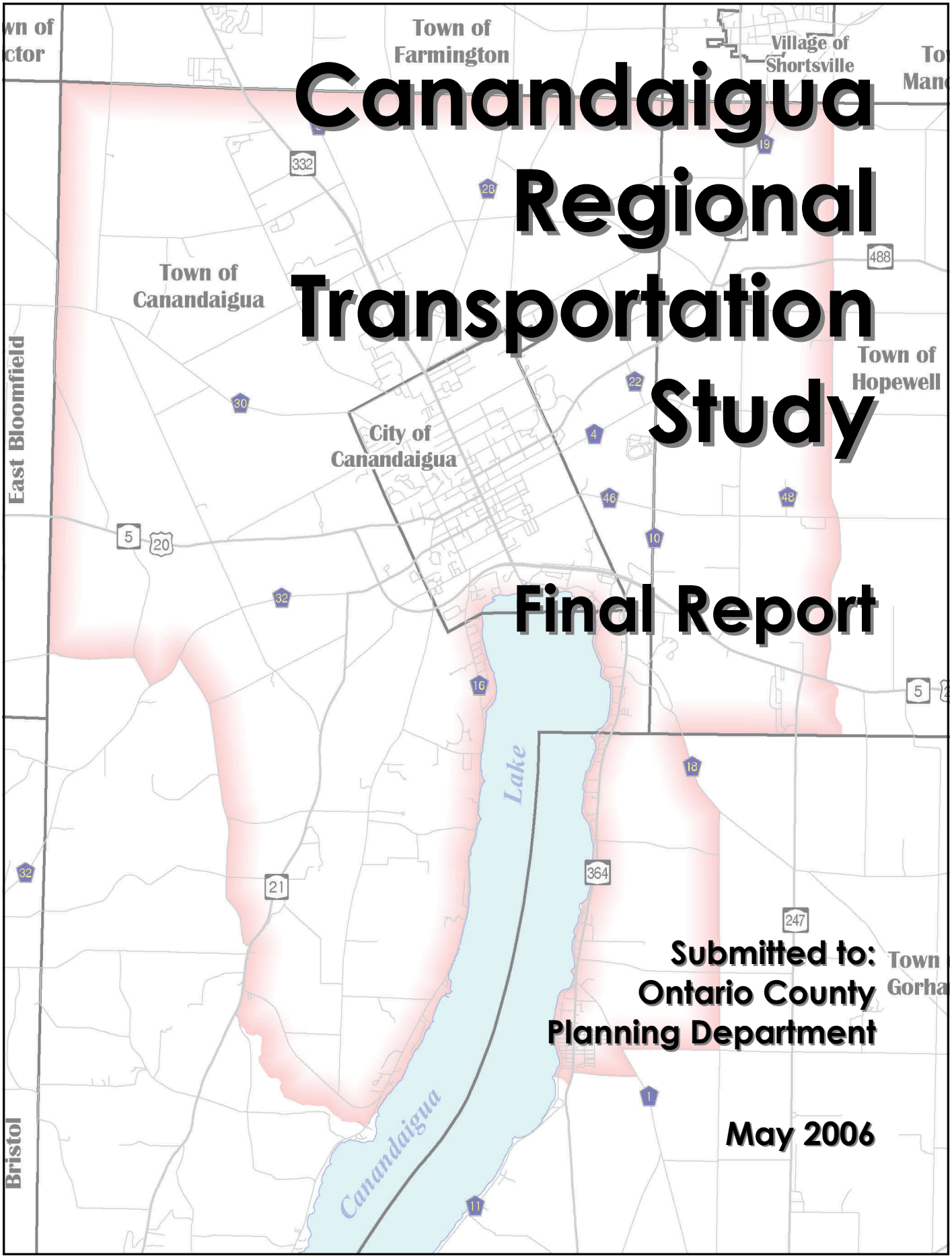

Canandaigua Regional Transportation Study

Final Report

Submitted to:
Ontario County
Planning Department

May 2006

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EXECUTIVE SUMMARY

The Canandaigua Regional Transportation Study focuses on the regional transportation conditions and needs of the northwestern portion of the County, including the City of Canandaigua, large portions of the Town of Canandaigua, the western portion of the Town of Hopewell, and the northwestern portion of the Town of Gorham. This is collectively defined as the Greater Canandaigua Area for the purposes of this Study.

STUDY PURPOSE

Ontario County, in cooperation with the City of Canandaigua, the Towns of Canandaigua and Hopewell, the NYS Department of Transportation and the Genesee Transportation Council, conducted an extensive evaluation of transportation needs in the Canandaigua Region. This effort identified improvements to the regional transportation system that are needed to adequately manage existing and future economic and land use development, as well as associated traffic safety concerns.

The Canandaigua region is growing in popularity as a place to live, visit and do business. The area's cultural resources, the appeal of the City's traditional Main Street, and the presence of natural and scenic resources are attracting increasing numbers of residents, visitors and employers. The greater Canandaigua area is also effectively connected to major employment centers within the County (e.g. Victor) and outside the County (e.g. City of Rochester and Monroe County). The region is conveniently served by Thruway Exits 46 and 47 as well as SR 332 and SR 21, which are major north-south thoroughfares.

Growth in employment, high quality schools, lower land costs, and convenience to shopping and employment centers have moved Northwest Ontario County to the forefront of development in the Greater Rochester Area. While substantial residential and commercial growth has been concentrated in the Town Victor, the greater Canandaigua area has also experienced increased demand over the last five to ten years. Development pressure is expected to increase in the study area over the next decade.

The Canandaigua Regional Transportation Study examines the transportation impacts and needs related to anticipated future growth. The Study examines issues related to transportation, land use, and economic development and proposes goals and objectives to guide future policy and capital investment within the region.

The Study sought input from stakeholders, community leaders, local experts and the community at large, helping to ensure that the process and products were based on a local knowledge base of the transportation issues at hand. An existing conditions assessment was completed that included an evaluation of current transportation system operation and safety. In addition, the Report assesses current natural, demographic and land use conditions within the study area. An economic analysis was also conducted to determine commercial and industrial development potential. This information provides an understanding of how future growth can impact the transportation system.

Summary of Findings

Eight projects were identified as priorities for future improvements to the road network in the region. Based on existing and projected levels of service and Annual Average Daily Traffic (AADT) counts, enhancements at these locations are needed to ensure the effective functioning of the area's transportation system. Additionally, the Study recommends specific improvements to the public transit system, the regional trail system, and pedestrian safety. The details of these improvements are addressed in Section 6 of this Report.

The analysis conducted as part of this Study determined that a bypass around the City of Canandaigua is neither necessary or appropriate in the next 5-10 years. According to the model developed for this Study, the anticipated increases in traffic congestion are more effectively addressed by other intermediate improvements identified by this Report. However, future examination of the need for a bypass is suggested as a long-term recommendation, and should be considered again if significant growth occurs beyond the projections provided in this Study.

The Report includes several improvements for the City of Canandaigua Central Business District which will enhance pedestrian safety. These improvements align with the economic, social, and community safety goals of the County and local municipalities.

SECTION 1—INTRODUCTION AND OVERVIEW

1.1 PROJECT BACKGROUND

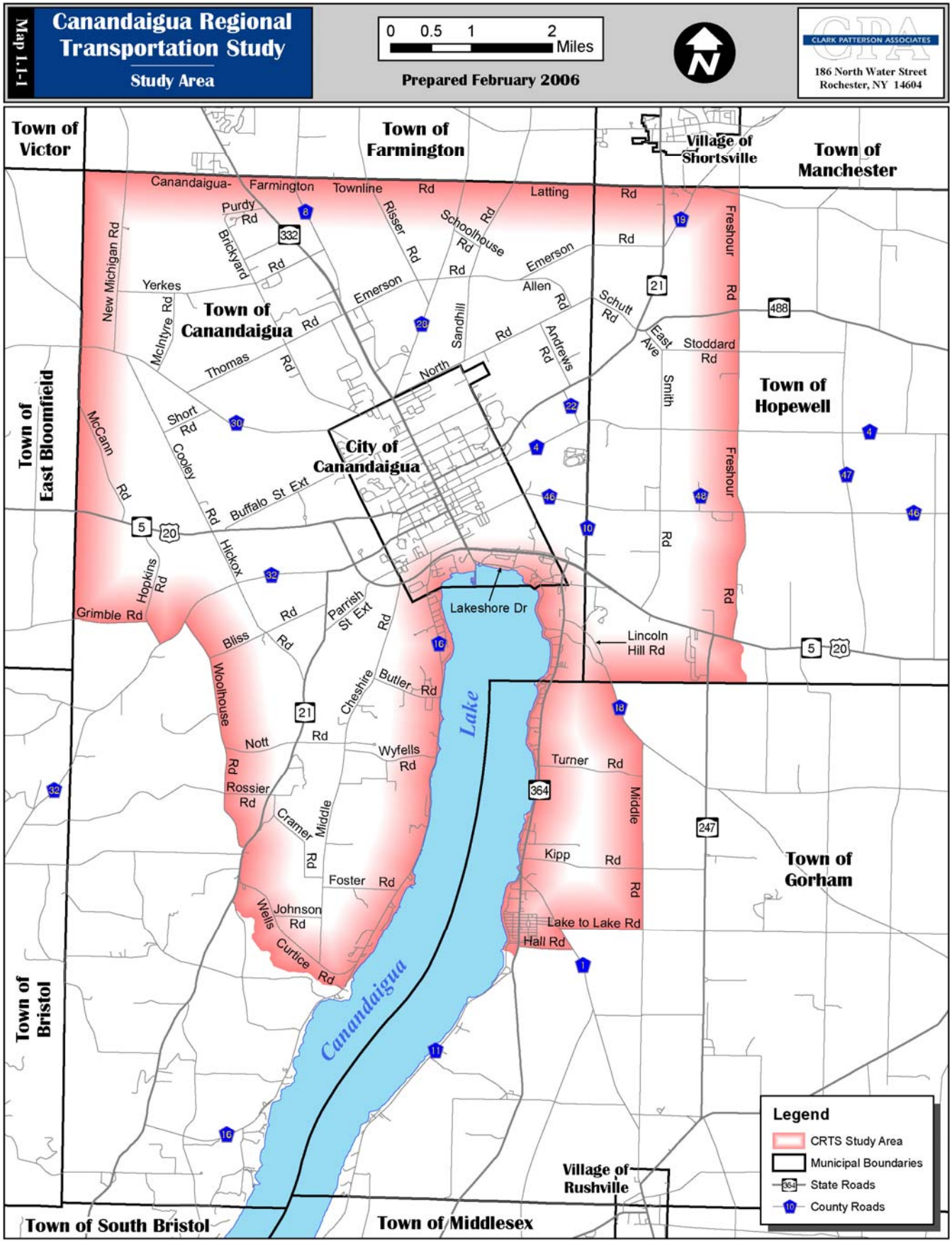
Growth in employment, high quality schools, lower land costs, and convenience to shopping and employment centers have moved Northwest Ontario County to the forefront of development in the Greater Rochester Area. While the majority of development has occurred in the Town of Victor, other municipalities in Northwest Ontario County including the Towns of Canandaigua, Farmington, Hopewell, and Gorham and the City of Canandaigua have also seen relatively strong residential growth. Development pressure is expected to increase in each of the municipalities as Victor continues to build out. Moreover, the increased capacity of SR 332 which was recently widened from two lanes to four lanes, decreasing travel times significantly, is expected to increase the rate of growth in the study area over the next several years.

With expected increases in development, operational impacts to the capacity of the region's transportation system are likely to occur. For this reason, Ontario County, Genesee Transportation Council (GTC), the New York State Department of Transportation, the City of Canandaigua, and the Towns of Canandaigua and Hopewell determined the need for a regional transportation study that will identify recommended future enhancements to the existing system. Map 1.1-1 contains a map of the study area.

The study area consists of the City of Canandaigua and portions of the Towns of Canandaigua, Hopewell, and Gorham. It should be noted that, although not officially part of the study area, towns such as Victor, Farmington, East Bloomfield, and Manchester are frequently mentioned throughout this Study as they are impacted by the transportation issues in the region.

The study area is dynamic and growing. Consider the following:

- Development along Routes 5&20 and SR 332 continues, such as the Tops on SR 332 and Lowes on Routes 5&20, bolstering the local economy and lessening the area's dependence on outside commercial centers;
- Presence and future expansion of the Finger Lakes Performing Arts Center (FLPAC) and the Finger Lakes Community College (FLCC);
- Existence of significant tourism base with presence of Canandaigua Lake and the role of this area as a gateway to the Finger Lakes Region;
- Relatively short commute times to major employment centers in the Greater Rochester area and Canandaigua region; and
- Availability of sewer and water infrastructure.


Map 1.1-1
Canandaigua Regional Transportation Study
Study Area
0 0.5 1 2 Miles
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of East Bloomfield
Town of Canandaigua
City of Canandaigua
Town of Hopewell
Town of Gorham
Town of Bristol
Town of South Bristol
Town of Middlesex
Village of Rushville
Lake
Canandaigua
Lakeshore Dr
Lincoln Hill Rd
Canandaigua-Farmington Townline Rd
Latting Rd
Purdy Rd
Brickyard Rd
Risser Rd
Schoolhouse Rd
Emerson Rd
Allen Rd
Schutt Rd
Freshour Rd
Stoddard Rd
East Ave
Smith Rd
Andrews Rd
Sandhill Rd
North Rd
Thomas Rd
McIntyre Rd
New Michigan Rd
Yerkes
Short Rd
McCann Rd
Cooley Rd
Buffalo St Ext
Hickox Rd
Hopkins Rd
Grimble Rd
Bliss Rd
Parrish St Ext Rd
Woolhouse Rd
Cheshire
Butler Rd
Nott Rd
Wyfells Rd
Rossier Rd
Cramer Rd
Middle Rd
Foster Rd
Johnson Rd
Wells Rd
Curtice Rd
Turner Rd
Kipp Rd
Lake to Lake Rd
Hall Rd
Legend
CRTS Study Area
Municipal Boundaries
State Roads
County Roads

Given the current and forecasted increase in development, Ontario County will benefit from proactive regional planning approaches to address the impacts of growth in the area. Although focused on transportation improvements, this Study provides the community with an opportunity to consider a range of factors directly tied to transportation, such as land use, infrastructure and economic development.

