Appendix 3-2

Town of Brownville
Comprehensive Plan (1989)

COMPREHENSIVE PLAN

PREPARED FOR THE TOWN OF BROWNVILLE

Prepared By

The Town of Brownville Planning Board

With Technical Assistance From

The St. Lawrence-Eastern Ontario Commission
Local Government Assistance Program
317 Washington Street
Watertown, NY 13601-3788

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June 1989

TOWN OF BROWNVILLE PLANNING BOARD

P.O. Box 89,
Brownville, New York 13615

June 5, 1989

Mr. Eugene Parker, Supervisor; and
Members of the Town Board
Town of Brownville
Brownville, N.Y. 13615

Gentlemen:

On behalf of all members, present and past, of the Town of Brownville Planning Board and with a great deal of enthusiasm and satisfaction, I present to you, for your perusal, consideration and approval the completed Comprehensive, or Master, Plan for the Town of Brownville.

Though it has been a long and arduous process, and one which on occasion seemed interminable, it has been accomplished. Through the help and efforts of many people and organizations, as well as the Planning Board members themselves, the total picture has been developed and presents information of the past; evidence of the present; and guidelines for the future development of the Town of Brownville.

We want to express our special appreciation to Rod McNeil and the St. Lawrence-Eastern Ontario Commission for coming to our aid in the crucial, final developmental stages of the Plan. Particular thanks go to Tom Reaghard of the Commission offices, who Coordinated the Project and did the yeoman job of organizing and putting together all the data acquired through the Jefferson County Planning Dept.; St. Lawrence University, Dept. of Environmental Studies; General Jacob Brown Historical Society; individual study-projects by the Planning Board members; soil studies from the U.S. Soil Conservation Service; map and topographic information from the Jefferson County Real Property Tax office and the St. Lawrence-Eastern Ontario Commission. Without his sterling help, understanding of the process and ability to get to the heart of the matter we would still be floundering in a sea of inter- and intra-related information.

So, it is with a collective sigh of relief that we hand over to you this document which has been so long in coming; and which, though completed in the sense of having been assembled, can never be finished, since it is only a Guide to the Future.

With Sincerest Best Wishes,

TOWN OF BROWNVILLE PLANNING BOARD

Terrence W. Kelly

Terrence W. Kelly, Chairman

ACKNOWLEDGEMENTS

Many individuals and groups have contributed to the successful completion of this Plan. Major contributors were:

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TABLE OF CONTENTS

SECTION I

BACKGROUND

INTRODUCTION

The Town Law of the State of New York enables Town Planning Boards to "prepare and change, a comprehensive master plan for the development of the entire area of the town..." (Town Law, Section 272-a). This document, prepared by the Town of Brownville Planning Board will serve as the master plan for the Town.

The purpose of a master plan is manifold. Primarily, it serves as a guide for the policy decisions of the Town Board and the Planning Board when they are considering proposals or ideas that have the potential to effect the physical character of the Town. This guidance takes the form of an assessment of community-wide values, goals and objectives for a variety of aspects of the physical makeup of the Town. Examples might include, environmentally sensitive areas, the highway system and the patterns of residential development.

Secondarily, the Plan provides an indepth inventory and analysis of the various physical components that make up the Town. This inventory resembles a "snapshot" of the character of the Town, its physical and social make up at a given time. With this snapshot the Planning Board answers the questions "Where is the Town now?" and "What are the assets and liabilities accruable to the Town?" The inventory is the foundation from which the Town can inquire, "Given this situation where do we want to go from here?", "What assets are worth saving?", "What liabilities should be amortized?" and, "How do we want the Town to look in five, ten, or twenty years from today?"

These are the questions that the master planning process and product attempt to answer. However, recognizing that the physical and social environment is ever-changing, the Master Plan is necessarily a dynamic project. Yearly examination of the policies it puts forth are essential to its usefulness.

SOURCE: Jefferson County Planning Office

BRIEF HISTORY OF THE TOWN OF BROWNVILLE

A waterfall prompted Jacob Brown to settle Brownsville in 1799. He learned of the northern New York frontier through Rodolphe Tillier, land agent for 210,000 acres of land acquired in 1793 by Parisien Peter Chassanis. This acreage, conveyed by a 1788 treaty to New York State, was originally possessed by the Oneida Indians of the Iroquois Confederacy. In 1791 Alexander Macomb bargained for a section of it. Macomb's agent, William Constable arranged the sale in Europe to Chassanis.

Jacob Brown met Chassanis' agent, Tillier, while a school teacher in New York City. When his school closed in February 1799, Jacob headed north. Having traveled the Black River to Carthage, then by land along the "French Road" to Great Bend and Clayton, Brown left the road at French Creek moving back toward the river. In the Basin, about 1 1/2 miles below the present Village of Brownville, he heard the waterfall and a nightingale's song and named Philomel Creek after the French (philomelia) for nightingale. The abundant potential for water power and possible shipping access (later negated by rapids downstream) prompted Brown to judge this the best site for his new family home and for future manufacturing and commerce.

Jacob's father, Samuel, and 20 Brown family members arrived in May 1799. The sailcloth of one of their boats became a temporary roof for Brownville's first house, a log cabin Jacob had built.

The Town of Brownsville was formed from the Leyden territory on April 1, 1802. The first town meeting in Brownsville, which dropped the s by 1825, was held at the Brown home on March 1, 1803. Jacob was elected supervisor before adjourning to the Brownville Hotel.

Brownville became an incorporated village on April 5, 1828. It is one of Jefferson County's oldest communities.

Perch River, once Moffattville, is in a rich agricultural district. The original settlement had a few shops, a store, Union church, and a dozen houses.

The Rome, Watertown, and Ogdensburg Railroad crossed Perch River in Limerick, a popular town meeting spot. Early buildings included a depot, store, tavern, and a dozen houses. A dam at Limerick further aggravated spring flooding and was declared a nuisance by a circuit court and ordered removed.

The Village of Glen Park, incorporated in the 1890's lies partially in the Town of Brownville and partly in the Town of Pamelia. Once home to several paper mills (one manufacturing writing tablets which replaced schoolhouse slates), it also was the site of the Glen Park Amusement Park, featuring Montana Joe and his rattlesnake show, and early Red & Black football games.

The Village of Dexter in the Town of Brownville was incorporated on May 8, 1855. Formerly Fish Island, Dexter sits on land originally purchased by Jacob and John Brown, who built a dam here in 1811. The Black River swept it away; they built another. Early industry included a sawmill, gristmill, and blanket mill.

Pillar Point, named for unusual off-shore rock formations, lies in a farming district between Chaumont and Black River Bay. Some early shipbuilding occurred here.

Source: Brownville - A War of 1812 Community, May 1987. Prepared for Brownville by St. Lawrence-Eastern Ontario Commission.

NOTE: For more information concerning the historic sites in Brownville, turn to Appendix A.

SUMMARY OF PUBLIC OPINION SURVEY
WINTER, 1986

Town of Brownville Planning Board

The Town of Brownville Planning Board, in an effort to understand the public opinion toward land use planning, initiated a survey of the Towns-people in the early months of 1986. The Board developed a questionnaire and delivered it by mail to each town taxpayer. The mailing list was generated by the Data Processing Department of Jefferson County. The survey questionnaires, once completed, were returned to the Planning Board by mail or by dropping them at any one of three places in the Town.

The questionnaire itself was designed to do 3 things. The first objective of the questionnaire was to determine how well known the current land use laws (adopted May 1985) are. Questions one and two were directed at this objective. The second objective was to determine the public attitude toward and interest in future planning and zoning efforts. Questions 3, 4 and 5 were directed at this objective. Thirdly, the questionnaire tried to gauge the collective opinion of present town services. The questionnaire as it was sent is appended to this report for inspection. Following is a discussion and analysis of the results.

A. The Sample.

Of approximately 1,335 questionnaires that were mailed, the Planning Board received 171 responses. This translates into a 12.8 percent response rate. While this sample by no means is construed to be scientifically random, it represents the only existing gauge of public opinion regarding planning and zoning, and so must be given serious consideration. The sample size effects the utility of the survey seriously. Concrete conclusions may be drawn only from those question responses that exhibit a wide majority. Questions that do not exhibit such clear cut majority opinion can only be evaluated speculatively and/or generally.

B. The Results.

Immediately following this section the survey response is tabulated. The following discussion is based on those results.

Question 1 concerned the respondents awareness of the three land-use control laws currently in effect in the Town of Brownville. 47% responded yes, they were aware of the laws, 53% responded no. This is an example of a response that can not be taken at face value (i.e. more people don't know of the laws than do know) because the sample was too small and not genuinely random. Suffice it to say that there is room for improvement regarding awareness of these laws. To be sure, a measure of responsibility lies with the citizens to keep abreast of governmental matters, but local officials can facilitate this objective with more frequent and complete disclosure of governmental activities.

Question 2 attempted to determine the understanding of the three local laws. Again the results indicate that there is room for improvement. The vast majority of the respondents categorized their knowledge of the laws as "fair" or "poor". This percentage will increase as more people get involved with the laws through their applications, but perhaps an additional effort on the part of Town officials to provide information such as an easy to read pamphlet that summarizes

the three laws would be beneficial in this regard.

Question 3 attempted to measure the public opinion of three possible planning tools that the Planning Board is currently considering. These tools are: a Master Plan, a Zoning Law and the control of unsightly conditions. All three of these items received clear cut support with a significant portion of the respondents indicating a desire for more information. If the Town Board and consequently the Planning Board decides to heed this public opinion, they should make an extra effort to provide the people of the Town of Brownville with information and the opportunity for input to the process and product of the effort.

Question 5 underscores the idea that the citizens of the Town want to know about Town planning activities. Though few people expressed an interest in getting directly involved in future planning efforts, a large majority expressed interest in getting involved through public meetings. The solicitation of public participation should be the paramount goal of town officials in any future planning efforts.

Question 6 tried to gather public opinion regarding current town services. The results as shown on the following table are self explanatory.

1. Were you aware of the existence of the three laws mentioned on the previous page?

47% Yes 53% No

2. For each of the three laws listed below check the space that most nearly approximates your understanding of each law.

	Good Understanding	Fair Understanding	Poor Understanding	DNR*
Site Plan Review Law	21%	33%	46%	
Sanitary Code Law	21%	37%	37%	5%
Subdivision Control Law	15%	29%	51%	5%

3. Please indicate your feelings toward the following possibilities in the space provided.

	Favor	Neutral	Oppose	Need More Information	DNR*
a. A plan for the future development of the Town	58%	8%	8%	24%	2%
b. Control where different types of development may occur - zoning	60%	4%	14%	20%	2%
c. Control of Unsightly Conditions	79%	1%	4%	14%	2%

5. **Would you be interested in getting involved in this type of effort in the Town of Brownville?**

			DNR*
Through direct involvement	16% Yes	61% No	23%
Through public meetings	56% Yes	33% No	11%

* Did not respond.

6. The following chart seeks to gauge the attitudes of Townspeople regarding a range of public services. The information obtained through this survey will be used to direct the future of each of those services listed below. Please rate each of the following services or facilities as GOOD (no improvement needed), FAIR (some minor improvement needed) or POOR (considerable improvement needed).

	GOOD	FAIR	POOR	DNR*
a. Fire Protection	71%	14%	2%	13%
b. Ambulance Service	67%	11%	3%	19%
c. Medical Care	21%	22%	29%	28%
d. Police Protection	30%	37%	11%	22%
e. Sanitary Landfill	19%	33%	22%	26%
f. Recreation Facilities	26%	30%	21%	23%
g. Library	43%	23%	2%	32%
h. Road Maintenance	62%	21%	5%	12%
i. Snow Removal	76%	6%	2%	16%
j. Senior Housing	43%	25%	7%	25%
k. Low Cost/Rental Housing	24%	25%	17%	39%
l. Employment Opportunities	4%	17%	51%	28%
m. Schools	68%	14%	1%	17%

* Did not respond

SECTION II

GOALS

AND

OBJECTIVES

GOALS AND OBJECTIVES

After reviewing the public opinion survey the planning board established goals and objectives for the community. The goals and objectives section will encourage community leaders to make decisions based upon the expressed need of the citizens who responded to the survey and the information contained in the comprehensive plan.

1. Goal - Expand highway facilities to care for increased traffic due to expansion of mainly single family homes due to a general increase in population and the expansion of Fort Drum.

   Objective - Obtain information and possible financial assistance from developers through the use of land use regulations concerning the need for highway expansion due to proposed development. Make recommendations to the Town Board in determining long and short-range planning goals for needed road improvements within specific areas of the Town, such as Miller Road and Pillar Point.

2. Goal - Due to major expansion and areas of poor soil for conventional subsurface sewage system, consideration should be given to community water and sewage systems.

   Objective - Use regulations as a tool to steer new growth to locations where soil can carry new development.

   Adopt standards that will protect groundwater and other natural resources in area.

3. Goal - Proposed industrial areas must be kept separate from present residential areas.

   Objective - Limit industrial development through regulations to those areas that can accommodate industry without infringing upon residential areas.

4. Goal - Develop a townwide recreation program.

   Objective - Create a Town Recreation Committee that will determine the adequacy of existing recreational resources, determine a need for new recreation facilities, and make recommendations for implementing a recreation program based upon identified needs.

5. Goal - Review and enforcement of all local laws.

   Objective - Review applicability of local laws and develop procedures for their enforcement.

6. Goal - Expanded police protection is needed townwide due to poor response time by present law enforcement agencies.

Objective - Consider ways to improve police protection townwide.

7. Goal - Increase employment opportunities within the Town of Brownville.

   Objective - Attract new industry which is compatible with the character and resources of the Town through the promotion of Brownville's assets, such as strategic location, dependable work force, quality of life, educational opportunities, etc.

8. Goal - Protect historic resources.

   Objective - Support efforts to list qualified structures on the National Register of Historic Places.

   Consider the need to establish a historic district to regulate new development and protect existing historical structures.

9. Goal - Maintain and protect local water supply.

   Objective - Determine where recharge areas are in Town of Brownville. According to D.O.H., water quality appears to be good. At this time there is no way to determine exactly where recharge areas are located, but groundwater resource map shows the approximate location of these areas.

10. Goal - Protect wetland resources.

    Objective - Adopt land use regulation that will help control development affecting wetlands. Make sure the SEQR process is included in reviewing development proposals.

11. Goal - Promote year-round tourism in the Town of Brownville.

    Objective - Support efforts of Seaway Trail, Inc., Lake Ontario-Thousand Islands Association, Thousand Islands International Council, Dexter Chamber of Commerce, local service and fraternal organizations in promoting tourism in the area.

12. Goal - Commit to the local planning process.

    Objective - Local planning board can (1) develop and maintain through periodic review a local comprehensive plan, (2) recommend local land use regulations based upon community needs and goals determined by that plan.

SECTION III

NATURAL RESOURCES INVENTORY

NATURAL RESOURCES INVENTORY

TOWN OF BROWNVILLE, NEW YORK

Submitted to the Town of Brownville
Planning Board

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May 1987

ACKNOWLEDGEMENTS

This research was made possible by a grant from the Edward J. Noble Foundation. We gratefully acknowledge the generosity of the Foundation in providing support for research pertaining to the people and the environment of the North Country.

Information was contributed by the following individuals: Jeff Herter and Doug Quinn of the St. Lawrence-Eastern Ontario Commission; Len Olivett and Joe Lamendola of the NYS Department of Environmental Conservation; Bruce Armstrong, Doug Schelling, and Amy Smith of the Jefferson County Department of Planning; and Amy Lester of the New York Field Office of The Nature Conservancy.

Preparation of the maps was assisted by Sear-Brown Associates of Canton, NY. Preparation of the report for publication was assisted by Jeanne Van Auken and Mary Beth Clary of the SLU Environmental Studies Program. Sketches for the report were drawn by Chris Denise of the SLU North Country Research Center.

INTRODUCTION

This natural resources inventory, consisting of seven maps and accompanying text, was compiled for use by the citizens and planners of Brownville, New York. It is designed for use as part of a comprehensive land use plan. Comprehensive land-use plans take into account the physical capabilities of the land itself. The best means of conveying an adequate description of the land and its natural characteristics is through the use of maps.

The maps were created on individual sheets of five-mil, matte one-side, reproducible mylar. This medium was chosen for its qualities of dimensional stability, durability, and transparency. It is a polyester material that does not tear, absorb moisture, turn brittle, or yellow with age; it always lies flat which makes it easy to work with. One side is frosted to provide a receptive surface for pencil, ink, or other means of writing directly on the map. The relatively thick width was chosen within the range usually used for such maps (four to seven mil). Finally, paper reprints can be made from the mylar maps if working copies are desired.

In an effort to guide local planners on decisions regarding development policies within Brownville, this natural resources inventory contains information on seven environmental criteria: slope, soils, surface water resources, groundwater resources, bedrock geology, wetlands, and biological considerations. Data was integrated from numerous sources, including government agencies, research by academics and private consultants, and community service guides. Based on this information, regions unsuitable for growth, as well as those in which there is potential for development, were delineated. These maps should be studied holistically, so that all criteria are considered before a decision is made. Used in conjunction with a working knowledge of existing land uses, this inventory will help ensure that future development will occur on land that is best suited for specific uses.

The base map provides a foundation on which all other data was compiled in an organized and easily comparable manner. It shows major hydrologic and human-made features of the landscape, including roads, buildings in rural areas, rivers, streams, and wetlands. When making the base map for the Town of Brownville, some peripheral areas were included to show that the outlying area can affect and be affected by occurrences in Brownville. The Brownville base map was produced from the New York State Department of Transportation planimetric maps at a scale of 1:24,000. This scale means that one inch on the map equals twenty-four thousand inches in reality. A scale of 1:24,000 was chosen because it is of common use in regional planning and because much existing information has been mapped by various agencies at this scale.

While compromises must inevitably be made in deciding how best to utilize land, guidelines for use that take into consideration the information provided by a natural resources inventory may prevent such problems as contamination of water, destruction of critical natural areas, excessive erosion of soil, or extermination of wildlife. These problems, and the environmental information necessary to minimize them in land use planning, are described in more detail throughout this report. Each of the subsequent sections explains a different map in the natural resources inventory. The first consideration is slope.

SLOPE

Slope is a term used to describe the gradient or steepness of the land. Slope is determined by calculating the change in vertical height over horizontal distance. For example, if slope rose 10 feet over a distance of 100 feet, then:

(Slope (%) = 10 ft./100 ft. x 100 = 10%)

The severity of the slope contributes to suitability for development. Areas with a gentle slope (0-8%) are optimal locations for development, as long as all other factors have been considered. These areas can, however, become subject to erosion if large removal of the ground cover occurs. Moderate slopes (8-15%) are capable of supporting low-density residential use, but more intense uses should be allowed only with caution. Moderate slopes should have minimal development because of the increased chance of severe erosion and land slippage. Development on moderate slopes also increases sedimentation in nearby streams, disrupting natural water courses.

Development on steep slopes (above 15%) can be both dangerous and expensive. Development in these areas will inevitably result in reduced soil stability and water quality. Physical feasibility should not, however, be the only concern. Economic practicality is also important. For instance, as elevation increases, so do the costs of roads, maintenance services, and construction costs. Another consideration in the planning process is that a hillside is an attractive setting. Although hillsides have aesthetic value for housing, these areas should be set aside for recreational purposes. If development must occur in these areas, it should be approached with extreme care.

The slope map for Brownville shows general categories of steepness. The computations of slope were done by hand from contour elevations on the U.S. Geological Survey topographic maps. Horizontal distances between contours of vertical height were measured and slopes were calculated from these measurements.

The topography in Brownville is relatively flat, although there are small areas of moderate and steep slope. For example, the southwest part of Brownville is an area that is flat. Based solely on consideration of slope, this area would be a good location for development to occur. The area near Dexter and Glen Park, however, has a varied slope; therefore, proposed development should be studied carefully.

Five categories of slope have been delineated on the slope map. They are as follows:

0-3%: Flat lands are suitable for development, but drainage problems could cause difficulties.

3-8%: Gently sloping lands provide good drainage, thus posing few problems for construction of homes, roads, and septic systems.

8-15%: Only low-density development should be allowed in these areas. It should be kept in mind that as slope increases, problems with erosion, siltation, increased construction costs, and difficult roadway construction could occur. Alteration of the slope should be avoided to minimize these problems.

TOWN OF BROWNVILLE

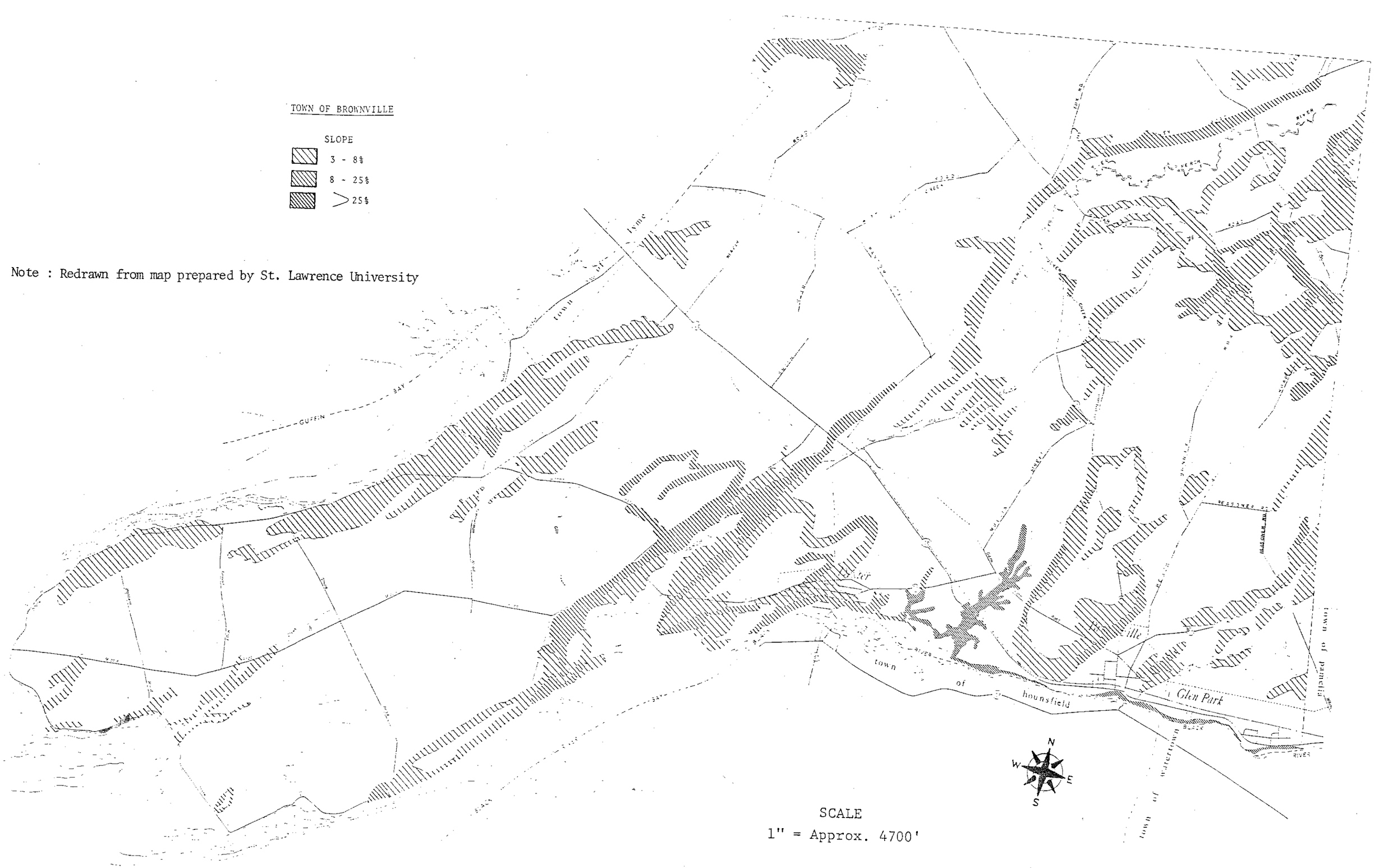
SLOPE

3 - 8%

8 - 25%

> 25%

Note : Redrawn from map prepared by St. Lawrence University



SCALE

1" = Approx. 4700'

15-25%: Steep slopes are only suitable for very low densities of development, and each site should be considered carefully. If precautions are not taken, erosion will be severe, septic systems will malfunction, and water supplies will be contaminated. The difficulties can be overcome, but only at considerable cost to the developer, the community, and the environment.

> 25%: These slopes will cause the same problems as above with even greater severity. These areas should be left undeveloped.

SOIL INTERPRETATION

Soil is the foundation for all land use. Soil composition directly affects the suitability of the land for all types of development: highway construction, industry, and housing. Since most land use change in Brownville is likely to result from the construction of residential housing serviced by individual septic systems, the primary concern is the ability of the soil to accommodate septic systems.

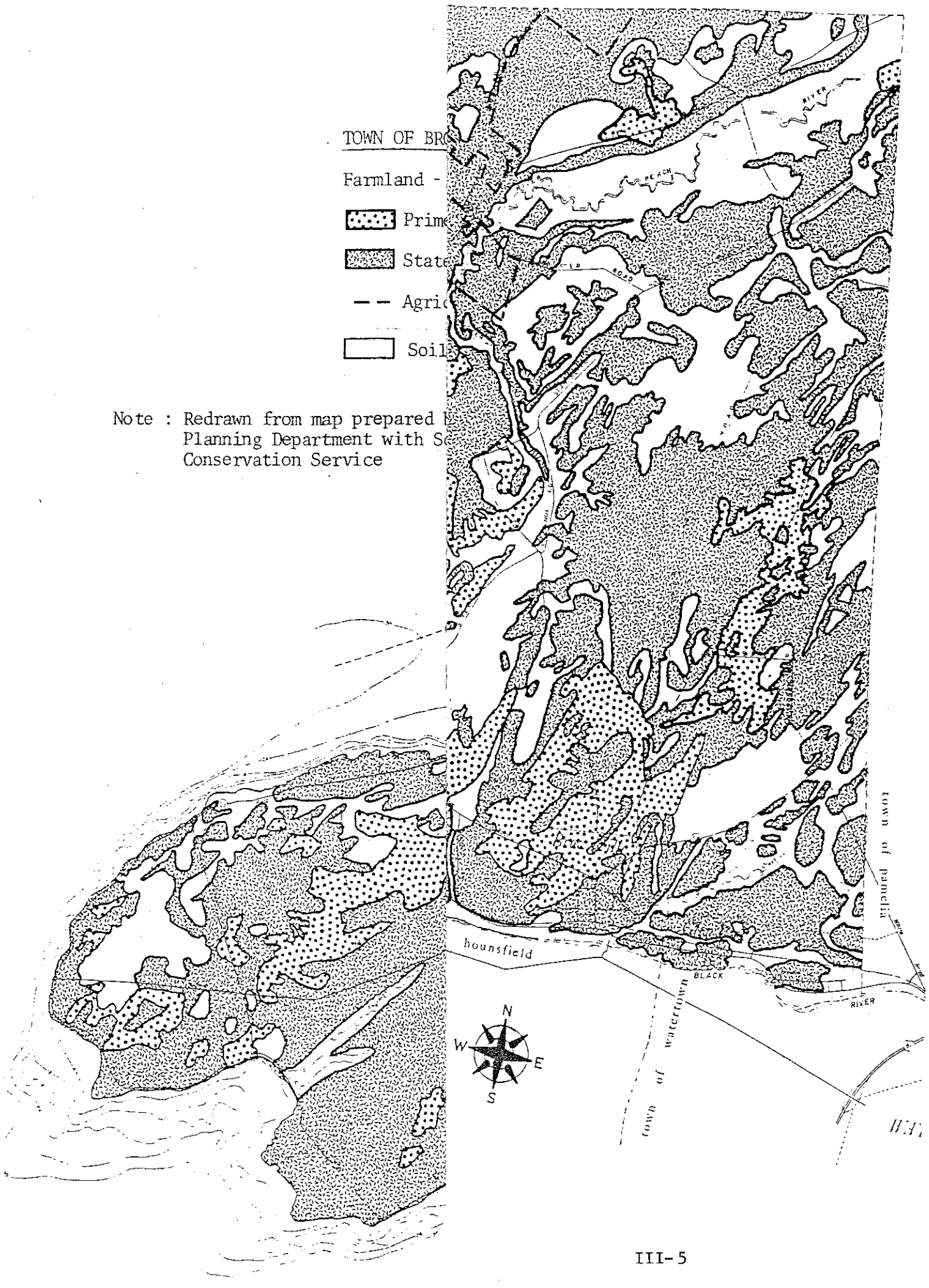
There are five important criteria for determining suitability of soil for septic systems: depth to bedrock, depth to seasonal high water, permeability, stoniness, and flood potential. In order for soil to be considered suitable for septic systems, it must meet certain standards for each criterion. Failure to meet any one standard limits the opportunity for on-site sewage disposal. Since Brownville has no municipal sewerage, septic limitations may translate into community development limitations.

