1. Introduction

Foreword

This document is a plan, a framework within which Town of Dryden leaders and residents can work together in the coming years to guide the future growth and development of the town. It has a long-range outlook, to the year 2020 and beyond. It attempts to identify both issues that the community may face, and opportunities that it might exploit for the common good.

Because this document has a twenty-year horizon the many positive impacts of implementing it will not be readily apparent. Implementation of the plan in fact will take place over the course of years, and in the case of some recommended courses of action decades. Implementation will not yield any quick return on the time and effort invested by the Town of Dryden Planning Board, but it will yield a substantial return, one that will be evident five, ten or fifteen years into the future.

Because certain assumptions have been made with regard to future growth and development, some of the trends, issues or needs that this plan anticipates may not come to pass. The anticipated levels of population growth and attendant new home construction, major factors in any community's comprehensive planning, may not occur. Agriculture, a critical component of the town's economy and contributor to the town's scenic beauty, continues to evolve. Technology continues to evolve. As a result some of the recommended policies, capital improvements and other recommended actions may not need to be implemented.

It is thus critical to the success of this plan that Town leaders and Town residents review this plan and update it every five years.

Brief History of the Town

The Town of Dryden encompasses some 94.9 square miles in eastern Tompkins County. It was established in 1797 as one of the 28 townships created and set aside by the State Legislature to be divided into lots and conveyed to Revolutionary War veterans as payment for their services. It was named after the English poet John Dryden. The new township was square in shape with each side being ten miles long and consisted of some 100 lots, each approximately one square mile in size. With the exception of seven military lots along its southern boundary that were annexed to the Town of Caroline, the Town of Dryden has retained its original shape and area.

Settlement by European Americans began in 1798 and the town's population grew rapidly to 1,893 persons according to the 1810 census and to nearly 5,000 persons by 1835.[1] Early settlers entered an area covered with large expanses of white pine and hardwood forests. As a result in the early years of European American settlement lumbering was a major economic activity within the town. Agriculture gradually replaced lumbering as the economic basis of the community as the forests were depleted.

In terms of population, the Town of Dryden is the second largest town in Tompkins County and third largest municipality after the City of Ithaca and Town of Ithaca. According to the U.S. Bureau of the Census, the town in 2000 was home to some 13,532 residents. Of these, some 1,832 lived within the village of Dryden and 505 in the village of Freeville. Other concentrations of population are located in and around the hamlets of Varna, Etna and McLean, and in the Ellis Hollow area.

The town is located along the NYS Route 13 transportation corridor connecting Elmira, Ithaca and Cortland. Its location between Ithaca and Cortland has a major factor in its growth since World War II. The growth of the industry and higher education sectors in Cortland and Ithaca has stimulated substantial residential development and population growth in the town. In recent decades, too, industrial and commercial development has begun to extend eastward into the town along the NYS Rte. 13 and NYS Rte. 366 corridors from Ithaca and Lansing.

1 Goodrich, George E. "Centennial History of the Town of Dryden, 1797-1897".

Despite the growth that has occurred in the town over the past several decades, Dryden for the most part still qualifies as a rural municipality. Outside the villages and hamlets population density averages only about 110 persons per square mile. In this regard it mirrors the predominant characteristics of the majority of its neighbors. With the exception of the built-up areas in the Village of Lansing and town of Ithaca along its western border, land use in the areas of the towns of Lansing, Groton, Virgil, Harford, Richford, Caroline and Danby that border Dryden are agricultural and rural residential in nature.

Prior Planning Initiatives

The Dryden General Plan, 1968

In October 1968 the firm of Egner and Niederkorn completed The Dryden General Plan on behalf of the town and the villages of Dryden and Freeville. The 230 page document, funded under the Department of Housing and Urban Developments Section 701 Program, provided an extremely detailed analysis of the town and villages then, including population, housing and economic data. It then proposed a series of policies to guide the development of the communities through the 1970s, 1980s and into the 1990s.

The General Plan assumed a population in 1990 of about 16,200 persons, of which 2,000 would live in Dryden village, and 700 in Freeville. (Actual population in 2000 was 13,532. See below.) This projection was partly in response to the anticipated construction of a limited-access NYS Rte. 13 between Ithaca and Cortland that was expected to stimulate new industrial development and residential growth. The substantial growth of manufacturing in Cortland at the time and growth in the education sector in Tompkins County were also major factors in this growth projection.

In summary, the 1968 General Plan proposed that:

- Future major residential development should be channeled into Dryden village and along the NYS Rte. 13 corridor, with lesser levels occurring in the Etna and Freeville areas.
- The better agricultural lands in the northeast portion of the town should be protected from extensive development.
- Commercial development should be concentrated in specific areas and scattered, low- density strip commercial development should be discouraged. Dryden village should remain the major commercial activity center in the town, with Varna and Freeville serving as secondary centers. The General Plan also considered as appropriate a "large regional shopping center" in the vicinity of Etna Road and Pinckney Road upon completion of the proposed limited access NYS Rte. 13.
- Light industry should be encouraged in two locations: in the NYS Rte. 13 corridor in the vicinity of the NYS Rte 366 intersection, and on the northern edge of Freeville. The rationale for the Freeville location was proximity to both the anticipated limited access NYS Rte. 13 and (then) rail service.
- Major development should be channeled away from the more rugged terrain of the Allegheny Plateau portion of the town and land uses in the area should be limited to farming and recreation or conservation-oriented uses.
- The existing undeveloped lands in the immediate vicinity of Fall Creek and Virgil Creek should be preserved as open space and possible acquisition for public park and recreation purposes. These areas would tie together the villages of Dryden and Freeville and extend southward from Dryden to include Dryden Lake and areas beyond. The Plan also recommends that some 1,600 acres of land along Fall Creek and Beaver Creek upstream of Malloryville and extending to Cortland County be acquired as a nature preservation/wildlife refuge.
- At least one larger park to serve the entire town and a number of smaller neighborhood-oriented parks should be established.

The 1968 General Plan dedicates an entire section to Fall Creek and issues related to water quality and its future use and use of the land along its banks. The plan envisioned Fall Creek and Virgil Creek as regional natural and open space assets. It goes into considerable detail in proposing a program to protect the two streams from inappropriate development, and to enhance public access to them.

Future Land Use in the Town of Dryden: Alternatives and Recommendations, 1999

Completed by the Department of City and Regional Planning at Cornell University in December 1999, this document includes an in-depth inventory and analysis of population and housing, public utilities, economic development, transportation systems, natural resources and recreation, and recommendations for further actions. Although not officially adopted by the Town, the document has provided valuable information and direction to officials and residents. Some of the data and concepts contained within ***Future Land Use in the Town of Dryden:***

Alternatives & Recommendations, 1990 have been incorporated into this plan.

The ***Future Land Use in the Town of Dryden: Alternatives & Recommendations, 1990*** document is not a comprehensive plan as they have typically been written. It presents four possible scenarios illustrating how the Town might develop in the coming decades:

- *Business as Usual.* This scenario assumes that the town will continue to develop in a dispersed, fragmented and somewhat random pattern. It is based on an analysis of past development patterns in the town and extrapolates them into the future.
- *Cluster.* This type of development scenario would include provisions such as a Clustering for Open Space Conservation Plan (COSP), zoning, and subdivision design provisions that would channel future development away from key open space and environmental assets. The intent is to "cluster" development in those areas most suitable -- from an open space and environmental protection standpoint -- for development.
- *Compact Center*. This approach focuses future growth and development in and around the existing population centers of Dryden village, Freeville, Etna and Varna, and Ellis Hollow at village-like densities of around four dwelling units per acre. In addition to its potential for preserving substantial quantities of open space, this scenario has the potential for revitalizing village and hamlet downtown areas and creating more intimate neighborhoods.
- *Corridor Development.* Under this scenario future development in the town will be directed toward its major transportation corridors where public water and sewer services already exist or can be easily provided, and away from areas without such services or away from key open space and environmental assets. Provisions would be made to reduce the anticipated traffic and safety impacts to targeted highways, such as NYS Rte. 13, such as access controls and road infrastructure improvements. Depending on location within the corridor, small-lot (1/2-acre) residential development, mixed-use development, industrial development and more intensive commercial development would be allowed. Outside the corridors large-lot (5-acre) and rural residential/ agricultural/forest areas would be identified and zoned for lower intensities.

The key goals of each of the above scenarios are to accommodate the level of growth that the town of Dryden is expected to experience over the next two decades, while at the same time preserve the town's important open space and environmental assets, and the rural character many residents enjoy.

In addition to the scenarios, the 1999 document outlines for the community a Recommended Land Use Framework based on the following principles:

- New mixed-use, compact development should be promoted in established hamlets and villages;
- Natural resources and groundwater should be conserved and protected;
- Agricultural and forest resources should be protected;
- Existing viewsheds and the sense of place many residents enjoy should be protected.

The proposed Recommended Land Use Framework is also grounded in an analysis of the suitability for development of land and natural resources in the various areas of the town. Attributes such as steep slopes, environmentally sensitive areas such as wetlands, riparian corridors, Cornell University lands, state forest land, Tompkins County Unique Natural Area and poorly drained soils have been identified and mapped. The result is a map showing areas where constraints to environmentally sound development exist and, conversely, areas where opportunities for environmentally sound development exist.

The Recommended Land Use Framework specifically recommends that the town:

- Create new incentives to focus economic and residential development in or around hamlets and villages and in the industrial/commercial area along the western stretches of NYS Rte. 13.
- Implement measures to better control development in areas such as northwestern Dryden, Ellis Hollow, the Dryden Lake vicinity and where scenic vistas occur along Rte. 13.
- Implement measures to reduce development in the agriculturally important northeastern section of the town, and in the Allegheny Plateau hill country.

The ***Future Land Use in the Town of Dryden: Alternatives and Recommendations, 1999*** report is not in itself a comprehensive plan. It does provide however both background data and insights into the town that are important in the development of a new comprehensive plan. The document also provides a palette of ideas and concepts that have the potential to provide for anticipated future growth in the town, protect the attributes that make it an attractive and unique place to live, and protect the many unique and valued ecological resources within its boundaries.

In 2000 the Town of Dryden along with the Village of Dryden and Village of Freeville completed and adopted a joint ***Hazard Mitigation Plan*** under the Federal Emergency Management Agency's **Project**

Impact program. The objectives of the Hazard Mitigation Plan are to:

- Assess potential hazards in the town and the villages;
- Identify problems that may be caused by such hazards;
- Set goals to eliminate of reduce the problems;
- Review alternative mitigation measures that could reduce disaster losses in the community;
- Develop and implement an action plan to eliminate hazards and problems identified in the Plan;
- Evaluate and revise the adopted Plan on a regular basis.

The plan identified a number of natural hazards facing residents of the town, including: floods, hurricanes and tropical storms, windstorms and tornadoes, winter storms, ice storms, wildfires and earthquakes. Ten floods causing substantial damage have hit in the Town over the past 100 years. There has also been a number of windstorms and major snow- or ice storm events in the past half century.

A number of technological hazards, or hazards produced by our use of modern technology. These include the transportation of hazardous materials through the community by trucks; the potential for airplane crashes due to the presence of the Ithaca-Tompkins Regional Airport; hazardous materials stored in various locations within the town; and abandoned underground storage tanks. An accident involving a bus or truck within any of the villages or hamlets is of particular concern.

The plan then identified a number of specific policies and actions the town and villages could take in order to reduce or eliminate such hazards.

Although it is a county document, the ***Tompkins County Agriculture and Farmland Protection Plan*** adopted by the County Legislators in 1998 addresses issues of importance to the Town's agricultural community. The plan outlines a number of strategies and actions steps to be taken to enhance the economic viability of agriculture in Tompkins County, and help protect agricultural land resources. It has been consulted in the course of preparing this plan to ensure conformance with its provisions.

Ongoing Initiatives

The Town of Dryden is currently involved in a number of initiatives related to comprehensive planning. It is actively participating in planning transportation planning efforts of the Ithaca-Tompkins County Transportation Council (ITCTC), The transportation Council, as the metropolitan planning organization (MPO) for Tompkins County, is responsible for coordinating transportation planning and funding from federal and state sources for transportation infrastructure improvements. The agency has recently completed a study of truck traffic in the county that includes the town. It is also developing a plan for improvements in public transit service in the Northeast Sub-area portion of the county, which includes the western part of the town.

The environmental resources of the Town of Dryden, including air, water, and soil, are of relatively high quality and are essential to a good quality of life, public health, and a thriving economy. The Town of Dryden has embarked on a number of initiatives to protect its environmental resources.

The Town of Dryden Conservation Advisory Board has completed an **Open Space Inventory** for the town. This document details the location and character of key environmental attributes such as soils, steep slopes, wetlands, waterways and riparian corridors, Tompkins County Unique Natural Areas and public and private open space assets. It can serve as an important reference to guide Town officials as they make decisions regarding land use and infrastructure investments.

Other ongoing efforts to protect and enhance environmental resources include:

- A cooperative agreement between the US Geological Survey and the Town of Dryden to study and characterize the Virgil Creek Aquifer, a highly productive valley fill aquifer with excellent quality water that is almost entirely contained within the Town boundaries;
- Active participation in the Cayuga Lake Watershed Intermunicipal Organization, which has resulted in a watershed characterization and management plan and funding to begin restoring stream banks in the southern end of the watershed;
- Supporting efforts of the Fall Creek Watershed Committee, a volunteer, grassroots organization dedicated to protection and improvement of the Fall Creek Watershed;
- Funding its share of the costs of a major upgrading of the Ithaca Area Wastewater Treatment Plant that will substantially reduce the levels of phosphorus discharges by the facility into Cayuga Lake.

The 2018 International and National Climate Assessments[2] indicate that the planet, at the current rate of warming, will exceed the 2ºC warming resulting in an irreversible trend that is an existential threat to humans and the earth's ecology. Scientists have stated that it is essential to attempt to reduce the rate of increase in eCO2 to zero by 2030 to keep warming at 1.5º C by 2100. Keeping global warming to 1.5º C would be the best option to reduce the most deleterious impacts of warming. County data collected in 2014 indicates that the greatest sources of GHG emissions, locally, are from transportation followed closely by residential and commercial structures.

As of 2018 the Town of Dryden had no energy or GHG emissions policy. For the Town to contribute to GHG reductions will necessitate changes to the Town's governing policies. Initial steps could include:

- A baseline survey of current GHG emissions
- Revisions to Planning Department Applications
- Revisions to Site Plan Review
- Revisions to the Town Building Code
- Revisions to the Town Zoning Laws
- Local amendments to SEQRA as authorized by State law
- Initiatives to assist homeowners and developers to make necessary changes to increase energy efficiency and take conservation measures.

[2] IPCC, 2018: Summary for Policymakers. In: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.)]. World Meteorological Organization, Geneva, Switzerland, 32 pp

2. Inventory & Analysis

Physical Geography

The Town of Dryden is located astride the boundary between the upper reaches of the Lake Ontario Plain to the north and the Allegheny Plateau to the south. This boundary stretches east to west from Beam Hill southwest of Dryden village to Turkey Hill overlooking Varna on the west.(Map2-1) Simms Hill and Bradshaw Hills along the eastern border of the Town are also part of the Allegheny Plateau.

The portion of the Allegheny Plateau within the town is heavily eroded and cut by numerous ravines as well as deep glacially carved valleys such as the Virgil Creek valley south of Dryden, Ellis Hollow and Six Mile Creek valley in the southwestern corner of the town.

Portions of six watersheds are located within the boundaries of the town: Fall Creek, Virgil Creek, Cascadilla Creek, Owasco Inlet, Six-Mile Creek and Owego Creek. Owasco Inlet, Six-Mile Creek and Owego Creek, have their headwaters within the town.

Most of the town drains into Fall Creek and Virgil Creek. The valley of Fall Creek is the most dominant feature of the northern half of the town. This major tributary of Cayuga Lake begins north of McLean and flows in a southwesterly direction through a relatively broad, shallow valley. Virgil Creek, which begins in Cortland County southeast of Dryden Village and Mill Creek, which has its headwaters just northwest of the town, are the two largest tributaries of Fall Creek, and join it just south of Freeville.

Streams in the Town of Dryden are dendritic, or branching, in pattern and have numerous large and small tributaries.

Elevations in the town range from approximately 750 feet above sea level at Six Mile Creek where it exits the town to approximately 2,015 feet in the vicinity of Star Stanton Hill. Major hilltop elevations within the plateau area include a low of about 1,280 at Hungerford Hill, just over 1,460 at Turkey Hill, just over 1,620 at Snyder Hill, 1,750 feet at Mt. Pleasant, approximately 1,930 feet for Hammond Hill and approximately 1,960 feet for Beam Hill.

Northeast of Dryden Village Simms Hill reaches an elevation of approximately 1,640 feet, and immediately east of the village an unnamed hill off Bradshaw Road reaches an elevation of approximately 1,730 feet above sea level.

A majority of the many hills in the town are broad and smooth with relatively mild topography at higher elevations and slopes that are relatively gentle. The slopes at the bases of hills however are generally substantially steeper and can be precipitous in places. In these areas slopes generally exceed 15 percent and can be in excess of 25 percent.

Approximately 14,250 acres or 23.5 percent of the total land area in the town have slopes of 15 percent or greater. Lands having a slope of 15 percent or greater are mainly located south of Route 13. The slope of the upper Owasco Inlet valley west of Route 38 and north of Freeville however is also marked by slopes of 15 percent or greater. Small areas covered by steep slopes are located in other places in the town. Notable examples are the bluffs along Fall Creek upstream of Freese Road. There the stream has carved nearly vertical bluffs by cutting into the glacial till which forms the walls of its ravine.

Lands covered by steep slopes generally are not extensively developed due to constraints such as drainage, septic field and foundation problems. They are also generally too steep for agriculture. Ideal uses for such areas are recreation, open space, forestland or as habitat for game.

The floor of the Fall Creek valley is approximately 870 feet above sea level where it flows out of the town, about 1,130 feet at McLean, and a little more than 1,200 feet where Virgil Creek enters the town.

The portion of the Fall Creek valley between Freeville and McLean, and the valley of Virgil Creek south of Dryden village, are both notable for topographies dominated by glacial moraine features. These include large rolling hills of gravel and unconsolidated glacial till and bowl shaped depressions. The glacial Malloryville Esker winds

Map 2-1. Physical Geography

across the Fall Creek valley floor west of McLean. Within the Virgil Creek valley south of the village, Dryden Lake fills a glacial "kettle" or bowl shaped depression. The 115-acre lake is part of a major wetland complex created by the irregular moraine topography of the area.

Some 85 different types of soils cover the land in the Town of Dryden. In general terms the soils can be classified according to one of three major characteristics: gravelly, clayey or fragipan. In general gravelly soils are located on the floors of stream valleys. They also occur in kame, esker, and moraine areas. Clayey soils were deposited in areas of the town once covered by Ice Age period lakes. These clay soils are limited in extent and are located mainly in western and northern extremes of the town along Fall Creek and in the Owasco Inlet Valley.

Fragipan soils are the dominant soils type in Dryden. They are characterized by presence of a compact, dense, impervious layer at varying depths in the upper subsoil. This layer greatly impedes movement of water through the soil and can cause creation of perched water tables. Water can often move horizontally across the surface of the fragipan layer a considerable distance. As a result water-borne sewage effluent and other contaminants can spread substantial distances through the ground from their origins.

Soil permeability is a key factor in determining the suitability of land for various uses. Soils are categorized as rapidly permeable, moderately permeable, slowly permeable and very slowly permeable soils.

Approximately 65 percent of the town is covered by soils that are moderately permeable. Slowly permeable soils cover approximately 26 percent of the land and rapidly permeable soils cover just under 9 percent. About 1 percent of the town is covered by very slowly permeable soils.

Rapidly permeable soils are located in scattered pockets throughout the town, but tend to be concentrated in creek valleys. The largest concentrations of rapidly permeable soils can be found in a crescent-shape area that extends in an arc from the vicinity of McLean in the northeast through the center of the Village of Dryden and southeast up the Harford Valley.

Table 2-1
Soil Permeability in the Town of Dryden

Soil Permeability Characteristics	Area	Percent of Town Area
Rapidly Permeable	5,270	8.7%
Moderately Permeable	39,370	64.8%
Slowly Permeable	15,750	25.9%
Very Slowly Permeable	345	0.1%

Source: 1968 General Plan

Slowly permeable soils are the dominant type in the Ellis Hollow area, in the Fall Creek Valley between Varna and Etna, and in an area running through the eastern half of Freeville and north into the Owasco Lake Inlet. Smaller pockets of these soils are also found in all areas of the town except the northwest.

Up until recently, the development patterns that have emerged in the Town of Dryden through the years have been in response to soil potential or soil limitations. In planning for future growth and development, the characteristics of the soils that overlay the town should be carefully considered.

Areas of the Town of Dryden that do not have municipal or communal sewage systems must rely on private on-lot systems. How long and how well a septic system works however can depend largely on the absorptive qualities, or the permeability, of the soil. Slowly permeable soils may require much larger filter fields and therefore bigger lots than are necessary with more rapidly permeable soils, or require increasingly complex and expensive disposal systems. This is especially true in areas where soils are so impervious that septic tank filter fields would be unsafe regardless of the lot size.

Soils that are poorly drained can also impose severe limitations on growth. Soils marked by high water tables and poor internal drainage can become waterlogged during wet weather and can remain wet for long periods of time. Some soils in low and swampy areas are permanently wet. When soils are wet there is no capacity to absorb septic tank effluent and filter fields are not able to function. Even though municipal water and sewer service can eliminate the issue of on-lot sewage disposal problem, other problems such as wet yards and basements can still seriously affect the quality of life in such areas.

Water Resources

Extensive water resources exist within the Town of Dryden, in the form of surface water (streams, lakes, ponds) and groundwater resources. Maintaining the quantity and quality of water resources within the town is critical to protecting the natural environment as well the general health and welfare of residents, and the local economy local. Water resources are an important recreational asset.

Major surface water resources within the town include Fall Creek, Cascadilla Creek, Six-Mile Creek and their tributaries, and Dryden Lake. There are also approximately 260 ponds located within the town, the majority of which are manmade. Significant areas of wetlands mark the northwest corner of the town. This area north of Lower Creek Road and west of Caswell Road as late as the 1960s consisted primarily of open farmland with relatively limited amounts of woodland. Today about two-thirds of the area consists of woodland or old field brush and meadow. Actively tilled farmland accounts for only about 20 percent.

A large wetland area north of Freeville is the source of Owasco Inlet, which flows northward into the Town of Groton and ultimately into Owasco Lake. Owego Creek begins on the southwestern flanks of Star Stanton Hill and flows southward to the Susquehanna River at Owego. It drains about three square miles in the southeastern corner of the town.

Six-Mile Creek drains approximately 15 square miles in the southern and southwest portions of the town. The stream rises in the uplands near Irish Settlement and Yellow Barn Roads and flows south into the Town of Caroline, then turns northwest and cuts across the southwest corner of Dryden.

Cascadilla Creek rises in the Town of Caroline and flows northward and then westward through Ellis Hollow into the Town of Ithaca. The creek drains approximately 11 square miles of the town, including most of the Ellis Hollow area.

Activity along and within streams, ponds, Dryden Lake, and wetlands is regulated by state and federal agencies, including the U.S. Army Corps of Engineers under the Clean Waters Act and the Rivers and Harbors Act of 1899. The Department of Environmental Conservation (DEC) also has regulatory responsibilities under the Environmental Conservation Law.

The DEC has classified most water bodies in the state based on existing or expected "best use." These uses, shown in the table below, range from AA (highest class) to D. Water bodies classified as C(T) or higher are collectively referred to as protected streams and are subject to more stringent regulation.[3]

Most of the major streams in the town are classed C(TS) or higher. Downstream of Freeville Fall Creek and its tributaries carry the "A" designation, as does much of Six Mile Creek and its tributaries. The main stem of Six Mile Creek upstream of the Town of Caroline, and its major tributary that runs along Midline Road, carry the "A(T)" designation. Approximately 25 percent of Mill Creek and its major tributaries, all of Owasco Inlet and Virgil Creek within the town and much of Cascadilla Creek and its main tributaries upstream of Genung Road carry a "C(T") designation.

Two small tributaries of Fall Creek just west of McLean are classed as "C(TS)" streams.

Table 2-2
DEC Stream Classification System

Stream Class	Best Use
AA	Drinking (after chlorination)
A	Drinking (after chlorination and filtration)
B	Bathing
C (T)	Fishing (trout)
C	Fishing
D	Secondary contact recreation

Data from Tompkins County Planning Department

In addition to the wetlands areas identified in the discussion above, major wetland complexes can also be found:

1. at the headwaters area of the Owasco Inlet north of Freeville;
2. along Fall Creek from the vicinity of Malloryville upstream to beaver Creek and into Cortland County;

[3] Town of Dryden Conservation Advisory Council. Draft Open Space Inventory. January 2003. The AA through D stream class codes may be modified by the addition of "T" or "TS" if the water body can support, respectively, trout and trout spawning.

3. along Virgil Creek, especially in the areas northwest of Dryden village and to its southeast toward Dryden Lake;
4. along Cascadilla Creek as it flows through Ellis Hollow.

The above areas represent only the major wetland areas within the Town of Dryden. Topography and soil conditions have created numerous small wetlands that are scattered throughout the town. Although some 3,350 acres of wetlands have been mapped, either by the Department of Environmental Conservation, as part of the National Wetlands Inventory overseen by the U.S. Fish and Wildlife Bureau, or on the Tompkins County Land use/land Cover Map, many wetlands remain undocumented.

Groundwater resources within the town constitute a very important resource in the Town of Dryden. With the exception of residences and businesses in the western part of the town served by the Bolton Point system, residents and businesses in the town depend on groundwater as their primary water source. The Village of Dryden municipal water system uses groundwater for its municipal water supply.

Groundwater is not uniformly distributed in the Town, but is concentrated in aquifers, the most significant of which are found in the major valleys, and result from fluvial and glacial processes. These aquifers are all composed of sand, gravel, and coarser material deposited by running water, originating either from melting glaciers or from more typical streams.

Outside the major valleys a large number of residents rely on wells that penetrate fractures in the bedrock, which locally consists primarily of sandstone and siltstone. These bedrock "aquifers" generally require deeper wells to penetrate enough fractures to provide even minimal water flows, and the water quality is generally lower than that of sand and gravel aquifers because of higher mineral content.

Most municipal and private water supplies in the town are expected to continue to rely on groundwater for the foreseeable future. It is thus a resource that needs to be monitored and protected. Some aquifers are relatively shallow and are recharged from rainfall and stream flow. Because they are open to the surface, they are particularly susceptible to contamination from human activities such as fuel-tank leakage, sewage, oil and gas spills, and agricultural chemicals.

Open Space & Environmental Resources

As stated above, topography has endowed the town of Dryden with significant open space resources. These include the agricultural lands that create scenic vistas across the several valleys of the town, the forested slopes of the Allegheny Plateau and numerous streams, ponds and wetlands.

Overall about 10,760 acres of land in the town, or slightly more than one-sixth of its land area, can be considered permanently preserved open space. (Map 2-2) This includes some 8,700 acres of state forest lands in the Yellow Barn Road and Hammond Hill area. These state lands consist of both mixed

deciduous hardwoods and conifer plantations, and are managed for both timber and recreational purposes.

In addition there are about 1,870 acres of land that is considered ecologically or geologically significant and protected through inclusion in 16 private preserves. These preserves are scattered throughout the town and protect ecological resources that range from stream corridors and wetlands to highland hardwood forests. Eleven of these, encompassing just under 1,400 acres, are part of the Cornell Plantations Natural Areas system of preserves. The Cayuga Nature Center, Finger Lakes Land Trust and The Nature Conservancy own and maintain the 5 remaining preserves.

Another significant open space asset is the 196-acre tract owned by the DEC at Dryden Lake. This parcel protects a substantial portion of the lake shoreline as well as provides public access to the water body for fishing and boating.

The Tompkins County Environmental Management Council has identified 57 areas in the town that harbor rare or endangered flora and fauna, unique geologic features or contain excellent examples of ecosystems or biotic communities.(Map 2-3) These areas have been designated as Unique Natural Areas (UNAs).

The Unique Natural Areas program does not afford an identified open space resource any tangible protections. The preservation of Unique Natural Areas within the town is largely in the hands of private landowners, and essentially voluntary. Less

Radon Gas – Part of the Environment Too

Radon is a colorless, odorless, tasteless and chemically inert gas that is generated by the natural radioactive decay of uranium in rock, soil, and water. Naturally existing low levels of uranium occur widely in Earth's crust. Radon gas can be found in all 50 states. It moves through the

than 20 of the UNAs identified are wholly or partly within any of the public or private preserves discussed above. Education and advocacy are the primary tools available to government and individuals to defend such areas.