The Canandaigua Regional Transportation Study (CRTS) was designed to consider these interrelated elements, allowing the County and involved stakeholders to identify transportation improvements that will:

- Reduce traffic congestion;
- Improve safety for motorists and pedestrians;
- Enhance and maximize economic development opportunities;
- Preserve critical natural and agricultural resources;
- Support local tourism; and
- Maximize the effectiveness and responsiveness of future capital investments.

1.2 PLANNING PROCESS

The CRTS planning process was designed to provide:

- Comprehensive data collection and analysis;
- Direct input from key stakeholders and community members; and
- Feasible, recommended improvement projects.

The process included the following major components:

Identification of Key Issues and Study Goals & Objectives—Key issues, which were identified through Steering Committee input, stakeholder interviews and focus group meetings, serve as the basis for the goals and objectives outlined for the Study Area.

Existing Conditions Analysis—data related to transportation system operations, land use, development, economic development, demographic trends and natural features were collected and analyzed. This information serves as a basis and a reality-check for the recommendations developed through the Study.

Buildout Analysis—Transportation planning depends on understanding and predicting, to the extent possible, the future growth and development in an area. This analysis examined the potential for development in the communities within the study area and identified Transportation Analysis Zone (TAZ)-based development projections.

Development of Transportation Alternatives—Based on the regional transportation model used by the Genesee Transportation Council, alternatives for transportation improvements, including roadway re-configurations and alternative routing were examined.

Evaluation of Transportation Alternatives—Each alternative was evaluated based on the costs and benefits associated with the corresponding improvement projects to determine which improvements should be advanced.

Prioritized Recommendations & Projects—A prioritized list of transportation projects and recommendations were developed based on the findings of the previous steps of the planning process.

Identification of Implementation Actions—An implementation plan was created that outlines the near-, medium– and long-term transportation improvements and projects that should be undertaken in the study area.

1.3 PUBLIC PARTICIPATION OVERVIEW

The public participation process was designed to ensure that all relevant perspectives were addressed in the data collection and the recommendation development stages. Input and feedback from local leaders, technical experts and community members at-large were critical to ensure thoughtful consideration of the issues, thorough analysis of the data and workable solutions for future transportation and programmatic improvements.

A. Steering Committee

A Steering Committee was formed to oversee the planning process and guide the design team throughout the project. The CRTS Steering Committee, comprised of representatives from the Ontario County Planning Department, the Towns of Canandaigua and Hopewell, the City of Canandaigua, the NYSDOT Region 4, and the Genesee Transportation Council, provided information, insights, feedback and guidance at each stage of the Study's development.

The Steering Committee was instrumental in identifying the full range of transportation system issues present in the study area. The wide range of representation and expertise ensure that the analysis of the transportation system, regional land use and development trends, and economic development needs could be adequately addressed by the group.

B. Stakeholder Interviews

A series of stakeholder interviews were conducted to gather pertinent information about the area's transportation, safety, and economic conditions. These informal discussions with local "experts" provided a level of insight and understanding that supplements the information gathered from the Steering Committee. Ultimately, this information is reflected in the findings and observations contained in the Existing Conditions portion of the Report (Section 3). A summary of these meetings is included in Appendix A.

C. Focus Group Meetings

The study focused on information gathering that would address key issues related to current transportation system function and future development areas. To provide a more formal forum for information sharing and qualitative data gathering, three focus groups were convened. The information gathered from each focus group was used to estimate future development potential, guide future safety improvements and determine enhancements to maintain and improve operations.

Economic Development & Tourism
Participants brainstormed the strengths, weaknesses, opportunities and threats of the transportation system and study area as they pertained to economic development and tourism. In addition, the group responded to a written survey in which they were asked to rate 23 "economic factors" with 10 being the highest score. The top five factors, based on average rating, were quality of life, business retention, job development, tourism travel/access, and highway access. Other highly rated factors included recreational opportunities and attraction of new businesses.

Land Use, Development and Infrastructure
Participants in this focus group were asked to address four key questions in a roundtable discussion setting. The questions related to the location of current development activity in the study area, the adequacy of the current transportation network, and preservation of farmland and agriculture (e.g. places where development should be avoided).

Emergency Services
Representatives from local emergency service agencies provided valuable information about current emergency response resources within the study area and surrounding region. The group examined the transportation network in terms of the critical impact it has on the provision of emergency services related to access by emergency

vehicles and adequate response times that allow emergency professionals to service the public within safe timeframes. In addition, they outlined emergency service hot spots, both for emergency care and transport needs, and identified priority improvements that would enhance emergency services response in the area.

Each focus group consisted of local representatives from businesses, state and local municipalities and organizations with first-hand knowledge of the topics at hand. The issues identified are included in the Key Issues sub-section that follows. Detailed summaries of the focus group meetings are contained in Appendix A of this Report.

Public Hearing—This section will be added once the public hearing has been conducted.

1.4 KEY ISSUES IDENTIFIED

The following issues were identified from input received during the information gathering phase of the project. The critical issues and areas of interest were defined in the early stages of the CRTS process, which set the stage for the goals, objectives and recommendations outlined in the Study.

A. Transportation

- The quality of the pedestrian experience and safety on Main Street in the City of Canandaigua is not optimal. The width of Main Street (7 lanes) and the amount of through traffic make crossing difficult.
- Congestion and traffic are relative. There is an element of perception (based on local experience and expectations) that must be addressed.
- Engineering standards regarding capacity and levels of service may differ from the motorists' idea of well functioning roadways.
- Through-town travel is increasing the pressure on the current transportation system. The study area is a "passing through" point for an increasing number of commuters.
- Informal bypass routes on local roads in the Towns of Canandaigua and Hopewell are used by travelers trying to avoid Main Street in the City of Canandaigua.
- Any proposed road improvement and reconstruction projects should consider the use of mountable curbs (to avoid problems experienced on Lakeshore Drive).
- In almost every public input forum, specific intersections were identified as needing improvements. Some examples included the intersections at SR 332 and North St., Parrish St. and Main St., and Parrish St. and West Lake Drive.

Additionally, the intersection of CR 10 and Routes 5&20 require site design improvement to improve safety and roadway function. Left turn lanes were perceived as necessary on 332 south at Fort Hill and Chapel Streets.

- There is also a perceived need for a truck bypass to re-route truck traffic away from Main Street in Downtown Canandaigua.
- Continue to develop access roads to connect parcels along SR 332 and Routes 5&20 to minimize use and congestion of these arterial roadways.

B. Land Use, Development and Infrastructure

- Preservation of farmland and agriculture should be an important consideration for future transportation improvements.
- Need to ensure that roadways can adequately accommodate equipment and automobiles.
- Increase in residential development is anticipated, especially in the Town of Canandaigua. This will impact capacity and function of local roads.
- Airport expansion, to extend the runway to 5,500 feet, will result in the dissection of Thomas Road.
- The redesign of SR 332, with raised median**,** controls development patterns and encourages access management techniques.
- Expansion of existing commercial areas, such as Routes 5&20 and 332, as well as improvements to the Finger Lakes Performing Arts Center and the Finger Lakes Community College will generate increase daily travel.

C. Economic Development and Tourism

- The presence of four I-90 interchanges in Ontario County is critical to future economic development initiatives within the study area. Preservation and enhancement of highway access is a priority concern for this area.
- Tourism travel/access was identified as one of the top five economic factors in the Economic Development focus group. The county's economy depends on a thriving tourism industry. Tourism attracts a lot of travelers, largely motorists, to the study area.
- The expansion of the airport is likely to enhance business development/ expansion throughout the study area.
- Public transit system, County Area Transportation System (CATS) is available and able to move people to and from .
- Redevelopment (industrial) around the airport is possible upon completion of the runway expansion.
- The City of Canandaigua should be viewed as a destination, not just a pass through point.

SECTION 2—STUDY AREA GOALS

A series of meetings with the Steering Committee, focus groups, stakeholders, and the general public were used to define specific goals and objectives related to transportation issues within the study area. These goals and objectives are intended to guide the development of alternatives and recommendations for the County and municipalities. Goals and objectives that were viewed as important for guiding the transportation recommendations in this study are provided below. A complete list of all goals and objectives that should be considered for potential follow-up or future activities is contained in Appendix A.

2.1 TRANSPORTATION

A. Goal: Improve operation efficiency and safety at critical intersections within the study area.

Objectives

- Develop prioritized list of intersections requiring the addition of turning lane(s).
- Ensure adequate storage bays for left turn lanes throughout the study area.

B. Goal: Determine the need for a bypass system on the east, west or both sides of the City to reduce congestion on Main Street.

Objectives

- Prioritize roadway improvements needed to accommodate future bypasses or alternative routing (road width, weight rating, etc.).
- Identify signage needs for alterative routes for trucks and "pass through" traffic to control volumes through Main Street.
- If a bypass is deemed necessary, complete a preliminary engineering report to better define costs, feasibility and potential support and financing from state and federal agencies.

C. Goal: Improve pedestrian access and facilities within the study area.

Objectives

- Enforce speed limits as a way of improving pedestrian safety.
- Consider installation of traffic calming techniques, both physical and programmatic, in the core Main Street area and other locations with high pedestrian activity.

- Reroute non-destination and/or truck traffic away from Main Street.

D. Goal: Enhance roadway corridors to address the specific needs and functions based on existing and future user groups.

Objectives

- Increase driveway spacing standards to provide adequate site distance, response times and stacking space.
- Utilize speed limit to determine minimum spacing between driveways.
- Establish and/or enhance site design standards that address driveway throat length and design, on-site circulation, pedestrian access, cross and shared access, and landscaping buffering where necessary to improve the efficiency and safety of adjacent roadways.
- Consider widening shoulders and roads, re-striping and other measures to enhance pedestrian and bicycle access throughout the study area.
- Address specific road improvements needed to accommodate increased truck and vehicular traffic in areas of existing and proposed commercial, industrial and civic use (e.g. government facilities) development.
- Identify enhancements to County roads that would improve access and road-sharing for farming equipment in areas dominated by agricultural uses.

E. Goal: Enhance linkages among multi-modal transportation options within the study area.

Objectives

- Monitor availability and condition of sidewalks, trails and other pedestrian facilities to ensure adequate and appropriate pedestrian access in the study area.
- Explore ways to expand access to public transit (e.g. CATS) including the establishment of additional park and ride areas.
- Identify roadway improvements to support bicycle access throughout the region.
- Identify opportunities to enhance small aircraft service upon completion of the runway extension project, such as private charters, business use, etc.).

F. Goal: Enhance existing service and expand access to the public transit system.

Objectives

- Pursue the recommendations identified in the CATS Report (*Linking People to the Workplace*, 2003, pages 25 to 26).
- Identify opportunities for multi-modal partnerships (park and ride).
- Examine feasibility of commuter service to other major employment hubs in the immediate region and beyond.

2.2 Land Use, Development and Infrastructure

A. Goal: Support future land use goals of individual municipalities.

Objectives

- Give high priority to transportation improvement projects that address multiple land use and development goals, especially across municipal boundary lines.
- Implement zoning changes at the municipal level that support transportation and land use recommendations identified within this Study.
- Encourage development and infrastructure improvements that protect valuable agricultural lands and open space.
- Concentrate commercial and industrial development where adequate infrastructure is located.

B. Goal: Improve pedestrian safety within the Main Street corridor.

Objectives

- Examine opportunities for using traffic calming devices to improve pedestrian safety.
- Enhance the quality of life along Main Street for pedestrian scaled activities that will bolster businesses.
- Improve amenities for bicyclists in the corridor.
- Reduce truck traffic along the Main Street corridor, especially during periods when pedestrian activity peaks.

2.3 ECONOMIC DEVELOPMENT

A. Goal: Enhance transportation system to accommodate existing and future tourism activity.

Objectives

- Improve access to regional destinations such as FLPAC, the NYS Wine and Culinary Institute, etc., as well as to public parking and alternative routes to improve access and enhance the traveling experience for visitors to the area.
- Improve gateway features at key regional entryways, especially at the northern and southern City limits on SR 332.

B. Goal: Enhance transportation system to encourage and accommodate commercial and industrial development along the SR 332 corridor.

Objectives

- Complete an additional analysis to determine the feasibility and potential location for future traffic lights and median breaks that may be needed to accommodate development adjacent to the corridor. This would be based upon the future land use and growth projections outlined in this Study.

C. Goal: Explore multi-modal approaches for advancing economic development priorities.

Objectives

- Identify ways to enhance and expand park and ride opportunities within the study area to provide public transportation access to the labor market.

SECTION 3—EXISTING CONDITIONS

3.1 TRANSPORTATION CONDITIONS

A. Area Roadways

The CRTS study area is bounded by the towns of Farmington and Manchester to the north and the Town of East Bloomfield to the west. Freshour Road in the Town of Hopewell and Lincoln Hill Road and Middle Road in the Town of Gorham delineate the eastern boundary. The southern boundary on the east side of Canandaigua Lake is Lake-to-Lake Road and Hall Road, and the southern boundary on the west side of the lake is just south of Wells Curtice Road.

The heart of the region is the City of Canandaigua and as such, the road network serves to move goods and services to and from the city resulting in a radiant pattern emanating from the city center. The area encompasses five state roads and nine county roads. The functional classification of each of these roadways is summarized in Table 3.1-1.

State Roads
The major east-west route is Routes 5&20. Motorists traveling from points north-northwest, such as Monroe County and its outlying areas, such as Victor and the New York State Thruway, are serviced by SR 332. In a southerly direction, motorists use SR 364 on the east side of the lake and SR 21 on the west side. SR 21 follows a general southwest—northeast direction servicing traffic to and from Wayne County to the north(east), Livingston County to the south, Steuben County to the south and Yates County to the east. SR 488 is located in the northeast quadrant of the study area and services points east, north of Routes 5&20.