Soil Standards for Septic Systems

Soil Characteristics	Limitations: Slight	Moderate	Severe
Depth to Bedrock (ft.)	>6.0	4.0-6.0	<4.0
Depth to Seasonal High Water Table (ft.)	>6.0	4.0-6.0	<4.0
Permeability (in./hr.)	>1.0	.63-1.0	<.63
Stoniness	little stoniness	slight stoniness	very strong
Flood Potential	none	slight	severe

Slight - limitations are easily overcome; maintenance is minimal
Moderate - limitations need to be recognized; they can be overcome
Severe - limitations are both costly and difficult to alleviate; they might require major soil reclamation, bedrock removal, and intense maintenance, which may not be feasible.

Shallow depth to bedrock severely limits the utility of a septic system. Normally, sewage effluent is filtered and cleansed as it percolates downward through soil layers before hitting bedrock. However, if the soil is shallow, relatively unfiltered sewage can reach bedrock and travel through fractures in


TOWN OF BR
Farmland -
Prime
State
Agri
Soil
Note : Redrawn from map prepared
Planning Department with S
Conservation Service
RIVER
ROAD
hounsfield
BLACK
RIVER
town of watertown
town of pamelia
N
W
E
S

TOWN OF BROWNVILLE

SOILS LIMITATIONS TO:

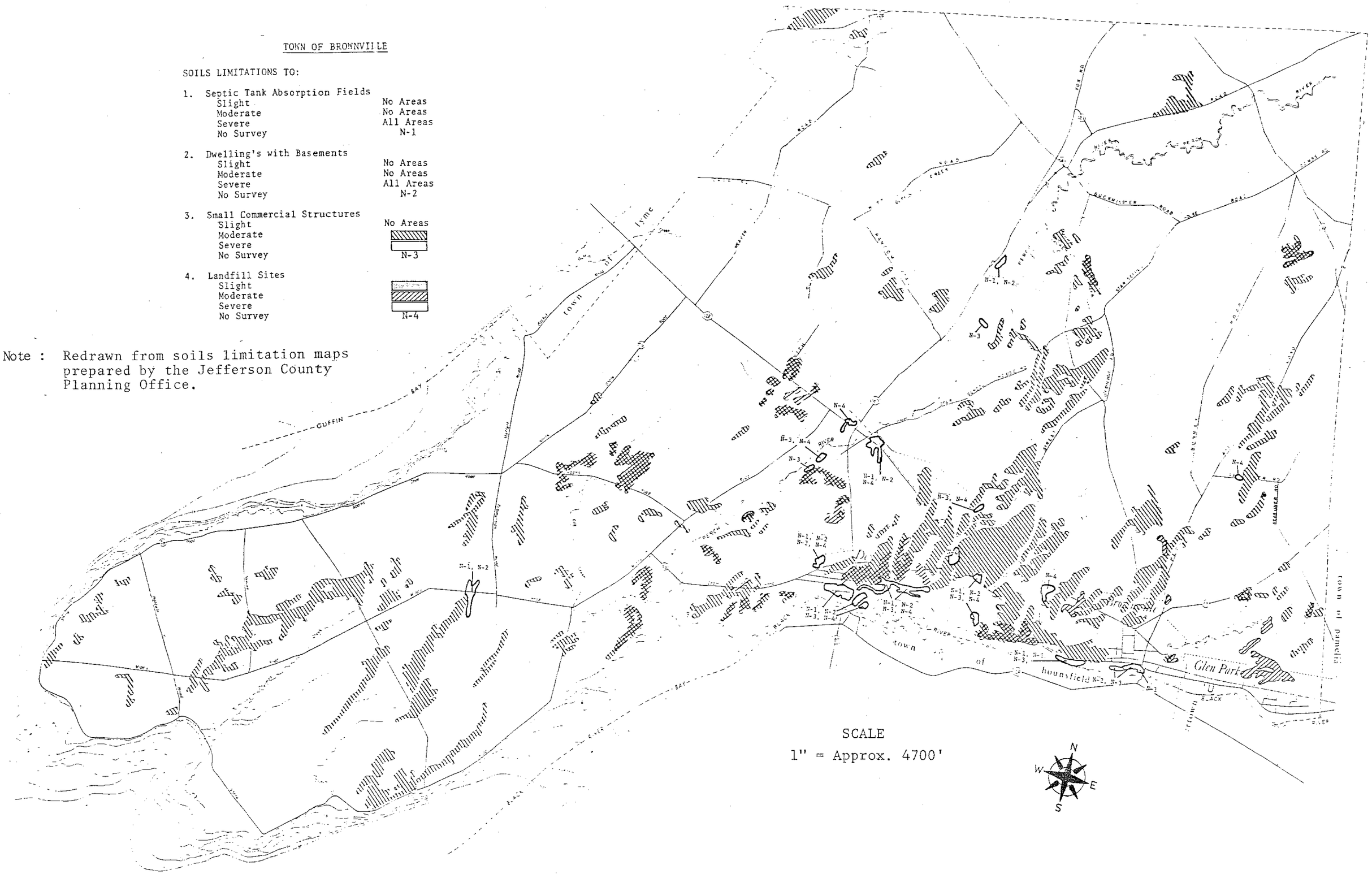
1. Septic Tank Absorption Fields
   - Slight — No Areas
   - Moderate — No Areas
   - Severe — All Areas
   - No Survey — N-1

2. Dwelling's with Basements
   - Slight — No Areas
   - Moderate — No Areas
   - Severe — All Areas
   - No Survey — N-2

3. Small Commercial Structures
   - Slight — No Areas
   - Moderate
   - Severe
   - No Survey — N-3

4. Landfill Sites
   - Slight
   - Moderate
   - Severe
   - No Survey — N-4

Note : Redrawn from soils limitation maps prepared by the Jefferson County Planning Office.



SCALE
1" = Approx. 4700'

the rock toward surface or well water, thereby causing contamination. Similarly, a seasonal high water table that rises to within four feet or less of the ground surface causes the septic tank to back up and malfunction.

Permeability refers to the rate at which liquid percolates through the soil. A rate of at least one inch per hour is required for sufficient on-site disposal. Permeability slower than .63 in./hr. causes ponding of the effluent which contaminates the ground surface above the tank. On rare occasions, permeability can be too rapid (>20.0 in./hr.). If the septic system is located in an aquifer recharge area or near a body of open water, rapid permeability in the soil will allow unfiltered effluent to contaminate water.

Stoniness refers to the amount of rock outcropping and presence of loose boulders in the soil. Excessive stoniness necessitates excavation for proper septic function; thus, such sites should be avoided. Flood potential refers to the danger of flooding in the area. Besides threatening human life and property, floods cause septic tanks to malfunction.

The soils of Brownville have been mapped and interpreted by the U.S. Soil Conservation Service (SCS). On the basis of this information, a series of maps interpreting the soils for various uses has been prepared for the town. A composite map was made using the information contained in these maps. The maps showing the location of prime and important farmland was not included in the composite map. (Both of these maps are located on the next two pages.)

Unfortunately, the entire Town of Brownville has severe soil limitations for septic systems. The most common reasons are shallow depth to bedrock, slow permeability, and high seasonal water tables. For example, a common soil on Pillar Point is "Benson Loam". Its rating for septic systems is severe due to shallow depth to bedrock (0-20 in.). In the center of Brownville, near Limerick, "Chaumont" soils are quite common. These soils are severely restrictive for both shallow depth to bedrock and slow permeability. Similarly, another typical soil, Kingsbury silty clay, is severely restrictive due to slow permeability and a high water table that reaches within six to eighteen inches of the surface.

These examples are representative of soils in Brownville. Because there are no suitable soils for septic tanks, all development should be approached with care. The danger of well-water contamination from malfunctioning septic systems must be recognized and dealt with appropriately. Accordingly, alternative approaches for the disposal of sewage should be encouraged by the planning board. These alternatives might include incinerating toilets, biological toilets, oil-flush toilets, and composting toilets. In addition to these alternatives, normal septic systems can be constructed according to a "mound" design. For a "mound" design, a normal septic system is constructed within a mound of sandy soil placed on the ground surface. A typical mound for a single household may have a bottom area of 4,000 square feet or more. The necessary height of the soil mound depends on the thickness of otherwise suitable soil overlaying the bedrock. The original soil surface beneath the mound must be plowed and stabilized before the sand is applied to ensure adequate infiltration into the soil. This option can be expensive.

SURFACE WATER RESOURCES

A study of surface water resources is an important component of the natural resources inventory. This study involves identifying, mapping, and describing

the principal surficial water features of Brownville. Water resources must be assessed in order to avoid incompatible development and environmental damage. A sufficient water supply is necessary for all communities, so it is essential to maintain the quality of this resource. Protection of water resources is also important for the preservation of recreational and sporting opportunities in Brownville.

Lakes, Ponds, Rivers, and Streams

All lakes, ponds, rivers and streams in the Town of Brownville have been identified on the surface water resources map. These water resources are important habitats for fish and wildlife. The Perch and Black Rivers, the Black River Bay, and the many other streams and small ponds in Brownville contain many species of birds and fish, some of which are considered "sensitive" (see section on biological considerations). Any environmental contamination that occurs in these areas can have serious effects on local wildlife.

These areas are also ideal for many forms of recreation. The opportunities for fishing, swimming, and boating are dependent upon the protection of the unspoiled character of the surface waters. Recreational activities, as well as the area in which they take place, should be managed to provide the greatest benefits to the people of Brownville.

The quality of water resources depends a great deal on the use of the land in the surrounding area. In Brownville, residential development and agriculture have the most potential for negative effects on the hydrology of the town. Construction of buildings can cause a dramatic increase in erosion. The sediment that results is eventually carried into the streams and rivers, causing adverse environmental effects. Sediment can reduce the clarity of the water, harm certain species of fish, and change the form of the river bed. Erosion sediment also contributes excessive nutrients to water systems, resulting in accelerating eutrophication, producing extensive growth of weeds and algal blooms. This plant growth depletes the oxygen content of the water. Decreased oxygen levels can be detrimental to game fish and other wildlife dependent on high water quality.

Septic tanks can also pollute the surface waters. Seepage from septic tanks can be dangerous if harmful bacteria enter the water supply. In addition, an increase in septic tank usage can result in a greater input of nutrients into the surface water and cause eutrophication.

Agriculture can increase surface water runoff and introduce harmful substances such as pesticides and fertilizers into the water resources. Agriculture often requires clearing vegetation from the land. These lands erode easily. This increase in erosion causes sediments and nutrients to flow into rivers and streams, disrupting wildlife habitats and lowering the quality of the water for other uses. Such problems can be eliminated by carefully managed agricultural practices, such as contour plowing an no-till farming.

To prevent the occurrence of these problems, limitations on community development should be established in areas near sensitive water resources. In Brownville, particular care should be taken in the development of the coastal areas on Pillar Point, as well as the areas surrounding the Perch and Black Rivers.

Flood Plains

Flood-prone areas occur on land adjacent to rivers, streams, lakes, and wetlands. Flood plains, which are those areas along the sides of these surface waters, aid in the discharge of flood water during peak flows. Floods can be caused by a combination of several factors. Heavy rainfall over a short period of time or melting snow in the spring can cause rivers to rise to dangerous levels. Human activities, such as development next to waterways, removal of vegetation, or lateration of natural stream beds, can also increase the amount or rate of surface runoff and cause a greater frequency of flooding.

Flood plains place serious limitations on development. Flood plains should be left for open space uses such as forestry, recreation, or agriculture, since these uses are not detrimental to the normal flow of surface waters.

The National Flood Insurance Program contains requirements of great significance for land-use control in flood plain areas. This program was established by the National Flood Insurance Act of 1968. Further sanctions and provisions were added by the 1973 Flood Disaster Protection Act. The program was implemented in order to ensure that all communities adopt land-use regulations for flood-prone areas, as well as to provide a system of subsidized flood insurance.

The National Flood Insurance Program is administered by the Federal Emergency Management Agency (FEMA) of the U.S. Department of Housing and Urban Development. Information and assistance regarding qualification for the program are available to communities directly from FEMA.

FEMA is responsible for identifying all flood-prone communities and for delineating the boundaries of flood plain areas which have special flood-hazards. The standard for the identification of flood hazard areas is the "100-year flood." This standard represents the flood level that, on the average, has a one-percent chance of being equaled or exceeded in any given year. In Brownville, the 100-year flood areas are located along the coast of Pillar Point, and in the Perch and Black River areas. These areas should be left for open space uses and should be managed according to the specifications provided by the National Flood Insurance Program.

The specific source of information for the flood hazard section of the Surface Waters Resources map was FEMA's Flood Insurance Rate Map, effective as of June 1985.

Drainage Basins

A drainage basin is the total area that drains into a specific water system. Water falling in the form of precipitation flows into a valley or lowland and then converges into streams, rivers, or lakes. Thus, all the water within a drainage basin is interconnected, and any alteration in a stream in one area may have repercussions throughout the entire drainage basin.

A drainage basin is bound by the highest points of local terrain. Several factors influence the way in which precipitation flows into the receiving body of water: pattern and intensity of precipitation; and the size, shape, and average slope of the watershed. All of these factors interact with each other to determine the proportion of precipitation which runs off, enters the groundwater,

or is evaporated. The specific manner in which these factors relate is unique to each watershed. When some of the factors change, either from natural causes or from development, the amount of direct runoff usually changes.

Surface compaction of soil reduces the capacity of the soil to absorb water. Almost no infiltration occurs when the soil is covered with an impervious layer such as asphalt or concrete. As rooftops and parking lots replace woodlands and fields, the amount of water that runs off the surface increases, while infiltration into the groundwater system decreases. Consequently, water reaches the stream or lake more rapidly, causing higher levels of run-off than had previously existed under the same conditions of precipitation.

Drainage basins on the surface water resources map were drawn from highest points of elevation between major streams in the town. The information for elevation was taken from USGS topographic maps. Because Brownville is relatively flat, few drainage basins are present and the catchment areas tend to be widely spaced. Major drainage basins exist for Perch River, Black River, Sherwin Bay, and Guffin Bay.

The surface waters in the Town of Brownville are a valuable resource. The ponds and streams, the Black and Perch Rivers, and the Black River Bay, are valuable in terms of both their use for future water supply and their excellent recreational opportunities. These resources need to be managed in order to maintain the highest water quality possible. Flood-prone areas should also be managed in order to avoid development that may be incompatible with the normal flow of surface waters.

TOWN OF BROWNVILLE

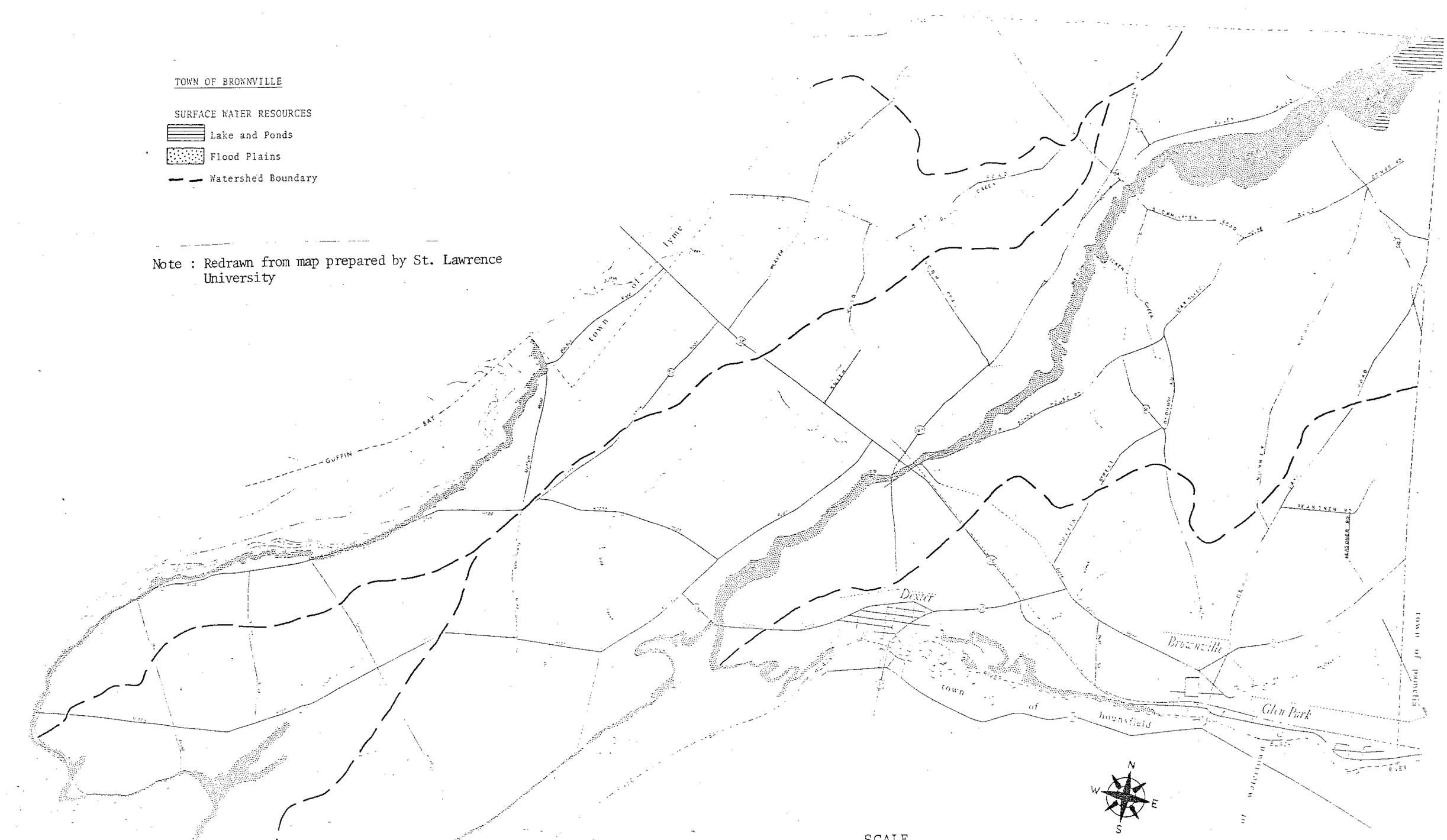
SURFACE WATER RESOURCES

Lake and Ponds

Flood Plains

Watershed Boundary

Note : Redrawn from map prepared by St. Lawrence University



SCALE

1" = Approx. 4700'

GROUNDWATER RESOURCES

A second major source of water for the Town of Brownville is located beneath the surface of the earth. Groundwater is all water located in the interstices of soil and in the pore spaces of rocks. The subsurface water is constantly replenished at aquifer recharge areas. At these locations, water infiltrates the soil and percolates downward through interstices until reaching bedrock. Then, depending on the physical characteristics of the rock, the water flows through pore spaces, joints, and fractures or fissures until it reaches the water table.

In order to protect groundwater, two hydrogeological features must be considered; the subsurface aquifer and the surface supplier or recharge area. An aquifer is a permeable stratum of rock, gravel or sand through which groundwater moves easily, making possible its use as a water supply source. Aquifers are replenished by recharge areas. These areas are the interchange between the aquifer and the earth's surface and the point where surface water and precipitation infiltrate the aquifer.

The entire town of Brownville is underlain by geologic materials suitable as an aquifer, and a well drilled at any location will intersect rocks yielding adequate water supply for individual homes. However, some areas of the town are underlain by rocks which are especially important as a potential supply of water on a larger scale, for example, municipal wells. A significant aquifer identified in a major study of water supply in Jefferson County has been mapped on the groundwater resources map. This aquifer, contained primarily in the Pamelia formation, is beneath the wetlands and the Perch River in the northern part of Brownville.

Recharge areas are determined by the permeability of both the overlying soil and surficial geology. Surficial geology is the unconsolidated material deposited over the bedrock by retreating glaciers. Soils form in the upper few feet of these glacial deposits. Geologically, the Town of Brownville is located on bedrock of limestone and dolomite, covered by a thin layer of unconsolidated glacial deposits.

Surficial geological information for the groundwater resources map was obtained from two sources: the 1968 Jefferson County Comprehensive Water Study prepared by the consulting firm of O'Brien and Gere, and the Pleistocene Geology of the St. Lawrence Lowland , a U.S. Geological Survey study, by Paul MacClintock and David Stewart. The combination of both studies covered the entire region with some overlap of information. Surficial geology characterized as having rapid permeability included sands and gravels. In the Jefferson County Water Study, the permeable deposits included glacial stream, outwash and beach gravels. In the McClintock and Stewart study, gravels, sands, and alluvium were considered permeable.

Information on soils in Brownville was obtained from various soils maps prepared by the U.S. Soil Conservation Service (SCS). The permeability of each soil type has been classified by the SCS as either slow, moderate, or rapid, based on the speed at which water percolates through the soil. Soils mapped as permeable on the groundwater resources map were those characterized as rapid or moderately rapid by the SCS.

The groundwater resources map also shows the location of wells providing public water supply in Brownville. The recharge area for each of these wells was defined as those areas having both permeable soils and permeable surficial

TOWN OF BROWNVILLE

GROUNDWATER RESOURCES

Potential Aquifer

Recharge Areas:

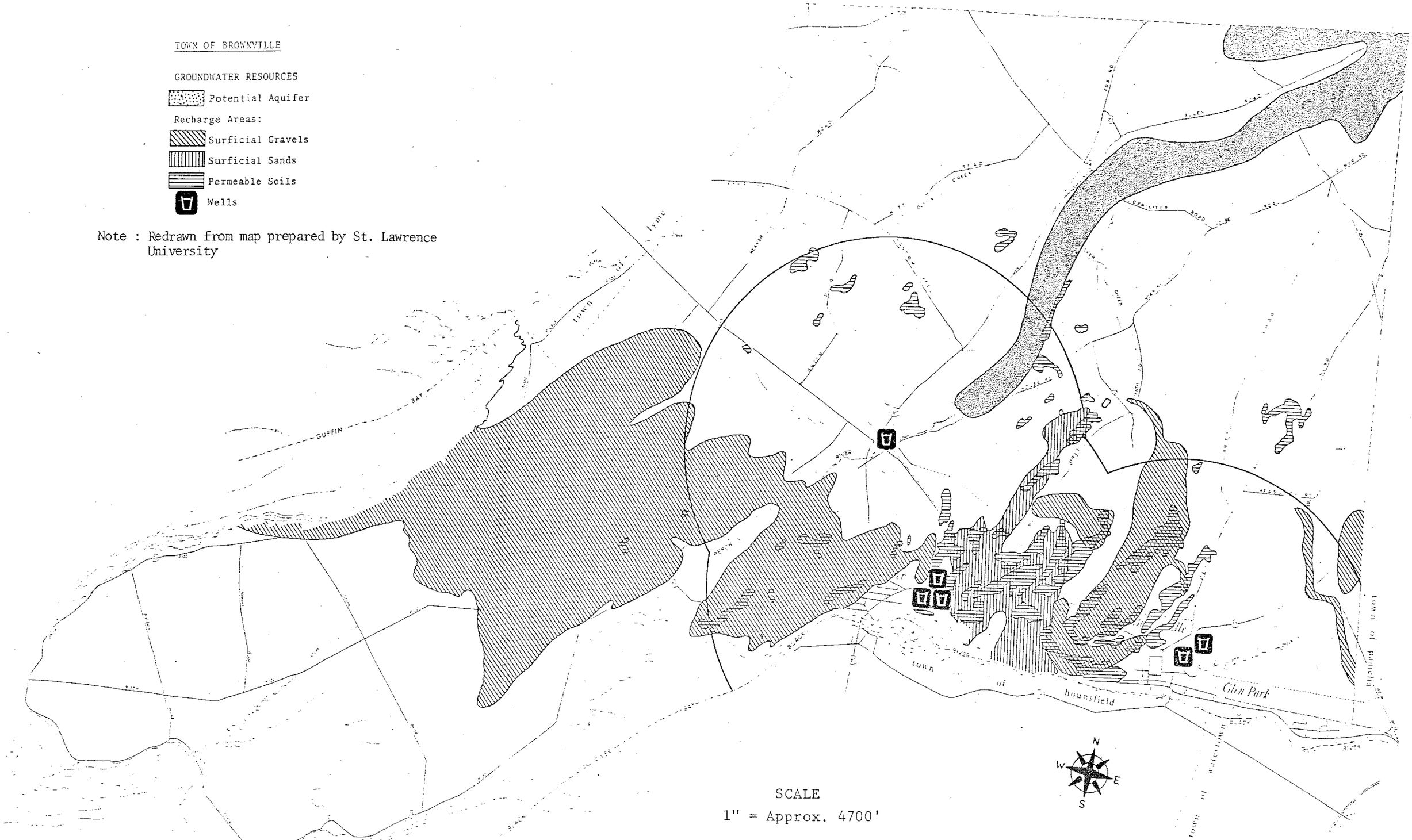
Surficial Gravels

Surficial Sands

Permeable Soils

Wells

Note : Redrawn from map prepared by St. Lawrence University



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1" = Approx. 4700'

geology within a two-mile radius of the well. A two-mile radius represents the limits recommended by the federal Environmental Protection Agency for mapping groundwater recharge areas. It is assumed that water removed by a well is replenished through permeable deposits located within a two-mile radius. Since rivers are thought to be a major source of groundwater recharge, the two-mile radius around wells in Brownville was not extended beyond the Black River.

Within the boundaries thus delineated, areas having both permeable soils and permeable surficial geology should be considered recharge areas. Surface water and precipitation falling on these areas will readily infiltrate the ground surface and percolate to the underlying groundwater. Of lesser importance are areas where permeable soils are underlain by impermeable surficial geology. Still, these areas merit consideration in land-use planning because permeable soils will allow the infiltration of water, which may eventually be channelled to an area of permeable surficial geology nearby.

To assure public and private water supply, aquifers and recharge areas should be protected from pollutants. If the aquifer recharge area is exposed to harmful substances, the groundwater could become contaminated. Unfortunately, contamination of the recharge areas in most cases would not be detected until it has entered the groundwater supply. Pollutants affect an aquifer in direct relationship to the size and physical characteristics of the aquifer and the type and amount of pollutants discharged. The sources for aquifer pollutants are usually located above or adjacent to an aquifer or recharge area. Common sources of groundwater contamination are septic tank effluent, landfill leachate, leakage from sewage lines, and ruptured fuel tanks.

Special consideration should be given to areas designated as recharge areas because these areas are the main source for groundwater supply. It would be wise to leave these areas only slightly developed or entirely undeveloped because these deposits transmit water rapidly to underlying aquifers.

BEDROCK GEOLOGY

Beneath the surficial geology in Brownville is bedrock. The bedrock in Brownville is composed of several layers. The deepest layer, approximately 300 to 400 feet below the ground surface, is a Precambrian base composed of granite, a very old rock in geologic terms. Resting on the base is a series of limestone and dolomite formations, formed when ancient oceans covered the Precambrian granite. The rock itself is composed of the remains of microscopic sea life.

The first of these formations is the Pamelia formation. It consists of about 120 feet of dolomite, composed of magnesium carbonate. Magnesium carbonate is very hard and contains relatively few fractures and joints. Thus, while dolomite is saturated with groundwater, permeability is considered medium to low.

Above the Pamelia is the Lowville formation. This formation is approximately 100 feet thick and consists mainly of limestone. Above the Lowville are other limestones, the Chaumont formation, the Rockland formation, the Kirkfield formation, and the Shoreham formation. The lower three formations make especially good aquifers.

Calcium carbonate in limestones has a very low resistance to groundwater; thus, as groundwater percolates through fractures of rock containing calcium carbonate, dissolution occurs. Dissolution is a chemical weathering process in

which calcium carbonate is removed by water and passes into solution. The Lowville and Chaumont formation have fairly good resistance to dissolution, while the Kirkfield and Shoreham formations have very low resistance to dissolution by groundwater. Large amount of water flow through the fractures and joints, resulting in extensive dissolution, which in turn enlarges caves and fractures. Where these formations are the last layer of bedrock before reaching the surficial geology, the result is a surface topography with caves and disappearing streams. Since surficial geology in Brownville is very thin, this type of bedrock makes it easy for pollutants to flow through the strata and pollute large quantities of groundwater in a very short period of time.

WETLANDS

Wetlands are defined as any tract of land periodically or continually saturated with moisture, including but not limited to swamps, bogs, and marshes. Wetlands are a vital component of a natural resource inventory for three main reasons: they are a means of flood control; they help purify polluted waters; and they provide nutrients and refuge for a variety of wildlife.