In addition to those lands managed through the Plantations Natural Areas program, Cornell University owns approximately 6,510 acres of land in the town. These lands are utilized for agricultural field crops and experimental plots, and field laboratories. Some are woodland tracts.

Although not generally viewed as an open space resource, there are substantial areas of floodplain along the major streams in the town. Floodplains and the adjacent riparian zones are subject to frequent flooding, especially during the spring as streams carry off snowmelt. Left in their natural state, floodplains can reduce the damaging effects of flooding by providing space for floodwaters to spread out and to pond in the low areas adjacent to the stream. This lowers the velocity of floodwaters, and the overall height of flooding. In many locations where floodwaters pond within the floodplain, water can infiltrate into the ground and recharge the underlying aquifer.

The relative flat character of floodplains, and the deposition of silt that occurs during periodic inundation also make many such areas ideal for agricultural use. They can also be unusually rich in botanical and faunal composition and offer linear corridors for the movement of wildlife.

Population

The population of the town of Dryden, according to the 2000 U.S. Census of Population, was 13,532 persons in April 2000. This number includes residents of the villages of Dryden and Freeville. The town's population has increase by some 6,179 residents, or 84% from 7,353 residents in 1960. The largest increase in population occurred between 1960 and 1970, when some 2,417 new residents were added, followed closely by the decade between 1970 and 1980, when some 2,386 residents were added. Growth has since tapered off substantially since 1980. Between 1980 and 1990 population grew by 1,095 residents, or 9 percent. According to the 2000 Census data, between 1990 and 2000 population growth was just 281 residents.(Table 2-3) The population of the two villages has fluctuated somewhat over the past four decades. (Table 2-3)

Dryden village grew from 1,263 residents in 1960 to a peak of 1,908 in 1990. Between 1990 and 2000 however the village population dropped slightly, to 1,832 residents. Freeville has experienced wider swings in population, with 471 residents recorded in 1960, a jump to 664 in 1970, a decline to 449 in 1980 and then 437 in 1990. In 2000 however its population rebounded to 505 residents. The town has grown at a substantially faster rate than Tompkins County as a whole.(Table 2-3) Between 1960 and 2000 the county as a whole grew by 54,161 residents, or 128 percent, while the population of Dryden has increased by 238 percent. The town in fact has

Map 2-2. Open Space Assets

Map 2-3. County Unique Natural Areas

Table 2-3
Comparative Population Growth
Town of Dryden and Tompkins County

Town	Population 1970	Population 1980	Change '70 - '80	% Change '70 - '80	Population 1990	Change '80 - '90	% Change '80 - '90	Population 2000	Change '90 - '00	% Change '90 - '00
Dryden	9,770	12,156	2,386	24%	13,251	1,095	9%	13,532	281	2%
Dryden Village	1,490	1,761	271	18%	1,908	147	8%	1,832	-76	-4%
Freeville	664	449	-215	-32%	437	12	-3%	505	68	13%
Tompkins County	77,064	87,085	10,021	13%	94097	7,012	8%	96,501	2,404	2%
Caroline	2,536	2,754	218	9%	3,044	290	11%	2,910	-134	-5%
Danby	2,141	2,449	308	14%	2,858	409	17%	3,007	149	5%
Enfield	2,028	2,375	347	17%	3,054	679	29%	3,369	315	9%
Groton (Town)	4,881	5,213	332	7%	5,483	270	5%	5,794	311	5%
Ithaca (Town)	15,620	16,022	402	3%	17,797	1,775	11%	18,198	401	2%
Lansing (Town)	5,972	8,317	2,345	39%	9,296	979	12%	10,521	1,225	12%
Newfield	3,390	4,401	1,011	30%	4,867	466	11%	5,108	241	5%
Ulysses	4,500	4,666	166	4%	4,906	240	5%	4,775	-131	-3%

Source: U.S. Census Bureau, 1970, 1980, 1990 & 2000 Decennial Census.

accounted for 17.4 percent of all population growth in Tompkins County. It ranked ahead of the town of Ithaca, which grew by 9,126 residents and accounted for 17 percent of overall growth, and Lansing, which grew by 6,300 residents, or 12% of overall county growth.

The population by age profile for the town differs from that of Tompkins County, but is relatively close to that of New York as a whole. (Table 2-4) Children under the age of 5 years make up a larger proportion of the population in the town than they do countywide. Persons in the age 5 to 24 bracket[4] make up a substantially smaller proportion of the town's population than they do in Tompkins County as a whole. This is likely because of the very large numbers of college students living in Tompkins County outside the town. In the city of Ithaca persons between 5 and 24 comprise 61% of the population. Of this group over 10,500 are between the ages of 20 and 24.

[4] The age groupings used in Table 2-4 match those used in the 1968 General Plan to allow comparisons between the 1960 and 2000 Census of Population data.

Table 2-4
Population by Age, Town of Dryden, Tompkins County & New York State

	Town of Dryden				Tompkins County				New York State	
Age	1960	% of Total Population	2000	% of Total Population	1960	% of Total Population	2000	% of Total Population	2000	% of Total Population
Under 5 years	341	8.6%	857	6.3%	3,025	7.1%	4,285	4.4%	1,239,417	6.5%
5 to 24 years	1,277	32.4%	3,942	29.1%	13,259	31.3%	39,065	40.5%	5,216,143	27.5%
25 to 44 years	1,059	26.8%	4,162	30.8%	12,450	29.4%	25,250	26.2%	5,831622	30.7%
45 to 54 years	422	10.7%	2,159	16.0%	5,122	12.1%	12,028	12.5%	2,552,936	13.5%
55 to 64 years	382	9.7%	1,167	8.6%	4,216	10.0%	6,616	6.9%	1,687,987	8.9%
65 years or older	466	11.8%	1,245	9.2%	4,268	10.1%	9,257	9.6%	2,448,352	12.9%
75 years or older	N/A	N/A	531	3.9%	N/A	N/A	4,620	4.8%	1,172,306	6.2%
Total Population	3,947	100%	13,352	100%	42,340	100%	96,501	100%	18,976,457	100%

Source: U.S. Census Bureau, 1960, 2000 Decennial Census.

Residents of the town, like elsewhere, are living longer. Indicative of this trend is the fact that in 1960 the Census had simply one category for persons 65 years old or older. For he 2000 Census, there were three categories -- 65 to 74 years, 75 to 84 years and 85 or older. In 2000, there were 65 more people who were counted as being 75 years or older than there were persons counted as being 65 years or older in

1960. The number of persons who were age 65 or older in 2000 however dropped as a proportion of total population in both the town and the county between 1960 and 2000.

That residents of the town are living longer may have significant land use implications in the coming decades. The housing needs for retired and elderly residents are different from those of other adults, for instance those between the ages of 25 and 54 years, who may have children. Across the country many older residents are moving out of the traditional single-family home and into smaller owner- or renter-occupied dwellings, specialized senior citizen housing or congregate care facilities that are conveniently located close to retail and health services. Older communities across the country have been the beneficiaries of this trend, with revitalized downtown areas and residential neighborhoods. The villages and hamlets in the town offer or have the potential to offer the types of amenities that would be attractive to older residents.

Current Structure Inventory

The following table lists the current structures in the Town as of 2018. This inventory was obtained from the Tompkins County Assessment Department in December 2018. The "Town of Dryden" column excludes the structures in the villages.

Table 2-4.1
Current Structure Inventory – December 2018

	Village of Dryden	Village of Freeville	Town of Dryden
Single Family	519	127	2327
Two Family	43	51	225
Three Family	9	1	16
Mobile Homes	1	2	385
Rural Residential	0	0	358
Multiple Residential	7	2	96
Seasonal Residential	0	0	6
Residential w/Commercial Use	3	1	5
Apartment	21	2	63
Motel	0	0	1
Mobile Home Park	0	0	14
Restaurant	1	2	2
Diner	2	0	0
Bar	1	0	1
Fast Food	1	0	0
Auto Dealer	1	0	0
Auto Body	2	2	11
Parking Lot	1	0	1
Warehouse	2	0	12
Storage	5	1	18
Fuel Storage	0	0	1
Mini/Wholesale Storage	0	0	8
Lumber Yard	0	0	1
Truck Terminal	0	0	1
Shopping Center	1	0	0
Retail Service	0	0	3
Large Retail	2	0	1
Small Retail	2	0	1
Bank	1	0	2
Office Building	9	3	12
Funeral Home	1	0	0
Attached Row Building	9	0	0
Detached Row Building	6	1	1
Converted Residence	3	2	0
Single Use Small Building	8	2	17
Mini Mart	2	0	3
Manufacturer	3	1	4
Aged Home (Nursing)	0	1	0

Land Use Trends

Although it has grown considerably in population over the past forty years, Dryden is still very much a rural township. Over 90 percent of its land area consists of active or inactive agricultural land or undeveloped meadow, brush, woodlands or wetlands. (Map 2-4) Woodland is by far the largest land use or land cover category, covering some 45 percent of the land area. Actively farmed land is a distant second, covering just over 22 percent of the town's land area.

Woodland is concentrated in the southern portion of the town, and covers much of the Allegheny Plateau hill country. In addition to privately held woodland, there are also approximately 8,700 acres of land in state forest holdings as well as some 1,050 acres in private natural preserves in this portion of the town.

Extensive woodland also covers 40 and 50 percent of the land north and west of Etna and Freeville. Much of this woodland however is relatively young and comprised of old field forest that has grown up since 1950.

Agricultural activities take place throughout the town. Altogether approximately 13,500 acres, or about 23%, of the land in the town are actively farmed. Another 3,500 acres of land are classed as inactive agricultural land. The largest area of contiguous farmland however extends along Fall Creek and Virgil Creek from Freeville eastward toward McLean and Dryden village. It extends southward past Dryden Lake to the Cortland County line, and encompasses about 8,300 acres of land, or about 60% of the town's farmland. Other major tracts of agricultural lands are located northwest and southwest of Varna and atop Mt. Pleasant, while smaller pockets exist in the northwestern corner of the town, in the upper reaches of Six Mile Creek along Irish Settlement and Midline Roads, Ellis Hollow and north of Etna.

Residential development, excluding residential development within the two villages, accounts for about 3,150 acres of land, or about 5.2 percent of the total land area in the town. Approximately 90% of dwellings existing in the year 2000 were single-family homes. According to the 2000 Census approximately 64% of all dwellings in the town were owner-occupied, compared to 51% for Tompkins County as a whole.

Manufactured housing (a.k.a. mobile homes) accounts for a significant proportion of the housing stock. There are an estimated 1,150 manufactured homes in the town, of which approximately 890 are located within 17 mobile home parks.[5]

Single-family homes, whether site-built, modular or single- or double-wide manufactured homes accounted for 94% of all new home construction between 1984 and 1999.[6]

By far the bulk of the town's residential development and population gain since 1960 has occurred outside its traditional centers of population of Dryden and Freeville. The two villages in 1960 had a combined population of 1,734 residents and accounted for 24% of the town's residents. However as the town grew between 1960 and 2000, the villages accounted for only 10% of the overall increase in population. By 2000 their proportion of town population fell from 24% to 17%.

Although census data are not available for the hamlets of Etna and Varna, the evidence indicates that they did not experience any substantial growth between 1960 and 2000. The detailed map of land use produced for the 1968 Dryden General Plan shows roughly the same number of structures in 1966 within the areas occupied by the hamlets today, including the large mobile home parks.
Hence the large majority of new homes built in the town of Dryden since 1960 have been built outside traditional centers of population. Comparison of the 1968 Dryden General Plan indicates that much of the development has occurred in the Ellis Hollow/Snyder Hill area, Yellow Barn/Ferguson Road area and south of Dryden village. (Map 2-5) In addition the number of homes in the area of the town west of Caswell Road and north of Etna Road has grown from approximately 175 in 1968 to approximately 430 today, or an increase of 255 homes.

The primary commercial area in the town of Dryden is located in the village of Dryden and along North Street between the village boundary and TC3. Smaller commercial nodes include the intersection of NYS Rte. 13 and NYS Rte. 366, Main Street in

[5] Town of Dryden. "Forest Home Circle Housing Rehabilitation Project Application for Small Communities Funding: Needs Description Narrative." 2002.

[6] Cornell University. Department of City & Regional Planning. "Future Land Use in the Town of Dryden: Alternatives and Recommendations." Ithaca, NY, 1999. p.73

Map 2-4. Land Use & Land Cover

MAP 2-5

Freeville and Dryden Road in Varna. Altogether there are approximately 200 acres of land in the town developed for commercial retail, services or office use. This amount of land represents just under 5 percent of total land area in the town.

In addition to the nodes discussed above there are also approximately 40 commercial offices or retail establishments scattered elsewhere throughout the town. Most of these are located along the NYS Rte. 366/NYS Rte. 13 corridor between the town of Ithaca and the Cortland County line. In recent years this scattered development of small-scale retail and industrial enterprises has created some land use conflicts.

This has been especially true where such enterprises have located within or near established neighborhoods, or where new residential development has occurred on surrounding lands. The amount of traffic generated by some enterprises, noise, hours of operation (very early morning, very late at night or 24-hours), and light pollution have all been raised by residents, at various times over the years, as impacts on quality of life for surrounding neighbors.

Although some of these enterprises may not have an adverse impact on adjacent residential properties, in some cases a specific business enterprise, in a specific location, may reduce the attractiveness for residential use of an otherwise desirable and appropriate area. This can result in residential development being directed into areas of the town that, from an overall land use planning standpoint, may not be as suitable.

Approximately 275 acres of land within the town are dedicated to industrial uses. Industrial land uses for the purpose of this report include manufacturing, warehousing and distribution facilities and extractive industries such as quarries and gravel mining. As with commercial development, industry is scattered across the town. Exceptions to this are the 50 acres at the NYS Rte13/NYS Rte366 junction where a number of manufacturing and wholesale or warehousing enterprises are located, and off Hanshaw Road south of NYS Rte. 13, where there is an industrial park covering approximately 20 acres.

Of the 275 acres dedicated to industry, approximately 105 are quarry or gravel mining operations. Stone quarrying and stone cutting occurs in Ellis Hollow. Gravel mining take place in the Mott Road/Cady Lane vicinity east of Freeville and south of Fall Creek.

Another major land use within the town is education. The town is home to George Junior Republic, a private residential school, and Tompkins Cortland Community College. The facilities of these two institutions occupy approximately 65 acres and 35 acres respectively[7] acres. In addition the campuses of the Dryden Central School District occupy another 115 acres in Freeville and Dryden villages, and at the Middle- and High School campus off NYS Rte38/Freeville Road.

Cornell University is a major landowner within the town. Although the institution's campus is located outside the town, it does own approximately 7,900 acres of land in the town. Approximately 3,600 acres are utilized for agricultural research and agricultural production. These lands are concentrated primarily around the Animal Science Teaching and Research Center south of Dryden, atop Mt. Pleasant and north and south of Varna. Approximately 1,400 acres of the University lands comprise part of the Cornell Plantations Natural Areas system. The remaining lands are primarily woodland.

Historic Resources

Prior to the arrival of European Americans the area that encompasses the contemporary Town of Dryden straddled the boundary between the Cayuga and Onondaga nations of the Haudenosaunee (Iroquois) Confederacy. The border line ran roughly north and south, approximately following the West Branch of Owego Creek to its headwaters, thence northerly through present day Freeville, thence north along the Owasco Inlet.

Being on the frontier between the two nations, the land was not subject to permanent settlement by either the Cayuga or Onondaga. Rather, it apparently served as hunting grounds. Vestiges of temporary occupation have been found in the vicinity of Irish Settlement Road and the headwaters of Six-Mile Creek, in the northwest corner of the town, and in the vicinity of the NYS Rte. 38/Peruville Road intersection.

European-American settlement in the town has left a rich fabric of historic structures throughout the community. Three structures in the town are listed on the National Register of Historic Places: the Eight Square School on Hanshaw Road, built in 1827, the West Dryden Community Center, built in 1832, and

[7] Both schools own substantially more land than the land occupied by their respective campuses.

the Ellis Hollow Methodist Episcopal Church, near the corner of Ellis Hollow and Ellis Hollow Creek Roads.

The perception of what constitutes "historic" is many times limited to structures or sites associated with the 18th or 19th century. Any structure that is fifty years old or older however can be considered potentially historic.

In addition to age, the criterion for National Register eligibility are: 1) the property is associated with events of broad historical importance; or 2) the property is associated with the life of a historically significant person – locally or nationally; or 3) the property is an outstanding representative of a specific architectural movement, period, distinctive method of construction, or the work of a recognized master; or 4) the property has yielded or is likely to yield information important in pre- or post-European settlement history.

A survey of historic structures in Tompkins County completed by Tompkins County Planning Department in 1977 identified 173 structures in the town that exhibited historical or architectural significance. Among the structures identified in the inventory were over 60 Greek Revival style houses, 34 Italianate style houses and 19 Gothic Revival homes. These styles were popular during the early to mid-1800s.

In addition to houses and other types of buildings, in 1999 students in the Department of City and Regional Planning at Cornell identified four metal truss bridges and over 200 barns in the town that may be of historical significance.

Recreational Resources

Town residents today are served by three small park facilities maintained by either the Town or the villages of Dryden or Freeville, as well as the approximately 2.6 miles long Dryden lake trail bicycle/pedestrian path. (Map2-4) Of the four parks the largest is the Town-maintained park approximately 8 acres in size at the outlet of Dryden Lake. This park offers access to the lake for fishing and boating, playground and picnic facilities and opportunities for informal leisure activities. The Dryden Lake Trail connects it to several residential neighborhoods and Main Street in the village.

In addition to a portion of the Dryden Lake Trail, the village owns the one-acre Montgomery Park, located on Elm Street near the center of the village. Facilities at Montgomery Park include lawn, playground, a basketball court and a bandstand.

The village of Freeville owns a park located off the end of Groton Avenue. The 6-acre site features a playing field for soccer and baseball or softball, as well as a picnic area and playground.

In addition to public park and recreation facilities, the Etna Community Association, Varna Community Association, Ellis Hollow Community Association and Bethel Grove Community Association provide community recreational facilities for residents in those hamlets or neighborhoods.

Altogether Town residents have available approximately 15 acres of developed public park and recreation space. The four community associations maintain another 37 acres of privately controlled park and recreation space, of which 28 acres are located at the Ellis Hollow Community Center on Genung Road.

In addition to the above facilities the Dryden Central School District maintains playgrounds and playfields to support recreation and physical education classes at the elementary schools in Dryden, Freeville and Mclean. The district also has extensive athletic facilities at the middle and high school complex. The elementary, middle and high school athletic and recreational facilities are utilized by the general public and non-school groups.

While they are recognized as a valuable community recreational resource, the availability for non-school use of the Dryden Central School facilities is subordinated to their primary mission of supporting the physical education and athletic programs of the school district. For this reason they are not counted as part of the inventory of recreational facilities available to Town residents.

Standards recommended by the National Recreation and Park Association (NRPA) recommend that communities provide between 6.25 and 10 acres of public park and open space for each 1,000 residents. By these standards the town of Dryden, including the villages of Freeville and Dryden, should have an aggregate of between 84 and 142 acres of park and recreation facilities. Such facilities should include opportunities for active recreation, such as basketball courts (1 per 5,000 persons); tennis courts (1 per 2,000 persons); baseball and softball diamonds (1 per 5,000 persons); and soccer fields (1 per 10,000 persons). In addition opportunities for informal activities such as picnics and reunions, and passive recreational pursuits should be provided.

Including the private community association facilities, town residents have available approximately 52 acres of park and recreation land. This is substantially lower than the national standards. Some adjustment downward of potential need may be warranted by the presence of state forest and other open space preserves and state parks elsewhere in Tompkins County. These areas however have limited access and are not suited for many of the types of activities that are accommodated at typical parks. The state parks too are regional recreational resources and should not be considered substitutes for municipal parks.

As the town continues to grow in population, the town and villages should work together to develop additional public park and recreation facilities to provide additional opportunities for residents. Because they involve significant public expenditures, careful consideration should be given to both locating such facilities to ensure maximum ease of access by residents, and the types of facilities developed.

Transportation

Roads and Highways

The Town of Dryden is served by a network of state, county and town–maintained roads totaling approximately 204 miles. Of these, approximately 31 miles are state highways, approximately 56 are county highways, and the remaining 117 miles are town owned and maintained.(Map 2-6)

With a few exceptions, Town of Dryden roads serve primarily as local roads with relatively low volumes of traffic. In general, they connect rural residences and farms with the state and county systems. As a rural road network the Town of Dryden road system is well maintained and in line with generally accepted standards for rural roads. Approximately 114 of the177 miles of Town maintained roads, or 97%, are oil and stone surface treated or paved roads, an above average number for rural upstate towns.

Although the population has grown by approximately 3,800 persons and some 3,430 dwelling units have been added to its housing stock, since 1968 the miles of road the Town of Dryden owns and maintains has increased by only about three miles.[8] These new roadways have been in the form of residential subdivision streets such as the Bridle Lane/ South Knoll/Catherine Drive; Hunter Lane/Eagleshead Road; and Sunnyslope Road residential developments; and the cluster of residential streets off Yellow Barn Road in the vicinity of NYS Rte. 13.

This modest increase in the number of road miles indicates that a large proportion of new residential development has occurred through development of frontage lots along existing roads and highways.

From a highway maintenance standpoint the Town of Dryden has avoided the large increases in costs associated with residential development that many other growing communities have experienced. This reliance on frontage lots however has exposed many homes to the impacts of increased traffic, especially along more heavily traveled corridors such as NYS Rte 13, NYS Rte 366, NYS Rte 79, Thomas Road and Ellis Hollow Road. As traffic on these roads has increased issues such as safety and increased congestion associated with numerous curb cuts have also surfaced.

The state highways serving the town are NYS Routes 13, 38, 79, 366 and 392. By far the most important of the highways, in terms of traffic volumes and connections is NYS Rte. 13. The highway connects Cortland with Dryden village, Ithaca and Elmira. It roughly bisects the town from northeast to southwest. NYS Rte. 366 is another key transportation link in the town. It begins in Freeville and connects the village and NYS Rte. 38 with major employment and retail centers in Ithaca via Etna and Varna. Together with Fall Creek Road between Freeville and McLean and Cortland County Rte. 105 (a.k.a. McLean Road) the highway also provides an alternative route between Ithaca and Cortland for motorists who wish to avoid congestion on NYS Rte. 13.

NYS Rte. 38 passes through the town from north to south and passes through the villages of Freeville and Dryden. To the north NYS Rte. 38 connects Dryden to Groton, Locke, Moravia and Auburn. To the south it connects Dryden with Owego and NYS Rte 17/I-86.

NYS Rte. 79 passes through the southwestern corner of the town. Its primary function is to connect Ithaca with I-81 at Whitney Point and points south and east. It does however serve as the primary link to Ithaca for residents in that area of the town. According to N.Y. State Department of Transportation data traffic volumes on local state highways varies considerably.

[8] Egner and Niederkorn Associates, Inc. The Dryden General Plan. 1968. Census of Population and Housing, 1970, 2000.

As Table 1 illustrates, NYS Rte. 13 is the busiest highway within the town, with an estimated average volume of 15,200 vehicles per day in the stretch between the NYS Rte. 366/Dryden Rd. and NYS Rte.

Table 2-5
Average Annual Daily Traffic Volumes AADT on State Highways in the Town of Dryden

Highway Route No.	Location	Year of Count	Estimated Traffic Volume
13	between Warren Rd. and Hanshaw Road	2001	14,603
13	between Dryden Road (NYS Rte. 366) & Main St. (NYS Rte. 366)	2002	16,443
13	Main Street, Dryden village	2001	9,996
13	North Street, Dryden village	2001	12,543
13	NYS Rte. 38 to Cortland County line	2002	10,744
38	between Freeville and NYS Rte 34B/Peruville Road	2001	3,315
38	between Main Street, Freeville (NYS Rte. 366) and NYS Rte. 13, Dryden	2001	3,638
38	between intersection of Main Street (NYS Rte. 13) and Harford	2002	3,803
79	west of intersection with Brooktondale Road	2002	1,0072
79	Between Brooktondale Road and Midline Road, Slaterville Springs	1996	4,608
366	between Forest Home Drive, Varna and NYS Rte. 13	2001	7,914
366	Main Street, Freeville	2001	5,903
392	between Main Street, Dryden and Cortland County line	2002	1,176

Source: New York State Department of Transportation, 2002 Traffic Volume Report.

366/Main St. intersections. On North Street in Dryden Village traffic on NYS Rte. 13 peaks again at approximately 13,800 vehicles per day in the vicinity of the NYS Rte. 38 intersection.

Both Dryden village and Varna experience substantial amounts of traffic in their respective cores. Main Street (NYS Rte. 13) carries an estimate average daily volume of 10,500 vehicles. Dryden Road (NYS Rte. 366) through Varna carries an estimate average daily volume of 9,800 vehicles. Main Street (NYS Rte. 366) in Freeville also carries a substantial amount of daily traffic, handling an estimated 5,800 vehicles per day in the vicinity of the NYS Rte. 38 intersection.

Data showing the volume of truck traffic in the Town of Dryden were released in August 2001 as part of a study of freight transportation in Tompkins County by the Ithaca-Tompkins County Transportation Council. Outside the City of Ithaca, NYS Rte. 13 through the town carries the heaviest volume of truck traffic in Tompkins County.(Table 2-6)[9] Despite the fact that it is not a state highway, Fall Creek Road between Freeville and McLean carried the fourth highest amount of truck traffic in the county, outside the city. The average volume of truck traffic on Fall Creek Road was higher than the volume on NYS Rte. 13 southwest of Ithaca.

The study also included a survey of trucks to collect origin and destination information on truck traffic. Results of the survey indicate that only 6% of truck traffic in Tompkins County qualifies as "through" traffic -- truck traffic passing through the county

[9] Sear-Brown. Tompkins County Freight Transportation Study, Technical Memorandum # 3.(draft) August, 2001. Trucks counted were those in FHWA Vehicle Classification 5 (min. 2 axles & 6 tires) or larger.

without stopping. Ninety-four percent of truck traffic is either destined for a location within the county, or has originated within Tompkins County.

Table 2-6
Average Daily Truck Traffic Volume in the Town of Dryden

Route/Road	2-Way Truck Volume
Route 13 NE of Dryden	1,211
Route 38/13 through Village of Dryden	1,129
Route 13/366 Overlap E of NYSEG	1,145
Fall Creek Road NE of Freeville	591
Route 38 S of Dryden	285
Route 38 N of Freeville	276
Route 34B E of Route34	251
Route 392 E of Dryden	207
Ellis Hollow Road	184
Route 366 W of 13/366 Overlap	149

Source: Sear Brown

In addition to having the highest volume of truck traffic outside the city, NYS Rte. 13 also carries a substantially higher percentage of through truck traffic. Some 15% of the truck traffic on that highway is passing through the county without stopping. This is due to the highway's function as a shortcut between I-81 in Cortland and NYS Rte 17/I-86 in Elmira.

The relatively high levels of traffic through the villages and hamlets of the town have both positive and negative implications. Higher levels of traffic make retail activities more sustainable economically. As is typical in American land use and community development patterns, however the respective commercial cores of the villages and hamlets are surrounded by and include residential development. For these areas to remain sustainable as attractive residential areas the impacts of heavier traffic volumes must be mitigated.

Most of the County-level highways in the town can be considered local collector roads that feed local traffic to the state highways. Several of these highways however can be categorized as connector roads wherein a substantial proportion of the daily traffic is through traffic. In addition to Fall Creek Road mentioned above, Ellis Hollow Road and Peruville Road have evolved or are evolving into important connector roads. The resulting increases in traffic due to the changing functions of these roads has in some areas created adverse impacts to existing residential developments along those roads.

Major issues that have been identified regarding roads in the town include:

- increased traffic through Varna, Freeville and Etna, and established residential areas such as along Ellis Hollow Road;
- congestion on NYS Rte. 13;
- traffic exceeding the posted speed limits, especially in the villages and hamlets, and Ellis Hollow.

Public Transit

The town is served by the Tompkins Consolidated Area Transit system, a.k.a. TCAT. Currently there are five TCAT bus routes that serve town residents:

- Route 40. 4 outbound (from Ithaca) and 5 inbound (to Ithaca) trips per day between Ithaca and Groton via Cornell University, Cayuga Heights, Etna and Freeville;
- Route 41. 6 outbound and 4 inbound trips per day between Ithaca and TC3 via Cornell University, Cayuga Heights, Etna and Freeville;
- Route 42. 2 outbound trips and 2 inbound trips per day between Ithaca and McLean via Varna, Etna and Freeville (2 Rte. 43 and 1 Rte. 40 outbound trips and 1 Rte. 40 inbound trip extend to McLean as well);
- Route 43. 7 outbound trips and 7 inbound trips per day between Ithaca and TC3 via Cornell University, Varna and Dryden village;
- Route 52. 9 inbound trips and 9 outbound trips per day between Ithaca and Newark Valley via NYS Rte. 79.