County Roads
There are eleven county roads within the study area, eight of which are functionally significant and will be described using the City of Canandaigua as a reference point.

Northbound
- CR 8 originates at SR 332 and connects to SR 31 in the Town of Macedon west of the village of Macedon
- CR 28 also originates at 332 at the confluence of North St. and North Rd. and connects to SR 31 east of the village of Macedon
- CR 10 connects CR 4 to Routes 5&20

Eastbound
- CR 4 is a continuation of Ontario Street and connects the city of Canandaigua and the city of Geneva.

- CR 46 is the extension of Saltonstall Street and intersects with CR 10 and ends at CR 47

Southbound

- CR 16 travels the length of the study area along the west side of the lake, eventually joining with SR 21

Southwestbound

- CR 32 services the Town of Bristol and connects to the north-south SR 64

Westbound

- CR 30 originates from Buffalo Road in the city of Canandaigua and connects to the Village of Bloomfield.

TABLE 3.1-1
STATE AND COUNTY ROAD CLASSIFICATIONS

JURISDICTION	ROUTE NUMBER	FUNCTIONAL CLASS	GENERAL DIRECTION
NYS	**332**	*rural principal arterial - outside city limits*	NW - SE
		urban principal arterial - within Canandaigua City limits	
NYS	**5&20**	*rural principal arterial - from west to West Ave*	E -W
		urban principal arterial expressway - from West Ave to SR 332	
		urban principal arterial - from SR 332 to west of Smith Rd	
		rural principal arterial - to eastern boundary of study area	
NYS	**21**	*rural major collector - from the south to Routes 5&20*	N - S
		urban principal arterial expressway - as overlapping with Routes 5&20	E-W
		urban principal arterial - as overlapping with SR 332	NW - SE
		urban minor arterial - from 332 for ~ 1.5 mi	NE - SW
		rural minor arterial - heading NE toward Manchester	
NYS	**364**	*rural major collector - to Canandaigua Town Line*	N - S
		urban collector - from Canandaigua Town Line to Routes 5&20	
NYS	**488**	*rural major collector - within study area*	E -W
County	**4**	*rural minor collector*	E -W
County	**8**	*rural major collector- urban collector- rural major collector*	N - S
County	**10**	*rural major collector*	N - S
County	**16**	*rural minor collector*	N - S
County	**28**	*rural minor collector*	N - S
County	**30**	*rural minor collector*	E -W
County	**32**	*rural minor collector*	NE - SW
County	**46**	*rural minor collector*	E -W

B. Existing Traffic Volumes

Average Annual Daily Traffic (AADT) information was obtained from the NYSDOT 2002 Traffic Volume Report and count data collected by the Ontario County Planning Department. The AADT information for the roadway segments, in which no AADT data was available, was calculated using evening peak turning movement counts. AADT is equal to the evening peak count multiplied by 10. The data is summarized in Table 3.1-2.

TABLE 3.1-2
SUMMARY OF AADT INFORMATION
EXISTING CONDITIONS (2002)

SEGMENT	EXISTING
SR 332: Routes 5&20 to Canandaigua City Line	30,272
SR 332: Canandaigua City Line to Canandaigua-Farmington Townline Road	20,500
Routes 5&20: Cooley Road to West Ave	8,900
Routes 5&20: West Ave to SR 21	7,900
Routes 5&20: SR 21 to SR 332	11,208
Routes 5&20: SR 332 to SR 364	23,558
Routes 5&20: SR 364 to CR 10	12,000
Routes 5&20: CR 10 to Smith Road	12,000
Routes 5&20: Smith Road to Freshour Road	12,000
SR 21: CR 32 to Routes 5&20 Overlap	5,050
SR 21: SR 332 Overlap to Canandaigua City Line	10,000
SR 21: Canandaigua City Line to SR 488	8,475
SR 364: Canandaigua-Gorham Townline Road to Routes 5&20	4,176
CR 4: SR 332 to Canandaigua City Line	7,610*
CR 4: Canandaigua City Line to CR 10	7,610*
CR 4: CR 10 to Freshour Road	7,610*
CR 46: SR 332 to Canandaigua City Line	5,988
CR 46: Canandaigua City Line to CR 10	5,988
CR 46: CR 10 to Freshour Road	5,988
CR 10: Routes 5&20 to CR 46	9,968
CR 10: CR 46 to CR 4	6,926

* Note: No AADT information available. Assume AADT is 10 times PM Peak.

The AADT volumes indicate that the most heavily traveled streets are SR 332 and Routes 5&20. These are the primary north/south (SR 332) and east/west (Routes 5&20) arterials through the project area.

The overall percent of heavy vehicles was obtained from the NYSDOT 2002 Highway Sufficiency Ratings for NYSDOT controlled roadway segments and is presented in Table 3.1-3.

TABLE 3.1-3
PERCENT HEAVY VEHICLES
NYSDOT CONTROLLED ROADWAY SEGMENTS (2002)

SEGMENT	% HEAVY VEHICLES
SR 332: Routes 5&20 to North Canandaigua City Line	7%
SR 332: Canandaigua City Line to Canandaigua-Farmington Townline Road	15%
Routes 5&20: Cooley Road to West Ave	6%
Routes 5&20: West Ave to SR 332	8%
Routes 5&20: SR 332 to Smith Road	7%
Routes 5&20: Smith Road to Freshour Road	15%
SR 21: CR 32 to Routes 5&20 Overlap	6%
SR 21: SR 332 Overlap to RM 21 4405 3004	5%
SR 21: RM 21 4405 3004 to SR 488	7%
SR 364: Canandaigua-Gorham Townline Road to Routes 5&20	3%

C. Existing Traffic Operations—Level of Service

In an effort to quantify transportation conditions and maximize resources, detailed intersection analysis was limited to a finite, manageable number. Key intersections, which were identified as choke points of all major travel routes throughout the study area, were analyzed in detail. Vehicle turning movement counts for these intersections were conducted for the weekday evening peak period, 4:00 PM – 6:00 PM. These counts were divided into two groups based on the location of the intersections.

The first group of intersections were located in the eastern half of the study area (east of SR 332). These counts were conducted in April 2004 to include traffic from the Finger Lakes Community College (FLCC). The following is a list of these intersections:

- North Road and Allen Road
- SR 21 and CR 22 / Andrews Road
- SR 21 and SR 488 / Schutt Road
- Routes 5&20 and SR 364
- Routes 5&20 and CR 10
- Routes 5&20 and Smith Road
- Routes 5&20 and Freshour Road

The second group, located in the western half of the study area (SR 332 & west), carry large amounts of tourist traffic during the summer because of Canandaigua Lake and other regional attractions. These counts were conducted in June 2004 to capture summer tourist traffic. Additionally, these volumes were factored upward for peak summer conditions using seasonal adjustment factors from the NYSDOT 2002 Traffic Volume Report. The following is a list of these intersections:

1. SR 332 and Canandaigua-Farmington Townline Road
2. SR 332 and CR 4 / West Avenue
3. SR 332 and Routes 5&20
4. Buffalo Road and Pearl Street
5. Parish Street and Pearl Street / West Lake Drive
6. Routes 5&20 and SR 21 diverge
7. SR 21 and CR 32
8. Routes 5&20 and Cooley Road

In addition to the intersections where data was collected in 2004, six key intersections within the study area were identified by the Steering Committee for inclusion in the study. Traffic volumes for these intersections were obtained from recent studies in the project area. These intersections are as follow:

1. SR 332 and North Road
2. CR 4 and CR 22
3. CR 4 and CR 10
4. CR 46 and CR 10
5. CR 46 and Smith Road
6. CR 46 and Freshour Road

The existing turning movement volumes for the key study intersections are presented in Appendix B.

A capacity analysis was conducted for each of the key intersections within the study area to establish the existing and future Levels of Service (LOS). The capacity analysis was completed using Synchro 6.0. This version produced a capacity analysis output compatible with the 2000 version of the NYSDOT Highway Capacity Manual. Table 3.1-4 presents the LOS and delay for each intersection during the PM peak period for existing conditions.

TABLE 3.1-4
EXISTING LEVEL OF SERVICE SUMMARY (2004)

Intersection Name		S/U	Existing Delay	Existing LOS
North Rd & Allen Rd		U		
EB	LT		0.9	A
SB	LR		9.8	A
SR 21 & CR 22		U		
WB	LT		4.7	A
NB	LR		14.3	B
SR 21 & Andrews Rd		U		
EB	LT		2.5	A
SB	LR		12.1	B
SR 21 & SR 488 / Schutt Rd		U		
EB	LTR		38.9	E
WB	LTR		46.8	E
NB	LTR		0.3	A
SB	LTR		1.8	A
Routes 5&20 & SR 364		S		
EB	L		10.6	B
	T		17.4	B
	R		6.6	A
WB	L		10.3	B
	T		18.3	B
	R		2.2	A
NB	L		33.3	C
	LTR		32.1	C
SB	L		32.0	C
	TR		33.0	C
	Overall		**18.6**	**B**
Routes 5&20 & CR 10		S		
EB	L		21.4	C
	TR		2.8	A
WB	L		17.6	B
	TR		22.4	C
NB	L		17.3	B
	TR		18.1	B
SB	L		20.6	C
	T		18.2	B
	R		18.1	B
	Overall		**16.9**	**B**
Routes 5&20 & Smith Rd		U		
EB	LT		0.7	A
SB	LR		18.5	C
Routes 5&20 & Freshour Rd		U		
EB	LTR		1.9	A
NB	LTR		33.2	D
SB	LTR		16.9	C
CR 4 & CR 22		U		
EB	LT		1.6	A
SB	LR		241.7	F

TABLE 3.1-4
EXISTING LEVEL OF SERVICE SUMMARY (CONTINUED)

Intersection Name		S/U	Existing	
			Delay	LOS
CR 4 & CR 10		U		
WB	LT		3.5	A
NB	LR		526.9	F
CR 46 & CR 10		U		
EB	LTR		16.1	C
WB	LTR		17.6	C
NB	LTR		153.3	F
SB	LTR		80.6	F
	Overall		**95.7**	**F**
CR 46 & Smith Rd		U		
EB	LTR		0.9	A
WB	LTR		0.4	A
NB	LTR		11.8	B
SB	LTR		11.9	B
CR 46 & Freshour Rd		U		
EB	LTR		2.8	A
NB	LTR		11.9	B
SB	LTR		11.1	B
Canandaigua-Farmington Townline Rd & SR 332		S		
EB	L		53.9	D
	TR		50.9	D
WB	L		49.4	D
	TR		49.6	D
NB	L		12.9	B
	TR		3.5	A
SB	L		3.8	A
	TR		4.6	A
	Overall		**6.8**	**A**
North Rd & SR 332		S		
EB	L		30.5	C
	T		29.9	C
	R		28.2	C
WB	L		39.3	D
	TR		29.6	C
NB	L		8.7	A
	TR		16.4	B
SB	L		13.4	B
	TR		12.1	B
	Overall		**17.0**	**B**

S – Signal controlled intersection
U – Stop sign controlled intersection
**: Delay is incalculable

TABLE 3.1-4
LEVEL OF SERVICE SUMMARY (CONTINUED)

Intersection Name		S/U	Existing	
			Delay	LOS
Ontario Street & SR 332				
EB	L		20.9	C
	TR		22.0	C
WB	L		37.5	D
	TR		20.7	C
NB	L		13.1	B
	T		46.0	D
	R		11.6	B
SB	L		15.8	B
	T		24.0	C
	R		10.0	B
	Overall		**31.7**	**C**
Routes 5&20 & SR 332		S		
EB	L		73.2	E
	TR		65.3	E
WB	L		73.3	E
	T		51.1	D
	R		18.0	B
NB	L		41.8	D
	TR		43.5	D
SB	L		79.5	E
	T		54.4	D
	R		33.7	C
	Overall		**53.4**	**D**
Buffalo Road & Pearl St		U		
WB	LT		4.1	a
NB	LR		26.1	d
Parish Street & West Lake Drive		S		
EB	TR		0.4	A
WB	TL		26.6	C
NB	L		28.1	C
	R		27.2	C
	Overall		**16.6**	**B**
Parish Street & Pearl St		S		
EB	TL		13.5	B
WB	TR		0.1	A
SB	L		30.5	C
	R		24.7	C
	Overall		**13.3**	**B**

S – Signal controlled intersection
U – Stop sign controlled intersection
**: Delay is incalculable

TABLE 3.1-4
EXISTING LEVEL OF SERVICE SUMMARY (CONTINUED)

Intersection Name		S/U	Existing	
			Delay	LOS
SR 21 & Routes 5&20		S		
EB	LTR		13.9	B
WB	LTR		16.6	B
NB	L		10.2	B
	TR		6.3	A
SB	L		5.8	A
	TR		8.4	A
	Overall		**10.4**	**B**
CR 32 & SR 21		U		
WB	LT		3.8	A
NB	LR		10.1	B
Routes 5&20 & Cooley Road		U		
EB	LTR		0.3	A
WB	LTR		1.1	A
NB	LTR		35.6	E
SB	LTR		276.4	F

S – Signal controlled intersection
U – Stop sign controlled intersection
**: Delay is incalculable

Under existing conditions all movements at all key intersections operate at acceptable LOS except for the following:

SR 21 / SR 488 & Schutt Road:	EB LTR – LOS E: 38.9 seconds delay WB LTR – LOS E: 46.8 seconds delay
CR 4 / CR 22:	SB LR – LOS F: 241.7 seconds delay
CR 4 / CR 10:	NB LR – LOS F: 526.9 seconds delay
CR 46 / CR 10:	Overall – LOS F: 95.7 seconds delay NB LTR – LOS F: 153.3 seconds delay SB LTR – LOS F: 80.6 seconds delay
SR 332 / Routes 5&20:	EB L – LOS E: 73.2 seconds delay EB TR – LOS E: 65.3 seconds delay WB L – LOS E: 73.3 seconds delay SB L – LOS E: 79.5 seconds delay
Routes 5&20 / Cooley Road:	SB LTR – LOS F: 276.4 seconds delay NB LTR – LOS E: 35.6 seconds delay

KEY

EB—Eastbound NB—Northbound SB—Southbound WB—Westbound
LTR—Left, Through, and Right Movements LOS—Level of Service

The delays for the eastbound and westbound approaches at the SR 21 / SR 488 & Schutt Road intersection, the southbound approach at the CR 4 / CR 22 intersection, the northbound approach at the CR 4 / CR 10 intersection and the southbound approach at the Routes 5&20 / Cooley Road intersection are due to minimal gaps available for vehicles stopped at these approaches to enter the intersection. The low gaps are created by the steady, high-speed traffic traveling on the mainline roadways. Additionally, at the Routes 5&20 / Cooley Road intersection there is a high volume of southbound vehicles on Cooley Road waiting to make left turns.