Wetlands control floods because they have the ability to absorb and slowly release large volumes of water. This property becomes especially important in periods of rapid snowmelt. Their spongelike absorbency is lost if they are drained and filled, thus increasing the dangers of flooding downstream.

Wetlands are also capable of helping to purify polluted water. This purification is accomplished by the simple process of slowing the flow of water as it passes through the wetland. When the speed of water is decreased, materials such as silt and other suspended particulates settle out. Additionally, the rich abundance of plant life associated with wetlands takes up much of the excess nutrients typically found in water. Purification is particularly important in agricultural areas where fertilizer runoff can cause accelerated eutrophication of lakes and ponds. Accelerated eutrophication, as indicated earlier, is the unnatural loading of nutrients in bodies of water which causes increased plant growth, especially algal blooms, literally suffocating fish.

Finally, wetlands are of unparalleled value as wildlife habitat. Not only are wetlands home to many species of plants and animals, but they are also important to many more species of wildlife residing in adjacent fields and woodlands. Much of this wildlife is dependent on neighboring wetlands for both sustenance and drinking water.

The Brownville wetlands map was completed with information provided by the New York State Department of Environmental Conservation (DEC). The DEC has sole responsibility for mapping and classifying wetlands within New York State under the Freshwater Wetlands Act (Article 24 of the Environmental Conservation Law). In accordance with this law, the DEC has promulgated four classes of wetlands based on specific performance criteria including vegetative cover, hydrological and pollution control features, distribution, and ecological considerations. Class I is considered most valuable. The ranking descends through classes II, III, and IV. A summary of the classification criteria follows.

A wetland shall be considered Class I if it has any of the following features:

1) it is a classic Kettlehole bog,
2) it is the resident habitat of an endangered plant or animal species,
3) it supports an unusual diversity or abundance of plant or animal life,
4) it is tributary to a body of water which could subject a heavily developed area to flood hazards in its absence,
5) it is adjacent or contiguous to a body of water primarily used as public water supply, or
6) it contains four or more of the enumerated Class II characteristics;

Class II if:

1) its cover type (of vegetation) is less than two-thirds loosestrife and/or reed,
2) it contains certain percentages (greater than 25%) of indicative plant species,
3) it is contiguous to a tidal wetland, or associated with open water, or with streams specifically classified under the Environmental Conservation laws,
4) it is a traditional migratory bird habitat or residence of vulnerable plant or animal species,
5) it supports unusual diversity or abundance of plant or animal life relative to the county,
6) it has archeological or paleontological significance or is associated with unique geological features,
7) it is a tributary to a body of water which could subject lightly developed areas to flood hazards in its absence,
8) it is hydraulically connected to a potentially useful aquifer, or
9) it is within an urbanized area, or used for public recreation or it is one of the three largest within a city or town;

Class III if:

1) it is two-thirds or more loosestrife and/or reed cover type,
2) it is deciduous or shrub swamp, or consists of floating or submerged vegetation or open water,
3) it contains an island of sufficient size for wildlife habitat or for recreational or educational activities,
4) it has an alkalinity of at least 50 ppm,
5) it is adjacent to fertile upland,
6) it is resident habitat for plant or animal species considered vulnerable in that part of the state,
7) it is contributing to the purification of a large volume of water,
8) it is visible from interstates, parkways, or passenger railways and aesthetically beneficial,
9) it is located in a town where wetlands comprise less than 1% of the acreage, or
10) it is on publicly owned land that is open to the public.

Class IV wetlands do not contain any of the above features, but are wet meadows or coniferous swamps. Brownville does not contain any class IV wetlands, but does encompass a few important class I, II, and III areas. Most notable is the Perch River Management Area, a state-owned class I wetland located in the northeast corner of the town. Also of great importance is the Dexter Marsh area,

TOWN OF BROWNVILLE

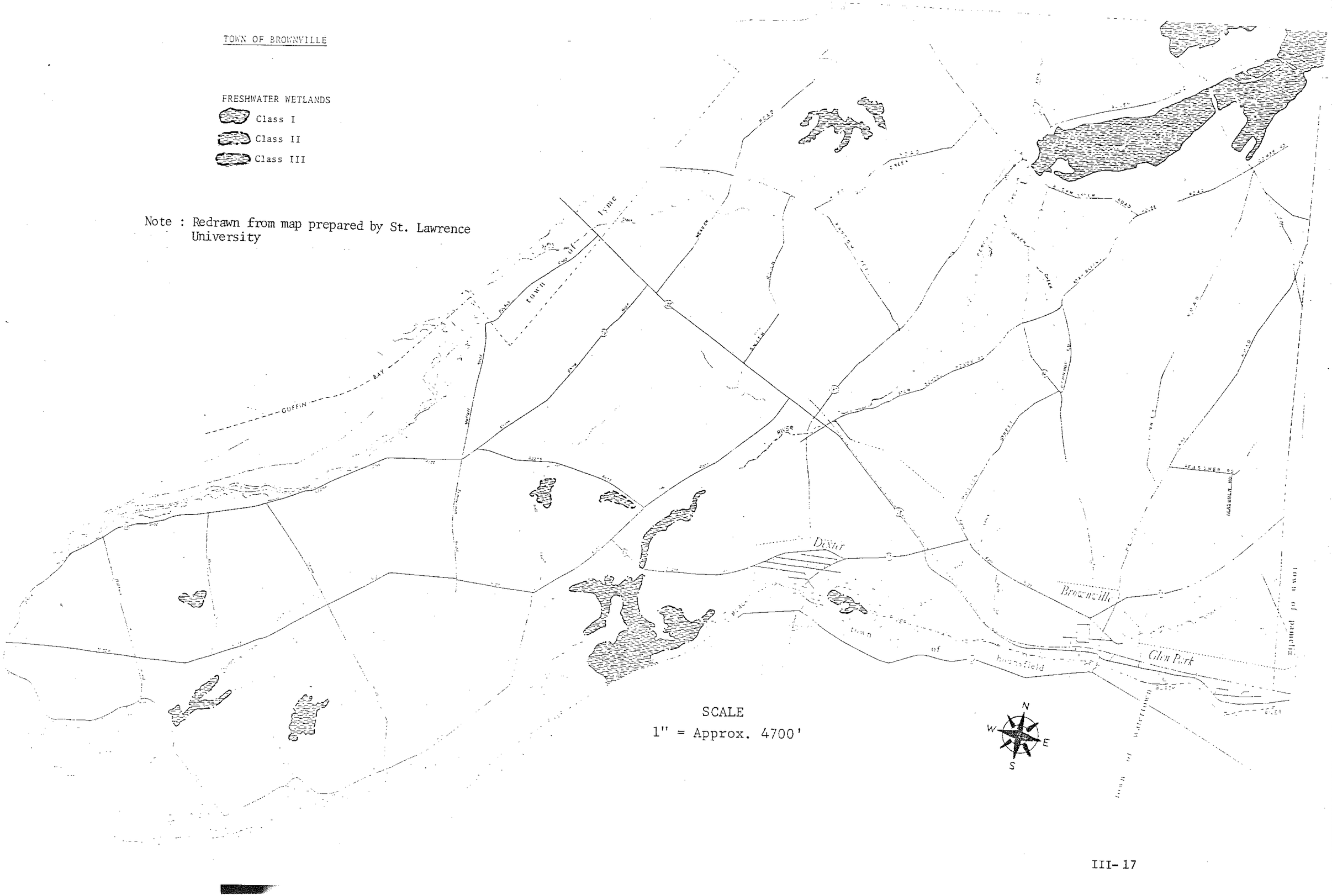
FRESHWATER WETLANDS

Class I

Class II

Class III

Note : Redrawn from map prepared by St. Lawrence University



SCALE

1" = Approx. 4700'

a state-owned class II wetland at the confluence of the Perch and Black Rivers. Scattered throughout the western end of the Town are several class II and III wetlands, which must be given special consideration before being altered.

New York State recognizes the value of wetlands and seeks "to preserve, protect and conserve freshwater wetlands and the benefits derived therefrom." Accordingly, DEC has devised a permit system to regulate use. Activities that are determined not to alter or impair the functioning of a wetland are often exempted from permit requirements. However, determination of such exemptions are the responsibility of the DEC commissioner. All other activities affecting wetlands are subject to state permission. Standards for granting permits reflect the value of the wetland; for example, class I wetlands have more restrictive permit requirements than do class II wetlands. The application process and any other information regarding permits are explained in a DEC pamphlet entitled, "Freshwater Wetlands Permit Requirements Regulations," part 664 of Title 6 NYCRR. It is reproduced in Appendix B.

BIOLOGICAL CONSIDERATIONS

The biological considerations map presents the biological resources in Brownville based on areas sensitive to pollution and development. These areas represent places of breeding and/or spawning, high migratory concentrations, and significant habitat and vegetation. Information for this map was obtained from the St. Lawrence-Eastern Ontario Commission's Oil Spill Response Model for Eastern Lake Ontario except for Nature Conservancy land, which was delineated from the tax map for the Town of Brownville.

The information presented in the biological considerations map is divided into two categories: 1) significant biological habitats and 2) high priority sensitive natural resources. In Brownville, significant biological habitats include littoral zones, beaches, and land managed by the Nature Conservancy. These habitats are important because of their ecological value and vulnerability to disturbance.

One significant biological habitat in Brownville consists of the beaches found along the shores of Lake Ontario. These beaches are primarily rock and gravel. They are very important to many shorebirds and waterfowl because they provide nesting sites and feeding grounds. In addition, beaches function as a buffer zone between land and water. They protect land from erosion by wave action and water. Because of their rocky nature and ecological value, Brownville beaches are highly unsuitable for development and may be better used in their natural state for such purposes as recreation and fishing.

The littoral zone is another ecologically significant habitat. A littoral zone is the area in a body of water which is shallow enough for light to reach the bottom, allowing plant growth. The littoral zone is characterized by aquatic vegetation. This vegetation provides much habitat and food for fish. In addition, it traps and anchors silt discharged from river mouths making this area nutrient-rich and biologically productive. Care should be taken when planning development on the shores surrounding the littoral zones to prevent disruption of this sensitive ecological area.

Nature Conservancy land, also knows as Limerick Cedars, is very interesting to scientists because of its rare flora. The land was bought in 1984 by The Nature Conservancy to be kept as a preserve. Within the boundary of the 230-acre

Limerick Cedars Preserve exists at least twelve rare plant species, including balsam ragwort, woodsia fern and aster ciliolatus. These species are commonly found on western prairies, but they have been designated rare because they are found in less than five places in New York State. Just how and when these uncommon plants appeared in the Limerick Cedar Preserve is an intriguing and unresolved question. The geology of the area consists of sheets of limestone, bald or only thinly covered with soils, that have been pitted and cracked by weather conditions and time. In spite of this barren environment, western species have flourished whereas there is not enough soil and moisture for many native plant species to live.

The Nature Conservancy is a nationwide organization committed to protecting unusual habitats. For this reason, the land is unavailable for development. In addition, care should be taken when planning development in adjacent areas so as to prevent disturbance of this unique and delicate ecosystem.

The high priority sensitive natural resources of Brownville are made up of shorebirds, marshbirds, diving ducks, dabbling ducks, warm water fish, salmonid fish, and mammals. On the biological considerations map, areas designated as specific areal extents and point locations indicate places of breeding, nesting, spawning, or high concentration of one or more species of these fauna. A point location shows a specific point of high concentrations of fauna, whereas specific area extent expresses a general area containing large amounts of wildlife. In Brownville, these areas are Black River Bay, Perch River, Black River, Dexter Marsh, Pillar Point, Sherwin Bay/Marsh, and Guffin Bay and Creek. The following discussion describes the particular species and ecological activities that are found in each of these areas.

Black River Bay

Because of its large littoral zone, the Black River Bay is a prime nursery habitat for yellow perch and white perch during the summer. In the spring, the surrounding communities harvest rainbow smelt. Ice fishing is a frequent activity in the Bay during the ice-covered winter months. Other documented fish species in the Black River Bay include: steelhead trout, brown trout, lake trout, northern pike, brown bullhead, American eel, smallmouth bass, largemouth bass, and walleye.

In addition to fish, Black River Bay is important for waterfowl. Flocks of 5,000-6,000 scaup have been reported in the Bay during fall migration (October-December). Many other migratory species use the Bay in the fall. These include: common loon, horned grebe, Canada goose, mallard, black duck, gadwall, blue-winged teal, and greater scaup. A significant number of birds also use the bay during the winter. Four hundred to five hundred waterfowl have been recorded in the ice-free bay areas.

Perch River

The Perch River is a highly productive fish area. Rainbow trout, brown bullhead, smallmouth bass, and yellow perch have been documented here. The river also provides spawning and nursery habitat for northern pike.

In addition to aquatic life, the Perch River contains a significant number of breeding waterfowl, gulls, terns, and marshbirds. These include pied-billed grebe, mallard, black duck, blue-winged teal, common snipe, and black tern. Species which are wintering and local residents, but have not been documented as

breeding species, include herons and least bittern. In terms of mammals, the Perch River is known to support a muskrat population. In addition, the river bank areas contain many rare, threatened, and endangered plant species.

Black River

The Black River provides habitat for a number of salmonid and warm water fish. Walleye use the river for spring spawning (April-June). Large numbers of steelhead trout are found here during the spring and the fall. The Black River is currently stocked with salmon. It is a salmonid tributary for fall runs of chinook salmon.

Dexter Marsh

Dexter Marsh is a state-owned wildlife management area, and managed by Region 6 of the DEC. It is listed on the National Registry of Natural Landmarks. Dexter Marsh contains several plants listed as rare, threatened, or endangered in New York State.

Dexter Marsh provides a significant amount of breeding habitat for marsh birds. These include the American bittern, least bittern, Virginia rail, long-billed marsh wren, and possibly black tern. In addition to its bird life, the marsh is a spawning area for northern pike and is suspected to contain a muskrat population.

Pillar Point (from Black River Bay to Reeds Bay

Pillar Point is used by many migratory birds. Large flocks of scaup (5,000-6,000 birds), Common Goldeneye and Bufflehead have been reported here as well as in the Black River Bay during the fall (October-December). Loons, gadwall and mergansers also use the area. Double-crested cormorants and snowy owls have been recorded to feed in this area as well.

Sherwin Bay/Marsh

The Sherwin Bay and Marsh area is an important bird habitat. Great blue heron, green heron, American bittern, least bittern, common snipe, and black tern are local residents. During the fall migration (October-December), common loon, red-throated loon, gadwall, and scaup frequent the Bay. Many shorebirds are commonly seen on Sherwin Beach during late summer and early fall.

In addition to its ornithological value, the Sherwin Bay and Marsh is also valuable for warm water fish species. Carp, brown bullhead, pumpkin seed, and smallmouth bass spawn in this area during May and June. Other important species present include northern pike, white sucker, white perch, rock bass, largemouth bass, black crappie, and yellow perch. Besides its bird and fish populations, Sherwin Bay Marsh is suspected to contain a muskrat population.

Guffin Bay and Guffin Creek

Because this area is not documented as having high priority sensitive natural resources, it has not been included on the biological considerations map. It does, however, contain a substantial amount of fish and wildlife which merits documentation here. During the months of April, May and June, Guffin Bay is used for spawning by yellow perch, white perch, and northern pike. During the winter, the area is used for ice fishing northern pike and yellow perch. Brown bullhead,

TOWN OF BROWNVILLE

BIOLOGICAL CONSIDERATIONS

I.- High Priority Sensitive Natural Resources

✸ Point Location

> Specific Area Extent

1. Waterfowl
2. Divers
3. Waders
4. Shorebirds
5. Gull/Tern
6. Marshbirds
7. Salmonid Fish
8. Warm Water Fish
9. Muskrat

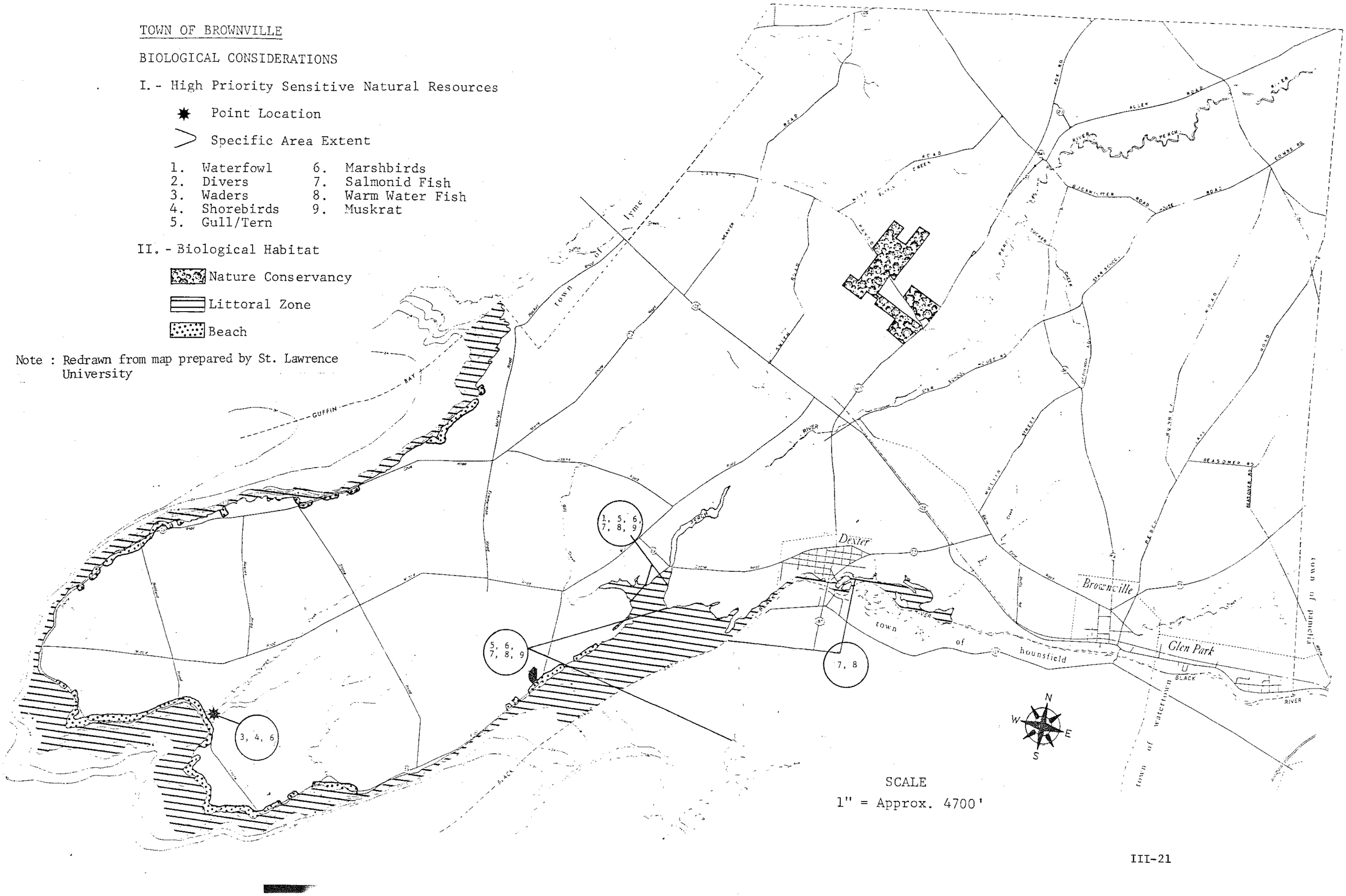
II.- Biological Habitat

Nature Conservancy

Littoral Zone

Beach

Note : Redrawn from map prepared by St. Lawrence University



SCALE

1" = Approx. 4700'

sunfish, smallmouth bass, and largemouth bass comprise the remainder of the fish life.

Guffin Bay is frequented by a variety of birds. Large numbers of horned grebe and oldsquaw visit the Bay during the spring (March - April) and fall (September - December) migration periods. In the winter, when open water is available, common goldeneye and oldsquaw congregate in the Bay. The Guffin Creek wetland is used by migrating common gallinule during both summer and fall. Muskrat are present here as well.

Perch River Wildlife Management Area

Although the bulk of the state-owned Perch River Management Area is outside of Brownville, the lower refuge pool is within the town boundaries. This refuge is about 400 acres on which public access is prohibited except for hunting by DEC permit only. It is estimated that hunting on the lower pool accounts for thirty-five percent of the annual harvest in Perch River as a whole. Similarly, muskrat and mink trapping is a popular and lucrative activity: some 800-1,000 muskrat are trapped annually. The refuge is home to numerous migratory and resident waterfowl species, including upwards of 150 nesting Canada geese. Osprey regularly nest in the refuge. Bald eages, which nest on the upper refuge, are occasionally seen in Brownville as they hunt for fish. Because of the diversity of waterfowl and raptors, the area is a favorite for birdwatchers who are able to view the otherwise inaccessible pool from an overlook adjacent to the refuge. Finally, fishing, especially for bullhead, is popular alongside Route 12.

It should be noted from the biological considerations map that the Town of Brownville contains a considerable amount of important biological habitat, flora, and fauna. The town is frequented by a number of significant biological species. The Perch River Management Area is used by both the endangered bald eagle and the threatened osprey. In addition, there are New York State "Special Concern" species found in various parts of Brownville. These include: common loon, least bittern, and black tern. The Nature Conservancy land, the Perch River area, and the Dexter Marsh contain rare, threatened and endangered plant species. These birds and plants are protected by both federal and state laws and should be an important consideration in land-use planning.

Besides its significant biota, Brownville contains a number of wetlands which provide opportunities for hunting, trapping, fishing, and recreation. Littoral zones, being prime fish-spawning areas, are very important for fishing. The maintenance of an ecological balance in these areas is crucial in order to sustain healthy fish, bird, mammal, and plant populations. Biological factors play an important role in the local economy and provide for recreational activities. Accordingly, they are essential to the character of Brownville.

SUMMARY: THE COMPOSITE MAP OF DEVELOPMENT LIMITATIONS

The development limitations map is a compilation of the information presented on the slope, surface water resources, wetlands, and biological considerations maps. The purpose of this map is to present an overall view of land limitations for the type of development that can be expected to occur in Brownville. The map was prepared by overlaying all the other maps to form a composite. Preparation of a composite map depicting development limitations was a three-step process.

First, lands that pose severe limitations for development were identified. Included in this category are:

1) all areas having a slope greater than 25%, from the slope map,

2) lakes and ponds, from the surface water resources map,

3) aquifers and recharge areas having permeable surficial geology (gravels) overlain by permeable soils, from the groundwater resources map,

4) all wetlands from the wetlands map, and

5) beaches and Nature Conservancy land from the biological considerations map.

These areas were delineated on the development limitations map. They are generally unsuitable for development of any type. In Brownville, extensive areas of land with severe limitations for development are located along the shoreline of Perch River from the State wildlife management area to Limerick, on the Nature Conservancy land, along the shoreline of Pillar Point, and on the steep slopes of Trout Creek between the Villages of Brownville and Dexter.

The second step in compiling the composite map was to identify areas having moderate limitations for development. Areas not included in the category of severe limitations but having any one of the following characteristics were labeled as moderate limitations:

1) slopes from 15 to 25%

2) flood-prone, or

3) permeable surficial geology (sands) overlain by permeable soils.

These areas are suitable for some low-density residential development. By restricting and carefully monitoring future construction on these lands, the planning board can protect natural resources while avoiding economic and environmental problems. Special design modifications may have to be requested in any structure proposed for construction. The most extensive area of moderate limitations is along the shoreline of the Perch River between Limerick and Black River Bay.

The third and final step in preparing the composite map was to delineate any further areas having slight limitations for development. The areas included in this category are:

1) areas with a slope between 8 and 15% and

2) recharge areas having permeable soils but underlain by impermeable surficial geology.

Areas with this classification are suitable for most forms of development throughout Brownville. Of concern are potential problems related to construction on (1) slopes that may cause problems of erosion and (2) soils that may replenish

groundwater.

All areas which have not been included in the three categories above have no limitations for development in terms of the maps contained in this natural resources inventory. These areas have no shading on the composite map. Much of the Town of Brownville falls into this category. It should be emphasized, however, that the composite map does not include soil interpretations. The entire Town of Brownville has severe limitations for septic systems due to soil considerations. Development should therefore be approached with care even in areas otherwise having slight or no limitations. Special consideration should be given to alternative methods for the disposal of sewage from private residences.

NOTE: Two appendices that accompanied the St. Lawrence University's Natural Resources Inventory have not been reprinted. Appendix A: Alternatives to Septic Tanks for Sewage Disposal and Appendix B: Freshwater Wetlands Permit Requirements Regulations.

TOWN OF BROWNVILLE

COMPOSITE MAP OF
DEVELOPMENT LIMITATIONS

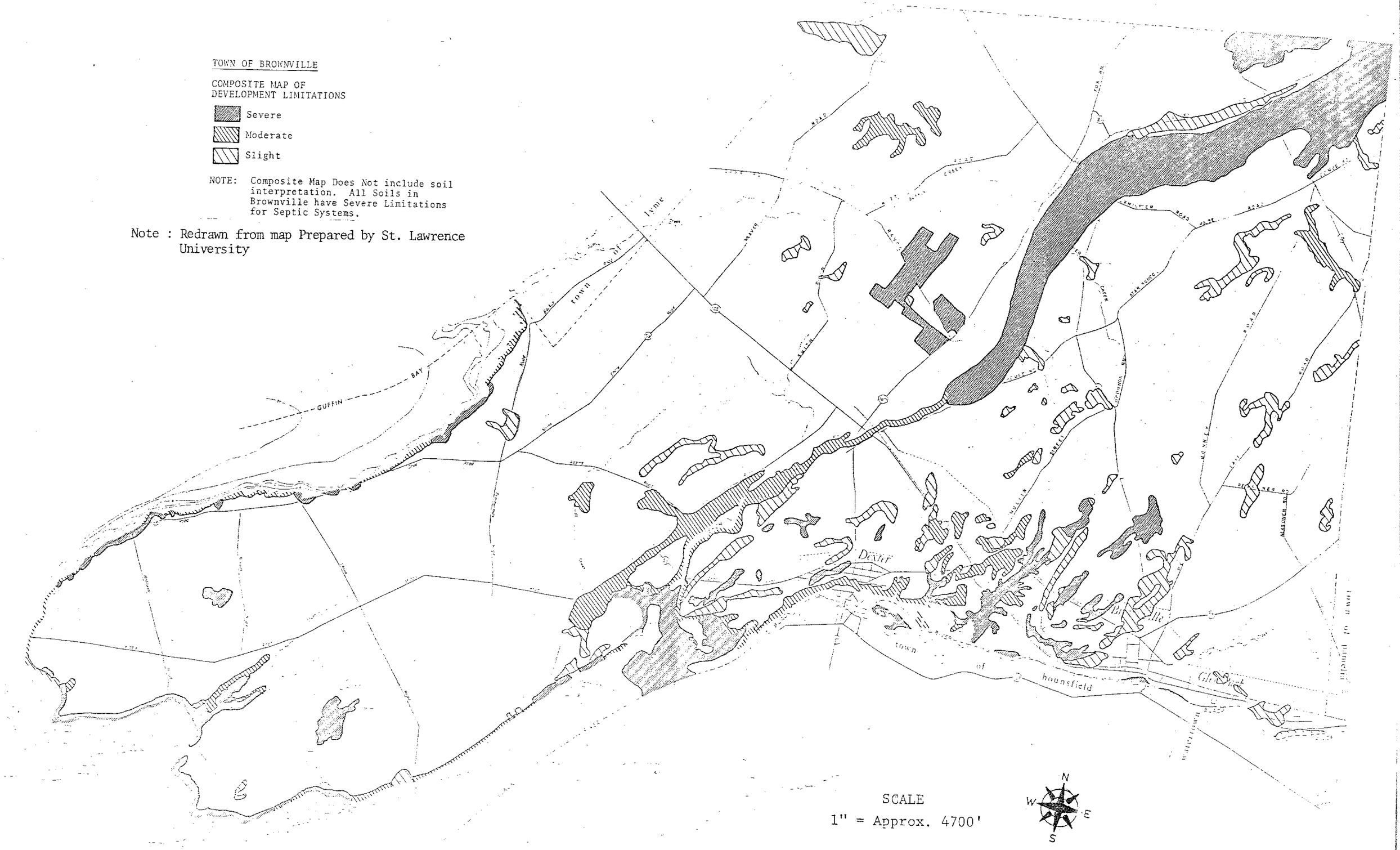
Severe

Moderate

Slight

NOTE: Composite Map Does Not include soil interpretation. All Soils in Brownville have Severe Limitations for Septic Systems.