Over the past two decades Tompkins County has aggressively developed what is now one of the most extensive rural transit systems in New York. As a result the level of public transit service in the town is well beyond that typically found in a rural municipality. Nonetheless a key factor in the continued existence of high levels of service is increased ridership. For town residents to be able to depend on the option of using public transit, future growth and development patterns that make public transit an attractive alternative must be encouraged.

Ithaca-Tompkins Regional Airport

The Ithaca-Tompkins Regional Airport is located in the Town of Lansing just west of the town line. It serves both commercial and general aviation aircraft. Facilities include a 6,601-foot long paved runway, a 2,000-foot turf runway, air passenger terminal and hangar facilities. The airport is home to Taughannock Aviation, a charter aircraft and aircraft maintenance and repair firm, as well as to the East Hill Flying Club.

In 2001 the airport handled slightly more than 53,800 take-off and landings, of which just under 40,000 were by general aviation aircraft, approximately 13,600 were by commercial aircraft, and the remainder military aircraft. More than 176,800 passengers arrived or departed from the airport in 2001.

Although none of its facilities are located in the Town of Dryden, the airport does influence land use in the western portion of the town. The flight approach to the main runway extends over three miles in a southeasterly direction to the top of Mt. Pleasant. The areas below this approach in the vicinity of the runway are subject to certain restrictions, such as height and a prohibition on places of public assembly. Moreover aircraft noise reduces the desirability of the area for residential development.

Public and Semi-Public Infrastructure

Water and Sewer Service

There is a limited amount of municipal water and sewer infrastructure in the town. (Map 2-6) In the western part of the town there are five water benefit districts that serve an area encompassing Varna and Dryden Road eastward to NYS Rte. 13; northward to include Freese Road and the southern portion of Sapsucker Woods Road; and along Turkey Hill Road south to Stevenson Road. Municipal water service also extends eastward along NYS Rte. 13 to serve NYSEG and northward along the highway to serve the area along Hanshaw Road south of the highway.

Town sewer districts also provide municipal sewer service to homes along Sapsucker Woods Road, Varna hamlet and Dryden Road east to NYS Rte. 13, portions of Mt. Pleasant Road and Turkey Hill Road. Municipal sewer service is also available along the sections of NYS Rte. 13 and Hanshaw Road served by public water.

Altogether the above water and sewer service areas provide municipal water and sewer to approximately 250 properties.

There is also municipal water available to approximately 45 properties along Snyder Hill Road adjacent to the town of Ithaca. Approximately 20 properties on the south side of the road, in the Peregrine Hollow development, have access to municipal sewer via the town of Ithaca system.

The Village of Dryden provides municipal water to village residents and to a limited number of businesses on North Street and Tompkins Cortland Community College. The village also operates a sanitary sewer system and wastewater treatment plant. It serves village residents, and a Town sewer district that encompasses land along NYS Rte 38 as far as the Dryden High School, North Street to just beyond Mott Road, and the Tompkins Cortland Community College campus. Altogether there are just over 40 properties served by this district.

The Village of Freeville maintains a municipal sewer system and wastewater treatment plant that serves village residents, and the George Junior Republic campus east of the village.

In New York a water supply or sewage treatment system that serves five or more dwellings is classed as

a "public" system, regardless of ownership. In addition to the municipally-owned systems, in the Town there are 12 privately owned and operated public water supply systems, and 9 sanitary sewer systems. These systems serve a number of mobile home parks and apartment complexes in the Town.

Two exceptions are the water supply and distribution system for George Junior Republic, and the approximately 80 homes on Yellow Barn Road, Foothill Road, Spring Run Road, Corn Crib Road, Top Forty Road and Thresher Place that are served by the privately owned and operated Yellow Barn Water System.

Table 2-7
Telecommunications Towers in the Town of Dryden

Location	Height	Owner
+/- 2,000 ft. north of Harford Rd, +/- 2,000 ft. west of Schutt Rd.	+/- 243 ft.	T&K Communications Systems, Inc.
+/- 700 ft. east of Beam Hill Rd.	+/- 60 ft.	Town of Dryden
1850 Dryden Road	+/- 80 ft.	New York State Police
south side Mt Pleasant Rd +/- 4,500 east of Baker Hill Rd.	+/- 140 ft.	Tompkins County
+/- 3,000 ft, north of Mt. Pleasant Rd., +/- 2,500 ft. west of Mineah Rd.	350 + ft.	Eagle Broadcasting
west side Whitted Rd. +/- 1,000 ft. south of Snyder Hill Rd.	+/- 100 ft.	Time Warner
+/- 1,250 ft. north of Simms Rd., +/- 2,700 ft. east of NYS Rte. 13	+/- 195 ft.	Southwestern Bell Mobile Systems, In.
+/- 700 ft. east of Bradshaw Rd., +/- 5,500 ft. north of NYS Rte. 392	+/- 190 ft.	Ithaca Wireless Cellular Limited Partnership
west side of Walker Rd. +/- 800 ft. south of Bradshaw Rd.	+/- 180 ft.	Tompkins County

Telecommunications

Today within the limits of the town there are a total of eight telecommunications towers. These structures transmit and receive radio, television, cellular, paging, personal telecommunications services or microwave telecommunications. They range in height from approximately 60 feet to over 350 feet. (Map 2-6) These towers are critical to modern communications. Nonetheless they can have substantial impacts on the aesthetic quality of the community.

The Town of Dryden since 1998 has had in place a Telecommunications Tower Siting Law adopted in May of that year (Local Law #2 of 1998) Although the Town cannot prohibit such towers in any zoning district, it can regulate to a degree location and also height and setback requirements for such facilities. It can also require prospective applicants to demonstrate that reasonable efforts have been made to co-locate their proposed transmission/receiving equipment on an existing tower.

Map 2-6. Public & Semi-Public Infrastructure

Public Safety

Fire

Several volunteer fire departments provide fire protection for town residents and businesses. Three of the companies, Neptune Hose Company in Dryden, Freeville Volunteer Fire Department, Etna Volunteer Company and the Varna Fire Company are located within the town. In addition volunteer companies in South Lansing, McLean and Brooktondale provide fire protection to small portions on the periphery of the town. The volunteer fire companies are private not-for-profit corporations that maintain their own equipment and facilities, and provide services under contract to the Town and the Village of Dryden and Village of Freeville.

Table 2-8
Summary of Fire Department Responses, Year 2002

Response Type	Dryden	Etna	Freeville	McLean	Varna
Fire	37	14	22	21	12
Rescue	90	11	12	19	30
Emergency Medical Call	898	125	136	102	118
Hazardous Conditions	19	7	11	12	12
Gas or Smoke Odor or Condition	5	3	1	1	3
Service Call	81	9	11	13	13
Other	70	4	56	3	16
Total	1,200	173	249	171	204

Source: Tompkins County Fire/Disaster & EMS Coordinator

The local volunteer fire companies are equipped with up-to-date equipment housed in modern facilities. They are dispatched through a centralized 911 dispatch system operated by Tompkins County. A network of mutual aid agreements provides for back-up support and when needed specialized equipment from other fire departments should an incident require resources above and beyond those of an individual department.

In addition to providing fire and rescue services, Neptune Hose Company also provides emergency medical services to residents throughout the town of Dryden, as well as to the town of Harford and portions of the town of Virgil, through its not-for-profit Dryden Ambulance, Inc. subsidiary. Altogether the ambulance service responds to over 900 calls per year from around its roughly 200 square mile service area.

A growing concern faced by the local volunteer fire departments is the decreasing numbers of volunteers available to respond to emergencies. One factor behind this trend that has been identified is the increase in the number of residents who commute to employment locations outside the community, and thus are no longer available to respond to calls while at work. A second factor is the dramatic change in the nature of fire fighting and emergency medical services that has occurred over the past two decades. More sophisticated response techniques, and recognition of the dangers of hazardous materials that are many times associated with fires and accidents, has substantially increased the amount of training necessary to become and remain a volunteer firefighter, and hence the time commitment required of volunteer members. This has decreased the pool of available volunteers.

Police

Police protection for town residents is provided by three law enforcement agencies. The New York State Police have a barracks facility on NYS Rte.13 approximately four miles west of Dryden village, and provide public safety services throughout the town. The Tompkins County Sheriff Department also patrols throughout the town.

In addition to state and county-level law enforcement agencies, the Village of Dryden has a professional police force. This agency provides public safety services to village residents. In addition it provides police services to the Village of Freeville under contract.

Schools

Town of Dryden children are served primarily by the Dryden Central School District and the Ithaca City School District. A small number of town children who live north and west of Freevile, along NYS Rte. 38 and Peruville Road live within and are served by the Groton Central School District.

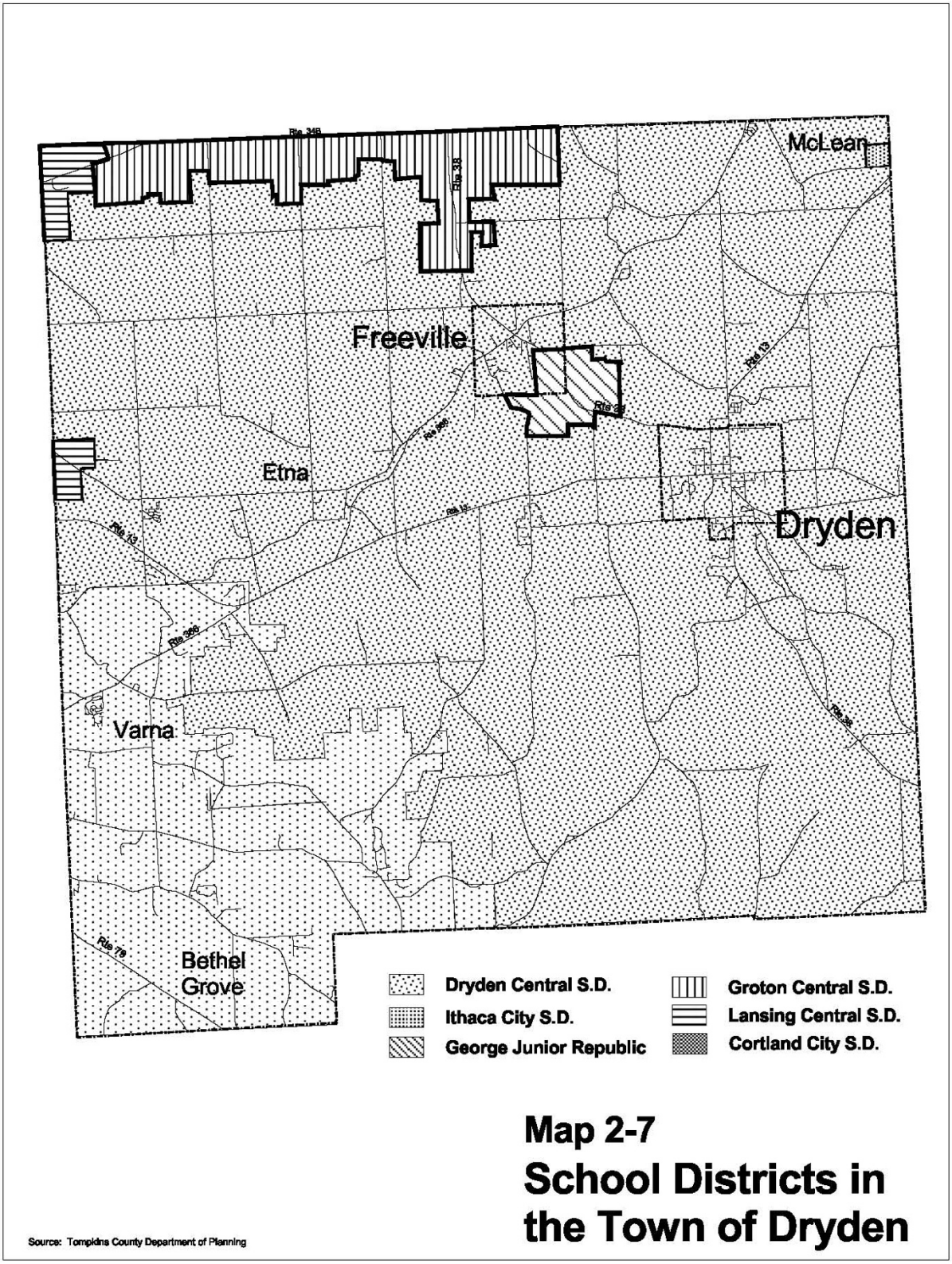
The Ithaca City School District encompasses an area in the southwestern corner of the town south of Hanshaw Road and along NYS Rte.366 west of the NYS Rte. 13/NYS Rte.366 intersection, the Ellis Hollow and Snyder Hill areas, and the NYS Rte.79/German Cross Road area. The Dryden Central School District serves the remaining three-quarters of the town, plus portions of the towns of Groton, Cortlandville, Virgil, Harford and Caroline.

Within the Dryden School District, elementary school age children attend school facilities located in Dryden, Freeville and McLean. Middle- and high school students are taught at the school district's main campus on NYS Rte.38 northwest of the village of Dryden.

In addition to the public schools, the private George Junior Republic Union Free School District serves the educational needs of its resident population on a 650-acre campus in and east of Freeville. The George Junior Republic is a private, not for profit residential treatment center licensed by the New York State Office of Children and Family Services to provide therapeutic and rehabilitative services to emotionally disturbed adolescents. It is recognized by the State Education Department as a junior/senior high school authorized to issue credits/ units of study to students who attend.

The George Junior Republic was established by William R. George in 1895 on family property in Freeville. It's distinctive self-governance structure, economic system and work program were imitated by schools in Connecticut, Pennsylvania and California.

Approximately 150 adolescent boys are currently enrolled at George Junior Republic. The youth are referred by probation or social services departments, school districts and the Office of Children and Family Services.



Map 2-7
School Districts in the Town of Dryden

Source: Tompkins County Department of Planning

Residents' Surveys

In 1990 and again in 1999 residents of the town were offered the opportunity to participate in a survey to solicit their input on various matters and issues they face as town residents. Although the questions asked might be different the two surveys are similar in that they focus on planning and quality of life issues.

Some 4,849 surveys were mailed to residents in 1990 and 1,164 completed surveys were returned, for a response rate of 24%. In 1999 some 6,000 surveys were mailed to residents and 1853 were completed and returned, for a response rate of 31%. As with all mailed surveys, caution must be taken in the interpretation of the results. Respondents to mailed surveys do not generally form a representative sample of the population being surveyed. Many times recipients of such surveys do not respond because they lack any strong opinions on the issues they are being queried about, or they question the validity of the survey itself and the motives behind its distribution. Conversely individuals or groups of residents with particularly strong opinions regarding specific town policies or initiatives may respond more readily and in higher percentages to a survey.

In both surveys the response rate by persons who rented their dwelling was substantially lower than their proportion of the total population. According to the Census in 1990 some 30% of housing units in the town were rented, while only 15% of survey respondents identified themselves as renters. According to the 2000 Census, some 32% of housing units in the town are rented, while again only 15% of survey respondents identified themselves as renters.

Both in 1990 and 1999 survey respondents were predominantly homeowners who had lived in the town of Dryden for more than 6years. In 1990 about 65% of respondents said they had lived in the town for six or more years, while in 1999 about 75% responded in the same manner.

Although the two surveys posed the question differently, just over half the respondents in both cases indicated that they work outside the town of Dryden. In 1990 5% of respondents identified themselves as "self-employed," while in 1999 6% worked in a "home business."

Both surveys posed several similar questions designed to gauge respondents' opinions on issues believed to be important to the future of the town. The results of both surveys show support for improved public transit, more recreation facilities and preservation of the town's open space resources.

In 1990 68% of respondents indicated that improved public transit was important or very important to them. In 1999 the sentiment was slightly less widespread, but not significantly so. Some 62% of respondents indicated that improve public transit was important or very important to them.

Support for improved access to public recreation facilities was strong in both surveys. Facilities such as playgrounds, hiking/walking/jogging trails, bikeways, ballfields, tennis courts, swimming or fishing access points were considered to be important or very important by 63% of 1999 survey respondents. Provision of "more recreation areas" was considered important by 65% of respondents in 1990.

Support for open space preservation grew considerably between the two surveys. In 1990 a majority of respondents – 59% -- believed that open space preservation was important or very important to the future of the town. In the 1999 survey 86% of the respondents indicated that open space preservation was important or very important.

The 1999 survey appears to reflect another shift in opinion on the questions of retail development and industrial development in the town. In 1990 only 32% of survey respondents believed that more retail development was important or very important. In 1999 however 61% of respondents believed that the town needs more retail businesses, specifically grocery, restaurants and discount retail establishments. Only 36% of respondents to the 1990 survey believed that additional industrial development was important or very important, while 53% of respondents in 1999 believed that the town needed more industrial development.

The survey conducted in 1999 focused a number of questions on growth and development and residents' perceptions of the importance of open space protection and how it might be accomplished.

Respondents appear to be comfortable with current growth trends and the present expectation that the town could add approximately 1,500 new residents over the next two decades. At an average household size of 2.43 persons (2000 Census), this would equate to approximately 620 new dwelling being built. Seventy-three percent of respondents supported accommodating the current trend on population growth; 7% of respondents favored accelerated growth; and 20% favored a slower growth rate.

Although no figures are available in the survey report, from the map and bar chart depiction it appears that slower growth sentiment is proportionately higher in the Ellis Hollow/Ringwood Road area, Bethel Grove, and the Dryden Lake/Beam Hill area. In these areas 30% to 35% of respondents appear to have supported a slower growth scenario.

In response to the question regarding where future growth should occur, the majority of responders – 53% -- prefer that it occur in clustered locations or within the existing villages and hamlets. Some 30% of responders however believe that growth and development should be encouraged anywhere in the town and 8% recommended that it be encouraged in rural areas.

Open space protection appears to be a priority with survey respondents. Seventy-two percent believe that the 8%-9% of the town's land area that has some sort of permanent protection (such as state forest lands, privately held nature preserves) is not an adequate amount, and that more land should be permanently protected. The most desirable methods for protecting additional open space resources chosen by respondents were through acquisition of conservation easements (24% of respondents) or Town acquisition of land (22%).
Over 60% of the survey respondents believe the streams and stream corridors require the most protection. Some 50% indicated that wetlands, public trail land and the Dryden Lake area warrant protection as open space resources. Some 1,214 or 59% indicated that they would be supportive of the Town utilizing property tax revenues to fund open space protection efforts.

The desires to accommodate anticipated growth and protect the opens space assets identified by survey respondents as being important to protect are not necessarily contradictory. Permanent protection of certain open space assets can also be achieved with tools other than easement acquisition of public ownership. Channeling much of the town's future new development into the villages and hamlets, as recommended by a majority of respondents, could protect large amounts of open space. Zoning densities appropriate for the more environmentally sensitive areas of the town, along with subdivision regulations that encourage the use of cluster subdivision designs can also be effective tools. In other places creative use of cluster subdivision design has proven effective at permanently preserving important open space assets while providing needed housing and protecting private sector investment.

In conclusion, the two residents' surveys indicate an acceptance on the part of respondents of continued growth and development in the coming decades. At the same time however there appears to be a strong desire on the part of respondents that as the town does grow, it does so in a manner that protects its rural character, the viability of its villages and hamlets and critical open space resources. Use of existing infrastructure such as water and sewer systems should be maximized, and extensions of such services have little support among respondents. Both surveys show support for improved public transit, more recreation facilities and preservation of the town's historic resources.

3. Goals & Objectives

Introduction

The basic principles of this comprehensive plan are outlined in the following goals and objectives. In comprehensive planning practice, goals are generally defined as statements of a desired outcome, based on values held by a community at large, and which may not necessarily be attainable. Progress toward any particular goal is also not generally quantifiable. Objectives in contrast are intended to outline specific desirous outcomes that are tangible, and for which progress toward achieving can generally be measured in some manner.

The overall goal of this comprehensive plan is to promote the health, safety and general welfare of the people of the town of Dryden. The avenue by which this goal would be pursued is through fostering a pattern of growth and development that would achieve the following objectives:

- protect the quality of life of residents, and provide opportunities for advancement in the quality of life for residents;
- protect the unique natural assets of the town;
- make optimum use of existing and future investments in public services and infrastructure;
- minimize the cost of government to residents and businesses;
- encourage intermunicipal cooperation and communication in land use policies and the provision of public services.
- protect current and future residents' wellbeing by increasing climate change resilience throughout our community through strengthening infrastructure systems, increasing the use of renewable energy, reducing greenhouse gas emissions, and reducing energy use through building and renovating structures to be highly energy efficient.

To further the above overall goal, the following goals and objectives that address specific areas of land use, quality of life for town residents, and the provision of municipal services are set forth.

1. Generally

Goal

Preserve the rural and small town character of the Town of Dryden, and the quality of life its residents enjoy, as the town continues to grow in the coming decades.

Objectives

Prepare a new Comprehensive Plan for the Town of Dryden that recommends, among other actions:

7. Efforts to channel new residential, commercial, industrial and other types of development into existing villages and hamlets and their immediate environs, or into and around existing nodes of development outside the villages and hamlets.
8. Efforts to ensure to the extent possible the long-term viability of the town's agricultural community.
9. Efforts to protect to the extent possible the important natural open space and scenic resources of the town, including woodlands, stream corridors, wetlands and steep slope areas.
10. Efforts to protect and enhance the livability of existing residential neighborhoods.
11. Efforts to ensure a safe and diversified transportation system to serve the needs of all town residents.
12. Efforts to provide for adequate and efficient provision of necessary public facilities and services.
13. Efforts to reduce greenhouse gas emissions and adapt to a changing climate.

2. Agriculture

Dryden has long been supportive of local agriculture, as evidenced by the Town's Right to Farm Law, and zoning that has permitted agriculture in all districts. This comprehensive plan will build on existing strengths by taking the steps outlined below.

Goal

Promote the long-term economic viability of the agricultural community in the town, and preserve agricultural land resources, without unduly infringing on property rights.

Objectives

Adopt land use regulations which grant agriculture primacy as a land use in areas zoned for agriculture, and which recognize the nature of contemporary

agricultural enterprises in those areas of the town designated for agricultural use in this comprehensive plan. Agriculture and related enterprises will continue to be permitted in other areas throughout the town, but will have special rights in the areas where primacy is granted.

Direct inappropriate intensity levels of residential development away from productive agricultural areas of the town to minimize loss of higher quality agricultural lands, the unnecessary fragmentation of agricultural land resources, and the potential for conflicts between farm and non-farm residents. To the extent possible, use non-regulatory methods to achieve this objective.

Encourage investments in public infrastructure, such as extensions of public water or sewer service, if, when, and where such services become necessary for agriculture related operations.

Permit commercial retail and service enterprises that serve the needs of the agricultural community.

Promote the continued stewardship of the land through agricultural practices that minimize soil erosion, surface water runoff and water pollution.

Maintain a Town Agricultural Advisory Committee that will review and make recommendations regarding proposals for local ordinances that may affect agricultural practices and lands.

Promote the use of existing programs to enhance the viability of agriculture and to protect farmland, as provided through the NYS Department of Agriculture and Markets, the Tompkins County Soil and Water Conservation District, and other governmental and private non-profit organizations.

3. Commercial Development

Goal

Provide for a variety of options for town residents to purchase goods and services at locations convenient to home and work while preserving the rural and small-town character of the town.

Objectives

Channel future commercial development into or in the vicinity of existing downtown areas and other nodes of retail and services activities.

Recognize Ithaca, Cortland and areas adjoining those cities as the centers of regional commercial activity.

Allocate land resources for commercial development on the basis of anticipated future town population and attendant demand for retail and services.

Encourage new commercial development in villages and hamlets through re-use of existing commercial structures or through new in-fill development in their traditional commercial centers.

Minimize the adverse impacts of commercial development on adjacent residential areas.

Develop design standards to ensure safe, sustainable, and attractive commercial development site designs, including standards for traffic circulation, parking, pedestrian facilities, buffer areas, landscaping, site coverage, stormwater management, signage and outdoor lighting design.

Review Town land development regulations to identify opportunities for revisions that could assist in mitigating some impacts of development by minimizing the creation of impervious surfaces through use of (for example) smaller parking lots, shared driveways and reduced building setbacks.

4. Economic Development

Goal

Provide for a wide variety of employment options for town residents.

Objectives

Allow for continued development of light industrial, warehousing, research and development and service enterprises within and adjacent to existing industrial and commercial areas of the town.

Develop design standards to ensure attractive industrial and office park site designs, including standards for traffic circulation, parking, pedestrian facilities, buffer areas, landscaping, site coverage, stormwater management, signage and outdoor lighting design.

Ensure that areas designated for future light industrial and office park developments are outside environmentally sensitive areas such as mature woodland, stream corridors, or wetland areas.

Ensure that adequate provisions for public water and public sewer are available in areas designated for industrial development.

Facilitate the development of state-of-the-art telecommunications systems within the town to ensure capacities and levels of service adequate to meet the needs of residents and businesses.

Enact design and safety guidelines to ensure that the development of future telecommunications facilities be consistent with protection of community character and the public health, safety and welfare

5. Housing and Residential Development

Goal

Provide for a variety of energy efficient, affordable, high-quality housing options for all town residents

Objectives

Protect the quality of life in existing residential communities from the adverse impacts of incompatible land uses and increased traffic.

Provide for the construction and placement of different types and styles of housing, and different densities, to serve the needs of different populations in the town.

Channel residential development toward areas where public infrastructure such as water and sewer service, park facilities and public transit exist or are planned in future years.

Encourage where appropriate new residential development within existing villages and hamlets.

Ensure that allowed residential development densities take into account environmental constraints such as slope, soils, vegetation and water resources.

Encourage where appropriate the use of cluster subdivision design approaches for new residential development to protect open space and other natural or scenic resources.

Review Town land development regulations to identify opportunities for revisions that could assist in mitigating some impacts of development by minimizing the creation of impervious surfaces through use of (for example) narrower roads, shared driveways and reduced building setbacks

Discourage creation of new residential lots with access available only off major highways and collector roads.

Discourage development that leads to excessive noise or light pollution in residential areas of the town .

Minimize conflicts between established and future residential areas and established and future commercial or industrial areas.

Maintain an active search for funding to encourage existing homeowners and new developers to convert to renewable energy sources and improve building energy use to reduce energy consumption and greenhouse gas emissions.

6. Open Space and Environmental Protection

Goal

Preserve the natural open space resources, environmentally sensitive areas and unique flora and fauna of the town as it develops in the coming decade.

Objectives

Identify and map the significant environmental and open space resources of the town and channel future incompatible development away from such areas.

Encourage the use of creative development concepts such as cluster subdivision to protect sensitive environmental resources on a site.

Encourage development that promotes conservation of energy and water resources, minimizes greenhouse gas emissions, and minimizes where possible adverse impacts such as loss of agricultural and forest lands, soil erosion and sedimentation, and stormwater run-off.

Support private land trusts and similar organizations in their efforts to protect significant open space and environmental resources within the town.

Protect stream corridors, wetlands and other water bodies from inappropriate levels of development.

Protect the functional capabilities of floodplains by channeling development away from such areas.

Establish standards for stormwater runoff from new development to decrease pollution from streets and parking lots.

Identify and implement measures to protect key viewsheds within the town.

7. Parks and Recreation

Goal

Develop a system of park and recreational facilities designed to serve the variety of recreational needs of town residents in a cost effective manner, and located as to provide easy access from major town population centers.

Objectives

Coordinate the development of town parks with adjacent municipalities, schools, town community associations, and local civic clubs to ensure optimum use of public and private investment in park and recreation facilities close to where residents live.

Identify and acquire locations close to existing and future residential neighborhoods that are suitable in terms of size and topography for park and recreation facilities.

Use existing authority under State statutes to acquire wherever appropriate park land through dedication by the developer, or cash payment in lieu of land.

Ensure that town parks provide adequate recreational facilities to serve the variety of athletics and other recreational activities town residents engage in.

Incorporate natural features such as woodland, meadows and stream corridors into town parks for the purpose of preserving such natural assets and ensuring their continued enjoyment by the public.

Create a system of bicycle/pedestrian paths that will integrate existing and future park and recreation facilities with residential and commercial areas.

Ensure, to the extent practicable, access to town parks by persons with varying mobility capabilities through compliance with the requirements of the Americans with Disabilities Act of 1990 and its successors.

