embrace all of Boyne City's seasons.
- The massing and design of large development projects should be subdivided so that the widths of the facades are compatible with the scale and patterns of their surroundings. Building facades should be articulated along the street, and punctuated with windows, bays, balconies, and other openings.



Boyne City is a city built for people.

- Adequate green space and amenities should be provided to encourage people to be outside enjoying the city year 'round. This includes the creation of rooftop gardens, a system of trails and paths, and a network of publicly conserved open spaces.
- People should be able to move safely and conveniently throughout the city on a network of sidewalks and paths.
- Streets should be easy to cross, with signals, signs, and crosswalks designed to enhance the pedestrian experience.
- Benches, bike racks, trash and recycling containers, public phones, public restrooms, information kiosks, public art and drinking fountains should be added to popular outdoor gathering spaces.

Adding Up the Details

Public: The city's public investment in its infrastructure includes thousands of small details: street lighting, manhole covers, catch basins, curb and ramp details, sidewalk paving textures, street trees, utility lines, benches, and hydrants, traffic signs and signals, fencing, and many more. The cumulative effect of these details, in conjunction with more substantial investments in public buildings and spaces, defines the standard of quality for Boyne City's built environment. Public buildings should set an example by defining a new standard for high quality architecture, creative site planning, energy efficiency, and green building techniques. Public projects should receive the same level of review for possible impacts on the built and natural environment that private projects receive.

Private: New construction and building renovation include numerous details that impact the design quality of the city. Gas, water, and electric meters, electrical transformers, heating, ventilating and air conditioning equipment, mailboxes, handicapped access ramps, refuse and recycling facilities and other service features can seriously detract from a building's appearance if not properly located or screened. While the nature and purpose of such equipment imposes certain requirements on their location, these details are often added to a building at the end of the process—leaving few creative options. Whenever possible, these service features should be integrated into building and site design from the beginning so as not to distract from the quality of a building or its site.



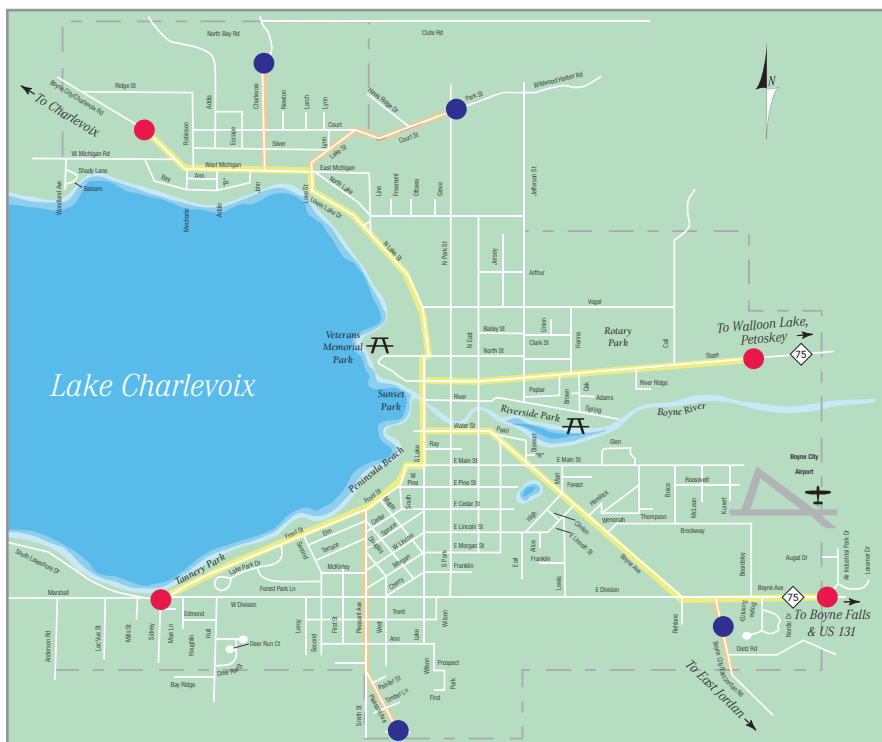
"You never get a second chance to make a good first impression."





Gateways

Gateways create a "sense of arrival" for those entering the city, and set the tone for what's to come. This feeling can be created with appropriate signs and landmarks, plantings, burying utility lines, protecting important views, and using distinctive

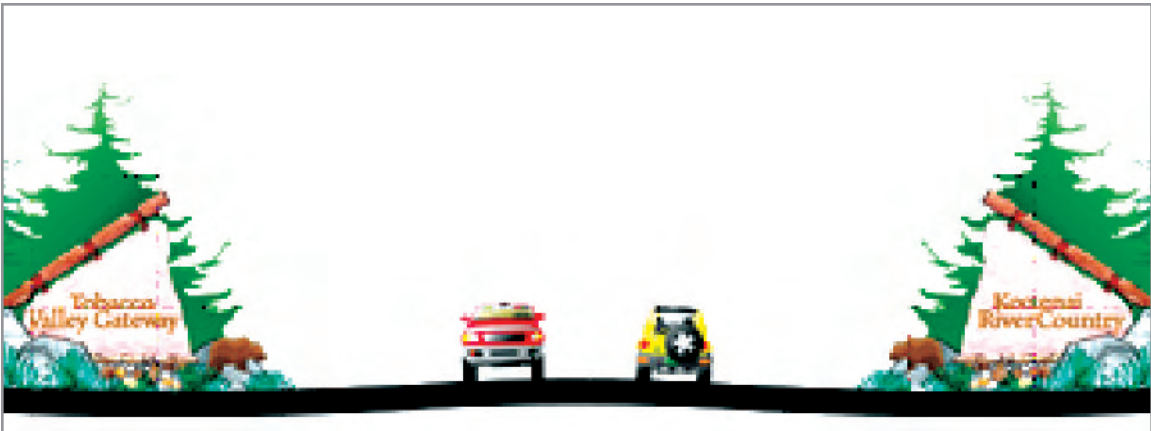
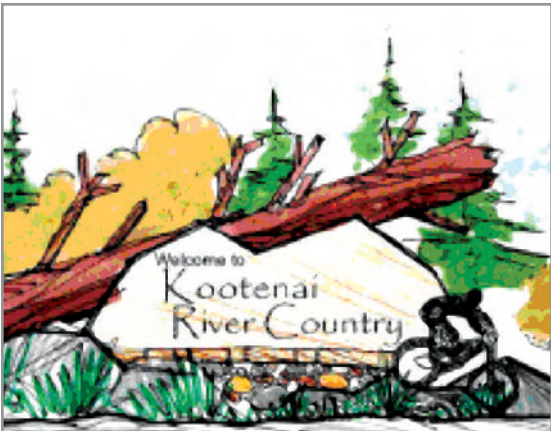
pavement and architectural elements at intersections. Each gateway to the city or its neighborhoods should reflect the particular characteristics of its setting and provide a welcoming introduction. The city should take active steps to enhance the gateways into Boyne City.



 Major gateways into Boyne City which need treatment to improve the entry way into the community.

 Secondary gateways into Boyne City which need treatment.

Examples of Gateways:





Public Art

Public art enhances the overall quality of the built environment. Whether it is a mural on a downtown building wall, a sculpture in a park, or unique architectural details on a building, public art personalizes the city and offers seeds for conversation and contemplation. Public art also includes performance art. Street musicians, jugglers, dancers, and magicians add vitality, activity, and a sense of community. Diverse offerings of public art should be encouraged and celebrated as distinctive elements of Boyne City's quality of life.

UNIFYING THEMES

Natural History and Resources: Boyne City is surrounded by an abundance of natural resources that have not only historical importance but provide current residents their "sense of place." These resources offer an endless source of inspiration for public art. For example, fossil stones and unusual pods and plant parts can be inspirations for sculptures; bird imagery could tap into the Great Lakes flyway pattern; and the geology of the area are fodder for interpretation.

Way Finding: Evidence of migrations through the Boyne Valley and Lake Charlevoix date back to time immemorial. Capturing the history of Native American migration patterns or trails, various trapper trails, or animal migration routes could be the framework for a current way-finding system. For example, gateways, thresholds, memorial interpretive artworks, special landscapes, etc. can mark these entry places, places of historical significance and important crossroads and places.

Water: Without water there would be no Boyne City. Weave water, or images of water throughout public art, landscaping, and design. Paving images could be installed that are symbolic of Lake Charlevoix, Boyne River, and the watershed. Create works that inspire citizens to be sensitive to water conservation and to continue coming together in search of solutions. Many contemporary artists create sculptural works that respond directly to changes in the environment or weather.

PUBLIC ART PRIORITIES

- For the public art collection, acquire art of the highest quality—worthy of Boyne City's scenic beauty.
- Build public art infrastructure as a key component of community revitalization and community life.
- Focus public art first in the waterfront/downtown area. Coordinate these initial public art commissions to complement the Waterfront Plan.
- Organize Boyne City's public art program as a partnership of the city, Main Street, the Historical Museum and the Chamber of Commerce.
- Adopt a percent-for-art plan and other funding sources to ensure sustainable funding.
- Improve public accessibility of public and private art collections, with public education and outreach, interpretive signage, interactive events, maps and brochures.
- Over time, expand public art beyond the waterfront and downtown, introducing artwork into public schools and neighborhoods, and at community gateways.



Public art and other design features such as fountains should be used to enliven the pedestrian environment.

While Boyne City already has gained a smattering of art in public places, there's a yearning for much more art—and more important artwork—to be commissioned and placed in public ownership. The community's shared vision is for art of the highest quality; installed at the most visible sites; and appealing to local residents and visitors alike.

Boyne City's public art collection should be diverse, including: permanent and temporary art; sculpture, paintings and other media covering a wide range of sizes, styles and themes; art placed at outdoor and indoor locations; integrated into the design of local buildings and parks; and providing opportunities for youth participation.

Particularly important at the outset is to select a signature piece or pieces that become identified with Boyne City, and earn national recognition. Priority locations for these first, key pieces of art should be central and visible to residents and visitors.

Public art programs, combined with other cultural activities, have helped make communities become interesting and attractive places to live and work.



Looking west on Vogel Street to Lake Charlevoix. Utility lines offer an unattractive view of the lake.

Locating Utilities

Overhead utilities—including electric, telephone, and cable—present a dominant visual element throughout many parts of the city. This is especially concerning where street trees and other streetscape improvements are desired to make parts of the city more inviting for development and pedestrians or to preserve or enhance important viewsheds.

Many large trees have been radically pruned to accommodate power lines. Indeed, the vistas along many of our city streets are more strongly characterized by the march of utility lines than the promenade of trees. This is particularly unfortunate along streets that have important views of Lake Charlevoix.

While too expensive to accomplish everywhere, there are parts of the city where placing overhead utilities underground, or relocating them behind buildings, must be an important design consideration. In addition to all new development, priority should be given to undergrounding overhead utilities in the Main Street District, streets that offer important view corridors to Lake Charlevoix, and the main approaches into the city.



An image of illumination concentration in Michigan and surrounding areas.

Street and Site Lighting

Recent expansions in the use of exterior lighting have resulted in a marked increase in overall lighting levels within the city. While originally intended to reduce energy use and improve security, the use of high-pressure sodium lighting—in combination with new styles of fixtures—has had several unintended results. These include a distortion of natural colors, excess brightness, glare spilling onto adjacent properties, and an obscuring of the night sky known as “sky glow” which affects not only Boyne City, but neighboring areas as well.

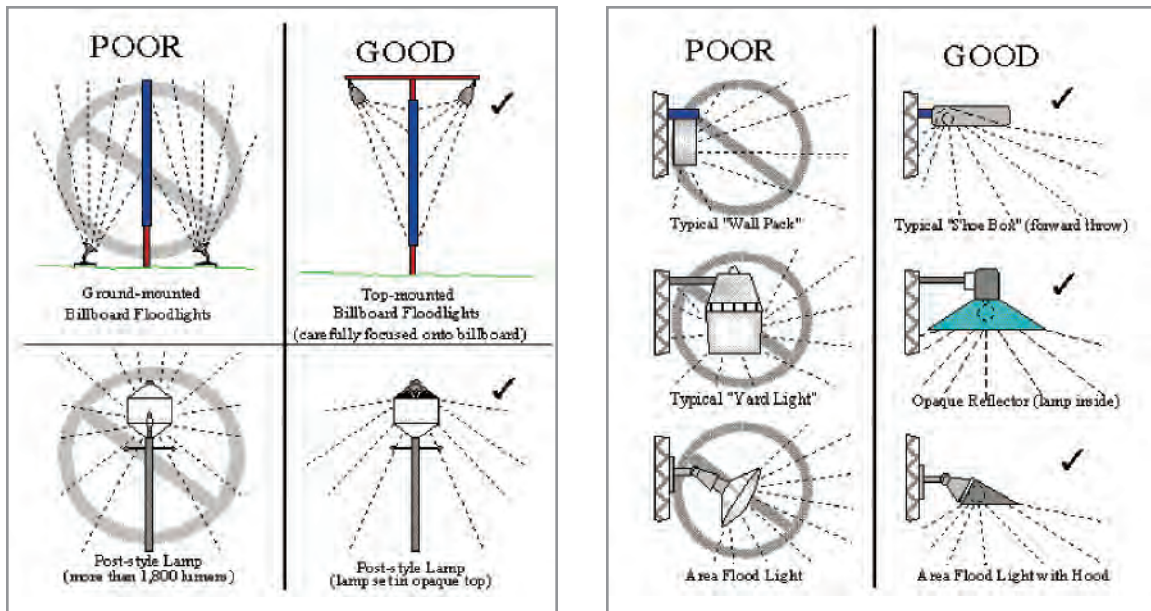
Boyne City should develop information on lighting issues and technology, and establish a set of lighting guidelines that will help Boyne City in the review of new lighting installations. Issues of particular importance include:

- Overall illumination levels are too high.
- Concern about the visual quality and color distorting properties of high pressure sodium lights.
- Glare from unshielded or misdirected fixtures.
- Improving the quality of outdoor lighting to improve public safety and perceptions of security.

- Unnecessary illumination of building facades.
- Design quality of fixtures and poles.
- Desire for complementary fixture designs in different types of settings and neighborhoods.

Recommendations: Include the use of cut-off or shielded fixtures; lower wattage bulbs; color corrected or other acceptable light sources; and fixtures and pole heights which are appropriate for the site and neighborhood in an evaluation for inclusion in the city’s zoning guidelines to be utilized by all city departments in the review of lighting installations.

Quality lighting brings other substantial benefits as well. Lack of glare and excessive contrast brings improved visibility, especially to the aging eye. Elimination of wasted light saves money, energy and resources, which in turn reduces air pollution, water pollution and carbon dioxide emissions caused by energy production and resource extraction. Good lighting returns a sense of balance to the night, and gives a quality appearance to our towns when the sun goes down.



Examples of common lighting fixtures.