Note : Redrawn from map Prepared by St. Lawrence University



SCALE
1" = Approx. 4700'

ADDENDUM

NATURAL RESOURCES INVENTORY

This addendum to the Natural Resources Inventory is an effort to provide the Town of Brownville with information that will create an awareness of resource sites that may be damaged due to the impact of development or land use. The addendum will address the following resources:

1) Alvar grassland and calcareous pavement barren ecosystems, including their plant and animal communities;
2) potential habitat for wintering raptors;
3) areas that may contain sensitive archaeological artifacts;
4) properties occupied by, or adjacent to, structures on, or in process of nomination to, the NYState and National Registers of Historic Places; and,
5) open space visual qualities along shorelines.

Some resource sites must be protected from public knowledge, eg: locations of archaeological sites; historic structures whose owners prefer not to have the historic significance of their home or business generally known; and sites supporting plant or animal species of statewide, continental or global significance. Definitive information about such sites may remain in the files of agencies or organizations outside the Town's bounds, with their location generally identified as sensitive to development. The Town should receive assurances, from agencies and organizations holding that "sensitive" data, that periodic Town requests for evaluations of projects' impacts upon such resource sites will be responded to promptly. The agencies and organizations most apt to hold sensitive information would include: the Town and County Historians; NYS DEC Region 6 offices in Watertown, NY, and NYS DEC Wildlife Resources Center, Delmar, NY; The Nature Conservancy; NYS Office of Parks Recreation and Historic Preservation in Albany; The NYS Museum in Albany; and the St. Lawrence-Eastern Ontario Commission.

The five sensitive resource types exhibit varying tolerances to land use and development. For example:

1) Alvar grasslands and calcareous pavement barren communities can tolerate little or no physical development or traffic; leaving little or no opportunity for any kind of use or development.

2) Wintering raptors utilize mature trees, power poles and etc. in vicinity of open fields for roosting, perching and hunting "stands". Open fields, such as those used for agricultural cropland or pasture, can support large Microtus (Voles, etc.) populations; important food sources for wintering raptors. Land use and development that maintain open field/grassland cover protects such habitat. Land use and development that introduce paved surfaces, lawns, and buildings diminish or destroy the value of such habitat.

3) Prehistoric villages, campsites, burial grounds, etc. are sensitive to excavation. Archaeological artifacts should be carefully removed to qualified repositories and/or documented before disturbed or destroyed by development or use. Archaeological site surveys may be required prior to permitting development or use. Developer's or user's agreement may need to be secured, and enforced, to

assure that if archaeological artifacts are encountered, activity near the "find" will cease until proper archeological authorities can complete necessary preservation measures and place artifacts in a public repository.

4) Development or use of lands occupied by or adjacent to an historic site should not destroy, damage or otherwise significantly degrade either the structure, or the character of its landscape setting. Few types of development or use are precluded in such cases, but development proposals should be tastefully designed, constructed, maintained and sometimes screened in order to maintain historic character.

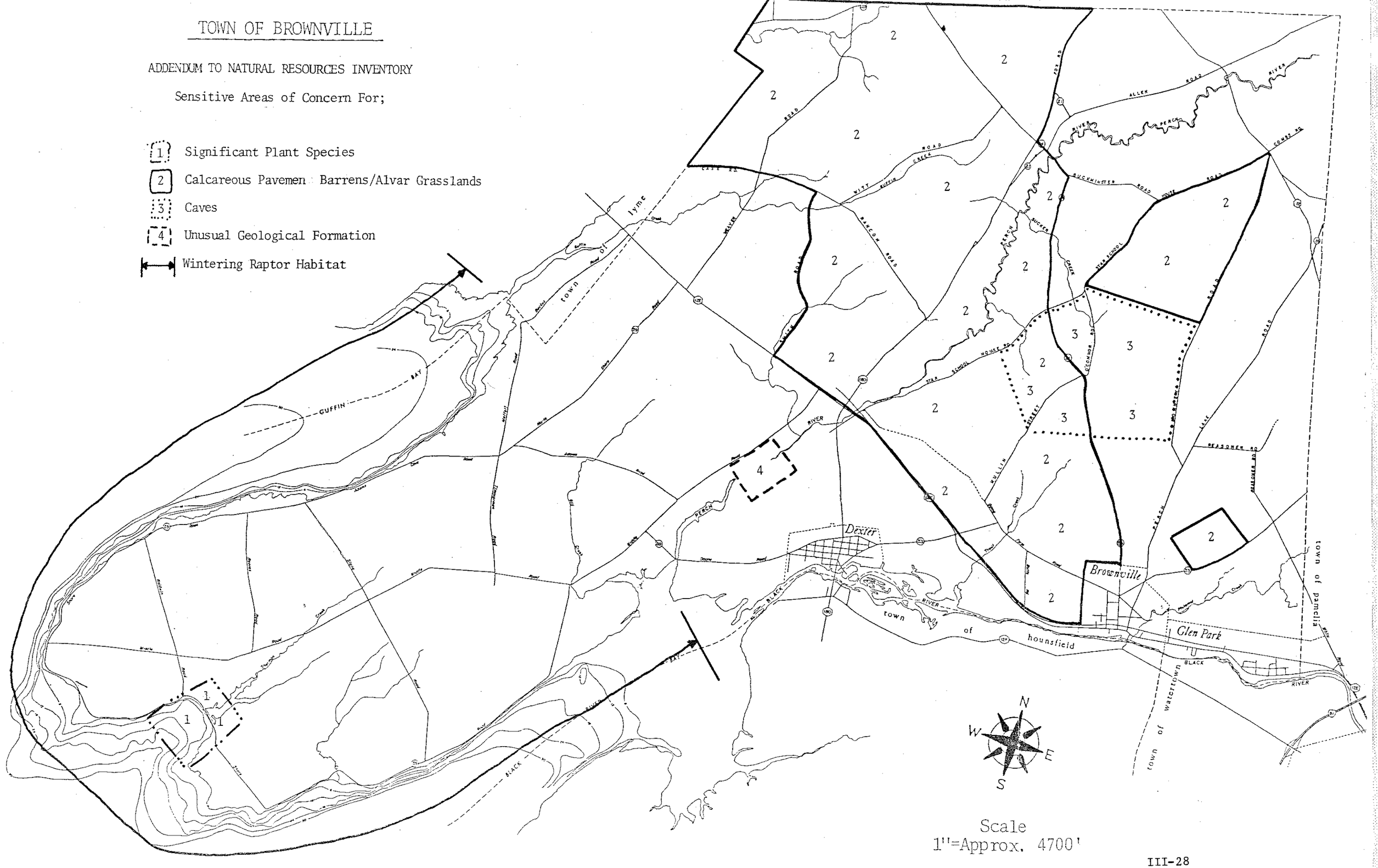
5) Much of the Town's remaining undeveloped or sparcely developed coastline is of high scenic quality. Waters offshore serve as waterfowl, waterbird and fishery habitat. Proposed coastal development should: leave a shoreline buffer zone in an undeveloped or nearly natural state; and provide common docks, serving several lots, rather than separate docks for each lot.

TOWN OF BROWNVILLE

ADDENDUM TO NATURAL RESOURCES INVENTORY

Sensitive Areas of Concern For;

- 1 Significant Plant Species
- 2 Calcareous Pavemen Barrens/Alvar Grasslands
- 3 Caves
- 4 Unusual Geological Formation
- Wintering Raptor Habitat



Scale
1"=Approx. 4700'

SECTION IV

CULTURAL RESOURCES INVENTORY

EXISTING LAND USE

This section of the comprehensive plan provides information concerning the various kinds of land use within the Town of Brownville and an existing land use map that shows the location of those uses. The inventory contained in this section will allow the reader to identify areas that are somewhat homogeneous and determine existing patterns of land use within the Town. The information obtained from the existing land use section will be analyzed with the other sections of the comprehensive plan to provide a future land use plan for the Town.

The information contained in the existing land use map is based upon data taken from aerial photos taken by Jefferson County Soil Conservation Service in 1985, a field survey by staff from the St. Lawrence-Eastern Ontario Commission, data taken from the Jefferson County Real Property tax rolls for the Town of Brownville, November 1988 and up-dated to the beginning of February 1989, a previous land use study and maps completed by Jefferson County Planning office and current building permit information from the Town of Brownville. The classification codes used to identify the separate land use categories on the existing land use map were obtained from the State of New York Property Type Classification Codes. Based upon these classification codes, the land use for the Town of Brownville breaks down into the following categories.

Active Agriculture: - Property used for the production of crops.

Along with vacant land, this category accounts for the largest portion of land use in the Town of Brownville. The windshield survey and aerial photographs by Jefferson county Soil Conservation Service indicate that much of the land that is classified as agriculture can also be classified as vacant land. Land that has been actively farmed in the past appears to be turning to wooded brushland.

Residential (under 10 acres): - Property used for human habitation.

This category includes land occupied by conventional year-round and seasonal residences, mobile homes and apartments. This type of land use accounts for the majority of growth that is occurring within the Town. Much of this growth is in development of residences under 10 acres and includes seasonal camps, cottages and summer homes. The majority of seasonal residences are situated in the Guffins Bay - Adams Cove area, on the North Shore of Pillar Point and around the point to the South Shore. The north shore is more developed than the south shore due to the protection it affords from prevailing winds, thereby making docking facilities more feasible. There is a significant amount of waterfront property open to development along the south shore. Residential growth is also occurring north of the Village of Brownville, up to the Perch River Wildlife Management Area and West, along Route 12E.

Residential development under 10 acres includes the location of areas for new mobile and modular homes. Since modular homes must meet the uniform building and fire code requirements, it is considered a conventional structure for the purposes of this land use inventory. Since 1985, mobile homes have had the fastest growth rate compared to conventional homes.

Residential (over 10 acres)

Residential areas with large lots make up a significant portion of the Town. The lots are historical remanants of agricultural acreage throughout the Town

which have been left by development trends of lots under 10 acres. Most of the large lots are scattered throughout the Town.

Commercial: - Property used for the sale of goods and/or services.

Most of the commercial property in the Town of Brownville is located within or near the Villages of Dexter, Brownville and Glen Park, and near the Hamlet of Limerick. A significant number of commercial enterprises can be found along Rt. 12E. Very few commercial uses are located within the Pillar Point area along the lake shore. Commercial uses in Brownville are small and appear to be locally owned.

Recreation and Entertainment: - Property uses for the congregation and gathering of groups for recreation, amusement or entertainment.

Based upon the field survey and property tax assessment rolls, land along the shoreline is open to many recreational opportunities for those that live in the area. Opportunities for hunting and fishing exist in certain areas throughout the Town. Much of the more organized types of recreation are provided by the villages and schools. There is also a rustic gold course, miniature golf, driving range, splattball field near Limerick and white water rafting in Black River along Glen Park, Brownville and Dexter.

Community Services: - Property used for the well-being of the community.

This land use category includes all public and semi-public uses. Examples include schools, government offices, churches, fire companies and cemetaries. The need for community services will generally increase according to the population size, density and expected growth; local income; and the capacity of existing facilities. Many families, businesses and industries look to the availability of these facilities as an important factor in deciding where to locate. The projected impact from the Fort Drum expansion has caused the General Brown School Distirct to evaluate its capacity to handle the influx of new students.

Industrial: - Property devoted to manufacturing and research.

There are very few areas within the Town that can be considered to have industrial uses. There are approximately three stone quarries within the Town of Brownville and may or may not be in operation any longer.

Public Service: - Property used to provide service to the general public.

According to the land use survey, these land uses occur more often in the more densely populated areas surrounding the villages of Brownville and Dexter.

Wild, Forested, Conservation Lands and Public Parks - Reforested Land, Preserves and Hunting and Fishing Clubs.

Some of these areas are under the protection of State law, and can be used for specific types of recreation such as hunting and fishing. There are several designated areas in the Town of Brownville that include: the Perch River Wildlife Management Area, Dexter Marsh and "Limerick Cedars".

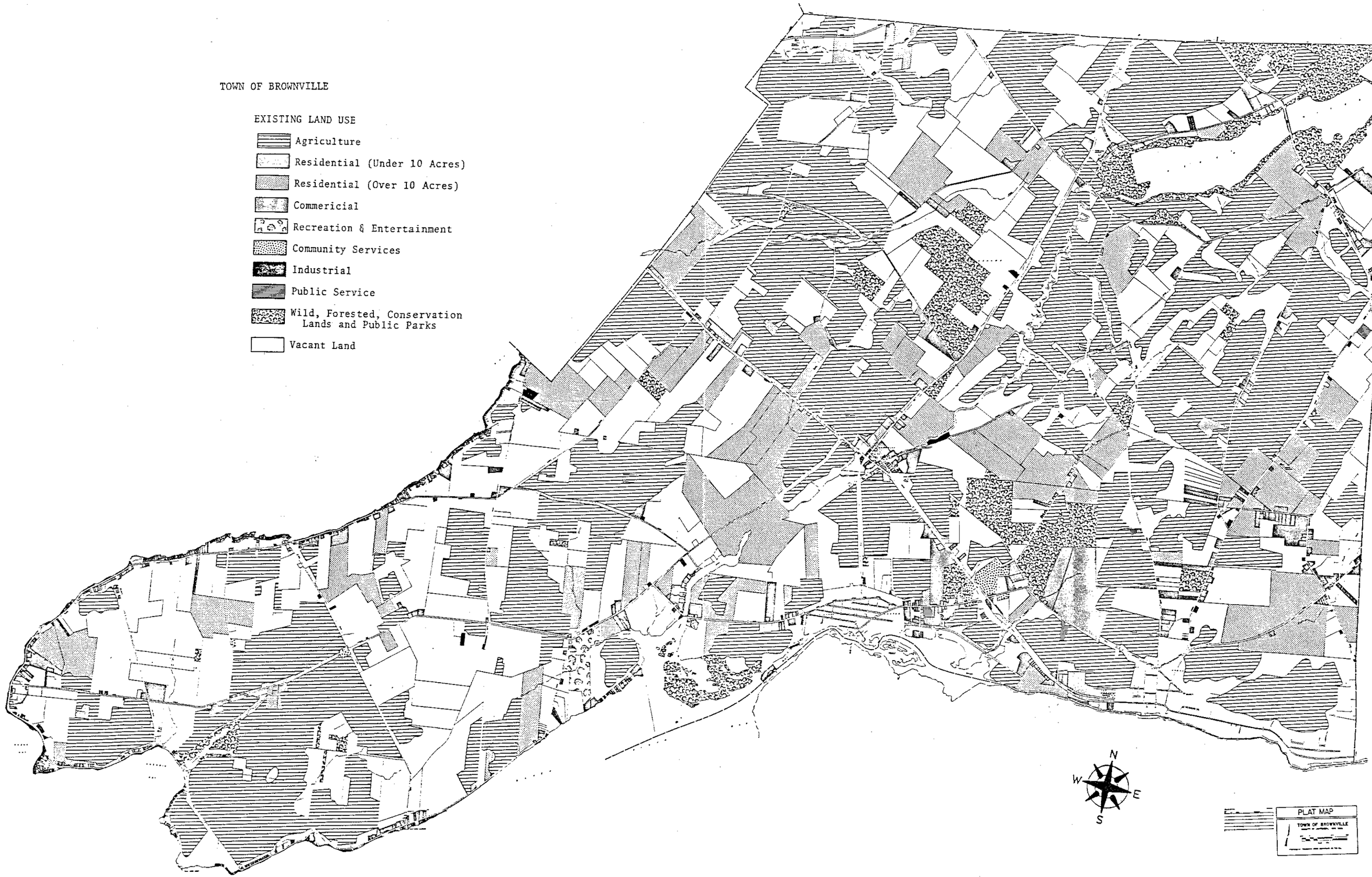
Vacant Land - Property that is not in use, in temporary use, or without permanent improvement.

The existing land use map shows many areas to be vacant. Much of this land can be classified as inactive farmland or wooded brushland. Due to soil limitations, many of these areas will remain undeveloped.

TOWN OF BROWNVILLE

EXISTING LAND USE

- Agriculture
- Residential (Under 10 Acres)
- Residential (Over 10 Acres)
- Commericial
- Recreation & Entertainment
- Community Services
- Industrial
- Public Service
- Wild, Forested, Conservation Lands and Public Parks
- Vacant Land



Village of Dexter

The Village of Dexter is located along the northeastern shoreline of Lake Ontario and lies approximately 8 miles west of the City of Watertown and covers less than 1/2 square mile in area.

Population

The Village's population has declined since it reached its peak of 1,164 residents in 1920. Population decreases in 1930 and again in 1950 coincided with the depression and the closing of the mills. Today, the population ranges between 1,000 to 1,100 persons. In 1980, the population of Dexter accounted for 21% of the total for the Town of Brownville.

Existing Land Use

The Village of Dexter is primarily a rural residential community and serves as a bedroom community to the City of Watertown. Residential uses account for nearly 75% of all occurrences in Dexter and encompass the largest proportion of land use within the village limits.

There are 16 commercial properties in the village, most of which are located along, or near, NY Route 180. Public and semipublic uses are scattered throughout the village. Industrial activity is limited to the hydroelectric plant on Fish Island and the recently renovated sulphite mill building.

Water System

The distribution system of the Village of Dexter consists essentially of six, eight, and ten inch water mains. Water is pumped from the well supply through the distribution system into a 300,000 gallon covered storage tank which is located just to the north of the Village.

The Village of Dexter obtains its water supply from three deep rock wells which are approximately 200 feet in depth. The three wells normally have a yield of approximately 270 gpm. The quality and quantity of the water fluctuates during drought and non-drought conditions.

In 1982 the Village of Dexter began taking a supplementary source of water for use in the existing Village water supply and distribution system by the installation of a 100 gallon per minute pump in well no. 4 at the former Crowley Milk Plant in the Hamlet of Limerick, and the installation of 7,000 linear feet of supply main from the well to the Village sysem. This well is now the primary Village source and the only treatment required is chlorination. The treatment plant facilities include water softening and chlorination which is performed on the water from the three original wells. The present demand in the Village is in excess of 120,000 gpd.

Recently the Village has been installing new water lines mainly in the west side of the Village under grant monies received by the Village.

Sewage Treatment

The treatment plant for the Village of Dexter consists of an aerobic digestion system with extended aeration, consisting of two prefabricated steel

units, 50,000 gallon capacity each and maintaining about a 9'-6" liquid depth. Each unit consists of an aeration chamber having a volume of 50,000 gallons, a clarifier chamber with a volume of 7,291 gallons, a sludge holding chamber with a volume of 7,500 gallons, and a chlorine contact chamber with a volume of 1,045 gallons. Dexter was allowed to discontinue chlorination of the effluent around 1980.

The design period for the Dexter plant is fifty yerars with a design population of 1,234 persons. The plant is designed for a daily flow of 100,000 gallons.

Infiltration causes a severe problem at Dexter and combined with the population growth of recent years, daily flows at the Dexter plant during wet periods of the year will run in the vicinity of 180,000 to 200,000 gallons. Periods have been recorded with daily flows over 200,000 gallons. Adequate treatment is impossible at the present plant under these conditions.

The Village of Dexter has signed a Consent Order with the New York State Department of Environmental Conservation calling for the correcting of the serious infiltration problem. The Department of Environmental Conservation is of the opinion further corrective work should be performed before any future sewer expansion takes place.

Streets & Highways

Dexter's transportation system includes a network of local, county, State, and interstate roads. NY Route 180 is the only major highway passing through the village. It provides direct linkage to NY Routes 12F and 3 (south of the village) and to NY Routes 12E and 12 (north of the village). County Routes 53 and 59 serve as local collector routes and provide access to the Village of Brownville and Pillar Point. Dexter's remaining streets are characterized as local residential and carry relatively low volumes of traffic.

Recreation Facilities

Local recreational facilities consist of Memorial Field to the north of West Grove; a boat launching site off the south end of Liberty Street; Riverside Park near the NY Route 180 bridge; and a developing park on the northern part of the larger Fish Island.

SOURCE: Village of Dexter Comprehensive Plan

Village of Brownville

The Village of Brownville has approximately 1,100 persons and is located along the Black River and Route 13E just west of Watertown. The village has a land area of 404.8 acres and is surrounded in all directions, except east, by dairy farms and associated agricultural activities.

Population

The Village's population has increased slowly since 1930, but between 1970 and 1980, the population dropped. Since then the population has been increasing at a faster rate. Residential growth is occurring around the periphery of already developed areas. Between 1962 and 1980, there was an increase of 15.8 percent in the number of housing units.

With the planned expansion of Ft. Drum, the population of Brownville could increase by 20-30%. Increased employment opportunities due to the Ft. Drum expansion could also slow out-migration.

Existing Land Use

The land use inventory shows that since 1962 the undeveloped land decreased from 62% to 47% of the total village area, or that developed land increased from 38% to 53%. Of the 191 acres of undeveloped land, only 63 acres are classified on the tax rolls as residential, with the rest of the land being agricultural.

The 191 acres of undeveloped land also represent 47.3% of the total village area. The undeveloped land consists of 121.9 acres of agricultural land, 6.7 acres of Penn Central property, 42.8 acres of private vacant land, and 20.6 acres of public vacant land. Much of the undeveloped land is suitable for future development and is one of the village's most valuable resources.

Water System

The water supply system for the Village of Brownville consists of three drilled wells, one 300,000 gallon storage tank, and a water distribution network. The system serves the entire Village and approximately 250 residents, or 53 homes, outside the Village limits in Glen Park. All of the residents outside the Village that purchase water from Brownville are served by the existing distribution system, and no extension of this system beyond its present limits is anticipated.

The #1 and #2 wells located in the pumphouse are 207 feet and 150 feet deep respectively. The third well, which was drilled in 1956, is 282 feet deep.

Historically, the wells that supply water to the Village system overflow in the spring due to the large snow melt and heavy rains. In the spring of 1978, the dam in the Black River at Brownville washed out resulting in a loss of 16 feet of head in the river. This dam helped maintain the high groundwater level and as a result of its loss, the wells did not overflow during the spring. Recent dry summers have caused a low water supply in the Village and residents have been urged to conserve water. During these periods, water is pumped directly from the Black River, chlorinated, and piped into the Village system.

The Village now operates a 300,000 gallon steel storage tank that is over 60 years old. Tank manufacturers indicate that steel water tanks can be expected to last from between 40 to 70 years. It is apparent that this tank will need to be replaced in the not too distant future.

In 1978 a plan was developed for the construction of a new 1,000,000 gallon tank to be used in conjunction with the existing 300,000 gallon tank. The new tank was not constructed.

Sewage Treatment

The Water Pollution Control Facilities for the Village of Brownville were constructed in the early 1970's on the site of the former Harmon Paper Company. The sum of the low bids for the prime contracts totalled $694,095. The basic treatment process consists of biological treatment utilizing the extended aeration process with final clarification followed by continuous chlorination of the effluent prior to discharge into the Black River. The Village was allowed to discontinue chlorination around 1980. This process was selected due to efficiency, economy, and ease of operation. The plant is designed for an average daily flow of 600,000 gallons. Slightly more than 50 percent of this capacity has been designated for treatment of the industrial wastes from the existing paper company. It is anticipated the plant will be capable of removing 85 percent to 95 percent of the biochemical oxygen demand and suspended solids prior to discharging the effluent.

The Village has also experienced problems with infiltration of stormwater into the sewage system. Recently, new storm sewers have been constructed on Potter Avenue, lower Franklin Street, and a portion of Rice Street.

Other than along Main Street, a good portion of the storm sewers utilize natural rock crevices that exist in the limestone that underlies the Village.

Streets & Highways

The street layout in the village extends from two major traffic arteries: State Route 12E and Brown Boulevard. State Route 12E, or Main Street, is the major east-west traffic axis extending through the village.

Brown Boulevard, the major north-south traffic axis in the village, begins at Main Street about midway in the village. There are approximately 4.68 miles of streets in the village, of which 3.76 miles are under the jurisdiction of the village and .92 miles are part of the New York and Jefferson County Highway systems. Except for Main Street, there are almost no curbs and gutters in the village and many of the streets in Brownville are in need of minor and major repair work.

Recreation Facilities

The Village's recreational facilities are somewhat limited but are supplemented by private and public facilities along Lake Ontario and the St. Lawrence River located within several minutes for those who have available transportation.

SOURCE: Village of Brownville Comprehensive Plan

Village of Glen Park

The Village of Glen Park is located on the north bank of the Black River between the Village of Brownville and Watertown along New York State Rt. 12E.

Population

The 1970 census showed the Village of Glen Park had a population of 587 people. The population dropped in 1980 to 470 people.

Existing Land Use

The Village is primarily a residential community and serves as a bedroom community to the City of Watertown. All of Glen Park commercial properties are located on or near NYS Rt. 12E.

Water System/Sewer Treatment

At this time the Village doesn't have a public water or sewer systems. Water is obtained from private wells and private septic systems treat sewage. The hydroelectric generating plant provides electricity for area residents.

Streets and Highways

Main Street, also known as Rt. 12E, goes through the village and connects with Watertown to the east and the Village of Brownville to the west. There are also ten streets running perpendicular to Main Street that contain the majority of the residential properties.

Recreation Facilities

The Village has a pavilion that's enclosed and a ballfield, basketball and tennis courts.

Source: Constance Hoard, Village Clerk, Village of Glen Park

EDUCATIONAL SERVICES

The Town of Brownville is served by the General Brown Central School District. This district includes all of the Town of Brownville including the Villages of Brownville, Dexter and Glen Park and parts of the Towns of Hounsfield, Lyme, Pamelia and Watertown. The boundary of the district is shown on the map that follows. The district has a reputation as one of the finest in Jefferson County.

Schools

The General Brown Central School District maintains three school buildings. These are the Brownville-Glen Park Elementary (K-6), Dexter Elementary (K-6) and the General Brown Junior-Senior High School (7-12). The enrollment as of 1989 at these schools is as follows:

Brownville	-	616 Students
Dexter	-	373 Students
General Brown	-	720 Students
TOTAL	-	1,668 Students

Due to the impact of Fort Drum expansion, a Comprehensive Long Range Plan for the School District has been completed. The Plan indicates that in the District there will be a demand for 140 elementary seats and 75 secondary seats by 1990.

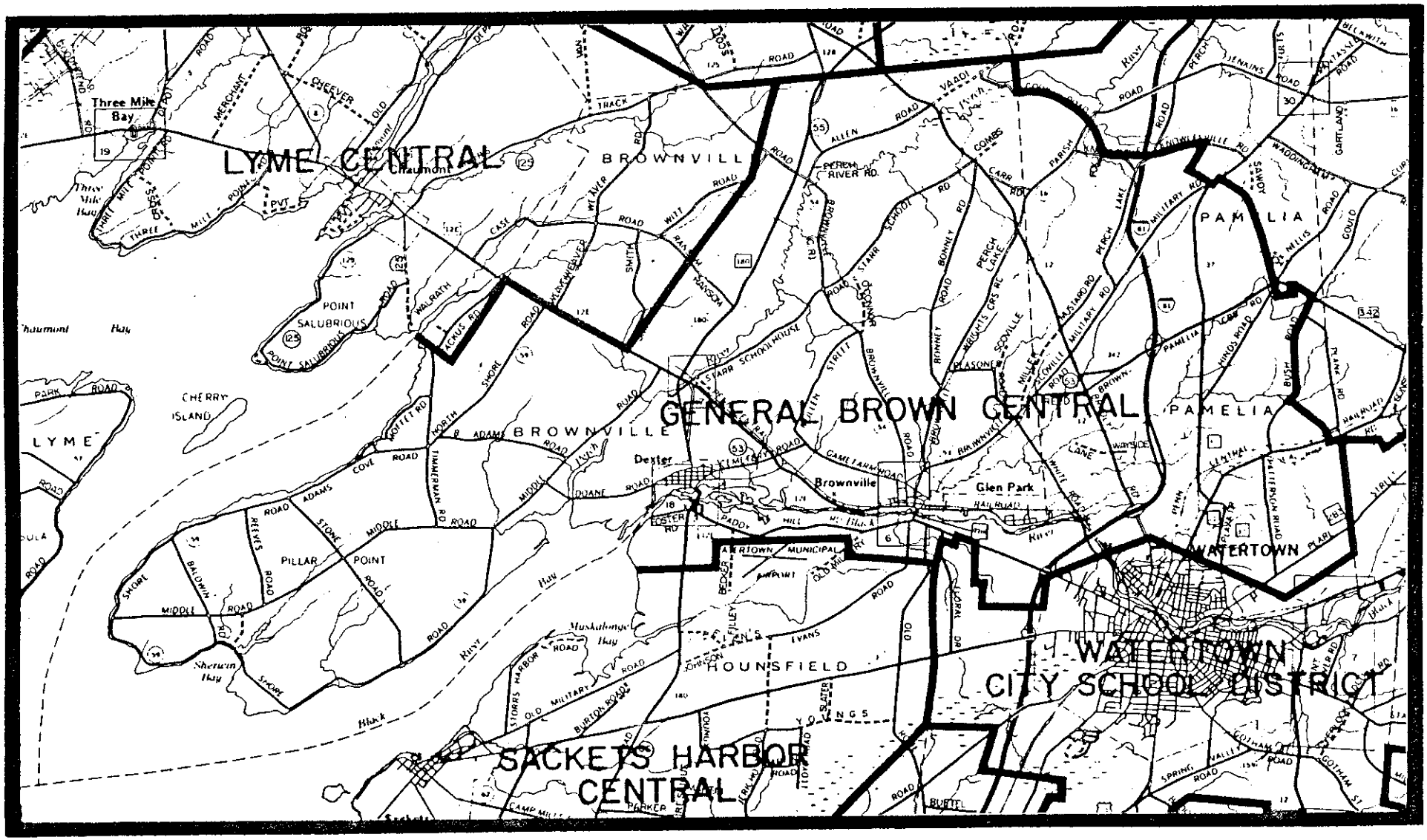
Source: Fort Drum Steering Council; Cambridge Systemmatics

Vocational Training

General Brown School District residents can utilize the Jefferson Vocational and Technical Center to receive trades education. As of the 1988-89 school year, 48 General Brown students were enrolled in this program. In addition, the Vocational and Technical Center makes available adult education services, for which enrollment figures are not available.