8. Public and Semi-Public Facilities

Goals

Develop and maintain public facilities such as water, sewer and road infrastructure in an efficient and cost effective manner.

Improve and enhance the electronic infrastructure within the town.

Objectives

Maximize the use of existing public water and sewer infrastructure by channeling future growth and development toward areas of the town where public facilities and services are available or easily accessible.

Allow the extension of public water and sewer services into areas not designated for more intensive development where required for the protection of public health and safety.

Evaluate future expansions of public water and sewer infrastructure based on cost and the need to protect environmental resources.

Utilize future expansions of public water and sewer infrastructure to encourage development in areas identified as being best suited for growth.

Ensure a continuous and systematic program of monitoring, maintenance and upgrading of existing water and sewer facilities to maximize their efficiency and life span.

Continue to work cooperatively with other municipalities to minimize the cost of public water and sewer services and to maximize the efficiency of such systems.

Wherever appropriate, promote the efficient use of frontage on existing and future roads in the town in order to minimize the amount of such infrastructure and associated maintenance costs.

Facilitate the development of state-of-the-art telecommunications systems within the town to ensure capacities and levels of service adequate to meet the needs of residents and businesses.

9. Public Safety

Goal

Ensure the provision of a comprehensive system of fire, police and emergency services and communications to protect life and property throughout the town.

Objectives

Channel future growth and development toward areas of the town where fire, police and emergency services are available or easily accessible.

Promote the continued recruitment and retention of volunteers by local volunteer fire and emergency services organizations.

Continue to work cooperatively with Tompkins County and other municipalities to enhance the provision of fire police and emergency services and to minimize the cost of such services to the public.

Implement the recommendations of the Hazard Mitigation Plan adopted in 1999, including proposed infrastructure improvements, awareness education, and training and equipment for local public safety and public works staff.

Work cooperatively with police and other emergency services organizations to ensure an effective program of public education and awareness of hazards to life and property, and appropriate action in case of public emergency

10. Transportation

Goal

Provide for a safe, efficient and diversified transportation system to serve the needs of all town residents.

Objectives

Ensure land use and growth management policies that promote efficient use of existing streets, roads and highways.

Provide for a network of streets, roads and highways that have adequate capacity to accommodate traffic without congestion.

Wherever feasible channel excessive vehicular traffic around established neighborhoods.

Work with the State and Tompkins County to initiate steps that will channel truck traffic away from residential areas of the town and off minor highways within the town.

Develop and implement tools to control access to and from major highways within the town to limit congestion along those routes and limit the need to upgrade such facilities in the future.

Wherever feasible provide for a network of bicycle and pedestrian paths that interconnect residential neighborhoods, commercial centers, schools, parks and places of employment.

Provide for residential streets that are designed, constructed and maintained in a manner that protects the livability of neighborhoods, and ensures the safety of local residents.

Identify and provide for a network of existing and future collector roads, and standards for development along such roads to ensure the safety and efficiency of said roads, and the protection of adjacent development from the impacts of anticipated traffic.

Wherever feasible encourage the increased use of *existing or new* public transit services as an alternative to individual automobiles.

Work with the Tompkins Consolidated Area Transit to expand public transit routes within the town and to develop a network of bus stops, park and ride facilities and other facilities that will attract increased use of public transit.

Where population densities warrant, develop a system of sidewalks and off-street walkways to serve existing and future residential neighborhoods.

4. Plan Synthesis

Introduction

The overall goal of this plan is to balance a community-wide desire for preserving the existing character of the town along with ~~and~~ its open space resources, and address the challenge of a rapidly changing climate with the accommodation of anticipated growth and development, including residential, commercial and industrial development. Striking such a balance is attainable. However to achieve the balance a number of issues must be addressed in the plan.

Energy, Emissions, and Efficiency

In the years since the adoption of the Plan, the issues of climate change and its mitigation have become crucial to the promoting the health, safety, and welfare of the community. Cornell University in collaboration with the Northeast Region Climate Center have released data documenting the dangers and negative, local effects of climate change[10]. In March of 2014, an analysis of this Comprehensive Plan commissioned by the Town Board found that the weakest element in this Plan was in an area the authors labeled "Climate and Energy[11]."

In 2016, the Tompkins County Legislature adopted a goal of reducing community greenhouse gas emissions by 80% from 2008 levels by 2050 and described methods for emissions calculations. In the same year, the Town Board in stated, "Climate change poses a real and increasing threat to our local and global environments and is primarily due to the burning of fossil fuels"; "our response provides an unprecedented opportunity to save money, build a livable, energy independent and secure community..."; and "we believe the scale of greenhouse gas (GHG) emissions reductions required ... will require sustained and substantial efforts[12]."

Since 2008, a rejuvenated economy and the attractiveness of the Tompkins County as a place to live—especially in the areas near Cornell and the City of Ithaca have created unprecedented pressure for residential development with its attendant demands for facilities and services.

All these factors necessitate amending this Plan to create a basis for updating our laws, regulations, and practices to address these new challenges. At a minimum areas to be addressed in these revisions should include energy use, emissions, and efficiency of structures.

Population

Although the population growth of the town between 1990 and 2000 was relatively small at 281 persons, the average growth per decade since 1960 has been about 1,540 persons. While the town's population has grown, however, the average size of households has shrunk. According to the Decennial Census of Population and Housing, the average size of a household in the Town of Dryden was 2.43 persons in 2000, a decrease in size from 2.47 in 1990. This trend in the declining size of households dates from the 1960s, when the average household size in the town was 3.39 persons.

This decline in the average size of household has implications for land use policies of the future. Simplistically put, in 2000 it took about 1,575 more new dwellings to accommodate the town's residents, at an average household size of 2.43 persons per household, than it would have had average household size remained at the 1960 level of 3.39 persons per household. Between 1990 and 2000, the town actually experienced a growth in the total number of new

[10] CLIMATE CHANGE ON THE COUNTY LEVEL, Cornell Small Farms Program, October 31, 2018, https://smallfarms.cornell.edu/2018/10/31/climate-change-on-the-county-level/

[11] Town of Dryden – Comprehensive plan Sustainability Assessment, Findings from Matrix Analysis – March 24, 2014. Report is on file with the Dryden Town Clerk.

[12] Town Board Resolution #137 (2106) Adopt Climate Smart Communities Pledge, Town Board Meeting Minutes 2016-08-18, Pages 7-8.

dwellings 419, which equates to 50% more new dwellings than new persons.

No data exists on how much additional land has been needed to accommodate the additional dwellings needed due to reduced household size. While it's known that in 2001 some 3,150 acres of land, or about 5.2 percent of the total land area in the town (outside the villages) was devoted to residential development, no data on the amount of land devoted to residential development in the town in 1960 exists. According to building permit data, however, since 1984 single-family homes have accounted for 94% of all new dwellings built outside the villages. Hence it is safe to assume that, on a per capita basis, substantially more land is being consumed for residential development today than has been in previous decades.

The net gain in the number of dwellings in the Town of Dryden between 1960 and 2000 was 3,615, or an average of 904 more dwellings per decade.

Current zoning densities and regulations governing the provision of on-lot sewerage systems that allow a maximum net number[13] of between 1 and approximately 1.3 dwellings per acre for single-family homes. By applying the average per decade growth rate of 904 dwellings per decade to these densities, the Town of Dryden can expect that somewhere between 1,390 and 1,810 acres will be developed over the next two decades. This is if the traditional reliance on the single-family detached home as the housing of choice for town residents continues. This would represent an increase of between 44 and 57 percent in the amount of land within the town dedicated to residential development.

The community can accommodate the level of population growth that it has experienced over the past four decades, and at the same time further the stated goals to maintain its rural character, protect its agricultural and other open space resources, as well as ensure the efficient delivery of public services. Rather than accepting the status quo, represented by the above projected need for new land for residential development, the Town of Dryden should strive to reduce this projected need by 50 percent, or to between 695 and 905 acres of new lands. To meet this goal will require the development of zoning tools and infrastructure that allows for a higher number of dwellings per acre than has been traditionally possible.

A population trend that is also likely to influence patterns of residential development is the aging of the town's population as average life span increases. This is likely to translate into demand for a broader selection of housing options, smaller dwelling units and alternatives to the single-family detached homes. This demand for housing can be met in a number of ways: construction of smaller owner-occupied housing, including single-family and attached housing (townhomes, condominiums); rental housing; and elder cottage (ECHO) housing.

Another type of housing for which demand may increase is the "life care" facility. Life care facilities may offer features or amenities such as individual dwellings or cottages, congregate apartments where residents may share common meals, nursing home facilities, laundry services, common recreational facilities, and other personal services for residents. Kendal at Ithaca and the Longview facility operated by Ithacare are two such facilities that have been built in Tompkins County in the past decade. The Town of Dryden in its planning for the future should ensure that its zoning regulations accommodate such facilities, and that necessary public infrastructure, including public safety resources, are available. In taking such a step it will help ensure that a variety of housing options will be available to residents of all ages, and reduce demand for land resources for residential purposes.

Land Use

Critical issues in land use planning for the future of the Town of Dryden include:

- the extent and locations of new residential commercial and industrial development;
- balancing such development with the expressed desires of residents to preserve the rural and small-town character of the community;
- preserving and enhancing the villages and hamlets within the town;
- protecting its agricultural and other open space resources;
- provide for appropriate levels of residential, commercial and economic development.

Hand in hand with these desires is the demand that the Town of Dryden provide municipal services at the lowest possible cost. Residents through surveys in particular have expressed concerns regarding the potential high cost of providing public water and

[13] The net number of dwellings factors in the amount of land typically needed for streets and other infrastructure.

sewerage services. The ability of the Town to provide such services is also governed by limits on debt and other parameters for financing infrastructure improvements set by the Office of State Comptroller in Albany. The provision of these services at the same time is critical to the Town's ability to encourage denser levels of development in its efforts to avoid sprawl.

Residential growth over past 15 years has been occurring in areas that are less than ideal in light of the goals and objectives outlined in Chapter 3. (Map 2-5) This growth has also been contrary to perceived desire of residents to preserve rural character and open space resources.

Commercial development, too, has been occurring in scattered fashion throughout the town, due in part to zoning regulations that allow commercial development within many residential areas by special permit. Specifically, within the R-B1, R-C residential districts, retail establishments such as grocery stores, restaurants, gasoline sales, auto repair or motels are among relatively high intensity uses that are allowed by special permit. In the R-D residential zoning district even more intense uses, such as light industry, wholesale storage and warehouse facilities and shopping centers, are allowed by special permit.

Such uses when allowed in discrete locations within a community, (e.g. along North Street) and with adequate buffers between such uses and residential areas, have relatively little adverse impact. When permitted in or in close proximity to established residential neighborhoods, however, they can result in adverse impacts on nearby residential or other non-commercial development. In recent years there have been a number of occasions where such uses have been the source of problems and concerns to residential neighborhoods.

In the new comprehensive plan accommodations must be made to allow commercial and industrial development within the town, but in a manner that minimizes the impacts on existing and future residential neighborhoods, and the overall character of the community.

The villages and hamlets of the town represent both challenge and opportunity. A majority of survey respondents indicated a desire to cluster future development in the town within or near existing villages and in close proximity to the hamlets. In Etna and Varna, and somewhat in Freeville, however, there is evidence of disinvestment in both commercial and housing stock. There are a number of factors involved, including the changed nature of retail sales and competition from newer retail sales establishment that have been permitted to build outside these traditional population centers. There is thus a need to encourage more investment within the tradition village and hamlet cores on the part of the Town of Dryden. A key mechanism for accomplishing this would be better coordination of village and town zoning regulations related to commercial development.

Factors such as increased traffic, the widening of the highways through the hamlets, and speed limits that are set too high by the State are perceived problems in the hamlets of Etna and Varna. In Varna the lack of maintenance of rental properties owned by absentee landlords is resulting in the appearance of blight and, as elsewhere in the town, there have been adverse impacts from incompatible commercial development that has been allowed by special permit adjacent to residential uses.

The longstanding application of the R-B, R-B1, R-C and R-D zoning regulations more appropriate for newer suburban areas to both Varna and Etna also does not reflect the nature of hamlets and the dynamics of land use within hamlets. The Town can aid in stimulating new development, re-investment in and revitalization of these hamlets by developing new zoning tools that better reflects their character. Etna and Varna can in the future act as magnets for new residential development, at densities higher than elsewhere within the town. This in turn can reduce the demand for development land elsewhere in the town, and further the goals of protecting valued open space assets, and the town's rural character.

Both Dryden and Freeville have some potential to accommodate future residential development within their respective boundaries. The U.S. Bureau of the Census includes their residents, and housing stock, as part of the overall town population and housing stock. Thus any future population growth, and development of new housing within village limits will contribute to filling the townwide need for new dwellings projected above, while reducing the demand for development land elsewhere in the town.

Agriculture is valued by town residents for its historical importance and its contribution to the scenic and rural character of the town. Support for the protection of agricultural land appears to be strong. Current town land use policies however do not reflect this. Although agricultural land uses are allowed throughout the town, under current zoning the agricultural sector and the land that it depends on for its long-term economic viability is not adequately protected. Farmers in Dryden must compete for land with sometimes more lucrative permitted uses such as residential, commercial and industrial development

It is desirous to protect important agricultural lands in the town from inappropriate development, but it is just as important to provide the town's farm community with options in land use that will enhance the economic viability of their farms and ensure their long-term existence. Contemporary agricultural operations many times require supplemental sources of income in order to remain economically viable. Many communities have responded with the concept of "agriculture-related commercial enterprises." These are businesses that are subordinate to and compatible with the principal agricultural use of the land. Examples include support businesses such as grain, seed, fertilizer, farm equipment or farm building suppliers, the processing of agricultural products, as well as bed and breakfast inns.

Other businesses that may be appropriate include small-scale manufacturing or service enterprises, not necessarily related to agriculture, but which are owned and operated by the property owner. Such enterprises , referred to sometimes as "cottage industries," could be a useful means by which older barns and other farm buildings could be preserved through adaptive reuse. Such enterprises could include small construction companies that require space for shops and storage of equipment. Standards that govern the size and type of such businesses must established, however, to ensure that they are in keeping with the rural character of the area.

Similar standards and criteria for approval should also be established for bed and breakfast businesses in rural areas. While such businesses are generally in character with the surrounding area, limits on size and requirements for parking and other site improvements must be explicit to ensure adequate protection of community character and public welfare.

Open Space & Environmental Resources

A number of environmental factors pose limits on the desirability or feasibility of allowing intensive development in many areas of the town. These include floodplain areas, wetlands, prime agricultural soils and steeper slopes.

As Map 4-1 shows, there are substantial areas along Fall Creek, Virgil Creek, Cascadilla Creek and Owasco Inlet located within 100-year floodplains. Smaller floodplains also exist along Six Mile Creek. In addition to the obvious benefit of reducing property damage due to flooding, channeling future development away from these areas will protect, among other beneficial functions of floodplains, their groundwater recharge functions and habitat and wildlife corridor functions.

Intensive development of wetlands areas should also be avoided. As Map 2-4 shows, approximately 3,360 acres of wetlands have been identified along the major stream corridors, as well as in the northwest quadrant of the town. Some 13,670 acres in the town are covered by hydric soils (Map 4-1). These are soils that are naturally saturated with water during at least part of the year, and are a key indicator of the potential presence of a wetland as defined under federal and state law. Comparison of Map 2-4 and Map 4-1 shows considerable overlap between areas identified as wetland and areas covered by hydric soils. At the same time, however, the amount of land covered with hydric soils in the town indicates that many wetland areas may be unidentified and unmapped.

Where possible intensive development should be directed away from areas where wetlands and hydric soils are present. From a practical standpoint the higher levels of groundwater that many times exist in such areas can add to the cost of construction for new homes, streets and other infrastructure. The long term maintenance costs of such investments can also be high. As with floodplains, wetland areas should also be protected because of their natural benefits such as groundwater recharge and water purification capacities.

Steep slope areas should also be avoided wherever feasible when allocating land for future growth. Development of steep slope areas can entail both higher costs to construct improvements (e.g. added earthmoving costs, costs associated with shallow depth to bedrock) and higher maintenance costs once improvements are completed. The environmental costs can be higher also, as the potential for soil erosion and landslides increases on steep slopes. Also, because many of the areas in the town that have steep slopes are also wooded, development can adversely impact the habitat function of woodland.

Finally, the prime agricultural soils that are being actively cultivated, especially in the upper reaches of Fall Creek, Virgil Creek, the headwaters of Six Mile Creek and atop Mt. Pleasant, warrant protection from inappropriate levels of development. These soils sustain a key economic sector of the town and contribute greatly to the natural scenic beauty of the town and its rural character.

Although there may be strong support for the preservation of important open space assets, the limited fiscal resources of the town mean that it will likely have to rely on growth management regulations and outside agencies to protect many of its important open space resources. Approaches such as purchase of development rights have proven effective ways to permanently protecting valued open space assets in a fair and equitable manner. Purchase of development rights is however a relatively costly approach, with cost estimates for preserving lands in Tompkins County running between $500 and $1,000 per acre[14].

Historic Resources

The historic resources of the town are an integral part of its character and contribute to the attractiveness of its communities. Collectively and individually however these resources face a number of threats. Not the least of these is their age, and the continuous need for vigilance and maintenance on the part of owners. Obsolescence also contributes to the decline and, ultimately, deterioration and disappearance of historic structures from the landscape. Finally, the lack of knowledge of a structure's significance can result in well-intentioned renovations or alterations that irreparably damage the historic integrity of a structure.

[14] George R. Frantz & Associates, American Farmland Trust, Thomas L. Daniels, PhD. Tompkins County Agricultural Lands & Natural Areas Preservation Feasibility Study. January 2002.

Map 4-1. Development Constraints

A complete inventory of its historic and architectural resources is the first step any community should take to protect those resources. The last time such an inventory was completed in the town of Dryden was in mid-1977, almost 25 years ago. The data in this inventory needs to be updated. Some structures are likely to have succumbed to the elements, the wreaking ball or fire. At the same time, however, a number of structures built between 1927 and 1952, structures that were ineligible for consideration during the 1977 inventory, may now qualify as historically or architecturally significant. Steps taken to identify these structures now can ensure that they will be maintained and have an increased chance of surviving into the next century, and continue to contribute to the historic fabric of the town.

It is important also that the Town of Dryden take steps to identify and protect Native American sites and cultural artifacts within its boundaries. This is a more difficult task, as the archaeological record of Native American presence in the town is sketchy.

The State Historic Preservation Office, however, can be a useful resource in any initiative. The State Environmental Quality Review process includes questions regarding the potential presence of historical and cultural resources as part of the short- and full environmental assessment form. Positive response to these questions provide the Town with the rationale it needs to require further investigation of potential archaeological site before a development proposal is approved

Recreational Resources

The Town of Dryden in the past has relied primarily on community organizations and the schools to provide park and recreation facilities. This arrangement has worked well in the past, however it has resulted in some gaps in the availability of some recreational facilities, especially the more expensive facilities needed to host sanctioned team sports such as lacrosse, soccer and baseball. As the town continues to grow a more comprehensive approach to providing park and recreation facilities will be necessary. Such approach will serve to provide facilities that are adequate to serve the town's population, in a cost effective manner.

The level of investment necessary to develop a future Town maintained park system could be substantial. For example, according to National Recreation and Park Association standards by the year 2022, Dryden should ideally have up to 166 acres of public park and open space lands, up to 2 soccer fields and 3 baseball or softball fields, among other park and recreational facilities. Currently there is one field large enough to accommodate a regulation size soccer field, at the park off Groton Avenue in Freeville.

Both the Dryden Central School District and Ithaca City School District have extensive sports fields that are utilized to some extent by the community. The use of these fields by non-school groups however is limited, and subordinate to their availability for school district athletic programs. Reliance on these facilities can thus put substantial constraints on the ability of youth and adult recreation programs in the town.

Recreational programs, and their support facilities, must also be designed to accommodate the needs and interests of all age groups within a community. Opportunities for active recreational pursuits can be just as important to older residents as they are to youth in the community. It is thus important that the Town of Dryden approach the provision of park and recreational development in a holistic manner that accommodates the needs of all town residents.

Such a holistic approach would include provisions for informal leisure activities such as walking, picnicking, hiking, biking and other individual or group experiences. To accommodate these activities, a future Town park system should include areas that are less organized or developed, or left in a naturalistic state. Park users could then create their own experiences within these areas. Bicycle and pedestrian trails are also key elements in any contemporary park system. They can serve as recreational walking paths, jogging paths, and bikeways. They can also serve a purpose beyond strictly recreational, by connecting future parks to nearby communities and neighborhoods and providing an alternative transportation mode to the automobile.

The development of a future park system for the town will not necessarily be an expensive proposition for taxpayers. State law for instance allows the Town to require dedication of land for public park and open space purposes from private sector developers as part of any new residential development project, or funding for such facilities in lieu of land. To date the Town has not taken advantage of this provision, but in the future there will be a number of such opportunities to do so.

Moreover, town residents and community associations have a longstanding tradition of fundraising and park construction projects that utilize community volunteers. This tradition should be continued and applied in the development of a future public park

system. While community associations have played a significant role in building and providing recreational facilities, their performance has been uneven. In general the fortunes and ability of the individual associations has varied from year to year, as has their capacity to provide labor and materials for capital improvements or ongoing park maintenance.

Transportation

Roads

Traffic volumes, traffic congestion and excessive speed are of increasing concern in a number of areas of the town. In most cases, because the roads that are the focus of concern are either state or county highways, the Town of Dryden has no direct control over the situation, or the solution. There are nonetheless steps that the Town can take that can ameliorate at least somewhat the adverse impacts of traffic on its major roadways.

Of particular concern is traffic congestion along NYS Rte 13 between its intersection with NYS Rte. 366 and Dryden village. One of the prime determinants of how well traffic on a highway flows is the number of access points, or curb cuts, to and from the highway. Traffic flows more smoothly when there are few curb cuts and hence fewer potential conflicts between moving traffic and traffic that is pulling onto the road, slowing down to turn, or stopped to make, for instance a left hand turn.

NYS Rte. 13 is classed as a controlled access highway from its intersection with NYS Rte. 366 and Hall Road westward to Warren Road. As a result there are no curb cuts along the highway, only intersections with other public roads. East of the intersection, adjoining properties with frontage on the road have access directly onto the highway.

Although it has no direct control over the issuance of curb cut permits on NYS Rte. 13 or other highways, the Town of Dryden through its land use policies and growth management regulations can still exert some control over the number of curb cuts. The primary tool is by controlling the intensity of development along the highways. A second tool, applicable during the review of residential subdivisions, is limiting access from new developments to intersections with a minimum number of streets. Thirdly, the Town can adopt specific design standards for driveway entrances to commercial and industrial development that would govern width, distance between curb cuts and use of joint access points. These standards would be enforced through the site plan approval process.

It is important that the Town of Dryden strive to limit congestion caused by new development in the coming decades, especially on NYS Rte. 13. Local drivers are already seeking alternative routes through the town, such as NYS Rte. 366 and County highways such as Etna Road. By utilizing to the extent possible the land use controls that it possesses, the Town of Dryden can limit congestion on NYS Rte. 13 and other major highways, and ensure that they continue to attract the bulk of traffic.

By encouraging more compact development in discrete nodes around existing population centers, the Town can limit the proliferation of curb cuts along major highways and reduce the amount of traffic using those highways. With denser development, the provision of public transit becomes more efficient, and more convenient for the user. Carpooling, bicycling and other alternatives to the single-occupant automobile become more attractive. At least a few residents would be within walking distance of work.

While there is an expressed desire by town residents to cluster future development in the existing villages and hamlets, traffic volumes and speed on the highways that pass through some of these places is adversely impacting the quality of life and their desirability. The primary problem, in many cases, is that the residential development in these locations predates the age of the automobile. The architecture of the dwellings is not designed to shield the occupants from the noise and other impacts of traffic. Zoning too, discourages the type of compact development that could create denser communities which in turn force reductions in speed limits. New zoning for the hamlets of the town is needed to encourage reinvestment in them, and their redevelopment into more traffic resistant communities.

Truck traffic has been identified as a major concern by residents in several areas of the town. Both Dryden and Freeville villages are located astride two of the heaviest traveled truck routes in Tompkins County. NYS Route 13/North Street corridor in Dryden village carried the third highest volume of truck traffic in the county outside Ithaca city proper in a survey conducted in 2001. Fall Creek Road between Freeville and Cortland carried the fourth highest amount of truck traffic.

Because both of these roadways are state or county highways, there is little in terms of direct action the Town of Dryden can do to limit the volume of truck traffic or to mitigate the impacts of truck traffic.

Geography also works against the local communities, as the Town of Dryden is located between two of the major regional generators of truck traffic: I-81 in Cortland and Ithaca. Moreover, no feasible alternative routes for truck traffic have been identified to date.

The Town of Dryden, however, can take some steps to reduce the impacts of truck traffic on future development along the major highway truck corridors. Requiring additional setbacks, from the right-of-way line along major highways, particularly for residential development, would provide additional buffering between homes and truck traffic. Also limiting the number of curb-cuts along major routes would help reduce highway congestion and one of the major impacts of truck traffic: the added noise created by trucks braking to a stop, and the added noise generated by trucks accelerating from a stop.

The Town of Dryden can and should continuously lobby for enforcement of speed limits and truck safety regulations.

Bicycle and Pedestrian Facilities

Nationally and on the local level, there is growing interest in the bicycle and in walking for recreational use and as a mode of transportation. Across the country moderate daily physical activity, such as bicycling or walking, is recognized as an important component of a healthy lifestyle. One result is demand for increased opportunities for community residents to walk and bicycle safely, easily, and conveniently. The Jim Schug Trail from West Main Street to Dryden Lake is a local example of the utility and popularity of such facilities.

As is the case in many communities, the Town of Dryden has relatively limited facilities to accommodate and encourage increased walking and bicycling, either as a recreational pursuit or as an alternative to the automobile. Outside the villages and hamlets there are few opportunities for such activities except along the shoulders of roads. Although several roads and highways in the town do have wide shoulders in good condition, high traffic and speed limits reduce the safety and attractiveness of these road for the average bicyclist or pedestrian.

Infrastructure, however, is but one facet of the issue. Land use planning, public facilities location decisions and public safety are also important factors in the utility and success of bicycle and pedestrian path networks. For bicycling and walking to be attractive transportation options places of work, school, goods and services must be located relatively close to home.

In terms of overall land use policies, this means that the major proportion of future growth and development must be channeled toward existing centers of population. Residential development, commercial development and business and industrial nodes need to be clustered in discreet centers where distances between different activities are relatively small.

Although there are some low-volume streets and roads in the town that can safely accommodate a mix of auto, bicycle and pedestrian traffic, these tend to be concentrated in and around the villages and hamlets. For many residents traffic and speed preclude any level of comfort walking or biking along a roadway.

In many cases improvements to streets and roads to accommodate bicycle and pedestrian traffic are not feasible due to cost or terrain.

Historical development patterns within the town provide the opportunity for the Town of Dryden to develop an efficient network of bicycle and pedestrian paths. Four of the primary centers of population, Dryden, Freeville, Etna and Varna were at one time linked by railroad. Substantial portions of the former railroad roadbed remain intact. These portions can be converted with relative ease to a bicycle pedestrian path. Several sections of the former railroad roadbed have been removed or built upon since abandonment, however these sections can either be rebuilt or a viable alternative route for the path can be constructed.

Integrating a bicycle and pedestrian path program with land use planning can produce an additional benefit. The town of Dryden can exploit its ability under NYS Town Law to in some cases require developers of residential subdivisions to dedicate land for public park and open space uses, including land for bicycle and pedestrian paths. To be successful, however, the Town must have a clear vision of where its network of paths will be located, and what activity nodes they will connect to.

Integration of bicycle and pedestrian path development and land use also will allow the development of shorter feeder paths from within new residential neighborhoods to a main path running, for example, from Dryden to Freeville to Etna, Varna and Ithaca beyond.

Unfortunately, the success of the nationwide “rails to trails” program has convinced many communities that

lack abandoned railroad corridors that they lack the opportunity to develop bicycle and pedestrian paths. In developing a future bicycle and pedestrian path network the Town of Dryden should look beyond the presence or lack of an abandoned rail corridor in determining the feasibility of such a path. Although construction off a railroad grade can generally cost more, on average a mile of new bicycle/pedestrian path built to the highest standards costs approximately one-tenth as much as a new highway.

Future bicycle/pedestrian facilities should link a community or neighborhood with another community or neighborhood, or a center of commerce or employment. In designing a network that emphasizes such connections the Town can maximize their utility to residents, as alternative transportation corridors.