Careless and excessive use of lighting in our outdoor environments causes extensive damage to the aesthetics of the night, at the same time it compromises safety and utility, the very uses for which it is usually installed. Bad lighting hurts everyone. It starts a cascade of negative consequences, beginning with the loss of our view of the heavens, continuing through falling

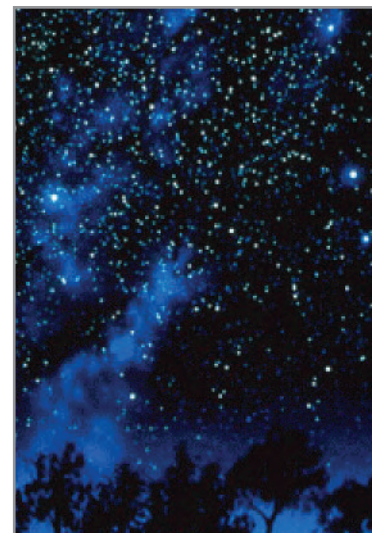
levels of safety and utility, irritation of neighbors and wildlife, disturbance of the rhythms of day and night that are vital to many natural systems, damage to the aesthetic appearance of our communities, wasted monetary and natural resources used to produce wasted light, and increased air pollution and carbon dioxide levels from wasted fossil fuels.



LED lights save energy and help to protect our view of the heavens.



Unshielded lights obscure the night sky.



A protected night sky for all to enjoy.



Historic Preservation

Historic properties have a way of disappearing. They quietly fall prey to demolition, neglect, or renovation that alters them beyond recognition. Building by building, site by site, Boyne City's heritage can gradually be lost through private and public action and inaction, taking with it much of our character, individuality, and vitality.

Like any limited resource, historic properties need careful planning and management to ensure their survival for current and future generations. They are subject to the complex pressures and issues of modern society, and often their preservation appears to be at odds with the immediate needs for affordable housing, economic revitalization, employment, education, and so on.

Remarkably, the preservation of our heritage is not a luxury. It actually helps combat the very problems that plague our city by stabilizing neighborhoods, providing affordable housing, lowering crime, stimulating private investment, bringing people and businesses back downtown, attracting tourists, and strengthening community pride.

There are numerous ways Boyne City can work to preserve our historic properties. A few include: a historic preservation ordinance, zoning, demolition moratoria, downtown revitalization programs, local economic incentives, promoting the federal rehabilitation tax credit (especially in combination with the low-income housing tax credit), and public education programs. The best approach is to use a combination of tools, especially chosen and integrated to suit local needs.



Preservation as an Economic Development Strategy

As the Main Street Program and the city work to protect and maintain the integrity of its historic buildings and landscapes through restoration, adaptive reuse and renovation, it becomes increasingly clear how preservation is a very effective economic development strategy. The Odd Fellows Building, Wolverine Dilworth Hotel, the Downtown and Main Street all are important pieces to our "Core Area" and in need a successful adaptive program to protect the historic nature of existing buildings. Opportunities for the restoration and renovation of buildings can be found throughout the Central Business District, the Downtown Waterfront and the strip



The Importance of Archaeology in Preservation

In Michigan, prehistoric remains consist mostly of Native American stone tools, flake debris from tool making, pottery pieces, burial ornaments, human bones, fire hearths and objects related to hearths. Archeological sites represent activities of early American inhabitants from the period of contact to about 75 years ago. Development and redevelopment throughout many portions of the city have disturbed many of the potential sites for finding archaeological remains. Once disturbed from their original context, much of the archaeological value of an artifact is lost.

development on the east end of town. Perhaps the most striking example of using historic resources as part of an economic development strategy is Water Street Downtown. Here, design review and historic preservation strategies have been combined with pedestrian amenities to make this downtown shopping area one of the finest in Michigan.

In addition, as the travel and tourism industry becomes a larger segment of the regional economy, opportunities to promote Historic Preservation and heritage tourism should be explored. Examples include education and interpretation of the city's past through historic walking tours, brochures, events and signs. To reinforce this economic development strategy, all policies of and projects undertaken by the city should enhance the city's historic resources and neighborhood characteristics. City policy should continue to support the innovative use of historic structures.

Despite more than a century of historic development, many areas in Boyne City remain archaeologically sensitive. These include shorelines, floodplains and ancient beaches along the lake and river. Boyne City should protect its remaining archaeological resources. The presence of archaeological remains does not need to prevent development of a site however. Steps can be taken to insure that important remains are not disturbed. Often mitigation can be achieved simply through documentation rather than complete preservation. Working in close partnership with the State, the city should work to minimize the burden on individual property owners in these sensitive areas while at the same time ensure the resources are properly documented and protected.



Energy and Smart Growth



"By failing to prepare, you are preparing to fail."

—Benjamin Franklin

This plan envisions Boyne City as a city where...

...Boyne City is a leader in the implementation of energy efficiency and renewable energy measures that reduce energy costs, enhance environmental quality, improve security and sustainability and enhance economic vitality. Key elements of this success are a broad range of energy efficiency programs, public education in resource conservation, publicly-owned alternatively-fueled electric generation, energy-efficient green building technologies and climate-friendly transportation solutions, which includes support for alternative fueled vehicles.

Boyne City will:

- Optimize overall energy efficiency, reduce energy requirements, and minimize the need for new energy resources on a citywide basis.
- Improve the energy efficiency of city-owned buildings and facilities.
- Reduce transportation energy use by lessening reliance on car trips, using more fuel-efficient vehicles, promoting increased transit use
- Educate our citizens regarding energy efficiency, renewable electric generation and conservation to ensure that citywide resource allocation decisions in years to come will reflect the wishes of an informed citizenry.
- Make tangible efforts to reduce greenhouse gas emissions through the implementation of a Climate Action Plan.

Connecting Smart Growth and Energy Efficiency

Between 1982 and 2003, the amount of land consumed for land development increased by 47 percent while the nation's population grew by only 17 percent. Inefficient land development practices have increased infrastructure costs as well as the amount of energy needed for transportation, community services and buildings. At the same time, a growing number of citizens and government officials have begun advocating a smarter approach to land use planning. These "smart" growth practices include compact community development, multiple transportation choices, mixed land uses and practices to conserve green space. These programs offer environmental, economic and quality-of-life benefits; they also serve to reduce energy usage and greenhouse gas emissions. Smarter growth land use policies have both a direct and indirect effect on energy consuming behavior. For example, transportation energy usage, the number one user of petroleum fuels, could significantly be reduced through more compact and mixed use land development patterns served by a variety of transportation choices. Improved planning and design could reduce energy demand and also help to increase supply by tapping into renewable energy resources. When we integrate energy considerations into development decisions, we can more effectively address the key way to secure our energy future, which is by reducing energy demand and diversifying supply.

Not since the early 1970s have energy issues consumed as much national attention. From California's rolling blackouts and deregulation problems, to concerns about the environmental and public health effects of energy use, to present national security interest in reducing dependence on foreign oil, energy issues are



near the top of the public policy agenda. Yet a critical piece missing from present energy discussions is the recognition of the role that land use decisions play in current energy policy. The way communities are designed, planned and built has significant influence over the amount of energy used, how energy is distributed and the types of energy sources that will be needed in the future. In addition, daily decisions concerning how and where to build communities can help or hinder national goals of energy efficiency and energy independence. "Smarter growth" land use policies and practices- that advocate more compact and mixed use communities, more transportation options, and the preservation of green space- have the potential to decrease reliance on fossil fuels and increase the ability to respond to volatile energy prices. While development built according to smart growth principles is inherently more efficient than conventional development, it could become even smarter through greater use of energy efficient designs and local renewable energy sources. "Energy smart" land use decisions- that focus on energy efficient neighborhood and building design as well as efficient locations- could reduce vulnerability to energy supply and price spikes, lessen air pollution associated with fossil fuel combustion, reduce greenhouse gas emissions and increase the affordability of housing and commercial space by reducing operating costs.

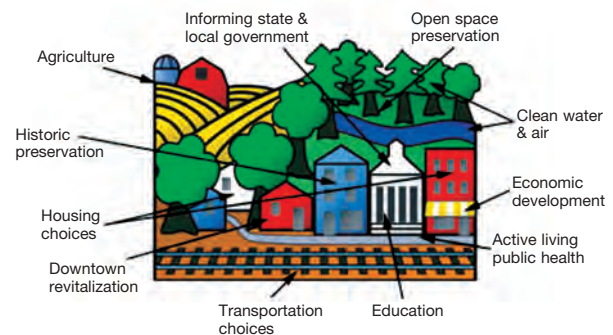


WHAT IS SMART GROWTH?

Smart growth refers to a relatively compact pattern of development that accommodates a diversity of people, housing types and jobs and makes efficient use of our public investments. It generally features:

- Cost-efficient regional transportation systems which provide real choice about how to move people and goods
- Efficient and sustainable use of land, natural resources and energy that take into consideration preservation of natural open and recreational space for citizens and wildlife
- Walkable and bikeable neighborhoods with mixed use centers for public and commercial life
- An enhanced civic realm with strategically designed centrally situated public facilities
- A broad sharing of the benefits of growth that doesn't abandon existing neighborhoods and urban centers and their residents
- The preservation of a built heritage for future generations
- Broad-based citizen participation in the process of deciding how to structure a livable, vibrant, attractive community in which to live, work and play

Ironically, sprawling rural development does not necessarily signify a healthy economy. In fact, in



many regions scattered, haphazard development occurs where the rural economy is deteriorating.

Many rural areas that attract vacationers or homeowners seeking a natural setting or small-town atmosphere become the victims of their own success. Scattered development of vacation cabins and year 'round housing can fragment farm and forest lands and pollute waterways with surface water runoff. Poorly planned efforts to accommodate tourism and residential demands can lead to unsightly, sprawling commercial development that causes unnecessary environmental impacts, taxes the capacity of country roads and saps the economic vitality from existing main street stores. Through innovative planning and development strategies, rural communities like Boyne City can enjoy the benefits of growth while protecting natural resources and maintaining character.

“Smart growth is pro-growth. We know that developers, banks, and the entire community rely on growth to fuel the economy. The goal is not to limit growth, but to channel it to areas where infrastructure allows growth to be sustained over the long term.”

—Hugh L. McColl, Chairman and CEO, Bank of America

MAINTAINING WORKING LANDSCAPES

The benefits of working landscapes are becoming increasingly well known. Forested land and open space protect watersheds, filtering water as it seeps into the ground and providing buffers for rivers and streams. These lands provide critical wildlife habitat, supporting complex ecosystems that require large acreage. They also afford “countryside,” the outdoors treasured for all sorts of recreation, from camping to berry-picking. Yet the vast majority of this land is privately owned and individual landowners bear much of the cost of maintaining its benefits for the rest of society. To survive and resist the pressures to develop their land, they need access to a resource-based economy that supports working lands; planning and zoning that preserves a critical mass of working land; and the cooperation of urban and suburban neighbors.



The Energy Landscape

Before addressing ways to better connect smart growth and energy, it is important to understand how and where energy is currently being used. Residential buildings, commercial buildings, and the transportation of people and freight use the majority of the energy consumed by the United States each year. Specifically, the industrial sector uses 38 percent of total energy, closely followed by the transportation sector at 28 percent, the residential sector at 19 percent, and the commercial sector at 16 percent. On a community level, transportation can account for 40 to 50 percent of total energy use, and residential buildings use another 20 to 30 percent.

The American way of life today is completely dependent on abundant supplies of energy. Energy is needed to heat, cool and light homes, fuel cars and power offices. Energy also is critical for manufacturing the products used every day, including the cement, concrete and bricks that shape our communities. Headlines such as: “Oil Supplies Fall as Nation Shivers,” remind us of the important yet precarious relationship between our daily needs and comforts and cheap sources of energy.

While the U.S. represents only five percent of the world's population, it consumes 25 percent of its energy and generates about 25 percent of





its greenhouse gas emissions. U.S. citizens, for example, use more energy per capita for transportation than do citizens of any other industrialized nation- which, in part, reflects the greater distances traveled by Americans compared with citizens of other nations. To satisfy an energy-intensive lifestyle, the U.S. has become vastly dependant on fossil fuels. About 85 percent of the energy used in the U.S. comes from fossil fuels-39 percent from oil, 23 percent from coal and 23 percent from natural gas.

This nation consumes 20,000,000 barrels of oil per day-which is more oil per day than any other country in the world. While the U.S. consumes 25 percent of the total oil produced each day, it has only two to three percent of the world's known oil reserves. Currently, 55 percent of the oil used in the United States is imported from foreign sources and this percentage is predicted to rise in the coming years.



One alarming problem with the close connection between energy and land use is the relative inflexibility of the built environment in relation to energy shifts. Energy availability and pricing are volatile and dependent on changing political and economic factors. While energy shifts can be quick and capricious, land development patterns can be difficult and expensive to alter.

“The living arrangements America now thinks of as normal are bankrupting us economically, socially, ecologically and spiritually.”

—James Howard Kunstler,
The Geography of Nowhere



Energy Conservation

Opportunities for energy conservation are increasingly available in almost every application in any setting. Home, school, office and industrial environments have all benefited from cost-saving and energy-saving innovations. The advantages of energy conservation have been quantified on the local level as tons of air-

pollutants avoided and dollars saved. Reduction in global greenhouse gas emissions are also quantified with the benefit of reduced warming affect. On the community level opportunities for large scale energy saving applications may be hindered by the up front investment costs.



“Americans are in the habit of never walking if they can ride.”

—Louis Philippe, Duc d’Orleans (1798)



Community Environment



Dear City Planners,

I have wanted to help the environment since I met Jinny Heick. She helped us with our garden and got me so excited. Now I know that if you work together you can make somethings come true. I think we should keep the water clean. Don't forget more trees and gardens in the town.

*Sincerely,
Preslye Jane Fortune
4th Grade
Boyne City Elementary*

Boyne City presents an impressive collection of natural landscape features, from dramatic views of Lake Charlevoix, the surrounding hills and the Boyne River to unique natural landscapes of Avalanche Park. The city's natural qualities provide a strong foundation for public enjoyment and enrichment.

Boyne City's physical setting contributes much to its uniqueness. Among the obvious features is the city's relationship to water. Both Lake Charlevoix and the Boyne River play important roles in defining Boyne City.

Lake Charlevoix and the Boyne River are two of the region's most valued resources. They provide extensive aquatic habitat, scenic beauty, recreation opportunities, even food and drinking water. The lake and river are simply elements of a much larger and very complex ecosystem-including the Lake Charlevoix and the Great Lakes Basin. For these and other reasons, many of our local activities must be considered within a larger regional context.

Besides protecting the lake, river and streams, the city must consider its groundwater-water that seeps into the earth through porous soils and cracks in the bedrock. Because Boyne City gets its drinking water from wells, the city has to give consideration to groundwater. Yet both ground and lake water are part of the same water cycle, making it vital that Boyne City protect the quality of these essential water resources.

