

**GROWTH MANAGEMENT PLAN
CITY OF VALPARAISO**

FEBRUARY 2000

**GROWTH MANAGEMENT PLAN
CITY OF VALPARAISO**

CHAPTER 9

Of the

Valparaiso Comprehensive Plan

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Approved by the Valparaiso City Council

FEBRUARY 2000

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1. INTRODUCTION

The City of Valparaiso is a growing community of 26,000 people, located in Northwest Indiana. The City has a tradition of offering a high quality of life based on good schools, stable and well maintained neighborhoods, easy access to the Chicago Metropolitan Area and an excellent parks and recreation system. The City is distinguished by the presence of substantial environmental resources, the most noteworthy of the physiographic features being the extensive network of creek tributaries. In conjunction with the creeks are several hundred acres of land designated as 100-year floodplain and substantial stands of wooded areas.

The residents value the small town character of the City, evident in the architecture and ambiance of the downtown, the mature and diverse neighborhoods, relative isolation afforded by the rural countryside, and a strong sense of community. However, the residents recognize that their sense of place, of community, can change. Therefore, the Valparaiso residents have sought, through a growth management plan, to assert control over those forces which could irrevocably alter the character of their community.

Current policy requires that anyone requesting access to current City utilities must petition for annexation first. The City then determines if the land should be annexed immediately, or annexed at a later date with a waiver against future remonstrance of annexation, or not to annex and not to extend utilities.

The growth management policies contained in this plan are not non-growth or limited growth in nature. Quite the contrary, the policies invite growth. They recognize that the City is nearly build-out and annexation of adjoining land parcels is necessary to ensure its continued growth. The main emphasis of the plan policies is therefore to guide and regulate development of the new growth areas to be compatible with the physical fabric and character of the existing city, as well as the values and vision of its residents. The plan seeks to develop positive linkages between potential growth patterns and the existing city fabric so as to encourage a desirable and high quality expansion of the City. In order to do so, the principles of sustainable development are promoted by the growth management plan, which emphasizes the importance of preserving and enhancing environmental features, as well as efficiently managing existing infrastructure and resources to ensure their availability for future generations.

The Growth Management Plan does not in of itself necessarily compel a better future or improve a personal or collective well being. However, it does establish a dynamic context through which future development forces can be received, understood and used to optimally capture human and civic potential. The plan, its principles and recommendations, provides a consistent and coherent framework to effectively guide future physical development decisions.

The future land use plan illustrates what Valparaiso might look like if the public policies detailed in the plan are, in a large measure, implemented. It also assumes that there are no unaccounted for technologic, economic, governmental or demographic forces which would drastically alter the social or environmental context under which the plan was prepared. However, it is clear that

significant unforeseen changes will occur. When these changes do occur then the public policies need to be reaffirmed, clarified or altered accordingly. Nevertheless, the basis of the plan still remains rooted in public policy.

It should be noted that the plan document does not address all possible issues nor does it address every area of future concern in Valparaiso. Human services, health education, art and culture, and even architecture, for example, receive minimal discussion in the document. These topics and others are of vital consequence to the future of Valparaiso and its residents. The plan document should be viewed only as an attempt to establish a long term and collective vision of how land could be used for urban activities.

The Plan for Valparaiso is organized into nine chapters. Chapter 2 establishes the framework of the Plan and includes a community vision statement as well as the main goals and objectives of the Plan. Chapter 3 discusses the overall land use strategy and presents recommendations for future land use patterns. The Open Space Strategy is detailed in Chapter 4, and presents the overall open space concept, policies and implementation mechanisms. Chapter 5 includes design recommendations and guidelines for key traffic corridors and gateways into Valparaiso. Chapters 6, and 7 detail the infrastructure recommendations regarding transportation, water and sewage, which are critical elements in planning the growth of the City. Finally, the Annexation Strategy is outlined in Chapters 8. The Appendix includes a discussion of the planning process, results of the community survey, an overview of existing demographic and socio-economic profile and trends, and finally a report on the Indicator Exercise.

Overall, the Growth Management Plan is a guideline for establishing a long term, collective vision for land use and urban activities for a preferred future of Valparaiso. The Plan develops several land use concepts, policies and implementation strategies. The corridor plans identify site specific recommendations along key corridors and intersections throughout the City. And with any planning document, this Plan is subject to revisions through public processes.

2. VISION, GOALS, OBJECTIVES AND POLICIES

2.1 VISION

A vision, as used in this context, is a broad statement that expresses a consensus regarding what a future community should be like. As such, the vision should address issues of visual character and community aesthetics. However, it should also address non-visual issues such as what it should be like to live in community, local philosophy regarding quality of life and how various components of the community interact with one another. This vision need not be entirely unique to Valparaiso, for no community is entirely unique from other communities. What is important is how the community interprets itself, and how this interpretation is applied to the future.

The primary use of the vision is to provide direction for the formulation of the growth management plan. The vision should be the starting point for formulating plans in the growth management planning process. Sub area and community system plans should draw substance from the vision and illustrate the visual and functional characteristics that will help make the vision statement a reality. Accordingly, the vision requires interpretation and application as each planning item is addressed, and the city needs to ensure that these interpretations reflect the true intent of the vision. The vision, as well as the growth management plan as a whole, should be used as a preference in the review of new development to make sure that such development will enhance the city in the desired manner.

The vision is not an ordinance or standard that can be definitively enforced. Unlike the city's zoning ordinance, consistency with the vision cannot be measured in a quantifiable or numerical manner. A broader, fuller consideration of factors must be used to assess the application of the vision. The intent of the vision must be weighed in relation to practical considerations affecting individual planning issues in order to make decisions about how to best achieve the vision. The collective sense of Valparaiso, gathered through the *Winning Communities* process, is its vision and is expressed as follows:

2.2 GOALS, OBJECTIVES AND POLICIES

The goals and objectives that follow represent major planning categories. None of the statements are necessarily more important than any other in terms of achieving the community's vision. However, the order in which they are presented reflects the relative priority that developed through the planning process and that priority should be considered when implementing the policies and recommendations of this plan.

Goal 1. Downtown Business Preservation

Valparaiso's downtown business district has traditionally functioned as the commercial, cultural and governmental center for Porter County. Preservation of the downtown would require policies aimed at protecting, strengthening and invigorating it as the city center. This would imply

encouraging diversity in retail uses and mixed commercial/residential projects within the downtown. Rehabilitating existing building, encouraging pedestrian oriented development and amenities, and establishing sensitive design and sign controls would also serve to enhance the character and vitality of the downtown.

Objective A: Enhance the economic vitality of Valparaiso’s downtown business district.

- Policies:**
- (a) Enhance the existing retail activity in downtown to strengthen it as a specialty regional shopping center.
 - (b) Promote additional entertainment-oriented businesses and residential/commercial mixed-use development in Downtown Valparaiso in order to attract university students and people from neighboring communities.
 - (c) Promote downtown Valparaiso as a viable tourist destination by holding city wide events like farmer’s markets, festivals, etc. and extending evening business hours.
 - (d) Encourage the continued collaboration between the city and stakeholders to work toward improving downtown Valparaiso by promoting a detailed plan and design of physical improvements and public-private partnership efforts to complete streetscape and physical improvements as outlined in the Downtown Master Plan.

Objective B: Diversify the mix of compatible land uses in the downtown.

- Policies:**
- (a) Maintain and promote the existing balance of office, retail and residential uses in downtown.
 - (b) Support adaptive reuse of existing buildings with the intent of preserving mixed uses within downtown.
 - (c) Assist in marketing downtown available space.

Objective C: Preserve and enhance the historic and pedestrian friendly character of Downtown business and residential districts.

- Policies:**
- (a) Support adaptive reuse initiatives for revitalizing existing commercial buildings. Promote and assist downtown facade improvements.
 - (b) Protect and promote the downtown's historic landmarks and older residential neighborhoods adjacent to the downtown business district. Neighborhood associations should be included in plans to develop/redevelop this area.
 - (c) Promote a public and private effort to complete the streetscape and physical improvements outlined in the Downtown Master Plan.

Objective D: Expand and improve existing on-street and off-street parking facilities.

- Policies:** (a) Provide incentives within the Zoning Ordinance for non-traditional methods of meeting parking requirements. Encourage mass transit and bicycle ridership as alternatives that reduce automobile parking demand.
- (b) Examine parking needs of the Downtown and investigate alternative methods for providing parking.
- (c) Conduct an analysis of additional potential parking needs generated by the future growth of the City and revise the parking system with policies for rectifying parking shortages. Pursue opportunities to expand the number of on-street and off-street parking facilities in areas where parking might be insufficient in the future.
- (d) Consider opportunities for additional structured parking to meet the long-term parking demand, generated by additional growth, in Downtown Valparaiso and other business districts.
- (e) Promote landscape and lighting requirements for parking areas, including public lots, that will improve aesthetics but not hinder safety.

Goal 2. Economic Growth

Valparaiso will need to create and pursue new opportunities for economic growth over the next two decades. Valparaiso's economic base can be strengthened by diversifying types of employment and kinds of economic activities. This can be achieved by maximizing Valparaiso's locational/institutional advantages and by maintaining a highly skilled work force. Strong economic policies are required to improve the economic well being of residents and enterprises.

Objective A: Retain and attract businesses in order to strengthen Valparaiso's economic base.

- Policies:** (a) Market Valparaiso's unique qualities and advantages (such as the educated work force, and access to Chicago) to attract new firms in the growing sectors of high-technology and health care sectors.
- (b) Investigate the feasibility of creating an inventory of fully prepared industrial sites within the context of a business park. Identify large undeveloped sites which could accommodate substantial corporate expansion or relocation projects.
- (c) Investigate future employment projects for the greater Valparaiso area and mitigate sufficient land requirements for maintaining adequate supply and availability.

- (d) Create an Industry Council in order to help current industries expand and develop a more focused approach for attracting specific industries to Valparaiso.
- (e) Encourage and foster a climate that is friendly to small businesses.
- (f) Support a cooperative marketing effort with business associations and other organizations to attract new businesses to underutilized storefronts and commercial spaces.
- (g) Monitor and evaluate market supply and demand conditions with respect to housing units, commercial and industrial space absorption, and community-wide environmental conditions on an annual basis.
- (h) Encourage the incorporation of new telecommunications technology and infrastructure in new and renovated residential and commercial construction.
- (i) Seek regular airline commuter service to major airline hubs from Porter County Airport.

Objective B: Recognize and support the strong role neighborhood business districts and commercial corridors play in Valparaiso's economy and identity.

- Policies:**
- (a) Use the Chapter 5 design guidelines to improve the appearance of existing commercial areas.
 - (b) Create incentives to encourage development of higher density, mixed commercial, governmental and residential uses in the downtown. Promote downtown as a specialized retail district that serves community and regional markets.
 - (c) Establish small scale neighborhood retail centers to serve new neighborhoods. Ensure that new commercial/retail centers do not adversely impact the downtown.
 - (d) Promote pedestrian oriented retail activity in Valparaiso's neighborhood business centers.
 - (e) Improve parking and circulation in commercial areas and adjacent neighborhoods, where required.

Objective C: Support and encourage efforts at employment assistance and linkages.

- Policies:**
- (a) Identify potential sites for locating a training/business center for on-going vocational training.
 - (b) Promote linkages between local schools and employers with the objective of helping Valparaiso students become competitive members of the work force.

- (c) Negotiate commitments for employing Valparaiso residents with firms seeking redevelopment assistance. Maintain strong linkage between job creation and tax abatement.
- (d) Promote and support job readiness and training programs as well as small business start-up assistance programs.
- (e) Support programs that provide affordable day care options for working parents and guardians.
- (f) Continue to support home-based businesses while enforcing restrictions that minimize any adverse effect on surrounding neighborhoods.
- (g) Support the Workforce Development Services in providing mechanisms for posting and matching job opportunities with prospective employees.

Objective D: Foster regional tourism by promoting and supporting cultural and sports events.

- Policies**
- (a) Develop a promotional map/film showing the cultural, artistic, crafts and environmental traditions which make Valparaiso unique to visitors and foster a sense of place for residents.
 - (b) Make Valparaiso a state center for a specific type of sporting event. Explore the potential for attracting a minor sport team to Porter County.
 - (c) Promote city-wide music and cultural events to attract people from neighboring communities.
 - (d) Market and strengthen Valparaiso as a unique and quality community for dining and shopping opportunities.

Goal 3. Environmental Integrity

This principal recognizes that the existing natural environment in Valparaiso is a vital and irreplaceable element of its residents' quality of life. Future development should not compromise or diminish the environmental integrity of Valparaiso. In fact, future development should be managed so as to enhance and improve upon existing environmental conditions.

The plan aims to conserve Valparaiso's environmental resources through preservation of natural features, creation of open space and protection of air and water quality and land, ground and water resources.

Objective A: Preserve and enhance environmentally significant lands (woodlands, floodplains, wetlands, etc.) and open space as the City continues to develop and expand.

- Policies:**
- (a) Develop an Environmental Ordinance to include a detailed composite overlay to land use and zoning maps delineating the general extent of environmentally sensitive areas.
 - (b) Encourage environmentally significant land uses around open spaces, agricultural land and natural features. Establish minimum performance criteria for development in environmentally sensitive areas.
 - (c) Enforce the tree preservation ordinance which would help to protect existing wooded lots and direct continued landscaping in the community. The ordinance should protect existing groves of trees and provide buffer between land uses. It should promote replanting replacement trees with the same canopy coverage rather than the number of trees removed.
 - (d) Rewrite existing Floodway Ordinance to restrict developments in floodways and floodway fringes only at natural elevations higher than would inundated with the 100 year flood.
 - (e) Promote the Wellhead Protection Plan recommendations to other relevant local and regional initiatives including storm water management.
 - (f) Rigorously enforce the Erosion Control Ordinance which limits the amount of off-site deposition and on-site loss of soil.
 - (g) Establish public-private partnerships for the protection and restoration of environmentally significant areas.

Objective B: Maintain existing air and water quality.

- Policies:**
- (a) Participate in local and regional efforts for meeting National Air Quality Standards.
 - (b) Operate and maintain waste water treatment plants and collection systems for optimum performance. Investigate potential options for additional wastewater treatment plants.
 - (d) Promote awareness of technical advancements in maintaining air and water quality to private developments.

Objective C: Promote public awareness and encourage practices that sustain a healthy environment.

- Policies:**
- (a) Support the ongoing environmental education provided by citizen and action groups. Encourage school districts to participate in environmental practices, such as recycling, to help educate children
 - (b) Expand curb-side recycling programs.
 - (c) Encourage units of local government to purchase recycled and environmentally sensitive products, when cost feasible, in order to help strengthen these markets.
 - (d) Promote interest in, and use of, environmentally sensitive building materials, including products made from recycled materials. Encourage site planning and building designs that promote energy conservation and environmental sensitivity.
 - (e) Review ordinances for improving tree planting programs, where required.
 - (f) Promote land use development patterns that reduce automobile dependency.
 - (g) Promote employer incentives that will encourage employees to commute by means other than the single-occupancy vehicle.
 - (h) Consider, thoroughly, environmental issues in design, review and construction.

Objective D: Promote programs to beautify and clean Valparaiso.

- Policies:**
- (a) Develop gateway designs and streetscape programs for new and existing main districts and corridors.
 - (b) Develop policies that minimize air, water, noise and odor pollution.
 - (c) Promote design requirements for lighting, signage, greenspace, landscape, curb and sidewalk, detention areas, building quality types, and utilities for key existing and new commercial areas.
 - (d) Improve the enforcement of existing and new requirements. The City monitors landscape and site improvement ordinances through the site review process to ensure the finished product complies with requirements.
 - (e) Include aesthetic design considerations and improvements in all city projects. For no or minimal costs, streets, sidewalk and utility projects can improve what the City looks like.

Goal 4. *Balanced Housing Resources*

The older core neighborhoods are central to Valparaiso's small town character. Infill developments which drastically alter the physical character or adversely affect the livability of these neighborhoods should be discouraged. These neighborhoods consist of a diverse housing stock, both in size and affordability, which should be preserved through a strong public policy. New residential subdivisions should encourage similar socio-economic diversity through provision of housing options for all incomes, ages and family types. Furthermore, new subdivisions should be integrated, and be compatible, with the fabric of existing neighborhoods.

Objective A: Maintain and encourage diversity in housing stock in existing neighborhoods as well as new residential growth areas.

- Policies:** (a) Encourage developers to provide for different housing unit types within a residential development. Encourage proposals that will maintain the supply of moderately priced housing, both rental or owner occupied.
- (b) Create incentives that maintain diverse housing opportunities within residential developments.

Objective B: Ensure that infill and new residential developments respect the historic context and as-built environment of older core neighborhoods.

- Policies:** (a) Ensure that infill residential development is compatible with the existing neighborhood character through architectural and zoning regulations.
- (b) Provide incentives for preserving and maintaining the older, typical housing stock.

Objective C: Maintain and enhance property values and positive perceptions of housing in Valparaiso.

- Policies:** (a) Support local realty firms, the Chamber of Commerce, neighborhood associations and others in marketing Valparaiso housing and neighborhoods to promote awareness of their desirability as places to live.
- (b) Encourage both new housing construction and the conversion of underutilized non-residential buildings in order to increase housing variety and to enhance the property tax base.
- (c) Encourage collaboration among neighborhood stakeholders (e.g., property owners, residents, businesses and institutions) and City staff to improve housing conditions that are negatively impacting surrounding property values, and neighborhood character.
- (d) Support individual owners and neighborhood-based organizations engaged in efforts aimed at improving Valparaiso's housing stock, and neighborhoods.

Objective D: Ensure availability of affordable housing in Valparaiso.

Policies: (a) Package and promote the availability of assistance programs that provide resources for home acquisition and repair.

(b) Support organizations pursuing affordable housing initiatives.

Goal 5. Community Amenities

This goal recognizes the importance of arts, music and recreational activities in enriching and enhancing Valparaiso's character, as well as the residents' quality of life. Valparaiso University offers a wide variety of cultural and recreational events for the residents. Actively creating and enhancing the cultural and recreational opportunities within Valparaiso would not only enhance its livability but also add economic value. Cultural and athletic events would attract tourism from the region and hence contribute to the city's economic vitality

Objective A: Foster public awareness and participation in arts and cultural events.

Policies: (a) Pursue opportunities for increased entertainment events and activities in Valparaiso.

(b) Support programs that provide visual and performing arts activities for all Valparaiso residents. These programs could be generated in partnership with Valparaiso University.

(c) Encourage the inclusion of cultural facilities and arts installations in large development or redevelopment projects through density and other incentives.

(d) Support special arts projects that require partnership between residents and local businesses.

(e) Support local artists' and art organizations' involvement in community service projects that benefit Valparaiso residents.

Objective B: Preserve and enhance existing parks while seeking opportunities for increasing the amount of park land within Valparaiso.

Policies: (a) Preserve and enhance open space and recreational facilities and programs in Valparaiso.

(b) Preserve land dedicated as public park and open space while searching for ways to increase facilities, programs, and the amount of leisure space available throughout Valparaiso.

- (c) Support the updated Master Park Plan by the Parks Department.
- (d) Continue to pursue private, federal and state grant money that is, or may become, available to local municipalities for park acquisition and development.

Goal 6. *Effective Transportation*

Effective intermodal transportation implies a public policy for actively decreasing the demand for automobile trips and consequently reducing automobile related traffic impacts. These policies reduce the frequency and length of auto trips by promoting an increased spatial association between residential areas, convenience retail and employment centers, and by encouraging relatively self-contained mixed use projects. Effective traffic management policies also seek to substitute auto-oriented trips with other modes of travel like walking, biking and transit.

Objective A: Encourage and promote higher levels of public transportation in Valparaiso.

- Policies:**
- (a) Promote higher-density residential and mixed-use developments in close proximity of transit nodes in order to encourage non-automobile dependent lifestyles.
 - (b) Promote public transportation ridership as an alternative to automobile use, focusing attention on new strategies for getting residents to Chicago and suburban employment locations via mass transit.
 - (c) At the regional level, join long-term planning discussions to include potential initiatives to establish a direct rail link.
 - (d) Encourage development of bus routes along major corridors. Expand and promote connections to the existing airport shuttle services.
 - (e) Support the continued use and expansion of paratransit alternatives by agencies that serve special needs groups and the elderly.

Objective B: Improve the pedestrian and bicycle path system and safety through infrastructure upgrades and modifications.

- Policies:**
- (a) Establish the bike path plan and develop design standards for it.
 - (b) Improve connections between Valparaiso's bike path system and that of other communities and regional trail networks. Identify streets that could accommodate special lanes for bicycle traffic only.
 - (c) Encourage the placement of bike racks in convenient, well-lit areas, especially those in close proximity to shopping areas and mass transit stops.

- (d) Promote walking to enhance the community character, retail viability and the health of residents. To that end, require new developments to include sidewalks and discourage developments that inhibit pedestrian circulation. Support the installation of sidewalks in areas where they presently do not exist.
- (e) Minimize the number of curb-cuts for driveways as they disrupt sidewalk continuity. Reduce excessively high curbs that are inconvenient for pedestrians.
- (f) Require safe curb ramps at intersections.

Objective C: Employ techniques to promote safe and efficient traffic circulation within Valparaiso.

- Policies:**
- (a) Monitor changes in traffic patterns and volumes generated by future growth in order to identify required traffic improvements.
 - (b) Ensure that major traffic intersections in new growth areas provide clearly designated and safe pedestrian and bicycle circulation. Consider reconfiguration of problem intersections in order to improve traffic flow and safety
 - (c) Manage congestion on major and collector streets so that through traffic is diverted to local streets.
 - (e) Create a standardized directional signage system that facilitates locating key destinations in Valparaiso.
 - (f) Participate in regional transportation planning to secure Valparaiso's share of state and federal transportation funds.

Goal 7. *Financial Integrity*

Local public finance investments have to be strategized to make the best possible use of the existing public infrastructure while planning for new services required by a growing city. This implies directing growth to areas with existing reserve system capacity and strategically locating new capital investment to maximize public return. Such an approach would favor a more compact urban growth pattern which accommodates future growth in established areas and precludes potential private disinvestment in these areas.

Objective A: Expand existing and identify alternative public revenue sources.

- Policies:**
- (a) Continually search for creative financing strategies for maintaining and enhancing the City.
 - (b) Work at the state level with other local governments to alter the total levy limitation or provide alternate funding sources.

- (c) Give priority to public capital projects that reinvest in existing infrastructure and public facilities over those which avoid or limit future public operating and capital expenditures.
- (d) Explore alternate mechanisms like conservation easements, private donations and private foundations for preserving land or financing purchase of land.

Objective B: Optimize public expenditures.

- Policies:**
- (a) Direct new development to areas with reserve infrastructure capacity. Limit development density and intensity to existing or planned and funded infrastructure capacity.
 - (b) Encourage redevelopment, infill development and adaptive reuse of vacant or underutilized buildings.
 - (c) Acquire strategically located sites in advance for future public facilities
 - (d) Explore opportunities to expand and upgrade the capacity or efficiency of exiting systems in conjunction with adjacent development projects requiring new or improved roadways, stormwater drainage systems or sewer systems.
 - (e) Explore public-private sector partnership opportunities for improving or upgrading existing infrastructure.
 - (f) Support the Stormwater Management Board in their responsibility for planning, constructing and managing stormwater drainage improvements, detention facilities and stormwater quality issues.