The delays for the northbound and southbound approaches at the CR 46 / CR 10 intersection are due to high volumes on CR 10 having to stop at a four-way stop. The volume on CR 10 exceeds the capacity for the CR 10 approaches to the intersection.

The SR 332 / Routes 5&20 intersection is the largest intersection in the study area. The two busiest highways in the study area meet at this node. This

intersection is operating on a long cycle length with the majority of the time available for SR 332. The eastbound and westbound movements are operating at LOS E due to the long delay experienced at these approaches while traffic on SR 332 is traveling. The southbound approach is over capacity; all southbound traffic coming from north of the Town of Canandaigua and the city is funneled through this intersection.

The effects of the high volume of traffic traveling on SR 332 (Main Street) through the City of Canandaigua are also evident at the SR 332 / CR 4 (Ontario Street) intersection. Large queues exist at both the northbound and southbound approaches to this intersection. These approaches are also operating at high volume to capacity ratios (v/c). The NB approach has a v/c of 1.02 (over capacity) and the southbound approach has a v/c of 0.88 (at capacity). This means that SR 332 is at its threshold for the maximum amount of vehicles that are able to flow on the existing configuration. The LOS for these movements is acceptable due to the low side street volumes and the extensive amount of green time allotted for vehicles traveling on SR 332.

D. Safety Considerations, Accident History and Analysis

Accident History

An accident screening was completed for the study intersections and roadway segments to determine the accident rate and severity of accidents as well as the locations of pedestrian and/or bicycle accidents. The screening used accident data from the New York State Department of Transportation's (NYSDOT) Safety Information Management System (SIMS) for the most current five-year period (06/97-05/02) on file.

During the study period, one thousand six hundred and four (1604) accidents were documented on study roadway segments and intersections. Approximately 27.9 percent (447/1604) of these accidents involved an injury. Six fatalities were reported on study roadway segments and intersections. An accident summary of study roadway segments and study intersections are presented in Table 3.1-5 and Table 3.1-6, respectively.

TABLE 3.1-5
ACCIDENT SUMMARY
STUDY ROADWAY SEGMENTS (06/97 - 05/02)

ROADWAY SEGMENT	NON-REPORTABLE	PROPERTY DAMAGE	NON-FATAL INJURY	FATALITY	TOTAL
SR 332: Routes 5&20 to Canandaigua City Line	144	119	114	1	378
SR 332: Canandaigua City Line to Canandaigua-Farmington Townline Road	63	125	65	0	253
Routes 5&20: Cooley Road to West Ave	17	27	5	0	49
Routes 5&20: West Ave to SR 21	4	4	2	0	10
Routes 5&20: SR 21 to SR 332	24	30	14	1	69
Routes 5&20: SR 332 to SR 364	38	36	50	0	124
Routes 5&20: SR 364 to CR 10	9	18	8	0	35
Routes 5&20: CR 10 to Smith Road	7	17	9	0	33
Routes 5&20: Smith Road to Freshour Road	10	41	20	0	71
SR 21: CR 32 to Routes 5&20 Overlap	1	4	2	0	7
SR 21: SR 332 Overlap to Canandaigua City Line	9	12	7	0	28
SR 21: Canandaigua City Line to SR 488	15	18	9	0	42
SR 364: Canandaigua-Gorham Townline Road to Routes 5&20	7	18	9	0	34
CR 4: SR 332 to Canandaigua City Line	12	9	0	0	21
CR 4: Canandaigua City Line to CR 10	5	6	2	0	13
CR 4: CR 10 to Freshour Road	12	23	14	2	51
CR 46: SR 332 to Canandaigua City Line	11	14	4	0	29
CR 46: Canandaigua City Line to CR 10	3	7	0	0	10
CR 46: CR 10 to Freshour Road	4	15	5	0	24
CR 10: Routes 5&20 to CR 46	8	17	4	0	29
CR 10: CR 46 to CR 4	4	2	0	0	6
TOTAL	**407**	**562**	**343**	**4**	**1316**

TABLE 3.1-6
ACCIDENT SUMMARY
STUDY INTERSECTIONS (06/97 - 05/02)

INTERSECTION	NON-REPORTABLE	PROPERTY DAMAGE	NON-FATAL INJURY	FATALITY	TOTAL
North Road & Allen Road	0	0	1	0	1
SR 21 & Hannah Road	0	1	2	0	3
SR 21 & Andrew Road	1	1	2	0	4
SR 21 & SR 488	1	4	1	0	6
Routes 5&20 & SR 364	7	13	8	0	28
Routes 5&20 & CR 10	7	20	13	0	40
Routes 5&20 & Smith Road	0	1	1	0	2
Routes 5&20 & Freshour Road	3	2	0	0	5
CR 46 & CR 10	3	5	6	0	14
CR 46 & Smith Road	2	5	4	0	11
CR 46 & Freshour Road	3	3	4	0	10
CR 4 & Hannah Road	0	0	1	0	1
CR 4 & CR 10	2	6	4	0	12
SR 332 & Canandaigua-Farmington Townline Road	7	1	7	0	15
SR 332 & North Road	11	11	5	0	27
SR 332 & CR 4	3	4	4	0	11
SR 332 & Routes 5&20	13	13	11	0	37
Buffalo Street & Pearl Street	2	3	4	0	9
Parish Street & West Lake Drive	3	0	3	1	7
Parish Street & Pearl Street	2	1	1	0	4
Routes 5&20 & SR 21	3	7	11	1	22
SR 21 & CR 32	0	1	0	0	1
Routes 5&20 & Cooley Road	4	9	5	0	18
TOTAL	**77**	**111**	**98**	**2**	**288**

Table 3.1-5 shows one thousand three hundred and sixteen (1,316) accidents documented on study area roadway segments. Approximately 26.4 percent (347/1316) of the study area roadway segment accidents involved an injury. Four fatalities were reported on the study roadway segments.

Table 3.1-6 shows two hundred and eighty eight (288) accidents documented at study area intersections. Approximately 34.7 percent (100/288) of the study area intersection accidents involved an injury. Two fatalities were reported at the study intersections.

A total of six fatalities were recorded within the study limits. The locations of the six fatalities are presented in Table 3.1-7.

TABLE 3.1-7
FATALITY SUMMARY (06/97 - 05/02)

LOCATION	STUDY SEGMENT/INTERSECTION
SR 332 / Forthill Avenue	SR 332: Routes 5&20 to Canandaigua City Line
Routes 5&20 / SR 21	Routes 5&20 / SR 21
Routes 5&20 / Middle Cheshire Road	Routes 5&20: SR 21 to SR 332
Parish Street / West Lake Drive	Parish Street / West Lake Drive
CR 4 / Smith Road	CR 4: CR 10 to Freshour Road
CR 4 between CR 10 and Smith Road	CR 4: CR 10 to Freshour Road

Subsequent to the SIMS accident research period (05/02), improvements have been implemented at the following fatal accident locations:

- Routes 5&20 / Middle Cheshire Road: Signal Implemented
- Parish Street / West Lake Drive: Operation modified from flasher to actuated signal, coordinated with Parish Street / Pearl Street intersection.

A summary of the reported bicycle and pedestrian accidents is presented in Table 3.1-8. There were a total of 29 reported pedestrian and bicycle accidents on study area roadway segments and intersections during the five-year study period.

TABLE 3.1-8
SUMMARY OF PEDESTRIAN & BICYCLE ACCIDENTS (06/97 - 05/02)

LOCATION	NUMBER OF PEDESTRIAN & BICYCLE ACCIDENTS
Roadway Sections:	
SR 332: Routes 5&20 to Canandaigua City Line	14
Routes 5&20: West Ave to SR 21	1
Routes 5&20: CR 10 to Smith Road	1
Routes 5&20: Smith Road to Freshour Road	2
SR 21: CR 32 to Routes 5&20 Overlap	1
SR 21: SR 332 Overlap to Canandaigua City Line	5
CR 46: SR 332 to Canandaigua City Line	1
CR 46: CR 10 to Freshour Road	1
Total	**26**
Intersections:	
SR 332 & Routes 5&20	3
Total	**3**

The majority of the pedestrian and bicycle accidents occurred within the Canandaigua City Limits. This is due to the high volume of pedestrians traveling within the city. The segment of SR 332 from Routes 5&20 to the Canandaigua City Line is Canandaigua's Main Street and travels directly through the central business district. The SR 332 / Routes 5&20 intersection is the gateway to the Canandaigua Lakefront Resort Area and has both high pedestrian volumes and high traffic volumes. The remainder of the pedestrian and bicycle accident locations were scattered with no discernable patterns.

Accident rates were calculated for study roadway segments and intersections and compared to the NYSDOT average rates for similar locations to determine locations with above average accident rates. The accident rate calculations for the roadway segments include accidents for the study area intersections at local roads located within the roadway segments.

The study area intersections at state or county routes were not included in the roadway segment rates. These intersections contained a significant number of accidents and were not representative of the remainder of the roadway segment. Therefore, these intersections were not included in the segment analysis and were analyzed as intersections only.

Several of the segments and intersections have had improvements implemented since the time period of the accident data used for this analysis. A summary of locations at which improvements have been implemented is presented in Table 3.1-9.

TABLE 3.1-9
SUMMARY OF IMPROVEMENTS

Location	Year	Improvements Implemented
SR 332: City Line to northern edge of study area	2001-2002	Reconstruction from undivided two-lane highway to divided four-lane highway.
Routes 5&20: Middle Cheshire Road to CR 10	2004	Repaving and re-striping to separate left turns from mainline at key intersections in main retail section.
Parish Street/West Lake Drive	2004	Operation changed from flash to actuated signal, co-ordinated with signal at Pearl Street.
Parish Street/Pearl Street	2004	Coordinated with signal at West Lake Drive.

The improvements in Table 3.1-9 may reduce the number of accidents and accident rates, therefore, the rates listed may be outdated. The NYSDOT SIMS database does not have data more current than 2002, therefore, calculation of accident rates after the improvements was not possible. A summary of the roadway segment and intersection accident rates are presented in Table 3.1-10 and Table 3.1-11, respectively. Locations with above average accident rates are highlighted in gray and locations at which modifications have been made are denoted with an asterisk (*).

TABLE 3.1-10
SEGMENT ACCIDENT RATES (06/97 - 05/02)

Segment	Number of Accidents	Accident Rate	NYSDOT Average Accident Rate
SR 332: Routes 5&20 to Canandaigua City Line	378	3.15	5.05
SR 332: Canandaigua City Line to Canandaigua-Farmington Townline Road	268	2.05	2.15
Routes 5&20: Cooley Road to West Ave	67	2.37	2.81
Routes 5&20: West Ave to SR 21	10	1.02	2.81
Routes 5&20: SR 21 to SR 332	69	2.07	2.77
Routes 5&20: SR 332 to SR 364	124	2.33	5.66
Routes 5&20: SR 364 to CR 10	35	5.92	5.66
Routes 5&20: CR 10 to Smith Road	35	1.97	2.81
Routes 5&20: Smith Road to Freshour Road	78	2.94	2.81
SR 21: CR 32 to Routes 5&20 Overlap	7	2.17	2.81
SR 21: SR 332 Overlap to Canandaigua City Line	28	1.69	3.66
SR 21: Canandaigua City Line to SR 488	49	1.38	2.81
SR 364: Canandaigua-Gorham Townline Road to Routes 5&20	34	2.90	2.81
CR 4: SR 332 to Canandaigua City Line	21	1.64	3.66
CR 4: Canandaigua City Line to CR 10	14	0.88	2.81
CR 4: CR 10 to Freshour Road	51	1.96	2.81
CR 46: SR 332 to Canandaigua City Line	29	2.92	3.66
CR 46: Canandaigua City Line to CR 10	10	1.12	2.81
CR 46: CR 10 to Freshour Road	45	2.13	2.81
CR 10: Routes 5&20 to CR 46	29	1.94	2.81
CR 10: CR 46 to CR 4	6	0.45	2.81
Locations with above average accident rates are highlighted in gray			

***** Locations at which modifications have been made.

TABLE 3.1-11
INTERSECTION ACCIDENT RATES (06/97 - 05/02)

Intersection	Number of Accidents	Accident Rate	NYSDOT Average Accident Rate
North Road & Allen Road	1	0.27	0.16
SR 21 & CR 22	3	0.17	0.16
SR 21 & Andrews Road	4	0.26	0.16
SR 21 & SR 488	6	0.34	0.35
Routes 5&20 & SR 364	28	0.56	0.46
Routes 5&20 & CR 10	40	0.91*	0.46
Routes 5&20 & Smith Road	2	0.07	0.16
Routes 5&20 & Freshour Road	5	0.28	0.35
CR 46 & CR 10	14	0.59	0.35
CR 46 & Smith Road	11	0.83	0.35
CR 46 & Freshour Road	10	0.71	0.35
CR 4 & CR 22	1	0.06	0.16
CR 4 & CR 10	12	0.57	0.16
SR 332 & Canandaigua-Farmington Townline Road	15	0.37*	0.59
SR 332 & North Road	27	0.41*	0.46
SR 332 & CR 4	11	0.17	0.46
SR 332 & Routes 5&20	37	0.42*	0.46
Buffalo Street & Pearl Street	9	0.59	0.16
Parrish Street & West Lake Drive	7	0.45*	0.35
Parrish Street & Pearl Street	4	0.25*	0.35
Routes 5&20 & SR 21	22	0.82	0.59
SR 21 & CR 32	1	0.10	0.16
Routes 5&20 & Cooley Road	18	0.96	0.35
Locations with above average accident rates are highlighted in gray			

***** Locations at which modifications have been made.

The results in Table 3.1-10 indicate that approximately 14 percent (3/21) of the study area roadway segments had accident rates over the statewide average. Above average accident rates were typically experienced on the rural sections outside the city limits. This is due to an above average number of collisions with animals, which is a common occurrence on rural routes.