An Economic Asset

The economic, cultural, public safety and health benefits of balancing community development with environmental protection are increasingly being quantified in economic, as well as social measures that show them to bring significant and diverse values to society. Open space protection is an important component behind successful community development projects, and a major contributor to the character of place that forms the foundation of our economy. Community investment and planning will determine where and how development occurs, how cost effective it is, and whether the most important natural systems are preserved and sustained. There is a long-held belief that undeveloped land is not economically productive, and that it carries its weight in the local tax base after it is developed. Communities are quickly learning the opposite is true. More and more studies are showing that conserving open land and choosing carefully where development goes is not contrary to economic health, but essential to it. Corporate CEO's say quality of life for employees is the third most important factor in locating a business, behind access to domestic markets and availability of skilled labor. Owners of small companies ranked recreation/parks/open space as the highest priority in choosing a new location.

Land conservation and open space purchase is a sound investment for municipalities. Studies comparing the fiscal impacts of development to those of open space protection have found that open space preservation has a more positive impact on a community's economy than most conventional forms of suburban-style development, even when property is preserved through public dollars. Weighing the true costs and benefits of development and open space



protection is the key to making the right investment choices.

While the cost of protecting a community's important natural systems and open spaces may seem high, the cost of not protecting them may be much, much higher.

The cumulative impact of development will place a heavy burden on the Boyne River and Lake Charlevoix. The increase of impervious surface due to development prevents rainwater from percolating into the ground, which increases stormwater rates and volumes and negatively impacts stream hydrology.

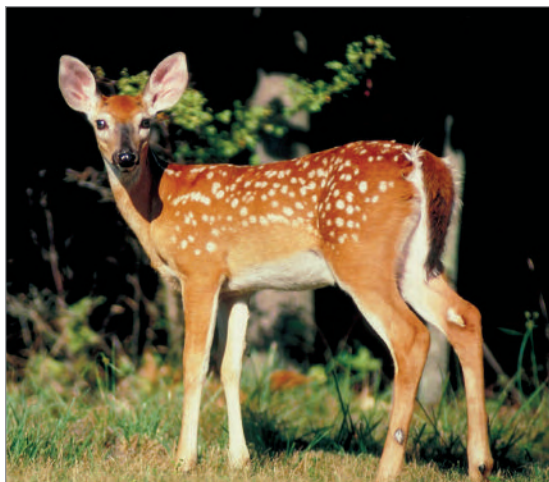
Protecting Shorelines and Wetlands

Lands along the Boyne River and Lake Charlevoix are particularly fragile and should serve as important greenbelts in the city. Vegetation along the shoreline of lakes and ponds, rivers and streams, and wetlands should be protected in order to stabilize the shoreline, filter surface runoff, and provide habitat for wildlife. The Michigan Department of Environmental Quality suggests limiting the following activities near waters: housing and



commercial development, road construction, cultivation, dumping, filling, mowing, and herbicide application. The MDEQ recommends setting aside buffers of naturally growing grasses, shrubs and trees to protect the health of a stream, wetland, river or lake. These buffers must be large enough (50-100 feet) to capture surface runoff, and must be permanently conserved. Shorelines must not be used exclusively for private benefit. Appropriate public access should be encouraged in places that will not harm the ecology of these fragile areas. All development adjacent to a shoreline should be subject to design review, as well as review for water quality by the Planning Commission.

Wetlands are particularly important for protection regardless of their size. As development adds impervious surface, their role in capturing and treating urban runoff becomes more and more critical. City regulations must take a closer look at how these important resources are protected and undertake efforts to ensure their essential functions are maintained.



Wildlife

Boyne City features impressive landscapes, valued not only for their scenic qualities, but also for the wildlife that inhabits them. Many factors impact wildlife survival, including changes in the available habitat, vegetation and water, as well as species competition, predators, disease and parasites.

The health of a wildlife species is strongly related to the quality of its habitat. Contiguous habitat “patches” are critical to many species that migrate seasonally. These patches can be altered or destroyed by development, wildfires, roadways, or concentrated human activity.

Diversity is greatest when habitat patches are large and contiguous. Animals often require different resources for different activities. For example, birds may nest and forage in different areas. Wildlife activities that require specific environmental components include nesting, calving, foraging, roosting, bedding and singing. Requirements may differ by life stage or season—for example, during nesting and fledging periods, or during breeding seasons. Migratory birds typically use different habitats within their breeding, migration and wintering

grounds. Habitat use can vary from year to year, often reflecting the availability of resources such as water and vegetation. Species with large home ranges—owls, black bear, deer, northern goshawk, and others—are commonly referred to as “wide ranging.” Some use specific wildlife movement areas and wildlife corridors. Greenbelts and bike paths, and their associated greenbelts, can offer important wildlife “routes” and can be coordinated as development continues.

Air Quality

Boyne City’s exceptional air quality is one of its most important assets. Maintaining this quality is important, not only for public health, but also for protecting views of the hills and ridges around Lake Charlevoix and other scenic areas. The air quality is high because Charlevoix County has very little heavy industry; attracting new, nonpolluting industries will help maintain this standard. Unlike larger urban areas, carbon monoxide from vehicular emissions is not a serious problem here. To date, no standards have been violated, although we may occasionally experience localized problems on winter mornings from wood smoke.



Air pollution in Boyne City comes from various sources: dust and other local particulates, cross-lake pollution from Wisconsin, and regional haze. Occasionally, high-particulate problems originate locally from wind-blown fugitive dust, dust from traffic on unpaved roads, construction activity and wood stove and fireplace smoke. Dust from dirt roads generates the most concern by area residents; we have little local control over the other sources as the regional haze originates outside the city.

Renewable Energy

Virtually all the energy used in Boyne City comes from non-renewable resources; coal mined in the Appalachia region, natural gas from Canada and oil from international sources.

We can mitigate the environmental impacts of traditional energy production and consumption by adopting good policies. Boyne City, for example, should encourage the efficient use of energy and promote the energy production from clean, renewable sources. We should also model good energy use by properly designing and maintaining government buildings and by using efficient vehicles. Sound energy policies provide both economic and environmental benefits for city residents.





Fortunately, our area has abundant sources of renewable energy that, if developed, would help protect air quality, reduce greenhouse gas emissions, minimize impacts to natural resources, reduce the need for transmission lines and increase energy security. These sources include passive solar, photovoltaic panels, solar thermal generators, wind, biomass and geothermal; another renewable fuel that we already use extensively is wood for home heating. The viability of developing these renewable sources depends on how much energy the source can provide and how much it will cost to obtain and transmit it safely. Sensible policies can also reduce the amount of energy we use.

Sustainable Building

Sustainable building, also called “green building” or “intelligent building,” involves implementing various practices that minimize the depletion of natural resources, water and energy consumption, and construction waste. Boyne City should adopt a sustainable building program that includes a checklist, a certification program for green builders, education on alternative building techniques and specific

technical guidelines for local owners and builders. Many sustainable building technologies require new codes, standards, and processes that, once adopted, will expedite efficient resource use in Boyne City

Sustainable building practices are healthier for the occupants and for the environment. They conserve energy and water, limiting environmental impacts. Buildings constructed using these practices have superior indoor environmental quality. They incorporate environmentally sensitive site planning and resource efficient materials. An important function of sustainable building is to reduce energy consumption through architectural design. Techniques such as installing more efficient insulation, heating and cooling systems, placing windows where they can best take advantage of solar energy, and weatherizing can dramatically reduce the amount of energy we consume.

LEED Certification

WHAT IS LEED CERTIFICATION?



In the United States and in a number of other countries around the world, LEED certification is the recognized standard for measuring building sustainability. Achieving LEED certification is the best way for Boyne City to demonstrate that our City is truly “green.”

The LEED green building rating system-developed and administered by the U.S. Green Building Council, a Washington D.C.-based, nonprofit coalition of building industry leaders-is designed to promote design and construction practices that increase profitability while reducing the negative environmental impacts of buildings and improving occupant health and well-being.

WHAT ARE THE BENEFITS OF LEED CERTIFICATION?

LEED certification, which includes a rigorous third-party commissioning process, offers compelling proof to the City, and the public at large that we’ve achieved our environmental goals. Getting certified allows the developer to take advantage of a growing number of state and local government incentives, and can help boost press interest in the project.

The LEED rating system offers four certification levels for new construction-certified, Silver, Gold and Platinum-that correspond to the number of credits accrued in five green design categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources and indoor environmental quality. LEED standards cover new commercial construction and major renovation projects, interiors projects and existing building operations. Standards are under development

to cover commercial “core & shell” construction, new home construction and neighborhood developments.

Boyne City should develop ways to encourage LEED certification.

Natural Areas and Open Space

Natural areas are areas of particular sensitivity that are recognized for their highly significant natural functions and values. These areas must be protected from the impact of development. In addition to the obvious elements of water and air, Boyne City has several acres of wetlands and forests. The urban forest includes the trees that grow in our backyards, along our streets, and in natural areas that support rich forest communities.

Areas that should be identified and mapped are:

- Wetlands
- Sustainable forest community
- Land containing critical habitat for migratory waterfowl, fish, and other wildlife
- Shorelines of surface waters, to include the Boyne River, Lake Charlevoix, wetlands, tributaries, and natural drainage ways
- Geological features of regional and state significance
- Migration corridors that link natural communities
- Outstanding natural features unique to Boyne City
- Any established natural site that provides valuable resources for education or has exceptional natural beauty

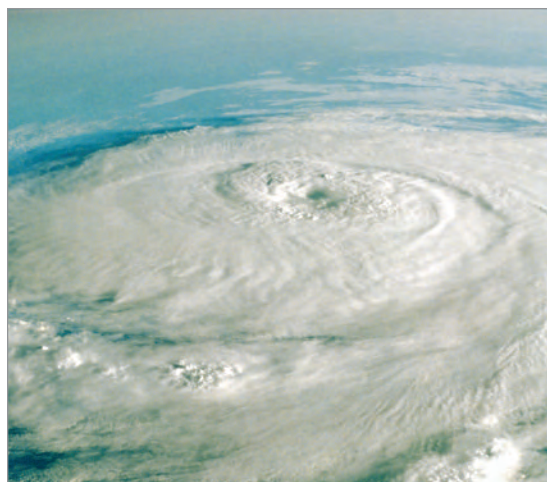
Boyne City should prepare an ***Open Space Protection Plan*** that will introduce and describe a comprehensive land conservation program for the city that will be implemented through three complementary approaches:



- 1. Conservation Education** to improve the public's familiarity and appreciation of Boyne's natural areas, to communicate the importance of open space protection and to encourage public participation in the protection process;
- 2. Proactive Conservation** that identifies sites of the highest priority for protection, and offers the mechanisms and resources to set these lands aside as a legacy to future generations. The cornerstones to this approach include the creation of a *Boyne City Conservation Fund* by the city, and the establishment of a *Conservation Legacy Program* which will guide the acquisition of conservation land; and
- 3. Future Planning and Improved Development Review** to continue the planning process for open space protection in the city, and act as a safety net for specific resources and features from the adverse impacts that may be associated with nearby development.

The plan will provide an over-arching vision for the future of Boyne's landscape where natural areas, parklands and greenbelts are physically integrated into the urban fabric to complement development with conservation—where natural and recreational systems play an essential role in enhancing environmental quality, economic prosperity and quality of life.

*The 10 warmest years
on record have all
occurred since 1990.*



Climate Change

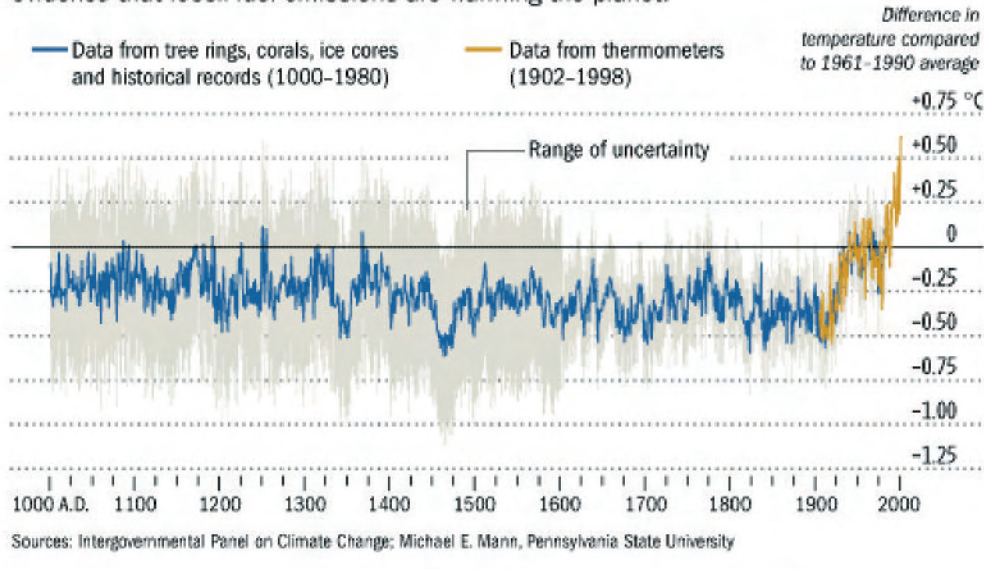
Human activities such as burning fossil fuels and removing carbon sinks are resulting in ever-increasing concentrations of greenhouse gases in the atmosphere—the primary contributor to global climate change. Among other impacts, climate change is predicted to have significant impacts on natural areas and locally may reduce snowfall,—an outcome that will threaten winter-based tourism in Northern Michigan.

Key Opportunities ... the City of Boyne City can:

- Join the other 300+ cities nationally and the six Michigan Cities that have signed the Kyoto agreement.
- Develop a plan to decrease total use of fossil fuels across all sectors—especially transportation.
- Strengthen the incorporation of efficiency and conservation measures within city buildings.

Temperature Tracker

A reconstruction of average surface temperatures in the Northern Hemisphere was the highlight of a 2001 U.N. report. The graph's hockey-stick shape is cited as evidence that fossil-fuel emissions are warming the planet.



Natural Landscaping

In recent years, a new look in landscaping, commonly known as natural landscaping, has been gaining enthusiastic acceptance across the country. It provides a cost effective alternative to conventional turf grass lawns.

Natural landscaping minimizes the environmentally detrimental effects of pesticides and fertilizers, as well as the noise pollution, and the emission of air-polluting substances from lawn-maintenance equipment. It virtually eliminates the need to use water for irrigation as is required for turf grass lawns. While not maintenance-free, natural landscaping requires less time and money for ongoing maintenance than conventional landscapes.

WHAT IS NATURAL LANDSCAPING?

Landscaping is the physical modification of the outdoors to serve the needs of people by planting, altering the contours of the ground, and building structures and amenities such as pedestrian ways, paths and picnic areas.

Our area of the country, with its harsher climate of extremes of heat and deep freezes, drought and drenching rains, is an inhospitable atmosphere for short-cropped, short-rooted grass. Therefore, the contemporary weed-free lawn, is maintained at a high price, not only in terms of dollars but also degraded water and air quality, water consumption, and the peace and quiet of our neighborhoods.



In returning to a more natural landscape, we will be returning those plants which evolved under our conditions of climatic stress, which require less maintenance and coddling and provide environmental, economic and aesthetic benefits.

Fortunately, there is a selection of native plants that have a wide tolerance for varying conditions and work well in many locations. Where special expertise and resources are available, ambitious natural landscaping projects can attempt to restore the original soil and water conditions.