3. LAND USE STRATEGY

3.1 PLAN CONCEPTS

This section describes seven fundamental plan concepts for structuring the process of growth and development within the plan area. These plan concepts will help implement Valparaiso's vision for the future, as articulated by the goals and objectives in Chapter 2. The plan concepts are as follows:

a) *Open Space*

Environmental protection emerged as an important element in the overall goals for guiding development over the long-term. The Plan recognizes that the existing natural environment in Valparaiso is an important and vital element of the quality of life for its residents.

The open space concept holds that the complex environmental interrelationships should be maintained, conserved, and where possible, enriched. It states that the environmental integrity of Valparaiso should not be compromised or diminished through future development. Moreover, environmental stewardship should in fact result from developmental processes. The principle of environmental integrity invokes a higher standard than *status quo* reservation of existing environmental conditions. It compels generation of substantially improved environmental conditions. Clearly, as knowledge and understanding improves about the interrelationships among environmental components - air, water, vegetation, wildlife and land forms - urban development should strive to respect and complement these interrelationships. In other words, environmental integrity should be nurtured. Where development does intervene in these special areas it should occur with great care.

The open space strategy proposes creation of a greenway ring, to the extent possible, surrounding the existing developed areas. This open space system provides the framework or armature for planning other aspects of the growth area. The strategy is discussed in further detail in Chapter 4.

b) *Cluster Developments*

In order to implement the system of open space describe above, it is essential to adopt the technique of cluster developments. Cluster developments or open space planning is a way to preserve open space and rural character. Clustering should be used as a technique to augment public purchase and environmental set asides. Cluster developments are not a technique to reduce density as it allows the same amount of overall development that is already permitted. The key difference is that this technique requires new construction to be located on only a portion of the parcel, while the remaining open space is permanently protected through perpetual conservation easements co-signed by a local conservation

commission, land trust, or homeowners association, and recorder in the county recorder's office.

Cluster developments will need to be strategically planned and located to ensure preservation and enhancement of the open space system. Cluster developments should be planned for areas which have significant environmental features that need to be preserved during the development process. The Proposed Land Use Plan shows areas that might be suitable for cluster developments, and is discussed in greater detail later in this Chapter.

c) *Long Term Investment In Utilities*

The location and capacity of sanitary sewer and water service is one of the largest influences on the location of new development. Unless responsible, long-term investment in infrastructure is made, Valparaiso will have difficulty keeping pace with demands resulting from new growth.

d) *Restrict New Retail*

Preservation and enhancement of Valparaiso's downtown emerged as one of the most important goals of this plan. Valparaiso's downtown has traditionally functioned as the commercial, cultural and governmental center for Porter County. This plan concept recognizes that future commercial growth will have to be carefully regulated in order to strengthen and not compete with the existing downtown. As the population of the unincorporated areas of Center and Washington Townships continue to grow, so will the overall demand for conveniently situated retail services and goods. By providing for only neighborhood retail centers of limited scale within the new medium to high density residential developments, the plan aims to strengthen the traditional retail center rather than displace it. The commercial/office/business parks along Route 49 and in the vicinity of the airport encourage a commercial mix that would not compete. The land use recommendations for Route 49 are detailed later in this chapter.

e). *Treatment Of Route 49*

Route 49 serves as the major arterial entranceway to the plan area. Public perception of community character is based largely on what can be seen from an automobile. Since roadside land is so easy and relatively inexpensive to develop, it is often the first to be converted to residential or commercial uses. This plan policy recognizes that programs to protect and enhance the scenic quality of relatively "unspoiled" roads like Route 49 must be supported in order to preserve the rural and small town character that residents of Valparaiso so highly value. Therefore the plan recommends establishing frontage and design control mechanisms to regulate the quality of residential, commercial and retail developments along major traffic corridors. The proposed design recommendations are discussed in Chapter 5, Design Elements.

f) *Live And Work In Valparaiso*

The Valparaiso Growth Management Plan envisions a community in which individuals of all socio-economic groups can both live and work. One of the main goals of the plan is to strengthen Valparaiso's economic base by diversifying types of employment and kinds of

economic activities. This implies generating jobs that require a range of low to highly skilled labor. It also implies that future growth areas have to provide diversity in the housing stock in order to accommodate a wide range of socio-economic groups.

The plan policy recognizes this and recommends that new developments should accommodate and promote different lifestyles, income levels and household characteristics. Specifically, differences in housing types, densities and prices should be encouraged in the growth areas. The proposed land use plan seeks to achieve this by providing four residential density classifications, ranging from high to low, to ensure a diversity in housing sizes and costs. The concept of cluster developments would be a method to achieve a diversity in housing sizes and costs within the same subdivision.

g) *Regional Commuter Service*

The immediate benefits of increased regional transportation include reductions in the number of automobile trips, minimization of traffic congestion and decrease in road and parking construction which enhances air quality. As such, the growth management plan encourages continued efforts to establish regional commuter rail service along the existing Canadian National Railway and other public transit.

3.2 LAND USES

To accommodate projected levels of growth and reflect existing and desired development patterns the growth management plan provides fourteen land use categories to permit the types of development indicated in the table above. The existing and proposed land use pattern is illustrated in Figure 1, Existing Land Use, and Figure 2, Proposed Land Use. The land use categories are as follows:

a) *Agriculture*

This category is intended to deal exclusively with agricultural land uses. Agriculture is an active and often intensive land use. It is unlike greenways in that respect. Additionally, it is an important part of the regional economy and landscape. The agricultural category designates areas appropriate for agricultural uses.

b) *Park And Open Space*

The Park and Open Space category designates areas where the City desires to protect sensitive natural resources or provide park lands for recreational uses. This category recognizes the conservation and preservation of natural features and open lands could provide the City with abundant outdoor resources, help to protect important environmental features and habitats, and provide linkages between city parks, institutions, other land uses. Uses may include passive recreational facilities where active parks and playgrounds may not be appropriate or possible. This category also recognizes existing parks and other active recreational facilities such as golf courses as intensive uses of the land which are apart from the considerations of preservation or linkage provided by open space and greenbelts.

c) ***Wetlands/Waterways***

This category includes categories that deal with lakes, ponds, floodplains, creeks, rivers and drainage ways.

d) ***Residential***

Residential areas within Valparaiso are established to provide residents with adequate opportunities for housing, particularly the opportunity to own their own home. Residents recognize that compelling reasons exist to develop larger scale multifamily housing development. Likewise, there are compelling reasons to develop neighborhoods which are exclusively single family. To accommodate these varied needs, four general residential categories have been created.

Low Density Residential (*R-1A, R-1B*)

Low Density Residential areas are created to provide for "suburban" style single-family residential structures at a density of two to three units per acre.

Medium Density Residential (*R-1, R-2, R-3*)

Medium Density Residential areas are designed to accommodate single-family and townhome structures at a density of four and one-half to nine units per acre.

High Density Residential (*R-3, R-4*)

High Density Residential areas are established to provide for single-family, townhome and apartment structures at a density of six to sixteen units per acre.

Cluster Residential (*PUD*)

This category provides opportunities for residential development which is clustered in order to preserve surrounding open space or environmental resources. Most such development is of a medium density style. Clusters will accommodate residential uses which are traditional single family in style, but are large enough to permit several dwelling units per structure, with densities reflecting approximately five (5) or six (6) units per acre. These could include duplexes or other types of side by side or upper/lower residential units. This type of housing fulfills a critical need within the community by providing more affordable housing options while permitting a more integrated and traditional community atmosphere and by lowering levels of large traffic-generating uses. Cluster residential areas focus on smaller, tightly spaced residential development. These types of development should also be located near significant support uses such as commercial, recreational, public and transportation. Cluster residential areas could be established under the Planned Unit Development (PUD) ordinance.

e) **Commercial**

Commercial areas accommodate retail development in those areas of the community near major transportation routes and adequate population bases. The City intends that adequate commercial space be provided within cohesive commercial zones within the City. Careful siting of commercial uses will discourage the random scattering of commercial uses into inappropriate locations.

Neighborhood/Local Commercial

This category recognizes that there are types of commercial activity which are small in scale, are necessary in close proximity to where people live, and provide services primarily to a neighborhood area rather than the community or region at large.

Community/Regional Commercial

This category reflects the existence of larger scale commercial areas which serve a broader community and therefore generate larger amounts of traffic and are comprised of buildings which are larger and more intensive than would be appropriate without substantial buffering or treatment adjacent to small scale residential development.

Business Park

This category accommodates a mix of small business services and goods providers. It is a type of development which has unique characteristics and is separate from types of development that rely on continuous traffic.

Office Park

This category provides for the location of office parks within the community. This is a type of commercial development which has unique characteristics and is separate from the types of impacts associated with retail or other types of commercial activity which rely on continuous traffic.

f) **Industrial**

Industrial areas are provided to permit research, distribution, assembly and manufacturing uses within the community in locations near major transportation facilities and away or buffered from residential areas. Such uses are vital to the economic well-being of the community both to provide an adequate tax base from which to provide necessary and desirable public services and to provide stable employment opportunities for Valparaiso residents.

Light

This category is designed to accommodate quality small-size manufacturing, warehousing and distribution uses that generate minimal levels of noise, pollutants and traffic are suitable for sitting next to buffered residential areas.

General

This category provides for mid-size and large-scale manufacturers that generate substantial levels of noise, pollutants and traffic and should be located well away from residential areas.

g) *Institutional*

Public institutional areas provide for the location of religious, medical, public service and educational institutions. Such institutions are given a special land use designation to indicate their special importance to the community and to provide them with adequate spaces for location and expansion. The location of these facilities should not be precisely identified by this plan since variations in residential density and development will undoubtedly occur. The appropriate institutions should work with the City to plan the most appropriate locations for their facilities.

3.3 SUBAREAS

The purpose of the subareas is to provide a framework for a more detailed rationale for the overall proposed land use plan. The subareas considered in this plan are: 1) the Route 49 Corridor Subarea, 2) the Northeast Subarea, 3) the Airport Business Park Subarea, 4) the South Subarea, 5) the Southwest Subarea, 6) the West Subarea, 7) the Northwest Subarea, and 8) the Lakes Subarea. These areas were designated because of their relative geographical distinctness. The intent here, however, is not to treat each subarea as a completely separate entity. Rather it is to consider them as interdependent elements of the larger land use plan. Figure 3, Subareas Map, depicts the extents of each subarea.

a). *Route 49 Corridor Subarea*

Background

The Route 49 Corridor Subarea is bounded by the north line of the study area, a north-south line located approximately 3000 feet east of Route 49 on the east, the south line of the study area, and the corporate limits of Valparaiso, County Road 150 East and Old Indiana State Route 2 to the west. The northern half of the Route 49 Corridor is comprised mostly of agricultural lands. The southern half of the Corridor is made up largely of industrial uses, particularly in the areas near the Porter County Airport.

Issues

Providing a direct connection to I-80 and the Chicago Metropolitan Area, Route 49 will function as Porter County's primary arterial. As such, the Route 49 corridor will continue to burgeon as a commercial and industrial center. Special zoning and design efforts will need to be taken to ensure that future land uses complement existing residential, commercial and industrial uses, and create a positive image for the community as a whole.

Land Use Plan

To ensure the continued ease of access along the corridor, a frontage road is proposed for areas north of Route 30 and east of Route 49. This improvement will provide for the development of medium-density and low-density residential uses and office parks in the

portion of the subarea located north of Vale Park Road. In order to take advantage of the accessibility and exposure afforded by Route 49 office and commercial retail uses have been planned for the portion of the subarea located between LaPorte Avenue and Route 30. Finally, the part of the corridor located south of Route 30, is designated for general and light industrial uses and some additional community-regional level retail. Wherever, possible, an open space buffer has been provided to separate future land uses from Route 49. Figure 4, Route 49 Corridor Sub Area Plan, illustrates the proposed land use recommendations for this sub area.

b) *Northeast Area*

Background

The Northeast Subarea is bounded by the north line of the study area, the east line of the study area, County Road 300 North and State Route 2 on the South, and Route 49 on the west. With the exception of rural density residential units, the area is primarily used for agricultural purposes.

Issues

Aside from nearness to Route 49, the Northeast Subarea will need utilities developed to attract development compatible with this plan.

Land Use Plan

Given the disincentives for residential development and the community's desire for the preservation of farmland, the land use plan calls for continued agricultural uses in the eastern half of the Northeast Subarea. The western half of the Northeast Subarea, meanwhile, has been set aside for rural, low and medium-density residential development. The medium density developments, would include clustered townhomes so as to maximize opportunities for the preservation of open spaces or environmentally sensitive lands. Higher density residential developments would be located closet to Route 49 to minimize traffic flows in rural areas.

c) *Southeast Area*

Background

The Southeast Subarea is bounded by County Road 300 North and State Route 2 on the north, the east line of the study area, the south line of the study area, and Route 49 and County Road 150 East on the west. The predominant land use is Porter County Airport. Other major land uses are agriculture, industrial and commercial.

Issues

The Southeast Subarea has emerged as a hub for much of Porter County's industrial and commercial activity. With direct access to interstates, railways and an airport, the subarea is well positioned to meet the transportation needs of modern firms.

Land Use Plan

Drawing on the Southeast Subarea's marketability and location advantage, the land use plan calls for the continued development of industrial and commercial uses. More specifically, general industrial uses are proposed for much of the land lying south of Route 30. The lands north of the Route 30 and east of Porter County Airport are largely set aside for office and business park.

d) South Area

Background

The South Subarea is bounded by incorporated Valparaiso on the north, County Road 150 East and incorporated Valparaiso on the east, the south line of the study area, and Smoke Road on the west. The South Subarea is generally characterized by large tracts of agricultural land and rural density residential developments. A stretch of commercial retail uses is also located in the northern portion of the subarea along Route 30.

Issues

The south subarea includes some of the region's most unique natural features. These include several large concentrations of woodlands, particularly adjacent to Smoke Road. Another environmental characteristic worth noting is Sager Lake and the adjacent wetlands in the northern part of the subarea.

Land Use Plan

As depicted on the land use plan, a large tract of land along the eastern edge of the South Subarea has been designated for light industrial uses because of its direct access to Route 49. Similarly, two pockets of neighborhood retail land uses have been proposed for the northwest and southwest corners of the subarea because of their contiguity to Route 30 and Route-49. In terms of future residential uses, the subarea has been reserved for medium density residential uses. The remainder of the south subarea which includes the environmental features referenced above is set aside for inclusion in the larger planned open space network.

e) Southwest Area

Background

The Southwest Subarea is bounded by Joliet Road and incorporated Valparaiso on the north, Hayes-Leonard and Smoke Roads on the east, the south line of the study area, and the west line of the study area. The primary land uses are commercial, particularly along Route 30, and low density residential.

Issues

In recent years, the Southwest Subarea has experienced relatively high levels of residential development. The major reasons for this growth include quick access to the Central Business District, the ability to tap into many municipal services, inclusion in the Valparaiso Community Schools and an abundance of recreational and open space opportunities.

Land Use Plan

Taking advantage of the qualities identified above, the land use plan calls for the continued development of low density residential land uses throughout the Southwest Subarea. Moreover, much of the proposed residential development is to be clustered, providing numerous opportunities to retain existing wooded areas and create open space throughout the South Subarea. Other proposed land uses include a pocket of high density situated near the intersection of Route 30 and State Route 2 so as to provide additional residential housing options in proximity to existing commercial areas.

f) West Area

Background

The West Subarea is bounded by 400 North and Vale Park Road extended east on the north, Incorporated Valparaiso on the east, Joliet Road on the south, and the west line of the study area. The major land uses are open space and rural density residential.

Issues

The West Subarea has experienced little development relative to other subareas such as the Southwest. This is largely due to limited roadway access resulting from the numerous at-grade railways which fragment the subarea.

Land Use Plan

The Land Use Plan calls for the retention of large tracts of open space and wooded lands surrounding the existing parkland. This would create the largest contiguous concentration of green space in the entire proposed open space network. Complementing the open space are multiple centers of clustered medium density residential developments. To meet the needs of the residents who would inhabit the clustered development, two areas of neighborhood/local retail have be placed at key intersections along Vale Park Road.

g) Northwest Area

Background

The Northwest Subarea is bounded by the north line of the study area, Incorporated Valparaiso and Meridian Road on the east, 400 North and Vale Park Road extended east on the south, and the west line of the study area. The area is primarily used for agricultural purposes. However, a number of rural density subdivisions have also been constructed in this subarea.

Issues

The Northwest Subarea is somewhat removed from the more populated areas of Center Township and lacks the infrastructure necessary to provide City services. Alternative well and septic systems, as well as the privately owned and operated South Haven Wastewater treatment facility, however, have made it feasible for a number of rural or medium density residential developments to be constructed.

Land Use Plan

As noted on the land use plan, the northern half of the Northwest Subarea is to be either retained for agricultural purposes or developed for residential uses at a low density. Meanwhile, the southern half of the Northwest Subarea will be set aside for open space and recreational land uses that are interspersed with medium density residential developments. As in other subareas, these residential developments will be clustered to maximize the retention and creation of open space and recreational areas. To accommodate the increased number of residents that would inhabit the clustered developments, two areas of neighborhood/local retail have been placed at key intersections along Vale Park Road.

h) Lakes Area

Background

The Lakes Subarea is bounded by the north Line of the study area on the north, Route 49 on the east, Incorporated Valparaiso on the south, and Meridian Road on the west. The area has been overwhelmingly developed.

Issues

Much like the Southwest Subarea, the Lakes Subarea has several unique characteristics that have made it attractive for residential development. These include proximity to natural water features and quality recreational facilities, easy access to Route 49, location in the Valparaiso Community Schools District and proximity to retail establishments and employment opportunities.

Land Use Plan

Capitalizing on the Lakes Subarea's quick access to the interstate system and regional employment centers, a medium density residential development has also been proposed for the large tract located along the eastern edge of Campbell Road in the northern half of the Lakes Subarea. The remaining large tract of land in the north part of the Lakes Subarea and directly west of Route 49 has been designated for low-density residential development area. Finally, all existing open areas have been retained, creating a crucial link for the eastern and western portions of the planned open space network.

4. OPEN SPACE STRATEGY

4.1 INTRODUCTION

Valparaiso plans to create "*a city embraced by open space*" as it manages growth into the 21st century. This strategy is the formative element in the City's growth management plan. The existing natural resources in Valparaiso's planning area are a vital and irreplaceable element in the

quality of life of the community. Future development should not compromise or diminish the open space context or the environmental integrity of Valparaiso. In fact, future development should be managed so as to enhance and improve upon open space resources and environmental conditions.

The plan aims to conserve Valparaiso's open space and environmental resources through preservation of natural features, creation of additional open space, protect air and water quality, and preserve and protect water resources.

The distinctive natural elements of the planning area consist of significant creek systems and associated flood plains, wetlands, and large tracts of wooded areas. Most of these natural features are located on the periphery of and surround the city. These environmental features are illustrated in Figure 3, Existing Environmental Features, and summarized below:

Surface Water. The extensive creek and stream are one of Valparaiso's strongest assets. The six primary creek systems consist of the Salt Creek, Beauty Creek, Pepper Creek, Hutton Ditch, Koselki Ditch and Clark Ditch. These largely define the six drainage basins within the study area which are: Beauty Creek Basin, City Basin, Smith Ditch Basin, Koselki Ditch Basin, Listenberger Drain and Valparaiso Lakes Basin. Salt Creek runs through the southwest quadrant of the study area, and also drains this area. The primary drainage basins are illustrated in Figure 4, Major Watershed Areas.

Woodlands. The plan area consists of substantial wooded areas which help to define the community's natural character. There are approximately 3,327 acres of wooded parcels within the planning area. These areas provide scenic and rural quality to the community and help buffer high intensity land uses. Woodlands are located predominantly along the floodplains and are scattered throughout the study area.

100-Year Floodplains

Floodplains are defined as those lands subject to inundation by 100-year frequency floods, excluding stream channels and lake beds. The floodplains include 322 acres of the study area. Most of these floodplains are associated with the above discussed drainage basins and creeks. Floodplains should be prohibited from development and should be preserved as open space.

4.2 THE OPEN SPACE STRATEGY

The framework of the open space strategy is based on an extensive system of greenways/trails and open spaces along area streams and creeks. These watercourses are the most noteworthy of the natural features which surround Valparaiso. In conjunction with the creeks and streams are several hundred acres of land designated as 100-year floodplain and the most significant wooded areas. Many of the remaining upland wooded lots are also located on the periphery of the city. This combination of creeks, floodplain, wetlands and tree cover provides an excellent framework for trails, parks and open space system.

The proposed open space strategy aims to create greenways, or corridors of open space that link together swatches of existing open space, including parks, forest preserves, wetlands, golf

courses, schools and cultural and historic sites. The concept of continuity or linkages is important to the open space strategy, because natural systems remain connected, to the extent possible, so that they can function properly. Similarly the linkage of recreational opportunities through greenways maximizes outdoor recreational benefit. This continuity of open space sites make them more effective than an array of separate, dissimilar, and non-mutually supportive open space sites.

The greenways will provide the City with abundant outdoor resources, help to protect important environmental features and habitats, and provide linkages between City parks, institutions, and other land uses. The fact that greenways are often capable of simultaneously providing multiple benefits means that greenways can be a very cost effective strategy for the use of public and private resources. Greenways can also be cost-effective through their ability to avoid future public and private costs, such as the costs of flood damage. Benefits and functions of greenways are:

- Protecting and preserving the region's biologic diversity;
- Providing recreation opportunities
- Enhancement of the aesthetic appeal of neighborhoods.
- Improving water and air quality;
- Providing opportunities for utility easements, and flood and stormwater management;
- Providing and preserving cultural and historic resources;
- Promoting environmental awareness;
- Providing visual relief and improved aesthetics;
- Promoting transportation opportunities;
- Promoting regional identity and awareness; and
- Aiding in economic development by marketing high quality of life.

Many of these benefits become even more significant and important when considered in the context of the goals of the City's comprehensive plan and the ultimate development of the land. The vision for open space is to see the City develop within a permanent garland of natural areas. People moving about the City either by car, by foot or just looking out the window should be able to experience open space as part of their immediate environment.

The open space system that could result from such a strategy and vision would provide the armature for all other aspects of the land use and the City's thoroughfare system. Such a framework will maximize opportunities for development of scenic routes, bike paths, new parks and additional recreational facilities if it is established now, before future development precludes the creation of a linked system.

Figure 5, Illustrative Open Space Framework, shows how a hypothetical ring of open space could evolve around existing developed areas as future development is realized. If consistently pursued over the next twenty years or so (the period of maximum expected growth), an open space/greenway system containing upwards of 6,500 acres could be achieved. This would amount to some 22 percent of the total land area within the growth management planning area and become a major defining element in physical character of the City.

Linkages which add so much recreation value, would be created by taking advantage of existing natural features like creek basins and land with low development potential like that between railroad tracks. The greenways focuses on existing drainage corridors due to three major advantages: 1) the land is relatively unsuitable for development, so there is less economic competition for trails on easements of such land, 2) these areas are relatively undisturbed and provide the highest scenic and ecological quality in the area, and 3) intrusion by vehicular traffic is minimized.