The results in Table 3.1-11 indicate that approximately 57 percent (13/23) of the study area intersections had accident rates over the statewide average. As stated above, some of the intersections have had improvements implemented since the years in which the accident data for this analysis was collected. With the improvements, these intersections may have lower rates than those shown in Table 3.1-11. Many of the other intersections with above average accident rates are low volume rural intersections with a low number of accidents. The

low volume drastically inflates the accident rate for these locations. The remaining intersections with above average accident rates tend to be either meeting points for two major roadways or rural stop controlled intersections on high speed roadways. These are typical locations for above average accident rates. Intersections of two major roads are choke points that service large amounts of traffic, increasing the potential for accidents. Accidents at rural stop controlled intersections tend to be speed related or animal hits.

Summary of Above Average Accident Locations

The results of the accident screening were used to identify locations with safety issues. This process began with the examination of locations with above average accident rates, fatal accidents, and/or high number of pedestrian/ bicycle accidents.

Locations that met any or all of these criteria were then examined to identify accident patterns and causes and determine if they were correctable. Using this process it was determined that multiple locations that met the initial criteria did not have safety issues. These locations had the following characteristics:

- Low number of accidents
- High proportion of animal accidents
- No identifiable accident patterns

More specifically, the following outlines the reasons why certain locations were not given further consideration.

Routes 5&20: Smith Road to Freshour Road

- Mostly animal accidents
- No identifiable accident patterns

SR 364: Canandaigua-Gorham Townline Road to Routes 5&20

- Mostly animal accidents
- No identifiable accident patterns

CR 4: CR 10 to Freshour Road

- Fatalities were random and non-correctable

North Road / Allen Road

- Only one accident occurred

SR 21 / CR 22

- Low number of accidents
- No identifiable accident patterns

SR 21 / Andrews Road

- Low number of accidents
- No identifiable accident patterns

CR 46 / Smith Road

- No identifiable accident patterns

Buffalo Street / Pearl Street

- No identifiable accident patterns

Nine locations were identified as having safety issues. These locations have been ranked by the significance of their safety issues. The significance was determined using the following criteria:

- Accident rate
- Fatal accidents
- Identifiable accident patterns

Additionally, some of these locations have recently had improvements implemented. These locations were considered the least significant even though some had more safety issues than locations rated with a higher significance. It is recommended that these locations be monitored and screened when there is sufficient accident data available, after the implementation of the improvements, to determine whether the improvements have corrected the safety issues or if additional improvements are necessary.

Conclusions

The following is a list of the 9 locations with notable safety issues, in order from most significant (S1) to least significant (S9):

- S1—Routes 5&20 / SR 21
- S2—SR 332: Routes 5&20 to Canandaigua City Line
- S3—Routes 5&20 / Cooley Road
- S4—CR 10 / CR 46
- S5—CR 4 / CR 10
- S6—Routes 5&20 / CR 10
- S7—Routes 5&20 / SR 364
- S8—Routes 5&20: SR 364 to CR 10
- S9—Parish Street / West Lake Drive

The following discusses the locations identified above. It is important to note that the NYSDOT average accident rates vary by intersection type and roadway type, according to geometry, control, and whether the location is rural or urban. Additionally, roadway segments have higher rates than intersections. Intersection accident rates and road segment accident rates are compared to statewide averages to determine if above average accident rates are present for the roadway or intersection.

S1—Routes 5&20 / SR 21

This intersection has the following:

- Above average accident rate
- One fatal accident
- Identified accident patterns

This intersection had an accident rate of 0.82 which is above the NYSDOT average accident rate of 0.59. A total of twenty-two accidents occurred at this intersection.

Right angle accidents were the predominant accident type, accounting for 31.8 percent (7/22) of the total accidents. Other common accident types included rear end accidents (18.2 percent) and left turn accidents (13.6 percent).

Four of the seven right angle accidents involved northbound and westbound vehicles. All other accidents at this intersection were scattered with no identifiable patterns. Common accident causes included failure to yield the right of way and disregard for traffic control.

This is a meeting point of two main roadways with traffic traveling at high speeds. This is a probable cause for many of the accidents. Vehicles are traveling at high speeds and continue through the intersection during the yellow/red light instead of stopping.

The fatality was a right angle accident involving a northbound and westbound vehicle. The westbound vehicle disregarded traffic control and collided with the northbound vehicle which had the right-of-way.

S2—SR 332: Routes 5&20 to Canandaigua City Line

This roadway segment has:

- One fatal accident
- Above average number of pedestrian/bicycle accidents

A total of fourteen pedestrian accidents occurred on this roadway segment. The majority of these accidents occurred at intersections along this segment. The following is a breakdown of these accidents:

- Bristol Street: 5 accidents
- West Gibson Street: 2 accidents
- Howell Street: 2 accidents
- Fort Hill Avenue: 2 accidents
- Ontario Street: 1 accident
- Scotland Road: 1 accident
- Greig Terrace to W. Gibson Street: 1 accident

The fatality was a pedestrian accident at the Fort Hill Avenue intersection involving a southbound vehicle and a westbound pedestrian. The pedestrian disregarded traffic control and was hit by the southbound vehicle which had the right-of-way.

This roadway segment is Canandaigua's Main Street and travels directly through the central business district, therefore there is significant pedestrian traffic. SR 332 (Main Street) also has a significant amount of traffic and congestion within this segment.

S3—Routes 5&20 / Cooley Road

This intersection has:

- Above average accident rate
- Identified accident patterns

This intersection had an accident rate of 0.96 which is above the NYSDOT average accident rate of 0.35. A total of eighteen accidents occurred at this intersection.

Right angle accidents were the predominant accident type, accounting for 44.4 percent (8/18) of the total accidents. Three of the eight right angle accidents involved southbound and westbound vehicles. Common accident causes included failure to yield the right of way and disregard for traffic control. All other accidents at this intersection were scattered with no identifiable patterns.

Traffic on Routes 5&20 is traveling at high speeds through this intersection and there is limited sight distance for vehicles entering Routes 5&20 from the side streets. This is a probable cause for many of the accidents.

S4—CR 10 / CR 46

This intersection has:

- Above average accident rate
- Identified accident patterns

This intersection had an accident rate of 0.59 which is above the NYSDOT average accident rate of 0.35. A total of fourteen accidents occurred at this intersection.

Right angle accidents were the predominant accident type, accounting for 42.9 percent (6/14) of the total accidents. Other common accident types included rear end accidents (35.7 percent).

Three of the five rear end accidents involved northbound vehicles. All other accidents at this intersection were scattered with no identifiable patterns. Common accident causes included failure to yield the right of way and disregard for traffic control.

This intersection is controlled by a 4-way stop sign. CR 10 is a default bypass to Main Street; therefore, traffic can be heavy during the peak hours. The heavy traffic on CR 10 being forced to stop at the intersection creates congestion and aggressive driving.

S5—CR 4 / CR 10

This intersection has:

- Above average accident rate
- Identified accident patterns

This intersection had an accident rate of 0.57 which is above the NYSDOT average accident rate of 0.16. A total of twelve accidents occurred at this intersection.

Rear end accidents were the predominant accident type, accounting for 25.0 percent (3/12) of the total accidents. All three of the rear end accidents involved northbound vehicles. All other accidents at this intersection were scattered with no identifiable patterns. Common accident causes included driver inattention, failure to yield the right of way and disregard for traffic control. CR 10 is a default bypass to Main Street; therefore, traffic can be heavy during the peak hours. The heavy traffic on CR 10 being forced to stop at the intersection along with the lack of gaps on CR 4 creates congestion and aggressive driving.

S6—Routes 5&20 / CR 10

This intersection has:

- Above average accident rate
- Identified accident patterns

This intersection had an accident rate of 0.91 which is above the NYSDOT average accident rate of 0.46. A total of forty accidents occurred at this intersection.

Left turn accidents were the predominant accident type, accounting for 30.0 percent (12/40) of the total accidents. Other common accident types included right angle accidents (22.5 percent) and rear end accidents (15.0 percent).

Seven of the twelve left turn accidents involved an eastbound vehicle turning in front of a westbound vehicle. Three of the twelve left turn accidents involved a southbound vehicle turning in front of a northbound vehicle. Five of the nine right angle accidents involved northbound and eastbound vehicles. Four of the six rear end accidents involved southbound vehicles. All other accidents at this intersection were scattered with no identifiable patterns.

Common accident causes included failure to yield the right of way, driver inattention and disregard for traffic control.

This is a meeting point of two main roadways. This section of Routes 5&20 is the main commercial corridor in the study area and CR 10 is a default bypass to Main Street. Both roads experience heavy traffic. The high volume turning to/ from CR 10 is a possible cause for many of the accidents.

This intersection has recently been re-striped to separate left turns from mainline. This improvement will most likely reduce driver confusion and decrease the number of accidents at this location. This location should be screened again when there is sufficient accident data after the re-striping.

S7—Routes 5&20 / SR 364

This intersection has:

- Above average accident rate
- Identified accident patterns

This intersection had an accident rate of 0.56 which is above the NYSDOT average accident rate of 0.46. A total of twenty-eight accidents occurred at this intersection.

Rear end accidents were the predominant accident type, accounting for 17.9 percent (5/28) of the total accidents. Other common accident types included right angle accidents (14.3 percent).

Three of the four right angle accidents involved southbound and eastbound vehicles. All other accidents at this intersection were scattered with no identifiable patterns. Common accident causes included failure to yield the right of way, driver inattention and disregard for traffic control.

This is a meeting point of two main roadways. This section of Routes 5&20 is the main commercial corridor in the study area and SR 364 provides access to the east side of Canandaigua Lake. The high volume of traffic through this intersection is a possible cause for many of the accidents.
This intersection has recently been re-striped to separate left turns from mainline. This improvement will most likely reduce driver confusion and decrease the number of accidents at this location. This location should be screened again when there is sufficient accident data after the re-striping.

S8—Routes 5&20: SR 364 to CR 10

This roadway segment has:

- Above average accident rate
- Identified accident patterns

This roadway section had an accident rate of 5.92 which is above the NYSDOT average accident of 5.66. A total of thirty-five accidents occurred at this intersection.

Rear end accidents were the predominant accident type, accounting for 20.0 percent (7/35) of the total accidents. Other common accident types included right angle accidents (11.4 percent).

Four of the seven rear end accidents involved eastbound vehicles and three of the seven rear end accidents involved westbound vehicles. All other accidents at this intersection were scattered with no identifiable patterns. Common accident causes included driver inattention and failure to yield the right of way.

The accidents on this roadway segment are most likely based on congestion and the influence of the intersections located at its endpoints, Routes 5&20 / SR 364 and Routes 5&20 / CR 10.

This roadway segment has recently been re-striped. This improvement will most likely decrease the number of accidents at this location. This location should be screened again when there is sufficient accident data after the re-striping.

S9—Parrish Street / West Lake Drive

This intersection has:

- Above average accident rate
- One fatal accident

This intersection had an accident rate of 0.45 which is above the NYSDOT average accident rate of 0.35. A total of seven accidents occurred at this intersection. All accidents at this intersection were scattered with no identifiable patterns. The fatality was a single vehicle accident involving a northbound vehicle that disregarded traffic control and overturned.

Improvements have been made at this intersection. Operation changed from flash to actuated signal control, coordinated with the signal at Pearl Street. This

improvement will most likely decrease the number and severity of accidents at this location. This location should be screened again when there is sufficient accident data after the improvement.

E. Public Transit

Public transportation in Ontario County, including portions of the study area, is provided by the County Area Transit System (CATS). Managed and operated through a County Contract with Coach USA since 1996, CATS offers two types of transportation services including a fixed-route system and a dial-a–ride service. The fixed-route services offers regularly scheduled bus service along fixed routes in certain areas of the county. The dial-a-ride service transport services available anywhere in the county for a per-ride fee.

Fixed Route Fast Facts:

- Operates 7 days a week
- Fixed daily time schedule
- Five routes, two of which service areas within the boundaries of the study
- Adult fare is $1.00 one way (children under 5 are free and seniors and disabled ride for $0.50 per trip.
- Monthly bus pass costs $30
- Ridership increased between 1999 and 2002.

Dial-A-Ride (DAR) Fast Facts:

- Available Monday through Friday, 7:00 a.m. to 7:00 p.m.
- Demand Request Service; 24-hour notice
- No set service boundaries or regions for purpose of scheduling rides;
- Adult fare is $3.00 per passenger one way;
- Medicaid ridership accounts for about 50 percent of DAR service including medical transport services in and outside of Monroe County;
- Ridership increased 167 percent from 1999 to 2002
- Twenty five vehicles are operated to provide trips to and from various origins and destinations.

F. Air Service

Located in the Town of Canandaigua, three miles northwest of the City, the airport supports light aircraft activity. The airport is privately owned and available for public use. Proposed expansion of Runway 13-31, which is current 3,200 feet in length, would extend the runway to 5,500 feet and include

modifications to runway and taxiway widths to enhance capabilities and mitigate non-standard crosswind coverage for smaller aircraft.