Higher Education

Jefferson Community College offers a two-year associates degree program. In addition, a new program is being formed to broaden the higher education opportunities for area residents. The State University of New York - North Country Education Services Consortium is presently an informal association of area universities and colleges. The institutions involved are: Jefferson Community College, Canton ATC, Potsdam, Oswego, Empire State University College of Environmental Science & Forestry, Delhi ATC, and the SUNY College of Technology at Utica. The organizers of the consortium intend that the program will develop to provide Jefferson County residents a bachelors degree without having to travel to do so.



BROWNVILLE EDUCATIONAL SERVICES MAP

EMERGENCY SERVICES

Police Protection

State, County and local organizations are utilized to insure security and protection. These organizations are: Jefferson County Sheriff's Department located on 311 North Massey Street in the City of Watertown, and the New York State Police Zone offices on State Route 37 in the Town of Pamelia. In addition, the Villages of Dexter, Glen Park and Brownville utilize part-time law enforcement officers.

Fire Protection

Village and Town Fire protection is provided by volunteer fire departments. Charged with the task of firefighting are: Brownville Volunteer Fire Department, Glen Park Volunteer Fire Department, Dexter Volunteer Fire Department, #1 and Dexter Volunteer Fire Department #2, located on Pillar Point. Mutual Aid for coordination and training is provided by the Jefferson County Fire Coordinator located in Watertown, New York.

Ambulance and Emergency Medical Service (EMS)

Ambulatory and Emergency Medical Care is provided through services of the Dexter Fire Ambulance or Commercial Ambulance Service available in Watertown and Dexter via invalid coach.

Hospitals

Emergency and extended medical care are provided by two hospitals located in the City of Watertown. They are: House of Good Samaritan and Mercy Hospital.

Disaster Service

The Jefferson County Office of Civil Defense provides numerous services. Some of them include: State Emergency response, Energy Audits, Hazardous Materials Information, Flood Insurance Programs, Materials Resource Lists, and Educational training for emergency and public officials.

RECREATION

As Americans strive for greater recreational and leisurely opportunities a significant trend for recreational facilities and physical fitness has generated a growing demand and need for recreation areas and facilities.

Brownville's efforts to encompass this trend are no exception, for Brownville residents can enjoy numerous recreational areas and activities. An inventory of existing opportunities is as follows:

Active - Ball Fields:

Brownville Elementary School, Dexter Elementary School, General Brown High School, Dexter Athletic Field

Golf Courses:

Rustic Golf Course
Middle Road Pillar Point Miniature Golf

Tennis Courts:

General Brown Jr.- Sr. High School
Brown Mansion - Brownville

Ice Skating:

Dexter Athletic Field
Brown Mansion

Indoors: Adult Education Recreation Program, Spring and Fall Semesters - General Brown Jr. - Sr. High School

Outdoor: Perch River Wildlife Management Area
Kitto Marina, Dexter Boat Launching Ramp
Fish Ladder at Dexter for Salmon

Summer Recreation: Indoor and outdoor for elementary students

Brown Mansion
Dexter Athletic Field
Pee Wee Little League - Brownville and Dexter
Pop Warner Football - Dexter

ENERGY RESOURCES

Within the Town of Brownville, when one speaks of energy, one speaks of the hydroelectric power afforded by the Black River. Probably the most significant catalyst to the settlement and growth of Jefferson County, the Black River continues to be of great importance to the people of the region.

At each Village in the Town of Brownville there is either an existing or proposed hydroelectric generating facility, the size and status of which are shown below.

Dexter Hydro - 4.0 MW Existing -

Brownville Hydro - 0.0 MW Existing - (License Application before federal administrative law judge at present) - size of plant not set

Glen Park Hydro - 32.65 MW Existing

ROAD SYSTEMS

The Town of Brownville is served by a road system that is administered and maintained by three governmental levels: State, County, and Town. This inventory is primarily concerned with the County and Town network in the Town of Brownville.

There are 28.21 miles of County highways in the Town and 52.61 miles of Town roads. This translates into a total of 80.82 miles of non-State highway. The width of these highways ranges from 10′ to 20′. The typical Town Highway is 15′ wide, and the average County Highway is 17′ wide. Both County and Town Highways are constructed of asphalt and in generally good condition. Most of the roads that are in poor to fair condition are located near Pillar Point. Traffic counts done in 1973 and 1988 on Middle Road and South Shore Road indicate that there is increased traffic in these areas. Building Permits issued for homes and mobile homes from 1985 to 1987 in Pillar Point indicate that traffic has been increasing.

Increased development is also occurring along the roads north of the village at Brownville. Most of the roads in the area are considered to be in good condition.

The Town of Brownville is considering the reconstruction of Star School Road beginning at the Perch River Road and Star School Road intersection and proceeding northerly for approximately 2.95 miles to Route 12. This would widen the road to 20 feet and encourage more people to use this road. No traffic counts are available. At present there does not appear to be a traffic count that would indicate an increase in use at the present time. However, observations indicate increased usage as a short-cut for Fort Drum traffic coming from Pillar Pt., Chaumont, Three Mile Bay and Cape Vincent areas.

Appendix C contains three table related to roadways. The first Table, "Roadway Inventory", identifies various roadway sections, their length and width. The second, "Roadway Functional Classification", classifies each road segment in a particular category. Those categories are defined as follows, in order of classification.

1. Collector: a local road which serves moderately heavy levels of traffic; may serve as a significant intermunicipal route; connects significant (State) routes; and supports a wide range of land uses.

2. Minor Connector: a local road which serves moderate levels of traffic, is not a significant intermunicipal route; connects collector roads; and supports primarily residential and agricultural land uses.

3. Minor: serves light levels of traffic, serves only as access for property owners (no through trips) and supports agricultural and residential land uses exclusively.

The third table describes the location of the road and gives a determination as to whether a road is in good, fair, or poor condition.

The map on the next page takes the information from the three inventories and shows it for the Town.

TOWN OF BROWNVILLE

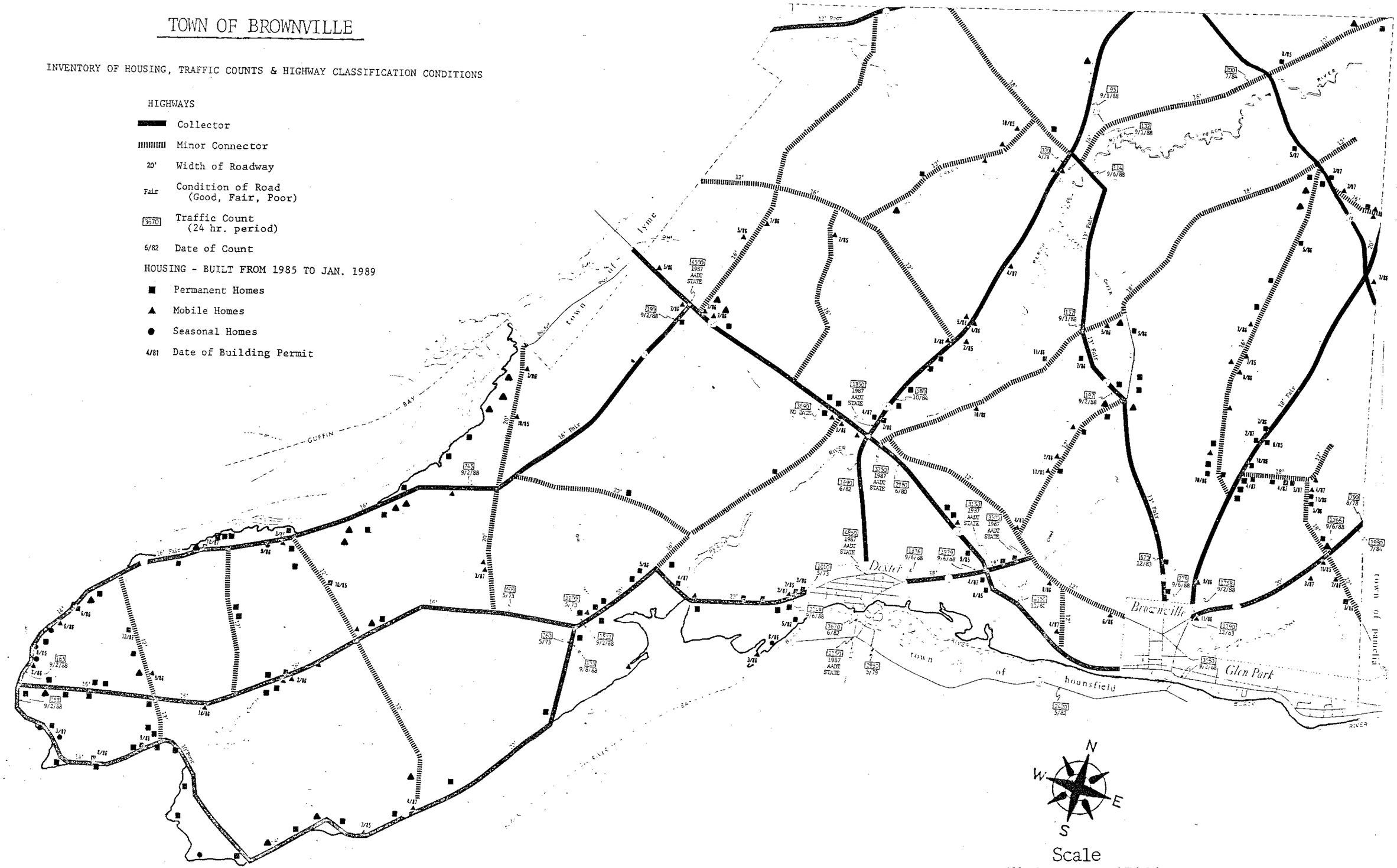
INVENTORY OF HOUSING, TRAFFIC COUNTS & HIGHWAY CLASSIFICATION CONDITIONS

HIGHWAYS

- Collector
- Minor Connector
- 20' Width of Roadway
- Fair Condition of Road (Good, Fair, Poor)
- 3670 Traffic Count (24 hr. period)
- 6/82 Date of Count

HOUSING - BUILT FROM 1985 TO JAN. 1989

- ■ Permanent Homes
- ▲ Mobile Homes
- ● Seasonal Homes
- 4/81 Date of Building Permit



Scale
1"=Approx. 4700'

POPULATION, DEMOGRAPHY, AND PROJECTIONS*

Introduction

An understanding of Brownville's population in terms of numbers, characteristics and trends is an important part of the planning program because of the insight that is provided into the future need for both public and private development. Such information enables the community to look ahead and plan for its future housing, commerce, industry, recreation and public improvements such as utilities and schools. As the population changes, so does the demand for various types of land uses and community facilities. For example, in a growing community there is always a greater need for new schools, recreation areas, shopping centers, and utility expansion than will be found in an older and more stable community where the need is usually for the replacement and improvement of existing facilities and services. A community has the opportunity to decide whether it will encourage or discourage population growth and as a consequence, to what extent it will be responsible for the extension of both public and private facilities and services usually associated with such growth. Comprehensive planning enables a community to provide more efficiently for the needs of whatever population distribution and density that it decides upon and provide a better basis for the decisions that must be made eventually by the community if it is to adequately meet its future obligations.

Recent Changes In Population

Brownville's present and future growth will closely parallel that of the County and the Region. Presently known indicators suggest that the population stagnation of the past will be replaced by steady and significant growth in the future. Of course, the driving force of this growth is the expansion of Fort Drum and the attendant economic growth of the region.

Table I depicts the historical population dynamics of the town of Brownville and its associated municipalities. Those figures indicate that the Town has experienced an increasing rate of growth over the past three decades. This is in marked contrast to the experiences of neighboring communities, whose populations have generally declined.

Present Population Characteristics

The demographic data provided by the 1980 Census provides a wealth of information about the citizens of the Town of Brownville. While this information is now becoming dated, it is useful as it provides an accurate depiction of the population in 1980. It is from this benchmark that estimates of future population are made. Among the most important data regarding population are age and gender. Chart 1 shows the gender/age cross section of the Town of Brownville according to the 1980 Census.

The 1980 population of Brownville (2,491 persons) resided in 807 households. The average age of a Brownville citizen was 28.5 years: 27.6 years for males, 29.3 years for females.

Projection

The estimation of future population is at best an imperfect science. Many immeasurable factors contribute to population growth: birth and death rates, migration, economics, availability of housing, employment and other intangible parameters. The projection of population contained in this section was produced from many sources. These include projections conducted by the New York State Department of Commerce, the Fort Drum Steering Council, historical birth and death rates and projections of the American Planning Association.

Table I also depicts the growth expected for the Town of Brownville and its surrounding municipalities. As is shown, the Town will experience a significant increase in population due in part to the activity associated with Fort Drum. This information is depicted graphically on Chart II.

Chart III shows the increases in the various age groups that will occur by 1990, Chart IV, the same information for 2010.

Methodology

The method by which these projections were produced is important to understanding the figures themselves and their validity. As stated previously, the projection draws upon many sources. The overall population projection shown in Chart II used as its basis a projection conducted by the Jefferson County Department of Planning. The Department first produced a County-wide projection based upon historical birth-death and net migration rates. To that, the expansion of Fort Drum was added. Finally, the whole-County projection figures were distributed by a model developed by the Fort Drum Steering Council which assigns population to municipalities, it is assumed that the portion allocated to the Town of Brownville will remain constant, hence the "straight-line" growth as shown in Chart II.

To obtain the age-sex distributions shown in Charts III and IV, the various age cohorts for which the information is provided were assigned a percentage of the total population based upon projections conducted by the New York State Department of Commerce. In that effort, New York State Department of Commerce estimated the number of persons in a variety of age groups for every five years beginning with 1990, for the entire County.

Analysis

For the purposes of this investigation, the population will be divided into categories to facilitate analysis. The various age cohorts for which population has been projected (as per charts III and IV) will be grouped according to behavior or cohort trait. These categories are as follows:

Pre-School	: 0 - 4 years
Grade School	: 5 - 9 years
Junior and High School	: 10 - 17 years
College Age	: 18 - 21 years
Working Age	: 22 - 64 years
Senior Citizens	: 65 years and older

It should be recognized that the above age cohort groups are presented only as a means to enable this analysis. It should be clear that particular individuals may satisfy the behavior or trait of one group while their age dictates their membership in another.

Pre-School

In 1990 the number of pre-school children will rise to 772, 394 male, 378 female. By 2010, this figure will be 881 persons, 459 male, 422 female. These fitures represent 10.6 and 10.0 percent of the total population, respectively, up from 8.5 percent in 1980.

Grade School

In 1990 the number of grade school children is expected to be 584 persons, 297 female. By 2010, these numbers rise to 762 persons, 395 male, 367 female. As a percentage of the total population this age group was 8.7 percent in 1980 and will be 8.0 percent in 1990 and 8.6 percent in 2010.

High School (Junior and Senior)

In 1990 there are expected to be 885 children of Junior and Senior High School age. 460 will be male, 425 will be female. In 2010 the figures are 1,169 persons, 630 male, 539 female. Thus there will be a slight decline in this age group's portion of the population by 1990 (as compared to 1980), followed by an upturn which by 2010 will be close to the 1980 percentage (see Table II).

College

Following the 1980-90 jump, this age group will behave fairly constantly. While there is growth expected between 1990 and 2010, this age group will not increase its share of the total population significantly.

Working Age

In 1990 it is expected that the number of working age persons in the Town will increase to 3,696 persons, 1,839 of them male, 1,857 of them female. These people will account for 50.5 percent of the population. By 2010, the percentage is 49.4 percent. Interestingly, the percentage of people in this age group remains fairly constant.

Senior Citizens

By 1990 there are expected to be 820 senior citizens in the Town, by 2010, 971. Note on Charts III and IV that the female portion of this age group is close to twice that the male portion. In addition, the percentage of persons aged 65 years or more will gain, from 8.6 percent in 1980 to 11.2 percent in 1990 to 11.1 percent in 2010.

* Source: Jefferson County Planing Dept.

TABLE 1
TRENDS IN POPULATION 1920-2010
TOWN OF BROWNVILLE AND SURROUNDING COMMUNITIES

	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010
BROWNVILLE (T)	3856	3489	3671	3806	3985	4321	5113	7315	8065	8769
BROWNVILLE (V)	-	842	907	1013	1082	1187	1099	1247	1368	1487
GLEN PARK (V)	-	559	523	516	561	587	470	521	571	621
DEXTER(V)	-	1020	1109	1038	1009	1061	1053	1296	1421	1545
PAMELIA (T)	988	979	855	992	1414	1894	2417	3317	3638	3995
HOUNSFIELD (T)	2297	2926	3137	2630	2722	2771	2645	3805	4173	4537
WATERTOWN (C)	31285	32205	33385	34350	33306	30787	27861	30880	33866	36819
JEFFERSON CO.	82250	83574	84003	88521	87835	88508	88151	119841	131429	142888

NOTE: ALL TOWN FIGURES INCLUDE INCORPORATED AREAS

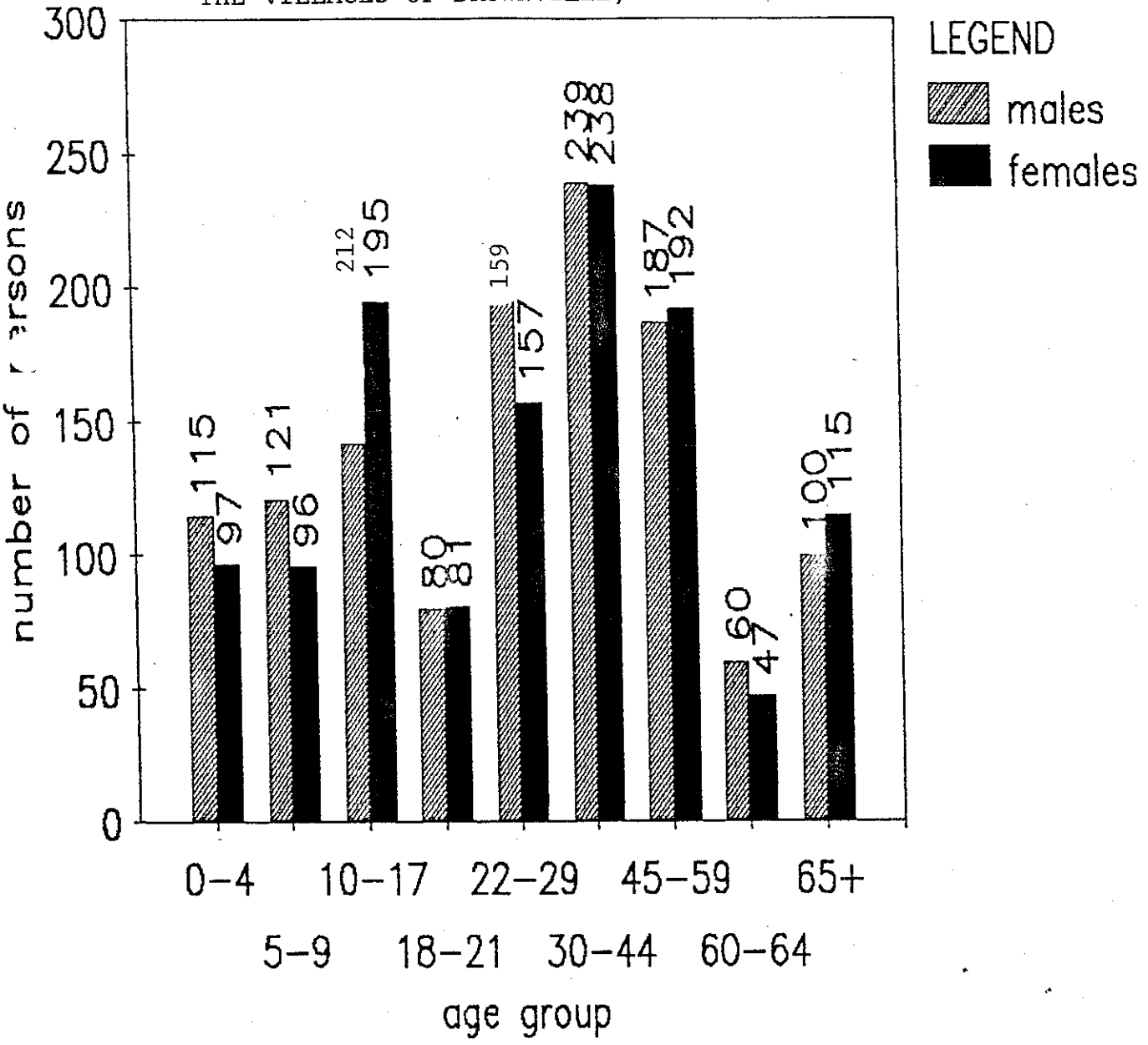
TABLE II
COHORT PERCENTAGES - 1980, 1990, and 2010

COHORT	PERCENT 1980	PERCENT 1990	PERCENT 2010
0-4 (PRESCHOOL)	8.5	10.6	10.0
5-9	8.7	8.0	8.6
10-17	13.5	12.1	13.3
TOTAL, SCHOOLAGE	22.2	20.1	21.9
18-21 (COLLEGE)	6.5	7.6	7.6
22-29	12.7	14.8	13.3
30-44	19.1	20.0	17.6
45-59	15.2	12.2	14.5
60-64	4.3	3.5	4.0
TOTAL, WORKING AGE	51.3	50.5	49.4
65+ (SENIORS)	8.6	11.2	11.1

CHART I
AGE-SEX DISTRIBUTION
1980 CENSUS

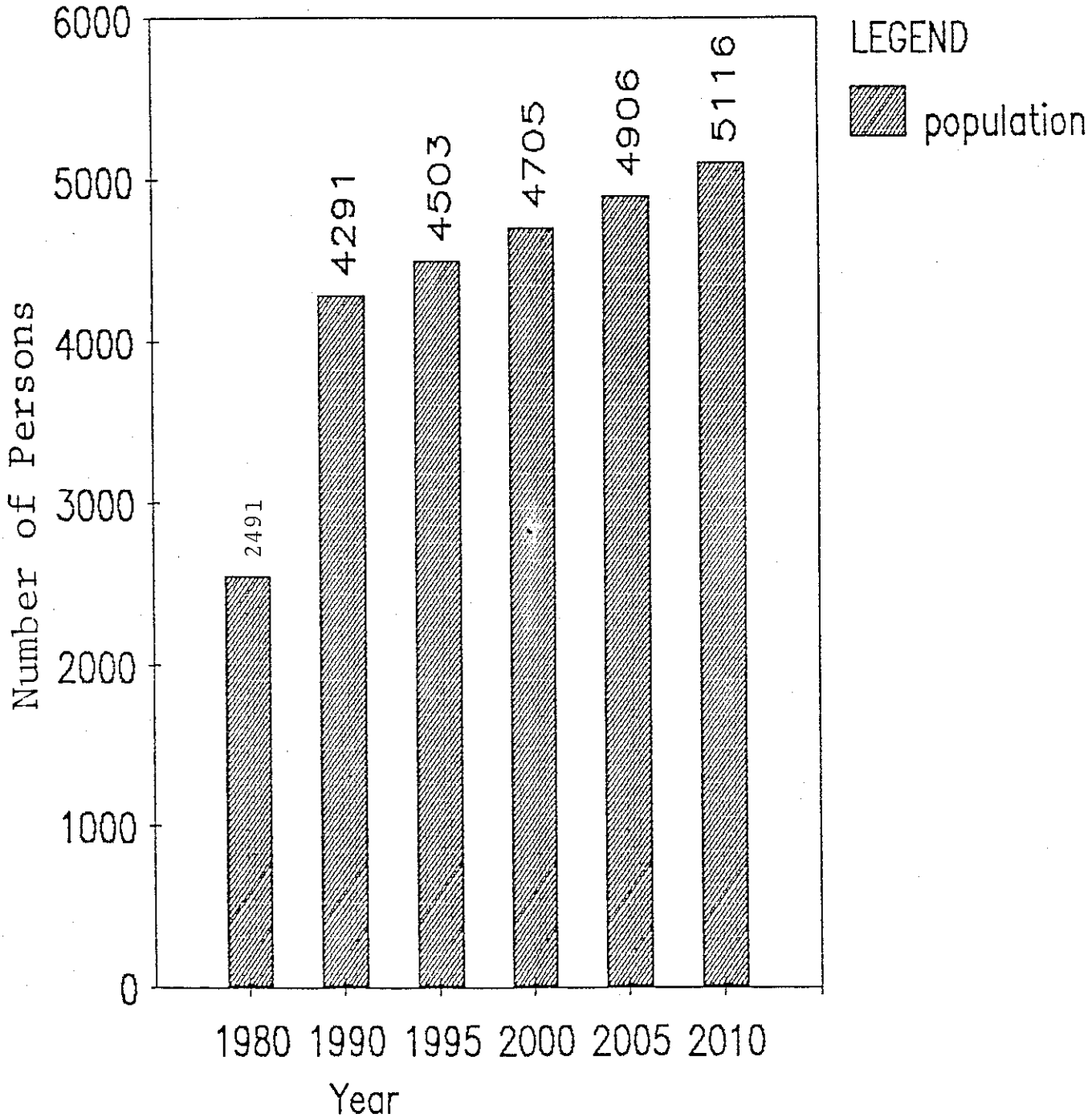
FOR THE

TOWN OF BROWNVILLE EXCLUDING
THE VILLAGES OF BROWNVILLE, DEXTER & GLEN PARK



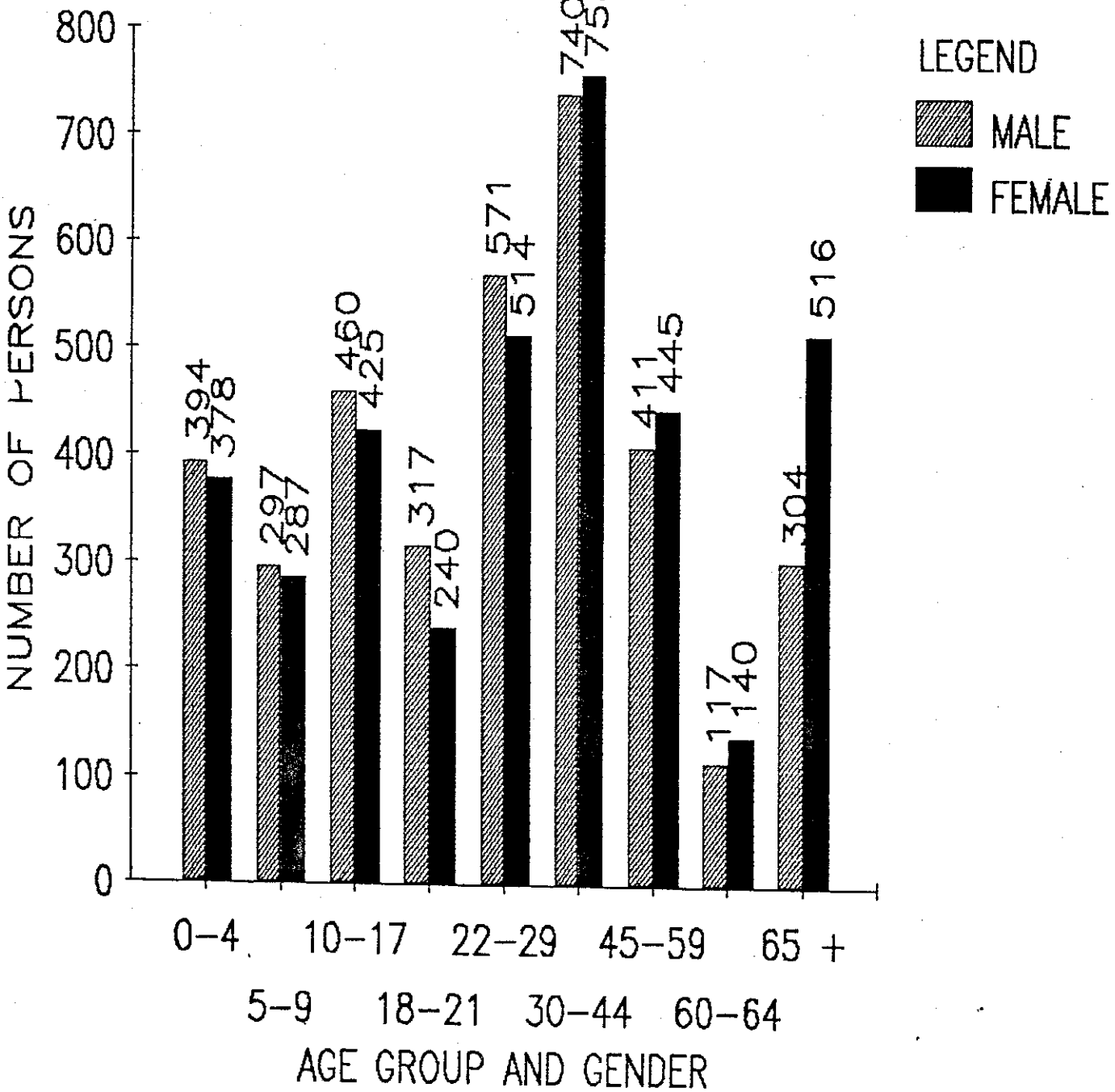
Compiled by Jefferson County Department of Planning