The proposed greenway system along the existing western boundary of the city is located primarily along the Salt Creek, Clark Ditch, Pepper Creek and Beauty Creek. The open space along the eastern boundary follows the lake basin on the north and the Hutton Ditch and Koselki Ditch on the west.

Scenic Traffic Corridors

Public perception of community character is based largely on what can be seen from an automobile. Since roadside land is so easy and relatively inexpensive to develop, it is often the first to be converted to residential or commercial uses. However, programs to protect and enhance the scenic quality of relatively “unspoiled” roads must be supported in order to preserve the rural and small town character that residents of Valparaiso so highly value.

The Open Space Strategy proposes to preserve and augment large wooded parcels along the existing and proposed traffic corridors in order to protect the existing route structure and also provide scenic gateways into the planning area. A significant feature of the eastern section of the open space ring is the creation of a scenic and wooded northern entrance corridor into the study area along the Route 49 corridor. Frontage controls should be imposed on future development envisaged along this corridor, south of Burlington Beach Road. Frontage controls could include setback and landscaping requirements in order to preserve the rural and scenic quality of Route 49. Additional open space is proposed along the frontage road, east of Route 49, to buffer the proposed commercial land uses from the residential uses.

Wooded areas are also proposed along most other major arterials, at the entrances to the plan area as well as along defined sections of the roadway. Specifically, significant sections of Indiana State Road 2, Highway 30, State Road 130, Joliet Road, and Smoke Road are proposed to be preserved with wooded/rural landscapes.

Gateway features and design elements to enhance the community image and identity are discussed in further detail in Chapter 5, Design Elements.

Greenway Trail System

To complete the open space framework it is important to implement a system of greenway trails that would ultimately connect to other local and regional bike paths. The proposed trail system uses the natural creek system to connect the open spaces and to link them with neighborhoods, parks, schools and commercial developments.

Because the timeframe for future development is unpredictable, a framework of greenways and trails gives the neighborhood based system of parks the ability to plan incrementally over a long period of time. As residential neighborhoods develop and needs for new parks arise, they can be sited in conjunction with the pre-determined trail/ greenways system. The framework also gives other users planning direction for locating schools, churches and commercial facilities to maximize the use of the greenway/trail system.

The proposed overall trail system for Valparaiso is made up of both greenway trails and roadside trails. Both the Greenway Trails and the roadside Hike/Bike Trails are illustrated in Figure 5, Proposed Open Space Framework. Roadside trails will be discussed further in Chapter 7, Transportation Strategy. Policies related to greenway trails are as follows:

- The trail system should be linked, wherever possible, with other regional trail systems.
- The system should be internally looped, wherever possible, to avoid dead ends.
- Detailed studies should be made regarding the actual location and alignment of trails in the greenway corridor. In addition to following the river or creeks, the trails should seek to connect areas of special scenic beauty or natural habitats that can be utilized as interpretive areas.
- Interpretive areas should be enhanced with special plantings or treatments to encourage a high-quality environment for both the users and the animals to whom the habitats belong. Signage of a standard design for both natural and historical interpretive and regulatory use should be installed throughout the entire trail system. Maps should be developed for trail users as both way-finding measures and to locate and describe the interpretive aspects of the system.

Acquisition of land for this extensive greenway/trail system should receive a high priority in the action plan along with a more detailed study of the exact location, size, etc. Also plans for underpasses and bridges at major crossings should be planned now so they may be constructed in conjunction with the major thoroughfares and be part of the capital expenditure plans. Whenever possible, plans to accommodate parks or other modes of open space along greenways should be made, as well as to utilize utility easements and expanded roadway rights-of-way as part of the open space/trail system.

Park System

The City's park system is now a significant and valued resource for the community. As the community grows, it will need to expand and develop to meet the needs of the growing population. As such, the park system offers the potential to be a large part of the overall open space strategy. Under this strategy significantly more park land would be acquired.

This means a major commitment to the park acquisition fund by taxpayers both present and future. While outright purchase of parkland is not the only, and perhaps not the major means of setting aside open space, it will be an important part and would guide City officials to continue the higher standard of park acreage per capita that exists now. To provide a sense of magnitude to this component of the strategy, the City should consider supporting the acquisition, development and maintenance of two times the standard recommended by the National Park and Recreation Association.

The second important implication to the planning of the future park system is on the location of these new parks. Clearly, if new park land can be acquired so that these parks provide links in the trail and greenway systems they further enhance the City's ability to achieve the open space strategy. Opportunities exist to accomplish this while meeting the recreation needs and environmental requirements normally followed by progressive parks departments. Timing however, is a key. The imperative will be to establish an aggressive acquisition program while prime land is still available.

4.3 IMPLEMENTATION OF THE STRATEGY

A strategy this bold requires a multifaceted program of implementation. While there is certainly a need for a park acquisition program of substantial dimensions, buying park lands alone will not be enough to achieve the vision of "*a city embraced by open space*". A series of complimentary actions and initiatives must be diligently pursued to achieve the results desired by the community. Many parties and groups must devote time and resources to the effort as well. The City can provide leadership and apply regulatory mechanisms, and financial support for park and recreation budgets but cannot be expected to do it all. Other community based groups and organizations need to be active in this effort, and the effort must be sustained over many years.

The strategy must be flexible, opportunistic and coordinated. As such, it must be guided by policy so that the various parties who are now and who will become part of the community effort to secure an open space system of the magnitude envisioned are working toward common goals.

Implementation Policies

Policies that would encourage the creation of open space and greenways are as follows:

- (a) Annex or protect through intergovernmental agreements natural areas and open spaces to create a greenway buffer around the City.
- (b) Require developers to set aside land, subject to the presence of appropriate site conditions, for recreation, permanent open space and flood control as part of the development approval process. Use cluster design techniques to achieve balance in the financial implications of such set aside programs.
- (c) Establish zoning incentives and design options which assure that open space is included in new developments. Besides cluster developments, these might include use of common open

space areas, preservation of natural areas, and design standards such as screening dissimilar uses, landscaping, park site selection, buffer zones, site design and building setbacks.

- (d) Encourage the donation of conservation easements on lands, particularly woodlots.
- (e) Use flexible design standards and other zoning tools to encourage new developments to provide open space or rights-of-way that would link to the bicycle/pedestrian system.
- (f) Preserve and develop the natural corridors with bikeway trails, which connect to Valparaiso's bikeway system.
- (g) Protect floodways of streams and creeks from development encroachment and preserve them as natural corridors.
- (h) Preserve natural views and features as the City grows and expands.
- (i) Acquire outright park and conservation lands through the County and City park programs.

Flexible Management

The Illustrative Open Space Framework, Figure 7, is meant to be a guide only for plan implementation. It is deliberately titled *illustrative* for the City and its allies in the open space quest to react opportunistically to development actions as they occur, and to funding opportunities from within and outside the City to acquire land. The illustrative framework map shows what might be considered the best parcels to set aside and to link the system. However, it is very unlikely that all such parcels will come available or be connected through ownership to active development parcels. Therefore, flexibility and case by case judgement will be needed to adapt the illustrative framework to the realities of development as it actually occurs.

The City's planning staff is well suited to carry out this function over time as it goes about its responsibilities in advising the Plan Commission on development proposals that come before the commission. It will also fall to the Plan Commission to work with the planning staff of the City in carrying out the policy-making judgements on each development proposal and to study how each proposal can contribute to the emerging open space system.

Cluster Developments

Cluster developments or open space planning is a way to preserve open space and rural character. Clustering should be used as a technique to augment public purchase and environmental set asides.

Cluster development is not a technique to reduce density but can allow the same amount of overall development that is already permitted. The key difference is that this technique requires new construction to be located on only a portion of the parcel, while the remaining open space is permanently protected through perpetual conservation easement co-signed by a local conservation

commission, land trust, or homeowners association, and recorded in the county recorders office of deeds. This form of development should be encouraged through the use of zoning incentives that rewards the developers for preserving wooded areas and other natural features in accordance with the open space framework, and not otherwise required by the current zoning district.

Cluster developments might also be used to encourage diversity in housing stock, which is one of the main housing objectives of the growth plan. By employing the principles of cluster developments aided by flexible zoning, creative land planning should be able to achieve a variety of lot sizes, thus ensuring a range of housing styles and costs within the subdivision.

This pattern of down-sized lots and preserved open spaces offers distinct economic advantages to all parties. Developers can reduce the cost of building roads and, if applicable, water and sewer lines. Local governments save on snowplowing and on periodic road re-surfacing. And home buyers often pay less because of these cost savings. Cluster developments also usually gain enhanced value due to the aesthetic and environmental benefits of permanent open space, and also contribute to increasing the value of adjoining residential areas.

Transfer of Development Rights

Transfer of development rights or TDR is a planning techniques available in a growing number of states to facilitate land preservation in areas with important natural or rural resources, and to make possible the utilization of development rights from the protected land elsewhere in the community. Areas of the city most suitable for development are declared receiving zones with increased use densities, leaving intact open farm and forest lands as the sending zones from which the development rights are “sold”. The key is the increased densities allowed in the designated growth centers or infill development centers. The growth centers could include identified highway nodes. As public monies decline for the outright purchase of such rights, using more creative techniques, such as TDR, will become imperative to preserve open lands.

4.4 FINANCING RECOMMENDATIONS

The acquisition of open lands in the expanded areas of the city should utilize one or more acquisition techniques.

- Propose general obligation bonds for park land acquisition
- Involve a third party acquisition partner (Nature Conservancy/Trust for Public Lands Friends of the Parks) to acquire land in advance of city acquisition funding.
- Consider the use of additional special tax levies to be dedicated for acquisition and development of open space.
- Use creative techniques like cluster developments and transfer of development rights to preserve open lands.

Potential State and National Funding Sources

- a. *Department of Interior - Land and Water Conservation Fund*

The revenues from off shore well permits collect in a federal government fund that is dedicated to park and conservation projects. Program funding for states has been minimal in the last few years, but pending legislation could reopen funding for major projects at the state and local level. Funds can be used for pathway and trail projects if the land is or will be dedicated park land.

b. *Department of Transportation - Recreation Trails Program*

A minor funding program is being offered by TEA-21 Enhancement Funds for Recreation Trail Development.

c. *Department of Interior - Rails to Trails Program*

This program is a successful system that enables abandoned railway corridors to be transformed into public hike and bike paths. Grant applications are made to the Department of Interior.

d. *U.S. Fish and Wildlife Service Habitat Development Program*

This new program is focused on creating new wildlife habitat in partnerships with private land owners. Project funds can be used for public use improvements such as trails and paths if the primary product is habitat creation.

e. *U.S. Soil Conservation Service*

The Service has from time to time available funds that can be spent on projects that have recreation benefits that are connected with drainage and soil conservation efforts. Adaptation of drainage canals that might also reduce the runoff and sedimentation process in the drainage system might find favor with the Service.

f. *Development Partnerships*

The partnership between the City of Valparaiso and area developers could be enhanced by joint ventures to create parks, paths and trails that will positively impact the value of their development. Improved action on sidewalk installations, development transfers for park, trail and path easements. Adjustments of landscape requirements for trail easements, and connection of commercial sites to pedestrian and bike paths would offer ways for the city and the developers to achieve mutually beneficial goals.

g. *Neighborhood Challenge Program*

The establishment of neighborhood parks, paths and trails might include a challenge program for neighborhoods and businesses. A fund could be established that would offer matching grants for parks and trail projects that offer in-kind or financial support by the neighborhoods and or business. This partnership could include land easements, construction support or other elements of implementation.

h. *City of Valparaiso Funding*

City Funds (general obligation bonds and general operating funds) could also be used for land acquisition, facility development, pathway and trail development along with operating expenses.

i. *Hotel-Motel Tax*

This funding source could be considered for the parks and recreation system if funds would be used to create services that would attract visitors to Valparaiso.

5. DESIGN ELEMENTS

The quality with which a community develops is as important as what develops where. That is to say, it is one thing to carefully select how land uses should be arranged, and another to assure that what is actually built is designed well from both an architectural and a site design perspective. A bad design is something the community has to live with for generations even though the land uses might be properly located. Comprehensive growth management must establish the standards that will influence the quality of future development.

Most often, design is thought of on a building or project scale. Equally important yet overlooked in many community growth plans is the larger scale design concern which ask, What is the city as a whole going to look like? How will I experience my environment as the city grows in the future? What can be done to set the stage through planning and growth management so that what is actually built will be something the community will share with pride?

The Open Space Strategy presented in Chapter 4 will contribute greatly to a positive and varied visual environment for the city. If successfully implemented, it will establish the vision of a *city embraced by open space*. As such, it is a major design principal of this Growth Management Plan. It is one of a number of formative elements that will combine to establish the urban design character of Valparaiso in the future.

Not all formative elements are germane to the scale of growth management. For example, the architecture of important buildings in the community will have a major impact on Valparaiso's overall character. Imagine how the character would be diminished if the Porter County Courthouse were not in its place on the square. Many communities concerned about quality growth utilize architectural review, sometimes called design review as part of their development approval processes. When managed properly, design review can be effective without being overly intrusive on the private sector petitioners.

The formative elements that are more directly related to planning for growth management are larger in scale than individual buildings, and respond to a combination of capital investment by local governments, and to design regulations that private petitioners, who want to develop land and build projects, must respond. In addition to the cluster development concept and the encouragement of good architecture, key elements are:

- A **Gateway System** for the city.
- The concept of **Signature Streets** in Valparaiso.
- **Subdivision Design** standards, and

- **Roadway Design** principles

5.1 GATEWAY PLAN

The residents of the City of Valparaiso value its unique character. The essential character of the City is the result of its history, and geography. This character is defined by its physical and social fabrics. While the social fabric is defined by the various neighborhoods that constitute the community of Valparaiso, the physical fabric is defined by the various landscapes that shape it. What defines the City of Valparaiso, in terms of landscape entities, is the presence of a traditional downtown, various contemporary commercial-strips and their associated suburban subdivisions and a rural countryside.

Residents and visitors experience these landscapes or streetscapes to various degrees on a regular basis. Right now, these various streetscapes exist independently and do not have a strong relationship with each other. Also, the "limits" of the City of Valparaiso are not visually and physically well defined. Usually, in places where the boundaries are clearly delineated, people remember their experience when traveling through the diverse landscapes or neighborhoods.

The gateway plan presented in this report answers this issue. It is the creation of a scheme of visual references that will serve as gateways for the City of Valparaiso. First, these visual references will serve to create a distinct image for the City of Valparaiso. Second, they will help in unifying the various landscapes or streetscapes of the City of Valparaiso. Finally, to some extent, these visual references will reflect the character of the City of Valparaiso.

This gateway plan is part of the growth management planning process. In order to enhance the community image and identity of the City of Valparaiso, gateway features and design elements should be developed. Specifically, one of the stated objectives is to "promote programs to beautify and clean Valparaiso" and develop gateway designs and streetscape programs for new and existing main districts and corridors. When implemented, the gateway plan will help to better define the City of Valparaiso as a distinct community.

The structure of the gateway plan is directly related to the various landscapes or streetscapes of the City of Valparaiso. The three landscape entities (the traditional downtown, the various contemporary commercial-strips and their associated suburban subdivisions, and the rural countryside) define the City of Valparaiso character and are used as the framework in the elaboration of the gateway plan.

The proposed gateways are strategically placed along major corridors. The specific location of the gateways was either determined by the change of character along the thoroughfare or by the presence of a major intersection. Also, in some cases, it is the change in land use that determined the location of the gateways.

The scale of the gateways is an important consideration. Public perception of community' character is based either on what can be seen while driving or walking. Three levels of gateways are proposed' regional, semi-regional, and local. These levels are what influence the scale of the proposed gateways.

At the first level, associated with the rural countryside, the gateways might be defined by vertical structural elements. The streetscape of the corridors located between the "regional" gateways is

automobile-oriented. At the second level, associated with the commercial-strips, the gateways are defined by focal point elements. The streetscape of the corridors located between the "semi-regional" gateways is automobile/pedestrian-oriented. At the third level, associated with the downtown, the gateways might be defined by horizontal structural elements. The streetscape of the corridors located between the "local" gateways is pedestrian-oriented. It is outside the purpose of this plan to actually design the gateways. That is one of the next steps in the implementation of the Growth Management Plan.

The treatment of the gateways as well as the use of plantings is dictated by their location and scale. Gateways do not have the same visual impact on people whether they are surrounded by cornfields, by shopping centers, or by sidewalks cafes and boutiques. Examples of conceptual treatment for the three categories of gateways are shown. Locations of the proposed gateways are as follows:

Regional Scale:

- Route 49/Burlington Beach Road
- Route 49/Vale Park Road
- Route 49/State Road 2
- Route 49/US Highway 30
- US Highway 30/Hayes-Leonard
- State Road 2/100W

Semi-Regional Scale:

- Calumet Avenue/Burlington Beach Road
- Calumet Avenue/Vale Park Road
- Calumet Avenue/Canadian National Railway LaPorte Avenue-Lincolnway/Sturdy Road
- Morthland Drive/Sturdy Road
- State Road 130/Joliet Road
- US Highway 30/State Road 2/Washington Street

Local Downtown Scale:

- Lincolnway/Garfield Avenue
- Lincolnway/Wayne Street
- Lincolnway/Morgan Boulevard
- Washington Street/Monroe Street

5.2 SIGNATURE STREETS AND MAJOR STREET CORRIDORS

A unique proposal for Valparaiso's urban design composition is that of *Signature Streets*. This concept identifies seven roadways that are arterial highways, and highlights these from a design standpoint to *present* the city to its residents and to visitors. The proposed roadways are:

- Vale Park (400N), an east-west local arterial,
- Campbell Street, a north-south local arterial,

- County Roadway 700N, a future east-west local arterial,
- US 30, an east-west regional highway, and
- Bypass 49, a north-south regional highway which is semi-access controlled.
- Calumet, a north-south business arterial
- Lincolnway, a east-west arterial through the downtown and Eastgate areas

The three priority corridors are US 30 (Morthland Drive), Calumet, and Lincolnway. Proposed signature streets are shown on Figure 8. They are both local and regional in their function and have been selected for their ability to link the entire community in the future. They are very important circulation routes and it is expected that they will be heavy traffic carriers in the future. US 30 (Morthland Drive) already is heavily traveled, and the 49 Bypass is steadily growing in volume.

The vision for these special streets is for them to set the design standard for the community and should include standards for utilities, signs, landscaping, traffic control and lighting. These standards will define the quality commitment of the city to its residents, and will work to substantially upgrade the way individuals absorb their community and their environment. As important circulation routes, the city will be viewed daily from within these corridors. What people will see as they traverse the signature streets will do much to define this place, Valparaiso, where they may live, work, carry out business, choose to shop or just visit. It is expected that major land use investments will be attracted to these routes because of their prominence, the access they provide and if developed as proposed the prestige factor or 'being located along one of Valparaiso's unique signature streets.

Each proposed signature street will offer somewhat different set of conditions to work with when actual design and enhancement are tackled. Segments of Campbell, US 30 and even Vale Park are developed. Each has, or is planned to have a unique cross-section This notwithstanding, commonality can be expressed through the application of design elements and materials which can be repeated in each corridor.

Design Prototypes

Prototypes of recommended intensity of design and appropriate design concepts and materials are presented in the following two figures, 9 and 9.5 Both these design prototypes are intended to show how a signature corridor can be comprehensively designed. They do not represent any actual street segments in Valparaiso but instead are reasonable prototypes of the kind of roadway cross-sections and abutting development that should occur over time as Valparaiso develops.

Both the public rights-of-way and the abutting front yard setbacks of private, fronting properties are brought into play as part of the design. Public and private parts of the prototype corridors are designed to relate and to augment each other. The same materials are repeated and the layouts appropriately interact to present a unified design which has the depth to truly create an environment that will be pleasant, uplifting and a source of pride for the community. The recommended prototypes include landscaping elements, building setbacks and driveway control standards. These vary depending on the abutting land uses. For example, abutting

commercial uses will have less of a setback (30 Feet) than will residential development (40 feet).

Four separate applications are presented in the prototypes on figures 9 and 9.5. Figure 9 shows how new segments of Campbell and Vale Park might be developed or improved as boulevards with center medians acting to both organize driveway access and to embellish the landscape treatment of the signature street. Highlighted are left turning improvements and driveway control policies which emphasize side street and shared access from the signature street itself. Such controls do much to protect the traffic carrying capacity of the roadway and to avoid congestion on what will be busy streets in the future.

Different land uses are shown with appropriate setbacks and building locations on their hypothetical lots. Buildings that can function at or very near the front property line are shown there deliberately in order to provide variety in the three dimensional character and experience provided by the corridor.

Figure 9.5 show how the these design policies and principals can be applied to four lane roadway segments without boulevard treatment, and for two lane cross-sections where it may not be possible to widen the roadway to four lanes. In these cases, the beatification improvements are somewhat more subdued reflecting the reality of the amount of space that is available to work with in already built up roadway segments.

It should be noted that these more limited improvements (Figure 9.5) could be applied to non-signature streets in the city as well. Streets such as Calumet and Lincolnway, already fully developed, could benefit from the applications of the design policies and principals shown on Figure 9.5. Certainly refinements and specific design development would have to accommodate what is on the ground but the basic design concepts, if applied consistently will change the face of Valparaiso in a very positive way.

The intent of these corridor design guidelines is to create a unified sense of character while developing a functional transportation plan. This can be accomplished by regulating building setbacks, intersections and drives, providing pedestrian and bike connections, and establishing minimum standards for landscape requirements. The linear landscape treatment will provide continuity throughout the corridor, with major emphasis at the intersections. A fully landscaped median adds interest and color, softens the harshness of the pavement, and makes the corridor appear more natural. The attractive character of the corridor will ultimately be expanded with the addition of adjacent land uses by implementing landscape standards for developments that compliment the corridor right-of-way. Recommendations for the treatment of the corridor are as follows:

Rights-of-Way Treatment:

- Maintain a one hundred 20-foot right-of-way distance for City/State Arterial corridors to accommodate sufficient landscape treatments and buffers and allow for pedestrian/bike pathways.

- Provide extensive landscape treatment within rights-of-way to create an attractive green corridor, screen service and parking areas, and replace natural features that would be lost to new construction.
- Create a pedestrian/bike pathway to provide connections between different land uses
- Eliminate the need for over-head wires wherever possible by placing power lines and cables underground.
- Provide a 20-foot median with extensive landscaping as a continuation of the right-of-way treatment.