The expansion of the airport is being sought as an economic development driver to attract additional air travel and freight to the Canandaigua area. The extension of the airport's runway would enhance the region's opportunities to development multi-modal hubs that incorporate air, rail and truck transport.

The proposed runway extension would result in the severance of Thomas Road. There are five residences located on the road, four of which would be located west of the airport and one to the east. According to the Traffic Impact Analysis conducted for the project, the SR 332/Yerkes Road intersection is the only intersection that would experience a change in level of service (during the PM peak hour) as a result of the diversion of existing traffic volumes. Additionally minor increases in travel times are anticipated for the anticipated diverted traffic patterns resulting from the severance of Thomas Road.

G. Regional Trail Network

The CRTS study area contains various multi-use trails, both existing and planned. While not typically considered a significant part of the transportation network, trails are a valuable asset to a community and will continue to play an integral role in the region's balanced approach to transportation.

A strategically planned trail network can provide an important transportation alternative to a community. It also provides opportunities for recreation, exercise, environmental stewardship, and even economic development. In order to achieve this, the trail network needs to connect residential, employment, and recreation centers.

The Canandaigua area is fortunate to have a series of trails at various stages of development that, when completed, will connect important destinations such as the Central Business District, the lakefront, City Hall, the County Fairgrounds, various neighborhoods, and commercial and retail properties in the SR 332 and Routes 5&20 corridors. Additionally, the trails will be integrated with the regional network, providing access to communities and recreational destinations throughout the Finger Lakes and the Genesee Valley. These trails include:

Canandaigua Lagoon Walk

The Canandaigua Lagoon Walk, currently under development, includes the rehabilitation of existing trails and construction of new bridges in the Lagoon area between Canandaigua Lake and Routes 5&20. It will provide direct and

naturalized pedestrian linkages between business, residential, and recreational facilities at the Canandaigua lakeshore and Routes 5&20. It will also include the construction of new sidewalks along Routes 5&20.

Canandaigua Downtown Rail-with-Trail
This trail in the City of Canandaigua is partially completed. The eastern half, which connects Main Street to the Ontario Pathways Trail at the City line, has been completed. The second phase will travel along the active railroad bed from Main Street north to Buffalo Street. When completed, the Downtown Rail-with-Trail will connect several destinations, including Baker Park, Canandaigua Elementary School, City Hall, the Central Business District, and various adjacent neighborhoods.

Ontario Pathways Trail
The Ontario Pathways Trail is a 23-mile rails-to-trails project that connects Canandaigua, Stanley, Seneca Castle, Orleans and Phelps/Clifton Springs. The portion of the trail that is within the study area travels from the Canandaigua City line east into the Town of Hopewell. The trail is owned and maintained by Ontario Pathways, a non-profit organization.

Canandaigua Feeder Canal Trail
The Feeder Canal Trail is a proposed project that would consist of a multi-use pathway along the Feeder Canal in the City of Canandaigua, connecting the lakefront area to the Ontario Pathways Trail. The asphalt trail would begin at Ontario Pathways near the County Fairgrounds and connect to the western edge of Kershaw Park on the lake.

Canandaigua Connector Trail
Also a proposed project, the Connector Trail would link the existing Canandaigua Downtown Rail-with-Trail to the proposed Feeder Canal Trail. The trail would provide an important connection between the City's southeast neighborhood and the lakefront.

Canandaigua-Farmington Trail Connection
This proposed trail would utilize an abandoned railroad right-of-way to connect the City of Canandaigua to the Auburn Line Trail in Farmington. The Auburn Line Trail is a significant piece of the regional trail system that, when completed, will travel from Canandaigua west to the Genesee River.

State Snowmobile Trail #4
This snowmobile trail is an extension of an existing trail in Wayne County. The extension would travel from the Town of Palmyra to Canandaigua and ultimately to the north end of Honeoye Lake. The trail is a part of the Genesee Transportation Council's long-term plan for the regional trails network.

3.2 SOCIO-ECONOMIC CONDITIONS

It should be noted that, although not officially part of the study area, towns such as Victor, Farmington, East Bloomfield, and Manchester are frequently mentioned throughout this section as they have an impact on transportation issues in the region.

TABLE 3.2-1
POPULATION, AREA MUNICIPALITIES, 1970 – 2030

	Decennial Population				Change 1970 - 2000		Population Projection[1]			Change 2000 - 2030	
Municipalities	1970	1980	1990	2000	#	%	2010	2020	2030	#	%
Canandaigua (C)	10,488	10,419	10,725	11,264	776	7.4%	11,449	11,612	11,719	455	4.0%
Canandaigua (T)	5,419	6,060	7,160	7,649	2,230	41.2%	8,242	8,742	9,154	1,505	19.7%
Hopewell	2,347	2,509	3,016	3,346	999	42.6%	3,452	3,542	3,613	267	8.0%
Gorham	2,839	3,450	3,296	3,598	759	26.7%	3,688	3,765	3,824	226	6.3%
Farmington	3,565	8,933	10,381	10,585	7,020	196.9%	10,841	11,062	11,230	645	6.1%
Victor	2,884	3,414	4,883	7,544	4,660	161.6%	8,547	9,037	9,463	1,919	25.4%
East Bloomfield	1,730	1,788	1,927	2,094	364	21.0%	2,151	2,199	2,236	142	6.8%
Manchester	3,463	4,102	4,564	4,694	1,231	35.5%	4,891	5,057	5,192	498	10.6%
Ontario County	78,849	88,909	95,101	100,224	21,375	27.1%	103,296	105,606	107,430	7,206	7.2%

Study Area municipalities are highlighted in gray

1 – Projections obtained from the Genesee/Finger Lakes Regional Planning Council (G/FLRPC), *Regional Population Forecasts*, December 2003

Source: U.S. Census Bureau; Genesee/Finger Lakes Regional Planning Council (G/FLRPC)

A. Population

As shown on Table 3.2-1, most area municipalities grew at a faster rate than Ontario County as a whole, which grew to 100,224 people, a 27 percent increase since 1970. The Town of Victor had the largest population growth among area municipalities, increasing by 4,660 people to 7,544, between 1970 and 2000. The Town of Farmington also experienced strong growth, increasing by 197 percent to 10,585 people. The slowest growth rate among study area

TABLE 3.2-2
HOUSEHOLDS, AREA MUNICIPALITIES, 2000

	Households		Change, 1990-2000		Persons Per Household	
Municipalities	1990	2000	HHs	Percent	1990	2000
Canandaigua (C)	4,413	4,762	349	7.9%	2.4	2.4
Canandaigua (T)	2,370	2,886	516	21.8%	3.0	2.7
Hopewell	1,027	1,244	217	21.1%	2.9	2.7
Gorham	1,067	1,186	119	11.2%	3.1	3.0
Farmington	3,494	3,870	376	10.8%	3.0	2.7
Victor	1,798	2,750	952	52.9%	2.7	2.7
East Bloomfield	650	741	91	14.0%	3.0	2.8
Manchester	1,491	1,564	73	4.9%	3.1	3.0
Ontario County	34,929	37,370	2,441	7.0%	2.7	2.7

Study Area municipalities are highlighted in gray

Source: U.S. Census Bureau

municipalities occurred in the City of Canandaigua, which still expanded by 7 percent to 11,264 people. Most of the urban areas—i.e., villages and cities—in Ontario County lost population between 1970 and 2000.

While population growth in and throughout the region is expected to continue, according to projections from the *Regional Population Forecasts*—which was completed by the Genesee/Finger Lakes Regional Planning Council (G/FLRPC) in December 2003—a slower pace is anticipated between 2000 and 2030. Still, significant growth is projected to continue in the Towns of Victor and Canandaigua, where population increases of 1,919 (25 percent) and 1,505 (20 percent) are projected, respectively. Expected growth among the other study area municipalities include a 4 percent increase in the City of Canandaigua, a 6 percent increase in Gorham, and an 8 percent increase in Hopewell. The overall County is expected to increase by about 7,200 people over the period, an increase of approximately 7 percent.

B. Households

Similar to population trends, during the 1990s, the number of households in area municipalities, as well all of Ontario County, increased (see Table 3.2-2). The Town of Victor overwhelmingly had the largest increase, increasing by 952 households, or 53 percent. The Towns of Canandaigua, Farmington and Hopewell also saw significant advances in their number of households, with increases of 516 (22 percent), 376 (11 percent), and 217 (21 percent), respectively.

While the number of households went up, the size of households for most area municipalities declined between 1990 and 2000. The household sizes in the more rural towns, which ranged between 2.7 and 3.0 persons per household in

TABLE 3.2-3
HOUSING UNITS, OCCUPANCY AND TENURE, AREA MUNICIPALITIES, 2000

Municipalities	Total	Occupied	Percent	Vacant	Percent	Owner occupied	Percent	Renter occupied	Percent
Canandaigua (C)	5,066	4,762	94.0%	304	6.0%	2,396	50.3%	2,366	49.7%
Canandaigua (T)	3,281	2,886	88.0%	395	12.0%	2,264	78.4%	622	21.6%
Hopewell	1,342	1,244	92.7%	98	7.3%	1,026	82.5%	218	17.5%
Gorham	1,900	1,410	74.2%	490	25.8%	1,192	84.5%	218	15.5%
Farmington	4,046	3,870	95.7%	176	4.3%	2,993	77.3%	877	22.7%
Victor	3,872	3,685	95.2%	187	4.8%	3,071	83.3%	614	16.7%
East Bloomfield	1,268	1,215	95.8%	53	4.2%	970	79.8%	245	20.2%
Manchester	3,815	3,589	94.1%	226	5.9%	2,824	78.7%	765	21.3%
Ontario County	42,647	38,370	90.0%	4,277	10.0%	28,230	73.6%	10,140	26.4%
Study Area municipalities are highlighted in gray									
Source: U.S. Census Bureau									

2000, remained higher than that of the City of Canandaigua, which averaged only 2.4 persons. This trend demonstrates that families with children were more likely to reside in rural or suburban rather than urban areas.

C. Housing Units

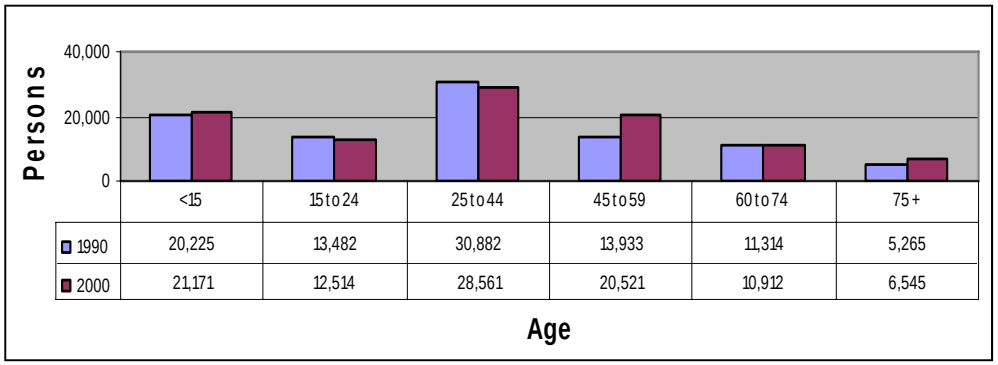
Similar to other parts of the Finger Lakes region, the study area is attractive for seasonal residents as well as tourists. The large number of seasonal residences in the study area municipalities accounted for their relatively high vacancy rates in 2000. For example, despite the 26 percent vacancy rate in the Town of Gorham, 416 (85 percent) of its 490 vacant units were seasonal homes. Table 3.2-3 shows the occupancy/vacancy rates and tenure of housing units in area municipalities. The Town of Victor and City of Canandaigua both had the highest occupancy rates, with 95 and 94 percent, respectively. Due to the large number of seasonal homes, the number of people living, working and visiting the region in the summer is much larger than during the colder months. Therefore, the transportation system must accommodate much higher traffic volumes in the summer, compared to the traffic conditions in the winter.

As would be expected in an urban area, only about half of City of Canandaigua's housing units were owner-occupied, compared to the other area municipalities, whose owner-occupancy percentage ranged between 77 and 85 percent.

D. Age

As shown in Figure 3.2-1, residents of Ontario County grew somewhat older from 1990 to 2000. While most age groups were relatively steady, the number of 45

FIGURE 3.2-1
ONTARIO COUNTY AGE DISTRIBUTION, 1990-2000



	<15	15 to 24	25 to 44	45 to 59	60 to 74	75 +
1990	20,225	13,482	30,882	13,933	11,314	5,265
2000	21,171	12,514	28,561	20,521	10,912	6,545

to 59 year olds grew by 6,588 or 47 percent. The median age of Ontario County residents in 2000 was 37.9 years. The Town of Canandaigua had the oldest population among study area municipalities, with a median age of 39.6. In addition, the Towns of Gorham and Hopewell and the City of Canandaigua all had median ages of over 39 years. Farmington was the youngest municipality in the region, with a median age of 35.1 years.

The City of Canandaigua included the largest number of seniors over the age of 75 years, reflecting the senior citizen residential facilities available in the City, as well as the proximity of retail and service establishments. Conversely, Farmington had the highest percentage of 25 to 44 year olds (31.8) as well as children under 15 years (24.1), demonstrating the prominence of families with children in the Town.

E. Workplace

Table 3.2-4 illustrates the workplace of employed Ontario County residents from 1980 to 2000. The total number of employed County residents has steadily increased since 1980. While the number of residents that work in Ontario County has steadily increased, its percentage of the County's total workforce has dropped slightly. During the same period, the number of residents who worked in suburban Monroe County increased both in number of workers and as a percentage of Ontario County's workforce. The number of residents working in the City of Rochester, as well as those employed in counties other than Monroe or Ontario, held steady but diminished as a percentage of Ontario County's workforce.