Public Transit

Public transit can and should play an increased role in the town's transportation system. Public transit has the potential for reducing traffic congestion by providing a viable alternative to the automobile for commuters. For this to happen however bus routes must be easily accessible to the general public, operate at time convenient to potential users, be designed to be a short as possible, and located in a manner that maximizes the number of prospective riders. Because of these constraints, public transit cannot be expected to be available in the town except where populations are concentration or major activity nodes such as retail, employment or educational centers exist.

The provision of public transit service is not under the direct control of the Town of Dryden. Town land use policies of the future however can have a direct positive influence on the availability of service and level of use by residents. The key is Town policies that channel future growth and development into existing nodes of population such as in and around its villages and hamlets, in order to increase the pool of potential transit users. The Town should also work with Tompkins Consolidated Area Transit to develop new transit routes, bus shelters, park and ride lots and other facilities to encourage increases in ridership.

Ithaca-Tompkins Regional Airport

Land use decisions for the western portions of the town need to continue to factor in the presence of the airport. To date development under the flight path approach to the airport from the southeast has been primarily industrial and commercial enterprises, with limited residential development. This development pattern extends to the top of Mt. Pleasant, which is also within the flight path approach area. Although it is some 4.5 miles from the end of the airport runway, the area of Mt. Pleasant in the vicinity of Mt. Pleasant and Baker Hill Roads is high enough that future development must consider the airport and the flight path approaches to it.

Much of the land under the flight path approach is owned by Cornell University, and is dedicated open space through inclusion in the Sapsucker Woods Bird Sanctuary and the Cornell Plantations Monkey Run Natural Area, or it is utilized for agricultural research fields. There are however several parcels not owned by the University and may be subject to development in the future. Currently the Town of Dryden Zoning Ordinance does include provisions that limit the height of structures, as well as preclude developments such as multi-family housing, hospitals, nursing homes, and places of assembly within a defined "flight hazard area."

The new plan should ensure that these restrictions on land use within the areas under the flight approaches to the airport continue and are up-to-date.

While single-family residential development is not considered a public safety issue, over the past two decades airport noise has become a major quality of life issue in many communities across the country, as communities have expanded and large numbers of new homes have been built in the vicinity of airports. To avoid possible noise-related conflicts in the future, the potential for significant residential development within the flight path approach area, including the crest of Mt. Pleasant, should be reduced as part of a town-wide land use plan.

Public & Semi-Public Infrastructure

Water & Sewer Service

The extension of municipal water and or sewer service to limited areas within the town will be necessary in order to provide the foundation for denser residential development in and around existing centers of population. At the same time, residents responding to recent surveys express little support for paying for extensions of water and sewer infrastructure.

Intermunicipal cooperation will be critical to providing municipal water or public sewer service to future development, at a reasonable cost. This plan does not recommend that the Town embark on a capital program to construct independent systems, but

rather the Town should work with the Village of Dryden, Village of Freeville and with its partners in the Ithaca Area Wastewater Treatment Plant and Southern Cayuga Lake Intermunicipal Water Commission. (a.k.a. Bolton Point) The Village of Dryden for example has both a water system and wastewater treatment plan. The Village of Freeville operates a wastewater treatment plant also.
A Town of Dryden approach to providing public water and sewer service to future neighborhoods should piggyback on these existing facilities. Contributing to upgrading these facilities is likely to be more cost effective that building new ones solely to serve town areas outside the villages.

In order to facilitate denser development in appropriate areas, the Town of Dryden will likely construct some new water and sewer extensions to serve select areas. These extensions need to be carefully staged. The likely mechanism for financing such extensions is the benefit district. Hence they will be dependent upon compliance with NYS Office of the Comptroller regulations regarding public debt for such projects, and the ability of existing residents and landowners to pay local benefit assessments.

Much of the cost of the envisioned public water and sewer infrastructure of the future, however, will also be borne by the private sector developers that build the neighborhoods of the future. As with new streets, the water and sewer infrastructure within new residential development that is built by the developers would be dedicated to the Town upon completion.

Telecommunications

Telecommunications technology is changing the landscape as wireless technology continues to evolve. The Town of Dryden has a Telecommunications Tower Siting Law adopted in May of 1998 that provides some local control in the siting of such facilities. The Town however needs to develop additional standards that would provide the citizens of Dryden access to the needed wireless services of the future, preserve the character of the Town while complying with parameters set forth in the Telecommunications Act (TCA) of 1996. It also should offer siting alternatives and standards to personal wireless service providers such as but not limited to cellular and personal communications services that embrace the concept of co-location within the Town of Dryden.

As the needs of providers change and evolve to data services requiring the use of increasing data rates, signal densities, and more sites for personal wireless services, the Town should address the needs of those providers to ensure continued high quality services for residents.

Although the tower structures needed to facilitate wireless technology have potential adverse impacts on aesthetic resource and require careful review by the Town, the wireless technology that they support is important to the continued economic health of the town. The education and industrial sectors are increasingly reliant on wireless communications. More and more town residents are also becoming reliant on the technology. There is thus a need ensure that to the extent possible new telecommunications technologies are available to residents, the educational and business communities in the coming decades.

Public Safety

As population increases in the coming decades the community can expect some increase in the demand for public safety and emergency services. The average age of town residents is also expected to increase in the coming decades, a trend that is expected to also increase demand for such services. This increase in demand due to these two factors is expected to be incremental in nature. A critical issue with regard to the capacity of fire and medical emergency service (EMS) organizations to serve the community is the decrease in the number of volunteers needed to adequately staff such services. Although the number of fire calls has trended downward in recent decades, there has been a much larger increase in EMS and rescue calls.

The capacity of the several volunteer fire and ambulance companies in the community is adequate at present levels. If the current downward trend in the ability to recruit and retain volunteer fire and EMS personnel continues, especially as population grows, the capabilities of existing organizations may no longer be adequate to serve the needs of residents.

Town land use policies can play a positive role in reducing the need to expand emergency service delivery capabilities. A policy that channels future development into and adjacent to the traditional population centers of the town can reduce the length of response times during emergencies. Along with such a policy however, the town must also develop a street system that ensures the ability for emergency personnel and equipment to respond quickly and efficiently.

Outside the areas of land use and transportation infrastructure, the question of adequate numbers of volunteers for fire and ambulance services will continue to be a major issue in the coming years.

5. Plan Recommendations

Introduction

As part of an overall approach to accommodating anticipated future growth in population while preserving the character and quality of life residents enjoy the Town of Dryden should pursue a holistic strategy that includes:

- Encouraging higher density residential development in and around the existing village and hamlet centers of population;
- Encouraging the construction of a wider variety of housing types within existing and future neighborhoods to meet the needs of an aging population;
- Providing for attractive amenities such as neighborhood scale parks and off-street bicycle/ pedestrian paths in areas where higher density residential development is planned;
- Encouraging the use of cluster subdivision designs that create areas of permanent open space within future residential neighborhoods without reducing overall site density.
- Directing future commercial development into existing village and hamlet downtown cores where practical, or into existing nodes such as the North Street area between TC3 and the village, and the corner of NYS Rte. 13 and Dryden Road (NYS Rte. 366)
- Reviewing and taking recommended actions to increase the resiliency of Town's infrastructure to mitigate current and future impacts due to our changing climate.
- Establishing a goal for GHG emission reductions that is in line with the goals and standards of the county and New York State.
- Encouraging sustainable development, and the reduction of fossil fuel usage in the built environment by reviewing, and where necessary, modifying land use laws, building codes, planning and code enforcement regulations, and Town policies and procedures.

A key goal of this plan is to also ensure decent affordable housing for all Town residents. For many communities across the country the most successful approach to providing decent affordable housing is development at the community level through public / private partnerships. To this end this plan encourages partnerships between the Town and private for- and not-for profit organizations, both for the rehabilitation of older houses and for the development of new small scale multi-unit housing with an emphasis on owner occupied homes.

A number of land use and infrastructure policies or initiatives to further the above strategy are outlined below and illustrated on Map 5-1, Map 5-2 and Map 5-3.

The zoning revisions brought about by this plan should be constructed to permit gradual evolution of change in community character. Although the plan accommodates more than 5 times the anticipated need for housing over the next 20 years, the desire is to encourage growth to remain at historical levels to the extent possible.

Future Land Use

In terms of future land use this plan proposes the creation of a hierarchy of land uses. This hierarchy is based on the intensity of the proposed land uses and their anticipated environmental, social and fiscal impacts. At the highest level of the hierarchy, in terms of intensity of use, are the Suburban Residential, Hamlet, Commercial, Industrial, and Institutional land uses. These land uses can affect the greatest amount of change to the land and the character of their surroundings, and to the community as a whole.

At the second level is the Rural Residential category. This category of land use, the primary character of which is low density single-family detached homes, can have a low to moderate impact, and effect little change in neighborhood or community over the short term. If not controlled however this type of land use can, over a period of two or three decades, have significant impacts on land use patterns and dramatically alter the character of a community.

At the third and lowest level in terms of intensity of land use and potential to change the land, and level of impact on the community, are the Agricultural and Conservation/Open Space land use categories. The shared goal of these two categories is to conserve the most important agricultural, environmental and scenic land assets within the town. These assets include the

most important agricultural lands and woodland areas, steep slopes, wetlands, stream corridors and lands with specific ecological resources worthy of preservation.

In some instances this plan recommends that land that is currently being actively farmed be designated for higher intensity development in the future. It recognizes the importance of agriculture to the character and economy of the Town, however, and that the amount of land that is proposed for Suburban Residential, Hamlet, Commercial, Industrial, and Institutional uses in the future is more than adequate to meet reasonably expected demand for land for such uses. Hence although later in this Plan there is a proposal for a zoning district specifically for agriculture, it also anticipates that agriculture would also be explicitly permitted as a land use by right in all other future zoning districts in the Town of Dryden.

Moreover this plan recognizes that farms located within Tompkins County Agricultural District No.1 are afforded specific protections from unreasonable restrictions on farm operations under NYS Agricultural and Markets Law Sect 305.

Farmers who desire to continue to farm should be provided with whatever support the Town of Dryden can provide them in their efforts.

As the Town proceeds with implementation of the land use components of this plan, through zoning and infrastructure improvements, it must ensure that these actions do not conflict with AML Sect.305 or undermine the viability of farm operations.

Suburban Residential Development

The Town of Dryden needs to take measures that will encourage denser residential development in and around the traditional centers of population in the town. The areas around the village of Dryden are particularly suited to accommodate much of the anticipated future residential development, with limited investment in municipal water and sewer infrastructure development.

This plan envisions residential development densities on the periphery of the town's villages and hamlets that would average four dwellings per acre. These areas, shown as Suburban Residential on Map 5-1, Future Land Use Plan, are where the majority of the estimated 1,800 new dwellings that may be needed to accommodate future population growth should be built.

Agriculture is also expected to continue to be a major land use within the proposed Suburban Residential areas, and permitted under any new zoning regulations that may be adopted in the future.

Altogether approximately 3,400 acres of land are designated as Suburban Residential on Map 5-1. Of these approximately 1,740 acres are currently undeveloped.

In addition to the lands designated for Suburban Residential uses in this Plan there is an area of approximately 910 acres of land immediately west of Dryden village that is designated as an Agricultural Reserve area. From an overall land use standpoint these lands are well suited for development as future residential neighborhoods. Yet at the same time they are high quality agricultural lands that are owned and farmed by families that are committed to continue farming their lands.

To balance these two competing interests the Town should treat these lands as if they were designated for agricultural uses and apply the actions and policies recommended in the Agriculture section below to these lands. Not including these lands in the "development" land use categories will not have any measurable impact on the Town of Dryden's ability to accommodate all expected future growth and development. In future decades, however, should their use for agricultural purposes be abandoned then they can be treated as other lands in the Suburban Residential category.

These undeveloped lands designated Suburban Residential or Agricultural Reserve represent only about 4.4% of the town's total area. At an average development density of 4 dwellings per acre, however, they are adequate to accommodate over 10,000 new dwelling units – about 5.5 times more than the total number of dwellings that may be needed in the coming two decades. This allocation of land well in excess of what may actually be needed is to provide both flexibility in the location of future new residential development, and to ensure that the amount of land made available for this type of development is enough to preclude artificial inflation in land prices.

Projected residential development within the proposed Suburban Residential areas will be a mix of housing types. Most new homes will likely be single-family or two-family homes (a principal residence with accessory apartment) on lots that would range in size between 10,000 and 30,000 square feet. Multi-family housing however will also be part of the fabric of these new neighborhoods. Envisioned densities for multi-family housing would be between 10 and 15 dwellings per acre, which are typical of garden apartment multi-family development.

Map 5-1 Future Land Use

The Suburban Residential areas shown on Map 5-1 are not proposed zoning districts and should not be viewed as such. In reality the proposed Suburban Residential areas of the town are expected to encompass a number of different types of residential zoning districts. These new zoning districts will govern the types and densities of development allowed. For example there may be a district that allows single-family homes on lots as small as 10,000
square feet; one that requires a minimum of 20,000 square feet per lot; and one that may require lots one acre in size or larger, probably at the periphery of the Suburban Residential area.

As is the case in many municipalities, multiple residence development in the future could be accommodated in Dryden through a discrete zoning district. Such a district would set a maximum density in terms of the number of dwellings per acre allowed, maximum height of structures and minimum parking requirements. In addition such a district should also include specific requirements for building setbacks and buffer areas, maximum lot coverage by impervious surfaces and standards for the amount and quality of open space available for use by residents.

The use of cluster subdivision design can enhance the quality of development in these new areas in a number of ways. This form of residential subdivision platting allows land to be developed at the density allowed under zoning regulations in place. However it gives the developer flexibility in the design of the owner-occupied housing. Reduced lot sizes, condominiums and townhome designs can be utilized separately or integrated together as part of an overall development concept. Cluster subdivision does not increase the amount of development on a tract of land, but rather condenses it, using less land for the same number of dwellings and maximizing the amount of useable open space.

Integral to these new Suburban Residential neighborhoods would be a network of off-street bicycle/ pedestrian paths that will connect different sub-neighborhood areas together, provide access to one or more small neighborhood parks, and access to transit stops. This network could also provide access to downtown Dryden through links with the street and walkway network of the village. In addition to proposing new Suburban Residential development around Dryden village, this plan proposes similar development in an area northwest of Freeville and west of Etna hamlet.

The area northwest of Freeville is proposed as a means of increasing population in the vicinity of the village, to enhance the market base and economic viability of its small commercial center. The specific area was selected because 1) it avoids the prime agricultural lands northeast of the village, and the wetland complexes to the north and south; 2) the commuter traffic to and from Ithaca that the new residential area is expected to generate will not have to drive through the village and exacerbate existing traffic problems; and 3) the location uphill of the village affords the opportunity to utilize the existing village sewer system.

The area west and north of Etna was selected for similar reasons. The new residents could provide a larger market base for retail business development in the hamlet. The majority of commuters generated by the new residential areas would not be passing through the hamlet. Finally, encouraging development west of the hamlet could provide the critical mass needed to make the cost of extending municipal water and sewerage service to the hamlet financially feasible.

A critical element in the above vision is the provision of municipal water and sewerage service. This is discussed below in the Public and Semi-Public Infrastructure section.

Hamlet Areas

The hamlets of Etna, Varna, McLean (Dryden portion), and Dryden (north of the Village of Dryden) require an approach to land use and development that differs substantially from the rest of the town.

The goals of development in hamlets should be:

1. Encourage new development that would increase the attractiveness of the area by offering a diversity of development options, including townhouses, duplexes, small multiunit complexes, and mixed residential-commercial.

2. Encourage home ownership.

3. Regulate hamlet transformations so that the character of the community is maintained or shifts slowly, not in dramatic steps.

What is a "Cluster Subdivision?"

The term "cluster subdivision" simply refers to a way by which a new residential subdivision can be designed. Cluster subdivision design is allowed Under Section 278 of New York State Town.

If authorized by the Town Board through a Local Law a planning board may modify the minimum lot area, width, depth, setback and other dimensional requirements of the zoning ordinance in order to provide for an alternative method for configuring building lots, dwellings, roads, utility lines and other infrastructure in order to preserve the natural and scenic qualities of open land. Townhomes and other types of attached single -family dwellings are typical examples of cluster subdivision development, however today an increasing number of cluster subdivision designs feature the traditional single-family detached home, albeit on a smaller lot.

The purpose of cluster subdivision design is NOT to increase site density, but to preserve open space and reduce the amount of road, water, sewerage and other public infrastructure needed to be built and maintained to serve residential development. It also allows for the development of a wider variety of housing, styles.

The use of cluster subdivision design can result in the permanent setting aside and preservation of 30% or more of any given tract of land as permanent open space. This permanent open space can encompass a significant environmental feature on the site, or be an amenity for residents of the new development.

Typically hamlets are more densely developed, with residential land uses mixed with or in close proximity to small scale commercial development. Lots tend to be smaller and population denser than in the rest of the town. However, it is important to maintain a healthy balance between home owners and renters. This balance encourages long-term residents who are invested in the community. Hamlets are attractive areas to live in because they can offer many of the amenities of village living.

To create a more attractive environment for new commercial and residential development within its hamlets the town of Dryden needs to create new land use regulations. These regulations should offer a mixture of opportunities, some that allow more dense development, on smaller lots and without the large yard setback areas typically found in suburban areas, and some that maintain the current average of one-half acre lot sizes. Another feature of hamlet development is the use of two story structures that house commercial, office and residential use under one roof. With more compact development, amenities such as sidewalks are also possible.

The residential development density proposed for the hamlet areas is a maximum of 4 dwellings per acre. As with the Suburban Residential areas of the future, the Hamlet areas would be comprised of several types of residential zoning districts with varying maximum allowed densities. Multiple residence zoning districts could be appropriate within the Hamlet areas. Mixed-use zoning that would allow, for example, apartment-style residences above ground floor commercial space would also be an appropriate land use tool. To maintain the balance between home ownership and rental housing and to prevent rapid change in the hamlet character, multiunit developments should be limited to a maximum of 20 units.

Higher density single-family owner-occupied residential development, such as a collection of town houses, can be encouraged through the creation of

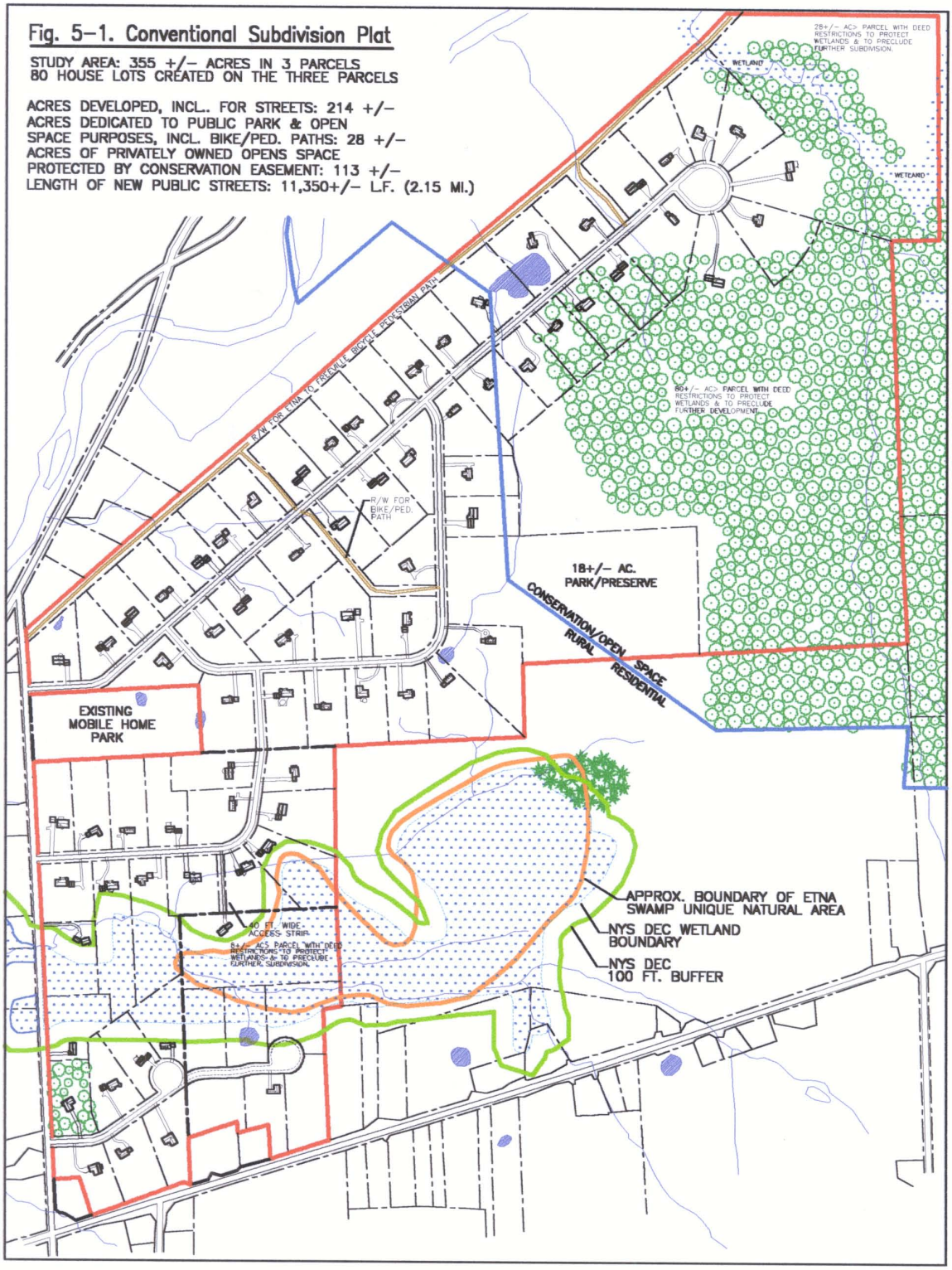


Figure 5-1. A conventional subdivision plat under proposed Rural Residential and Conservation/Open Space densities in the Etna Swamp area east of Kirk Road and north of NYS Rte. 13.

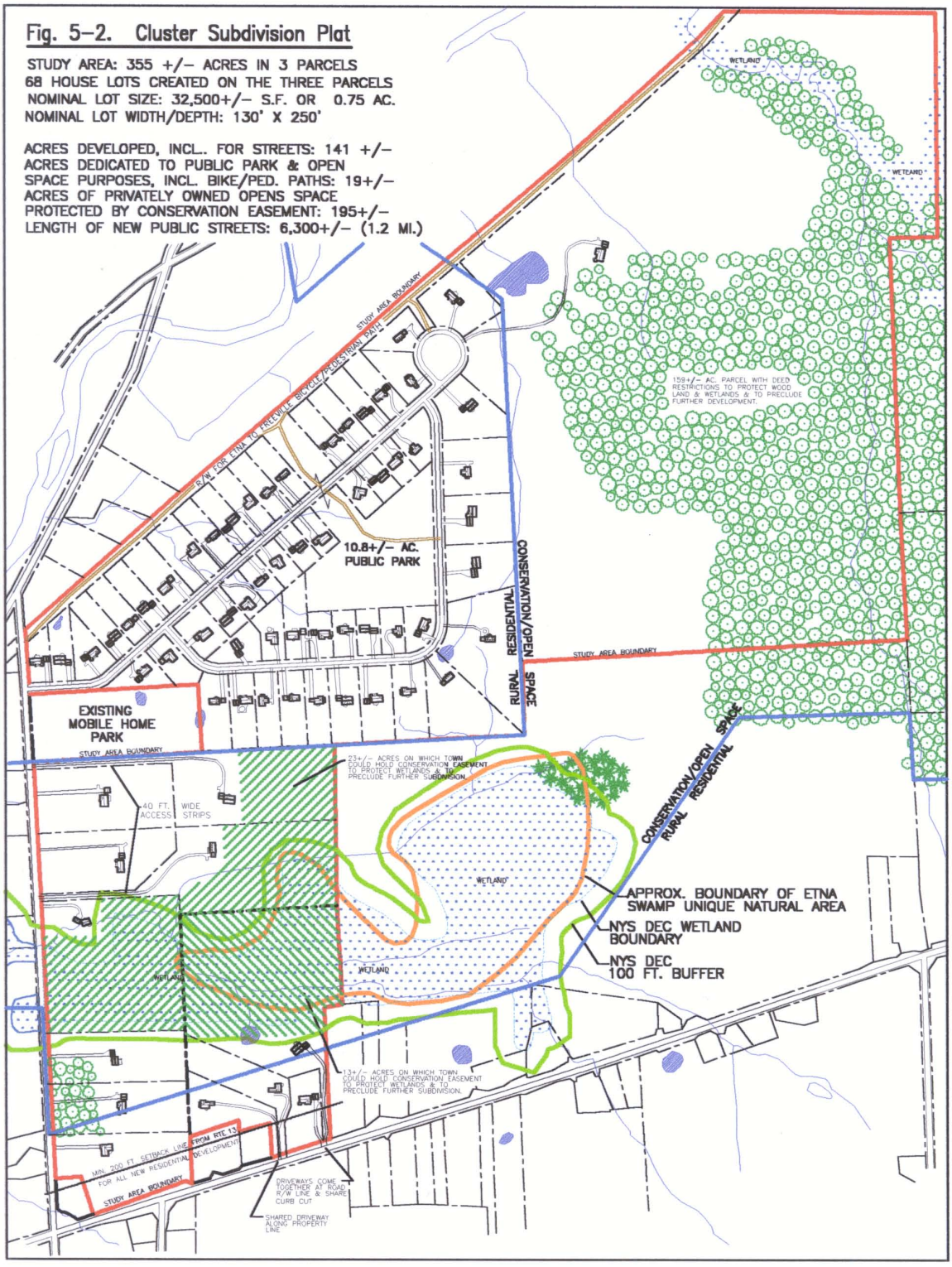


Figure 5-2. A subdivision plat utilizing cluster subdivision design principles and proposed Rural Residential and Conservation/Open Space densities in the Etna Swamp area east of Kirk Road and north of NYS Rte. 13. The reduction in lots sizes down to a nominal size of one acre results in considerable open space being saved, and a considerable reduction in infrastructure costs.

Some Guidelines for Multi-Family Development

A critical component of the housing stock of any community is multi-family rental housing. If not properly controlled, however, this type of housing can adversely impact a community, as well as the quality of life of the residents of the development itself. This can be especially true in communities where college students comprise a substantial portion of the housing market.

Specific design standards are an effective means of ensuring that multi-family housing provides quality, affordable living for residents without negatively affecting the character of the surrounding community.

Examples of design standards used in other communities include:

1. *A cap on the density allowed, usually measured in terms of dwellings per acre or dwellings per square feet(examples);*
2. *A cap on the maximum amount of land occupied by buildings, parking lots and other paved surfaces to ensure adequate provision of open space;*
3. *A cap on the size and height of structures allowed to ensure any multi-family development fits the scale of the community. This can be accomplished by limiting the number of dwellings per building , and number of stories allowed;*
4. *Minimum yard setbacks that ensure adequate buffering for adjacent lower density residential areas. Buildings and parking would be prohibited within any required yard;*
5. *Minimum setbacks between buildings on the site to ensure adequate provision for light, air, access, and privacy in the arrangement of the buildings to each other;*
6. *Minimum requirements for the set aside of land for outdoor recreational uses by residents (10% of the site or 1,000 square feet per dwelling unit is commonly used);*
7. *Minimum requirements for landscape plantings within and on the periphery of the site, including numbers and sizes of trees and shrubs.*

Standards such as the above can still allow for both substantial density on a site and

small zoning districts, comprised of 1 to 3 acres each, that allow detached and attached dwellings on a few small lots scattered through the hamlet. These districts should be widely spaced through the hamlet at a minimum distance between them to minimize their visual impact on hamlet character.

Multi-family developments with a maximum density of 8 units per acre could be constructed in new multiple residence zoning districts. The size of these districts should be limited to preclude the construction of large-scale apartment complexes that could adversely impact the character of the community. Instead the Town should limit the size of such districts to between 2 and 2.5 acres in area so that a maximum of no more than 20 units could be built in any one complex.

Village- or hamlet-residential zoning districts have been developed elsewhere in Upstate New York to accommodate such development. These zoning districts encourage more compact development by reducing lot size requirements as well as setback requirements. Side yard requirements are reduced to 5-10 feet or less and lot coverage limits raised. These special districts should be established in a manner that keeps them from dominating a hamlet, but maintains a mixture of development opportunities.

Crafting land use regulations and guidelines that would allow the hamlets in the town to evolve into attractive, vibrant communities will require considerable care. Clear guidelines for mixed use development that might combine residential with retail commercial uses are necessary to ensure that future development results in quality affordable housing, adequate parking, and a design and character that is compatible with the existing community character. They must continue to encourage home ownership.