CHART II
Projection of Population Growth
1980 - 2010



(*) Figures Represent Town Population - Outside Villages

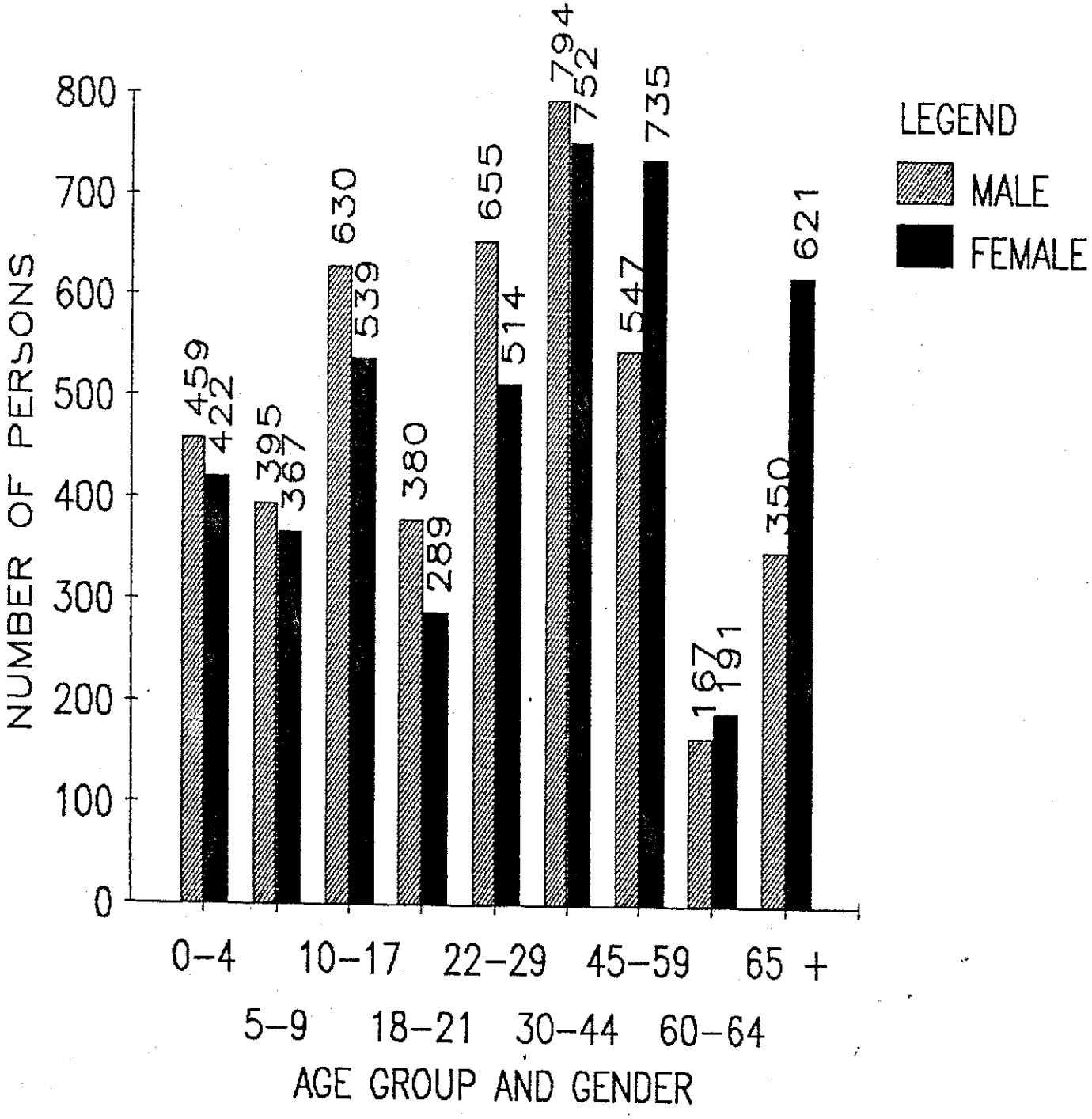
CHART III
AGE-SEX DISTRIBUTION
1990



FIGURES REPRESENT TOWN POPULATION INCLUDING VILLAGES

Compiled by Jefferson County Department of Planning

CHART IV
2010
AGE -SEX DISTRIBUTION



Compiled by Jefferson County Department of Planning

* Figures Include Villages

SECTION V

ANALYSIS

PHYSICAL CONTRAINTS AND NATURAL AND CULTURAL RESOURCES

Many criteria and determinants are used in writing a comprehensive plan. Some are common to any planning process, others vary with the area for which the plan is to be prepared.

The determinants used in preparing this comprehensive plan were chosen to identify those areas in the Town of Brownville best suited for development. The determinants fall into three basic categories: (1) natural resources, (2) cultural resources and (3) demand. The determinants found within these three categories help identify areas where similar standards are necessary if development is to provide positive values to the Town of Brownville. Furthermore, they identify areas where the potential costs of development to the developer, the community, the prospective purchaser and the environment are so great that serious consideration should be given to alternative uses.

The natural resource section identifies specific areas where physical constraints must receive serious consideration and where natural resources must receive due protection. Conversely, areas without restrictions or valuable resources are most capable of sustaining development pressures without significant adverse impacts.

As part of the cultural resource section, existing land use portions of the plan must also be carefully considered in the planning process because it is important in determining Brownville's present and future character. Identifying the historic patterns of Brownville's growth will indicate the types of growth that have been and are presently viable. Future development completed under the Plan must also be considered in light of its relationship to existing development.

In order to develop a future land use plan for the Town, it was necessary to take the topics from the Natural Resources section and the addendum to that section, and break each of the topics into levels of physical constraints and value of natural resources. Based upon this information, each topic is rated according to the amount of residential development that can occur where a particular development or constraint is located. The following procedures outline the rating system for determining the recommendations for the kinds of populations densities that should be allowed in the Town of Brownville.

Please remember that this rating system serves as one of the guidelines for future development. Each new development has special concerns that need to be addressed and one system for rating constraints and resources may not address those concerns.

In general, using the information contained in this document will help determine the effects that a proposed development may have on a community and can be the basis in forming a conclusion as to what is the best course of action.

In order to come up with a rating for the Rating Chart, a category such as Wetlands was evaluated according to one of 3 levels based upon its value as a cultural or natural resource and one of 4 levels based upon physical constraints to development. These lands were assigned numbers then were placed next to each other and used to determine the residential density that is recommended for a particular category. The density recommended for each of the categories ranged from recommendation for no developmment because of severe physical constraints or

high resource values to categories that allowed residential moderate densities for categories that had slight physical limitations or no resource values. The recommended densities for the categories were drawn on the composite maps. The recommended densities for development will be used as a guide to determine areas of suitability.

Levels of Physical Constraint on Development

0 - Extreme or Very Severe Constraints - Constraints are prohibitive to development.

1 - Severe Constraints - Constraints to development are costly and difficult.

2 - Moderate Constraints - Once constraints to development are recognized, they can be overcome.

3 - Slight Constraints - Constraints are easy to overcome.

Levels of Constraint Based on the Value of Natural and Cultural Resources

0 - Preservation - to be preserved as it now exists with few or any changes.

1 - Conservation - uses are allowed which will support and do not inhibit the conservation of that resource.

2 - Not Considered a Resource -

RATING CHART

CULTURAL AND NATURAL RESOURCES

PHYSICAL CONSTRAINTS	Preservation 0	Conservation 1	Not Considered A Resource 2
Extreme or Very Severe Constraints 0	0, 0	0, 1	0, 2
Severe Constraints 1	0, 1	1, 1	1, 2
Moderate Constraints 2	0, 2	1, 2	2, 2
Slight Constraints 3	0, 3	1, 3	3, 2

CHART RATING

0, 0 - 0, 3	Recommended No Development - ND
1, 1 - 1, 3	Low Density - Over 10 acre lots - LD
2, 2	Moderately Low Density - Over 5 acre lots - MLD
2, 3	Moderate Density - Over 1 acre lots - MD

A. Slope

1) 15 - 25% - If precautions are not taken, erosion may be severe, septic systems will malfunction, water supplies will be contaminated, and siltation and construction problems will occur. If rigid standards are followed, some low to moderate density development can take place.

Level of Natural Resources - 2
Level of Physical Constraints - 2

Chart Rating 2, 2

Recommended Density - Moderately Low Density (MLD) (5 AC)

2) >25% - Developing these slopes present serious environmental problems. Erosion rates are accelerated. Accelerated erosion increases siltation. Conventional septic systems will not function properly on these slopes. Development costs are likely to be prohibitive because of the special engineering techniques that must be employed to ward off problems such as slipping and sliding. Proper grades for streets are difficult to attain and often can only be accomplished by large road cuts.

Level of Natural Resources - 2
Level of Physical Constraints - 0

Chart Rating 0, 2

Recommended Density - No Development (ND)

B. Soils - The entire Town has severe soils limitations for septic systems. Reasons are: shallow depth to bedrock, slow permeability and seasonal water tables. Massive excavation costs are necessary to do even minimal development. Community sewage systems can only be installed at a prohibitive cost.

Level of Natural Resources - 2
Level of Physical Constraints - 2

Chart Rating 2, 2

Recommended Density - Moderately Low Density (MLD) (5 AC)

1) Prime Farmland - land best suited for producing food, feed, forage, fiber and oilseed crops; and, also available for cropland, pastureland, forests and other land, but not available for urban land.

Level of Natural Resources - 1

Level of Physical Constraints - 2

Chart Rating 1, 2

Recommended Density - Low Density (LD) (10 AC)

2) Farmland of Statewide Importance - exists throughout the Town and consists of soils that do not meet prime farmland criteria.

Level of Natural Resources 2
Level of Physical Constraints - 2

Chart Rating 2, 2

Recommended Density - Moderate (M) (1 AC)

C. Surface Water Resources - Lakes, ponds and streams. In Brownville, residential development and agriculture have the most potential for harmful effects on the hydrology of the town due to erosion, septic tanks, and surface water runoff of various harmful chemicals. The town should establish and regulate areas near sensitive water resources, i.e. coastal areas, and areas surrounding the Perch and Black Rivers.

Level of Natural Resources - 1
Level of Physical Constraints - 2

Chart Rating 1, 2

Recommended Density - Low Density (LD) (10 AC)

D. Floodplain - areas designated along the shoreline of Pillar Point and along the Perch and Black Rivers should be developed so that structures allowed in the floodway are appropriately flood proofed and built so as not to impede flood waters. Homes built in these areas may be located in or near the floodway, which is an area required to be reserved for the passage of the waters of a major flood. Development that would destroy the shoreline vegetation would result in serious erosion during flood stages. On-site sewage disposal systems will not function properly and will pollute both surface and groundwater. Development regulations for areas bordering the Floodplain should require set back regulations that will prevent structure and sewage disposal damage.

Level of Natural Resources - 2
Level of Physical Constraints - 2

Chart Rating 2, 2

Recommended Density - Moderately Low Density (MLD) (5 AC)

E. Groundwater Resources - Special consideration should be given to areas designated as recharge areas because these areas are the main sources for groundwater supply. Soils mapped as permeable on the groundwater resources map are characterized as rapid or moderately rapid based on the speed at which water percolates through the soil. Surface water and precipitation falling on these areas will readily infiltrate the ground surface and percolate to the underlying

groundwater.

1) Aquifer and recharge areas having permeable surficial geology (gravels) overlain by permeable soils.

Level of Natural Resources - 1
Level of Physical Constraints - 2

Chart Rating 1, 2

Recommended Density - Low Density (LD) (10 AC)

2) Permeable surficial geology (sand) overlain by permeable soils.

Level of Natural Resources - 1
Level of Physical Constraints - 3

Chart Rating 1, 3

Recommended Density - Low Density - 10 Acre Lots

F. Wetland - protected and regulated by the Department of Environmental Conservation. Wetlands provide flood control; water purification; source of nutrients and refuge for a variety of wildlife.

Level of Natural Resources - 0
Level of Physical Constraints - 0

Chart Rating 0, 0

Recommended Density - No Development

G. The Nature Conservancy Land - Limerick Cedars - Harboring more rare and endangered species than any other preserve in Central New York. Limerick Cedars protects 17 species of vascular plants classified as heritage elements. It also provides shelter for 5 rare birds; a rare butterfly; 3 rare mosses, and this rare type of ecological community.

Level of Natural Resources - 0
Level of Physical Constraints - 0

Chart Rating 0, 0

Recommended Density - No Development

H. Beaches - Beaches are important to many shore birds and waterfowl because they provide nesting sites and feeding grounds. Beaches also function as a buffer zone between land and water. These beaches, in their natural state, are more suitable to recreation and fishing.

Level of Natural Resources - 0
Level of Physical Constraints - 0

Chart Rating 0, 0

Recommended Density - No Development

I. Littoral Zone - is an area in a body of water that is shallow enough for light to reach the bottom, allowing plant growth. The littoral zone may be characterized by the presence of aquatic vegetation. Care should be taken when planning development on the shores surrounding the littoral zone to prevent disruption of this sensitive ecological area.

Level of Natural Resources - 0
Level of Physical Constraints - 0

Chart Rating 0, 0

Recommended Density - No Development

J. Calcarious Pavement and Alvar Grasslands - are listed as imperiled globally. These plants have about six to twenty occurences or between 1,000 and 3,000 individuals. The areas where they are located are shown on the Sensitive Areas map _____ for the Town of Brownville. When new development occurs in the areas outlined on the map, call the Department of Environmental Conservation and the St. Lawrence-Eastern Ontario Commission for site specific information. Zoning for low density may help protect areas where this vegetation is located.

Level of Natural Resources - 0
(for specific sites only)
Level of Physical Constraints - 3

Chart Rating 0, 3

Recommended Density - No Development

K. Archeological/Historic Sites - Burial grounds or campsites, prehistoric finds generally need to be carefully removed to qualified repositories and/or documented before disturbed or destroyed by development or use. Any on site development could destroy (except restoration) the sites historical and educational values. Archeological site surveys should be required prior to permitting development or use.

This is a cultural resource, but will use the same rating system that was used for natural resources.

Level of Cultural Resources - 0
(for specific sites)
Level of Physical Constraints - 3

Chart Rating 0, 3

Recommended Density - No Development

L. Agricultural Districts are created when the Agricultural Resources Commission has determined that the land encompassed in a proposed district is predominantly unique and irreplacable agricultural land, which means that the land is uniquely suited for the production of high value crops, including, but not limited to, fruits, vegetables and horticultural specialties, and has recommended that the Commissioner of Environmental Conservation establish an agricultural district.

Level of Cultural Resources - 1
Level of Physical Constraints - 3

Chart Rating 1, 3

Recommended Density - Low Density 10 ac. lots

M. Perch River Natural Bridge - This area is an interesting geological resource considered to be of local interest. It is unique geologically, but it is not a rare ecosystem type. No endangered, threatened or special concern species are known to reside in the area.

Level of Natural Resources - 1
Level of Physical Constraint - 0

Chart Rating 0, 1

Recommended Density - No Development

N. Weninger Caves - Considered a unique scenic area. Limestone solution cavern system. Bedrock geology should be examined before development takes place.

Level of Natural Resources - 0
Level of Physical Constraints - 0

Chart Rating 0, 0

Recommended Density - No Development

Based upon the information obtained from the physical constraints and natural resources section, the recommended densities for new development are shown on the map.

TOWN OF BROWNVILLE

COMPOSITE MAP OF DEVELOPMENT CONSTRAINTS

- Areas Recommended for No Development
- Areas Recommended for Low Development (10+ Acres)
- Areas Recommended for Moderately Low Development (5+ Acres)
- Areas Recommended for Moderate Development (1+ Acres)

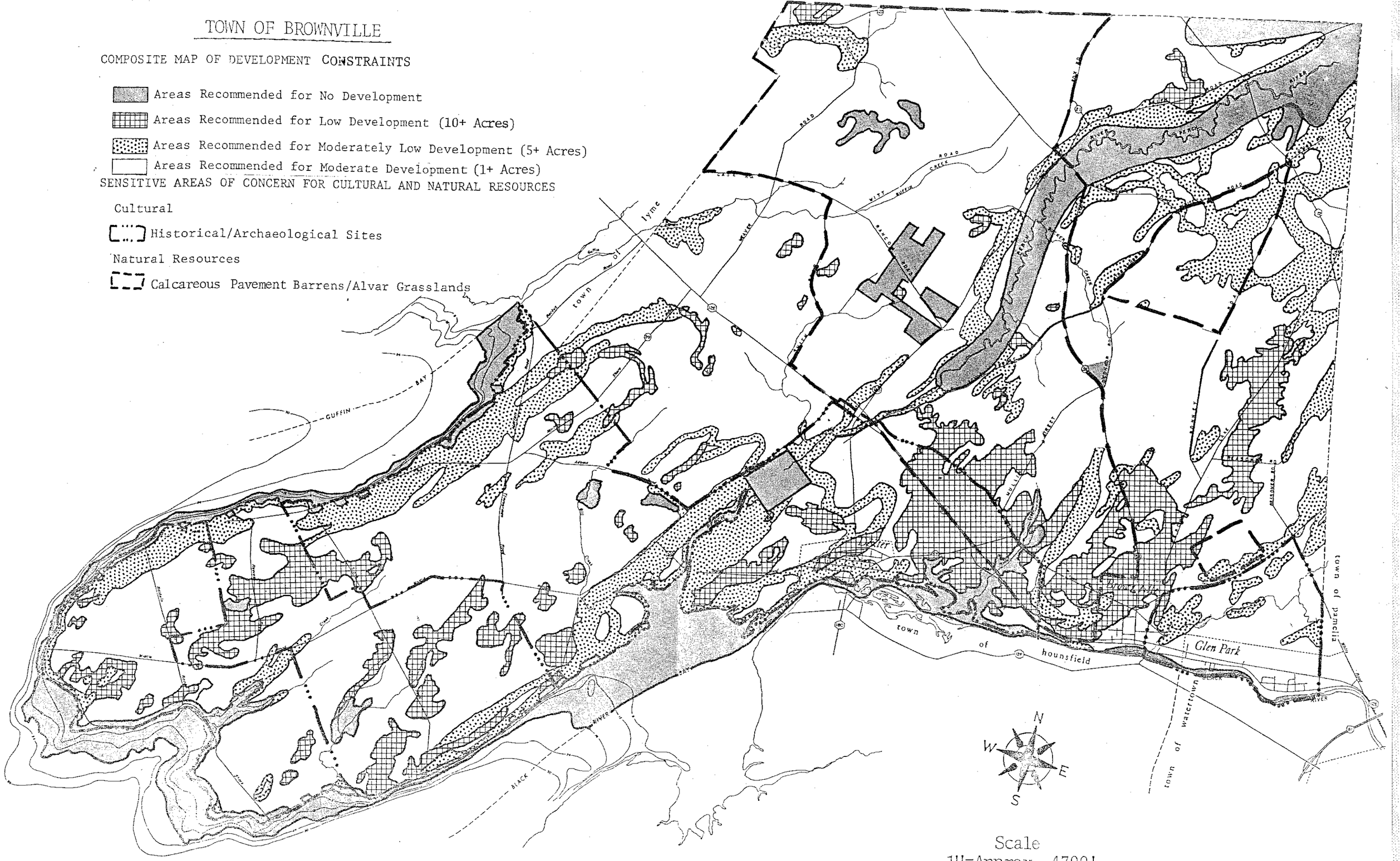
SENSITIVE AREAS OF CONCERN FOR CULTURAL AND NATURAL RESOURCES

Cultural

- Historical/Archaeological Sites

Natural Resources

- Calcareous Pavement Barrens/Alvar Grasslands



Scale
1"=Approx. 4700'

Areas Of Land Use Suitability

Based upon existing land use information and the analysis and density recommendations for the different levels of physical constraints and natural resources, Brownville was divided into suitability areas. The suitability areas are shown on the following Land Use Suitability chart. The chart addresses existing and proposed land uses, possible areas of constraints in reviewing development and land use recommendations for each suitability area.

AREAS OF LAND USE SUITABILITY

AREA	EXISTING LAND USES	PROPOSED LAND USES	POSSIBLE CONSTRAINTS TO CONSIDER IN REVIEWING DEVELOPMENT PROPOSALS	RECOMMENDATIONS
SD SHORELINE DEVELOPMENT	- Residential (under & over 10 acre lot) - Commercial (bar/restaurant, small retail) - Recreation - Vacant Land - Agricultural Land - Designated Wild, Forested Conservation Lands and Public Parks	- Residential - Commercial (Bed & Breakfast) - Scenic Areas (Recreation) - Public Parks & Playground - Recreation (boat ramp, dock, public beach)	- Soils, Flood Prone Areas, Beaches, Littoral Zone, Slope (3-8% near Guffin Bay, 8-25% near Black River Bay), Sherwin Marsh (Significant Plant Species), Historical and Architectural Resources	- Protect Littoral Zone Through Land Use Regs - Encourage Moderately Low Density Where Possible - Recommend Construction Setback 25' - 50' From Normal Highwater Mark In Flood Prone Areas - Place Septic Systems 100 ft. From Normal Highwater Mark - Require Common Dockage For Shoreline Subdivisions - Require Minimum Shoreline Lot Widths
AR AGRICULTURAL/ RESIDENTIAL	- Agricultural - Residential (over & under 10 acre lot) - Community Service - Industry - Designated Wild, Forested Conservation Land - Vacant Land	- Agricultural Land Use - Residential - Accessory Uses Needed to Maintain Agricultural Use (Commercial) - Timber Cutting (Industry) - Recreation	- Soils, Caves, Slopes (3-25%), Wetlands, Recharge Areas, Potential Aquifer Along Perch River and Perch River Wildlife Management Area, Nature Conservancy Lands, Unusual Geological Formations, Caves, Prime Farmland, Calcareous Pavemen Barren/Alvar Grasslands, Historical and Architectural Resources	- Utilize Existing Vacant Land For Development - Encourage, When Possible, Low Density Residential Development Along Existing Highways Through Zoning Regulations - Where Possible, Limit Access To Town, County and State Highways Through Cluster Development and Access, Spacing Requirements - Introduce Measures to Encourage/Protect Agricultural Land Uses and To Retain Open Field Habitat For Birds of Prey
RV-1 RV-2 RESIDENTIAL AREAS NEAR VILLAGES 1 & 2	- Residential (over & under 10 acres) - Commercial - Recreational - Public Service - Community Service - Designated Wild, Foreste Conservation Land	1. Residential - Parks, Open Space 2. Residential (under 10 acres) - Community Service (schools) - Commercial (retail)	- Recharge Areas, Wetlands, Flood Prone Areas, Slope (more than 25%), Soils, Prime Farmland, Calcareous Pavemen Barrens/Alvar Grasslands, Historical and Architectural Resources	- Encourage Cluster Development Where Possible Through Zoning Regulations - Recommend Low Density Development in Recharge Areas
RD RURAL HIGHWAY DEVELOPMENT	- Residential (over & under 10 ac.) - Agricultural - Community Services - Commercial - Public Service	- Residential - Community Services - Planned Unit Development	- Soils, Recharge Areas, Potential Aquifer, Flood Prone Areas, Slope (3-25%), Prime Farmland, Wetland, Caves	- Encourage Cluster and Large Lot Development (Any Lot Facing a Previously Existing Public Road Shall Have Frontage Of Not Less Than One Hundred and Fifty Feet) - Create Buffer Zones Of Vegetation Between Agricultural and Residential Uses - Create Limited Access Points For Commercial Uses - Create Visual Buffers Around Commercial Uses
H HAMLET	- Commercial - Residential (under 10 acres) - Community Service	- Commercial (Retail) - Residential	- Soils, Flood Prone Areas, Slope (8-25%), Possible Historical & Archaeological Resources, Calvareous Pavemen Barrens/Alvar Grasslands	- Adequate Open Space and Attractive Landscaping Should Be Provided Within Commercial Areas - Where Feasible, Residential Areas Should Be Separated From Arterial Roads By At Least 30 Feet Of Landscaped Buffering

PROPOSED LAND USE PLAN

Most of the proposed land use changes involve the expansion of residential areas and where those lots are located. The land use plan shows areas of possible expansion for residential development. The plan utilizes the vacant land that now exists for residential development, while preserving much of the existing farm land. Even though there is a need for other types of land use throughout the Town, the vast majority of new growth during the last five years has been the development of residential lots. This growth will, if managed wisely, utilize existing vacant land and also concentrate development in and around current growth in order to conserve energy.

Agriculture - Farming is the main industry in the Town of Brownville, even though much of the land that was previously farmed now lays vacant. In terms of future land use, farming has been declining since the late sixties and early seventies. Agricultural uses will continue to dominate land use within the Town. When new development occurs, consideration should be given to the fact that the Town has a large portion of farmland that is of statewide importance or prime farmland. Agricultural land should be protected from nonagricultural uses. Adoption and enforcement of various land use regulations, such as the creation of agricultural districts, or the enactment of land use controls such as zoning regulations, are ways by which the Town's agricultural land can be preserved.

Residential Areas (1 to 10 acres) - Many of the new residential areas that are being developed contain lots that are from 1 to 10 acres. New development with moderate to high densities should be located near already existing residential areas to avoid using existing farmland and locating them along existing town roads. Regulations and initiatives that would help utilize existing vacant land and encourage cluster development should be adopted. Rural development at suburban densities creates a demand for costly sewer lines and highway improvemets. Most of the Town roads were built to serve low levels of traffic.

Residential (over 10 acres) - The Plan recommends that much of the vacant land area be utilized if possible for large residential lots. Large lots are a necessity due to poor soil conditions for septic systems. Utilizing vacant land for large lot residential development also helps maintain a low density residential siting that is adjacent to agricultural uses. Many residents enjoy the opportunity to drive in rural areas. Many residents of the Town would like to keep a rural environment which attracted them to the area in the first place.

Commercial - Commercial areas that service the Town are either located outside the Town (Watertown) or in Limerick and nearby villages of Dexter and Brownville. Small retail outlets that service the daily needs of the Town should be located in areas that can utilize those needs for the convenience of the Town residents. Commercial development should be located in commercial centers with adequate parking and access to the main highways. Buffer zones should be utilized between residential areas and commercial centers in order to maintain the residential character of the Town. A variety of commercial uses tend to be located in areas along the highways to provide service to auto oriented and tourist related activities. These uses should be developed as commercial centers in order to provide safer access to the highway.

Recreation and Entertainment - Much of the land that is utilized for recreation is located along the shoreline at Pillar Point. Although there appear to be few

designated recreational areas in Brownville, there appear to be many opportunities for recreation in the form of hunting, fishing and boating. Residents of Brownville have access to public parks that are located within a 30 minute drive.

Community Service - As the population continues to grow, there will be a need for increased community services. These facilities should be located where they are convenient to most of the residents of the Town.