TABLE 3.2-4
WORKPLACE OF EMPLOYED RESIDENTS, ONTARIO COUNTY, 1980—2000

Workplace	1980	%	1990	%	2000	%
Ontario County	25,552	65.1%	28,332	61.3%	30,893	61.8%
Anywhere in Monroe County	8,632	22.0%	11,878	25.7%	13,094	26.2%
City of Rochester	4,799	12.2%	4998	10.8%	4,862	9.7%
Suburban Monroe County	3,833	9.8%	6880	14.9%	8,232	16.5%
Other Counties	5,055	12.9%	6,029	13.0%	5,964	11.9%
Total	**39,239**	**100.0%**	**46,239**	**100.0%**	**49,951**	**100.0%**
Source: U.S. Census Bureau						

The total number of jobs in Ontario County increased by 7,516 between 1990 and 2000, or 18.5 percent. This increase in jobs was divided rather evenly among workers who reside in Ontario County (2,561), Monroe County (2,607) and other counties (2,348). However, the percentage increase of those working in Ontario County, who reside in Monroe County, was dramatic (76.8 percent),

compared to the percentage increase of workers from Ontario County (9 percent) and from counties other than Ontario and Monroe (26.7 percent).

F. Commute

As shown in Table 3.2-5, approximately 93 percent of Ontario County workers drove to work in 2000, including 83.5 percent that drove alone and 9.5 percent that carpooled. Besides driving, 4.1 percent walked to work and 1.3 percent used public transportation, bicycles, or other means to commute to work. Those who worked at home comprised 3.6 percent of the County's workforce. Overall, only about 15 percent of County workers who commuted (not including those who worked at home), did not travel to work by driving alone. While this trend was reflected in most study area municipalities, 21 percent of commuters from the City of Canandaigua traveled by means other than driving alone—including 12.1 percent who carpooled, 7.0 percent who walked, and 2.2 percent who took public transportation, biked, or traveled by other means.

TABLE 3.2-5
COMMUTE TO WORK, ONTARIO COUNTY, 2000

Means of Transportation		
Drove alone	40,861	83.50%
Carpooled	4,663	9.50%
Public transportation	396	0.80%
Bicycle	71	0.10%
Walked	2,000	4.10%
Other means	180	0.40%
Worked at home	1,780	3.60%
Length of Commute (Minutes)		
< 10 Minutes	9,470	19.30%
10 - 19 Minutes	13,548	27.70%
20 - 29 Minutes	9,152	18.70%
30 - 44 Minutes	9,614	19.60%
45 to 59 Minutes	4,117	8.40%
60 to 89 Minutes	1,590	3.20%
90+ Minutes	7,901	16.10%
Worked at home	1,780	3.60%
Source: U.S. Census Bureau		

Approximately two out of three workers from Ontario County had commute times of less than one-half hour, including 19 percent that traveled for 10 minutes or less. Though most study area municipalities had similar length of commute times, a greater proportion of City workers had shorter commutes, including 71 percent that traveled less than one-half hour and 28 percent who had quick commutes of 10 minutes or less.

3.3 NATURAL FEATURES

As part of the Finger Lakes region, the study area includes an abundance of natural resources that form a scenic setting, attracting countless visitors and residents. Environmental features in the study area include Canandaigua Lake, streams, wetlands, floodplains, rolling topography and steep slopes, as well as agriculturally significant soils. In addition to providing quality-of-life benefits to residents, workers and visitors of the study area, these resources play integral roles in sustaining the local ecosystem—including the protection of water purity, provision of plant and wildlife habitat, management of water run-off and erosion, and flood mitigation.

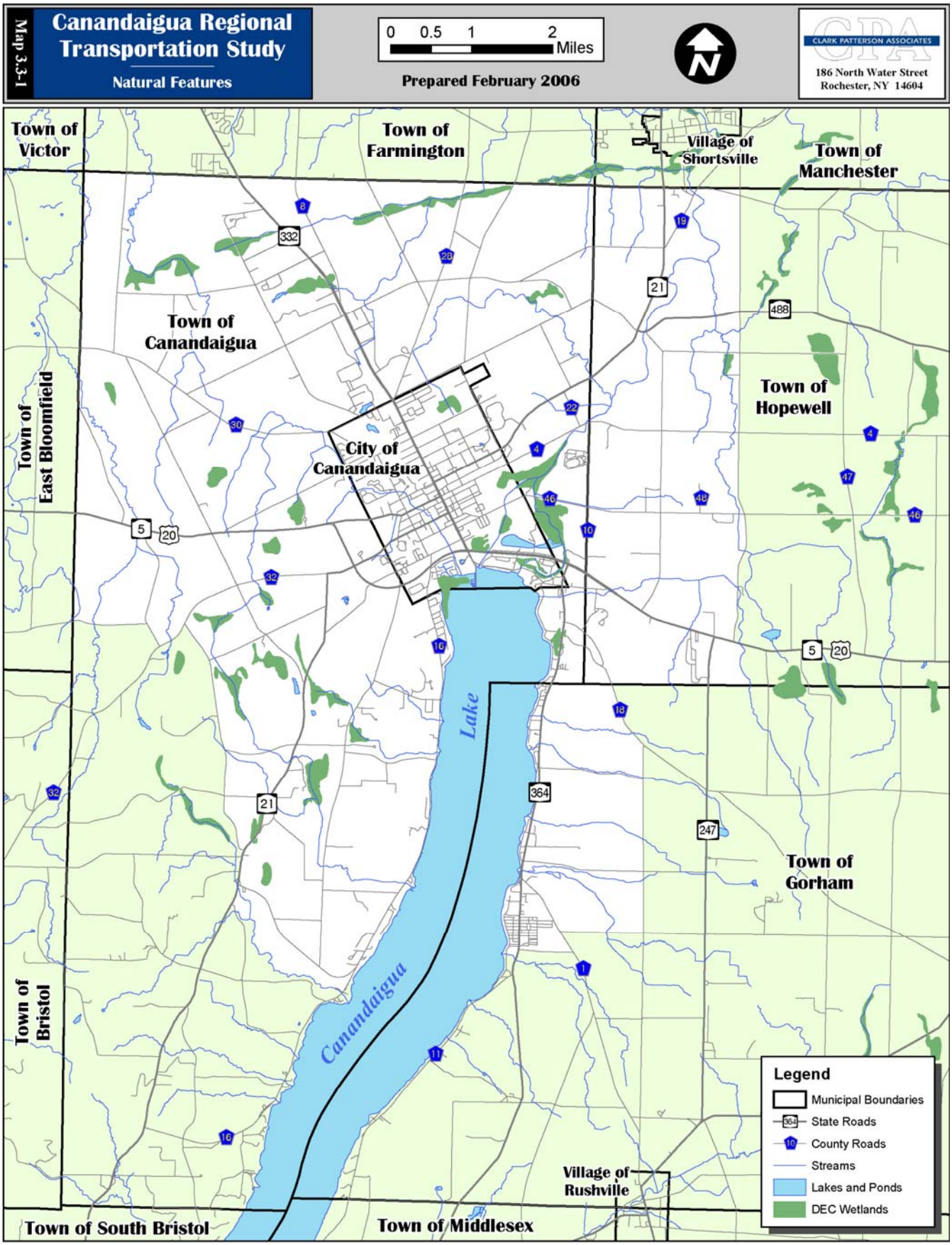
Natural resources can be affected by point and non-point pollution sources generated by poor development practices. Typical sources of pollution include water runoff from roads, parking lots and other impervious surfaces that introduce salts, oils, gasoline, toxic household wastes, and sometimes industrial waste. Natural features—such as water, soils, topography, as well as plants and wildlife—need to be identified and protected so that planning for future growth ensures their protection. It is of the utmost importance that future development coincides with the natural features in the study area in order to preserve the natural, rural and scenic qualities of the region, as well as the significant economic value the area derives from its natural resources. Important natural features in the study area are illustrated on Map 3.3-1.

Topography and Steep Slopes

The northern portion of the study area is part of the Central Lowlands physiographic region, which has a slightly rolling topography but is generally consistent terrain. The southern half of the area forms the beginning of the Allegheny Plateau which is characterized by stream valleys and rolling hills. Most of the steep slopes in the study area are concentrated on the ridges that surround Canandaigua Lake, particularly along ravines carved by streams flowing into the Lake.

Watersheds, Lake and Streams

A watershed is defined as an area of land that drains into a particular body of water. The study area is part of the Lake Ontario watershed and the Seneca-Oswego sub-watershed. In general, study area streams flow into the Erie/New York State Barge Canal, which then drains into the Seneca River, into the Oswego River and eventually draining into Lake Ontario. The southern portion of the study area initially drains into Canandaigua Lake, before flowing into the Canandaigua Outlet and then into the Erie/New York State Barge Canal.


Map 3.3-1
Canandaigua Regional Transportation Study
Natural Features
0 0.5 1 2 Miles
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of Canandaigua
Town of East Bloomfield
City of Canandaigua
Town of Hopewell
Lake
Canandaigua
Town of Gorham
Town of Bristol
Village of Rushville
Town of South Bristol
Town of Middlesex
Legend
Municipal Boundaries
State Roads
County Roads
Streams
Lakes and Ponds
DEC Wetlands

Canandaigua Lake

Canandaigua Lake is the third largest of the Finger Lakes in terms of volume. The Lake is protected by the New York State Department of Environmental Conservation (NYSDEC) and has a water quality rating of AA(TS)—very high quality water that can be used for drinking and food processing, as well as being a trout spawning resource. The lake supplies water to over 50,000 people via municipal water systems, including most of the approximately 1,500 residences located along the lakeshore. In December 1999, all the municipalities situated along the Canandaigua Lakeshore were part of an inter-municipal agreement that committed to funding the implementation of the *Canandaigua Lake Watershed Management Plan*, which is aimed at maintaining the purity of the lake's water.

Streams

There are numerous streams that drain into Canandaigua Lake from its surrounding ridges. The lake is drained into two outlet channels, both controlled by the City of Canandaigua. A smaller outlet is for a feeder-canal which controls flows from the City's water treatment plant. The second outlet is the natural channel, which is managed according to the lake level. If there is a high lake level, the outlet gate system may be fully opened, allowing the lake to drain by a rate of one inch per day. All streams in the study area are considered Class C by NYSDEC, suitable for fish propagation.

Floodplains

Floodplains are the low lands adjacent to streams that are susceptible to being inundated by floodwaters, especially during big storm events. Besides providing temporary storage for floodwaters, floodplains improve water quality, are ideal settings for wetlands, offer green space and provide important habitat for wildlife. The 100-year floodplain in the study area is generally located along area streams. The most significant section of floodplain in the study area is situated along at southeastern City-Town of Canandaigua boundary, along the Canandaigua Lake Outlet.

Wetlands

According to the NYSDEC, "freshwater wetlands are those areas of land and water that support a preponderance of characteristic wetlands plants that out-compete upland plants because of the presence of wetlands hydrology (such as prolonged flooding) or hydric (wet) soils. Freshwater wetlands commonly include marshes, swamps, bogs, and fens." Wetlands provide a number of important environmental functions including flood protection, erosion and sedimentation control, water quality maintenance, groundwater recharge, surface flow maintenance, fish and wildlife habitat, as well as nutrient production and cycling.

The NYSDEC regulates wetlands that are 12.4 acres or greater, which include several wetlands in the study area. The NYSDEC classifies wetlands from Class I, which provide the most benefits, to Class IV, which provide the fewest benefits. Surrounding every regulated wetland is a regulated buffer area of 100 feet. Most of the wetlands in the study area are Class II and III. However, there are five Class I wetlands in the area, all of which are associated with the Canandaigua Outlet and are located proximate to the City-Town of Canandaigua southeastern boundary.

Soils

As shown in Map 3.3-2, 83 percent of the soil in the study area is considered an important Farmland Resource, according to the United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). About 25 percent of the area's land is considered to be Prime Farmland, or comprised of soils that have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops and that is available for these uses. An additional 25 percent of the study area land is considered Prime Farmland, if drained properly. About one-third of the study area land is considered Farmland of Statewide Significance for crop production. Farmland of Statewide Importance is land that is also important for growing crops, but it has one or more soil properties which do not qualify for prime farmland. The soils of such land may be moderately erodable, may not provide ample moisture for crops, or may be less permeable to water and air.

3.4 LAND USE AND ZONING

A. Study Area

The study area includes the City of Canandaigua, most of the Town of Canandaigua, the western portion of the Town of Hopewell, and the northwestern portion of the Town of Gorham. For the purposes of the land use analysis, this Report will mainly focus on the portions of the study area in the Town and City of Canandaigua and the Town of Hopewell.

B. Existing Land Use

As shown in Table 3.4-1 and on Map 3.4-1, the most prominent land use within the study area is agriculture, which occupies over 15,000 acres or about 43 percent of the nearly 35,000 total acres of land within the area. Residential and vacant land are also significant uses in the study area, comprising 22 and 15 percent of the total acreage, respectively. Reflecting the rural nature of the area, commercial and industrial land accounts for only about six percent of the total study area. Community/public services and recreation/parkland make up approximately six and three percent of the area, respectively.