For most parcels in the hamlet the density should be maintained at its current level. To control the development process, the town should require that a developer seeking a higher density on a given parcel request a zoning change, placing the responsibility on the developer to prove why their proposal fits with the plan's vision for hamlet growth. This procedure for the approval of new development is much more likely to give the town the power to create the type of heterogeneous set of densities sought for the hamlets.

These special districts within the hamlet could be designated for higher density opportunities with the following standards:

1. Setback and design standards for the street-facing facades of buildings. Maximum front yard setbacks are a tool commonly used in many communities, primarily to encourage return to the historic pattern of downtown commercial buildings being built at the edge of the public right-of-way;

2. No side yard setback requirements for attached structures, and minimal setback requirements for detached structures;

3. Limiting parking in front of buildings to that provided for on the street. Off-street parking must be located to the side or the rear of the property;

4. Increased lot coverage limits to 80 percent or more;

5. Strict definition of the types of retail or service establishments that would be allowed within the mixed-use area. Automobile-oriented businesses such as gas stations, convenience stores and fast food restaurants should be excluded as permitted uses.

6. Additional side- and rear yard buffers where a mixed-use zoning district would abut a residential district.

In communities where municipal water and sewer services are available lot sizes in the range of 11,000 square feet are used to encourage compact residential development in areas surrounding the core of a hamlet or village.

Specific standards for such development are critical, and should include:

1. Limiting uses to single- and two-family homes;

2. Street design standards that ensure on-street parking lanes, curbs and underground stormwater drains, and sidewalks;

3. Standards for landscape plantings within the public right-of-way, including spacing, types and sizes of trees and shrubs;

4. Provisions for garages, including prohibitions of free-standing garages in front yard areas, standards for alleys that could provide access to garages in the rear yard areas of lots, and for additional setbacks and shared driveways where alleys are not practical;

5. Maximum overall site densities, building height limit of 2 stories, bulk limits and maximum site coverage limits;

6. Development done in a manner that architecturally fits with the current styles of the town;

7. A mixture of appropriate commercial and residential uses in the hamlets controlled through initiating maximum set-backs and preventing drive-through businesses.

Municipal water and sewerage services give greater flexibility in designing a hamlet environment. These are available in Varna, but not in Etna. Etna however is close enough to the existing water and sewer lines that serve the area around the NYS Rte. 13/NYS Rte. 366 intersection, that extension of service is possible. As with all areas designated in this plan to be logical locations for future implementation of water and sewer line, this plan does not advocate construction of new lines in advance of development. Such extension of service should be considered after a density has built up in the area to warrant supporting it. Once such service has been added, it can provide the catalyst for redevelopment of that hamlet and provide the infrastructure to support the envisioned Suburban Residential area to the hamlet's west.

In addition to the recommended changes in land use policies within the hamlet areas, there needs to be an investment in the physical infrastructure of the hamlet areas, particularly in Varna.

NYS Rte. 366 in Varna, with its wide travel lanes and road shoulders and attendant 40-MPH speed limit, is designed solely to function as a highway that allows traffic to move quickly and effortlessly through the hamlet. The width of the highway and attendant 40 MPH speed limit, while successful in moving traffic, have had a significant adverse impact on the quality of life of Varna residents, and the character of the community.

The roadway should be reconfigured wherein its original primary function of quick and efficient movement of traffic is subordinated to it functioning as a village "Main Street." Toward this goal the Town

should work with the New York State Department of Transportation to redesign and secure funding to rebuild the roadway to:

1. Eliminate the existing highway shoulders and replace them with curbing, tree lawns and sidewalks within the highway right of way;

2. Provide for on-street parallel parking opportunities on at least one side of the on-street;

3. Create a safe intersection at Freese Road and Mt. Pleasant Road;

4. Reduce the speed limit through the hamlet to 30 MPH.

Reconfiguration of NYS Rte. 366 from a road designed as a highway to one designed as a main street would significantly enhance the livability of Varna. This in turn would make the hamlet more attractive to investment in new family-oriented residential and neighborhood scale commercial development. Figure 5-3 illustrates how the highway-to-main-street and proposed hamlet zoning concepts could be applied in the vicinity of the Freese Road/Mt. Pleasant Road intersection.[**]

It is important to the maintenance of the hamlet of Etna that the area south of the hamlet and north of Rt. 366 is kept as a green-space corridor of low-density conservation land use, with some rural residential land use surrounding the intersection where Rt. 366 leaves Rt. 13 to move north. A green-space corridor of low-density conservation land should be maintained to the west of this area along Rt. 13 as an important visual break for travelers on Rt. 13, separating the built-up areas surrounding Ithaca from the rural residential community of Dryden.

Rural Residential Development

Beyond the periphery of villages and hamlets, lower residential development densities would be allowed in areas designated as Rural Residential. The intent of these Rural Residential areas is to allow residents that desire to do so the option of living in a rural environment. In these areas agriculture is also expected to be a major land use well into the future and permitted in any future zoning regulations.

In the Rural Residential areas single- and two-family homes would represent the predominant form of development, at an overall density of 1 dwelling every two acres. This overall density is proposed as a means of reducing the overall development potential of the area. It should not be interpreted however as a recommendation that a minimum lot size of two acres be established. Rather within the areas designated for Rural Residential development the Town should promote the use of cluster subdivision design whenever possible.

In many areas, even without municipal water or sewer services being available soil conditions and County Health Department regulations may allow lots as small as one acre or less. *As Figure 5-1 illustrates*, even at the envisioned lower development density cluster subdivision can be an effective tool in protecting open space resources in such areas.

Because of their scenic and ecological value, there are three areas within the town where cluster subdivision should be made mandatory. These areas are:

1. The areas adjacent to Dryden Lake, in order to maintain a substantial buffer between future development and the lake shore as well as to preserve views of the lake from nearby roads;

2. The areas adjacent to Etna Swamp, in order to maintain a substantial buffer between future development and the wetland complex as well as to preserve significant views across the valley from NYS Rte. 13;

3. Undeveloped areas of Ellis Hollow and Snyder Hill where Rural Residential land uses are proposed, to preserve ecologically sensitive areas such as wetlands and the Cascadilla Creek corridor, and to protect scenic vistas from nearby roads.

*

* Figure 3 is for illustrative purposes only and does not represent any proposal or proposals for developing or re-developing the properties shown, nor any endorsement by the Town of Dryden of any specific designs for development or re-development.

Fig. 5-3

The provision of municipal water or sewerage service is not proposed for such areas, nor is public transit service, unless a transit route happens to pass through the area.

Approximately 2,270 acres of land are classed as Rural Residential on Map 5-1. At the overall target density of one dwelling every two acres about 1,135 new dwellings could be accommodated in these areas. Since 1985 residential dwelling construction in rural area of the town has averaged about 290 dwellings per decade. This growth is well above a desirable rate of growth in rural areas. Even if should it continue, however, there is adequate capacity within the proposed Rural Residential areas for about twice this number of new dwellings. This capacity when combined with the development potential within the proposed Agricultural and Conservation/Open Space areas, is expected to adequately accommodate demand for rural homes in the coming decades.

Commercial Development

Reflecting the desire of residents that large-scale commercial development should be limited to existing centers of population in the town and elsewhere in Tompkins and Cortland County, the Future Land Use Plan envisions only a small increase in the amount of land dedicated to commercial retail and service enterprises[15]. The type of commercial development that this plan envisions would be a continuation of the pattern that exists in the town today, specifically small neighborhood-oriented businesses providing goods and services to a primarily local market. Commercial development that is out of scale with existing businesses should not be encouraged in Dryden.

In these areas agriculture is also expected to be an appropriate land use and should be permitted in any future zoning regulations.

Outside the hamlets and villages, such land uses are proposed to be limited to existing pockets of commercial development located primarily along NYS Rte.13 and NYS 366.

Some opportunity for expansion of commercial development – approximately 55 acres – is provided for in the plan. This opportunity for future commercial development is located in and around the existing commercial areas along North Street, and around the intersection of NYS Rte. 13 and NYS Rte. 366. Available land in these areas, combined with land available in the hamlets and village business districts, is expected to be adequate for the amount and type of commercial development necessary to serve town residents in the coming decades.

Industrial/Office/Research

Although it occupies a small proportion of the town's land area, industry continues to be an important economic sector. Currently there are approximately 275 acres of land dedicated to industrial uses in the town and another 412 acres dedicated to utilities. These utilities include the electrical distribution system of New York State Electric and Gas Corporation, and the gas pipeline compressor station in Ellis Hollow.

This plan proposes that approximately 125 acres of undeveloped land be allocated for future development for industrial, office and research and development type enterprises. The types of industry envisioned in this plan would be light industrial and warehousing enterprises. These manufacturing establishments would be characterized by manufacturing processes that include fabrication, assembly, treatment, packaging and distribution of finished products or parts, predominantly from previously processed or prepared materials. The processing of raw materials is generally absent in light industry, and energy demands are generally limited to electricity.

In addition to light industry, the areas proposed for future industrial development could also accommodate the development of office buildings that could house corporate administrative operations and service enterprises. Research and development enterprises such as computer software and equipment design businesses are another type of use in these areas.

In these industrial/office research areas agriculture is also expected to be an appropriate land use and should be permitted in any future zoning regulations.

This land is located within and adjacent to the existing industrial areas in the vicinity of the NYS Rte.13/Hanshaw Road intersection; the area south of Etna between NYS Rte. 366 and Kirk Road, and north

[15] The Future Land Use Plan map is a generalized map and not intended to illustrate proposed land use at the level of individual parcels of land. It thus does not show many of the existing stand alone businesses in the town, which are expected to continue under this plan.

of Dryden village off NYS Rte. 38. The largest expansion of industrial land is proposed for the area north of Hanshaw Road and southeast of the Ithaca-Tompkins Regional Airport. Because it is below the flight approach to the airport runway this area is not ideal for intensive residential development. It is also located away from major concentrations of residential development, and easily accessible to municipal water and sewerage service, as well as NYS Rte. 13.

Although municipal water and sewerage service is not available to the area south of Etna, extension of service to Etna would make it possible to also serve this area.

Institutional

In terms of land use planning, little change in the amount of land used for institutional uses, or any changes in existing zoning or land use policies related to institutional uses is envisioned in this plan. The amount of land dedicated to such uses increased substantially in the 1960s and 1970s with construction of the Dryden Central School and TC3 campuses north of Dryden village.

The proportion of town population comprised of school age children (ages 5 to 19) in 2000 was approximately 22 percent according to the 2000 Decennial Census. This represents a decrease from 30 percent in 1960, a decrease that can be accounted for by the overall decline in family size in the United States in the last four decades. If the town experiences the maximum envisioned population growth of just over 3,000 residents in the next two decades, and the proportion of school age students remains the same over the next two decades as it was in 2000, there could be an increase in school age children of about 675 students. This potential increase in student population may require expansion of Dryden Central School District or Ithaca City School District facilities at some point in the future, however given the locations of existing facilities and the amount of land owned by Dryden Central School District in particular, any such expansion is not expected to have any significant land use implications.

Highway Corridor Overlay

The Rte. 13 corridor between Irish Settlement Road and Etna Lane poses a particular planning challenge. High traffic volumes adversely impact the utility of land adjacent to the highway for residential development. Also as the corridor experiences further development in the future, there is the potential for substantial increases in the level of congestion on Rte. 13 unless steps are taken now to control that potential.

The conflicts that have occurred where commercial and industrial development has occurred in close proximity to residences are an ongoing land use issue within the corridor. In several instances long-time residents of the area have been adversely impacted by new non-residential development adjacent to their properties. These newer industrial or commercial enterprises are seen as exacerbating the impact of the heavy traffic on the road.

The Town of Dryden should establish a Highway Corridor Overlay area in the areas recommended for Rural Residential along Rte. 13 between Irish Settlement Road and Etna Lane. Overlay districts are commonly utilized in zoning ordinances to supplement the provisions of a zoning district. They are commonly applied in cases where particular circumstances warrant an added measure of control over development, such as historic districts, highway corridors or environmentally sensitive areas. They can also be utilized to expand upon the allowed uses within designated areas of one or more zoning districts.

This proposed overlay area would extend to a depth of 500 feet from the highway. It would allow a mix of small-scale retail, service enterprises, office buildings that could house corporate administrative operations and research and development enterprises such as computer software and equipment design businesses as well as residential development. Churches and other institutional land uses would be appropriate uses of frontage lands along Rte. 13 within the proposed Highway Overlay District.

The objectives of this proposed Highway Corridor Overlay area are to:

1) Allow for mixed use development within the corridor that can both exploit the opportunities for economic development and encourage the development of decent affordable housing;

2) Ensure that highway access standards are in place that would adequately control future development in the corridor in a manner that reduces potential traffic congestion;

3) Ensure that standards for the envisioned residential development and retail, office, research and development businesses are in place that would mitigate potential adverse impacts of such development and reduce potential land use conflicts.

Examples of standards that could be included in an adopted Highway Corridor Overlay would be standards that control access to and from Rte. 13. In some communities, access to major highways such as Rte. 13 is limited to one curb cut or driveway entrance per parcel. This standard works well especially where large tracts of undeveloped land front on the highway, because it discourages the subdivision of small frontage lots along the highway and a proliferation of new driveways. In lieu of multiple frontage lots and driveways along the highway, future development would be directed to a new road off the main highway.

Two other approaches that can be utilized by communities are 1) the establishment of minimum distances between curb cuts and 2) requiring that adjacent properties share a common driveway or curb cut. These approaches spread out and control the number of curb cuts or driveways. They allow the community to reduce the potential number of conflict points between traffic entering or exiting the highway, and through traffic. In doing so the potential for highway congestion can be reduced, highway safety levels maintained and the need for costly widening and other improvements avoided.

Finally, where a tract of land has frontage on both Rte 13 and one of the several side roads that intersect it, the Town should encourage access off the side road. This would both eliminate added curb cuts along Rte 13 and take advantage of an existing intersection.

Although the envisioned resident and non-residential land uses such as retail, office, services and research and development businesses are not compatible, they can still occur adjacent to or in relative proximity to each other without adverse impact to the quality of life in future residential neighborhoods. This is easily accomplished by establishing ahead of time standards to guide residential and non-residential development.

Particular attention should be paid to the interface between future residential and future non-residential land uses within the overlay area. The most effective tools for reducing conflicts in these areas are distance and visual buffers. Additional setbacks for future residential lots (i.e. requiring 60-ft. rear yard setbacks instead of 30-ft. setbacks.), and additional buffer areas on future non-residential development sites where they abut future residential development, should be mandated. Also visual buffers such as earth berms and landscape plantings should be required where non-residential development abuts residential development. This combination of distance and visual screening would substantially reduce the potential adverse impacts such as noise, light pollution, odors and other aspects of retail, office, service and other non-residential land uses.

Controlling the scale of future office or research and development enterprise development within the proposed Highway Corridor Overlay area will be critical to maintaining the desired semi-rural character of the corridor. An effective approach to controlling development scale is to: 1) limit the number of stories to two stories or less and overall building height to 40 feet or less[16]; 2) limit the amount of site coverage by buildings, parking lots, driveways and other impervious surfaces to 40 or 50 percent; and 3) require substantial front yard setbacks from the highway right of way.

Limiting lot coverage would ensure the reservation of enough open space on a development site to provide for adequate landscaping, setbacks between adjacent properties and buffer areas. Landscape plantings can also be more effectively utilized within these required open space areas to screen unsightly views into the site. Parking lots, driveways and other exterior impervious surfaces should be included in the lot coverage calculation. In general the amount of land taken up by parking facilities for office complexes is equal to approximately 1.5 times the gross floor area of the building(s). For instance, utilizing the above-recommended definition of site coverage, a two-story, 10,000 square foot office building, parking (1 space/200 sq. ft. floor area) and attendant driveways would cover approximately 25,000 square feet of land.

With a 50 percent ceiling on site coverage, another 25,000 square feet of land (0.57 acre) would be dedicated to open space. With a 40 percent ceiling, some 37,500 square feet of land (0.86 acre) would be dedicated open space. This open space can be in the form of landscaped lawns, left in a natural state or a combination of both.

Highway noise can have major ramifications for residential development along busy corridors such as Rte. 13. Two commonly identified sources of highway noise are tire noise and noise associated with large trucks accelerating or decelerating. The most effective remedies for highway noise are solid barriers between the source of the noise and distance. Solid barriers have become very common along major

[16] The two-prong approach of limiting the number of stories above grade to two, and overall building height to 40 feet or less, would allow the design option of peaked or gabled roofs on commercial or office structures, but preclude more massive three and four story structures with flat roofs.

expressways in urbanized areas; however they are expensive and unattractive. In areas like the Town of Dryden, additional setbacks from the highway right of way can be a cost-effective approach. Generally, the level of sound decreases fifty percent for every two hundred feet of horizontal distance from the source.

Within the proposed Highway Corridor Overlay the Town should enact larger setbacks from the highway right of way for residential development. Because the Highway Corridor Overlay area will allow a mix of land uses, setting a two-hundred feet buffer setback for residential development would not completely eliminate use of the frontage along the highway. Those lands could be reserved for non-residential development. The use of cluster subdivision design for residential development would be another effective means of creating an open space buffer between residential development and Rte. 13.

Agricultural Areas

This plan anticipates that agriculture can continue to be a major and valuable land use in the town. Even as this plan anticipates a need to accommodate up to 1,800 new dwelling units, still envisions placing some 16,000 acres of land currently farmed in areas reserved primarily for agricultural use. Several hundred acres of actively farmed land in small, non-contiguous tracts also fall into the Rural Residential and Conservation/Open Space categories, where limitations on development afford some protection also.

Notwithstanding the above, the agricultural sector in the town will require a level of attention that it has traditionally not received.

The primary emphasis of future land use policies in the town as they affect agriculture must recognize agriculture as a legitimate, long term land use on par with residential, commercial, industrial and other traditional land use, and not as merely a temporary state pending development for a "higher" use. This plan thus recommends a new zoning district for the agricultural areas designated on Map 5-1 Such district should grant agriculture the primacy as a land use that is in practice according residential development in a residential zoning district, commercial development in a commercial district, or industrial development in an industrial zoning district.
The town also needs to recognize the enterprise nature of contemporary agriculture. Any new zoning regulations for the agricultural areas must be flexible enough to allow farmers to make a reasonable economic return on their substantial investments. Today many farmers supplement their incomes with income generated by an agriculture-related business such as grain, feed, seed, farm implement or farm building dealerships, as well as wholesale and retail distribution of agricultural products. By providing such options for generating revenue in its zoning regulations, the Town can allow the farmer or farmland owner alternatives to the sale of land for development purposes.

It is critical however that any zoning regulations that would allow agriculture-related enterprises carefully define what such enterprises could and could not include. A sample definition might contain language such as
"…retail or wholesale enterprise providing services or products utilized in agricultural production, such as structures, agricultural equipment and agricultural equipment parts, batteries and tires, livestock, feed, seed, fertilizer and equipment repairs. Wholesale or retail sale of grain, fruit, produce, trees, shrubs, flowers or other products of agricultural operations are also included in this definition."

Care must be taken in crafting zoning language that such enterprises do not evolve into retail operations that primarily sell products not produced on a farm or non-farm-produced items or services that are not marketed primarily to the farm community. For this reason some communities place limits on the sale and service of items such as lawn mowers and other lawn and garden equipment and supplies, ATVs, or snowmobiles

Important to ensuring the continued viability and presence of agriculture in the town of Dryden will be preserving large tracts of contiguous, actively farmed land, without adversely impacting the equity farmers have in their lands.

An effective and equitable way to do so would be through a purchase of development rights (PDR) program. The Town of Dryden should establish an Agricultural Land Preservation Program as a means of protecting its best agricultural lands. This program would provide the means by which the Town of Dryden could preserve the Town's farmland resources for future generations by purchasing the development rights to the land.

The program would be a voluntary program through which a willing buyer -- the Town Board on behalf of all Town residents -- would purchase from willing sellers the development rights to their land. In exchange for a monetary consideration the landowner would convey to the Town of Dryden an *agricultural conservation easement*.

The purpose of the proposed Agricultural Land Preservation Program would be to:

1. Protect the most viable agricultural lands by acquiring agricultural conservation easements that prevent the development or improvement of the land for any purpose other than agricultural production.

2. Provide agricultural landowners with monetary compensation in exchange for their relinquishment of the right to develop their property.

3. Encourage a long-term commitment to preservation of agricultural land by landowners through financial incentives and stabilization of land use patterns favorable to agriculture.

4. Enhance the economic viability of the Town's agricultural economy.

5. Protect the Town's farmers and agricultural landowners from incompatible non-agricultural land uses that may render farming impracticable.

6. Concentrate financial resources in a manner that will ensure the purchase of agricultural conservation easements for the protection of the largest amount of agricultural land possible.

The purchase of development rights (PDR) as a way to protect agricultural and other open space resources is based on the tradition that ownership of land conveys to an individual or individuals a variety of rights. Examples of such rights include the right to sell or lease, enter onto the premises, water rights, mineral rights, or easements for utilities or access. Landowners have the ability to convey such rights, through sale, lease or other mechanism, to other parties, while retaining ownership of the land.

Another right that comes with land ownership is the right to develop the land to the extent allowed by law, including zoning and subdivision regulations. By purchasing from the landowner the rights to develop their property (development rights) the Town of Dryden would remove the potential for development from the land, and permanently preserve it for future agricultural use. The landowner would retain all other rights to their land, including the right to farm, rent, sell or give it away.

After the sale of their development rights, landowners retain the right to control access to their land. The sale of development rights to the Town of Dryden would not convey to the Town the right to allow the public access to the landowner's property for hunting, fishing or other activities. Conversely, the sale of development rights to the Town does not limit a landowner in the right to allow public access to the land.

In some cases, the sale or donation of an agricultural conservation easement to the Town of Dryden may have positive tax benefits for the landowner. Participation in a PDR program can also be a useful tool in estate planning and the transfer of a farm to the next generation. The various tax-related and estate planning implications of conveying an agricultural conservation easement however are too numerous and complex to be discussed in this document. Farmers and farmland owners should consult their own advisors prior to participating in any PDR program.

An additional method that should be utilized to channel large-scale residential development away from agricultural areas is to reduce the potential density of future residential development in those areas designated Agricultural from the current level of approximately one dwelling per acre to a lower density, such as one dwelling for every two acres. This overall density is proposed as a means of reducing the overall development potential of the area. It should not be interpreted however as a recommendation that a minimum lot size of two acres be established. Rather within the proposed agricultural areas the Town should promote the use of cluster subdivision design whenever possible.

In many areas, even without municipal water or sewer services being available soil conditions and County Health Department regulations may allow lots as small as one acre or less. *As Figure 5-1 illustrates*, even at the envisioned lower development density cluster subdivision can be an effective tool in protecting valuable agricultural land resources in such areas.

To ensure that the Town's agricultural community continues to have a voice in local government decision making, the Town Board should establish an advisory committee comprised of members of the farming community. The primary charge of this committee should be to advise the Town Board and other local boards and committees on matters related to agriculture in the Town of Dryden. The committee could also serve as a liaison with the Tompkins County Agricultural and Farmland Protection Board and oversee the administration of the proposed purchase of development rights program.

Another consideration with regard to the agricultural landscape in the town is the disappearance of the traditional wooden barn. The decline in the number of these structures can be attributed to the abandonment of agriculture, consolidation of farm operations into larger units and functional obsolescence.

If the Town of Dryden desires to preserve these traditional rural landmarks, then ways to encourage adaptive re-use of the structures need to be pursued. New York State has recently established a grant program to fund private restoration of historic barns still actively utilized. This is an extremely limited program, however.

The Town of Dryden should consider ways in which it can encourage adaptive re-use of barns. One means may be to allow, through zoning regulations, small business or manufacturing enterprises owned and operated by the owner of the structure. Such "cottage industries" could be limited in their scale and impact through controls on number of employees and types of business activities.

Conservation/Open Space

As detailed in Chapter 2, the town contains within its boundaries a variety of ecological and open space assets within its boundaries. Many of these are afforded some protection by being within the bounds of the 10,760 acres of state forest land or within the 16 privately owned preserves located in the town. This acreage however only represents about one-third of the land within the town that warrants protection from the impacts of intensive development. The remaining two-thirds consist of land that is opened to development and in most cases zoned for development.

As with agricultural land, a key means of protecting these assets will be to channel major development away from these areas. This plan thus proposes that the Town enact zoning that provides for reduction in development densities from the current level of approximately one dwelling per acre to a density of one dwelling for every ten acres or more. In addition other more intense land uses such as commercial or industrial uses, quarrying and other extractive industries should not be allowed.

In the areas designated as Conservation/Open Space agriculture is also expected to be an appropriate land use well into the future and should be permitted in any future zoning regulations.

This reduction in density level and intensity of land uses will still allow for a substantial amount of residential development within the areas recommended for Conservation/Open Space designation. Even at one dwelling per ten acres, there is still potential for over some 2,000 dwellings within these areas. Residential development will still continue to occur, albeit not at the same levels as possible in the past.

The use of cluster subdivision design can be an effective tool for the protection of UNA's and other open space resources. As shown previously in the Etna Swamp case study (Fig. 5-1), cluster subdivision, even when the development consists of single-family detached homes, can create substantial buffer areas between development and environmentally significant resources. An additional benefit of cluster subdivision design in the Conservation/Open Space areas is that, with a 1 dwelling/10 acre density, and a two-acre maximum lot size cap within a development, up to 70 or 80 percent of a tract can be protected as permanent open space.

This permanent open space could have a conservation easement placed on it and be incorporated into one of the subdivided lots – creating a "mega-lot." The open

space however could also be donated or sold to a public or private preserve or park. In recent years Cornell University has received two such donations of land, totaling almost 50 acres, for incorporation into its Clausen Swamp Natural Area holdings in the Town of Ithaca.

The Town of Dryden will encourage other political entities (i.e., the County and the State) to recognize lower assessed values on land encumbered by conservation easements.

Dealing with Radon

While radon gas is not typically considered a factor in land use, transportation and other policy matters covered in a comprehensive plan, it is a serious health concern and quality of life issue that the Town of Dryden can nonetheless address on a local level. Education about radon, the dangers it poses and steps that can be taken to reduce exposure to radon, is considered key to reducing the danger nationally. The Town is in a unique position to provide information and educational materials to contractors and residents who are planning to build within the town through the Building and Code Enforcement Office. Informational packets for homeowners and others that are readily available from state and federal agencies should be acquired and be made available at Town Hall to residents

Town residents can and should take action themselves. Radon testing kits are now widely available, relatively inexpensive and easy to use. Individual homeowners should thus test their home for radon. If levels of radon above the recommended safe thresholds set by the Environmental Protection Agency are detected, in most cases fairly simple steps can be taken to reduce them to a safer level.

The Town of Dryden should also investigate amendments to local building codes that could require radon resistant design for new structures.

Open Space & Environmental Resources

While the above land use recommendations regarding future land use can reduce the impact of future growth on the environment, the Town of Dryden should continue and expand its efforts to protect and enhance environmental quality through direct actions.

The Town of Dryden Conservation Advisory Board (CAB) can play an important role in such efforts. The Town Board established the CAB in 2000 to provide advice and input on issues related to natural resources planning in the Town of Dryden. The group has completed an Open Space Inventory of the town. This document provides data for developing sound open space planning and protecting natural and scenic resources of the Town of Dryden.

The CAB can be an effective partner with the Town Board and Planning Board in future land use planning decisions. The Town Board and Planning Board should take steps to integrate the CAB into their decision making processes by soliciting the body's input early on, and by incorporating the Open Space Inventory into resource management and land use planning efforts.

A second step that the Town can take to enhance the protection of important ecological lands would be to designate specific areas as being *Critical Environmental Areas.* (CEA) A CEA is defined by the State under 6 NYCRR PART 617 as being a specific geographic area designated by a state or local agency, having exceptional or unique environmental characteristics.

The criteria for designation as a CEA include the presence of an exceptional or unique character covering one or more of the following:

1. a benefit or threat to human health;
2. a natural setting (e.g., fish and wildlife habitat, forest and vegetation, open space and areas of important aesthetic or scenic quality);
3. agricultural, social, cultural, historic, archaeological, recreational, or educational values;

4. an inherent ecological, geological or hydrological sensitivity to change that may be adversely affected by any change.

Many of the Tompkins County Unique Natural Areas (Map 2-3) within the town are likely to qualify as Critical Environmental Areas as well. Designation as CEAs would give these areas the added protection of requiring a more detailed review of environmental impacts under the State Environmental Quality Review process.