Intersection Treatment:

- Limit intersections to occur at a minimum of 1,000 feet apart, with an optimum minimum distance of 1,320 feet.
- Develop special design emphasis at intersections to include decorative paving and lighting, ornamental trees and shrubs, perennials and groundcover. Repeat these elements along the corridor to create a unique character.
- Add gateway features such as stone walls, special identification signage, unique landscape materials, artistic elements, and decorative lighting.
- Provide appropriate viewing angles from intersections by limiting vegetation taller than three feet in height within a 45 degree angle from stop bar Allow a larger viewing angle at two-way stop intersections.
- Minimize curb-cuts along corridor by providing shared drives and additional drives on secondary, streets. Utilize connecting drives between commercial, office, and industrial land uses wherever possible Limit curb-cuts to a width of 36-feet
- Maintain a minimum distance of 300 feet between drives

Parkway Plantings:

Plantings are intended to provide a linear, natural, visual enhancement that unify the corridor character and add a greenbelt to an otherwise bleak landscape. It is ideal to use native and hardy plant materials with ornamental and decorative supplements at intersections The following is a list of recommended plant materials that would be optimum for corridor plantings:

Deciduous Trees

Burr Oak, Hackberry, Honeylocust, Little Leaf Linden, Red Maple, Red Oak. River Birch, White Ash, White Oak

Evergreen Trees

Spruce, White Fir, White Pine

Ornamental Trees

Crabapple, Eastern Redbud, Hawthorn, Ornamental Pear, Serviceberry,

Shrubs

Burning Bush, Cotoneaster, Forsythia, Fragrant Sumac, Lilac, Red Twig Dogwood, Spirea, Viburnum, Witchhazel

Perennials and Groundcover

Daylily, Daffodil, Hosta, Ivy, Purple Leaf Wintercreeper, Russian Sage, Salvia, Sedum, Tulips, Vinca

Native Prairie Plants

Aster, Black-Eyed Susan, Butterfly-weed, Columbine, Coreopsis, Daisy, Goldenrod, Leadplant, Phlox, Prairie Clover, Prairie Dropseed, Purple Coneflower, Sedge, Spiderwort, Sunflower

Building Setbacks and Landscape Requirements by Type of Land Use

These standards are intended to create a unified corridor appearance, provide adequate landscape material, and supply screening where appropriate. The building setbacks will achieve a sense of scale and frame the corridor in a visually appealing manor. Wherever possible, parking areas should be placed between or behind buildings, and be screened with landscape material. The following chart displays these standards:

Land Use	Minimum Building Setback	Minimum Landscape Yard along R.O.W	Landscape requirements per 100 linear feet frontage	Other requirements
Commercial	30'	30'	2 Shade trees, 1 Evergreen tree, 2 ornamental trees, 3 large shrubs, 6 small shrubs	Screen all service areas with dense planting of shrubs and evergreen trees.
Large Commercial	30'	30'	2 shade trees, 1 evergreen tree, 2 ornamental trees, 3 large shrubs, 6 small shrubs per linear foot of building frontage	Screen all parking areas with 5' buffer of shrubs, 3' height maximum.
Industrial	60'	30'	4 Shade trees, 3 Evergreen tree, 4 ornamental trees, 6 large shrubs, 10 small shrubs	Screen all service areas with dense planting of shrubs and evergreen trees.
			All other area must be covered with sod, perennials, native	Screen all parking areas with 5' buffer of shrubs, 3'

			prairie plantings, or height maximum. groundcover	
Office	30' min. 50' max.	equal to building setback	2 Shade trees, 1 Evergreen tree, 2 ornamental trees, 3 large shrubs, 6 small shrubs All other area must be covered with sod, perennials, native prairie plantings, or groundcover	Screen all service areas with dense planting of shrubs and evergreen trees. Place all parking areas behind buildings. No parking within landscape yard.
Multifamily	40' min. 106' max.	30'	2 Shade trees, 3 Evergreen tree, 3 ornamental trees, 3 large shrubs, 6 small shrubs	Provide 10' foundation plantings along buildings consisting of shrubs, perennials, and ground- cover
Single Family	40'	30'	2 Shade trees, 3 Evergreen tree, 2 ornamental trees, 3 large shrubs, 6 small shrubs	
Open Space/ Public	40'	40'	3 Shade trees, 2 Evergreen tree, 3 ornamental trees, 3 large shrubs, 6 small shrubs	All other area must be covered with sod, perennials, native prairie plantings, or groundcover

Three remaining elements not shown on the prototypes in figures 9 and 9.5 need to be included in the design policies; lighting, sign controls and buried utility poles. Low cut off lighting fixtures whether in a canopy or on a pole provide safe and efficient lighting without glare for the passerby or motorist. It also focuses the light distribution on the property and not adjacent parcels or roadways. These are standard fixtures which can be used in lieu of exposed lamp and lens fixtures which will significantly change the image of the development along these key corridors

Any streetscape can be improved with the application of sound sign controls. While controversial in many locales, the upgrading of sign controls can do more for the appearance of a community than any other single action. Sign controls can be discreet. For example, tighter sign controls might be applied as a zoning overlay to the designated signature streets or perhaps to all street segments that are not yet fully developed. There is no reason (legally) that new, more design conscience sign controls cannot be applied citywide.

Underground utilities do a great deal to remove the jumble that creates visual chaos that so many arterial streets convey. It is expensive to retrofit underground utilities where they have been previously installed, but not unheard of in the Midwest. Such action would be a big step and represent a major commitment to the signature street program. It should be considered and studied in cooperation with local utility providers. More opportunity may exist as part of regular maintenance or planned upgrading of the distribution poles and lines. A long term program might be the answer to the expense involved But in areas not yet served, underground utilities should be a firm policy.

As part of this growth management plan, these recommendation, are intended to set policy, and are not meant to suggest that the standards expressed and implied are ready for integration into the city's development control codes. Additional study and refinement are warranted to implement these signature street recommendations

5.3 DESIGN REVIEW PROCESS

it is important that the redevelopment of existing corridors as well as the development of new corridors be given design consideration as each public or private project occurs. In a short time, this can significantly improve the face of Valparaiso.

To date, Valparaiso uses a Site Review process which reviews the private sector projects for compliance with ordinances, good engineering practices, and safety requirements. Landscape plans are also submitted and required but only reviewed for compliance with approved tree and material types. At a minimum, site design and development needs design review for compliance with the Growth Management Plan, so that even without ordinances, recommendations can be made to the developer.

Frequently, new or redevelopment projects in Valparaiso present an opportunity to request qualitative planning and design requirements in exchange for annexation or infrastructure development. As it has in the past with engineering requirements, the City can also be effective in implementing improved design standards (planning, site development, building, landscaping, lighting, signage, etc.)

In addition, projects by the City, which have always set the example regarding the quality of engineering, have the opportunity to set the example for the quality of design expected in our community. A design review of each project and how it relates to or reinforces the Growth Management Plan regarding streets, sidewalks, curbs, landscape, lighting, and signage, is an important ongoing step. Since Valparaiso is in a continual process of development or redevelopment of infrastructure, more important than anything else is the design quality of City projects. This can set an example without ordinance.

Valparaiso should give consideration to instituting a design review process to be applied to all except non-single-family residential development. Most often, such processes are established by ordinance and made a part of normal development review procedures. A design review commission is established that serves by pleasure of the elected municipal council and mayor. Usually, the commission is made up of a majority of design professions but often includes local property owners and business persons in the community Principles are established to guide the commission and there are limitations that keep the commission from becoming the chief designer of project that may come before the city

5.4 DEVELOPMENT DESIGN STANDARDS

The city should prepare and integrate into its development control codes development design standards that will provide developers and builders of all kinds of property with guidelines for the type of development the city is looking for as it manages its growth. While beyond the scope of this plan, the nature of the recommended development design standards are exemplified here by the inclusion of another prototype, this one a set of design standards for one type of land use,

namely office and business park development. Similar design standards should be prepared for major corridor overlays, and major land use type with priority given in order to: shopping centers, free standing "big box" development, office and business parks, multiple Family residential developments, single-family residential developments, public buildings and facilities, and industrial developments.

PROTOTYPE DESIGN STANDARDS FOR OFFICE AND BUSINESS PARK USE

The design of buildings, lots and lot improvements/or Office Park and Business Park uses shall conform to the following regulations.

1. *Minimum Parcel Size.*

An Office or Business Park use area shall not be less than 15 acres in size.

2. *Minimum Lot Area.*

2.5 acres, provided that corner lots along a principal arterial street shall be not less than 5 acres and that, where permitted with special approval, hotels shall be on lots not less than 5 acres.

3. *Minimum Lot Width*

230 feet, provided that:

a) on corner lots the lot width shall not be less than 300 feet;

b) on corner lots along a principal arterial street the lot width shall not be less than 450 feet; and

c) where permitted, lots with hotels shall be not less than 330 feet.

4. *Minimum Yard Requirements.*

a) Front Yard and Corner Side Yard

1) For Lots Along Principal Arterial Streets

150 feet from the centerline of the street

2) For Lots Along Collector Streets

100 feet from the centerline of the street

3) For Lots Along Local Streets

93 feet from the centerline of the street

b) *Interior Side Yards – 200 feet*

c) *Rear Yard – 20 feet*

5. *Area Reserved for Streets, Sidewalks and Utilities.*

To preserve adequate land area adjacent to streets for the provision of utilities, a clear zone free of permanent structures shall be maintained, expressed in feet from the centerline of the street, as established below:

a) *Along Principal Arterial Streets - 75 feet*

b) *Along Collector Streets - 40 feet.*

c) *Along Local Streets - 33 feet.*

d) *Permitted obstructions shall be limited to bus stop shelters, park benches (no advertisements), and pedestrian pathway amenities.*

6. *Minimum Parking Setbacks.*

Parking areas on lots within this area shall maintain the minimum setbacks established below within which only driveways and sidewalks are permitted to provide reasonable access

a) *In Front and Corner Side Yards Abutting Principal Arterial Streets.
/35 feet from the centerline of the street.*

b) *In Front and Corner Side Yards Abutting Collector Streets.
60 feet from the centerline of the street.*

c) *In Front and Corner Yards Abutting Local Streets.
53 feet from the centerline of the street.*

d) *Minimum Setback Along Any Property Line - 10 feet.*

e) *Internal Parking Setbacks from Buildings.
A minimum of 15 feet of landscape area shall be provided around all principal buildings*

f) *Natural Gas Easement.
Where applicable, setbacks provided by virtue of the Natural Gas easements shall be counted toward required parking setbacks*

7. *Maximum Building Height.*

a) *Principal Buildings.*

Maximum building height shall be controlled by the Valparaiso Zoning Ordinance, provided that for each foot the building exceeds 35 feet in height, each required yard shall be increased one foot

b) *Accessory Buildings.*

*50 feet, provided that for each foot **the building** exceeds 35 feet in height, each required yard shall be increased one foot.*

8. *Bypass 49 Setbacks.*

All principal and accessory buildings shall be setback 80 feet from the right-of-way line of Highway 49 Bypass

9. *Required Open Space between buildings.*

Multiple buildings are permitted on a lot, provided that the following spacing between buildings provided is provided:

a) *Space Between Principal Buildings.*

40 feet, provided that for each 3 feet of height over 45 feet, this space shall be increased one foot

b) *Space Between Principal and Accessory Buildings.*

20 feet, provided that for each foot the accessory building exceeds 25 feet, this space shall be increased one foot.

c) *Space Between Accessory Buildings - 20 feet.*

10. *Minimum Landscape Coverage.*

The minimum landscape coverage shall be not less than 40% of the lot area.

6. TRANSPORTATION PLAN

6.1 INTRODUCTION

A well-planned transportation system is a vital component of any growing community such as the City of Valparaiso. A goal of the growth management study has been to provide a functional and efficient roadway and public transportation system that is available to serve the travel and access needs of the full community. It is also desirable that the transportation system be designed to provide for all modes of transportation, whether by car, bus, train, bicycle or other any other means of travel. The system needs to allow for direct movement around all parts of the city and to the surrounding northwest Indiana regional area.

The city is fortunate to be located in central Porter County with good connections for travel in all directions via the interstate highway network, commuter rail lines and private airplanes. Interstate 65 is located 13 miles west of the city and provides for north-south regional travel. Interstates 80/90 and 94 are located 7 and 9 miles respectively north of the city and provide for east/west regional travel. The South Shore Line, a commuter rail service operating between South Bend, Indiana and Chicago, Illinois, provides access to employment opportunities throughout northwest Indiana and Chicago through the Dunes Park station located 11 miles north of the city in Chesterton. Porter County Airport is located on U.S. Route 30 immediately east of State Route (SR) 49 and provides a means for businesses and privately-owned planes to have access to and from the area. Bus shuttle service is available to Midway and O'Hare from Merrillville and Portage.

Local major arterial highways under the jurisdiction of the State of Indiana provide connections to the interstate, rail and airport systems. State Route 49, a partial access-controlled, four-lane, divided highway located on the east side of the city, provides connections north or south to the interstate and rail systems. U.S. Route 30, a four-lane divided highway, located on the south side of the city, provides connections east or west to the interstate system and other northern Indiana communities. State Route 2 and State Route 130, both two-lane highways, provide connections to other parts of the regional area to the west, southwest and east. State Route 149, though not directly within the city limits, is a two-lane highway providing connections to communities and employment in the northern part of Porter County.

6.2 EXISTING TRANSPORTATION SYSTEM

Existing Thoroughfare Plan Description

In 1990, the city established an Official Thoroughfare Plan (OTP) which defined the arterial and collector streets within the city that provide the primary means of travel in and around the community and to surrounding areas. Figure 10 shows the most current OTP as revised in 1998. The OTP was developed to be consistent with the city's comprehensive plan and zoning ordinance and has served as a planning guide for future development of the city and of areas adjacent to its borders.

Current average daily traffic volumes carried by streets that are part of the OTP are shown on Figure 11. More heavily traveled streets that experience higher traffic volumes (greater than 10,000 vehicles per day) include the following as shown on Table 1:

**Table 1: Average Daily Traffic (ADT)
Selected Arterial Streets in Official Thoroughfare Plan**

Street Name	Limits	ADT
U.S. Route 30	From west to east city limits	28,000 to 32,000
State Route 49	U.S. Rte. 30 to north city limits	20,000
Calumet Avenue	Morgan Blvd. to Bullseye Lake Rd.	16,000 to 18,000
Campbell Avenue	Lincolnway to Bullseye Lake Rd.	8,000 to 11,000
LaPorte Avenue	Sturdy Road to S.R. 49	7,000 to 12,000
Lincolnway	Yellowstone Rd. to Sturdy Rd.	9,000 to 16,000
Morgan Boulevard	Lincolnway to Calumet Ave.	10,000
Roosevelt Road	Lincolnway to Vale Park Rd.	9,000 to 10,000
Sturdy Road	U.S. Rte. 30 to Lincolnway	16,000
Washington Street	U.S. Rte. 30 to Lincolnway	12,000 to 14,000

Source: EarthTech

a) Existing Traffic-Related Problem Areas

Through discussions with city staff and based on surveys conducted of the working group, several streets and neighborhood areas experiencing inefficient traffic flow and traffic congestion were identified. The streets involved and the traffic problems that occur can be described as follows:

- i) Calumet Avenue from the Canadian National railroad tracks to Bullseye Lake Road**
Traffic volumes average about 18,000 vehicles per day on this three or four-lane, variable-width roadway. Calumet Avenue experiences traffic congestion due to the high traffic volumes generated by the extensive commercial development in the local area. The busy intersection of Calumet, Vale Park Road and Roosevelt Road with its five approaches and split phase traffic signal, is also a source of traffic delay.
- ii) Campbell Street in the vicinity of the high school** - Traffic volumes average between 8,000 to 11,000 vehicles per day on this two-lane roadway. Though Campbell has been widened with turning lanes adjacent to the high school, traffic congestion is still experienced at the beginning and end of each school day.
- iii) Lincolnway from Campbell Street to Morgan Boulevard (downtown area)** - Traffic volumes range between 11,000 to 16,000 vehicles per day in the downtown area. Lincolnway is a two-lane roadway with parallel parking lanes on both sides of the street and traffic signal control at each cross street intersection. Traffic congestion relates to the inefficient coordination of the traffic signal system, certain intersections without turning

lanes and the interruptions to traffic flow caused by the parking maneuver and commercial business access.

- iv) **Campbell Street, Sturdy Road, Silhavy Road, Vale Park Road, Eisenhower Avenue, McCord Road and Chicago Street** - As shown on Figure 10, portions of these streets are incomplete though they are a part of the city's thoroughfare plan. A lack of continuity in these streets forces local traffic to travel over a more indirect route to reach their destination and concentrates more traffic on other parallel arterial and collector streets that do have a continuous alignment through the city.
- v) **Washington Street from U.S. Route 30 to Lincolnway** - Traffic volumes average about 13,000 vehicles per day on this two-lane roadway. Washington Street is the most direct street connecting the city's downtown area to U.S. Route 30. With on-street parking in the downtown area and an at-grade crossing of the Norfolk Southern track, traffic congestion does occur due to the high traffic volumes, heavier freight train traffic and the interruptions to traffic flow caused by the parking maneuver and commercial business access.
- vi) **Various Intersections throughout the city** - Many arterial streets that are part of the thoroughfare plan function inefficiently at their intersections with collector streets due to the lack of modern traffic signal installations to control traffic movements and due to a lack of turning lanes.

b) ***Existing Public Transportation System***

Up until the late 1960's, city residents had options of using either Amtrak train service or Trailways bus service to provide public transit access to the Chicago metropolitan area and to other northwest Indiana communities. Currently, neither train nor bus service operates locally within the city. The Northern Indiana Commuter Transportation District (NICTD) does operate a commuter rail service in Porter County on the South Shore line with the nearest station located on U.S. Route 12 near the S.R. 49 interchange in Chesterton. As mentioned previously, the South Shore provides service between Chicago, Illinois and South Bend, Indiana. Bus service is not available in Porter County. There is a privately operated taxi system which provides service to city residents within the local area.

c) ***Existing Non-Motorized Transportation System***

Bikeways and sidewalks serve an important function in their ability to provide for convenient access to local commercial areas, parks, schools and other community facilities. They also serve well for recreational activities and exercise within the city without creating additional traffic congestion or delay. Figure 12 shows existing bikeways established by the city and Porter County. Though somewhat limited in their length and availability currently, bikeways are located either on the pavement for travel with the flow of vehicular traffic or on separate paths parallel to the roadway section.

Streets within the city limits generally have sidewalks on both sides of the streets for pedestrian use. There are, however, many areas where there are gaps in the sidewalk or where sidewalks were not required when the land was subdivided. This is particularly the case in county subdivisions that were annexed into the city after they were already developed.

6.3 PROPOSED TRANSPORTATION PLAN

a) *Conceptual Development*

The proposed transportation system for the growth management study has been planned considering the land use and development scenario preferred by the city for the greater Valparaiso area. The transportation system reflects our understanding of discussions with city staff, comments received at working group meetings and the study team's observations and analysis of existing traffic and travel conditions that are unique to this community and northwestern Indiana. The transportation plan is also designed to be consistent with the preferred alternative transportation network known as the "Vision 2020 Plan" as developed by Northwestern Indiana Regional Planning Commission (NIRPC). This regional plan recognizes the fiscal challenges of implementing both regional and city thoroughfare plans.

In developing the transportation plan, the travel needs of all modes of transportation and of all segments of the community's residents have been considered. It is designed to be implemented through both short and long-term improvements to provide for more efficient and safe travel for present conditions and for the future after full development occurs throughout the study area. Implementation of some projects will rely on competing successfully for state and federal TEA-21 funds.

b) *Proposed Thoroughfare Plan*

Figure 13 depicts the proposed thoroughfare plan for the city. The thoroughfare plan builds upon the present OTP and extends the arterial and collector streets network to serve future development of open areas surrounding the city. In planning the roadway network, the goal has been to provide continuous alignments for the arterial or collector streets that allow for travel from any direction over the full length or breadth of the city. Typically, collectors have been planned approximately every half-mile and arterials have been planned approximately every mile. Providing several alternative travel routes for any particular destination will spread vehicles over more than one street and reduce the potential for traffic congestion or delay in any part of the roadway network.

In certain instances, either natural or man-made features made it infeasible to provide the desired spacing. Examples of natural features include lakes, wetlands or areas of widely variable topography. A roadway alignment through these areas might have a negative impact on the natural wildlife habitat, degrade water quality or be costly to construct. Examples of man-made features include railroad tracks, existing residential or commercial development or the land area set aside for the Porter County airport. In these circumstances, a new roadway alignment might be a safety concern to the railroad, have

negative social impacts on the quality of life in a residential neighborhood or prevent a future expansion of airport facilities.

For arterial roadways, it is recommended that a 100-foot right of way be provided. A 100-foot right of way provides sufficient width so that an arterial could have a four-lane cross section with turning lanes at major intersections and still have sufficient remaining parkway width for trees, street lighting, utilities, sidewalks or bikeways. For collector streets, an 80-foot right of way is recommended. This width will provide sufficient room for a two or three-lane cross section, sidewalks or bikeways and set aside parkway areas for trees, street lighting or utilities. A 60-foot minimum right of way is recommended for local streets. The 60-foot width provides the area needed for a two-lane road with sufficient pavement width for on-street parking, parkway trees and sidewalks.

c) ***Projected Traffic Volumes of the Thoroughfare Network***

Traffic volumes were projected based on the full development of land uses shown in the city's preferred development scenario and the proposed thoroughfare plan. The focus of the preferred development scenario is the preservation and enhancement of the city's downtown area. Thus, there will be a significant volume of traffic concentrated on streets that provide the most direct route to a downtown destination such as Lincolnway, Calumet Avenue, Campbell Street and State Route 130. The limited number of arterial streets crossing the Norfolk Southern railroad tracks has a similar effect of concentrating traffic generated from southern portions of the study area on Campbell Street, Washington Street and Sturdy Road since they provide the most direct access into the downtown area.

A second important factor which influenced projected traffic volumes was the location of future interchanges on State Route 49. SR 49 provides a desirable route for employment-related trips to northern portions of Porter County and Lake County due to its combination of good capacity and high speed. Thus, significant traffic will be seeking access to SR 49 by using east/west arterial streets such as County Road 600 North, Burlington Beach Road, Vale Park Road and LaPorte Avenue.

A third factor which influenced traffic projections was the barriers to travel caused by natural and man-made facilities. On the west side of the current city limits, the railroad tracks, floodplains and varying topography limit the continuity of north/south travel routes to Tower Road and Campbell Street. On the southeast side of the study area, the continuity of travel routes is again blocked by land set aside for Porter County airport and the limited number of at-grade railroad crossings.

Projected traffic volumes for full development are provided in Table 2. It should be understood that future traffic volumes may vary widely from the projected volumes shown. The preferred development scenario does offer a broad latitude in the intensity and location of certain land uses which could have a significant influence on the volume of traffic generated in the future. Full development of the area will also occur over two or three decades, well beyond the customary twenty year planning period. Thus, the projected traffic volumes may not be reached until many years into the future.