New developments of all types can:

- Preserve and enhance existing natural areas such as wetland, floodplain and woodland areas as an essential component of site planning;
- Cluster homes in order to reserve green areas designed with native plants as a substitute for conventional subdivision design;
- Reduce the amount of impervious surfaces by substituting vegetation where appropriate;
- Utilize natural drainage approaches such as swales and vegetated filter strips instead of storm sewers.

Existing institutional and commercial complexes can:

- Create prairie, wetland, and woodland areas as part of government, corporate and institutional campuses, and reduce the area devoted to turf grass;
- Design and retrofit stormwater detention basins as natural wetland/prairie systems to enhance water quality and other environmental benefits.

Individuals and groups of homeowners can:

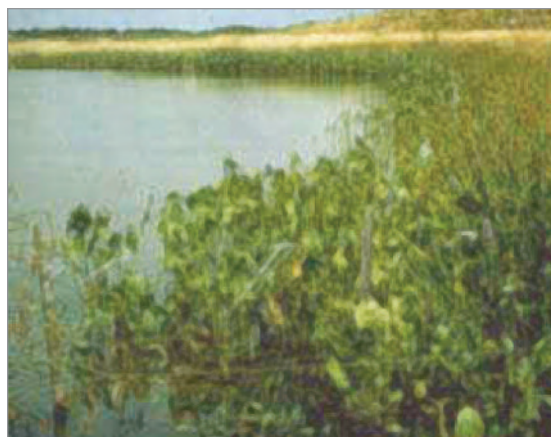
- Totally or partially replace lawn areas and common areas with native plants and retrofit areas for more natural stormwater detention.

The City of Boyne City can:

- Incorporate natural areas into non-active areas on most types of public property, as well as use natural landscaping for stormwater management.



Difficult to maintain conventional landscaping.



Natural landscaping for habitat and reduced maintenance.

NATIVE PLANTS CAN BE USED IN VARIOUS WAYS IN THE LANDSCAPE

Native plants as one part of the landscaping material:

Existing or new building sites can use native trees, shrubs and grasses instead of the “exotic” plants typically marketed by nurseries. Native grasses and ground covers may partially replace turf areas. This approach is becoming increasingly popular with homeowners. Natural landscaping on commercial properties provides environmental benefits and a distinctive appearance to the building site. Native vegetation used in “ornamental” ways in landscape design can create unusual and attractive effects.

- Native plants as the principal landscaping material—With careful planning, native plants can constitute the primary landscaping material in new development sites and sites that are being re-landscaped.
- Using more vegetation and less concrete and asphalt—The excessive use of concrete, asphalt and other impervious materials in our landscapes causes several environmental problems. It accelerates stormwater runoff and creates flooding and erosion conditions. Increasing the use of native vegetation — in our landscaping can reduce damage from stormwater runoff, reduce temperatures, reduce energy costs, improve water quality and increase wildlife habitat.

There are several special situations where the natural landscaping approach should be considered:

- To preserve existing native vegetation—Preserving existing natural vegetation is a fundamental purpose of natural landscaping. Rare and valuable natural area remnants (wetlands, prairies, and woodlands) should be protected and properly managed. With removal of exotic species, native plants will often re-establish themselves rather quickly.

- To create greenways—Linear open spaces called “greenways” provide exceptional opportunities for utilizing natural landscaping to protect and restore the region’s ecological identity. Our greenways will contain rivers, streams, and other waterways. In these locations native vegetation in buffer strips adjacent to the streams provides wildlife habitat, bank stabilization, and water quality benefits. These buffer strips protect natural resources from human impacts and filter our pollutants that could flow into streams.
- To manage flood and stormwater—Floodplains are regulated so they will be retained in non-intensive, open space uses in order to reduce hazards from flooding. Planting native vegetation in floodplains helps absorb and slow flood waters. Stormwater detention basins designed to replicate the natural water purification functions of wetlands also improve water quality and wildlife habitat as well as creating aesthetically pleasing landscapes. Careful design and planting of these basins allows them to blend more naturally into the landscape than conventional basins.

Benefits

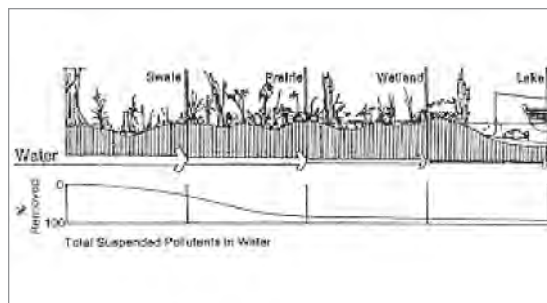
CREATION OF A DISTINCTIVE COMMUNITY IMAGE THAT STRENGTHENS REAL ESTATE MARKETS

High quality natural features such as river corridors and woodlands strengthen the identity of a community or neighborhood. Distinctive natural landscaping that preserves the unique characteristics of a community is a unique community asset.

Real estate within a distinctive landscape setting, if done well, can possess a marketing edge and positively affect property values. A community that appears to care for a high quality environment establishes a marketing niche that traditional area developments cannot offer.



Deep root systems of native grasses and forbs. Note shallow root systems of conventional blue grass turf at far left.



Drainage of a site through a natural system, rather than through storm sewers, dramatically reduces pollution levels.

Natural landscaping projects require materials, labor and professional services that generate income as well as enhance the environment. Nurseries, landscape architects, environmental restoration professionals, environmental groups and neighborhood organizations are increasingly responding to the market for natural landscaping materials and professional expertise. Some inner-city neighborhood organizations are considering the economic development potential of cultivating native plants and seed products for environmental restoration projects. Sources for natural landscaping materials must be from businesses rather than from the “wild.”

ENVIRONMENTAL BENEFITS

In many ways, natural landscaping reduces the stress that the “weed-free” lawn places on clean air, clean water, soil stability and other environmental qualities of life.

Reduced soil erosion—Natural landscaping has distinct advantages over conventional turf grasses in stabilizing easily erodible soils. Native plants are particularly effective on steeply sloped sites, stream banks, and areas where moving water is present. The roots of native plants are very dense, fine, and often very deep (in some cases, 5 to 10 feet in mature plants) and hold soil well. By contrast, typical turf grass root systems are only four to six inches deep.

IMPROVED WATER QUALITY

Native vegetation in naturalized drainage ways enhances the infiltration of contaminated stormwater. The dense, deep root systems augment the permeability of the soil and help the uptake of certain stormwater pollutants. Native vegetation buffers are particularly effective along the edges of streams, lakes and wetlands. They can intercept runoff and subsurface water pollutants from urban and agricultural land uses and construction sites. Emergent and submerged wetland vegetation provides an additional benefit along the edges of lakes and streams by serving as a growing surface for microorganisms. These microorganisms break down certain pollutants, thereby reducing their harmful effects.

REDUCED AIR POLLUTION

Standard lawn maintenance equipment creates significant amounts of air pollution. Equipment such as lawn mowers, chain saws, leaf vacuums and other fossil fueled lawn maintenance equipment emit high levels of carbon monoxide, hydrocarbons (VOCs) and nitrogen oxides, which contribute to the formation of ground level ozone (smog), toxins and other particulates. USEPA estimates that a gasoline powered lawn mower emits 11 times the air pollution of a new car for each hour of operation. Gasoline lawn and power equipment, on average, produce 5 percent of “smog” forming VOC in non-attainment areas (such as the northeastern Illinois region). Smog is a

noxious irritant which impairs lung function and inhibits plant growth. In addition, the “driver” of such equipment is typically positioned where exposure to such carbon monoxide and toxic emissions is greatest.

Small gasoline spills evaporate and pollute the air as well. USEPA estimates that every summer, the few ounces spilled during each refueling of lawn and garden equipment adds up to 17,000,000 gallons of gasoline nationwide.

Natural landscaping can significantly reduce the need for fossil fueled lawn and garden equipment and this reduces the associated air pollution and health risks. In addition, the native plants themselves can help to improve air quality by reducing particulates and gaseous air pollutants.

REDUCED NOISE POLLUTION

Noise from lawn and gardening equipment has become a source of increasing dissatisfaction in some communities. The use of natural landscapes reduce the use of this equipment.

NATURAL RESOURCE CONSUMPTION FACTS

- The United States uses one million gallons of oil every 2 minutes.
- Every American uses about 47,000 pounds of newly mined materials each year.
- A television requires 35 different materials, and more than 30 minerals are needed to make a computer.
- Over the past 40 years, global consumption of wood as industrial fuel rose by nearly 80 percent. North America alone accounts for about 40 percent of both production and consumption of wood as industrial wood products.
- In 2001, each person in the United States threw away an average of 4.4 pounds of waste each day.

(Sources: Natural Resources Defense Council, 1996; National Mining Association, 2000; World Resource Institute, 2000; EPA, 2003.)

RECOVERY—IN ACTION

- More than 65 percent of the steel produced in the United States is made from recovered steel.
- The average aluminum can contains an average of 50 percent post-consumer recycled content.
- By 2003, the paper industry relied on recovered paper for 50 percent of its feedback.
- Using recovered aluminum cans saves 95 percent of the energy required to make the same amount of aluminum from bauxite, its virgin source.
- Recycling and reuse of 2,000 pounds of paper saves 7,000 gallons of water and 380 gallons of oil.

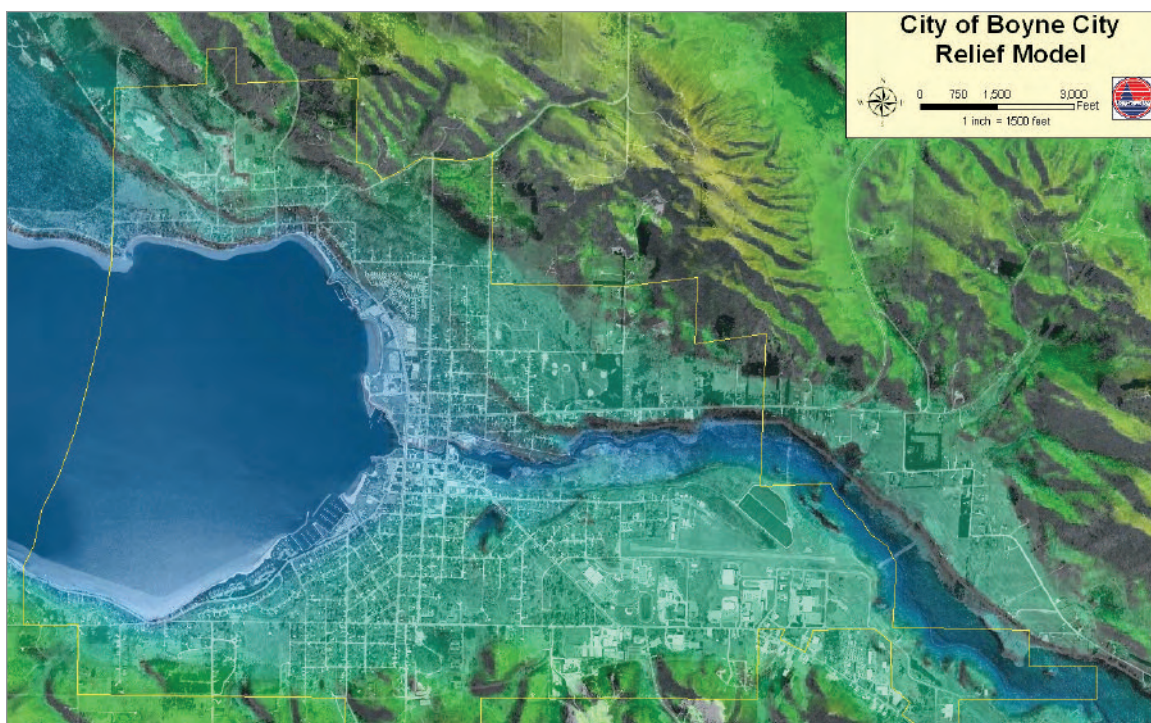
(Sources: Steel Recycling Institute, 2000; Aluminum Association, 2000; American Forest and Paper Association, 2000; The Can Manufacturers Institute, 1997; Weyerhaeuser Company, 1999.)

REDUCED GREENHOUSE EFFECT

Natural vegetation can help to combat global climate change (the “greenhouse effect”) by removing carbon dioxide (CO₂) from the atmosphere. Plants remove CO₂ from the atmosphere and store the carbon in the body of the plant, the root system and the soil.

BEAUTIFICATION

Though it is difficult to quantify, beautification is an important reason, sometimes the fundamental reason, for natural landscaping. Many people living or working in natural landscapes appreciate the variety of textures, colors and shapes of native plants and the dramatic progression of hues throughout the seasons. The wildlife, especially the birds and butterflies attracted to the plants, also enhance the aesthetic appeal of natural landscaping.





Transportation



Dear City Planners,

I love this town! I am involved with many things concerning the environment. Our school has a garden that we take care and plant. Our garden at our school started out as nothing but dirt and grass and look at it now. It is beautiful and wonderful. We can make it better, just like the garden at our school. We can keep growing and keep building. My plans for Boyne City are simple. I think we should keep it the way it is, but add some small stores and gift shops. This would be good for the high percentage of tourists coming here every year. Turning it into a reasonably big city should be far out of the question. People come here to get away from big cities and relax. We could be putting ourselves in danger by polluting Boyne City and wonderful Lake Charlevoix. A hospital closer than Petoskey would be nice too. Good Luck planning, and thank you for coming!

Sincerely,
Quinn Ameal
4th Grade
Boyne City Elementary

The Transportation Plan Envisions Boyne City as a City Where...

...transportation functions as part of an interconnected system which offers a range of choices that are safe, affordable, efficient, and convenient for residents, employees, and visitors alike. As a result, rail, air, ferries, transit, cycling, and walking are successfully competing with the automobile for the dominant mode of choice. Local and regional multimodal corridors and centers are maximizing the use of existing infrastructure, while eliminating congestion, preserving air quality, and conserving energy. Commuters, families, and employers are benefiting from a diverse array of transportation demand management strategies such as car- and van-pools, flexible work schedules, and telecommuting. Land use and transportation decisions are considered together, significantly reducing the need for individual automobiles and large parking facilities. Use of rail for freight has been embraced as an effective means of removing trucks from neighborhood streets. City streets are attractive public spaces, and function as part of a system of interconnecting streets. Circulation within the downtown, waterfront, neighborhoods, activity centers, and institutional areas is predominantly oriented to the pedestrian. A series of trails and paths provide access between neighborhoods and areas of protected open space.

Introduction

An effective transportation network is essential to moving people, goods, and services, and for the social and economic well being of Boyne City.

Changes in Michigan's transportation system have had a profound effect—both positive and negative—on development patterns over the course of the last two centuries. Access via Lake Charlevoix, and later by railroad, were instrumental to the early growth of Boyne City as a port through the late 1800s. The completion of the interstate highway system spawned a development boom seen statewide through the 1960s and '70s by improving access from large urban centers. Today, Boyne City is within a day's drive of over 11 million people.