Industrial - At present, there appears to be little or no indication of a need for industrial sites within the Town of Brownville. Conditions could change and industrial sites could become desirable. These sites should be located in an industrial park that could provide adequate water, sewer, and access to the State highway system. Considering the general agricultural/residential character of the Town, any proposed industrial development should not threaten that character.

Wild, Forested, Conservation Lands and Parks - Many areas throughout Brownville are environmentally sensitive and are not regulated by the NYS Department of Environmental Conservation.

Vacant Land - Because of the decline in farmland, there is now large amounts of vacant land. Much of the vacant land cannot be utilized for residential development and will remain forested land or become forested land again. This kind of land use will provide for certain types of recreation such as hunting and can be used for forest products and grazing. Cottages and camps for seasonal occupancy, hunting, fishing and hiking are some of the uses that could be carried out in this rural vacant land.

PROPOSED LAND USE MAP

The proposed land use map was produced by combining the existing land uses for the Town and the Areas of Land Use Suitability. This was accomplished by grouping the existing land uses into five areas of land use suitability, as shown on the chart on page V-10 . The selected areas were chosen because of the types of land use presently in existence, available land for future land uses, and the location of physical constraints and cultural and natural resources.

Developers are allowed a certain amount of flexibility in locating land for new development through the placement of areas of land use suitability over existing land uses. This procedure also guides the Town and the developer in determining if the proposed development is compatible with existing land uses and does not conflict with the recommended land use standards for density that were established through the evalation of the physical constraints to development and the value of cultural and natural resources.

When comparing the recommendations from the Composite Map of Development Constraints to the land use recommendations for areas of land use suitability, there are some apparent contradictions. In those areas where the composite map recommends moderate density development, it is also recommended that the rural character of the Town be maintained. The composite map also recommends either no or low development on land along the shoreline and near the villages. Much of this land is developed and continued growth at the current rate will damage the cultural and natural resources in those areas.

TOWN OF BROWNVILLE

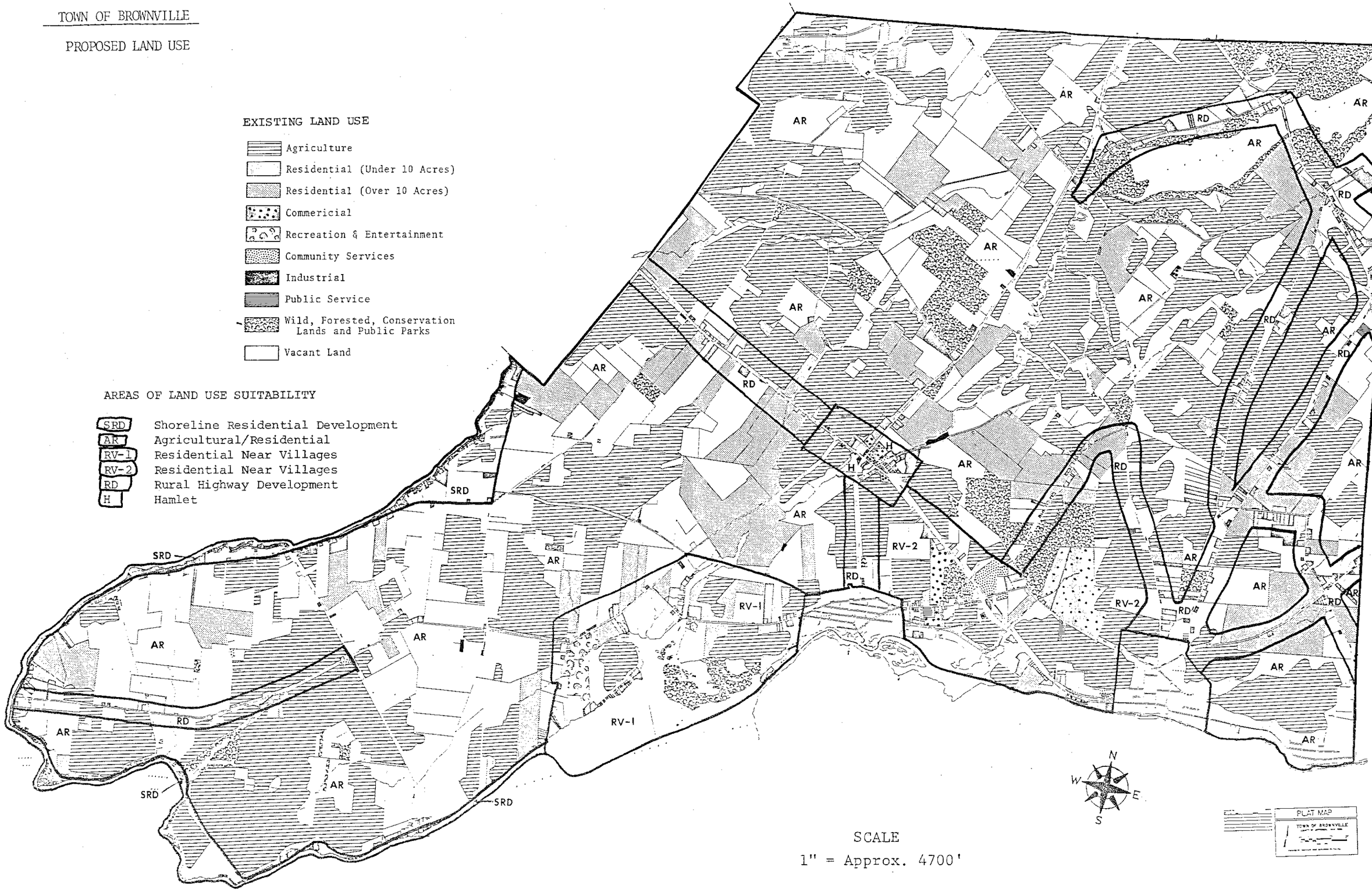
PROPOSED LAND USE

EXISTING LAND USE

- Agriculture
- Residential (Under 10 Acres)
- Residential (Over 10 Acres)
- Commericial
- Recreation & Entertainment
- Community Services
- Industrial
- Public Service
- Wild, Forested, Conservation Lands and Public Parks
- Vacant Land

AREAS OF LAND USE SUITABILITY

- SRD — Shoreline Residential Development
- AR — Agricultural/Residential
- RV-1 — Residential Near Villages
- RV-2 — Residential Near Villages
- RD — Rural Highway Development
- H — Hamlet



SCALE

1" = Approx. 4700'

IMPLEMENTATION PLAN

In order to implement the comprehensive plan, it is necessary to adopt land use regulations and policies that carry out the recommendations of the Plan. Listed below are recommendations for specific land uses and lot sizes within the areas of suitability.

Shoreline Development Areas include land areas that are heavily developed with residential uses. Further development of the shoreline must consider possible damage to natural resources and possible damage to structures where there are physical constraints to development. Land use regulations should include minimum lot size densities of one (1) acre. One-half acre lots should be granted by special permit.

Agricultural/Residential Areas combine uses for agriculture with residential development. Based upon the information in the Composite Map for Development Constraints, much of the Town land is recommended for moderate development, but the map does not consider the need to preserve the Town's rural character. Taking the rural character into consideration, land use regulations should permit five acre minimum lot sizes and a ten acre minimum in areas where there are severe development constraints.

Residential Areas Near Villages are still rural and more sparsely populated than nearby villages. In general, the standard minimum lot sizes should be one acre. A two acre minimum lot size should be considered in recharge areas. Small retail centers could be located along Route 12E near the Village of Brownville and along Cemetery Road near Route 12.

Rural Highway Development should be discouraged where possible and cluster development encouraged where possible. Five acre minimum lot sizes are recommended for development in areas where there are severe development constraints. A one acre minimum lot size is recommended for areas with few constraints. One or two small commercial centers could be located long Route 12 west of Limerick and east of Smith Road.

Hamlets - It is recommended that there be a minimum lot area of 1 acre. One-half acre lots should be granted by special permit for development that occurs in areas where there are few development constraints. Commercial centers could be located near Limerick near NYS Route 3 and NYS Route 12E.

POLICIES

The recommended policies for the plan are based upon the information contained in the Goals & Objectives section, the Natural & Cultural Resources Inventory section and, the analysis of these sections.

1. ENCOURAGE THE DEVELOPMENT OF AND ADOPTION OF ZONING REGULATIONS IN ORDER TO PRESERVE THE EXISTING RURAL CHARACTER OF THE TOWN.

2. PROVIDE INCENTIVES AND ADOPT REGULATIONS THAT WILL ENCOURAGE DEVELOPERS TO UTILIZE UNDERUTILIZED, BUT ALREADY DISTURBED, LAND AREAS.

3. ENCOURAGE ZERO OR LOW DENSITY DEVELOPMENT IN ENVIRONMENTALLY SENSITIVE AREAS AND IN LESS DEVELOPED RURAL AREAS.

4. BUILDINGS AND OTHER STRUCTURES WILL BE SITED SO AS TO MINIMIZE DAMAGE TO PROPERTY AND ENDANGERMENT OR THREAT TO HUMAN LIFE CAUSED BY FLOODING AND EROSION.

5. ENCOURAGE THE LOCATION OF DEVELOPMENT IN AREAS WHERE PUBLIC SERVICES AND FACILITIES ESSENTIAL TO SUCH DEVELOPMENT ARE ADEQUATE, OR CAN BE PROVIDED BY THE DEVELOPER.

6. PROTECT THE TOWN'S NATURAL RESOURCES FROM THE INTRODUCTION OF HAZARDOUS AND NOXIOUS WASTES.

7. EFFORTS TO INCREASE THE RECREATIONAL USE OF THE TOWN'S NATURAL RESOURCES WILL BE MADE IN A MANNER THAT ENSURES THE PROTECTION OF THOSE RESOURCES.

8. ENCOURAGE THE USE OF ALTERNATIVE AND INNOVATIVE SANITARY WASTE SYSTEMS WHERE CONVENTIONAL SYSTEMS ARE NOT ADEQUATE.

9. ENCOURAGE CLUSTER AND LARGE LOT RESIDENTIAL DEVELOPMENT ALONG EXISTING RURAL ROADS.

10. ENCOURAGE, THROUGH ZONING, SITE PLAN REVIEW AND SUBDIVISION REGULATION DEVELOPMENT DESIGNS THAT WILL LIMIT THE NUMBER OF ACCESS POINTS TO TOWN, COUNTY AND STATE HIGHWAYS.

11. SUPPORT THE CONTINUATION OF EXISTING AGRICULTURAL DISTRICTS AND THE ESTABLISHMENT OF NEW AGRICULTURAL DISTRICTS IN FARMLAND AREAS.

12. ENCOURAGE, WERE POSSIBLE, PLANNED UNIT DEVELOPMENT WHICH INTEGRATES VARIOUS KINDS OF LAND USES SO AS TO MAKE THINGS CONVENIENT AND ACHIEVES A SENSE OF COMMUNITY.

APPENDICES

APPENDIX A

INVENTORY OF HISTORIC SITES

Two historic contexts have been established for the evaluation and study of historic resources in the Brownville Multiple property listing. One looks at the first fifty years of development as a farming and shipping community and the vernacular traditions that were established in the region during that period. Property types from this period include everything from farms and associated outbuildings to early industrial buildings. Given the region is rich in limestone deposits and had an abundance of lumber during its development period, the property types have been divided into three categories according to construction materials: limestone, wood, and brick. Each of the materials has a significance of its own: the limestone for its level of craftsmanship, the wood for its rare survivorship, and the brick for its rarity in general during the first fifty years of development. Thirteen properties have been identified in this historic context. The numbers located next to the names of the historic sites show the location of the sites on the map of historic sites.

The second looks at development from 1860 when the railroad began to have its full impact on the community and the villages had a strong industrial base in paper-making and textiles. Most of the structures identified under this context are located in one of the three villages in the town: Brownville, Glen Park, and Dexter. Three property types have been identified: the village residence; commercial and civic structures; and resources associated with the railroad and industrial development. Eight properties have been identified in this historic context.

Rural Vernacular Architecture of Brownville 1800 - 1850

Brownville, like the entire region north of Syracuse, was part of the Macomb Purchase lands. Macomb had acquired 210,000 acres originally owned by the Oneida Indians and promoted the sale of lands in the European market. Peter Chassanis of Paris purchased 210,000 acres of land and hired Rodolphe Tillier of New York to manage and sell his property. The parcel was to be divided into fifty-acre lots with plans for two cities. It was Tillier who was able to interest Jacob Brown of Pennsylvania to purchase land and settle in this promising region. Brown was born in Bucks County, PA on May 9, 1775 and became a teacher and landsurveyor after attending schools in Trenton, N.J. In an attempt to recover a lost family fortune, Jacob, along with his father Samuel and brother Samuel, were looking for a land speculation opportunity. After considering a development in Ohio, Tillier was able to convince them to travel to the Chassanis lands in upstate New York. Jacob Brown closed his school in New York City in February, 1799 and set out for the north country of upstate New York. In an attempt to locate near the head of navigation for transportation and water power reasons, Jacob built a log cabin near where the Philomel Creek flows into the Black River, the site of the present Village of Brownville. His father's family of about twenty arrived in the region on May 27, 1789 and despite crude and harsh conditions, survived the following winter.

The following spring saw a promising growth in the area with many new settlers locating near the Brown's settlement. There was a sawmill built at the mouth of the Philomel Creek during the year and Jacob Brown had a grist mill built the following year. The presence of the mills had a positive effect on the development of Brownville as were the new roads proposed for construction. The

land company run by Tillier had cleared a road but never built any bridges. Jacob Brown was instrumental in obtaining State funds for the construction of two roads into the area including a major road from Utica via Boonville and into the Black River valley.

While many of the earliest residents of Brownville built homes which are included in the nominated resources, none of the earliest log and wood frame structures survive to this day. There has not been a thorough archaeological survey conducted in the area. However, the sites of these early structures have been built on many times over.

The town was officially organized on March 1, 1803, named after its founder Jacob Brown and first supervisor. The town was much larger than its present configuration, but by 1821, the Town of Orleans had split off as well as Lyme, Cape Vincent, Clayton, Pamelia, and part of LeRay, Theresa, and Alexandria.

By September, 1805 there were twenty five houses in the Village of Brownville and it was expanding rapidly. The first public house was built in that year by Jeremiah Phelps on the site of the present stone hotel. The latter was built about 1820 as part of the Stone Buildings of Brownville Thematic nomination. Also in that year, John Brown built mills on the south side of the river and, in 1806, built the first dam across the river.

In 1810 the State legislature passed an act to improve the navigation of the mouth of the Black River up to Brownville by building locks and canals. Up to this point the river was only navigatable up to Dexter. It was felt that the project would make Brownville a major shipping port for the commerce on the Great Lakes. However, the natural harbor at Sackets Harbor, immediately south of the town proved to be too strong a competition.

By 1811, Jacob Brown had established a lucrative potash business, most of which was exported for consumption in Canada. The product was produced from clearing the land of its timber and was exchanged in Kingston, Ontario for flour, pork, and other food supplies. There were two warehouses built for this trade just below the village with small sailboats being used to transport the goods. Just before the War of 1812, Congress called for an embargo on trade between Britain and the United States. As a result the price of potash rose and the smuggling of products became prolific.

It was in 1811 that Jacob Brown built his large stone residence in the village. The mansion, as it is referred to, is a handsome Georgian style structure with twenty-two rooms and fine interior architectural detail. The property was listed on the National Register as part of the Stone Houses of Brownville Thematic Nomination.

The War of 1812 was a significant event in this region of the state. Jacob Brown became a Brigadier General in the U.S. Army and his home was used as headquarters for the Army during the war. Brown was responsible for defending the frontier from Oswego to St. Regis, a distance of about 300 miles, and with an army of 600 untrained men. Brown maintained post-war headquarters at his home from 1815 to 1821 before moving to Washington, D.C. to serve as General-In-Chief of the U.S. Army.

The Black River Navigation Company continued to operate the wooden locks from Lake Ontario to Brownville and replaced them with stone locks in 1828, the year the Village of Brownville was incorporated. Cotton and woolen mills in the

village as well as the postash industry kept the canal lucrative until sometime in the 1840s.

The two houses constructed of brick that are included in the nomination were the homes of Brownville's early settlers and businessmen. The (3) Major Samuel Brown House is the earliest of the two and was built in 1816. Samuel Brown was the younger brother of General Brown and lived here until his death in 1852. The house is composed of a four-bay, two-story main block and originally had two, one-story wings flanking the main block. The main entrance to the house is through the eastern wing (now a porch) with a secondary entrance through the west wing. The source of the brick used in the construction of the house is unknown but the craftsmenship shows a familiarity with the material with the front and rear elevations carefully laid in Flemmish bond. This Roman Classicism style inspired house was quite unlike the house that Brown's brother built but may have served as the inspiration to the other brick structure being nominated. Though built over ten years later, the (6) Col. William Lord House also has a central block with two flanking wings but has the central block with a gable end orientation to the street. The Lord House has outstanding interior finishes in plaster and wooden moldings that survive with little alteration. Despite its rich architectural interior details, the Lord House has the enclosed stair that is common to this region of the state. Lord was a colonel in the War of 1812 and operated a foundry in Brownville, originally with Alanson SKinner and later with his sons. He served as president of the village trustees in the year 1833.

It was just after the end of the war when a number of stone residences were constructed in the region. Most of the St. Lawrence River valley has extensive deposits of blue limestone which lies very close to the surface and is easily quarried. This limestone became a popular choice of building material for many of these early settlers. While little information has yet to be revealed on the stone craftsmen of the region, a variety of building techniques are represented from the crude vernacular to the finely dressed blocks of the Brown Mansion. The buildings which retain a significant amount of integrity are: (30) Brown Mansion - 1811, (1) Calvin Britton Farm - ca. 1811, (31) Brownville Hotel - 1820, (32) Gilson Houses - ca. 1820, (4) St. Paul's Church - ca. 1820, (5) Oliver Stevens House - ca. 1821, (34) Knap Mansion - ca. 1830, (2) Henry Brown Mansion - ca. 1830, (9) Col. William Cole House - ca. 1833, Perch River School - ca. 1835, (10) Daniel Ackerman House - ca. 1836, and the (11) Captain John Bradley House - ca. 1840.

The Town of Brownville was a rich agricultural region and although farming has declined in recent years, there are still some active farms maintaining the tradition. By mid-century there were over 300 farms in the town, averaging under 100 acres in size but ranging between 50 and 200 or more acres. Originally grains like oats and barley as well as hay were the principal source of revenue for the farmer but, as transportation options improved, cheese and butter became their mainstay.

The earliest of the farm residences found in the town is the Calvin Britton Farm and was built around 1811. Members of Britton's family were involved with some of the road building in the area and he, along with a brother, moved to the area from Remsen in 1802. The house survives as an outstanding example of an early limestone residence of the region and the only one of its kind. It has an English interior plan with formal rooms on the second floor with the kitchen and work rooms in the first floor. Typical to the north country is the enclosed staircase. That feature, presumably a heat-saving, energy concious design, is found in most all north country houses despite the architectural fashion. The

local architectural tradition is to enclose the stairs and it can be found even in later Victorian designs where the stairs were often the focal point of interior design.

The interior staircase design feature can be found in a number of other early stone farmhouses in the area. The Oliver Stevens House - 1812-22 and the (9) William Cole House - 1832-33, have a visual prominence not unlike that found in the Britton Farmhouse but are vernacular interpretations of Greek Revival style. Their interior reveals the typical plan of a working farmhouse and the enclosed interior stair a key feature.

Another farm, but since construction referred to as a mansion, is the Henry Brown Mansion located about a mile from the center of the village on Old Military Road. Built about 1815, the house has a fully developed Federal style house plan with a two-story, five-bay, center entrance facade and is rivaled only by the Jacob Brown Mansion . The stone craftsmanship is of the highest level with regularly sized and dressed blocks and a handsome eliptical entryway. Unlike the utilitarian interior of the Britton Farmhouse , the Henry Brown Mansion has well-crafted interior with original mantels, deeply channeled woodwork, and an open central stair with handsome turned balusters and a newel crowned with a cherry handrail. The kitchen also retains a high degree of integrity with the cooking fireplace and bake oven surviving.

Pillar Point, although now a vacation and summer colony for the region, was once the town's most productive area. Originally farmed for wheat, the area's harsh winters and depleted soils encouraged the change to dairying wih milk and cheese the major products around mid-century. By 1860, there were many farms on the point with two established hamlets of Pillar Point and Adams Cove. Three properties survive on the point which retain significant integrity and convey the important agricultural heritage of the point. The Daniel Ackerman House is an excellent example of a five-bay, one and one-half-story, stone farmhouse, a form commonly found in northern New York. Its limestone construction however, is rare in this form. Long abandoned when the farm ceased operation in the early twentieth century, the house was recently renovated as a summer residence after a fire destroyed the interior.

The (8) E. F. Rounds House is also an example of an early farm on Pillar Point which has been adapted into a summer residence. Originally built in the 1840s by a son of one of the Point's earliest settlers, the Rounds House is a representative example of a vernacular farmhouse which experienced stylistic improvements during the post-Civil War prosperity the region enjoyed. The Rounds House has a beautifully crafted, Eastlake style front porch announcing the farmer's new prosperity found with the improved transportation networks (railroad) that provided a larger market for the farmer's products. As one of the two wooden structures included in the nomination, the Rounds House is a rare unaltered survivor from the first half of the nineteenth century. The three-bay, center entrance gable end facade seems to be a local vernacular form used rather than the typical five-bay, long wall facade. There are other examples of the gable end facade treatment found in the hamlet of Pillar Point just east of the farm, but loss of integrity prevents their nomination. Although the major outbuildings to the farm, once located across the street, are now gone, the original farm setting is strongly reinforced by the mature stand of handsome maples which line the road.

Another wood frame farmhouse, the (12) Westcott Farmhouse is one of the most recent farms on the Point and is an excellent example of a pre-Civil War

residence. Built about 1850, the builder must have had access to building pattern books because the house recalls the picturesque Gothic Revival cottages popular at the time but is extremely restrained in its decoration and embelishment. The Westcott Farmhouse and the Rounds House are rare unaltered survivors of the wood frame farmhouse commonly built in the region.

The Hines Farm is another rare, unaltered example of a wood frame farmhouse. It was constructed ca. 1850 and is the same five-bay, center entrance form as seen on the Ackerman House and a common form found in norther New York. Like the Rounds House , the Hines Farmhouse has evidence of the post-Civil War prosperity seen in the large, two-story addition and a modest Eastlake style porch. In addition to the intactness of the house, the property has a significant unaltered setting with small outbuildings clustered around the house and all are set in a grove of trees well back from the road.

The rural agricultural character of the town required the formation of rural school districts. Education was an important component of town services and by 1820 there were fifteen school districts. Each district had a one room schoolhouse with one teacher handling all grade levels. As the population grew and demographics changed, new schoolhouses were built and some abandoned. The Perch River Schoolhouse was one of the few schoolhouses constructed of stone in the town. Built in 1835, it is a surviving example of the one-room schoolhouse form, despite the fact there were twenty schoolhouses by 1880. The schoolhouse has a traditional form and plan with two entrances for boys and girls, and an open plan with windows on either side. The school had an alteration done in the early twentieth century that is significant in its own right. The windows on the southern wall of the school were removed and replaced with a bank of windows that provided maximum light. This was done in direct response to the educational philosophy of the period. It was published in education journals throughout the country that southern light was most conductive to learning and recommended the installation of a bank of windows and closure of all others. It is not known whether the school district closed the northern windows for a period of time, but the original sash appears to be intact. The school was in use until about the second world war and has since been converted to a residence like so many others. However, the conversion was done extremely sensitively with the fenestration and outward school appearance left intact.

Religion in the town has been served by many churches and St. Paul's Episcopal Church is the oldest in the town as well as the region. Constructed in 1820 as a Union church to be used by all denominations, the church is built of limestone block in a traditional Federal style meetinghouse design rarely seen in the region and even more rarely done in stone. The edifice is two stories high with evenly placed windows at each level. It has a double entrance in the engaged pavillion at the facade that is surmounted by a handsome three-stage steeple. The original gallery survives in place but has since been closed-off with a barrel vaulted ceiling. Excellent Federal period woodwork survives throughout the church. It bacame St. Paul's Episcopal Church in 1826 and continues in use to this day.

Village Architecture of the Railroad and Industrial Period of Brownville, 1860-1930

Industry in Brownville and its three villages centered around the best source of power: the Black River. Falls at Jim Woods Falls (now Glen Park), Brownville and Dexter immediately attracted grist and saw mills and were the reason for each of the villages being in the early 1800s. Soon carding,

spinning, and fulling mills appeared as well as sash and blind factories. As was mentioned, the Browns were heavily involved in the potash business and by 1820 there were 33 asheries. Brown was also involved with the organization of the Brownville Cotton Factory, maker of cotton goods. Each of the villages grew throughout the century and business seemed to improve as transportation improved. The Black River Canal from Brownville to Dexter was instrumental in supporting the early businesses. By the 1840s, the turnpikes in the area had improved to the point that land travel was quicker and more economical. However, the advent of the railroad seemed to have the most significant impact on the development of the three communities. Regional agriculture benefited as much from the railroad by providing a larger market for their product. Cheese and butter continued to be the main export products, but it became possible to ship milk further afield without spoiling.

The railroad was introduced to the area in 1852 when the Cape Vincent branch of the Rome, Watertown, and Ogdensburg Railroad was completed. It passed through the center of the Village of Brownville and had another stop in Limerick that was used to ship goods by the farmers in the Perch River and Pillar Point area of the town. The freight depot at Limerick survives but has lost integrity due to deterioration. The passenger station at Brownville however survives intact and unaltered. The (15) R.W. & O. Railroad Depot was constructed in 1867 replacing a smaller make-shift station in the village. The station is an excellent example of a rail station of the period with a low sloping gable roof with wide overhangs, Stick Style brackets, and board and batten siding. It combines both passenger and freight functions into one building with the waiting room and ticket office at the western end and the freight warehouse at the eastern end. Now used for a museum of the Northern New York Railroad Society, the building stands as an outstanding reminder of the importance of the railroad to the community.

After the Civil War, the textile mills of the north, including the Brownville region, suffered greatly from the cheaper competition in the south and most of the mills closed. The Ontario Woolen Mill at Dexter was one of the largest and had a large stone factory built in 1838. The mill closed in 1868. It was about ten years before a new industry would infuse new life into the three villages. New advances were being made in the paper and pulp industry with a new process that made papermaking very profitable. The Remington family was instrumental in bringing this new process to the Brownville area with Alfred D. Remington building a sulfite plant on Sewall's Island in Watertown and his brother, Charles R. Remington built a pulp mill at Glen Park in 1882. The C.R. Remington and Son Paper and Pulp Mill initially employed 75 men and had two paper making machines and soon expanded to include a third. The success of the Remington Mill soon attracted other business investors and paper mills were opened in Dexter and Brownville. Dr. Charles Campbell purchased the old Ontario Woolen Mill in Dexter in 1886 and the following year established the Dexter Sulphite, Pulp, & Paper Co. About the same time, James T. Outterson established the Outterson Paper Company at Brownville. The industry continued to grow with the Ontario Paper Co. opening in Glen Park in 1888, the Frontenac Paper Co. in Dexter in 1889, and the St. Lawrence Paper Co. also in 1889 in Dexter. Between 1898 and 1900 the International Paper Company purchased the Ontario Mill and all of the Remington's holdings in Glen Park and Watertown and the Outterson Mill in Brownville.

The industry flourished until the 1920s when labor strikes began to disrupt the operations. The mills in Glen Park were hardest hit by the strikes in that the C.R. Remington Mill never re-opened after a lengthy strike in 1920 and burned

to the ground while idle in 1926. The Ontario Mill, known as #4, stayed in operation at reduced capacity but burned in 1927 after being idle from a strike the year before. In Dexter, the Dexter Sulphite, Pulp & Paper Mill was sold to William Randolph Hearst and operated until 1942. It was sold to a Canadian firm that operated through the war but ceased operations in 1953. The Dexter Sulphite Mill took over the Frontenac Mill and operated it until 1947. After an interim period, the mill burned to the ground in 1950. The St. Lawrence had a similar checkered history and survived under various names until the second world war. The International Paper Mill in the Village of Brownville is the only paper mill still in operation in the area and unfortunately frequent modernizations had destroyed any original integrity of the Outterson Mill.

During the industrial development of the latter half of the nineteenth century, the three villages in the town grew and remained economically viable. It is under this context that eight resources were identified in the area. They fall into three distinct categories: residential, civic and educational, and industrial and commercial. The residential offers a variety of houses ranging from a speculative house that was rented to paper workers to the home of one of the mill supervisors. The civic and educational category includes an example of each, the (14) Dexter Village Jail and the (17) Brownville School. There are no mill structures included in the industrial and commercial category due to fires or extensive alterations. The Brownville R. W. & O. Railroad Station is an excellent example of railroad architecture and a significant reminder of the late nineteenth century prosperity of the community.