Table 2: Projected Traffic with Full Development

Arterial Street Section	Projected Traffic Volume	Future Improvement Description
Bullseye Lake Road	A	Two lanes with turning lanes at intersections
Burlington Beach Road	C	Two lanes with turning lanes at intersections
Calumet Avenue	D	Four lanes with turning lanes at intersections
Campbell Street	D	Four lanes with turning lanes at intersections
County Road 400 East	A	Two lanes with turning lanes at intersections
County Road 600 North	B	Two lanes with turning lanes at intersections
Division Road	A	Two lanes with turning lanes at intersections
Evans Avenue	C	Two lanes with turning lanes at intersections
Froberg Road	A	Two lanes with turning lanes at intersections
Glendale Boulevard	A	Two lanes with turning lanes at intersections
Harrison Boulevard	A	Two lanes with turning lanes at intersections
Hayes-Leonard Road	A	Two lanes with turning lanes at intersections
Joliet Road	B	Two lanes with turning lanes at intersections
LaPorte Avenue	D	Four lanes with turning lanes at intersections
Lincolnway with Roosevelt Road	D B	Consider one-way couple in combination either Jefferson Street or Indiana Avenue Four lanes with turning lanes at intersections
Silhavy Road	A	Two lanes with turning lanes at intersections
St. Clair Road	A	Two lanes with turning lanes at intersections
State Route 49 interchanges	F	Four lanes with limited access &
State Route 130	C	Two lanes with turning lanes at intersections
State Route 149	B	Two lanes with turning lanes at intersections
Sturdy Road (south)	C	Four lanes with turning lanes at intersections
Sturdy Road (north)	A	Two lanes with turning lanes at intersections
Tower Road	A	Two lanes with turning lanes at intersections
U.S. Route 30	F	Six lanes with turning lanes at intersections
Vale Park Road	D	Four lanes with turning lanes at intersections
Valparaiso Street	A	Two lanes with turning lanes at intersections
Washington St (S of DT)	D	Four lanes with turning lanes at intersections

Source: EarthTech

Projected Traffic Volume Legend

- A = 0 to 10,000 Average Daily Traffic (ADT)
- B = 10,000 to 15,000 ADT
- C = 15,000 to 20,000 ADT
- D = 20,000 to 25,000 ADT
- E = 25,000 to 30,000 ADT
- F = Greater than 30,000 ADT

d) ***Present Highway Planning Efforts by the City, County and INDOT***

The City, Porter County and Indiana Department of Transportation (INDOT) have already initiated study and design efforts on several projects as shown on Figure 13 which will be part of the proposed thoroughfare plan, that includes other intermodal transportation plans. These plans should include sidewalks and bike paths. Examples of such planned projects include:

- i) **Calumet Avenue - Evans Avenue to Glendale Boulevard.** Under this project, the City has widen and reconstructed sections of Calumet Avenue to a four-lane roadway with turning lanes at Evans and Glendale.
- ii) **Vale Park Road - County Road 150 West to Goodrich Road; Campbell Street to Valparaiso Street; and Calumet Avenue to State Route 49.** The two westerly portions of Vale Park Road are new roadway sections being proposed by the City to provide a complete alignment from State Route 130 to State Route 49. Both are not yet under active study. The most easterly section between Calumet and SR 49 is currently being studied by the City. A construction schedule has not been determined for either of the three roadway sections.
- iii) **Valparaiso Street - Evans Avenue to Burlington Beach Road.** The City is planning to reconstruct Valparaiso Street and include major drainage improvements. A construction schedule has not been determined for this project.
- iv) **State Route 149 - U.S. Route 30 to State Route 130.** Porter County is planning a new two-lane roadway which would extend SR 149 southerly to U.S. 30. A construction schedule has not been determined for this project.
- v) **LaPorte Avenue - Lincolnway to Silhavy Road.** The City is planning to widen and reconstruct LaPorte Avenue with a four-lane roadway section with turning lanes at Lincolnway, Sturdy Road and Silhavy Road. Construction is expected in either 2001 or 2002.
- vi) **State Route 49 - Interchange at Vale Park Road and Partial Interchange at Burlington Beach Road.** INDOT is proposing to provide interchanges at Vale Park and Burlington Beach Road. The City is requesting that INDOT provide full interchanges at both these locations and at the SR 49 intersection with CR 600 North.

6.4 RECOMMENDED SHORT-TERM ROADWAY IMPROVEMENTS

For this study, short-term transportation improvements are those improvements needed to solve more present travel needs within a three to seven-year horizon. Several projects are recommended that would have an immediate impact in improving traffic circulation and reducing traffic congestion. There are also projects that position the city for the future growth that will eventually occur as the study is developed.

Transportation improvements mentioned in the previous section of this report are projects that the city, county and INDOT should continue to pursue as funding becomes available. Additional projects that are recommended to the city for consideration are as follows:

- i) **Calumet Avenue Intersection Improvements** - As mentioned previously, under present conditions, Calumet Avenue between the Canadian National tracks and Bullseye Lake Road experiences traffic congestion. Much of the delay is related to intersections at the major cross streets that do not function effectively due to an inconsistent roadway section, existing uncoordinated, traffic signal installations and the need for added turning lane capacity. The intersections of Calumet Avenue with Vale Park Road, Bullseye Lake Road and Burlington Beach Road need left turn lanes on all approaches and a modernized traffic signal systems that is coordinated with signals at Glendale Boulevard and Evans Avenue.
- ii) **Campbell Street Intersection Improvements and Extension to U.S. Route 30** - In the future, as the western and southern portions of the study area are developed, Campbell Street will play an increasingly more important function as a means of circulating traffic for north and south portions of the city. Adding turning lanes and traffic signals at Campbell Street intersections with Burlington Beach Road and Glendale Boulevard will improve traffic capacity and reduce traffic delays. When Vale Park Road is completed between Campbell and Valparaiso Streets, a traffic signal installation will be needed at this intersection.

Planning efforts should also begin for the eventual allowance of a direct roadway alignment on Campbell Street from Lincolnway to U.S. 30. Additional roadway capacity feeding into the south side of the downtown area is needed now beyond what is currently available primarily on Washington Street only. Since a Campbell Street connection will desirably have grade separated crossings with the railroad tracks, the time and coordination effort required for planning the new alignment will be significant.

- iii) **Lincolnway from Weston Street to Roosevelt Road** - Lincolnway plays an important role in providing access to the downtown area. There are limited options available to improve traffic flow since many buildings front on the right of way line and there is on-street parking. The elimination of on-street parking capacity is not feasible if the downtown area is to continue to attract commercial activity. As an alternative, it is suggested that the city consider the potential for a one-way couple with either Jefferson Street or Indiana Avenue. Lincolnway would serve traffic in one direction and Jefferson or Indiana would provide for traffic flow in the opposite direction. Direct connections between Lincolnway and either Jefferson or Indiana would be needed at the east and west ends of this street section to make this option feasible and traffic signals at cross streets would need to be coordinated.
- iv) **Lincolnway from Roosevelt to Sturdy** – This area is called Eastgate and is under study for traffic and streetscape improvements. A charrette will be developed in 2000, with

recommendations for implementation. A steering committee that includes VU, businesses, utilities, INDOT and city representatives will continue to lead this effort.

6.5 RECOMMENDED LONG TERM ROADWAY IMPROVEMENTS

The development of the proposed thoroughfare plan is recommended for the population and traffic growth projected for the study area. To accomplish this end will require careful planning and coordination with land development. Right of ways with sufficient widths for arterial and collector streets need to be provided for as property is developed. Continuous roadway alignments for the thoroughfare streets must be considered if an efficient roadway network is to be possible for the future. Pavement widths and intersection designs should be established that will provide for projected traffic volumes.

An additional long term roadway improvement that the city may want to consider is the provision of grade separation structures on the proposed thoroughfare system. Porter County and INDOT should be encouraged to provide grade separation on the planned extension of SR 149 to U.S. 30. This improvement would then provide the city with a grade-separated route on the west side of the city similar to the already grade separated route available on Bypass SR 49. Since Campbell Street already has an overpass at the Canadian National tracks and is located midway between the SR 149 and SR 49, it is a logical choice for grade separations at both of the Norfolk Southern track crossings.

To reach any of these objectives will require joint cost participation by private and public funds. Developers and the city, county and state will need to work in cooperation if the travel needs and economic well-being of the community are to be encouraged in the future.

a) *Present Transit and Bikeway Planning Efforts by the City, NIRPC and NICTD*

Though the vast majority of residents will continue to use their personal automobile as the primary means of traveling around the city, it is still desirable to encourage the use of public transportation, bikeways and walking as an alternative means of travel. Reducing travel demand through an efficient public transportation system and through non-motorized travel alternatives will decrease the amount of public funds that need to be invested in more costly roadway improvements that may still not have sufficient capacity to serve the travel growth projected in the study area.

Planning efforts are already underway on two public transportation initiatives. NIRPC has CMAQ funding in the Vision 2020 Plan for operating an express bus system that will provide access from Valparaiso to the Merrillville area and to the South Shore commuter line in Chesterton. The bus service will operate during peak hours to allow workers to commute to their jobs from the city. A selection process is currently being developed by NIRPC to find an operator for this system. It is hoped the bus system can be in operation by the fall of 2000.

In 1998, NICTD initiated a major investment study to determine how to best solve the need for an efficient commute from northwest Indiana to employment in Chicago. Three

separate commuter rail alternatives are being considered with one alternative using the Canadian National line in Valparaiso. Currently, ridership projections and rail capacity analyses are being conducted. It is hoped that the major investment study can be completed in the spring of 2000 and that “New Start” funding can be obtained from the Federal Transit Administration for more detailed planning, an environmental assessment and preliminary engineering. Both transportation initiatives are illustrated on Figure 15.

The City is working with Porter County and the park district to plan a bikeway system for the city’s study area. Figure 15 shows potential bike routes that may be considered. Design criterion for bike routes, location within the right of way, signing and access control are still being developed. Funding options include TEA-21 enhancement allocations.

7. WASTEWATER & WATER SYSTEM EXPANSION STRATEGY

7.1 WASTEWATER SYSTEM EXPANSION STRATEGY

7.1.1 INTRODUCTION

Expansion of the wastewater system is an important element of the Growth and Development Plan. This chapter presents an overview of the existing wastewater system operated by the City of Valparaiso. This chapter delineates needs for serving the potential ultimate population in the study area and identifies required components for expansion of the wastewater system.

7.1.2 EXISTING WASTEWATER SYSTEM

The existing Valparaiso wastewater system serves a domestic population of approximately 25,000, several light industries and the Valparaiso University. Existing population load on BOD basis is estimated to be 45,000. The area served by the existing wastewater system covers approximately 12 square miles. The area being considered by this study covers approximately 52 square miles.

Figure 16 shows the existing and potential future service areas. The study area has been divided into six service areas for consideration of potential future expansion of the wastewater collection system. Figure 17, also presents the location of wastewater treatment facilities in the study area, areas already served by sanitary sewers and significant development currently served by individual septic systems.

a) Wastewater Treatment Plants

The Elden Kuehl Pollution Control Facility service area includes the entire area incorporated by the City of Valparaiso, approximately 12 square miles. The service area also includes approximately 2 square miles of additional areas currently served by private systems.

The facility has a design average flow of 6 mgd and a peak hydraulic capacity of 13.5 mgd. It represents capacity to treat flows from a population equivalent of approximately 50,000. The plant is a tertiary (advanced) treatment facility with primary clarification, two-stage air activated sludge, nitrification, phosphorus removal, tertiary filtration, chlorination, dechlorination, and post aeration. Sludge treatment facilities include dissolved air flotation thickening of waste activated sludge, anaerobic digestion, sludge dewatering and lagoons for temporary storage of anaerobically digested and dewatered biosolids. The City is committed to expand this facility in the very near future to treat 9 mgd average day flow and 18 mgd peak day flow. This facility expansion represents capacity increase to serve a population equivalent of approximately 30,000. The total treatment capacity with the planned facility expansion would serve an approximate population equivalent of 80,000.

Within the study area there are also wastewater treatment facilities owned and operated by others. South Haven Sewage Works provides service to an area within the North and West study service areas. Sherwood Forest and Aberdeen also have plants to treat wastewater from their respective service areas in the South Southwest Service area.

b) *Wastewater Collection System*

Two types of sewers collect wastewater within the City of Valparaiso. The first sewers that were installed served two purposes, storm drainage and sewage collection. These sewers are called combined sewers and were installed prior to the 1960's. During the 1960's construction of combined sewers was prohibited because combined sewers were designed to discharge excess flows to the rivers and streams during wet weather resulting in the pollution of the receiving waters. After the 1960's, sanitary sewers were installed to carry only liquid wastes from residences, commercial buildings and other types of development. The combined sewers cover approximately 1,650 acres mostly in the older areas of the city. The sanitary sewers cover the remaining 6,000 acres extending out from the combined system.

Topography in the City of Valparaiso is such that the central and north portions of the city are generally higher in elevation than the surrounding areas. The most efficient and cost-effective wastewater collection systems utilize topography to collect sanitary flows in gravity operated systems. Due to the nature of expansion of the collection system in Valparaiso, a number of subdivisions have been developed with independent sanitary systems with pump stations to pump collected flows to the combined sewer system or to force mains that transport flows to the Elden Kuehl Pollution Control Facility. Most existing pump stations have been designed to accommodate small residential subdivisions that have been developed near the city limits. Typical capacities of these small pump stations range from 150 gpm to 300 gpm. One exception is the pump station and force main that serve the Airport area. The existing pump station has an approximate capacity of 2.5 mgd and the existing 14-inch force main was provided to accept flows up to 6.6 mgd.

7.1.3 WASTEWATER SYSTEM NEEDS FOR ULTIMATE DEVELOPMENT OF THE STUDY AREA

The necessary wastewater collection system is already in place or has been planned for most of the existing 12 square mile service area within the city limits. As mentioned, expansion of the sanitary sewer system will require additional sanitary sewers, pump stations and possibly increased capacity at existing pump stations. Cost effective construction of future sanitary sewers should be completed to serve the potential ultimate service area. For example, adequate capacity should be provided in sanitary sewers at proper invert elevations as they are constructed to accept flows from future developments likely to discharge to that particular sewer. This is especially important for the City of Valparaiso given the physical constraints and pumping requirements associated with extending wastewater collection to outlying areas.

Figure 16 presents potential locations of future wastewater collection system components. The presented layout considers physical constraints associated with topography and has been prepared to minimize required pump stations and maximize use of the existing system where possible. The presented layout has been prepared to collect and transport sanitary flows within the study area to the existing centrally located treatment plant site. Typical sewer sizes range from 8-inch to 24-inch in diameter. Required pump station capacities generally range from 1 mgd to 3 mgd to transport peak daily flows. Total pumping capacity required to serve peak daily flows for ultimate population of the study area could be as high as 27.5 mgd. Sanitary flows for ultimate development of the study area are presented by service area in Table 3.

Table 3: Future Additional Wastewater Flows For The Study Area

(1) Service Area	(2) Total Service Area (Acres)	(3) Future Development (Acres)	(4) Future Residential Lots	(5) Population of Future Development (persons)	(6) Additional Flow ADWF (mgd)
North	5,071	2,642	6,419	17,652	2.09
West	4,170	1,613	3,919	10,776	1.22
Southwest	2,555	1,394	3,387	9,314	1.08
South Southwest	6,806	3,432	8,339	22,933	2.75
East	9,329	4,549	11,053	30,395	3.48
Central	6,414	811	1,970	5,419	0.64
Total	34,345	14,439	35,087	96,490	11.26

Source: EarthTech

General Note Table presents projections for flows required for expansion of the wastewater collection system to serve future development and existing unsewered development

Column 1 Service area designation (see Figure 16)

Column 2 Total area contained in each service area (includes existing as well as future service area)

Column 5 Additional population over and above existing population

Column 6 Additional flow (over and above existing flow) based on serving future development and existing unsewered development in each service; future flow assumed to be 310 gpd/home per IDEM standards

ADWF(mgd) - average dry weather flow (million gallons per day)

An alternative to the wastewater collection system layout to serve the East service area presented in Figure 17 that should be considered is construction of a new treatment plant in the southeast portion of the study area. The cost to construct a new plant in the East service area would be

comparable to treating the wastewater in the existing Elden Keuhl treatment plant. The primary difference between the two alternatives would be the elimination of additional pumping and conveyance capacity required along Highway 30 to transport flows west to the existing treatment plant. Provision of a new plant in the East service area would be attractive to serve potential future industrial development as well as potential future residential development east of the current study area.

It is important to note that while the collection system should be provided to accommodate future flows, the treatment facilities should be expanded in stages proportionally to growth and development in the study area. The existing treatment facilities have adequate capacity to serve a population equivalent of 50,000. As summarized in Table 4, additional treatment capacity of 8.7 mgd (average daily flow) will be required to serve an ultimate population of 137,000. There is adequate area at the existing treatment facilities site to complete the potential future expansion. However, as with the water system, wastewater flows collected from significant industrial sources will need to be considered and incorporated on an individual basis.

Table 4: Wastewater Treatment Capacity Required For Ultimate Development Scenario

Treatment Capacity Parameters	Identified Quantities
<ul style="list-style-type: none"> • Ultimate Population 	137,000
<ul style="list-style-type: none"> • Current Treatment Capacity (population equivalent) 	50,000
<ul style="list-style-type: none"> • Additional Capacity Required (population equivalent) (@ 100 gcpd) mgd 	87,000 8.7
<p>Opinion of Probable Cost Tertiary Treatment (1999 dollars)</p> <p>Cost per Gallon Treated</p> <p>Total Cost (\$ million)</p>	<p>\$4</p> <p>\$35</p>

Source: EarthTech

7.1.4 OPINION OF PROBABLE CONSTRUCTION COSTS

Planning level probable construction cost of the major wastewater system components including collection system components and treatment capacity to serve the study area of 52 square miles and the projected population of 137,000 is estimated to be approximately 190 million dollars, based on 35 million dollars for treatment and approximately 155 million dollars for the collection

system. The breakdown of the probable costs for future collection system by service area is presented in Table 5.

It should be stressed that the cost of construction of the facilities will be incurred in stages and in proportion to the population and land development growth in the study area. Table 2 presents a summary of wastewater collection system components required to support future growth in each designated service area.

Table 5: Opinion Of Probable Construction Cost Of Wastewater Collection System Components For Ultimate Development Scenario (Presented Costs are in 1999 Dollars)

(1) Service Area	(2) Total Sewer Length (feet)	(3) Range of Sewer Sizes (inches)	(4) Pump Station Capacities	(5) Opinion of Probable Cost of System Expansion (\$ Million)
North	65,000	8 to 15	1 @ 2 mgd 1 @ 5 mgd	17
West	61,200	8 to 30	1 @ 2 mgd	23
Southwest	35,300	8 to 12	1 @ 1 mgd 1 @ 1 mgd	11
South Southwest	124,300	8 to 21	1 @ 0.5 mgd 1 @ 1.0 mgd 1 @ 2.0 mgd 1 @ 3.0 mgd	46
East	169,900	8 to 36	2 @ 1 mgd 1 @ 9 mgd	58
Central	*	8 to 15	*	*
Total	34,345	8 to 36	27.5	155

Source: EarthTech

*Length of sewer required to serve undeveloped portion of the Central area is considered to be insignificant

7.1.5 SUMMARY, CONCLUSIONS AND STRATEGY

The following items summarize the recommended strategies for expanding the wastewater system to serve the potential future development in the study area. Most important of the items presented is the concept that expansion of treatment facilities will be proportional to population

growth. Expansion of the collection system will be linked to the location of future growth as it occurs.

- i) Existing wastewater treatment capacity is adequate, in general, to provide proper treatment up to a population equivalent of approximately 50,000. Existing service population equivalent is approximately 45,000.
- ii) A new industry that may produce a relatively large amount of wastewater, approximately 1.2 mgd, is under construction in the southeast part of the study area. This wastewater flow is equivalent to a population of approximately 12,000. This is equivalent to an instant population growth of approximately 20%. The utility must establish adequate pre-treatment requirements and plan for the unique flow rate.
- iii) Encourage new development contiguous to existing wastewater service area
- iv) Consider maximum possible future contributory service area during planning and design of new sanitary sewers
- v) Utilize results of wastewater collection system masterplan currently being developed to define strategy for construction staging of the major wastewater collection system components.
- vi) Monitor growth and continue proactive planning to construct wastewater system components to stay in step with the growth and wastewater collection needs.
- vii) Utilize results of wastewater collection system masterplan currently being developed to determine the feasibility and potential cost-effectiveness of construction of an additional wastewater treatment plant to serve future development east of the existing city limits.

7.2 WATER SYSTEM EXPANSION STRATEGY

7.2.1 INTRODUCTION

Expansion of the water system is an important element of the Growth and Development Plan. This chapter presents an overview of the existing water system administered by the Valparaiso Water Department, delineates needs for serving the potential ultimate population in the study area and identifies required components for system expansion. Recommended staging of improvements required for maintaining adequate supply and treatment are also presented on the basis of population served.

7.2.2 EXISTING WATER SYSTEM

The existing Valparaiso water system serves a domestic population of approximately 30,000, several light industries and the Valparaiso University. The area served by the existing water system covers approximately 20 square miles. The area being considered by this study covers

approximately 52 square miles. Figure 18 shows the existing and potential future service areas. Capacities of existing water system components including wells, treatment plants and treated water storage are presented in Table 6 as a part of water system needs analysis. A brief description of the existing system components is presented below in three parts: Raw Water Sources, Water Treatment Plants and Water Distribution Systems.

a) *Raw Water Sources*

Two sources of water are currently available. These are ground water, which occurs in aquifers about 130 to 150 feet deep throughout the city and surface water from Flint Lake, north of the city. Maximum extraction from Flint Lake is limited to an average of 2.5 mgd. There are currently 15 operational wells. Four wells are located at the Flint Lake site near the lake, 7 wells at the Airport site and 4 wells at the Valparaiso Country Club site. Average production per well at the Flint Lake and Airport sites is approximately 500 gpm. Two wells at the Country Club site produce 750 gpm each and 2 wells produce 1000 gpm each.

Surface water source at the Flint Lake site is on standby status at the present time and is not used to meet typical daily water supply needs in the service area. Total reliable capacity of the 15 wells is estimated at 10 mgd. This capacity is considered to be adequate to supply water to a population equivalent of approximately 40,000.

b) *Water Treatment Plants*

Both surface water and ground water requires treatment prior to distribution to ensure compliance with the primary and secondary drinking water standards. Treatment of raw water is currently provided at three separate plants. Two plants are located north of the city near Flint Lake – Flint Lake plant and Flint Lake 2 plant. The third plant is located in the southeastern part of the City near the Airport – the Airport Plant. Currently the Flint Lake plant, which primarily treats the surface water, is on the standby status. The Flint Lake 2 plant and the Airport plant processes the groundwater to remove iron and manganese. Total reliable treatment capacity of the two ground water treatment plants is 8.41 mgd. Detailed capacities of the three plants are presented in Table 6. The existing reliable treatment capacity is considered to be adequate to provide treated water to a population equivalent of approximately 35,000.

c) *Water Distribution Systems*

The existing distribution system in the City of Valparaiso extends over an area of approximately 20 square miles. The system has been divided into two pressure zones. The high-pressure zone, which is located in the north central part of the city, serves areas with ground elevations generally greater than 800 ft. The low-pressure zone, which extends through the east, south and western sections of the city, serves all other areas, generally with ground elevations less than 800 ft. The two zones are connected by a single open line with a booster pump, which normally only allows flow from the low to the high-pressure zone. Flow can pass from the high zone to the low zone by means of control valves. The high-pressure zone is generally served by the Flint Lake Plant and the low-pressure zone is generally served by the Airport Plant.

Two elevated storage tanks are located in the low-pressure zone distribution system. Each tank has a storage capacity of 500,000 gallons and a maximum water level of approximately 930 feet. There is additional finished water storage at the two of the treatment plant sites. A 2 million gallon ground water storage tank is located at the Flint Lake 2 plant site and a 2 million gallon ground water storage tank is located at the Airport Plant site. Total storage in the distribution system is 5 million gallons. This storage is considered to be adequate for a population equivalent of approximately 40,000.