Our society's embrace of the automobile has caused previous planning efforts to concentrate on transportation supply, principally expanding highway capacity. In recent years, however, the public has become increasingly concerned about the consequences of accommodating this unrelenting demand—on our communities, environment, and pocketbooks. This sentiment is now reflected in federal legislation. The Intermodal Surface Transportation Efficiency Act (ISTEA), passed in 1991, closed the door on the interstate era and ushered in a period where choices and connections between transportation modes, and the containment of costs—financial, environmental and community—have become national priorities. Subsequent re-authorizations (TEA-21) have reiterated and reinforced this commitment.

Boyne City's transportation priorities are based on the belief that our quality of life is not an accident and needs to be nurtured. In the context of transportation, this nurturing is best expressed:

- in a more efficient use of existing services and facilities
- by considering land use and transportation decisions together
- by enhancing pedestrian, bicycle and public transit opportunities and experiences as an alternative to the single occupancy automobile
- by sharing resources and strengthening connections between various modes of transportation

This can only be accomplished by developing a "transportation system" that meets existing needs while paving the way for tomorrow's users.

Street Classification

Streets serve two essential purposes: providing **access** to property and **mobility** between destinations. While many roads attempt to serve both functions at the same time, most can do neither well. For example, traffic will be slow on a street that has many driveways due to the number of turning vehicles (access to property is high, but mobility is low).

A limited-access highway, on the other hand, provides a higher level of mobility but, by definition, offers little access to adjacent property.



Streets, particularly neighborhood streets, also serve as an important public space providing places for people to park their cars and to ride bikes, paths for walking, places for talking and playing, right-of-ways for utilities, and offering an important setting for public buildings and private homes. To facilitate planning and decision-making, Boyne City's streets are classified as major, collector, or local streets based on their function within the transportation network.

Major Streets: These streets serve as the principal access routes from adjacent communities, and as primary connections between neighborhoods within the city. They provide mobility over access. Parking is permitted where feasible. Additional curb cuts are discouraged and only allowed where absolutely necessary.

Collector Streets: Streets that gather traffic from local streets and feed it onto major streets. They attempt to balance access and mobility functions. Parking is generally permitted on collector streets.

Local Streets: Streets that provide direct access to adjacent property. They facilitate the movement of vehicles to and from collector or major streets. Parking, biking and other public uses of the street are encouraged. Through traffic on local streets is discouraged, as are trucks, except those destined for local deliveries.

In Boyne City, most streets are at least partially residential, some have sidewalks to serve pedestrians, and some provide at least some accommodation for cyclists. The primary function of residential streets is to serve the land that abuts them. Yet, many function as collector or major streets in the city's transportation network and are classified accordingly. Here a conflict may arise between

the presence of moving vehicles and the quiet of a residential street. This is partly a function of the street grid originally laid out when Boyne City was first platted. This grid however is an important asset to the city's transportation system. It creates continuous thoroughfares and eases congestion by providing route choices and distributing traffic across a broader network. Without this network, all of the traffic would be concentrated on just a few streets. Boyne City's grid network of streets should be maintained, and expanded whenever possible by linking dead-end streets when it is not detrimental to the surrounding neighborhood. The challenge is to move vehicles efficiently while protecting a sense of community in city neighborhoods.

ACCESS OBJECTIVES

- To Downtown
- To the Waterfront
- To the Industrial Park
- To Community Parks and Facilities
- To other Transportation Modes

NEIGHBORHOOD OBJECTIVES

- Removal of Truck Traffic from Local Streets
- Removal of Commuter Traffic from Local Streets
- Provision of Safe and Convenient Pedestrian Routes
- Provision of Safe and Convenient Bicycle Routes
- Strong Linkages Within and Among Neighborhoods
- Integration of Traffic-Calming Techniques for Local Streets

DESIGN OBJECTIVES

- Roads that are appropriate in scale to Boyne City and its neighborhoods.
- Roads that are fully integrated into and designed as part of a multimodal system including accommodations for transit, cycling and walking.
- High quality landscaping, lighting, and amenities.
- Underground utilities.
- Cost effective solutions that meet local design standards.

This Plan reinforces the notion that a multi-modal approach, which encompasses a broad range of objectives, is the only practical and effective answer to the city's long-range transportation needs. The city will not accept a project design that is not responsive to community objectives and does not serve a wide range of users.

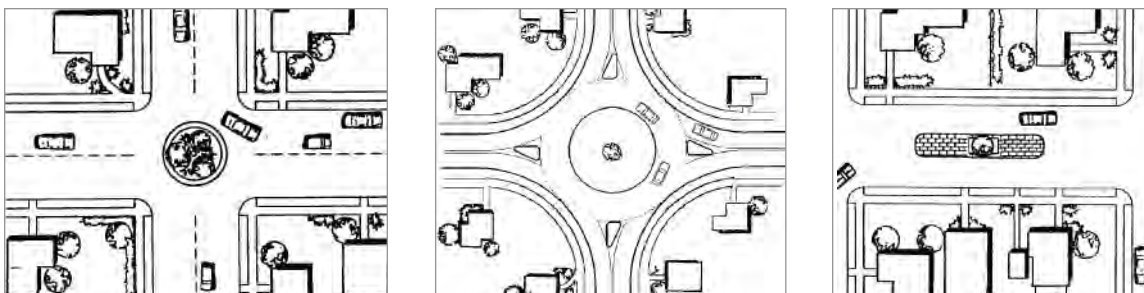


Poor access management / poor appearance.

Residential streets are complex places that serve multiple and, at times, competing needs. Residents expect a place that is relatively quiet, that connects rather than divides their neighborhood, where they can walk along and cross the street relatively easily and safely, and where vehicles move slowly. Other street users, including emergency service providers, solid waste collectors, and delivery trucks, expect a place that they can safely and efficiently access and maneuver to perform their jobs. Clearly, balancing the needs of these different users is not an easy task.

Traffic Calming

Traffic calming techniques enhance both safety and the quality of life on city streets. Shade trees and on-street parking can buffer homes from the streets and slow traffic. Sidewalks can be widened and bicycle lanes added where safe and appropriate. Street entrances can be narrowed and brick crosswalks added. The intent is to affect driver behavior and expectations—causing vehicles to slow down and adopt a more pedestrian-friendly behavior. Physical barriers or a change in pavement texture may slow traffic entering a calmed area. Parts of the street are often reclaimed for pedestrian activities or landscaping. Making a street one-way or blocking lanes can also protect a local street from through traffic. Traffic calming can help keep through traffic off residential streets, and make collectors quieter, more friendly for bicycles, and easier to cross for pedestrians.



(Left to right) Mini-traffic circles, roundabouts, and center islands are three traffic calming techniques often employed.

Mini-traffic circles are raised islands, placed in intersections, around which traffic circulates. They are sometimes called intersection islands. They are usually circular in shape, though not always, and are usually landscaped in their center islands, though not always. They often have outer rings (called truck aprons) or conical shapes (with "lips") that are mountable so large vehicles can circumnavigate their small curb radii.

Roundabouts, similar to mini-traffic circles in that traffic circulates around center islands, roundabouts are used at higher volume intersections to allocate right-of-way among competing movements. Roundabouts in the U.S. are found primarily on arterial and collector streets, often substituting for traffic signals or all-way stops. They are larger than mini-traffic circles, are designed for higher speeds, and have raised splitter islands to channel approaching traffic to the right.

Center islands are raised islands located along the centerline of a street that narrows the street at that location. They are also called midblock medians, median slow points, and median chokers. Placed at the entrance to a neighborhood, often with textured paving on either side, they are called gateways. They may be nicely landscaped to provide visual amenity and neighborhood identification as well as modest speed reduction.

Stressing Other Modes of Travel

Intermodalism has become the latest buzzword in the transportation jargon. The past ten years have seen the development of a greater diversity of travel options. These include the beginning of Commuter Rail Service as seen in many cities around the country; recognition of bicycles as a legitimate means of transportation; and pursuit of pedestrian enhancements throughout the city. All reflect a broadening of transportation alternatives and perspectives about the importance of transportation issues to the city. In order to be most effective, all modes of transportation must be integrated as part of a transportation system.

Transitions between modes must be smooth and convenient, and the design of new developments and transportation facilities must facilitate this transition. The concept is one of a "mobility system." that is not simply roads, buses or bikeways, but the essence of the functions they serve. A mobility system also includes land use policies that enable people to live close to work, shopping and entertainment, and the design of system components (i.e. roads, transit systems, sidewalks, etc.) that are sensitive to the needs of the community—major streets that facilitate mobility, not create single-use barriers within a community; transit vehicles that are welcome in neighborhoods, not viewed as intruders; and amenities that serve the user.

Public Transportation

Public transportation is perhaps the single most important component in a future transportation system that will serve the city and region. While public transit will not likely dominate automobile use, it does offer the greatest opportunity for improved efficiency and mobility. Public transportation includes fixed-route and demand-response bus service, shuttles, taxis, ferries, and passenger rail. The advantage of public transportation is that more people can be served for fewer dollars. This means less traffic, fewer highways, cleaner air, safer travel, less space devoted to parking and greater opportunities for lower income residents and those who choose not to drive.

Intermodalism refers to making connections, or linkages, between various modes of transportation.

Multimodalism refers to providing a range of transportation options (e.g. buses, cars, carpools, bikes, walking, etc.).

Public transportation is expensive in the short-term. In this era of fiscal restraint, new expenditures on infrastructure must be closely examined. We must make the best use of existing capacity, and make choices that will serve us best over the long-term. However, we must take advantage of those opportunities where investment in transit is a wiser use of public and private funds than continuing exclusive investment in facilities that serve predominantly the automobile. For this to be effective, the private sector must be a partner, both philosophically and financially, and service providers must be responsive to changing needs during this time of transition. Public transit has suffered in matters of convenience when compared to automobile use. Taking transit may mean a longer trip due to

longer headways, traffic and scheduling. In addition, many trips are linked—meaning they involve stopping at more than one location along the way. A typical example is grocery shopping and picking-up children on your way home from work. Boyne City's climate offers another deterrent to greater use of public transit, as most bus stops are unsheltered from cold winds, provide few amenities and offer little information. None of these factors, however, should be seen as reasons not to aggressively promote public transportation. They are simply realities and obstacles that must be accommodated in system planning and design. If we are to capture a greater percentage of trips with public transit, the comfort and convenience of the user must be a guiding principle. Users must know where and when they can access the service—before ever getting on. Transit must be made convenient and economical if it is to compete effectively with the car. At the same time, we must never lose sight of public transit's true objective: to take people where they need to go, when they need to get there. For many transit dependent users, it is not a question of convenience, but of necessity. Finally, land use patterns and densities must facilitate transit use. Both within the city, and across the region, a land use pattern that promotes concentrations of higher-density development will be essential to improving the quality and frequency of transit service.

Passenger/Freight Rail

Although Boyne City does not currently have an active rail line, it did in the past and may again in the future. As conditions change over time, the need for passenger and freight rail most likely will come back to Boyne City. A rail spur most likely will come from Boyne Falls.



The old rail bed and Rail Right-of-Way located just north of East Main Street within the city limits should be preserved as part of a trail system for conversion into a future rail line.

Passenger Ferry Service

As with rail service, Boyne City once had a thriving water transportation service for both passenger and freight. Water transportation is the least expensive way to ship goods or to travel.

The Public Right-of-Way must be kept intact at the end of Water Street to Lake Charlevoix as this may once again be used as a public dock in the future. An active port may one day be in Boyne City's future. The most logical public facility for water transportation is at the terminus of Water Street at Lake Charlevoix. Someday, both passenger and freight service will be an important mode of transportation at the waterfront.



Bicycles

Boyne City has a growing reputation as a "bike-friendly" city. The popularity of the "Ride the Charx," the Delmac and other rides are evidence of this popularity. Bicycles continue to play an increasing role in reducing auto dependence and improving the livability of the city. While bicycling may not be an option for everyone or every day, properly designed and maintained bicycle facilities, coupled with a well developed education and enforcement program, can help provide a reasonable reduction in the use of cars and an enjoyable and healthy mode of transportation for many. Choices for future bicycle facilities cannot be an either/or decision. In-the-road options typically serve the experienced cyclist and dedicated commuter, and offer a shared use of existing roadways. They work best where speed limits are 30 mph or less. "Share the Road" is the philosophical expression of this commitment. In contrast, dedicated bike paths better accommodate users such as children and visitors who are less confident and experienced, and have proven an important economic development tool for the city. These paths should be used to provide access to destinations frequented by children such as schools, and major destinations where they may represent the shortest route. Major improvements to the city's bicycle network should be associated with the major roadway reconstruction projects. Future improvements must also include amenities such as secure and sheltered bike parking; showers and lockers. The placement of bike racks on all Charlevoix Country Transit vehicles will be a big step forward. Bike lanes and routes must be adequately marked in order to give notice to drivers that they should expect to encounter bikes on this road. Two important steps forward in this regard should be creation of a bicycle education program in association with the city's schools, and placing Community-Based Police Officers on bicycles whenever possible.

Walking as a form of Transportation

Walking is the oldest and most basic form of human transportation. It requires no fare, no fuel, no license and no registration. With the exception of devices to assist the mobility-impaired, walking demands no special equipment. Thus, walking is the most affordable and accessible of all modes of transportation.

Over the decades with the planning and engineering emphasis toward automobile travel, the art and recognition of the pedestrian as a viable form of transportation became lost.

There are a number of reasons to walk in Boyne City.

- **Quality of Life.** Quality of Life is a hard concept to clearly explain. However, it is something that most individuals seek either consciously or in a less direct fashion. Pedestrian opportunities, pedestrian connections, and connectivity are all important to increasing the quality of life in Boyne City.
- **Air Pollution.** Walking trips that replace vehicle trips reduce motor vehicle emissions, which are responsible for our air quality degradation.
- **Energy Savings.** A shift of some short motor vehicle trips to walking can have an impact on our energy usage and reliance on imported oil. The Ten Percent Energy Reduction Challenge is a goal of the “Plan-it Boyne City” initiative.
- **Noise Reduction.** Reductions in noise result from decreased auto usage. Thus, any reduction in motor vehicle use that can be achieved through pedestrian trips will be beneficial. Possibly more important is that to create a pedestrian-friendly and safe

environment, traffic calming techniques need to be implemented that slow traffic and have a corresponding reduction in motor vehicle noise.