To permanently protect particularly environmentally sensitive lands, the Town of Dryden can also work with the Finger Lakes Land Trust, Cornell University Plantations and the Tompkins County Environmental Management Council to and encourage landowners to take steps to preserve their lands through donations of conservation easements.

Steps to better protect the water resources of the town are necessary at this time, in order to protect them for future generations.

Wetlands continue to be at risk. State and federal maps that are the traditional sources of wetland location information do not show all wetland areas. The Town of Dryden should adopt the criteria set forth in the Federal Manual for Identifying and delineating Jurisdictional Wetlands as a means of identifying and protecting wetlands. Such a step would both enhance the protection of wetlands in the town, and protect landowners from violating the Clean Waters Act and other federal laws.

The Virgil Creek Aquifer study should be completed and the results incorporated into planning and environmental management efforts. The remaining aquifers in the town, including bedrock sources, also need to be inventoried and mapped in order to determine effective protection and management strategies. Given that Route 13 parallels the edge of a large aquifer along Fall Creek (according to *Unconsolidated Aquifers in Tompkins County*, USGS, 2000), any proposed new development along Rt. 13 should be carefully evaluated with respect to its potential impacts on the Fall Creek Aquifer.

The Town of Dryden comprises a large portion of the Cayuga Lake watershed. Water quality in Cayuga Lake is affected by discharges and runoff from a wide spectrum of land use activities in the town. These include non-point sources such as runoff from construction sites, agricultural fields and barn yards, residential lawns, and parking lots. Wastewater discharges from both municipal and private sources within the town also enter the lake.

The Town should continue to be an active participant in the Cayuga Lake Watershed Intermunicipal Organization. This organization furthers watershed studies and protection activities through the IO and other watershed organizations.

Historic Resources

The state of the town's substantial number of historic or architecturally significant structures should be determined through a comprehensive inventory. Such an inventory should be conducted in accordance with the national standards set by the Secretary of the Interior. Adherence to these standards will ensure appropriate levels of uniformity and objectivity in assessing structures for their significance. It will also ensure that any documentation efforts can be used in future applications for designation of a structure or structures for listing on the State and National Register of Historic Places, or the creation of historic districts.

The completion of an inventory can have secondary benefits as well. They can provide an opportunity to educate residents of their local history, and even the history of their home. This in turn can raise awareness of the importance of protecting historic and architectural resources and the proper approaches to doing so amongst members of the public. Finally, property owners may be encouraged to take measures to preserve their properties of significance.

After completion of an inventory the Town of Dryden should establish a process by which historic structures can be better protected. Communities can enact landmark preservation ordinances that allow municipal review proposed changes to structures or the sites that they sit on if they are listed on an officially adopted list of local historic structures, or are listed on the State or National Register. Outside of a formal process, the Town of Dryden should tap the resources available through the State Office of Historic Preservation (SHPO) in cases where concern arises over specific structures. The agency has a substantial database of cultural and historical sites throughout the state, and can also assist local municipalities in interpretation of and adherence to state and national regulation regarding historic sites.

Park & Recreational Resources

To address the current lack of park and recreation amenities in the town, and to meet future needs, this plan proposes that the Town of Dryden create a system of public park facilities in the coming decades.

The envisioned park system would comprise up to ten parks. (Map 5-2) Nine of the proposed parks would be small facilities -- about one acre in size -- nested within existing and future Hamlet or Suburban Residential areas. These parks are intended to serve homes within a one-half mile radius, or comfortable walking distance. They would offer limited recreational opportunities, generally in the form of a play structure for children, benches, picnic tables, a lawn area for informal activities, and walkways. The typical uses of these parks would be neighborhood residents and children who will generally stay for an hour or less. Hence facilities such as comfort stations and water fountains would not be included in their design.

Because the primary access to these parks will be by foot or bicycle, whenever possible these parks should be located along the proposed bicycle and pedestrian path system. Parking facilities will be limited to parking for handicapped persons only.

In Etna and Varna and Ellis Hollow, it may be more cost effective for the Town to partner with the community associations to maintain and improve the existing community association facilities instead of developing a new park for those locations. There are already precedents for such partnerships, such as the tennis courts at the Ellis Hollow Community Center, constructed with government grant funding. At the Coddington Road Community Center in the Town of Ithaca a baseball diamond and pavilion are another example of local government and community association working in partnership to provide recreational facilities.

Section 277 of NYS Town Law grants town planning boards the authority to require that residential subdivision plats show "a park or parks suitably located for playground or other recreational purposes." Section 274 grants planning boards authority to require similar dedications in cases where they review a site plan for residential development such as apartment complexes. Prior to requiring that land be dedicated, the planning board must make an evaluation of the present and future needs for park and recreational facilities, based on projected future population growth to which the proposed subdivision would contribute.

The use of this authority appears possible in several locations in the town (Map 5-2), such as in areas of future development around Dryden and Freevile villages, and west of Etna. In these locations there are several large tracts of land where potential exists for relatively large-scale residential subdivisions. Development of these parcels is thus likely to create population growth that would warrant request to dedicate land for park and open space purposes.

Both Section 277 and Section 274 further grants a town planning board the authority to require a payment of cash in lieu of land, should the board make a finding that a park site is warranted, but determines that no suitable site exists on the property on which development is being proposed. The amount that the planning board could require in lieu of dedication of land is established by the town board. The funds collected through this mechanism must be deposited into a trust fund dedicated exclusively for park land acquisition or the development of park, playground or other recreational facilities.

A system by which the Town of Dryden can accept both dedications of land or cash in lieu of land should be established in the near future. The payment of cash in lieu of land could be especially important, given that many of the tracts of land within the Suburban Residential areas are relatively small and are likely to not yield suitable sites for public parks. Nonetheless their development will likely generate a significant percentage of the new homes in the town, and hence a significant percentage of new park and recreation facility users.

Proposed Community Park

The tenth proposed park would be a community park -- a larger facility designed to serve the entire town and feature areas for organized athletics as well as areas to accommodate a wide variety of informal recreational activities. The program for such a park should include, at a minimum, two soccer fields and three baseball or softball diamonds, all designed and built to standards for league sports competition. In addition up to two basketball courts and four tennis courts should be included.

Up to three picnic pavilions to accommodate larger group gatherings, plus a number of individual picnic tables with nearby charcoal grills area also recommended, as well as one play structure or playground facility. Because the average user of this facility will be staying for one to two hours or longer, a comfort station with restrooms, drinking fountain or other source of potable water should be included in the

park program. Parking too is a necessary program element and given the activities envisioned, some 100 to 120 parking spaces may be needed.
The minimum recommended size of this park is 20 acres. Of this land area, 8 to 10 acres need to be relatively level in order to accommodate the envisioned baseball/softball fields and soccer fields with a minimum amount of earthmoving. Approximately five acres would be required to accommodate the remaining program elements. This acreage would not require a flat site.

The remaining 5 to 8 acres would be dedicated a third program element, the opportunity for park users to be in and enjoy a naturalistic area within the park. Also, acreage on the perimeter of the park should be reserved as a buffer area between the park and nearby residential areas. Although parks are generally perceived as being low impact land uses, they can generate substantial levels of noise from athletic events, concerts and other large community events.

The recommended location of the future community park is along Virgil Creek and the former Lehigh Valley Railroad grade between Dryden and Freeville. This area is recommended for several reasons:

1. It would be at the approximate center of population for the town.
2. It would astride the future bicycle/pedestrian path between the two communities, and hence be easily accessible via that path and others shown on Map 5-2.
3. The riparian corridor along Virgil Creek would be an ideal natural area component for a community park.
4. The park would be easily accessible by automobile from both NYS Rte. 13 and NYS Rte. 38 via George Road.
5. There is very little residential development in the area that could be negatively impacted by noise and traffic from major athletic or other events at the park.

Bicycle and Pedestrian Paths

Although covered in detail below under transportation, a system of bicycle and pedestrian paths should be developed as an integral part of the proposed system. These paths are envisioned as transportation linkages, but they can at the same time be extensions of the future town parks themselves.

Funding Future Parks

Using this plan as a basis, the Town of Dryden should establish a process whereby developers of future residential neighborhoods contribute land for public park and open space purposes, or contribute money to fund development of new park facilities in lieu of land dedication. This is allowed under the provisions of NYS Town Law, Section 277. Taking advantage of this provision of State law can substantially reduce the cost of developing a new town park system.

The development of the town's future park system will likely take place over a period of years, as new residential developments are approved and built out. Although it is possible to construct the proposed community park as a single capital improvement project, this is neither necessary nor recommended. The development of the proposed community park can be completed in several phases, as funding becomes available. By taking this approach the Town of Dryden can continue to tap its longstanding tradition of community volunteerism and private donations of funds for park improvements.

Locally the Town of Lansing has taken such an approach in developing its extensive and popular town parks system. Many of the facilities in Lansing's parks, such as baseball field and picnic pavilions, have been constructed through donations of funds and labor from various community groups.

Finally, there are continued grant programs at the state and federal level that provide matching funds for park development that the Town would be eligible to apply for. The Town has already successfully tapped such programs for the development of the Dryden Lake Trail and other park and recreation or bikeway projects. Upon adoption of this master plan the Town should aggressively pursue similar such grants to fund specific aspects of park system development.

Insert Map 5-2

Transportation

The existing transportation system in the town of Dryden is well developed and generally adequate for accommodating any future growth envisioned in this plan. The land use patterns proposed above are intended to maximize the efficient use of existing roads and highways, and minimize the need for major investments in new roads by the Town, County or State.

The primary issues with regard to the town's road network that should be addressed are: 1) controlling traffic congestion along NYS Rte 13; 2) the impact of excessive speed and the need to limit traffic volumes within the hamlets, villages and other concentrations of residential development; and 3) providing alternatives to the automobile as a means of transportation.

Most, and perhaps all of the new road infrastructure that may be required due to the development envisioned in the plan is expected to be constructed by the private sector, as future neighborhoods are being developed.

Controlling Congestion

Because it is a State highway, the most effective role that the Town of Dryden can play in controlling congestion on NYS Rte 13 is through land use and growth management policies. There are a number of policies that the Town should enact to limit the impact of future development on NYS Rte. 13.

The first would be to concentrate future commercial development within discrete areas, as recommended in the land use section above. The Town however should also, within these areas, implement regulations that also control the number, size and locations of curb cuts. Outside the hamlets, front yard setbacks in commercial areas should be deep enough to accommodate potential future highway widening projects.

In areas designated as Suburban Residential, future curb cuts on State and County highways should be limited to those needed for new public streets. Driveways should enter onto interior residential streets of new developments. Implementation of this policy will be especially important along Irish Settlement Road and Etna Road and West Dryden Road where they pass through proposed Suburban Residential Areas. Avoiding driveway curb cuts to the extent possible on these County highways will enhance their capacity to accommodate the increased traffic from future residential development.

This policy would both reduce potential for congestion and enhance the quality of life for residents. The Town should also maintain its requirement for deeper front yards for new homes built along County or State highways, and enact a similar requirement for new homes where the backyard borders a County of State highway.

In the case of both commercial and residential development, the construction of shared driveways to serve adjacent properties as a means of reducing curb cuts should be mandated.

Excessive Speed and Traffic Volumes

The problems of excessive speed and traffic volumes are issues that the Town of Dryden can address only partially. Speed limits on streets, roads and highways in areas outside village limits, such as in Varna, Etna, Ellis Hollow and along Slaterville Road are set by NYS Department of Transportation using criteria such as density of development, traffic volumes and accident data.

There are some actions however that the Town can take to influence State decisions on speed limits. The first is implementing the land use policies above that emphasize increasing development densities, especially in the proposed Hamlet areas. One of the primary criteria used by the NYS Department of Transportation is the density of development along the subject road or highway. Both Varna and Etna have undeveloped or under-utilized properties along NYS Rte 366 that provide the opportunity for compact development that in turn could trigger reductions in speed limit to more appropriate levels.

The Varna Community Association has proposed such an approach in its recently completed Varna Community Revitalization Plan. The plan calls for changes in zoning regulations that would better segregate residential and commercial uses, but also encourage higher density mixed residential, office and retail centers between 922 and 999 Dryden Road.

Where it is not possible to have speeds reduced, the Town should enact additional setbacks to help buffer new residential development from highway noise.

Excessive traffic volumes are expected to continue to be a problem for the several areas of the town identified previously. This can be attributed to regional geography, primarily the fact that these areas

are astride the major routes into and out of Ithaca from the east. The Town however can take steps to mitigate to some extent the impacts of traffic on neighborhoods.

The first would be to support speed reduction efforts of local civic and neighborhood groups wherever possible, and stepped up enforcement of existing speed limits. One of the major impacts of traffic on residential neighborhoods is noise, and the level of noise generated by traffic increases as speed increases. Reductions in traffic speed thus can mitigate somewhat the impacts of high traffic volumes.

Two areas of particular concern regarding traffic speed have been identified. The first is the section of NYS Rte. 366 between Freeville and NYS Rte. 13; the second is Fall Creek Road through the hamlet of McLean, a portion of which is in the Town of Dryden.

Promote the increased use of public transit and other alternatives to the automobile through more compact development patterns along transit routes, development of park and ride lots and development of a network of bicycle and pedestrian paths.

One of the reasons that high traffic volumes can have an adverse impact on communities is that the architecture many times is reflective of the pre-automobile era. The Town should thus encourage the use of new architectural technology that can both substantially reduce the impact of traffic on property and complement the character and fabric of the community. This would be useful especially in Varna and Etna hamlets, where there are opportunities for redevelopment.

New Streets

Under this plan, the majority of the new dwellings that would be constructed within the proposed Suburban Residential areas will be located on new streets. For the majority of new dwellings constructed within the Hamlet, Rural Residential, Agricultural and Conservation/Open Space areas, little or no new street construction is expected. Instead the traditional pattern if subdividing off land with frontage on an existing road is expected to continue.

Ideally some 80% or more of future homes in the town will be built within the Suburban Residential areas. If 80% of future homes were built within these areas, the Town could expect between 1,015 and 1,320 new dwellings within these areas. Assuming all of these were built as single-family homes on conventional lots fronting on new streets, somewhere between 12.0 and 15.6 miles of new streets may be built and dedicated to the Town over the next two decades. If 10% of these dwellings are constructed as attached townhomes or other type of attached housing this number could drop to between 11.1 and 14.4 miles.

If 10% of future new dwellings (i.e. only 70% of new homes are built within the Suburban Residential areas.) can be built within the two villages, then the number of new miles of additional streets could drop to between 10.8 and 14 miles if all new home were single-family homes, and between 9.9 and 12.8 miles of new streets would be necessary.

Specific recommendations for future streets are:

1. Setting the design speed for all new streets at 25 miles per hour. This will help create an environment where drivers are less comfortable exceeding speeds of 30 miles per hour.
2. Ensure that street construction specifications are up to date, and that they are stringently applied to developers as the construct new streets. This will help reduce maintenance costs after the Town assumes ownership.
3. Where appropriate, specifically on very low volume residential streets develop standards that allow for narrower streets to reduce impervious surface areas within new developments.
4. Limit curb cuts for new streets off major highways.
5. Ensure that the street network of the future allows traffic to flow in all directions into and out of neighborhoods, and provides residents with a number of choices for entering or exiting their neighborhood. This will help reduce the traffic associated impacts of development but more evenly distributing traffic from new developments onto several streets, rather than channeling it onto one or two.
6. Conversely, limit the use of cul-de-sacs in new residential development. While attractive to developers and prospective homeowners, cul-de-sac street systems tend to concentrate traffic on specific streets within a community and lead to traffic congestion as well as adverse impacts on the quality of life for residents on those streets. Cul-de sac streets also increase the cost of winter plowing and deicing, especially in cases where turn-arounds are not adequate to accommodate snowplows.
7. Where the use of a cul-de-sac is appropriate, ensure that the cul-de-sac turnaround radius is large enough to allow Town snowplows to turn without having to stop and reverse. A number of designs for cul-de-sac allow this, and should be incorporated into Town street standards.
8. Utilize Ferguson Road and Irish Settlement Road as a connector linking existing and future

development south of the village and along the two roads to NYS Rte. 13. (Map 5-2) To ensure both the capacity of this proposed link to accommodate traffic, and to protect future development along the two roads, the Town should 1) limit access to both to intersections with future public streets; and 2) require additional setbacks from the two roadways for future residential development.

9. The Town should work with Tompkins County to reconstruct the intersection of Ferguson Road and Irish Settlement Road to allow the two roads to function efficiently as the connector roads envisioned in 8 above.

The Town of Dryden can avoid almost all the cost of constructing the new streets and roads needed to serve the anticipated future development envisioned by this plan by requiring that developers construct to Town standards new subdivision streets, and then dedicate them to the Town. This would include the proposed connection between Ferguson Road and NYS Rte. 13. This new street would serve as a minor collector street. The amount of traffic that it might carry, even at a maximum build-out of the surrounding Suburban Residential area, should not exceed 6,000 to 7,000 vehicles per day. This level of traffic would be at the high end of the acceptable volume of traffic for a suburban residential street. A design that limits the speed of traffic to 30 mph on the street, combined with addition front yard setbacks, however can ensure even that this level of traffic the street can still provide a livable environment.

Bicycle/Pedestrian Paths

The Town of Dryden and Village of Dryden have together developed the popular Dryden Lake Trail that utilizes the abandoned railroad grade extending southward from Main Street in the village to Dryden Lake. The Town has received funding and is engaged in the development of a second segment that will continue the existing rail-bed trail into the Village of Freeville. The Town also plans to develop a long trail segment that will follow the former Lehigh Valley Railroad grade eastward from the terminus of the East Ithaca Recreation Way owned and maintained by the Town of Ithaca, through Varna to Freeville. All of these segments linked together could create a central spine off which a network of bicycle pedestrian paths can link town residents to the major centers of employment, commerce, education and recreation in the town.

This plan envisions a bicycle/pedestrian system. (Map 5-2)

The network would be comprised of the trail between Dryden Lake and the East Ithaca Recreation Way development of which the Town has already embarked on. Other linkages in the proposed network could include (if further study determines that such a path can be constructed without adverse environmental impacts) a link through Ellis Hollow from the vicinity of the Genung Road and Ellis Hollow Community Center westward to connect to the Dryden Lake-Ithaca spine in the vicinity of Stevenson Road.(approx. 1.8 miles).

Although it is represented on Map 5-2, no final determination as to its desirability or specific route for a path in Ellis Hollow has been identified. Any prospective route for such a path must be carefully analyzed to ensure that wetlands or other environmentally sensitive areas are not adversely impacted during or after construction. The Town should work closely with local residents and the Ellis Hollow Community Association to make a final determination as to 1) the feasibility of such a path; and 2) an appropriate alignment and design for the path.

Other municipalities that have developed such bicycle/pedestrian path systems have found that they can provide an attractive transportation alternative to the automobile, and an attractive amenity to residents of both existing and future neighborhoods in the town. Locally in the Town of Ithaca the East Ithaca Recreation Way and the South Hill Recreation Way have proven to be very popular for both commuter and recreational purposes for residents of adjoining neighborhoods. Because of its success a 1.3-mile extension of the East Ithaca Recreation Way that will connect the Eastern Heights neighborhood off Snyder Hill Road is scheduled for construction in 2002.

Public Transit

Key steps that the Town of Dryden can take to improve accessibility to and the utilization of public transit are in the areas of land use and growth management. Toward this end the Town should promote the increased use of public transit through more compact development patterns along transit routes, development of park and ride lots and development of a network of bicycle and pedestrian paths connecting homes to bus stops.

To further the use of public transit, the location of existing transit routes was considered in the

development of Map 5-1. The proposed Hamlet areas and the locations for the proposed Suburban Residential areas around Dryden and west of Etna are astride existing transit routes.

The implementation of the land use plan recommendations such as encouraging growth within the villages and hamlets, and the Suburban Residential areas adjacent to them will thus enhance the attractiveness and serve to increase use of public transit.

Other steps that the Town of Dryden should take include:

1. Strongly advocating for improved public transit service within the Town of Dryden, especially for areas where there does exist or will exist in the future major development and concentrations of population.
2. Working with Tompkins Consolidated Area Transit to ensure that bus shelters are conveniently located and maintained.
3. Working with Tompkins Cortland Community College, Tompkins Consolidated Transit and Cortland County to develop bus service between Dryden, TC3 and Cortland.
4. Ensure that the bicycle and pedestrian path network envisioned above provides for connections to existing bus routes.
5. Ensure that the street system within new Suburban Residential areas is "transit friendly" with, among other things, adequate turning radii at intersections and elsewhere.

Climate, Energy, and Emissions

Climate Change

Climate change poses risks to the health, safety, security, and the economy of our Town. Prioritizing strengthening the resilience of the Town's built, natural, economic, and social systems is necessary given the existential threat of accelerating climate change as described in the Plan Synthesis section of this Comprehensive Plan.

Greenhouse gases from human activities are the most significant driver of observed climate change since the mid-20th century[17].

Joining with the County and others in New York State to reduce greenhouse gas emissions, will provide a consistent and synergistic response to the challenges of climate change. This can be accomplished by adopting the same goals of the County as described in the County's Energy Roadmap[18] which advocate for reductions of energy and fossil fuel usage along with the reduction greenhouse gas emissions. This process will require consistent monitoring, updating, and intermunicipal collaboration to maintain consistency with the most rigorous local and national standards.

Where the Town can coordinate its greenhouse gas mitigation policies, practices, or activities with the County, adjacent municipalities, and/or those located in New York State, it should try to do so.

Greenhouse Gas Inventories

It is recommended that the Town create and maintain an inventory of greenhouse gas emissions and use the most up to date, scientific methods for quantifying all greenhouse gas emissions.

Efficient Buildings

The built environment accounts for roughly 40% of energy use in the United States, and as a result the building sector is a major contributor to carbon emissions and global climate change[19].

The following policies, laws, regulations, standards and practices are recommended to improve the efficiency with which the Town's residential, commercial, industrial, and institutional structures are constructed and perform. Specific actions include:

- Incorporate Ithaca's Green Building Policy (GBP) and/or County's 239 building standards into our Residential and Commercial Guidelines
- Incorporate GBP and/or County's 239 standards into Varna Plan.
- Create incentives for increasing the energy efficiency of existing building as well as new development.
- Review and modify the site plan checklist as needed to reflect changes in the laws, policies, and regulations.

[17] US Department of Environmental Protection. Climate Change Indicators: Greenhouse Gases. https://www.epa.gov/ghgemissions/overview-greenhouse-gaseshttps://www.epa.gov/climate-indicators/greenhouse-gases

[18] Tompkins County Energy Roadmap. March 2016. Page 2. http://tompkinscountyny.gov/files2/planning/energyclimate/ documents/Energy%20Roadmap%203-25-16.pdf

[19] Building Codes Assistance Project. Climate Change. Energy Codes and Climate Change. http://bcapcodes.org/topics/climate-change/

Efficient Public Infrastructure

The Town should minimize resource use and demand in local public infrastructure as a means to mitigate greenhouse gas emissions and conserve water.

Greening the Energy Supply

The Town should adopt policies, laws, regulations, standards and practices which cause the local energy supply to transition away from fossil fuels toward renewable sources of energy.

Recommendations

The following are examples of policies, laws, regulations, standards, and practices to support the Town's efforts to reduce greenhouse gas emissions and support GHG reduction goals:

- Adopt the most up to date version of energy, fossil fuel, and GHG reduction goals
- Adopt science-based greenhouse gas emission goals that include upstream methane emissions.
- Include language which automatically adopts County standards if they become more rigorous than the one's we are using
- Develop and promote the use of the rail trail as an alternative to commuting with cars
- Install public electric car charging stations
- Require PB to review County and other municipalities policies and practices every two years to remain consistent or to increase our standards
- Add Town SEQRA form which requires the estimation of energy use and GHG emissions for all SEQRA Type 1 actions
- Add to required information for Town's building permit form answers to all applicable questions raised by the County's 239 Review including the source and efficiency of energy usage
- Require developers to go through the County Energy Navigator process and share the Navigator's recommendations with Planning Department.
- Partnering with other municipalities, the County, and/or NGOs to seek funding to improve the Town's "green" infrastructure and improve energy efficiency of current building stock.
- Investigate and conduct a cost-benefit analysis of Community Choice Aggregation and/or municipal power purchase agreements.

Public & Semi-Public Infrastructure

Water & Sewer Service

The extension of municipal water and or sewer service to limited areas within the town will be necessary in order to provide the foundation for the denser residential development in and around existing centers of population that this plan envisions.
This plan does not advocate that the Town extend municipal water or sewer service as a means of encouraging new development. Rather such extensions should be targeted to correcting identified needs or to encourage in-fill development within existing built-up areas. (Map 5-3)

The Town of Dryden should work with the Village of Dryden, the Village of Freeville and its partners in the Ithaca Area Wastewater Treatment Plant and Southern Cayuga Lake Intermunicipal Water Commission to develop the wastewater treatment capacities and public water supplies that will be needed to serve future development.

Providing municipal water service to the proposed Suburban Residential areas on the periphery of Dryden village will require construction of at least one water tank. Currently the approximate limit of the water service area for the Village of Dryden water system is around 1,250 feet above sea level. The elevation of approximately one-half of the proposed Suburban Residential area adjacent to the village, including a sizable portion of the area east of the village, is above this pressure zone limit.

To create a new pressure zone and allow expansion of municipal water service to serve the new Suburban Residential areas would require construction of a new water tank at an elevation of around 1,400 feet. Water pumped to this tank could then serve the new residential areas within the town as well as land in the southwest corner of the village that also above the existing limits of pressure.

Providing municipal sewer service to future neighborhoods around the village would be less complicated, as all areas are high enough to be served by gravity mains. The key question with regard to providing municipal sewer service is the capacity of the village wastewater treatment plant, and the role the Town of Dryden would play in operating the plant and funding any necessary capacity improvements.

The second area of the town where major investment in water and sewer infrastructure is recommended is in Etna hamlet and the areas north of Fall Creek between Etna and the Hall Road vicinity. Municipal water and sewer infrastructure in this area can serve as a catalyst for redevelopment of the hamlet and the creation of new residential neighborhoods on the periphery of the hamlet. The public infrastructure would also serve existing and future industrial development in the area south of the hamlet adjacent to NYS Route 13.

The proposed Suburban Residential area west of Freeville would require an extension of the Village of Freeville sewer system. This area is at a higher elevation that the village itself, so the system can be a gravity system. The Town should work cooperatively with Freeville to develop a joint sewer system and to fund any required upgrades to the existing wastewater treatment facility.

Although there is some addition development proposed on the periphery of Varna, almost all of this new development will occur within the existing water and sewer service areas.

Municipal water or sewer does not currently serve the area between Hanshaw Road and the Ithaca-Tompkins Regional Airport. It is however immediately adjacent to existing service areas, and extension of services into to the properties in that area would likely be constructed by a private developer of the land.

The financing of the Town's portion of the cost of extending municipal water and sewer service into the proposed Suburban Residential areas is expected to be accomplished through the establishment of benefit districts. Much of the envisioned system however is expected to be constructed by the private sector developers of the new residential neighborhoods.

Insert Map 5-3

Telecommunications

Given the increasing importance of wireless telecommunications in both the general economy and to individual residents, the Town of Dryden should strive to ensure such technology for is available, to the extent practicable, in its residential neighborhoods, businesses and educational institutions.

The future land use patterns proposed on Map 5-1, if implemented, are likely to indirectly facilitate the availability of wireless technology to a broader population of town residents. Focusing future development in and around the villages and hamlets of the town, as proposed, could reduce the amount of infrastructure necessary to serve residents and businesses and hence the cost of providing desired levels of service.

At the same time, it is important that the Town ensure that the placement, construction or modification of the support network of telecommunications towers and their support facilities continues to be regulated in a manner that is consistent with its land use policies, minimizes the potential negative impacts of the structures and protects the health, safety and welfare of residents. Key to accomplishing this will be monitoring the evolution of the sector, reviewing on a regular basis the Telecommunications Tower Siting Law adopted in May 1998 for its applicability and consistency with state and federal regulations and amending it as needed.

Public Safety

The longstanding network of volunteer fire and emergency medical services organizations continues to effectively serve town residents. While it does not directly participate in the day to day operations of these organizations, the Town of Dryden nonetheless must continue to work with them to ensure provision of quality fire and EMS services into the future, and a cost effective manner. Because service areas may overlap municipal boundaries, the Town should also work cooperatively with Tompkins County and other municipalities to enhance the provision of fire police and emergency services and to minimize the cost of such services to the public.

A number of recommendations in the adopted Hazard Mitigation Plan have already been implemented, or are in the process of being implemented. The Town of Dryden should continue such efforts, including proposed infrastructure improvements, disaster and hazard awareness education, and the acquisition of training and equipment for local public safety and public works staffs. By its nature the Hazard Mitigation Plan requires the development of partnerships with state, county and local agencies to implement specific aspects of the plan. The Town has been very successful to date in doing so, and must continue to do so in the future.