7.2.3 WATER SYSTEM FOR ULTIMATE DEVELOPMENT OF THE STUDY AREA

The existing water service area encompasses approximately 20 square miles. The study area encompasses about 52 square miles (34,000 acres). Based on the projected blend of the future land use, it is estimated that the study area has a potential to house a population of approximately 137,000. This population is projected to be distributed almost uniformly around the existing city limits with the exception of the East area where more industrial growth is projected to take place. For ease of presentation the study area for the water study (and also for the wastewater study) is subdivided into service areas named as Central, (which includes essentially the existing population), East, North, West, Southwest and South Southwest. Estimates of population, potential residential lots and water demands for the ultimate development of the study area are presented on a service area basis in Table 7. Figure 18 also shows the limits of the corresponding water service areas designated within the study area.

It should be noted that the study area has a potential to house 4 times the existing population. Accordingly, the needs for the water system expansion to serve the ultimate population are also great. Table 6 presents the capacity needs for the ultimate population. It should be noted that the ultimate peak day water demand could be as high as 33 mgd (present peak day water demand is approximately 6 mgd); well capacities would need to be increased from current amount of approximately 13 mgd to 36 mgd. Treated water storage in the systems would need to be increased from the current amount of 5 million gallons to approximately 10 to 20 million gallons.

Water treatment plant capacities would need to be increased from current levels of about 9 mgd to approximately 36 mgd. Additional water distribution mains ranging in diameter from approximately 8-inch to 16-inch and approximate total length of 100 miles would also be required. Potential locations of future major water mains (16-inch diameter) in the Study area outside the existing service area are shown in Figure 19. Industries requiring significant amounts of water will also need to be considered and addressed on an individual basis.

Table 6: Water System Need Analysis

Existing Capacities¹		Capacity (mgd)	Reliable Capacity (mgd)
Wells	<u>Airport Site</u> 7 wells @ 500 gpm	4.92	4.32
	<u>Flint Lake Site</u> 4 wells @ 500 gpm	2.88	2.16
	<u>Valparaiso Country Club Site</u> 2 wells @ 750 gpm plus 2 wells @ 1000 gpm	<u>5.04</u>	<u>3.60</u>
	Total Well Capacity	12.84	10.08
Treatment Plant	<u>Airport Plant</u> 2 filters @ 1.65 mgd plus 2 filters @ 1.35 mgd	6	5
	<u>Flint Lake Plant</u> Surface Water Treatment Plant (Currently standby)	(2.8)	(2.5)
	<u>Flint Lake 2 Plant</u> 3 filters @ 1.46 mgd	<u>4.38</u>	<u>3.41</u>
	Total Plant Capacity	10.38	8.41
Systemwide Storage	2 elevated storage tanks @ 500,000 gals, MG		1
	Ground storage at Airport Site, MG		2
	Ground storage at Flint Lake 2 Site, MG		<u>2</u>
	Total System Storage, MG		5

(Continued on next page)

Table 6: Water System Need Analysis (Continued)

¹ Existing service area 20 square miles; study area 52 square miles; projected population 137,000 (no time limit)

Capacity Needs for Ultimate Population (137,000 people)	Required Capacity (mgd)
<ul style="list-style-type: none"> • Avg. Day Demand (@150 gpcd), mgd • Peak Day Demand (@1.6 x ADD), mgd • Required Well Field Capacity @ 110% of Peak Demand, mgd • Required Systemwide Storage @ 12 to 24 hours • Storage @ Average Day Demand, MG 	<p style="text-align: center;">20.6</p> <p style="text-align: center;">33.0</p> <p style="text-align: center;">36.3</p> <p style="text-align: center;">10.3 to 20.6</p>
Needed Improvements for Ultimate Population (137,000 people)	Quantity Required
<ul style="list-style-type: none"> • Raw Water Supply (Wells) Needed additional reliable capacity, mgd <li style="padding-left: 20px;"># of wells @ 500 gpm including 4 standby wells • Treatment Plant Capacity Needed additional reliable capacity, mgd • Storage Needed additional storage @ 12 to 24 hours for Avg. Day Demand, MG • Distribution System Mains To serve the proposed service area of 52 square miles additional Distribution mains predominantly ranging in size from 8-inch to 16-inch and total length approximately 100 miles will be required 	<p style="text-align: center;">26.3</p> <p style="text-align: center;">40</p> <p style="text-align: center;">28</p> <p style="text-align: center;">5.3 to 15.6</p> <p style="text-align: center;">8-inch to 16-inch 100 miles total length</p>

Source: Earth Tech

Table 7: Future Water Demand For The Study Area

(1) Service Area	(2) Total Service Area (Acres)	(3) Residential Lots	(4) Population (persons)	(5) Average Water Demand (mgd)	(6) Peak Day Water Demand (mgd)	(7) Peak Hour Water Demand (mgd)
North	5,071	7,394	20,332	3.05	4.88	7.93
West	4,170	6,080	16,721	2.51	4.01	6.52
Southwest	2,555	3,725	10,243	1.54	2.46	3.99
South Southwest	6,806	9,924	27,290	4.09	6.55	10.64
East	9,329	13,601	37,403	5.61	8.98	14.59
Central	6,414	9,352	25,718	3.86	6.17	10.03
Total	34,345	50,076	137,708	20.66	33.05	53.71

Source: Earth Tech

General Note Table presents projections for future water demands based on ultimate development of the study area. Refer to Figure 18 for Service Area delineation.

Column 1 Service area designation

Column 2 Total area contained in each service area (includes existing as well as future service area)

Column 3 Estimated number of residential lots (including existing lots) based on ultimate development of the study area; Number of residential lots based on area (Column 2) x 0.60 x 2.43 units/acre

Column 4 Estimated population based on ultimate development of the study area
Population based on 2.75 persons/unit x units (Column 3)

Column 5 Average daily water demand based on 150 gpcd using the population in Column 4

Column 6 Peak day water demand based on peaking factor 1.6 (Column 5 x 1.6)

Column 7 Peak hour water demand based on peaking factor of 2.6 (Column 5 x 2.6)

7.2.4 WATER SYSTEM NEED ANALYSIS

Based on the review of the water system needs for the projected growth and existing capacities of the water system components following analysis is made.

a) ***Raw Water Source***

Existing service area predominantly depends on the locally pumped ground water. It is assumed that this practice will continue in the future. Following sections briefly describe the available aquifer system for the study area as a ground water source and the potential impacts of the future increased water demands on the local aquifer.

b) ***General Description of Aquifer System***

The City of Valparaiso and the surrounding study area is situated above three aquifer systems comprised predominantly of sand with lesser amounts of silt, clay and gravel. The three aquifer systems present in the unconsolidated deposits include the Kankakee, the Valparaiso Outwash Apron and Valparaiso Moraine aquifer systems. The Valparaiso Outwash Apron Aquifer, southern portion of the Valparaiso Moraine Aquifer and Kankakee Aquifer are located within the Kankakee River Basin. Groundwater in these aquifers flow toward the Kankakee River. The northern portion of the Valparaiso Moraine Aquifer is located within the Lake Michigan Basin. Groundwater in this portion of the aquifer flows toward Lake Michigan. The Flint Lake and Country Club Well Fields are located in the Valparaiso Moraine Aquifer System (Indiana DNR, 1990). This aquifer system is 100 ft. thick in the Valparaiso area. The Airport Well Field is located in the Valparaiso Outwash Apron Aquifer System (Indiana DNR, 1990).

c) ***Groundwater Recharge and Projected Groundwater Availability***

Groundwater within the three aquifers in the study area is recharged directly from infiltration of precipitation. The study area is located near a groundwater divide where flow is toward Lake Michigan on one side and the Kankakee River on the other side. Therefore, recharge to the aquifers in the study area generally flows away from the divide toward areas where the water table is present at lower elevations.

The development potential of aquifers in the study area is determined mainly by the total recharge to the aquifer. Rates of recharge to the Valparaiso Moraine Aquifer system vary from 125,000 gpd/square miles (2.6 in/yr.) to 200,000 gpd/square miles (4.2 in/yr.) (Indiana DNR, 1994). These recharge rates are considerably lower than rates of recharge to the other aquifer systems in the Lake Michigan Region of Indiana because the low permeability surficial sediments and steeper topography promote runoff. The highest estimated rate of recharge to the aquifer is 12 inches, based on the standard assumption (American Society of Civil Engineers, 1957) that one-third of the annual precipitation (approx. 37 in.) is available for recharge to the aquifer and two-thirds is lost to evapotranspiration or enters the surface water system as runoff. Based on the estimated range of recharge rates, the total volume of annual recharge to the aquifer system over the 52 square miles study area ranges from approximately 6 mgd to 29 mgd. It should be noted that in the future the recharge rate to the aquifer in the study area might be

adversely affected as urban development continues. Urbanization generally induces increased runoff and renders the area less permeable for recharge.

The ultimate domestic water need (approximately 20 mgd average day basis) is closer to the optimistic upper end of the potential aquifer recharge capacity of approximately 29 mgd. Besides the domestic water needs, there will be other demands for water in the study area (e.g. golf courses, major industries, farming). The aquifer will probably continue to provide groundwater even if extraction rates from the aquifer are increased to the level of ultimate rate of water demand (20 mgd or greater) within the 52 square miles study area. However, the water table elevation will probably slowly decrease. This condition may not be entirely reversible due to compaction of the aquifer that may result from dewatering. It is prudent to monitor the water needs and plan to locate additional well fields outside the study area if the City chooses to use groundwater as the water source.

d) *Water Treatment*

In order to support the ultimate population of 137,000, additional treatment capacity of 28 mgd (in addition to existing capacity of approximately 8 mgd) will be required. A part of the needed capacity can be cost effectively provided by installing two new filters @ 3.4 mgd total at the Flint Lake 2 Plant site and two new filters @ 4.6 mgd total at the Airport Plant site. With this addition the existing two plants treating ground water will be able to provide treated water at a rate of about 16 mgd. This treatment capacity would be adequate to serve a population equivalent of about 66,000. When the water demand in the system reaches 16 mgd, consideration should be given to expand the two treatment plants or to construct a new additional plant at a strategic location within the study area to support the growth (assuming that the study area will continue to use the ground water as a source).

It should be noted that the existing Flint Lake surface water treatment plant of 2.5 mgd treatment capacity is kept on standby status at the present time. Potential exists to bring this plant on line again. However, it will require major modification in order to meet new EPA regulations. Preliminary indications are that the modifications required to treat surface water may not prove to be cost-effective.

e) *Distribution System Storage And Piping*

In order to maintain reliability of the distribution system to supply water under all conditions, additional total water storage of about 5 to 15 million gallons, provided through a number of tanks strategically located within the study area, will be required to support the ultimate population of 137,000.

In addition to the water storage tanks, pumping stations of required capacities (located at the storage sites) will be required to pump the water from the storage tanks into the distribution system.

Also, additional distribution pipe network consisting of pipes ranging in diameter from about 8-inch to 16-inch and a total length of about 100 miles will be required to serve the study area. It should be noted that the storage and water distribution piping would be installed in stages depending on the growth in the study area.

7.2.5 OPINION OF PROBABLE CONSTRUCTION COSTS

Planning level probable construction cost of the major water system components including wells, treatment plants, distribution piping and storage to serve the study area of 52 square miles and the projected population of 137,000 is estimated to be approximately 100 million dollars. The breakdown of the probable costs by system components is presented in Table 8.

Table 8: Opinion Of Probable Construction Cost Of Major Water System Components For Ultimate Development Scenario (Presented Costs Are In 1999 Dollars)

System Component	Probable Construction Cost (Million \$)
Raw Water Supply	
40 Wells with Piping to Treatment Plants	10
Treatment Plants	
Modifications to existing Flint Lake 2 and Airport plants (total capacity increase by 8 mgd)	5
Construction of additional treatment plant – approx. capacity of 20 mgd	30
Distribution System	
Storage for Treated Water (approx. 10 million gallon)	10
100 miles of 8" to 16" pipes	45
Total Construction Cost	100

Source: Earth Tech

7.2.6 SUMMARY, CONCLUSIONS AND STRATEGY

The following items summarize the recommended strategies for expanding the water system to serve the potential future development in the study area. Most important of the items presented is the concept that expansion of treatment, storage and raw water facilities will be proportional to population growth. Expansion of the distribution system will be linked to the location of future growth as it occurs.

- i) Existing water system is adequate, in general, to provide treated water to approximately 40,000 population equivalent. Existing service population is approximately 30,000.
- ii) A new industry requiring a relatively large amount of water, approximately 1.2 mgd, is under construction in the southeast part of the study area. This water demand is equivalent to a population of 8,000. In terms of existing water service, this is equivalent to an instant population growth of approximately 25%. The industry will need the water in about two years.
- iii) Two additional wells and addition of filtration capacity at Flint Lake 2 plant or the Airport plant would be required in the near future.
- iv) Revival and modification to the 2.5 mgd surface water treatment plant at the Flint Lake site may not be cost-effective. In the future as the water demand grows, surface water from the Flint Lake plant would provide a very small fraction (about 10%) of the total water demand.
- v) Construction cost of a raw water supply and treatment components (wells and treatment plants) represents about 50% of the total future construction cost for expansion of the water system to serve ultimate development of the study area. Construction cost of the distribution piping and storage represents the other 50% of the total construction cost.
- vi) Suggested strategy for construction staging of the major water system components is presented in Table 9.
- vii) It is recommended to monitor growth and continue proactive planning to construct water system components to stay in step with the growth and water demand.
- viii) Assuming the City desires to provide its own water source, supply of ground water appears to be rather limited. Immediate attention should be given to plan and locate future well fields.
- ix) In the near future, a study should be initiated to determine the cost-effectiveness of construction of an additional water treatment plant or expansion of existing treatment plants

Table 9: Strategy For Staging Of Major Water System Components

Population Growth (PE) ¹	Additional Facilities Required to Serve Future Population			
	Wells ²	Treatment Plants	Storage	Distribution
30,000 (Existing)	Existing Facilities Adequate	Existing Facilities Adequate	Existing Facilities Adequate	Existing Facilities Adequate
40,000	Additional 2 Wells @ 500 GPM	Additional 2 Filters at Flint Lake @ 3.4 MGD Total	Additional 1 to 2 MG Storage	Additional Water Mains as Necessary
60,000	Additional 3 Wells @ 500 GPM	Additional 2 Filters at Airport Plant @ 4.6 MGD Total	Additional 1 to 2 MG Storage	Additional Water Mains as Necessary
80,000	Additional 4 Wells @ 500 GPM	Additional New Treatment Plant at Airport site or other suitable location in the Western part of the study area @ 5 MGD	Additional 1 to 2 MG Storage	Additional Water Mains as Necessary
137,000	Additional 31 Wells @ 500 gpm in stages	Additional Treatment Plant Capacity of 15 MGD at similar location as above	Additional 2 to 10 MG Storage	Additional Water Mains as Necessary

Source: Earth Tech

¹ PE: Population Equivalent – The number includes people as well as major water using entities expressed in terms of one PE for each 150 gallons of water usage per day.

² New well fields will be required to install additional wells.

8. ANNEXATION & GROWTH CONTROL STRATEGY

The growth and development policies that are the basis of this plan can only be achieved by local government exercising coordinated and consistent control over the areas that are to develop within the study area in the future years. That control must be cooperatively shared by the City and Porter County. Other agencies may also play a role particularly in the preservation of environmentally significant lands.

The growth management policies contained in this plan are not no growth or limited growth in nature. Quite the contrary, the policies invite growth and look to see such growth occur throughout the study area under a variety of design concepts. The driving force of the Valparaiso growth management policies is to encourage quality growth that fully integrates the natural resources of the study area with the solid community character attributes that define the quality of life in Valparaiso.

The essence of such control resides in agreement by all parties on the operative development regulatory policies. A long term program such as this one, controlling the growth of a large urbanizing area over the span of twenty years or more, requires committed intergovernmental cooperation that can be relied upon to survive the normal flow of elected officials and staff. Strong consensus must exist if such policies are indeed to prevail over such an extended period. This plan identifies and encourages consensus for consistent control and government coordination. Therefore, this plan sets the stage to carry out this ambitious growth management plan.

Implementing the Valparaiso growth management approach will require that local governments adopt a program of interrelated land planning strategies. The primary unit of government must be the City of Valparaiso. Porter County is a partner with the City in implementing the precepts of this plan. The plan is expressly inclusive of development and design concepts that enable a range of lifestyles supported and desired by the County as well as the City.

Implementation control resides in three primary areas. The first as mentioned above is a high degree of cooperation between City and County around the issues of growth and development. Second is the control that comes with annexation and City zoning powers. The third is governmental control over water and sewer utilities. The strategies that can set the stage for implementation are as follows:

1. The City and County should agree upon a planning growth area that could be eventually annexed into the City of Valparaiso. This area is called the Planned Annexation Area of the City of Valparaiso (see Figure 20).
2. Ideally, the Planned Annexation Area includes land that could be annexed within five years and should be part of a larger Intergovernmental Boundary Agreement process including participation of the County government.

3. Negotiations with the County should determine which areas are included in the "Corridors of Concern" map. Not all areas of a particular "Corridors of Concern" may be incorporated, but it identifies and encourages areas of joint planning.
4. After annexation, all areas will be provided with municipal services in accordance with the Indiana Code.
5. Developed areas within the Planned Annexation Area shall be annexed by the City when services can be provided.
6. The County and City will work together on development close to city limits and jointly plan the development of such parcels using City standards and design policies. There will also be parcels that the City determines should be annexed immediately and developed to City standards. Most of these parcels are on major corridors or are contiguous to existing city limits.
7. Annexation of currently undeveloped areas within the Planned Annexation Area will proceed in accordance with the City's ability and policy on utility extensions, market demand for new urban development and the maintenance of the City's fiscal integrity over time.
8. Municipal sewer and water service shall be established throughout the Planned Annexation Area in accordance with the Capital Improvement Plan adopted by the City.
9. The City will control all new utility service within the Planned Annexation Area.
10. The Eastside Sewage Treatment plant or the alternate infrastructure improvements will be built as a first priority capital improvement. Related trunk lines providing service to the economic development areas along the 49 Bypass will be first priority installations.
11. A limited number of land based satellite treatment plants will be considered for developing parcels not yet contiguous to the City, yet market ready for development. Firm annexation agreements, including design controls and payment for sewage treatment management and other services provided by the City, will be required.

Figure 20 on the following page indicates the Planned Annexation Area for the City of Valparaiso. It includes most of Center Township and portions of western Washington Township. The annexation strategy map also shows the same planning area shown in Figure 2, *Future Land Use Plan*. Figure 21 also show the suggested Valparaiso "Corridors of Concern." This boundary is subject to negotiations with the County and the other municipalities of northern Porter County who may choose to join in establishing an intergovernmental boundary agreement for the urbanized parts of the county

The South and Southwest subareas hold a considerable amount of developed lands which are now

unincorporated. These areas should be annexed where contiguity provides the opportunity to do so. The Lakes subarea is quite fully developed. It too, can and should be annexed as soon an acceptable fiscal plan can be developed. Other areas particularly in the West subarea can be annexed if already developed with additional undeveloped land welcomed into the City as development occurs or sooner if the property owner desires.

The East subarea is planned for priority capital improvement through the construction of the Eastside Treatment plant and attendant trunk lines. This to provide a foundation for economic development along 49 Bypass. Such action will the set the stage to strengthen the City tax base and provide the live/work possibility that is an important value for the future community.

Guidelines for prioritizing annexation include:

- Undeveloped areas because cost of services can be amortized
- Soundness of fiscal plan
- Capacity of infrastructure
- Contiguity to existing City boundaries
- Management of corridors and entrances into the City

9. APPENDICES

9.1 PLANNING PROCESS

a) *Planning Phases*

Valparaiso's growth policies, which are articulated in the plan document, emerged over the course of one year through a deliberate and careful process of citizen involvement. The planning process was conceived to be "citizen-directed" process. That is, the outcome of the planning effort was designed to evolve from active citizen participation in the process.

Phase 1: Discovery

The first phase was designed to isolate underlying concerns and issues relative to physical growth development in Valparaiso. As part of this, a community wide opinion survey was conducted, open city meetings were held, special interest groups were contacted and urged for input, and a series of interview, discussions and workshops were held with Plan Commission members, Planning Department staff, public agency directors, and with key informants representing a wide spectrum of views and opinions about growth and development issues and alternatives for Valparaiso. These interviews provided insights into the roots of current growth management policies, the cause and nature of support for them, their evolution over time and the problems and concerns they have raised. From this input, core issues and problems were isolated and clarified.

Phase 2: Growth Management Impacts And Implications

The second phase included preparing strategies, goals and objectives to indicate the directions the city should take in guiding growth and providing appropriate services. Three development scenarios were created to demonstrate different policy options and recommendations for alternative growth patterns. The growth scenarios reflected different assumptions about the rate of growth, the mix and intensity of future development, strategies required to foster implementation, and implementation policies connected to each major growth strategy. Each scenario was tested by relating it to the indicators or the earlier defined goals and objectives of the plan. A report was generated and distributed which evaluated the anticipated impacts of each scenario as they applied to the indicators, covering all aspects of the study as appropriate. The report is included in Appendix 2

Phase 3: Recommendations

Phase III of the year's effort was devoted to Policy Formation. Draft policy statements were prepared. A series of steering committee and planning staff workshops were held to redraft and fine tune policy statements. The workshops were held to review, question, rewrite and discuss draft policy statements. Working Group and Steering committee workshops were roundtable work sessions focused upon specific topics such as traffic and transportation or environment and natural resources with delegates representing the point of view of specific interest groups -- realtors, environmentalists, city departments and commissions, the Chamber of Commerce, builders/developers, and neighborhood associations.

b) Public Participation

The planning process emphasized public participation as a key element in formulating the recommendations in the Growth Management Plan. This was achieved by working closely with the Working Group and Steering Committee at all the stages of the planning process, as well as facilitating focus groups and a public open house.

Working Group: The consultant team worked with the City staff to finalize the sixty members of this committee. The steering committee's input was sought at every phase of the plan formulation.

Public Open House: The consultants attended an evening open house, the first aspect of the public participation process, at which the goals and objectives, assumptions, and alternative growth scenarios were presented and discussed.

Focus Groups: The consultants facilitated four focus group sessions, the second of the two elements in the community participation process, at which interested citizens were asked to contribute their ideas to the formulation of goals and strategies for growth management. Up to forty citizen participants were invited. Goals & strategies were revised as appropriate based on this input.