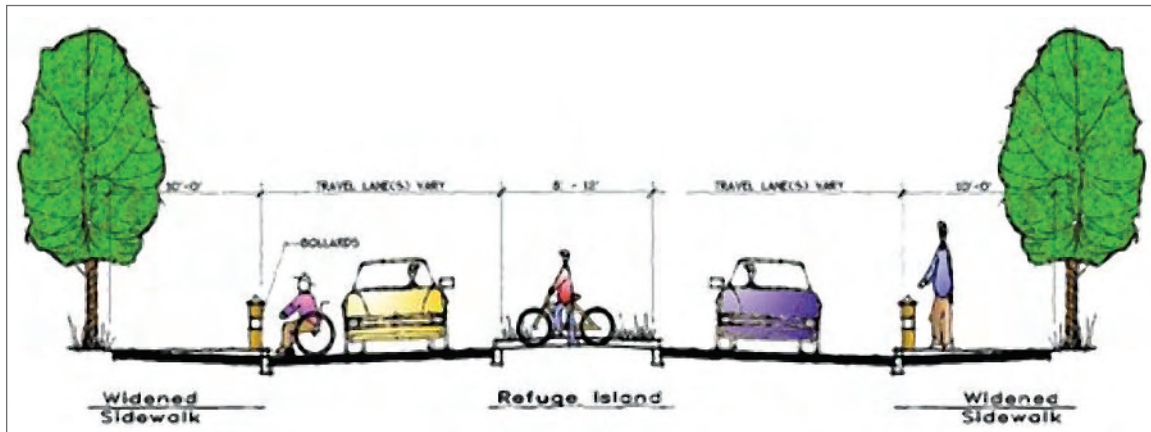
- **Reduce Motor Vehicle Parking Needs.** Pedestrians use no parking thus freeing up land for other uses.
- **Health Benefits.**
- **Reduced Crashes.**

Land Use Benefits of Improved Walkability

A shopping center or office complex may become more economically competitive if walking conditions improve. Pedestrianized commercial districts (“Main Streets”) must be carefully implemented to be effective.

Conventional transportation planning practices treat walking as a minor transport mode and recognize only modest benefits from improved walkability and increased walking activity. This results from evaluation practices that undercount nonmotorized travel and undervalue walking benefits.

From other perspectives it is clear that walking is a critical component of the transport system, and that improved walkability and increased walking can provide significant benefits to Boyne City. Improved walkability increases accessibility, provides consumer and public cost savings, increases community livability, improves public health and supports strategic economic development, land use and equity objectives. A variety of methods can be used to evaluate these impacts.



It should be a priority of Boyne City to allow for safe crossing of Lake Street to get from the Downtown to the Parks and in front of the School Campus on M-75.

COUNTDOWN SIGNAL HEADS

At signal locations Boyne City should install countdown heads for improved pedestrian safety.

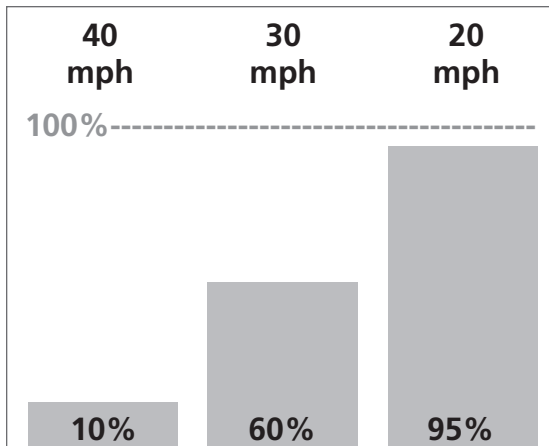
MID-BLOCK CROSSING LOCATIONS AND DESIGN

Mid-block crossings should be considered where there is an existing or potential pedestrian demand to cross at higher volume roadways or streets where crossings are

dangerous. Ideally, these crossings should be accommodated with a refuge island. Center crossing islands allow the pedestrian to deal with only one direction of traffic at a time and they enable them to stop partway across the street and wait for an adequate gap in traffic before crossing the second half of the street.

Economic	Social	Environmental
Improved accessibility particularly for non-drivers.	Improved accessibility for people who are transport disadvantages.	Reduced land needed for roads and parking facilities.
Reduced transportation costs.	Reduced external transportation costs (crash risk, pollution, etc.).	Openspace preservations.
Increased parking efficiency (parking facilities can serve more destinations).	Increased neighborhood interaction and community cohesion.	Reduced energy consumption and pollution emissions.
Can increase local business activity and employment.	Improved opportunities to preserve cultural resources (e.g. historic buildings).	Improved aesthetics.
Support for transit and other alternative modes.	Increased exercise.	Reduced water pollution.
Special support for some businesses, such as walking tourism.		Reduced "heat island" effects.
Health cost savings from improved exercise.		

This table summarizes various benefits from a more walkable community.



Chances of Pedestrian Surviving a Traffic Collision.



Winter and the Pedestrian

As a “winter city,” Boyne City faces challenges and issues far different than some cities. Solutions to most winter problems are not likely to be found in Michigan, but rather, through exchanges with cities whose climate more closely matches Boyne City’s. This statement is especially true for improving pedestrian conditions. Winter greatly affects the mobility of pedestrians in northern cities. Cold, snow, and decreased light levels in the north all influence not only the ability of people to walk in winter, but also the desire to walk.

Taxi Cabs

At present taxicabs are an underutilized and often nonexistent transportation option. Shared ride opportunities and potential new markets for operators have not been explored, but remain a potentially untapped opportunity. There may be latent capacity available within existing City of Petoskey or City of Charlevoix taxi services.

Access to Schools

The area around the elementary, middle school, and high school have become increasingly congested as parents drive children to and from school. This creates a cycle of dependence on motor vehicles as parents' concern for their children's safety grows along with more traffic and congestion. Boyne City has conscientiously maintained its schools in good condition. The schools should be connected to adjacent neighborhoods by a network of sidewalks, bicycle and pedestrian paths, and foot trails to provide safe and convenient access for school children. Mid-block crossings should be created at the schools, at a strategic point along M-75.



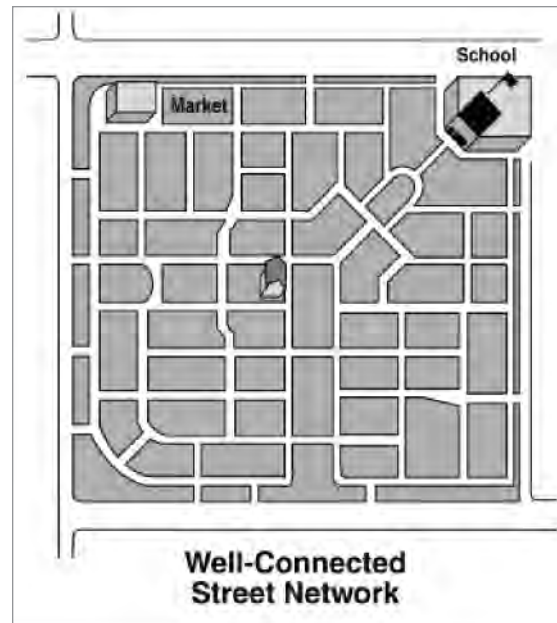
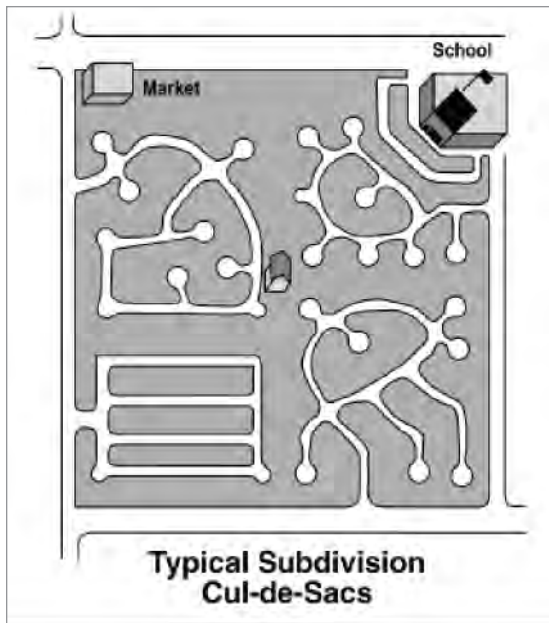
Approach to the Boyne City Airport. The Airport is an important gateway into our community.

Boyne City Airport

The Boyne City Airport, owned by the City of Boyne City and located within the city, is one of the busiest airports in the area with 6,500 flights per year, and serves as an essential gateway to the city. Boyne City's airport service is a dominant factor in the area's economic advantage, and weighs heavily in the city and the region's future economic development potential. The Boyne City Airport must be fully incorporated into a regional transportation system, with well-established linkages between other modes and facilities, and the downtown. The Airport will work with its neighbors in Boyne Valley Township. Airport administrators will seek solutions such as purchasing adjacent properties for conversion to airport-related uses, and development of commercial areas nearby to contain several airport-dependent uses.

Public Mobility System

As Boyne City's transportation system evolves, we will expand our focus beyond the traditional view of transportation, and place greater emphasis on the needs of the user and community at-large. We must enhance the existing transportation network with a range of non-traditional services, weaving the two together to create a "Public Mobility System." Together, with sensitively designed facilities for vehicles and pedestrians, this system can significantly improve the quality of life and economic prosperity of Boyne City by providing more effective transportation services and an enhanced setting for social interaction, business activities, and community life in general.



Connected street networks provide multiple ways for emergency response vehicles to access a particular location and multiple evacuation routes. In addition, a connected street system encourages slow, cautious driving since drivers encounter cross traffic at frequent intervals.

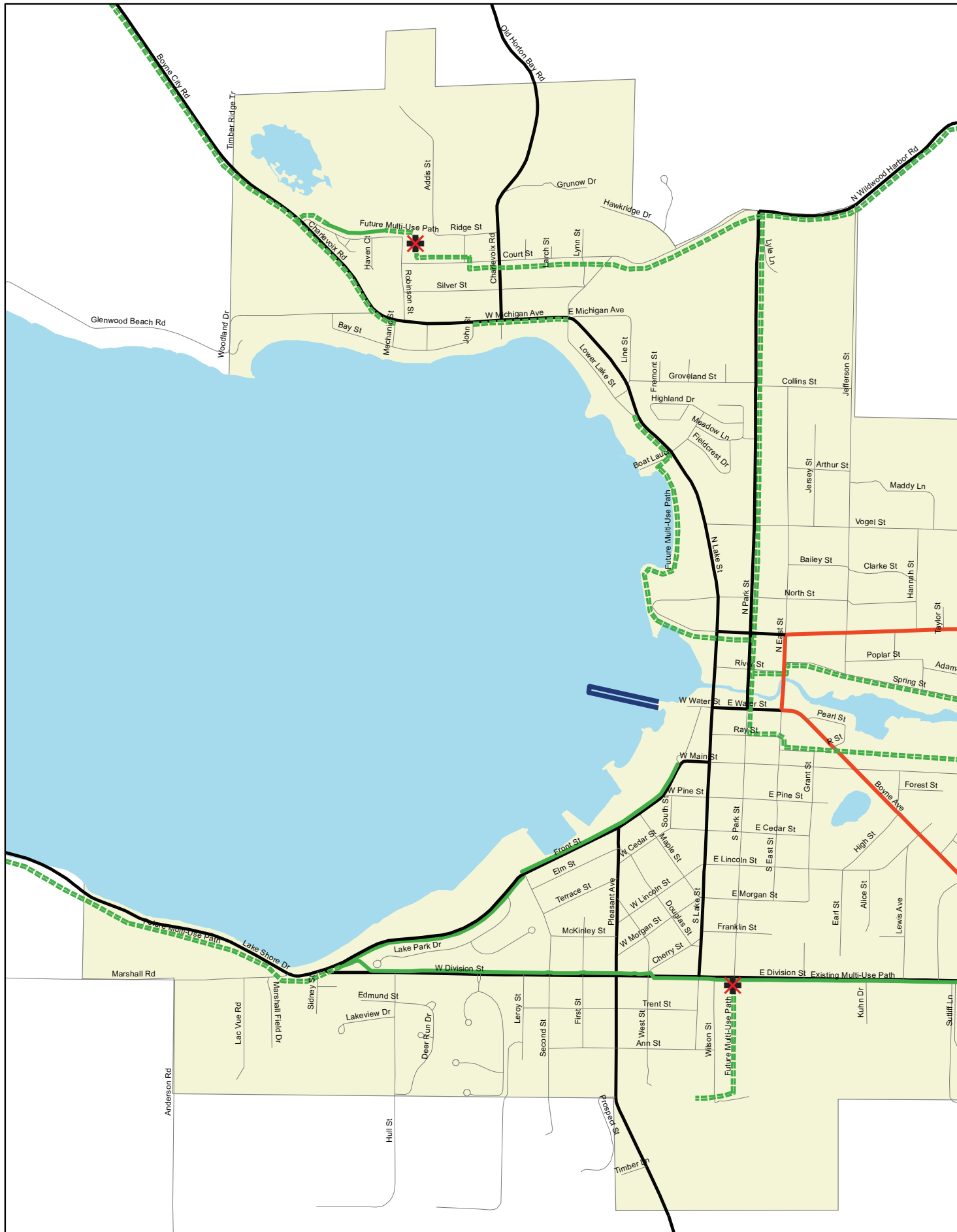
Transportation Objectives

1. Create City Ordinances to give right-of-way to the pedestrian over the automobile at crosswalks, intersections, and driveways and promote active education and enforcement of this ordinance.
2. Increase funding for sidewalks to successfully achieve the vision of becoming a truly "Walkable City."
3. The existing and proposed roadway network in the City of Boyne City should be designed and maintained so it is safe and efficient, but also consistent with the community's long-standing, historic character.
4. The city's topography, its associated fragile soils, and the linkage of outstanding regional parks located here should be considered when planning new streets or vacating old streets.
5. The development of future alternatives to automobile transportation in Boyne City should be explored and supported. These alternatives should include the following: rapid transit/rail systems, bicycle paths, and more opportunities to walk to destinations.
6. The natural vegetation and scenic views located along the city's network of roads should be preserved and enhanced for the benefit of both residents and visitors.



7. Institute Traffic Calming to reduce travel speed. Speed is a significant safety factor for pedestrians trying to cross a street. Factors that might affect travel speed include traffic, number of access points, and geometric design.
8. Reconstruct the Lake Street Bridge crossing the Boyne River in a way that is aesthetically appealing, pedestrian-friendly and has views of the Boyne River.
9. Preserve and enhance the scenic environmental qualities which exist along many of the city's roadways and their intersections through the application of appropriate design standards reflecting sensitivity toward Boyne City's unique environmental characteristics. These standards should be applied in the planning, construction, and maintenance phases of all roadways.
10. Increase Public Bicycle Parking Facilities. Functional bike parking should be provided at public destinations, including shopping centers, community centers, parks, and schools. All bicycle parking should be in a secure, visible area that is convenient to the destination (near building entrances). Bicycle parking on sidewalks in commercial areas and along walkways of shopping centers should be provided for. As a general rule, 'U' type racks bolted into the sidewalk are preferred in shopping centers, to be located intermittently and/or at specific bicycle destinations (e.g. cafes, grocery stores).





City of Boyne City Transportation Map

- State Trunk Line
- Collector
- Local
- Existing Bike Path
- Future Multi-Use Path
- Airport
- Boat Dock
- Trail Heads



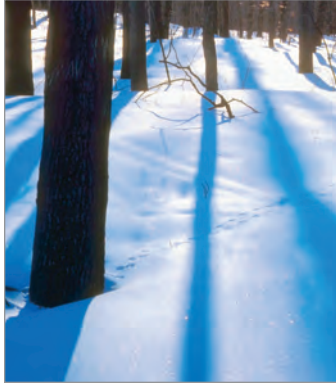
Map Produced by
the City of Boyne City
Planning Department
April 17 2006. Street
data provided by
CCE-911

0 750 1,500 3,000 Feet





Winter City Design



“A fresh snowfall brings a subtle change to the music of the woods ... Now all sounds are muted, as if nature stands in awe of the great changes it has brought to the land. This is a time for the nature-lover to read the diary of the forest, for the snow is a page on which each passing animal inscribes its message.”