Village residential architecture and character changed after the Civil War and with the industrial prosperity. The density increased as house lots grew smaller. The typical house was a small two-story residence with porch and a small carriage barn to the rear of the property. The traditional vernacular forms were being replaced by pattern book houses that incorporated the popular building styles of the period.

Joseph Underwood owned and operated the Underwood House in the Village of Dexter, near the canal and bridge. The community relied heavily on the river traffic and as a result there were many hotels and taverns in the village. Unfortunately, none survive with sufficient integrity for nomination. Underwood had lived in the village while operating the hotel but in 1885 began looking for a site for a new house to which he would retire in the next decade. He sought to live in the village but on a lot large enough to support horses and a few other animals. He chose to build on the northeastern edge of the village, not far from his work but on the edge of the denser lots. The house is an excellent intact example of the Queen Anne style popular during this period. Its asymetrical massing, multi-gabled roof, and decorated porches are all distinguishing characteristics of the style. The interior retains original plan, woodwork, hardware, and flooring. A distinctive feature of the property is the very large carriage barn that was used for carriage storage, horses, sheep, a few cows and a garage.

The (18) Otis Austin VanDeWalker House in the Village of Brownville is a more representative example of the typical village residence of the late nineteenth century. It was built in 1893 by VanDeWalker as a residence for his family. VanDeWalker was a local builder who built houses in Brownville and Glen Park to be rented to the transient population of paper workers. His home was similar in form to the rental housing but afforded more decorative finishes and trims. The house is a modest Queen Anne style residence yet survives intact on both the interior and exterior. The property is an excellent example of a

village residence with the house and small carriage barn located on a somewhat narrow village lot. Although many houses of this type were built in the villages, few survive with as much intregrity of design, materials and workmanship.

The (20) B.B. Fairchild house in Dexter was also the home of a woodworker and builder. Built eleven years after the VanDeWalker house in 1914, it embodies the distinguishing characteristics of the popular building style of the period and typical features of the village residence: compact size, small landscaped lot, and rear outbuilding. The carriage barn by this time had evolved to a garage. Fairchild was a cabinetmaker by trade and worked in the Dexter Sash and Blind factory when not building houses. He used a pattern book plan for a Bungalow style house and made personal revisions. All of the interior woodwork was crafted by him and utilizes cherry, chestnut, and oak wood finishes. The house survives as the best example of its style in the area and is a significant reminder of the prosperous period the turn-of-the-century was in the region.

SOURCE: John Harwood, Historic Resources Consultant

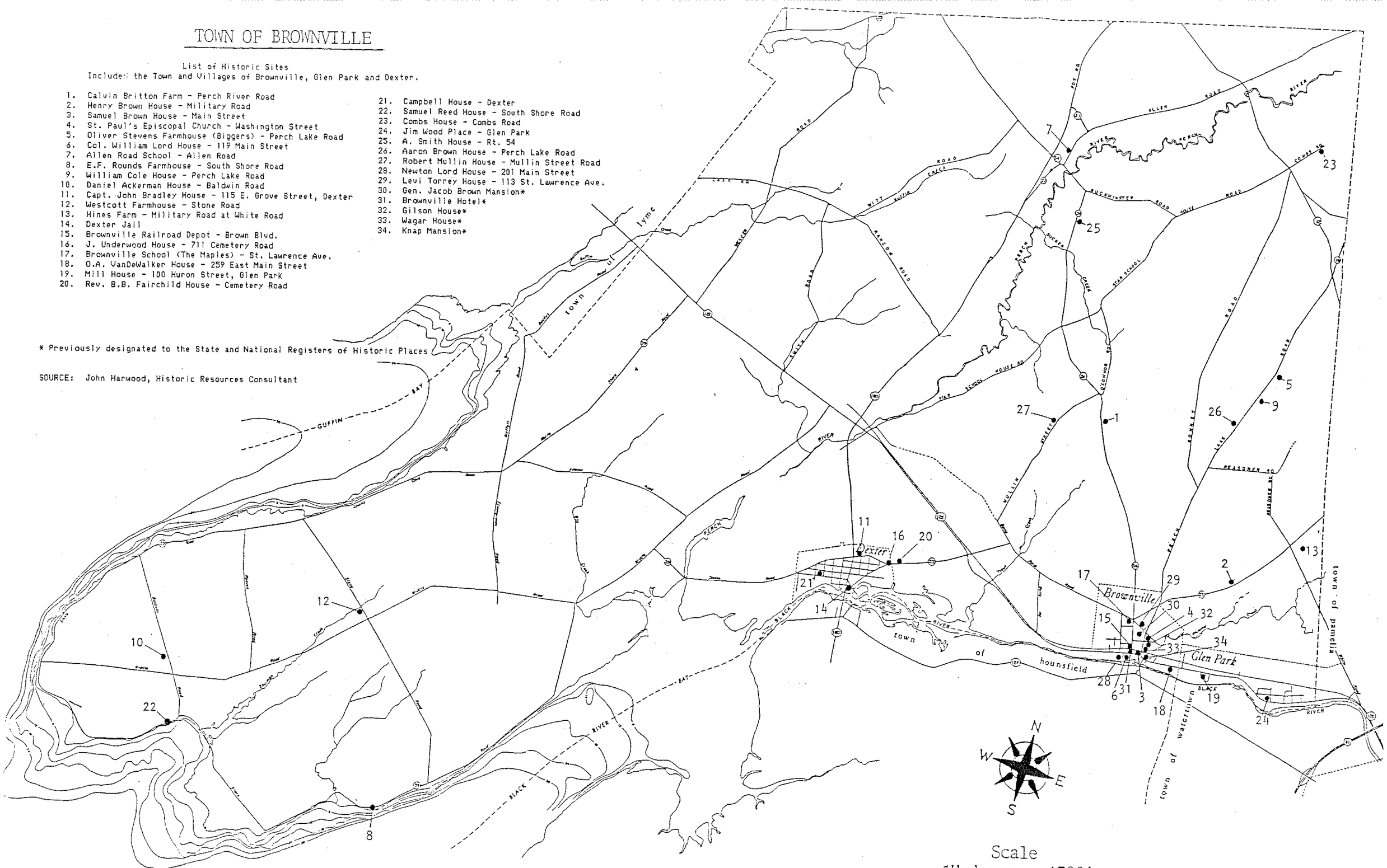
TOWN OF BROWNVILLE

List of Historic Sites
Included the Town and Villages of Brownville, Glen Park and Dexter.

1. Calvin Britton Farm - Perch River Road
2. Henry Brown House - Military Road
3. Samuel Brown House - Main Street
4. St. Paul's Episcopal Church - Washington Street
5. Oliver Stevens Farmhouse (Biggers) - Perch Lake Road
6. Col. William Lord House - 119 Main Street
7. Allen Road School - Allen Road
8. E.F. Rounds Farmhouse - South Shore Road
9. William Cole House - Perch Lake Road
10. Daniel Ackerman House - Baldwin Road
11. Capt. John Bradley House - 115 E. Grove Street, Dexter
12. Westcott Farmhouse - Stone Road
13. Hines Farm - Military Road at White Road
14. Dexter Jail
15. Brownville Railroad Depot - Brown Blvd.
16. J. Underwood House - 711 Cemetery Road
17. Brownville School (The Maples) - St. Lawrence Ave.
18. O.A. VanDeWalker House - 259 East Main Street
19. Mill House - 100 Huron Street, Glen Park
20. Rev. B.B. Fairchild House - Cemetery Road
21. Campbell House - Dexter
22. Samuel Reed House - South Shore Road
23. Combs House - Combs Road
24. Jim Wood Place - Glen Park
25. A. Smith House - Rt. 54
26. Aaron Brown House - Perch Lake Road
27. Robert Mullin House - Mullin Street Road
28. Newton Lord House - 201 Main Street
29. Levi Torrey House - 113 St. Lawrence Ave.
30. Gen. Jacob Brown Mansion*
31. Brownville Hotel*
32. Gilson House*
33. Wagar House*
34. Knap Mansion*

* Previously designated to the State and National Registers of Historic Places

SOURCE: John Harwood, Historic Resources Consultant



Scale
1"=Approx. 4700'

APPENDIX B

TOWN OF BROWNVILLE HISTORICAL AND ARCHAEOLOGICAL RESOURCES

The history of Indian occupation was written in January 1953 by Justice of the Peace Clifford Z. Bowman for the Town Board. Copies of the original document are kept on file at the Town Hall.

This is a brief summary of the original document that describes Indian habitats, their locations and customs. Also included is a brief description of Indian life in a camp located near Natural Bridge about 1000 A.D. Map B-3 , at the end of this summary, shows the general area of the ancient Indian camps found in the Town of Brownville.

Near the Black River, west of Dexter, artifacts of a very ancient Algonquin people have been found in the hills and on the flat land near the river. This area was also the home of the Onondaga people at a later date.

Some artifacts found near the Perch River show markings of Esquimo influence. Near the Perch River, the Onondagas, the local branch of the Iroquois, developed a high degree of civilization. They grew crops of corn or maize, beans and squash, caught many fish and played games of chance and skill. Some areas on Pillar Point are believed to have been used by ancient Algonquins before the birth of Christ. It was also found that Onondagas lived quite extensively along the shore of Adams Cove. There are numerous areas throughout the Town of Brownville where Indians had camps that existed 100 B.C. and, in some areas, different Indian cultures existed as far back as 3483 B.C.

During favorable weather, when the ground is covered with grass, some Indians came up the McKenzie River in search of food. A small group settled for a time on Pillar Point. In Jefferson County Indians hunted buffalo, moose, elk, bear, deer and wild turkey.

The author tells a story of how Indians lived day to day. Men were hunters and caught fish, women prepared meat for eating and gathered vegetables. Herbs were also gathered and used as medicines.

The Indians that lived near Natural Bridge had two things that were necessary for life - firewood and food. The inhabitants of this area had ample fish to go with their maize, squash, beans, roots, bulbs, berries, etc. Their houses were of various sizes, divided inside to accomodate several groups of the same family.

The fire was located in the center of the house and used by everyone living there. The pottery that was used was basic. Women gave birth alone in an area separate from the large houses.

Girls were taught to prepare food and were responsible for clothing. Marriages consisted of mutual desire, but the boy had to prove his bravery and his ability as a hunter.

Boats were made from logs. Bowls and fish lines were made from twisted cedar bark, spoons were made from bison horns and clam shells. Face paint and decorations on the doors of tents were made from the juice of roots and berries.

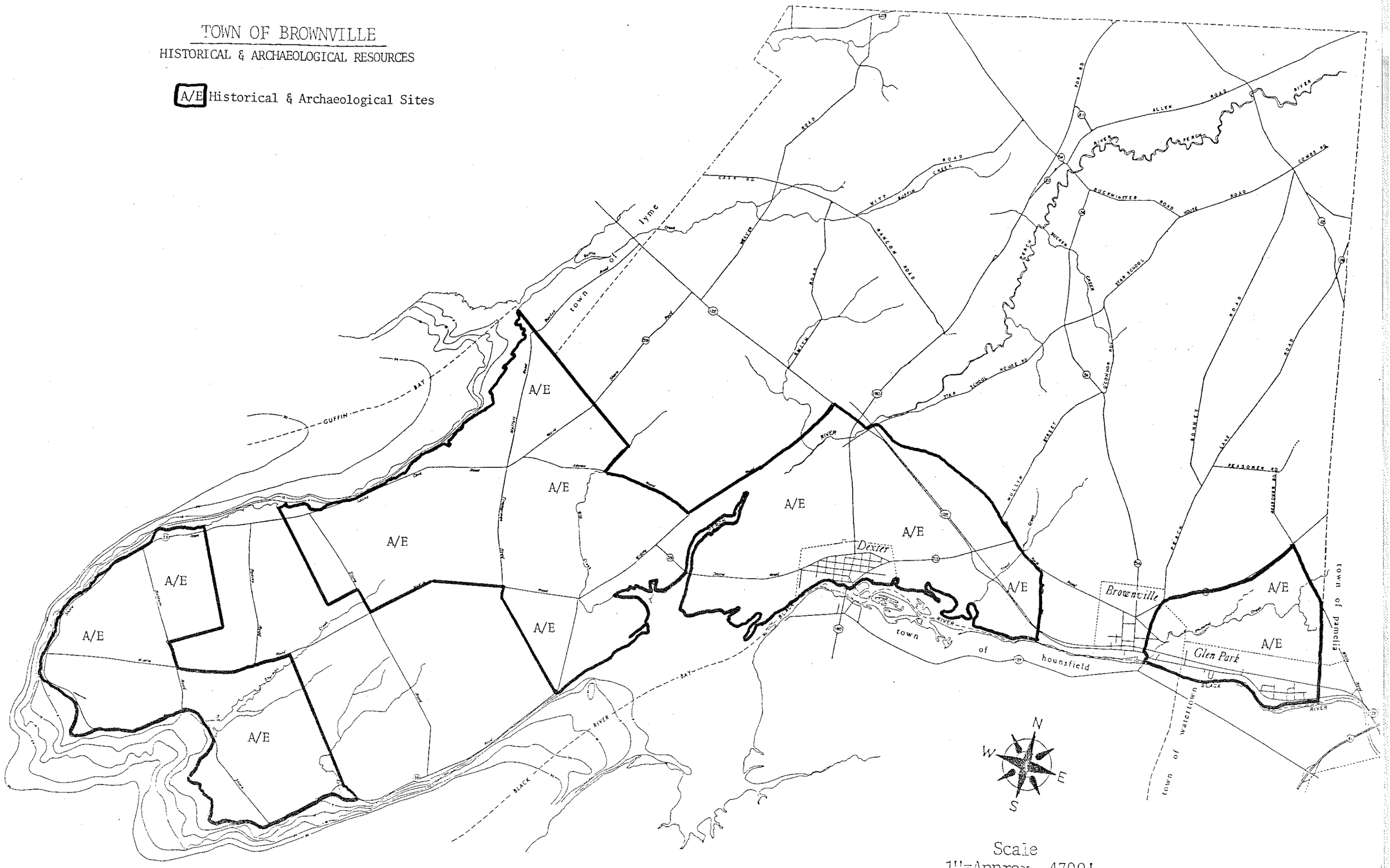
The history of ancient Indian camps in the Town of Brownville was due to the

hard work of men who had to find and dig for the Indian artifacts that were needed to put their work in a form that enabled them to draw conclusions about how Indians lived in this area. Many historic sites that were constructed 200 years ago are still standing today and makes the history in the next section much easier to trace.

TOWN OF BROWNVILLE

HISTORICAL & ARCHAEOLOGICAL RESOURCES

A/E Historical & Archaeological Sites



Scale
1"=Approx. 4700'

APPENDIX C

TOWN OF BROWNVILLE
ROADWAY INVENTORY
TOWN OF BROWNVILLE PLANNING BOARD
AUTUMN, 1987

ROAD NAME	SEGMENT DESCRIPTION	SEGMENT LENGTH	PAVEMENT WIDTH
CO RTE 59 DOANE RD	DEXTER LINE TO SO SHORE @ RUSTIC	2.59	20
CO RTE 59 SO SHORE	RUSTIC TO STONE RD	2.52	20
CO RTE 59 SO SHORE	STONE RD TO CHNG IN WIDTH SE SHERWIN BAY	2.49	16
CO RTE 59 SO SHORE	CHNG IN WIDTH TO BALDWIN RD	0.62	10
BALDWIN ROAD	SO SHORE TO NO SHORE	1.65	12
CO RTE 59 NO SHORE	BALDWIN TO BALDWIN	3.72	14
MIDDLE RD	S/N SHORE RD TO SO SHORE (C.R.59)	5.69	16
MIDDLE ROAD	C.R. 59(DOAN RD) TO B. ADAMS RD.	0.43	16
REEVES ROAD	MIDDLE RD TO NORTH SHORE RD	1.38	12
CO RTE 59 NO SHORE	BALDWIN RD TO NYS RET 12E	6.48	16
STONE ROAD	NO. SHORE TO SO. SHORE	2.95	12
TIMMERMAN ROAD	NO. SHORE RD, TO MIDDLE RD.	1.17	20
MIDDLE ROAD	PILLAR POINT RD. TO RTE. 12E	1.90	18
MOFFAT ROAD	NO. SHORE ROAD TO TOWNLINE	1.39	20
B.ADAMS ROAD	NO. SHORE TO MIDDLE ROAD	1.87	20
WEAVER ROAD	NYS RTE 12E TO MORRIS TRACK ROAD	1.50	16
CASE ROAD	WEAVER ROAD TO TOWN LINE	0.70	12
MORRIS TRACK RD(C125	TOWNLINE TO TOWNLINE	1.16	12
DEPAUVILLE ROAD	TOWNLINE TO NYS RTE. 180	1.90	18
WITT ROAD	DEPAUVILLE RD TO CASE/RANSN RDS.	2.03	12
CASE ROAD	WITT RD TO WEAVER ROAD	1.00	16
RANSOM ROAD	WITT ROAD TO NYS RTE. 180	1.48	12
ALLEN ROAD	CORTE, 55 TO NYS RTE. 12	1.38	16
PERCH RIVER ROAD	CUL-DE-SAC TO NYS RET 180(CO. RT. 55)	0.92	14
BROWNVILLE RD.(cr54)	PERCH RIVER RD TO VILLAGE LINE	4.52	13
STAR SCHOOLHOUSE RD	NYS RTE 12 TO DEAD END	0.34	16
CEMETARY RD.(CR.53)	DEXTER VILLAGE LINE TO NYS RTE 12E	0.80	18
CEMETARY ROAD	NYS RTE 12E TO GAME FARM ROAD	0.45	18
GAME FARM ROAD	BROWNVILLE VILLAGE LINE TO MULLIN RD.	1.34	18
MULLIN ROAD	GAME FARM RD. TO CO. RTE 54	1.69	12
O'CONNOR ROAD	FROM CO. RTE 54 TO DEAD END	0.45	12
PERCH LAKE ROAD	BROWNVILLE VILLAGE LINE TO NYS RTE. 12	3.62	18
BONNEY ROAD	PERCH LAKE ROAD TO NYS RTE. 12	3.36	16
STAR SCHOOLHOUSE RD	NYS RTE. 12E TO NYS RTE. 12	5.25	18
VAADI ROAD	NYS RTE 12 TO TOWN LINE	1.25	12
CAAR ROAD	NYS RTE. 12 TO TOWNLINE	0.51	16
REASONER ROAD	PERCH LAKE ROAD TO CO. RTE 53	1.58	18
REASONER ROAD	FROM REASONER RD (48) TO DEAD END	0.30	12
MILLER ROAD	CO. RTE 53 TO TOWNLINE AT PAMELIA	0.53	12

WHITE ROAD	CO. RTE. 53 TO TOWNLINE AT PAMELIA	0.66	12
BROWN ROAD (CR 53)	BROWNVILLE VILLAGE LINE TO TOWNLINE	1.97	20
BUTT ROAD	NYS RTE. 12E TO END	0.11	12
FETTERLY ROAD	CEMETARY RD. TO DEAD END	0.17	12
GAME FARM RD.	STAR SCHOOLHOUSE RD. TO DEAD END	0.31	12
PARISH ROAD (CR 16)	NYS RTE. 12 TO TOWNLINE	0.42	20
SMITH ROAD	CASE RD. TO NYS ROUTE 12E	1.84	16
COMBS ROAD	FROM RTE. 12 AT STARR SCHOOLHOUSE	0.43	12
*** Total ***		80.82	

ROADWAY FUNCTIONAL CLASSIFICATION
TOWN OF BROWNVILLE PLANNING BOARD
BROWNVILLE, NEW YORK
AUTUMN, 1987

ROAD NAME	SEGMENT DESCRIPTION	FUNCTIONAL CLASIFICATION
CO RTE 59 DOANE RD	DEXTER LINE TO SO SHORE @ RUSTIC	COLLECTOR
CO RTE 59 SO SHORE	RUSTIC TO STONE RD	COLLECTOR
CO RTE 59 SO SHORE	STONE RD TO CHNG IN WIDTH SE SHERWIN BAY	COLLECTOR
CO RTE 59 SO SHORE	CHNG IN WIDTH TO BALDWIN RD	COLLECTOR
BALDWIN ROAD	SO SHORE TO NO SHORE	MINOR
CO RTE 59 NO SHORE	BALDWIN TO BALDWIN	COLLECTOR
MIDDLE RD	S/N SHORE RD TO SO SHORE (C.R.59)	COLLECTOR
MIDDLE ROAD	C.R. 59(DOAN RD) TO B. ADAMS RD.	COLLECTOR
REEVES ROAD	MIDDLE RD TO NORTH SHORE RD	MINOR
CO RTE 59 NO SHORE	BALDWIN RD TO NYS RET 12E	COLLECTOR
STONE ROAD	NO. SHORE TO SO. SHORE	MINOR
TIMMERMAN ROAD	NO. SHORE RD, TO MIDDLE RD.	MINOR
MIDDLE ROAD	PILLAR POINT RD. TO RTE. 12E	COLLECTOR
MOFFAT ROAD	NO. SHORE ROAD TO TOWNLINE	MINOR CONNECTOR
B.ADAMS ROAD	NO. SHORE TO MIDDLE ROAD	MINOR
WEAVER ROAD	NYS RTE 12E TO MORRIS TRACK RD.	MINOR
CASE ROAD	WEAVER ROAD TO TOWN LINE	MINOR
MORRIS TRACK RD(C125	TOWNLINE TO TOWNLINE	COLLECTOR
DEPAUVILLE ROAD	TOWNLINE TO NYS RTE. 180	MINOR CONNECTOR
WITT ROAD	DEPAUVILLE RD TO CASE/RANSN RDS.	MINOR
CASE ROAD	WITT RD TO WEAVER ROAD	MINOR
RANSOM ROAD	WITT ROAD TO NYS RTE. 180	MINOR CONNECTION
ALLEN ROAD	CORTE, 55 TO NYS RTE. 12	MINOR
PERCH RIVER ROAD	CUL-DE-SAC TO NYS RET 180(CO. RT. 55)	MINOR
BROWNVILLE RD.(cr54)	PERCH RIVER RD TO VILLAGE LINE	COLLECTOR
STAR SCHOOLHOUSE RD	NYS RTE 12 TO DEAD END	MINOR CONNECTOR
CEMETARY RD.(CR.53)	DEXTER VILLAGE LINE TO NYS RTE 12E	COLLECTOR
CEMETARY ROAD	NYS RTE 12E TO GAME FARM ROAD	COLLECTOR
GAME FARM ROAD	BROWNVILLE VILLAGE LINE TO MULLIN RD.	MINOR COLLECTOR
MULLIN ROAD	GAME FARM RD. TO CO. RTE 54	MINOR
O'CONNOR ROAD	FROM CO. RTE 54 TO DEAD END	MINOR
PERCH LAKE ROAD	BROWNVILLE VILLAGE LINE TO NYS RTE. 12	COLLECTOR
BONNEY ROAD	PERCH LAKE ROAD TO NYS RTE. 12	MINOR CONNECTOR
STARR SCHOOLHOUSE RD	NYS RTE. 12E TO NYS RTE. 12	DRIVEWAY?
VAADI ROAD	NYS RTE 12 TO TOWN LINE	MINOR
CAAR ROAD	NYS RTE. 12 TO TOWNLINE	MINOR
REASONER ROAD	PERCH LAKE ROAD TO CO. RTE 53	MINOR
REASONER ROAD	FROM REASONER RD (48) TO DEAD END	MINOR(DRIVEWAY?)
MILLER ROAD	CO. RTE 53 TO TOWNLINE AT PAMELIA	MINOR

WHITE ROAD	CO. RTE. 53 TO TOWNLINE AT PAMELIA	MINOR
BROWN ROAD (CR 53)	BROWNVILLE VILLAGE LINE TO TOWNLINE	COLLECTOR
BUTT ROAD	NYS RTE. 12E TO END	MINOR(DRIVEWAY)
FETTERLY ROAD	CEMETARY RD. TO DEAD END	MINOR
GAME FARM RD.	STAR SCHOOLHOUSE RD. TO DEAD END	MINOR
PARISH ROAD (CR 16)	NYS RTE. 12 TO TOWNLINE	COLLECTOR
SMITH ROAD	CASE RD. TO NYS ROUTE 12E	MINOR
COMBS ROAD	FROM RTE. 12 AT STARR SCHOOLHOUSE	DRIVEWAY ?

ROAD NAME	DESCRIPTION	LENGTH	CONDITION
DOANE RD. (CR 59)	DEXTER LINE TO S SHORE	2.59	GOOD
S.SHORE RD. (CR 59)	RUSTIC TO STONE RD.	2.52	FAIR
S.SHORE RD. (CR59)	STONE RD. TO C-I-W	3.49	GOOD
S.SHORE RD. (CR59)	C-I-W TO BALDWIN RD.	6.20	POOR
BALDWIN RD.	S.SHORE TO N.SHORE	1.65	FAIR
N. SHORE (CR59)	BALDWIN TO BALDWIN	3.72	GOOD
MIDDLE RD.	N/S SHORE TO S.SHORE	5.69	GOOD
MIDDLE RD.	DOANE RD. TO B.ADAMS	0.43	GOOD
REEVES RD.	MIDDLE TO N.SHORE	1.38	GOOD
N.SHORE (CR59)	BALDWIN TO RT.12E	6.48	FAIR
STONE RD.	N.SHORE TO S.SHORE	2.95	GOOD
TIMMERMAN RD.	N.SHORE TO MIDDLE	1.17	GOOD
MIDDLE RD.	B.ADAMS TO RT.12E	1.90	GOOD
MOFFAT RD.	N.SHORE TO TOWNLINE	1.39	GOOD
B.ADAMS RD.	N.SHORE TO MIDDLE RD.	1.87	GOOD
WEAVER RD.	RT.12E TO CASE RD.	1.50	GOOD
CASE RD.	WEAVER TO TOWNLINE	0.70	GOOD
MORRIS TRACK RD.	TOWNLINE TO TOWNLINE	1.16	POOR
DEPAUVILLE RD.	TOWNLINE TO RT.180	1.90	GOOD
WITT ROAD	DEPAUVILLE TO CASE/RANSOM	2.03	GOOD
CASE RD.	WITT TO WEAVER	1.00	GOOD
SMITH RD.	CASE TO RT 12E	1.84	GOOD
RANSOM RD.	WITT TO RT 180	1.48	GOOD
ALLEN RD	CR 55 TO RT 12	1.38	GOOD
PERCH RIVER RD.	CUL-DE-SAC TO RT 180	0.92	FAIR
BROWNVILLE RD (CR 54)	PERCH R. TO VILLAGE LINE	4.52	FAIR
STAR SCHOOLHOUSE RD.	RT 12 TO RT 180	0.34	GOOD
CEMETARY RD (CR 53)	DEXTER LINE TO RT 12E	0.80	GOOD
CEMETARY RD.	RT 12E TO GAME FARM RD.	0.45	GOOD
GAME FARM RD.	BROWNVILLE LINE TO MULLIN RD.	1.34	GOOD
MULLIN RD.	GAME FARM TO CR 54	1.69	GOOD
O'CONNOR RD.	FROM CR 54 TO DEAD END	0.45	FAIR
PERCH LAKE RD.	BROWNVILLE LINE TO RT 12	3.62	GOOD
BONNEY RD.	PERCH LAKE TO RT 12	3.36	GOOD
STAR SCHOOLHOUSE RD.	RT 12E TO RT 12	5.25	GOOD
COMBS RD.	FROM RT 12 AT S SCHOOLHOUSE	0.43	FAIR
VAADI RD.	RT 12 TO TOWNLINE	1.25	GOOD
CAAR RD.	RT 12 TO TOWNLINE	0.51	GOOD
REASONER RD.	PERCH LAKE TO CR 53	1.58	GOOD
REASONER RD.	FROM REASONER RD. TO DEAD END	0.30	GOOD
MILLER RD.	CR 53 TO TOWNLINE	0.53	GOOD
WHITE RD.	CR 53 TO TOWNLINE	0.66	GOOD
MILITARY RD.	BROWNVILLE LINE TO TOWNLINE	1.97	GOOD
BUTT RD.	RT. 12E TO END	0.11	GOOD
FETTERLY RD.	CEMETARY RD TO DEAD END	0.17	GOOD
GAME FARM RD.	STAR SCHOOLHOUSE TO DEAD END	0.31	GOOD
PARISH RD (CR 16)	RT 12 TO TOWNLINE	0.42	GOOD
		87.4	