9.2 DEMOGRAPHIC CHARACTERISTICS

a) Population Trends

**Table 10: Population Growth
Indiana, Porter County, Center Township, Valparaiso 1960-Present**

Location	1960	1970	1980	1990	Increase	1998*	Increase
Indiana	4,662,488	5,193,669	5,490,224	5,544,159	1%	5,899,195	6.4%
Porter County	60,279	87,114	119,816	128,932	8%	145,726	13.0%
Center Township	19,422	25,191	29,392	32,603	11%	34,623	6.2%
Valparaiso	15,227	20,020	22,247	24,414	10%	NA	NA

Source: U.S. Census Bureau

* Equifax National Decisions Systems

Table 11
Household, Family, and Housing Unit Growth
Indiana, Porter County, Center Township, Valparaiso 1980-Present

Households	1980	1990	Increase
Indiana	1,927,050	2,064,246	7%
Porter County	39,146	45,159	15%
Center Township	9,816	11,763	20%
Valparaiso	7,486	8,978	20%
Families	1980	1990	Increase
Indiana	1,455,556	1,490,130	2%
Porter County	31,388	34,634	10%
Center Township	7,012	8,031	15%
Valparaiso	5,070	5,713	13%
Housing Units	1980	1990	Increase
Indiana	2,091,795	2,246,046	7%
Porter County	41,529	47,240	14%
Center Township	10,443	12,322	18%
Valparaiso	7,852	9,293	18%

Source: U.S. Census Bureau

Table 12
Family Characteristics
Study Area 1998 Estimate

FAMILY CHARACTERISTICS	Number of Households	Percentage
<i>Marital Status</i>	25,741	100.0%
Single Male	3,998	15.5%
Single Female	3,730	14.5%
Married	13,723	53.3%
Previously Married Male	1,197	4.7%
Previously Married Female	3,097	12.0%
<i>Households with Children</i>	4,130	100.0%
Married Couple Family	3,296	79.8%
Other Family-Male Head	135	3.3%
Other Family-Female Head	668	16.2%
Non Family	31	0.8%

Source: Equifax National Decisions Systems

b) *Employment Characteristics*

**Table 13
Employment by Type
Study Area 1998 Estimate**

Employment by Type	Number of Businesses	Percentage	Number of Employees	Percentage
Retail Trade	289	19.3%	3,440	16.9%
Home Improvement Stores	32	2.1%	365	1.8%
Finance/Insurance/Real Estate Services	151	10.1%	1,120	5.5%
Services	687	45.8%	10,840	53.1%
Hotel & Lodging	1	0.1%	3	0.0%
Health Services	172	11.5%	5,057	24.8%
Agriculture	26	1.7%	156	0.8%
Mining	1	0.1%	25	0.1%
Construction	98	6.5%	637	3.1%
Manufacturing	80	5.3%	1,855	9.1%
Transportation/Utilities	41	2.7%	517	2.5%
Wholesale Trade	45	3.0%	652	3.2%
Government	81	5.4%	1,156	5.7%
Total Businesses	1,499	100.0%	20,398	100.0%

Source: Equifax National Decisions Systems

c) *Housing Characteristics*

**Table 14
Housing Unit Growth
Indiana, Porter County, and Center Township 1980-1990**

Housing Units	1980	1990	Increase
Indiana	2,065,115	2,246,046	8.1%
Porter County	41,282	47,240	12.6%
Center Township	10,349	12,322	16.0%

Source: U.S. Census Bureau

Table 15
Type of Housing Units
Study Area 1998 Estimate

Housing Units by Type		
Single Units Detached	7,905	65%
Single Units Attached	284	2%
Double Units	445	4%
3 to 9 Units	1,777	15%
10 to 19 Units	590	5%
20 to 49 Units	641	5%
50+ Units	101	1%
Mobile Home or Trailer	265	2%
All Other	130	1%
Total	12,135	100%

Source: Equifax National Decisions Systems

Table 16
Age of Housing
Study Area 1998 Estimate

Housing Units by Year Built		
Built 1989 to March 1990	316	2.7%
Built 1985 to 1988	542	4.7%
Built 1980 to 1984	891	7.7%
Built 1970 to 1979	3,300	28.5%
Built 1960 to 1969	1,857	16.0%
Built 1950 to 1959	1,647	14.2%
Built 1940 to 1949	832	7.2%
Built 1939 or Earlier	2,214	19.1%
Total	11,600	100.0%

Source: Equifax National Decisions Systems

d) *Income Characteristics*

Table 17
Median Income
Indiana, Porter County, Center Township, and Valparaiso 1980-1990

Location	1980		1990	
	Household	Family	Household	Family
Indiana	\$17,582	\$20,535	\$28,797	\$34,082
Porter County	\$24,201	\$26,338	\$37,142	\$41,929
Center Township	\$21,647	\$26,239	\$35,739	\$45,627
Valparaiso	TBD	TBD	\$31,602	\$41,824

Source: U.S. Census Bureau

Table 18
Distribution of Household Incomes
Study Area 1998 Estimate

Income	Study Area	
\$150,000 or more	567	4.3%
\$100,000 to \$149,999	1,161	8.9%
\$75,000 to \$99,999	1,917	14.7%
\$50,000 to \$74,999	2,823	21.6%
\$35,000 to \$49,999	1,925	14.7%
\$25,000 to \$34,999	1,423	10.9%
\$15,000 to \$24,999	1,457	11.2%
\$5,000 to \$15,000	1,443	11.0%
Under \$5,000	353	2.7%
Number of Households	13,069	100%
Est. Avg. Hshld Income	\$61,093	
Est. Median Hshld Income	\$49,470	
Est. Per Capita Income	\$23,740	

Source: Equifax National Decisions Systems

e) *Education Characteristics*

Table 19
Population by Education Center Township 1990-1998 Estimate

Education Level (25+ Years Old)	1990	1998	Change
Elementary (0-8)	803	786	-0.1%
Some High School (9-11)	1,776	1,821	0.2%
High School Graduate (12)	6,286	6,264	-0.1%
Some College (13-15)	3,890	3,802	-0.4%
Associates Degree Only	1,301	1,282	-0.1%
Bachelors Degree Only	2,902	2,788	-0.6%
Graduate Degree	2,692	2,570	-0.6%

Source: U.S. Census Bureau & Equifax National Decisions Systems

f) *Transportation Characteristics*

Table 20
Transportation to Work
Center Township 1990-1998 Estimate

Transportation to Work	1990		1998	
Drive Alone	12,783	79.8%	12,525	79.8%
Car Pool	1,590	9.9%	1,553	9.9%
Public Transit	203	1.3%	192	1.2%
Motorcycle	12	0.1%	13	0.1%
Bicycle	89	0.6%	NA	NA
Walk	863	5.4%	857	5.5%
Other	80	0.5%	166	1.1%
Work at Home	401	2.5%	396	2.5%
Total	16,021	100.0%	15,702	100.0%

Source: U.S. Census Bureau & Equifax National Decisions Systems

Table 21
Travel Time to Work
Center Township 1990-1998 Estimate

Travel Time to Work	1990		1998	
Under 10 Minutes/Work at Home	4,311	26.9%	3,495	30.1%
10 to 29 Minutes	7,207	45.0%	5,189	44.7%
30 to 59 Minutes	3,244	20.2%	2,313	19.9%
60 to 89 Minutes	509	3.2%	355	3.1%
90+ Minutes	349	2.2%	249	2.1%
Work at Home	401	2.5%	NA	NA
Total	16,021	100.0%	11,601	100.0%

Source: U.S. Census Bureau & Equifax National Decisions Systems

9.3 WORKING GROUP SURVEY RESULTS

Below are the results of the working group survey. Respondents' answers are shown in the gray boxes. Percentages of responses are shown in parenthesis adjacent to the number of responses.

A. Respondent Information

1. Area of residence (*check one*): **6(27%)** North **0(0%)** South
0(0%) Northwest **1(4.5%)** Southeast
1(4.5%) West **1(4.5%)** East
6(27%) Southwest **2(9%)** Northeast
5(23%) Outside Valparaiso area

2. Do you live within the city limits, or in an unincorporated area?

05(26%) City Limits
14(74%) Unincorporated

3. How many years have you lived in the Valparaiso area? **26 Years** (Average)

4. What is your occupation?

Executive & Managerial	3	13%
Public Service	3	13%
Professional Specialty	11	47%
Sales & Marketing	2	9%
Service: Other	2	9%
Farming Forestry & Fishing	2	9%
Total	23	100%

5. Do you work in Valparaiso? **19(83%) Yes** **04(17%) No**

If not, where do you work? **1.At home (unincorporated)**
2.Hammond
3.Gary

6. Are you: **16(70%) Male** **07(30%) Female**

7. What is your age range: **01(4%)below30**
09(39%) 30-45
12(52%) 46-64
01(4%) over 64

B. Community Character

1. Think of a town in Indiana (Valparaiso or another community) that you admire and where you enjoy spending time.

a. What community did you choose?

Top five responses by frequency

- 1) Valparaiso, IN (42%)
- 2) Bloomington, IN (20%)
- 3) Columbus, IN (16%)
- 4) Crown Point, IN (11%)
- 5) Indianapolis, IN (11%)

b. What are its positive features?

Top five responses by frequency

- 1) City Services (39%)
- 2) Small Town Character (27%)
- 3) Sense of Community/Parks & Recreation/Downtown (18%)
- 4) Leadership/History (10%)
- 5) Culture/Housing Stock (6%)

2. What are the three best things about Valparaiso?

- 1) Community Spirit(8, 35%)
- 2) Schools(8, 35%)
- 3) Downtown(7, 30%)

Will expansion of the community increase or diminish these qualities?

	Increase	%	Diminish	%	Dependent Upon Planning Approach	%
1)Community Spirit	1	6%	2	11%	4	22%
2)Schools	1	6%	2	11%	5	27%
3)Downtown	0	0%	1	6%	2	11%

3. What are Valparaiso's three most critical problems?
- a) **Traffic(8, 42%)**
 - b) **Lack of Planning and Vision(6, 32%)**
 - c) **Affordable Housing(5, 26%)**

Will expansion of the community increase or diminish these problems?
Insufficient Response

4. Tell us about examples of good development in or near Valparaiso, whether recent or not. "Good" in this context means attractive or appealing to you.

Top three responses by frequency

Residential:

- a) **Aberdeen(12, 67%)**
- b) **Sand Creek(3, 16%)**
- c) **Keystone Commons(3, 16%)**

Commercial/Retail:

- a) **US 30 Corridor(4, 33%)**
- b) **Downtown Renovation(4, 33%)**
- c) **Eastport Center(4, 33%)**

Industrial:

- a) **Eastport Complex(7, 54%)**
- b) **McGill(5, 38%)**
- c) **Cargill/TSTips(1, 8%)**

Public/Institutional:

- a) **Valparaiso University(8, 53%)**
- b) **Porter County Administration Complex(4, 27%)**
- c) **Public School Facilities(3, 20%)**

5. Tell us about examples of poor development in or near Valparaiso, whether recent or not. "Poor" in this context means unattractive or unappealing to you.

Top three responses by frequency

Residential:

Insufficient Response

Commercial/Retail:

- a) **US 30/West Side(8, 53%)**
- b) **E.Lincolnway/Calumet Avenue(4, 27%)**
- c) **Kmart Plaza(3, 20%)**

Industrial:

Insufficient Response

Public/Institutional:

Insufficient Response

6. How do you want someone twenty years from now to describe Valparaiso?

Top five responses ranked by frequency

1. **Safe/A Great Place to Live and Work(7, 25%)**
2. **Well Run/Good City Services(6, 21%)**
3. **Small Town Character(5, 18%)**
4. **Clear Planning and Vision(5, 18%)**
5. **Clean(5, 18%)**

C. Growth and Development Issues

1. Under what conditions would you support annexation of additional property into Valparaiso?

Top five responses ranked by frequency

1. **Available Infrastructure(7, 33%)**
2. **Planned Growth Initiative(7, 33%)**
3. **Property Owner Initiated(4, 19%)**
4. **Maintain Open Space (2, 9%)**
5. **Property Tax Reduction of Current Valparaiso Citizenry(1, 5%)**

2. What kind(s) of development should be encouraged in the growth area?

(check all that apply)

- | | |
|--|--|
| 17(15%) Single Family Residential (detached) | 11(9.5%) Retail (small, locally oriented) |
| 11(9.5%) Townhomes (attached) | 06(5%) Retail (large, highway oriented) |
| 08(7%) Apartments / Condominiums | 10(9%) Offices |
| 13(11%) Affordable Housing (a small percentage) | 04(3%) Heavy Manufacturing |
| 15(13%) Parks / Open Space | 17(15%) Light Manufacturing |
| 03(3%) Other | |

3. What kind(s) of development should be discouraged in the growth area?

(check all that apply)

- | | |
|---|---|
| 02(6%) Single Family Residential (detached) | 03(9%) Retail (small, locally oriented) |
| 02(6%) Townhomes (attached) | 14(42%) Retail (large, highway oriented) |
| 03(9%) Apartments / Condominiums | 01(3%) Offices |
| 01(3%) Affordable Housing (a small percentage) | 04(12%) Heavy Manufacturing |
| 0 Parks / Open Space | 0 Light Manufacturing |
| 03(9%) Other | |

4. Consider area(s) that you think should be left undeveloped, or preserved during development, in the growth area (if any).

Where are these area(s)? *Top three responses ranked by frequency*

- 1) **Open Space(4, 44%)**
- 2) **Wetlands(3, 33%)**
- 3) **Agricultural Land(2, 22%)**

Why should they not be developed? *Top three responses ranked by frequency*

- 1) **Environmental Protection(5, 50%)**

- 2) **Quality of Life(4, 40%)**
- 3) **Agricultural Land Preservation(1, 10%)**

5. Consider area(s) that you think should not be annexed, even if they do develop (or are already developed).

Where are these area(s)?

Insufficient Response

Why should they not be annexed? *Top three responses ranked by frequency*

- 1) **Cost Prohibitive(4, 66%)**
- 2) **Property Owner Opposition(1, 17%)**
- 3) **Rural Preservation(1, 17%)**

6. Where do the most traffic problems currently occur (congestion, safety hazards)?

Top five responses ranked by frequency

- 1) **Calumet Avenue(15, 36%)**
- 2) **US 30(12, 29%)**
- 3) **LaPorte Avenue(7, 16%)**
- 4) **Valparaiso High School(5, 12%)**
- 5) **State Route 49 Bypass(3, 7%)**

D. Growth and Development Objectives

Please fill in the appropriate box to the right of each statement below:

SA = strongly agree **A** = agree **N** = neutral opinion **D** = disagree **SD** = strongly disagree

Objective Statements	SA	A	N	D	SD
<i>example of a "disagree" response</i>				X	
Adopt a policy of no growth beyond Valparaiso's current borders.	1	2	2	8	8
Increase the range of housing opportunities in the Valparaiso area.	4	12	5	3	1
Reserve open spaces in the growth area (by purchase if necessary) for public use, such as preserves, parks or school sites.	17	4	1	0	0
Ensure better coordination between Valparaiso and Porter County, to facilitate appropriate development in unincorporated areas.	20	7	2	0	0
Require developers to contribute to a community-wide open space fund.	11	8	2	3	0
Increase municipal involvement and investment in downtown conservation and economic well-being.	12	7	3	1	0
Keep Valparaiso a small, predominantly single family residential community, even if higher property taxes result.	2	9	1	8	2
Increase the tax generating capabilities of Valparaiso's commercial areas.	3	7	7	4	1
Annex all undeveloped areas adjacent to Valparaiso and create a master plan for development of these areas.	3	10	2	5	4
Discourage retail or community facilities in the growth area that might weaken the downtown.	4	13	2	4	1

Provide public transportation for persons with special needs.	5	12	5	3	3
Adopt an annexation policy of very limited expansion beyond Valparaiso's current borders.	5	6	6	3	3
New development should pay for the burden it places on city facilities and services.	9	9	2	1	1
Preserve the historic heritage of Valparaiso.	14	7	1	0	0
Increase housing opportunities to serve all income levels.	4	11	6	2	0
Maximize the geographic size of Valparaiso.		4	9	6	4
Encourage higher density residential (homes on lots of less than one-half acre) in the growth area.	4	8	3	6	1
Maintain a fiscally sound development pattern.	13	9	1	1	0
Increase city control over signage throughout the city.	5	11	6	0	0
Require developers to protect environmentally sensitive areas.	13	8	1	0	0
<i>continued on following page... Objective Statements, continued</i>	SA	A	N	D	SD
Restrict development of retail outside downtown and the commercial corridors of the city (Calumet, Hwy 30, and Lincolnway).	3	9	4	7	0
Restrict new development in the growth area until utilities and roads have been provided to the serve the development.	7	12	3	1	0
Improve the appearance of major entry points into Valparaiso.	14	9	0	0	1
Provide public transportation to reduce traffic congestion.	3	9	7	6	0
Increase the city's control (influence) over development in adjacent unincorporated areas.	11	4	4	2	0
Install utility and roadway upgrades only after development occurs.	1	4	3	15	1
Establish final boundaries to include all areas where development will have an impact on the demand for services within Valparaiso.	6	12	4	1	0
Increase the development of business and industry to provide new local employment opportunities.	6	13	4	1	0
Expand municipal water and sewer capacity to accommodate all growth that the market will support.	7	11	4	1	0
Encourage higher density redevelopment within the current boundaries of Valparaiso.	5	7	4	7	0
Maintain strict development standards in Valparaiso, even if it results in developers building in unincorporated Porter County.	6	9	3	3	1
Improve the appearance of major roadway corridors throughout Valparaiso.	9	12	1	1	0
Increase city control over the appearance of new development.	8	10	5	1	0
Install utility and roadway upgrades proactively, to influence future development patterns.	5	12	4	0	0
Maintain the relative proportion of housing types and prices that currently exists.	3	12	5	3	0

Improve the appearance of Valparaiso's commercial areas.	10	11	2	0	0
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E. Additional Comments

If you have any other comments or concerns related to growth and development that you would like to tell us about, please do so below.

“All these questions are geared so you must think growth is the solution...incorrect! If we are going to spend all this money on a growth plan so the results can be judged fairly.”

“Roadways-sewage treatment plants, schools, etc...will be inadequate for too much more growth. Higher tax will be a sure thing. Developers should be made to share the burden of extra costs. They reap the harvest then tax payers stand the cost of upgrading.”

“Develop qualitative design standards based on the type of development and location; signage, lighting, landscape, infrastructure. Create a project design review committee. Valparaiso is where ruralism hits urbanism & industrialism. Good enough and do what I want vs. long term vision needed for qualitative life in higher density. We have excellent political planning capabilities, but no formal design planning talent or sensitivity within the city (except Park Dept.). At the present time there is little or no enforcement of any design standards Landscape and Signage.”

“The best, most pleasant communities to be in are ones where people know each other and interact in positive ways...open green space in a ring around a community helps people feel like they are part of a cohesive town or community and promotes community service projects.....uncontrolled sprawl leads to lack of identity.”

“The survey ensures that demographic data on pg.1 allow you to identify respondents. The force-choice questions/table really aren't what I'd have said face-to-face because they're too B/W. This experience is confirming my expectations about pre-determined results being due to the process and processors.”

“Communication with the County concerning development is a must. I do not believe Buffer zones are the answer. The two can work together if people are willing to cooperate.”

“This is a process that is past-due. Valparaiso has suffered from surrounding development because we did not have a master plan t control their growth. Need better educated community leaders.”

“Many cities have learned if you can offer good capacity sewer and water service, developers will gladly share their planning need for better community. Exclusivity and ignoring the future on the West coming has kept Valparaiso relatively closed in a time of great growth.”

“The most important concern I have is the lack of implementation of current plans (example: comprehensive plan for the downtown, Plan for the East Lincolnway Area, etc...). To bring yet another plan is nice, but if it doesn't include the overall implementation of existing plans; what good does it do anyone. Suggest the new plan include a timeline that would include the implementation of all other plans while developing the new plan.”

“Growth must connect us rather than alienate us. Sidewalks, bike paths, neighborhood parks, and green spaces are important. We must strengthen the things that define us and set us apart and build on our own unique identity as a city.”

9.4 INDICATOR EXERCISE RESULTS

PURPOSE

This section presents three alternative growth scenarios for Valparaiso and describes the techniques that will be used to evaluate each scenarios performance. The evaluation of the three scenarios is based on the Task Force’s own objectives. It is a goal-oriented evaluation process that is well suited to balancing multiple objectives in preparation of a growth management plan for Valparaiso. The process will compare the three alternative scenarios by measuring how well, or poorly, each of them meets the Task Force’s objectives. That is, the evaluation process will provide answers to the question, “How well does each scenario perform relative to the objectives the Task Force is trying to achieve?” The evaluation process is not meant to select the preferred scenario. Rather, its intent is to provide insights which will help people to make more informed decisions in the refinement process of the growth management plan itself.

ALTERNATIVE GROWTH SCENARIOS

Scenario 1: Maximizing Open Space Plan

This scenario presents a land use plan that maximizes opportunities for preserving existing and providing additional open space. Currently, the remaining large open space parcels are located primarily on the periphery of the developed areas, conservation of which would result in a green ring roughly surrounding Valparaiso. The open spaces would also be present along major routes like Route 49, providing scenic vistas along the principal transportation arterials. Proposed residential densities in the growth areas include a higher density residential pocket in the northwest quadrant, low density residential/agricultural developments in the western section, and medium densities residential developments (consistent with existing densities) in the south section of the study area. The high density residential development would be based on neo-traditional clustering concept wherein lot sizes are minimized in order to preserve open space. The total estimated population for this scenario would be approximately 92,000 people. The transportation improvements would focus on maintaining the existing roadways, with minimal investments in constructing new arterials. Commercial development would also be concentrated in the existing business districts and few additional commercial centers are envisaged.

Scenario 2: Aggressive Annexation Plan

This scenario presents land use patterns that would develop in response to market forces, in absence of external regulatory controls. It presents a typical pattern of suburban residential sprawl wherein the preservation of public open space usually has the least priority. The land use plan shows that most of the growth area would experience medium density residential growth, consistent with the existing trend. The exception to might be the western most edge of the study area, which would most likely develop with low density residential/agricultural uses. This scenario would result in the maximum investment in a new transportation network, which would include

several new roads laid out in a grid system. This is primarily because the pattern and densities of residential growth would foster the maximum auto dependency. Furthermore, additional neighborhood commercial nodes are envisaged at the major intersections to service the outlying pockets of residential developments. This scenario maximizes the opportunities for generating additional jobs and work force development by designating large areas, extending all along Route 49, for commercial/office development.

Scenario 3: Downtown Conservation Plan

This scenario proposes a growth pattern that would conserve the existing downtown core. The entire plan area would be developed with low density residential uses. Additional higher density residential developments would be limited to the existing developed areas, and would include infill and replacement structures. No additional roadways are proposed, and future improvements would focus on maintaining and improving the existing network. The existing pattern of radial roadways focus on Valparaiso’s downtown, hence emphasizing its role as the city center. No additional neighborhood commercial centers are proposed, which also help the downtown retain its importance. Similar to Scenario 1, this alternative maximizes on work opportunities by designating large tracts of land along Route 49 for business/office development. The overall population estimates for this scenario would be approximately 78,650 people.

Table 22: Population Estimates By Scenario

SUBAREAS	SCENARIO 1 MAXIMIZING OPEN SPACE	SCENARIO 2 AGGRESSIVE ANNEXATION	SCENARIO 3 DOWNTOWN PRESERVATIO N
UNINCORPORATED	62,169	66,755	38,152
<i>NW QUADRANT</i>	32,220	24,990	9,099
<i>NE QUADRANT</i>	7,666	9,458	9,458
<i>SW QUADRANT</i>	14,994	23,990	16,427
<i>SE QUADRANT</i>	7,289	8,317	3,168
VALPARAISO	30,000	30,000	40,500
TOTAL POPULATION	92,169	96,755	78,652

Source: Camiros, Ltd.

EVALUATION METHODS

The evaluation process will measure the performance of above three growth scenarios. In order to accomplish this, the Task Force’s objectives have been turned into thirteen indicators of performance. Some indicators will be evaluated numerically, while others will be evaluated qualitatively. In the latter instances, the Delphi method to “measure” performance of the scenarios will be employed. Delphi is a group method that works to focus informed opinion and judgement by having a group of experts in a given subject area work together in search of the most reasonable qualitative assessment.