1963 by Josef Scaylea

Northern communities, which occupy the top quarter of the globe, must be more competitive than their southerly counterparts. Winter is often perceived as a negative force—generating inconvenience and added costs—instead of a positive one which includes overcoming challenges in innovative ways embracing healthy lifestyles and recreational opportunities. Therefore, a thorough understanding of who we are and where we live will inevitably lead to increased productivity and economic competitiveness in an era of globalization and in the desire to attain a higher quality of life and an enhanced standard of living.

Some of the negative aspects of being a Winter City are associated with:

- Increased costs for snow management
- Health expenses related to auto accidents, slips, falls
- Decreased mobility, especially for seniors (on foot and by car)
- Prolonged cold temperatures, ice snow and wind-chill
- Limited outdoor activities
- Increased heating expenditures and energy consumption
- Reduced effectiveness of public transit (where existing)
- A generally drab environment lacking in color and warmth

However, many positive aspects also exist—which are usually underemphasized or overlooked—such as:

- Opportunities for innovation (in fields such as energy, construction, clothing design, transportation, snow removal, etc.)
- Outdoor sports such as downhill and cross-country skiing, ice skating, snowshoeing
- A generally fit and robust population
- A strong will to confront challenging situations
- Utilization of ice and snow for civic art to embellish the town
- Unique urban planning concepts for weather protection
- Winter tourism
- Enjoyment of seasonal variation and its associated activities

The City of Boyne City would like to thank the Winter Cities Institute (www.wintercities.com) and Patrick Coleman, AICP for major contributions to this chapter.

Benefits of Winter City Development for Boyne City

- The quality of life of local citizens will be enhanced with the ease of movement through the utilization of weather-protected urban infrastructure such as canopies, atriums, galleries, or inter-store connections.
- Winter city development provides numerous business opportunities for innovation in fields such as energy, construction, clothing design, transportation, and snow removal.
- Many local citizens and tourists can benefit from outdoor sports such as ice hockey, downhill and cross-country skiing, snowmobiling, figure skating, snow shoeing etc.
- Utilization of lighting, ice and snow for civic art adds a festive atmosphere to the local community.

Goals for Boyne City as a Winter City

- Plant conifer trees to shelter pedestrian areas from prevailing winter winds.
- Use subdued colored exterior lighting to counteract long hours of darkness.
- Raise crosswalks as speed bumps both to slow traffic and to keep walking area dry.
- Use deep overhangs and sidewalk arcades on buildings to provide additional shelter.
- Create “swirl chambers” near entrances to catch winter winds and snow.
- Design urban parks for winter use, with heated structures, wind screens, skating and toilet rooms.
- Connect downtown stores with interior connections between adjacent buildings.
- Create vest pocket parks sheltered by buildings and open to the south.
- Allow for greater density to minimize necessary travel in inclement weather.
- Incorporate sun angles and southern exposures in zoning ordinance.

- Rejecting denial of our potentials and opportunities
- Taking measures to curtail importing “Anywhere USA” design and development styles
- Increasing awareness and education for winter’s demands
- Conceiving future plans and designs with winter in mind
- Creating multi-seasonal projects and plans for all seasons
- Designing in harmony with nature and its diverse expressions
- Shifting attitudes—thinking in a winter mode
- Acknowledging winter explicitly in urban frameworks
- Developing energy efficient, sustainable urban framework
- Generating local and regional pride
- Securing a globally competitive position for northern towns
- Ensuring success in socio-economic and physical well-being

Cities in cold winter climates need special planning for their downtowns. Such considerations include strategies that are appropriate only for cities in northern climates, and some are good planning strategies that are important anywhere but are rethought for “winter cities.”

To encourage these innovations, incentives should be given to developers who use such ideas. Especially encouraged should be mixed-use developments, which put complimentary uses in proximity and mitigate the problems of winter travel. But perhaps the most important factor is developing a community-wide attitude of celebrating winter, and discovering its good sides.



Public Art

Our cities in the last several decades, influenced by growing mass consumerism and global communications have developed a veneer of sameness and a sense of placelessness. Public art, free standing or incorporated into urban design, is one of the most effective ways to reconnect residents and visitors to the specialness of their particular place.

- Boyne City should strategically place public art in and around its downtown.
- Art should include lighting to draw people into the downtown
- Art can include seasonal variations such as ice sculpture, seasonal lighting, snow sculpted forms
- Winter landscape lighting plan could be a major tourist draw.



Color

In Boyne City, the seasonal color differences are strikingly apparent through Summer's greens, Autumn's dramatic gold and reds and Winter's refracted whites. Color combinations, which complement the seasonal background variations, will visually warm the winter experience and be more aesthetically pleasing all year round.

- Identify colors for the community's buildings and furnishings that are complementary with all of Boyne City's different seasonal visual backdrops, that add warmth and color to cheer up its residents and visitors in the winter periods of less sunlight.
- Implement "eco-color" awareness programs, and adopt color guidelines which relate to the dominant natural color palate.

Snow as a Resource

Boyne City's significant snowfall creates major visual opportunities. For that reason, the following should be considered:

- Examining alternate snow management strategies to visually reinforce winter wayfinding (e.g. gateways, places of activity, edges and landmarks), encourage seasonal artistic, recreational, or comfort opportunities (e.g. snow sculptures, winter adventure playgrounds and windbreaks)



Pedestrian Mobility in Winter

One of the keys to being a “good winter city” is to question and reconsider all municipal actions relating to the winter season. It is imperative for cities to seek out and implement new or different ideas for improving services, infrastructure, public spaces, and the environment.

Winter greatly affects the mobility of pedestrians in Boyne City. Cold, snow, and the decreased light levels in the north all influence not only the ability of people to walk in winter, but also the desire to walk.

Cold weather is not so bad by itself, as one can wear the right clothing and be comfortable. When cold is combined with wind, walking can be very uncomfortable, if not dangerous.

Snow and the condition of the walking surface itself are major factors with mobility. A packed snow surface actually is one of the best walking surfaces. Four centimeters of fresh snow and walking becomes more difficult. If the snow is old or has thawed, and the surface is icy, then walking again becomes difficult and dangerous, especially when combined with a sloped surface.

Decreased light levels also influence walkability. Pedestrians are more susceptible to auto collisions under decreased light levels. It becomes difficult to see ice and obstacles. People are not always comfortable walking at night, unless the walkway is properly-lighted.

If the city were to be designed for the pedestrian, the walkway would take on more prominence, with separation from traffic, windscreens using earth forms, evergreen trees, and adequate snow storage along streets.

During winter, walking becomes more difficult and often uncomfortable. This is a simple fact. If we, as winter cities, desire to make our communities more walkable, then we must consider all these environmental and psychological factors in our infrastructure and maintenance. The problem is, these factors are not considered, in fact, the prevailing thinking is that people do not or will not walk in winter no matter what.



Cultural Barriers to Pedestrian Mobility

In the auto-oriented culture of the United States, many northern cities have ignored the pedestrian in winter time, with most attention and resources devoted to keeping streets and highways clear of snow and ice for the automobile. Most strip commercial developments are constructed without pedestrian connections or any means of walking between businesses, much less walking to the commercial development from a neighboring residential area.

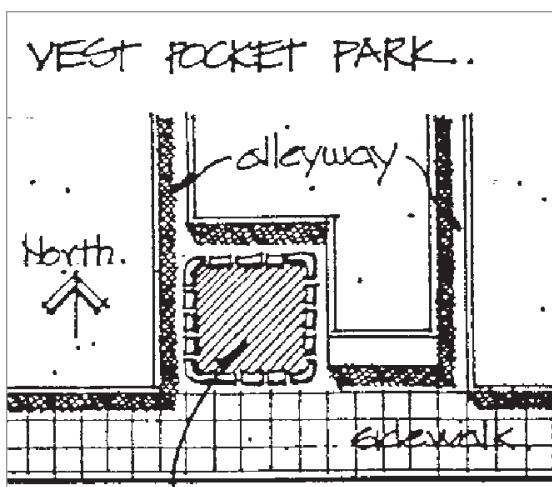
The auto-oriented culture further compounds the problem of pedestrian mobility. We have become so dependant upon cars, and related roads and parking facilities, that the needs of parking and roads outweigh the needs of the pedestrian.

Walkability also influences Boyne City's ability to attract new investment in business, jobs and residents to the downtown area, as more people desire to spend less time commuting and to live near where they work.

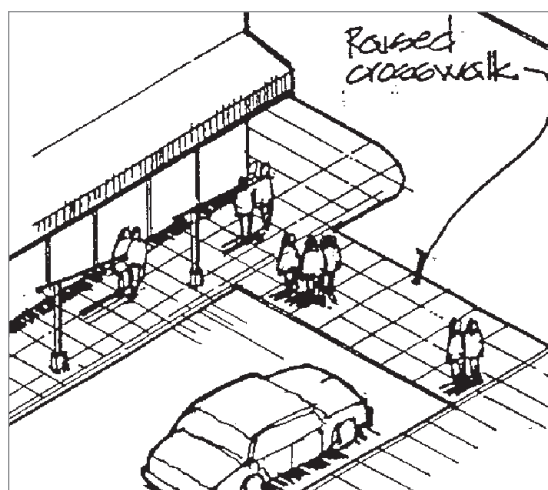
In both Kiruna and Lulea Finland, much care is taken to provide the pedestrians with a good consistent-walking surface. No salt or de-icers are used, rather, small diameter gravel is used for an abrasive to improve traction. Walkways are scraped clear of loose snow, leaving a packed snow surface, perfect for walking.

Traditional kicksleds, or sparks, are used by many persons in northern Scandinavia to assist with walking in winter. Consisting of a chair mounted on long steel runners, the kicksled has been used for over 200 years and remains an important transportation mode of travel. They are especially favored by older persons and mothers with children. The kicksled provides stability and support on the winter walking surface. They can be ridden on downhill grades, or propelled by standing on one runner and kicking the snow surface. Small parcels may be carried on them and the chair provides a place to sit and rest.

Scandinavian communities consider the kicksled when maintaining walkways. When spreading the gravel abrasive, clear lanes are left for the sleds. There are even special parking places for



A south facing, vest pocket park shelters pedestrians from winter winds.



Traffic calming improvements, such as raised crosswalks at street intersections, should be employed to slow down vehicles and provide a dry walking surface for the pedestrian to cross the street.

the kicksleds in some northern communities. Kicksleds have also become popular in Colorado and Minnesota.

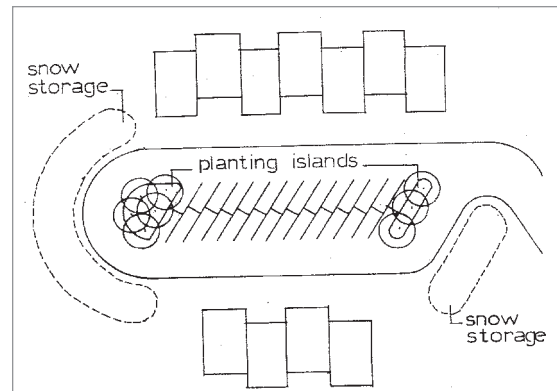
Key walkways through neighborhoods should be plowed for pedestrians. Walkways leading to schools should be priorities.

Winter maintenance of downtown walkways and parking areas should be a priority of the city's downtown. Linkages between parking areas and the retail street should be designed for comfort in the winter season.

Anchorage, Alaska, has developed a multi-use, non-motorized trail system linking various parts of the city. One can walk, run, ski, and ride bicycle on this trail in the winter. Marquette, Michigan is also considering maintaining a bike path in winter for multi-use. Special equipment must be purchased and used in order to pack and prepare the snow surface for multi-use.

This public cost of building and maintaining walkways for winter use must be compared to the value the community places on winter pedestrian mobility. Many will argue that pedestrian mobility in winter is not an achievable goal, or that the desire to walk in winter among citizens is not there. In the not so distant future, multi-seasonal access and mobility will have a far greater value, as more persons choose to live near where they work and forsake the traffic congestion and long commutes associated with many large cities.

For communities that experience periods of low sunshine, cold winters, and feelings of isolation, it is particularly important to maximize interaction with the outdoor environment. This is accomplished through extending the outdoor season by optimizing beneficial climatic elements. This facilitates longer periods of social interaction within the community throughout



Proper planning for snow storage and drainage.

the year. Climate-responsive design principles also promote safe and comfortable movement since many principles are geared to minimize icy sidewalks or dark, impersonal streets. These principles also encourage comparison shopping in colder periods of the year in lieu of quick destination shopping where people avoid the negative aspects of winter.

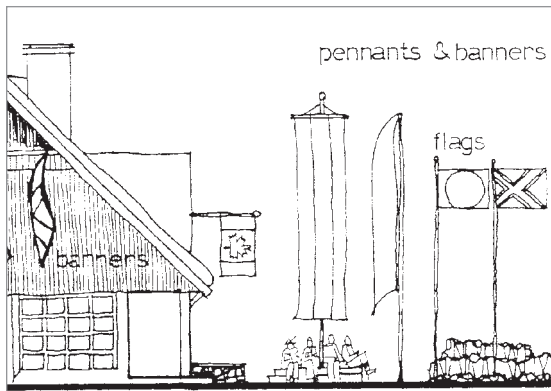
Design Issues

ACCESS/PARKING/LOADING

Boyne City is working toward a strong pedestrian orientation and the design of buildings should minimize the conflicts between vehicle and pedestrian circulation.

Underground parking is encouraged where possible. Above ground parking should be well signed yet unobtrusive. Landscaping and appropriate materials such as fences and boulders will make the parking areas less conspicuous.

Driveways should be designed to a maximum of 8% and ideally less than 6% slope. Where site conditions dictate driveways with more than an 8% slope, the slope may be increased with the use of heat tracing or a roof.



Pennants and banners should be used in the downtown area to add color and animation to the outdoor life of the streets.

While snow removal is a very important part of surface parking it is not the whole picture. Surface Parking should allow for adequate areas for snow storage and drainage. These may be combined with islands of plantings to break up large areas of paving.

Surface areas can be screened by a combination of walls, fences, landscaping and berms.

Separate pedestrian circulation routes within the parking area should be considered.

PROVIDE FOR SOLAR ACCESS

Design should preserve sunlight on neighboring outdoor or indoor spaces whenever possible. Late afternoon sun is most important for outdoor activities and uses.

SITE ELEMENTS

All site and landscaping elements should be designed to resist damage by incorporating durable materials, rounded edges and eliminating unnecessary protrusions. Downtown features such as water, public art, flags, banners and graphics are strongly encouraged provided they contain no commercial message.