Fiscal Implications

Introduction

Implementation of the recommendations outlined in Chapter Five would entail a substantial investment by the Town of Dryden in new public infrastructure, as well as a substantial financial commitment to maintaining this investment. This section provides estimates of the level of investment that may be required of the Town, as well as the revenues that may be generated through property taxes from anticipated new development over the next two decades. ***(N.B.: All figures used in this section are in 2004 dollars.)***

The major infrastructure investments will be in:

1. Road improvements consisting of reconstruction the intersection of Ferguson Rd. and Irish Settlement Rd. and the reconfiguration of NYS Rte. 366 through Varna;
2. A network of bicycle and pedestrian paths;
3. A system of neighborhood and community parks;
4. Extensions of public water and sewer service.

In addition to the above investments, this plan calls for investment in the future of agriculture in the Town of Dryden, through a purchase of development rights (PDR) program.

A critical factor that will govern the level of investment in new infrastructure needed in the future will be the actual level of population growth in the coming decades, and where that growth occurs. The need for the majority of the several neighborhood parks proposed in this plan, for instance, will be directly driven by population growth and the development of specific new neighborhoods. If the potential growth does not materialize, there would be no need for the investment in the envisioned parks.

The plan also proposes substantial investment in new water and sewer infrastructure. This infrastructure will allow the increases in development densities in and around the existing centers of population at Dryden, Etna and Freeville needed to channel the bulk of future growth into those areas. It could also serve approximately 500 existing homes in the envisioned service areas.

Park and Recreation Facilities

The cost estimates for the future park facilities are based on the envisioned uses and amenities in each facility. Table 6-1 lists the facilities that the typical neighborhood park would have.

The site for any neighborhood park should have an area of at least 15,000 square feet that is level to gently sloping to accommodate a lawn area that would be useable for informal games and activities, and a play structure. This will eliminate the need for any site grading. Given the open field character of the areas where the neighborhood parks are proposed, it is likely that no clearing or grubbing of woodland will be necessary.

No parking facilities would be provided at the neighborhood parks.

Based on the above assumptions, the Town of Dryden can expect to invest an average of $47,500 for each neighborhood park it develops in the coming decades. This figure is based on project cost data from other park facilities recently developed here in Tompkins County, and cost estimate data from construction industry cost references.

The proposed community park will represent a substantial investment by the Town of Dryden. The park as envisioned will include an athletics complex comprised of soccer fields, baseball diamonds, basketball and tennis courts, a day use area with picnic and playground facilities, comfort station, parking and other support infrastructure. Table 6-1 lists the facilities envisioned in the proposed community park.

This plan assumes that the land for the proposed community park would be purchased by the Town.

Table 6-1
Proposed Park Facilities and Cost Estimates

Neighborhood Park	Projected Costs
Minimum of 1 acre of land, of which a minimum of 1/2 acre would be maintained lawn; play structure w/ minimum 2 swings, 5ft slide, seesaw, climbing feature, bridge feature; 5 benches, 2 picnic tables; 200 LF paved walkway (entry walk) 6 deciduous trees of 3 in caliper; 15 conifer trees 5-6 ft in height; 60 shrubs; directional and regulatory signage.	$47,500 (ea.)
Community Park	
Minimum 20 acres of land (assumed purchased); minimum of 4 acres would be maintained lawn; play structure w/ minimum 2 swings, 5ft slide, seesaw, climbing feature, bridge feature; 12 seating benches, 25 picnic tables and 12 barbeque grilles; 20x30ft. picnic pavilion; comfort station; 1,000 LF of access drives and parking for 100 cars; 2,700 LF paved walking/jogging path; athletic facilities comprised of 2 soccer fields, 2 baseball diamonds, 2 basketball courts and 4 tennis courts; 75 deciduous trees of 3 in caliper; 50 conifer trees 5-6 ft in height; 250 shrubs; directional and regulatory signage.	$823,000

Land required for the development of neighborhood parks could be acquired through dedication of land by future developers as provided for in Section 227(4) of Town Law. Also, the Town of Dryden can establish a mechanism by which under specific circumstances it can require developers of residential properties to contribute funds in lieu of land for public park and open space purposes. These funds can be applied toward the cost of improvements in existing and future parks.

Some costs for rights-of-way may be incurred in development of the paths between Dryden village and Game Farm Road, and the path in Ellis Hollow. Given experience of municipalities elsewhere, however, much of these rights-of-way may likely be donated by property owners.

Transportation

The investments in transportation that are envisioned in this plan would be in the form of improvements to existing roads and a comprehensive network of bicycle/pedestrian paths.

Because no engineering or design work has been completed, only a very preliminary estimate of the potential cost can be given for the reconstruction the intersection of Ferguson Road and Irish Settlement Road to allow the two roads to function efficiently as the connector roads envisioned in Chapter 5.

A minimum-solution scenario could involve reconstruction of approximately 750 feet of roadway within existing rights of way to better align the roads and reconfigure intersections. For planning purposes the cost of such work is estimated to be $170,000.[20]

A more involved solution would include realigning the roadways so that Irish Settlement Road did not pass through the existing farmstead. This would entail construction of roughly 1,500 feet of new roadway and realigning the western leg of Ferguson Road. For planning purposes the cost of this project, including land acquisition, is estimated to be $380,000.

[20] These cost estimates and others used in this plan document are based on generic cost estimates for construction in Tompkins County and surrounding region and are presented solely for the purpose of assessing the potential costs of implementing this plan.

The improvements to the Ferguson Road/Irish Settlement Road intersections would be a partnership between the Town of Dryden and Tompkins County. Because the roads serve a role in the regional transportation system the improvements should be included in the County's Transportation Improvement Program (TIP) and be eligible for State and Federal funding. Generally such funding covers 75% or more of project costs. If the Town of Dryden were to be responsible for 50% of the local share, its costs would be between $21,000 and $48,000.

The second major investment in transportation infrastructure would be a reconstruction of NYS Rte. 366 through Varna. This "Highway to Main Street" conversion of the roadway would entail a substantial investment of public funds for new street curbing, sidewalks, street lighting and landscaping. The project would involve the section of NYS Rte. 366 extending approximately three-quarters of a mile from just west of Forest Home Drive to approximately 800 feet east of Mt. Pleasant Road.

As is the case with the Ferguson Road/Irish Settlement Road project, no engineering or design work has been completed, only a very preliminary estimate of the potential cost can be given.

The cost of the project, however, is expected to be similar to the costs of the recent reconstruction of Main Street in Dryden village and the planned reconstruction of Main Street in Trumansburg, or somewhere around $800,000 to $1,000,000. As is the case with the projects in both Dryden and Trumansburg, the project in Varna would require outside funding. Trumansburg received a grant from New York State to cover 75 percent of the approximately $850,000 cost of its Main Street reconstruction.

For the purpose of this Comprehensive Plan the Town of Dryden should expect to invest up to $250,000 in the proposed "Highway to Main Street" conversion of NYS Rte. 366 in Varna.

The third major investment in transportation infrastructure would be in the form of the proposed 12-mile bicycle/pedestrian path system. This network would include a central spine consisting of a trail from Dryden Lake westward across the town to the existing East Ithaca Recreation Way on Game farm Road. The overall cost of this future network is estimated to be approximately $738,000.

Water and Sewer Infrastructure

This plan assumes that the Town of Dryden will continue to rely on partnerships with other municipalities for the provision of wastewater treatment facilities. It also assumes that there is only minimal excess wastewater treatment capacity available through the Ithaca Area Wastewater Treatment Plant, or the treatment plants owned by the villages of Freeville and Dryden. Hence this plan assumes that the Town would have to purchase additional treatment capacity for at least 80 percent of all future residential development.

Investment in public water and sewer infrastructure will be concentrated in the areas in and around the hamlet of Etna, the area northwest of Freeville and around Dryden village. Table 6-2 provides a breakdown of the estimated costs, by area. These estimates were compiled for the purpose of assessing the potential fiscal impacts of this plan on the Town of Dryden only. They utilize generic cost data for such facilities and are not based on the detailed engineering studies that would be required if in the future the Town pursues the proposed improvements.

The financing of the proposed water and sewer improvements could be through the establishment of benefit improvement districts as provided for under Article 12 of Town Law. The cost of the improvements would thus be assessed to property owners within the districts. Not all improvements would be at public expense: land developers would be responsible for the cost of the water and sewer improvements constructed as a part of the approved development plan for their property. The costs of these improvements are not reflected in Table 6-2.

Table 6- 2
Projected Water & Sewer Improvements and Costs (2004 $$$s)

Area	Water	Sewer	Total
Dryden village	$915,000	$767,000	$1,682,000
Freeville village	n/a	$378,000	$378,000
Etna & vicinity	$2,016,000	$2,226,000	$4,242,000
Wastewater treatment plant capacity purchases	n/a	$1,334,000	$1,334,000
Total projected construction costs	$2,931,000	$4,705,000	$7,636,000
Estimated interest on borrowing (20 yrs @ 6.5%)	$2,314,000	$3,714,000	$6,028,000
Total cost	$5,245,000	$8,419,000	$13,664,000

Purchase of Development Rights Program

The actual cost of an agricultural conservation easement is determined through a formal appraisal process. Table 6-3 however outlines the potential costs of a PDR program for the Town of Dryden, based on recent land assessment values, the costs typically associated with acquiring easements and administering a PDR program. While the following figures are preliminary it appears that a successful purchase of development rights, implemented over a 20-year period, would cost approximately $3.3 million, or less than $170,000 per year on average.

According to Tompkins County Assessment Department data the average price per acre of farmland parcels sold in the towns of Dryden, Lansing and Groton between July 1999 and April 2004 was $1,040. Based on the number the estimated value of the 70 parcels suggested for inclusion in a PDR program is approximately $8.27 million. General experience in areas that have established purchase of development programs is that the value of development rights should exceed 60 percent of the total value of land. Sixty percent of $1,040 would be $624. At this rate the cost of acquiring the development rights to all candidate parcels would be approximately $4.96 million.

Acquisition of the development rights to all parcels of land within the proposed target areas however is not anticipated. Evidence from other places in the country, with longstanding PDR programs, indicates that protecting fifty percent of higher-quality farmland can create a critical mass of protected farmland that would stabilize agricultural land resources and farm viability in the town[21]. Hence the Town of Dryden could anticipate acquisition of easements on about half of the target properties.

Furthermore, not all of the above costs would be borne by the Town of Dryden. There are now in place funding programs at both the state and federal levels of government that the Town of Dryden could tap to fund significant portions of the cost of acquiring conservation easements. The current New York State Farmland Protection program funds 75% of the costs of acquiring agricultural conservation easements.

In some cases, the donation by a landowner of an agricultural conservation easement to the Town of Dryden may have positive tax benefits for the landowner while reducing costs to the public.

Table 6- 3
Purchase of Development Rights Program for Agricultural Land

[21] Daniels, Tom, and Mark Lapping. *Farmland Preservation in America and the Issue of Critical Mass*. Paper presented to annual conference of the American Farmland Trust. November 13, 2001.

in Town of Dryden Over 20-Year Program Timeframe

Program Element	100% Participation Rate	50% Participation Rate
Easement Acquisition Costs (@ $624/ac.)	Approx. $4.96 million	Approx. $2.48 million
Appraisals, Surveys, Legal Costs	Approx. $350,000	Approx. $180,000
Administration Program Leader (1/2-time position at $27,000/yr inc. benefits)	Approx. $540,000	Approx. $540,000
Easement Monitoring & Enforcement (approx. $270 per year per easement)	$190,000	$95,000
Total Estimated Cost	Approx. $6.04 million	Approx. $3.3 million

Projected Costs vs. Projected Revenues

The primary sources of revenues for funding the above investments are expected to be property taxes for the proposed park and bicycle/pedestrian facilities, and benefit assessments for the proposed water and sewer infrastructure.

The Town of Dryden has a relatively robust base of taxable property with which to fund its operations and services to residents. According to the Tompkins County Assessment Department the total assessed value of all taxable property in the Town of Dryden as of July 2004 was $615.77 million. (The total value of all property, taxable and tax-exempt, was $742.12 million.)

Property values in the Town of Dryden have also been increasing in recent years. The total assessed value of all taxable property in the Town has increased by some 22.6% from $502.21 million in 2000.

Commercial and industrial properties in the Town of Dryden only account for about 6% of all taxable property. Given this, the bulk of new property tax revenues that are expected to be generated by future development in the town are expected to be generated by future residential development. At the same time, this anticipated residential development is also expected to generate the demand for a substantial portion of the investments in public facilities envisioned in this plan.

Park & Recreation Facilities, Transportation Improvements

Altogether this plan envisions the need for an investment by the Town of Dryden of between $2.7 and $3.1 million in new park and recreation facilities and transportation improvements over the next two decades. In addition the Town will be incurring additional cost for maintaining the new infrastructure. These costs are broken down in Table 6-4. On average they represent a cost of between $225,000 and $390,000 per year.

The table is organized around four different growth scenarios: accommodating 33% of the projected increase in population between now and 2022; accommodating 50% of the projected increase in population; accommodating 75% of the projected increase; and accommodating 100% of the projected increase in population. This is due to the fact that the anticipated level of investment in park, recreation and transportation improvements will be tied somewhat to the level of future growth.

The cost figures shown in Table 6-4 for the proposed bicycle/pedestrian path network and park facilities do not anticipate any outside funding for such projects. For the purpose of this plan the presumption is that the Town of Dryden would fully fund such projects.
This approach has been taken because, unlike highway funding, the state and federal governments do not have any permanent funding mechanisms for local investments in park and recreation funding. Historically communities have had to compete for grants from limited, short-term funding programs. The conservative approach that presumes local funding only thus presents a "worst case" scenario in terms of fiscal impact on the Town of Dryden.

Table 6-4 also includes the projected costs of maintaining the envisioned roads, park and recreation facilities and bicycle/pedestrian paths. These projected maintenance costs are based on cost data from the Town of Dryden, other local municipalities and industry cost data sources.

The projected road maintenance costs were calculated by dividing the existing Town of Dryden Highway department budget by the number of miles of roads owned by the Town of Dryden. The highway department budget does include the cost of a number of non-road related activities of the department that would be difficult to separate out. Using this formula, without adjusting for non-road related activities, results in a cost of approximately $20,550 per mile of road. For the purpose of future land use policy planning, however, it is more desirable to use a higher cost estimate that includes non-road expenses rather than underestimate the potential future costs

The calculation of future costs also assumes that future residential lot sizes would be the same as allowed under the existing Town zoning, and that each new dwelling would require 125 feet of road frontage. There is some potential, through the use of land development concepts such as cluster subdivision design, to reduce the average amount of road frontage per lot in future developments. The conservative approach of assuming no change in average road frontage however protects against underestimating future costs, and is thus preferred.

The projected maintenance costs for the proposed parks and bicycle/pedestrian path system are based on an analysis of maintenance costs completed by the Town of Ithaca in 1997, as well as industry cost data references. Based on these sources, it is estimated that the Town of Dryden would spend approximately $8,000 annually to maintain a neighborhood park; approximately $17,000 per year to maintain a community park; and approximately $2,150 per mile of bicycle/pedestrian path, per year.

Table 6-4 also includes the projected costs of maintaining the envisioned roads, park and recreation facilities and bicycle/pedestrian paths. These projected maintenance costs are based on cost data from the Town of Dryden, other local municipalities and industry cost data sources.

Not all of the projected investments and attendant increases in maintenance responsibilities listed in Table 6-4 can be tied to the envisioned future development and population growth in the town. Some of the envisioned investment in proposed park facilities and the bicycle/pedestrian path system will actually serve an existing desire or need.

The proposed community park and about one-half of the proposed bicycle/pedestrian path network, including the proposed Ellis Hollow path and Dryden to Ithaca path, will serve existing needs or desires for such facilities in the town. As a result most of the costs associated with these facilities should not be attributed to the envisioned new development.

As Table 6-5 shows the share of park and recreational facilities that could be attributed to the existing town population would run between $1,947,200 if only 33% of anticipated population materializes, and $3,123,500 if the maximum anticipated growth in population occurs, and maximum amount of park and recreational facilities is developed. The amount attributable to future population growth (new homes, new residents) ranges between $638,100 if only 33% of the anticipated growth materializes, and about $1,042,400 if the maximum anticipated growth occurs.

Whether or not future development in the town will generate the additional property taxes necessary to cover the costs outlined above is a key question. According to Tompkins County Assessment Department data for 2004, the mean assessed value of a residential property in the town was approximately $121,200. At the current property tax levy (2005 Town budget) of $1.48/1,000 this equates to an average realization of $179 per property, per year in property taxes.

The amount of revenues that the Town can expect to be raised over the next two decades will be dependent on the level of growth and development. Table 6-6 thus outlines the potential revenue stream for each of the four anticipated levels of growth, compared to the cost of the envisioned road, park and bicycle/ pedestrian facilities, including maintenance costs.

Table 6-4
Projected Costs of Proposed Park and Transportation Infrastructure

Plan Component	Anticipated Costs 33% Level	Anticipated Costs 50% Level	Anticipated Costs 75% Level	Anticipated Costs 100% Level
Roads – capital improvements *	$297,500	$297,500	$297,500	$297,500
New Roads – maintenance costs (over 20 year period)	$1,069,000 (5.2 mi. new rds.)	$1,603,000 (7.8 mi. new rds.)	$2,425,000 (11.8 mi. new rds.)	$3,206,000 (15.6 mi. new rds.)
Parks – capital improvements	$965,500 construct community park plus 3 neighborhood parks	$1,013,000 construct community park plus 4 neighborhood parks	$1,155,500 construct community park plus 7 neighborhood parks	$1,250,500 construct community park plus 9 neighborhood parks
Parks – maintenance costs (over 20 year period)	$455,000	$533,000	$770,000	$927,000
Bicycle/Pedestrian Paths – capital improvements**	$738,000 Freeville to Game Farm Rd.	$738,000 Freeville to Game Farm Rd.	$738,000 Freeville to Game Farm Rd.	$738,000 Freeville to Game Farm Rd.
Bicycle/Pedestrian Paths – maintenance costs (over 20 year period, incl. Dryden Lake-Ithaca link)	$258,000	$258,000	$258,000	$258,000
Total Costs 2005-2025	$3,783,000	$4,442,500	$5,644,000	$6,677,000

* For the purpose of this Plan the proposed investments in road improvements are presumed to be needed at the 33% growth threshold. The Town of Dryden share is presumed to be 25% of the project costs for the Varna project and 12.5% for the Ferguson Rd./Irish Settlement Road improvements. The higher estimate of $380,000 is used for the Ferguson Rd./Irish Settlement Road project.

** Because the project is already in the implementation stages the cost of the Dryden to Freeville section of the Dryden Lake to Ithaca trail is not included.

Table 6-5
Allocation of Costs of Future Parks & Bicycle Pedestrian Facilities

	Anticipated Costs 33% Level	Anticipated Costs 50% Level	Anticipated Costs 75% Level	Anticipated Costs 100% Level
Total Estimated Costs – Capital & Maintenance	$2,585,300	$3,508,800	$3,874,900	$4,165,900
% of cost of new community park & 50% of bike/ pedestrian path system construction and maintenance allocated to new population – 2002 - 2022	10%	15%	20%	25%
Dollar amount allocated to new population – 2002 - 2022	$638,100	$729,900	$883,100	$1,042,400
Amount Allocated to Existing Population	$1,947,200	$3,145,000	$2,991,800	$3,123,500

Table 6-6
Impact of Projected Road, Park and Bicycle/Pedestrian Path Improvements on Tax Rate

	33% of Anticipated Growth	50% of Anticipated Growth	75% of Anticipated Growth	100% of Anticipated Growth
Potential Revenues From New Development (over 20 years)	$1,074,000	$1,611,000	$2,416,500	$3,222,000
Projected Cost of Roadway, Park & Bicycle/ Pedestrian Facilities, incl. Maintenance (over 20 years)	$3,783,000	$4,442,500	$5,644,000	$6,677,000
Average Cost Per Year	$189,200	$222,100	$282,200	$333,850
Average Annual Revenues From New Development (@ current property tax rate of $1.48/1,000)	$53,700	$80,550	$120,825	$161,100
Projected Annual Surplus/Deficit (over 20 years)	-$135,500	-$141,550	-$161,375	-$172,750
Projected Adjustment to Property Tax Rate	+$0.220/1,000	+$0.230/1,000	+$0.262/1,000	+$0.281/1,000
Projected Increase in Annual Property Tax Bill for Home Valued at Town of Dryden Mean	*$27 +/-*	*$28 +/-*	*$32 +/-*	*$34 +/-*

As Table 6-6 shows, the amount of revenues that the Town of Dryden can anticipate from new development will not fully cover the costs of projected improvements. If these costs are spread out over the entire base of taxable property in the town, the projected average annual amount of additional taxes ranges from $0.22/1,000 to $0.28/1000 of assessed valuation. For the owners of a home with the mean value of $121,299, this would represent an increase of between $26 and $34 per year in property taxes. (2004 dollars)

This scenario does not take into consideration the potential availability of outside funding. It is thus the "worst case scenario" from the standpoint of the potential future growth and development in the town over the next two decades. There are existing grants programs at the state and federal levels for the development of park and transportation infrastructure that the Town of Dryden can tap. In addition the town is home to a number of civic organizations with a long history of contributing to civic improvements. These groups can be expected to continue the tradition. Other municipalities in Tompkins County have developed extensive park facilities through the financial support and volunteerism of such groups.

Moreover, the above projection assumes that the future residential development in the town will follow the current pattern of single-family detached homes on conventional lots. As a result up to 15.6 miles of new roadway may be built to accommodate new residential development in the coming decades.

Through strategies that allow denser development in targeted areas and encouraging the use of cluster design in subdivision developments, the Town of Dryden could substantially reduce the number of new miles of roadway it would need to accommodate new growth and development.

By setting a goal of limiting the amount of new public roads developed through encouraging more efficient land use patterns to two-thirds of the projected amount, the Town of Dryden could substantially reduce the projected increases in road maintenance costs, and the projected increases in property taxes shown in Table 6-6. A one-third reduction in the amount of projected new road construction in fact would result in a reduction in the projected average annual additional property taxes shown in Table 6-6 to between $0.14/1,000 to $0.16/1,000 of assessed valuation. The result of this adjustment alone would be a more modest increase in property taxes of between $26 and $30 per year for the owners of a home with the mean value of approximately $121,200.

The impact of new residential development on property tax rates can be further reduced if the Town of Dryden were to establish a dedicated fund for park development. This could be funded through the levy of a fee on all new residential development on lots where a dedication of land has not been required as condition of subdivision approval. Such fee could be collected at the time of building permit application, from the applicant for the building permit for the new dwelling(s), or prior to the filing of a subdivision plat by a developer.

Table 6-7
Potential Revenues from Park & Recreation Development Fee

Potential Revenues From New Development (over 20 years) (collected on 65% of total DUs built)	33% of Anticipated Growth	50% of Anticipated Growth	75% of Anticipated Growth	100% of Anticipated Growth
$500 per unit	$195,000	$292,500	$438,750	$585,000
$750 per unit	$292,500	$438,750	$658,125	$877,500
$1,000 per unit	$390,000	$585,000	$877,500	$1,170,000

In those areas identified on Map 5-1 as suitable for Suburban Residential, approximately 35% of anticipated new development would occur on tracts where a dedication of land for public park and open space purposes is anticipated. This includes land dedicated for the purpose of building bicycle/pedestrian paths. The remaining 65% of new residential development would occur on tracts where no public park facility or bicycle/pedestrian path is anticipated. A park and recreation facilities development fee in lieu of land could be assessed on this remaining 65 percent.

If the Town of Dryden were to establish a $500 per unit fee, it could see a reduction in the potential property tax rate increases shown on the bottom row of Table 6-6 of between $1.58 at the 33% anticipated growth level and $4.75 at the 100% of anticipated growth level. With the fee set at $1,000, the reduction would be in the range of $3.16 at the 33% anticipated growth level and $9.50 at the 100% of anticipated growth level. The Town of Dryden should thus establish such a fund in order to reduce the impact on property taxes of the envisioned future park and recreation facilities and bicycle/pedestrian paths. The actual amount to be levied should be set after a more in-depth study of the issue is conducted.

Potential Costs - Park & Recreation Facilities, Transportation Improvements & Purchase of Development Rights Program

Table 6-8 outlines the cumulative costs of the proposed park and recreational facilities and transportation improvements, combined with the projected cost of a purchase of development rights program. It combines the data in Table 6-3 and 6-6 to give an overall picture of the fiscal impacts of the proposed investments described in Chapter 5.

The costs shown for the proposed purchase of development rights program assume an ultimate landowner participation rate of 50 percent, and no outside funding. This is considered the highest cost scenario for such a program and the one with the highest fiscal impact on Town taxpayers.

Table 6-8
Potential Impact on Tax Rate of Proposed Road, Park and Bicycle/Pedestrian Path Improvements and Purchase of Development Rights Program

	33% of Anticipated Growth	50% of Anticipated Growth	75% of Anticipated Growth	100% of Anticipated Growth
Projected Average Cost Per Year of Roadway, Park & Bicycle/ Pedestrian Facilities, incl. Maintenance (over 20 years)	$189,200	$222,100	$282,200	$333,850
Projected Average Annual Cost of Purchase of Development Rights Program	$170,000	$170,000	$170,000	$170,000
Total	$359,200	$392,100	$452,200	$503,850
Average Annual Revenues From New Development (@ current property tax rate of $1.48/1,000)	$53,700	$80,550	$120,825	$161,100
Projected Annual Surplus/Deficit (over 20 years)	-$305,500	-$311,550	-$331,375	-$342,750
Projected Adjustment to Property Tax Rate	+$0.496/1,000	+$0.506/1,000	+$0.538/1,000	+$0.557/1,000
Projected Increase in Annual Property Tax Bill for Home Valued at Town of Dryden Mean	*$60 +/-*	*$61 +/-*	*$65 +/-*	*$68 +/-*

Water and Sewer Improvements

As shown in Table 6-2, this plan anticipates a substantial investment in new public water and sewer infrastructure. The cost of this infrastructure would be

funded through the establishment of improvement districts as provided for under Article 12 of Town Law. Although there may be grant funding available in the coming years to defray some of the costs of this envisioned infrastructure, for the purposes of this plan it is assumed that there will not be outside financial assistance available to the Town.

Table 6-9
Projected Cost Per Dwelling Unit (DU): Water & Sewer Improvements

	Estimated cost (2005-2025)	Estimated number of dwellings & cost per dwelling to be served (33% level – new + existing)	Estimated number of dwellings & cost per dwelling to be served (50% level – new + existing)	Estimated number of dwellings & cost per dwelling to be served (75% level – new + existing)	Estimated number of new dwellings & cost per dwelling to be served (100% level – new + existing)
Water	$5,227,200	730	905	1,160	1,410
Cost Per Dwelling Unit - Water	n/a	$7,160	$5,780	$4,510	$3,710
Sewer	$8,523,200	805	980	1,230	1,485
Cost Per Dwelling Unit Sewer	n/a	$10,590	$8,700	$6,930	$5,740
Water + Sewer Cost per Dwelling Unit	n/a	$17,750	$14,480	$11,440	$9,450
Total Annual Cost Per Dwelling Unit Over 20 Years	n/a	$888	$724	$572	$473

The proposed investments in public water and sewer services would occur in three discrete locations in the town. Because it is not possible to accurately predict the level of development in each of the three target areas, no breakdown between the three areas in terms of number of dwellings is given. Also, given the nature of the improvements, the number of new homes built over the next two decades in the town is not expected to affect the costs of the proposed expansions of service. The anticipated costs would be essentially the same whether the amount of growth in the town is at the above referenced 33%, 50%, 75% or 100% of projected population growth.

This plan also assumes that the Town is successful in channeling 80 percent of its future residential development into these areas.

The cost figures shown in Table 6-9 show that public water and sewer service can be provided to the areas targeted under this plan for such service, at a relatively reasonable cost. The key to keeping costs at a reasonable level, however, is maximizing the number of units served by the proposed infrastructure, taking into consideration, at the same time, the desire of existing residents to respect the existing character of the community.

The areas around the village of Dryden where investment in public water and sewer are recommended pose a specific challenge with regard to financing. Almost all of the undeveloped land immediately adjacent to the village is located within Tompkins County Agricultural District No.1. Under state law the Town cannot charge a benefit assessment on these lands to defray the cost of any water or sewer improvement. Thus at this time there is essentially no base upon which to finance those proposed improvements through the traditional benefit district mechanism.