Using these two approaches, each scenario will be analyzed for its ability to achieve each of the Task Force’s thirteen objectives or indicators. This ability to achieve these indicators/objectives is that scenario’s performance measure. Units of measure will be established for each indicator which, of course, will be different for each indicator. A scale is used to score the performance of

each indicator in reference to the three scenarios. For comparison's sake indicators with quantitative performance results will be converted to a simple five position rating, ranging from very high performance to very low performance. The indicators assessed qualitatively by the Delphi process will result in the same descriptive ratings. The position ratings for each indicator are then graphed on a single scale to yield normalized numerical performance scores. Figure 1 shows the single scale used to obtain normalized numerical scores for each indicator.

Each scenario will receive a numerical performance score for each indicator.. The score will be multiplied by the Task Force's composite weight factor, resulting in a weighted score. The determination of the Task Force's composite weight factor is explained below. In this manner, relative performance and relative value are related. When the weighted score of all indicators are totaled, the resulting total evaluation score is interesting but is neither the answer nor even the most important finding to be gleamed from this exercise. It is the individual weighted performance findings by indicator for each alternative that reveal the most useful information.

WEIGHTING

Not all of the Task Force's objectives are of equal importance to different individuals. Accordingly, the Task Force is asked to weigh the thirteen indicators that represent the Task Force objectives prior to the evaluation process. This weighting ranks the indicators in terms of relative importance. However, it is not simply a matter of ranked priorities. Two important refinements are built-in. First, the Task Force objectives are ranked relative to each other. Second, the weighting procedure offers a way to account for the subjective preferences of the combined Task Force membership. The relative nature of the ranking incorporates the notion of having to make trade-offs in relative importance.

In order for the weighing exercise to work, the Task Force had to comply with the following rules:

- a) Each member was given 125 points for weighting purposes.
- b) These points are to be assigned to individual indicators according to their perceived level of importance.
- c) Each member must assign points to at least six indicators.
- d) The minimum number of points that can be assigned to an indicator is five.
- e) The total sum of all assigned points must be exactly 125.

Beyond these rules the task force was free to distribute the 125 points in anyway.

INDICATORS

Once again, in order to measure the performance of alternative growth scenarios, the Task Force's objectives have been turned into indicators of performance. The thirteen indicators of performance to be used in this exercise are described briefly as follows:

Indicator A: Downtown Preservation

Objective: Downtown Valparaiso has long functioned as the cultural, commercial and governmental center for Porter County. Nevertheless, it has always retained a “small town” atmosphere, characterized by land uses that are safe, diverse, and designed for pedestrian needs and functions. This indicator recognizes Valparaiso’s overall success in combining functional and human elements and seeks the continuation of this unique mix under future growth scenarios. This indicator received a score of 20.84 points out of a possible 50 points in the Task Force’s weighting process criteria. Downtown preservation has the highest weight factor making it one of the most important indicators in evaluating the three proposed growth scenarios.

Unit of Measure: Factors considered in the evaluation included:

- (1) extent to which the proposed road network emphasizes and strengthens the existing downtown;
- (2) potential for the growth of downtown Valparaiso in response to the development and expansion of the City; and
- (3) the extent to which existing downtown real estate can remain occupied and economically viable.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space**, was ranked average. This plan would maintain and support the existing commercial center, whose role as the city center would be emphasized by the open space ringing the existing city and the major road network converging at downtown Valparaiso. However, the peripheral pockets of high to medium residential neighborhoods will most likely develop competing commercial centers, diminishing the growth potential of the existing downtown.
- ◆ **Scenario 2: Aggressive Annexation**, was ranked low because it would most likely result in several discrete commercial centers, increasing competition and possibly reducing the amount of business and investment in the existing downtown. Furthermore, the more dispersed pattern of residential growth and major road network diminishes the importance of the existing downtown as the city center.
- ◆ **Scenario 3: Downtown Conservation**, was rated very high because it has the maximum potential for reinvestment in the existing downtown as a result of the growth of the city. This is partially because most of the main traffic arterials converge at downtown Valparaiso, making it easily accessible and enhancing its function as the city center. In addition, the annexed areas are proposed to be developed primarily with low density residential neighborhoods, which are unlikely to sustain separate and competing commercial centers. It also assumes that commercial development along US 30 will be restrained and regulated to complement rather than compete with downtown.

Indicator B: Conservation of Agricultural and Environmentally Sensitive Lands

Objective: Unfortunately the development of farms, forests, wetlands, prairies and other environmentally sensitive areas often results in fragmented landscapes, disrupted wildlife habitats and altered streams and watersheds. This indicator reflects the increasing concern for such

degradation and calls for the increased conservation of agricultural and environmentally sensitive lands. This indicator received a score of 12.34 points out of a possible 50 points in the Task Force's weighting process criteria making it a relatively important indicator.

Unit of Measure: This indicator is measured in acres of agricultural and environmentally sensitive land that are retained under the three growth scenarios.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space**, was ranked low end of high. Though this scenario provides for only 1,800 acres of low density and agricultural land, it also provides relatively high acreage (4,368 acres) of environmentally sensitive land
- ◆ **Scenario 2: Aggressive Annexation**, was ranked low. While this scenario provides for 2,400 acres of low density and agricultural land, it only allows for 480 acres of environmentally sensitive lands, an amount slightly above that required by federal law.
- ◆ **Scenario 3: Downtown Conservation**, was ranked high. This scenario provides for 1,460 acres of environmentally sensitive land and 7,800 acres of low density and agricultural land, both relatively high levels.

Indicator C: Preservation of Air and Water Quality

Objective: Clean air and water are fundamental to the overall health and well being of any community. Development can affect air quality through increases in airborne suspensions, mean and medium temperatures, fog, and level of precipitation, as well as decreases in intensity of solar radiation, wind velocity, relative humidity and evaporation. Development can also affect the water quality of an area through increases in peak flow total runoffs which carry pollutants and excess sediments into local waterways. This indicator acknowledges such negative impacts and places priority on the maintenance of air and water quality under all future growth scenarios. This indicator received a score of 12.25 points out of a possible 50 points in the Task Force's weighting process criteria making it a relatively important indicator.

Unit of Measure: A qualitative approach must be used to estimate how each scenario is likely to perform for this indicator primarily due to external pollution sources.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space**, was ranked very high. This alternative envisages a relatively high population due to the provision of high and medium density residential developments. The higher population would generate a greater volume of traffic with negative impacts on air quality due to emissions and air borne suspensions. However, this negative externality would be offset, to an extent, by the presence of substantial open wooded areas and buffered water ways around the entire city. The open spaces would also help control and improve the micro-climate in terms of temperatures, fog, and level of precipitation, solar radiation, wind velocity, relative humidity and evaporation. This scenario would encourage the highest water quality since it produces the minimum amount of additional impervious surfaces

and provides for buffered waterways. This is primarily because the residential developments occur in concentrated pockets surrounded by open space, and there are minimal stretches of additional major roadways proposed in this plan.

- ◆ **Scenario 2: Aggressive Annexation**, was ranked low. The proposed land use pattern would generate the maximum population and includes the largest number of additional main traffic corridors. Therefore this plan maximizes the amount of additional traffic and impervious surfaces with corresponding negative consequences for air and water quality. There is no provision for large tracts of open spaces that would offset some of these negative externalities.
- ◆ **Scenario 3: Downtown Conservation**, was ranked average. The growth plan includes the lowest residential densities and hence the least population. Also, the traffic would be accommodated on the existing traffic corridors, and no additional road surfaces are proposed. Both these conditions would produce the least amount of traffic and impervious surfaces and hence the least negative externalities. This plan has not been ranked as high as Scenario 1 due to the absence of open space.

Indicator D: Minimization of Tax Burden

Objective: The minimization of tax burdens and corresponding maximization of revenue-generating uses is critical to the long-term success of any growth plan. Depending upon the use, revenue will be derived in a variety of ways, including property and sales tax revenues. This indicator inherently values commercial and residential uses more highly than open space and other non revenue generating uses. This indicator received a score of 4.69 points out of a possible 50 points in the Task Force’s weighting process criteria.

Unit of Measure: The unit of measure for this indicator is the relative cost of thoroughfare streets, sewers, water lines and open space.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space**, was ranked low. This is due to its relatively higher cost for thorough fare streets and open space.
- ◆ **Scenario 2: Aggressive Annexation**, was ranked average. The cost of open space is minimal, while the cost of thoroughfare streets and water lines are relatively high.
- ◆ **Scenario 3: Downtown Conservation**, was ranked average. Again in this scenario the relatively high cost of thoroughfare streets and water lines are somewhat offset by minimal open space costs.

Indicator E: Mixed Housing

Objective: This indicator calls for the encouragement of socioeconomic diversity through the provision of housing options to people of all income, age and family groups. Conversely, it seeks

to limit large residential developments featuring a single use or serving a single market segment. This indicator received a score of 8.97 points out of a possible 50 points in the Task Force's weighting process criteria.

Unit of Measure: This indicator will be measured by comparing the mix of housing types in terms of unit sizes and costs achieved under each of the three scenarios.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space,** was ranked low end of average. Though this scenario provides a high degree of housing mix in terms of size and type, it does not provide a wide range of alternatives in terms of unit costs.
- ◆ **Scenario 2: Aggressive Annexation Scenario,** was ranked low. This scenario provides for medium density housing.
- ◆ **Scenario 3: Downtown Conservation Scenario,** was ranked low. This scenario provides for a high degree of housing mix in terms of costs. The type and size of housing however reflect current development patterns and provide no opportunity for high density development

Indicator F: Increased Cultural and Retail Activities

Objective: Cultural activities are those that offer educational and/or aesthetic enrichment. Retail activities, meanwhile, are those that sufficiently provide goods and services for local consumption. These activities strengthen communities both economically and socially. This indicator takes into consideration the manner in which land development can potentially increase local retail and cultural opportunities. This indicator received a score of 8.03 points out of a possible 50 points in the Task Force's weighting process criteria.

Unit of Measure: The unit of measure to be used for this indicator will be relative performance ranking of the three scenarios.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space,** was ranked high. This alternative maintains the existing downtown, and also encourages development of additional commercial centers within the peripheral medium density cluster residential neighborhoods. The existing city and the adjacent residential areas with different densities are enclosed and buffered by open space, giving them a strong identity, socially and economically. Furthermore, the large areas of open space would enhance the aesthetic and educational opportunities within the City.
- ◆ **Scenario 2: Aggressive Annexation,** was ranked on the higher side of average. This plan would most likely result in several discrete commercial centers, providing additional and diverse goods and services for local consumption. However, the dispersed and medium density residential development might not encourage additional cultural activities, and might diminish downtown Valparaiso as the city center.

- ◆ **Scenario 3: Downtown Conservation**, was rated on the lower side of average. This is because the low density residential development would not particularly enhance the growth of additional commercial or cultural centers. However, this plan emphasizes the role and function of the existing downtown as the City Center, and increases opportunities for additional and enhanced cultural and retail activities in the downtown.

Indicator G: Increased Job Opportunities and Workforce Development

Objective: Encouraging development that will provide well-paying jobs for area residents is an important objective. Economic restructuring in the Midwest has had a profound impact on metropolitan labor markets. There are fewer well paying blue-collar jobs that require low skill levels and little formal education, whereas much higher levels are often needed for employment in growing metropolitan economies such as information-processing, finance, communications, business services, etc. This indicator recognizes this mismatch and seeks to encourage future land uses that offer increased employment opportunities, particularly for those who are poorly educated or underskilled. This indicator received a score of 15.16 points out of a possible 50 points in the Task Force’s weighting process criteria, and is therefore one of the most important indicators.

Unit of Measure: The unit of measure will be the estimated development ready sites for employment generating facilities. These estimates will be derived using the acreage of each land use and a floor area ratio factor (FAR) to determine square footage. A ratio of jobs to floor area will then be used to project future job potential.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space**, was ranked average as it actually performs slightly below the 1990 ratio of jobs to total population (0.50), with a ratio of 0.48. This results from the limited number of acres made available for commercial, industrial and office development.
- ◆ **Scenario 2: Aggressive Annexation**, was ranked high as it performs above the 1990 ratio, and has a ratio of 0.77. This relatively high number results from the large amount of land set aside for commercial, industrial and office uses along the State Route 49 corridor.
- ◆ **Scenario 3: Downtown Conservation:** was ranked high, as it also performs well above the reference point with a ratio of 0.84. This relatively high number results from both the large amount of land set aside for commercial, industrial and office uses along the State Route 49 corridor and the increase in the number of jobs that would occur in the Central Business District.

Indicator H: Promotion of Local Transportation Options

Objective: The immediate benefits of increased local public transportation are well documented and include reductions in the number of automobile trips, minimization of traffic congestion and decreases in road and parking construction. However, for alternative transportation to be a truly effective substitute for automobiles, it must be clean, comfortable and convenient. Recognizing

these facts, this indicator calls for the increased availability of good public transit facilities and services. This indicator received a score of 4.75 points out of a possible 50 points in the Task Force's weighting process criteria.

Unit of Measure: The unit of measurement for this indicator is the focuses on the degree to which the three scenarios encourage the use of local public transportation.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space Plan**, was ranked very high. This alternative would have the potential for providing transportation options since it has nodes of medium density residential areas connected by key traffic corridors to a fixed number of destination points specifically downtown Valparaiso and office/ industrial area. The higher density residential uses could sustain more efficient transportation systems, bus, bike and pedestrian.
- ◆ **Scenario 2: Aggressive Annexation Plan**, was ranked very low because the dispersed destination points, the absence of a destination strategy in the thoroughfare system and the typical suburban density residential development would make it more difficult to sustain an alternative transport system.
- ◆ **Scenario 3: Downtown Conservation Plan**, was rated average because alternative transport systems could be sustained due to presence of a routes serving destination points. However, the lower density residential development in the peripheral areas would not be as conducive to a alternative transportation system as Scenario 1.

Indicator I: Promotion of Regional Public Transportation

Objective: Over the past few decades, the average distance commuters travel to reach their places of employment has increased considerably. As commuting distances have increased so has the cost of automobile ownership. These individual costs coupled with federal air quality laws requiring employers to reduce the number of employee automobile trips may be increasing the opportunities for regional public transportation. This indicator received a score of 6.25 points out of a possible 50 points in the Task Force's weighting process criteria.

Unit of Measure: The unit of measurement for this indicator focuses on the degree to which the three scenarios encourage the use of regional public transportation.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space**, was ranked average, since this plan would be the most conducive to establishing commuter train stations in the city for the Grand Trunk Railroad line. The higher residential density, possibility of Transit Oriented Development (TOD), the dominance of the existing downtown as the commercial hub of the City, and the easily accessible downtown are factors that would encourage establishing a train station near downtown Valparaiso. Additional stations could also be established in pockets of high density residential areas.

- ◆ **Scenario 2: Aggressive Annexation**, was ranked low because it represents the highest growth potential. A central location within a medium to high density residential area (TOD) is crucial to encourage the use of and generate sufficient ridership volumes at the station.
- ◆ **Scenario 3: Downtown Conservation**, was ranked average because there is potential for locating a centrally located and easily accessible station in the downtown. An emphasis on downtown investment may also pave the way for TOD type development. However, the lower growth and low to medium density residential development at the periphery might not provide the ridership volume to attract regional commuter rail service.

Indicator J: Decreased Traffic Congestion

Objective: The automobile has emerged as an essential part of American life. The corresponding increases in traffic congestion, however, have direct impacts on many aspects of community, including local commercial viability, air and water quality, and overall physical form and fabric. This indicator deals with the negative consequences of increased traffic congestion, and seeks their reduction under future growth scenarios. This indicator received a score of 7.66 points out of a possible 50 points in the Task Force’s weighting process criteria.

Unit of Measure: The unit of measure for this indicator will be the overall level of service that will be afforded by the local area road system as a whole in the projection year 2015. This projection accounts for both ground and the natural increase in area traffic. Performance of each scenario is derived from a traffic engineering qualitative assessment of the relative level of service given typical roadway system improvements.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space**, was ranked average. While this scenario envisages substantial population growth, the potential of development of decentralized commercial centers and additional traffic routes would probably reduce traffic congestion in downtown.
- ◆ **Scenario 2: Aggressive Annexation**, was ranked high since it would produce the least amount of traffic congestion even while it envisages the maximum population growth. The provision of additional main traffic routes and destination points would distribute the additional traffic more effectively than Scenario 1.
- ◆ **Scenario 3: Downtown Conservation**, was ranked the low in terms of decreasing traffic congestion. The proposed growth pattern would approximately double the existing population of Valparaiso, without introducing additional traffic corridors or commercial / office centers. Therefore, the existing downtown Valparaiso would experience significant vehicular congestion as it would serve as the commercial center for the entire study area.

Indicator K: Market Forces

Objective: This indicator places heavy emphasis on the belief that the free market is the best instrument for determining patterns of development. As such, it calls for a relatively limited role

for the public sector in managing future land use patterns. This indicator received a score of 1.91 points out of a possible 50 points in the Task Force's weighting process criteria.

Unit of Measure: The unit of measure to be used for this indicator will be relative performance ranking of the three scenarios.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space**, was ranked very low, since preservation of the large areas of open space and establishing higher density residential developments need the maximum amount of government intervention.
- ◆ **Scenario 2: Aggressive Annexation**, was ranked high, as government intervention would be limited to encouraging medium density residential development.
- ◆ **Scenario 3: Downtown Conservation**, was rated average since some amount of government intervention would be required to facilitate further development of downtown Valparaiso.

Indicator L: Improved Public Services and Facilities

Objective: Public services and facilities include police and fire stations, community recreation centers, libraries, post offices, schools, public work complexes, park land and golf courses. Obviously development patterns directly impact the level and quality of these kinds of public services and facilities. This indicator seeks to ensure that future growth is accompanied by corresponding maintenance or even improvements in the level and quality of public services and facilities. This indicator received a score of 8.94 points out of a possible 50 points in the Task Force's weighting process criteria.

Unit of Measure: The unit of measure used for this indicator is the relative availability of funds to support the requisite increase in public service and facilities.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space**, Performance should be on the low side of average. New growth will be strong enough to support corresponding increases in facilities and services. However, extraordinary revenue demands for the preservation of open space may work to funnel more funds toward this objective leaving fewer funds available to support expanded public facilities. Additional revenue sources dedicated to open space may offset this tendency.
- ◆ **Scenario 2: Aggressive Annexation**, Indiana tax caps make this scenario high performance. Annexation is the one way to increase total revenue flow to the city.
- ◆ **Scenario 3: Downtown Conservation**, We project low performance for this scenario. It has the lowest demand for expanded facilities and services. Low density residential and agricultural uses on the periphery demand less services and may well remain outside the city. We are projecting that the city will be able to maintain current levels of facilities and services.

Indicator M: Investment in Existing Commercial Corridors and Entranceways

Objective: Stretches such as Calumet Avenue have long functioned as vital commercial corridors as well as symbolic entranceways for Valparaiso. As such, this indicator calls for future land use plans, policies and programs that promote the continued viability of these key arteries. This indicator received a score of 13.22 points out of a possible 50 points in the Task Force's weighting process criteria, making it one of the more objectives for the growth plan.

Unit of Measure: Factors to be considered will include: 1) proportion of potentially visually negative land uses; 2) likely character of private development; 3) likely level of public investment.

Performance of Scenarios:

- ◆ **Scenario 1: Maximizing Open Space**, was ranked very high. The proposed development plan reinforces the existing key arterials as the major traffic corridors. The medium to high density peripheral developments would also ensure a higher use and hence the continued viability of these corridors.
- ◆ **Scenario 2: Aggressive Annexation**, was ranked at the low end of average. The land use plan proposes several additional traffic corridors in order to better serve the dispersed nature of residential development. The new routes open new parcels for commercial development which could, theoretically be treated with much greater urban design sensitivity. New and better designed commercial along these routes may well cause abandonment and attendant decline of the older commercial development and gateway locations that currently exist.
- ◆ **Scenario 3: Downtown Conservation**, was rated high. This land use scenario would essentially maintain and enhance the use of the existing commercial corridors. However, the intensity of use of the key routes might not be as high as Scenario 1 due to the low population levels.

CONCLUSION

The evaluation results have been summarized in Table 22 below.

Table 23: SUMMARY OF EVALUATION RESULTS

Growth Plan Indicators	Weight Factor	Scenario 1		Scenario 2		Scenario 3	
		Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
A. Downtown Preservation	20.84	9.25	192.77	6.00	125.04	18.50	385.54
B. Conservation of Agricultural & Environmentally Sensitive Lands	12.34	17.00	209.78	6.00	74.04	13.00	160.42
C. Preservation of Air and Water Quality	12.24	16.50	201.96	6.00	73.44	10.00	122.40
D. Minimization of Tax Burden	4.69	6.00	28.14	12.00	56.28	10.00	46.90
E. Mixed Housing	8.97	8.00	71.76	6.00	53.82	6.00	53.82
F. Increased Cultural/Retail Opportunities	8.03	14.75	118.44	11.25	90.34	8.25	66.25
G. Increased Job Opportunities and Workforce Development	15.16	10.00	151.60	14.75	223.61	13.00	197.08
H. Promotion of Local Public Transportation	4.75	18.50	87.88	2.50	11.88	10.00	47.50
I. Promotion of Regional Public Transportation	6.25	10.00	62.50	5.00	31.25	10.50	65.63
J. Decreased Traffic Congestion	7.66	10.75	82.35	12.25	93.84	6.00	45.96
K. Market Forces	1.91	1.25	2.39	14.75	28.17	11.25	21.49
L. Improved Public Facilities	8.94	9.00	80.46	15.50	138.57	5.25	46.94
M. Promotion of Existing Commercial Corridors and Entranceways	13.22	18.75	247.88	8.00	105.76	15.75	208.22
TOTAL	125.00	149.75	1537.90	120.00	1106.03	137.50	1468.13

Table 24: SUMMARY OF RANKING RESULTS

Growth Plan Indicators	Alternative 1	Alternative 2	Alternative 3
A. Downtown Preservation	Very High	Low	Very High
B. Conservation of Agricultural & Environmentally Sensitive Lands	High	Low	High
C. Preservation of Air and Water Quality	Very High	Low	Average
D. Minimization of Tax Burden	Low	Average	Average
E. Mixed Housing	Average	Low	Low
F. Increased Cultural/Retail Opportunities	High	Average	Average
G. Increased Job Opportunities and Workforce Development	Average	High	High
H. Promotion of Local Transportation Options	Very High	Very Low	Average
I. Promotion of Regional Public Transportation	Average	Low	Average
J. Decreased Traffic Congestion	Average	High	Low
K. Market Forces	Very Low	High	Average
L. Improved Public Facilities	Average	High	Low
M. Promotion of Existing Commercial Corridors and Entranceways	Very High	Average	High

KEY

- Very High
- High
- Average
- Low
- Very Low

9.5 CRITERIA FOR ESTIMATING VALPARAISO WATER SYSTEM NEEDS

- Average Day Water Pumpage –
(at the Treatment Plant) 150 gpcd
- Peak day / Average day 1.6
- Average Summer Day / Average Day – Annual Basis 1.3
- Peak Hour / Average Day 2.6
- Water Storage in the Distribution System 12 to 24 Hours Storage
on Average Day Basis
- Treatment Plant Capacity 110% of Peak Day
Demand
- Well Field Capacity 110% of Peak Day
Demand with 1 well out of
service in each well field.
- Number of Persons / Residential Unit 2.75