PLANT MATERIALS

Trees and plantings are to be protected from snow clearing operations by stone walls or concrete curb. Landscaping should use indigenous or similar hardy materials.

Plant materials located in the snow dump and snow shed areas must be sufficiently durable to survive the effects of snow. Summer floral displays are encouraged in feature areas.

Plating used for screening must be primarily coniferous.

LIGHTING

Illumination levels should be sufficient intensity to provide security but not over-power the nightscape. Illumination should be low level and non-glare, staying within the Dark-Sky principals.

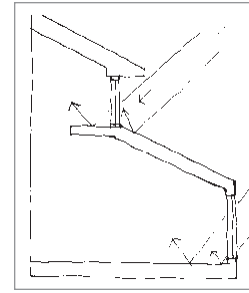
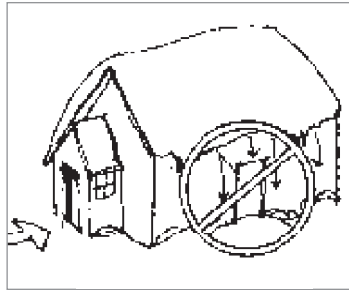
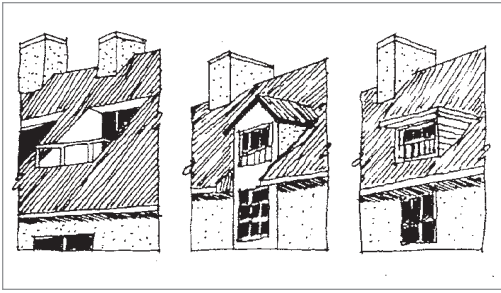
Provide exterior lighting for highlighting landscaped areas, features, walls, etc. Exterior neon is discouraged.

Lighting designers should be aware that the standard street and parking lot lighting is color-corrected Metal Halide. Fluorescent and sodium lighting are generally discouraged.

ROOF DESIGN

Roof Design is important for snow management, and is a major contributor to the character of Boyne City. Roofscapes are an important design element which is viewed from pedestrian level, the adjacent buildings and the approaches coming in to Boyne City.

Sloped roofs shed accumulated snow in avalanche fashion and can be dangerous to pedestrians below. The design of roofs and pedestrian areas below them is referred to as "snow management" is discussed in the next section.



Important elements of roof design contribute to the overall character. Various dormers can be employed to break up the roof form. Entries at gabled ends avoid snow and ice fall. Maximizing daylighting can be achieved by adding high windows.

1. Roof form should be modulated

Roof form should be broken up with the use of dormers, or other architectural features. The ridgeline should not be continuous but should be varied in height or broken with chimneys, cupolas, towers or other features.

2. Roofs should have sloped appearance

Roofs slopes should be between 5:12 and 12:12

Large areas of flat roofs are discouraged. A composition of sloped roofs is encouraged with small areas of flat roofs is acceptable. Mansard roofs are not acceptable.

3. Flat Roof Design

All flat roofs should incorporate colored roof membrane or special roof aggregate consistent with the building color scheme.

4. Roof Materials

Consider the effects of climate and snow management in selection roofing materials; cedar shake, cedar shingles and metal roofs are most effective. Asphalt shingles generally are not a best practice for this climate.

The color of roof materials should be generally neutral or muted in order to blend with or enhance the colors of the natural landscape.

5. Roof Mounted Equipment should be concealed

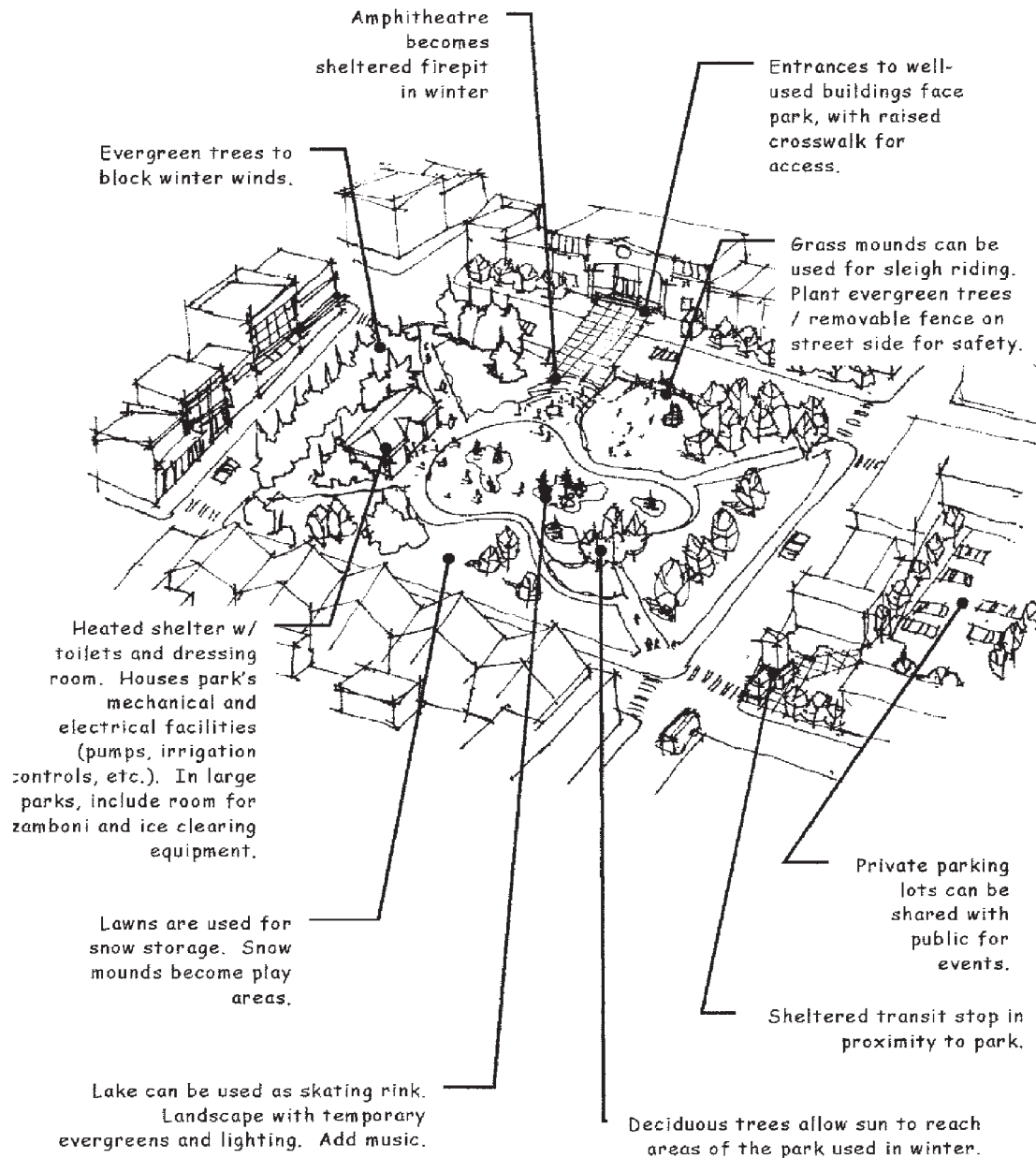
Satellite dishes, communications antennae and mechanical equipment should be concealed from all pedestrian viewpoints and any overlooking development. Venting stacks, flues and other similar projections should be concealed or integrated within the roof form.



Goals

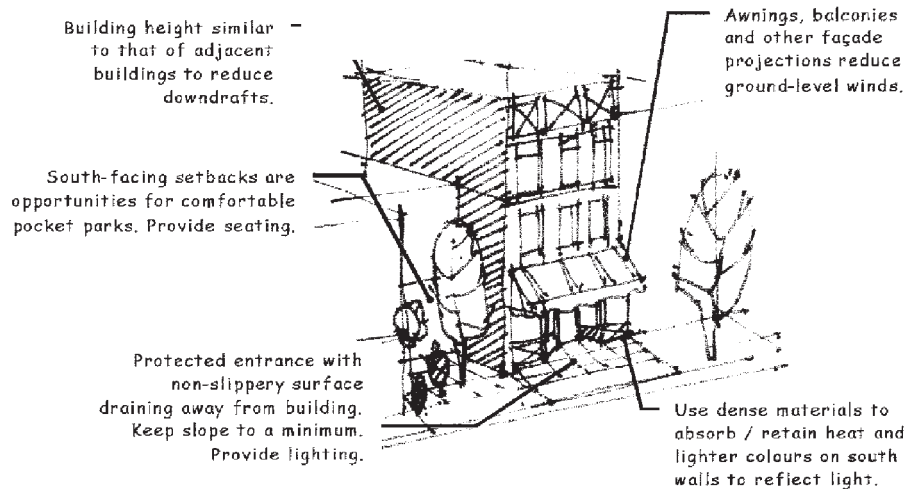
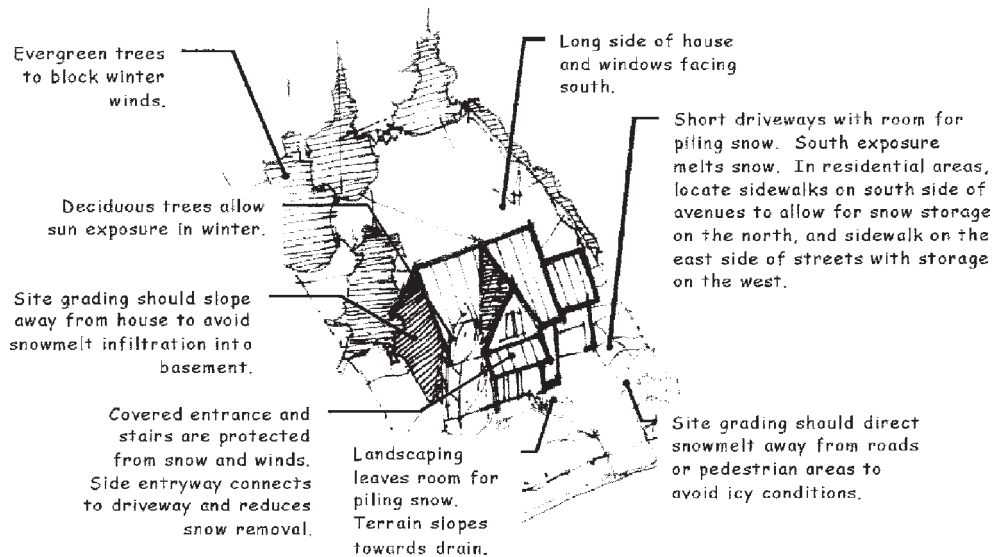
- Care should be taken to provide the pedestrians with a good consistent-walking surface. Salt and de-icers should not be used; rather, small diameter gravel is used for an abrasive to improve traction. Walkways should be scraped clear of loose snow, leaving a packed snow surface, perfect for walking.
- Planning for future parks and park improvements should take winter uses/design into consideration.
- Create and enforce sidewalk clearing regulations.
- Promote Boyne City as a Winter City destination offering multiple winter sports.
- Offer a high quality winter experience for outdoor enthusiast. This includes:
 - high quality warming stations.
 - Quality night lighting for activities
- Add Public Art to Parks
- Continue the high standard of design, architecture and landscape architecture which is what separates Boyne City from other places.
- Preserve where possible and supplement the existing natural landscape.
- Organize spaces, orient buildings and continue the scale of the existing downtown to maximize lake views and sunlight in public spaces.

Parks and Open Spaces





Homes and Commercial Buildings



Divide the parking lot into smaller ones separated by planted islands. This makes it easier for people to find their car and reduces wind speeds.

Provide pedestrian pathways between parking lots and connect them to main entrances of buildings.

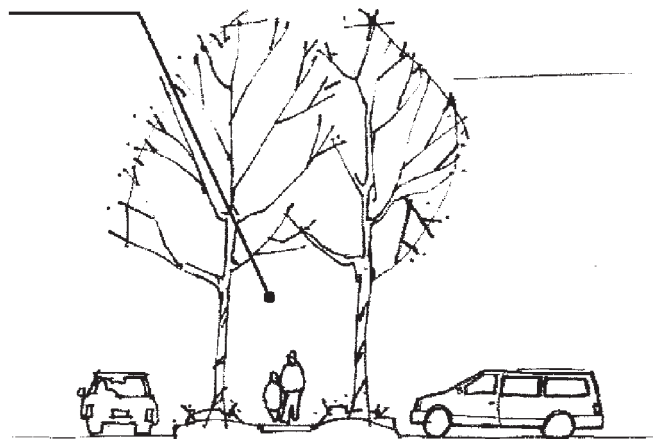
Put street-facing buildings along street frontage and at corners. Parking lot may remain visible but must be screened by vegetation.

Landmark feature at main entrance guides drivers.

Adequate snow storage should be developed to accommodate parking and walkway dimensions. Site should be designed to facilitate snow removal and equipment. Snow storage should be located in areas that maximise sunlight and melt.

Parking lot dividers

Provide room for pedestrian pathways and planted islands to serve as wind barriers. Dividers should be large enough to accommodate snow disposal. Raise them above parking level to reduce salt absorption from surface run-off and spray. Drainage and grading should direct water away from pedestrian and parking areas.



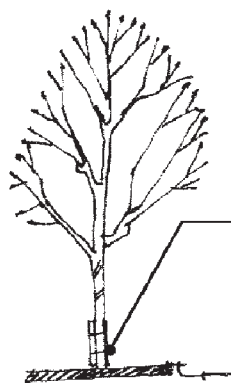
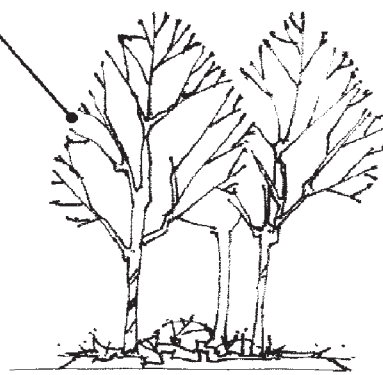


Trees and Plantation

The winter climate offers harsh living conditions for urban trees. To improve tree health, choose cold and salt-resistant species. Wherever practical, group trees together instead of planting them in rows.

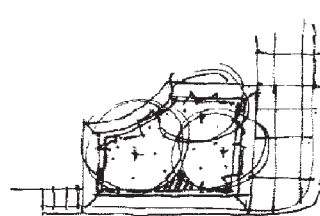
Planted Islands

Grouping trees together improves their resistance to wind exposure and reduces surface evaporation. Trees also have more soil available for root development and water retention. Plan understory with salt-resistant shrubs and perennials. Raising the island reduces salt intake.



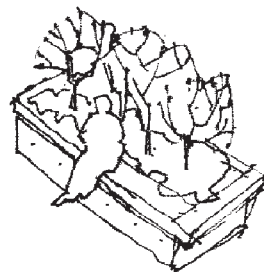
Winter Protection

Pieces of 2X4 lumber or recycled rubber matting strapped to the trunk protect trees against snow removal equipment.



Planters

Small planters are inadequate for most wintering plants and should be moved to wind-protected storage in winter. Large planters are adequate for hardy species and can double as street furniture.



Probability of a White Christmas