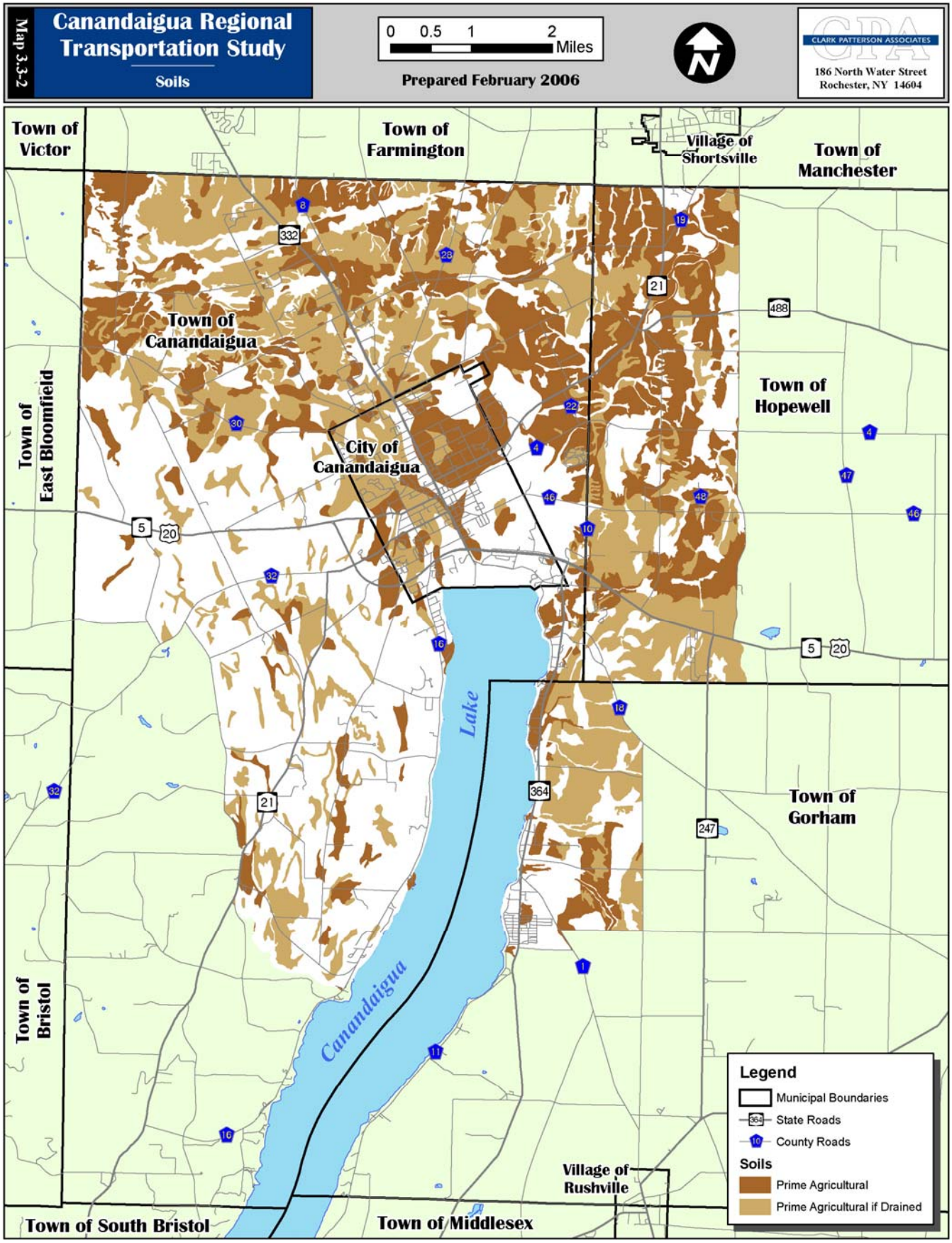

Map 3.3-2
Canandaigua Regional Transportation Study
Soils
0 0.5 1 2 Miles
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of Canandaigua
City of Canandaigua
Town of East Bloomfield
Town of Hopewell
Lake Canandaigua
Town of Gorham
Town of Bristol
Village of Rushville
Town of South Bristol
Town of Middlesex
Legend
Municipal Boundaries
State Roads
County Roads
Soils
Prime Agricultural
Prime Agricultural if Drained

TABLE 3.4-1
GENERAL LAND USE SUMMARY

Study Area

General District Type	Acreage	Percentage
Agriculture	15,036	43.3%
Residential	7,462	21.5%
Commercial	1,599	4.6%
Industrial	253	0.7%
Recreation	801	2.3%
Community Service	1,462	4.2%
Public Service	618	1.8%
Parks	112	0.3%
Vacant	5,213	15.0%
Unclassified	2,192	6.3%
Total	34,749	100.0%
Source: Ontario County Department of Planning		

Agriculture

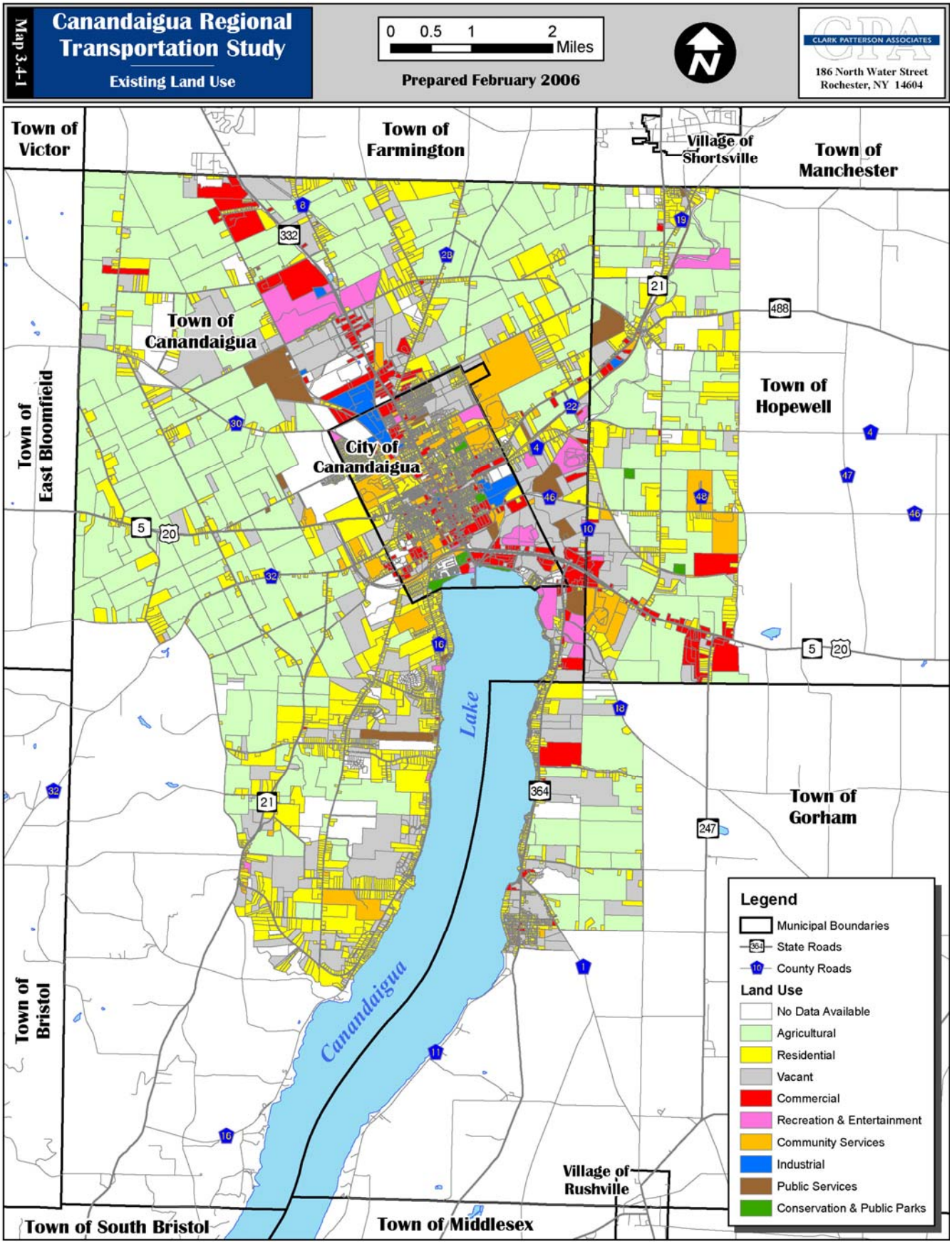
Agricultural uses dominate the northern, western and eastern portions of the study area, in the Towns of Canandaigua, Hopewell, and Gorham. Most of the agriculture uses are located within the Ontario County Agriculture Districts One, Six and Seven.

Commercial

The primary commercial areas in the study area are the SR 332 and the Routes 5&20 corridors (east of the City of Canandaigua), as well as Downtown Canandaigua. SR 332 is the study area's primary connector to the NYS Thruway and the Rochester Metropolitan Area and includes several automobile dealerships and other car-related uses. In addition, there is a Tops supermarket, a few restaurants and other small-scale commercial uses scattered along the corridor.

Routes 5&20, to the east of Main Street in the City of Canandaigua, function as the region's primary shopping area. The Routes 5&20 commercial corridor includes several plazas and "big-box" retailers, including Wegmans, Wal-Mart, and Lowes. Downtown Canandaigua is the civic center of the region and includes several government and community uses, various professional offices and smaller retailers and restaurants that cater to residents, workers and tourists. Smaller commercial nodes are situated along SR 364 (approaching Routes 5&20 from the south), and SR 21 in the northeastern portion of the study area.

There is potential for commercial expansion along the Routes 5&20 corridor to the east, where there currently is a mix of agricultural and vacant land, small-scale commercial, a few residential properties and a mobile home park. In addition, there are several vacant and agriculturally-used parcels remaining along SR 332 that are vulnerable to commercial development.


Map 3-4-1
Canandaigua Regional Transportation Study
Existing Land Use
0 0.5 1 2 Miles
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of Canandaigua
City of Canandaigua
Town of East Bloomfield
Town of Hopewell
Lake
Canandaigua
Town of Gorham
Town of Bristol
Village of Rushville
Town of South Bristol
Town of Middlesex
Legend
Municipal Boundaries
State Roads
County Roads
Land Use
No Data Available
Agricultural
Residential
Vacant
Commercial
Recreation & Entertainment
Community Services
Industrial
Public Services
Conservation & Public Parks

Residential

Residential development in the Town of Canandaigua is primarily concentrated south of the City and around the western shore and upland areas of Canandaigua Lake. In general, the neighborhoods closest to the Lake—particularly along the lakefront—are the most densely built, and the areas positioned further away from the shoreline and higher up along the ridgeline are of a lower density. However, residential lot sizes vary greatly in this area and there are several neighborhoods situated away from the lakeshore and along the ridgelines where density is relatively high for a rural area.

Dwellings in other parts of the Town of Canandaigua and in the Hopewell portion of the study area are located in sparsely distributed neighborhoods that are aligned along the frontage of roadways, with large agricultural lots positioned to the rear of the residences. Over half of the land area in the City is devoted to residential use.

Industrial

The largest industrial facility in the City of Canandaigua is Canandaigua Wine Company, located in the northwestern portion of the City. The industrial area in the southeastern portion of the City includes several older and small scale manufacturing companies and many underutilized buildings. The primary industrial uses in the Town of Canandaigua are the Tenneco Plastics facility, just north of the City, and the Infotonics Center on Campus Drive in the northern portion of the Town. There are no utilized industrial parcels in the Town of Hopewell within the study area, although a few, small-scale vacant industrial parcels are located on SR 21.

Community and Public Services

As the County seat and civic "center" for the region, several community services are located in the City—primarily centered along Main Street—including the Ontario County offices and courthouse, Canandaigua City Hall, and the Wood Library. In addition, the Thompson Health Care campus is located on Parrish Street in the western portion of the City and the Veterans' Administration (VA) Medical Center is located along Fort Hill Avenue, east of Main Street. Notable community services located outside the City include Finger Lakes Community College in the Towns of Canandaigua and Hopewell and the Ontario County Complex in Hopewell. General community uses located throughout the study area include schools, cemeteries, and churches.

Public service land uses include the Canandaigua Air Center, which is situated to the northwest of the City, and the Town of Hopewell Air Park, which is located along the Town of Canandaigua boundary in Hopewell.

Parkland and Open Space

Much of the parkland and open space in the City of Canandaigua is located along or proximate to the Lake, including the Canandaigua Lake Marine State Park, Kershaw Park and Beach, the City Pier, and the Atwater Meadows. Other parks, such as Baker Park, Jefferson Park and Sonnenberg Gardens are scattered throughout the City. Parks in the Town of Canandaigua include the 80-acre Onanda Park and New York State Department of Conservation (NYSDEC) Boat Launch, which abuts the Lake about 8 miles south of the City; Butler Road Park, which consists of a small swimming area along the Lake at the intersection of Butler Road and CR 16; Leonard R. Pierce Memorial Park, located in the hamlet of Cheshire; McJannett's Park, which is a small picnic area along SR 21; and the recently donated Richard P. Outhouse Park, located along the western boundary of the City. Other open spaces in the Town of Canandaigua include the Ontario County Fairgrounds, situated just east of the City, and the Canandaigua Country Club/Golf Course, located southeast of the City along the Lake.

Lakefront

Relatively small-lot, single-family residential is the primary use along Canandaigua Lake, especially in the Towns of Canandaigua and Gorham, although a few townhome developments exist. Public land uses located along the Lake in the Town of Canandaigua include Butler Park and the NYSDEC boat launch, which is located adjacent to Onanda Park. In addition, the Canandaigua Country Club/Golf Course is located in the Town of Canandaigua and along the Lake, southeast of the City. As mentioned under Parkland and Open Space above, the portion of lakefront in the City includes several public uses and open space such as Kershaw Park and Beach, the City Pier, Atwater Meadows and Canandaigua Lake Marine State Park.

Gateways and Borders

SR 332 is the primary gateway into the Canandaigua region from the Rochester Metropolitan Area and the NYS Thruway (I-90) to the north. Routes 5&20 provide the main access from the east and west. Though the western portion of Routes 5&20 remains primarily agricultural in nature, the largely commercial frontage along the eastern section of Routes 5&20 and SR 332 does not reflect the rural and scenic nature of the Canandaigua region.

There is an acute transition from the urban development in the City to the rural nature of the Town along most of the City-Town of Canandaigua borders, except to the north along SR 332 and the eastern boundary along Routes 5&20,

TABLE 3.4-2
GENERAL ZONING SUMMARY

General District Type	Acreage	Percentage
Agriculture	17,419	49.0%
Residential	13,299	37.4%
Commercial	1,912	5.4%
Industrial	1,887	5.3%
PUD	707	2.0%
Parks	75	0.2%
Mixed Use	279	0.8%
Total	35,578	100.0%
Source: Ontario County Department of Planning		

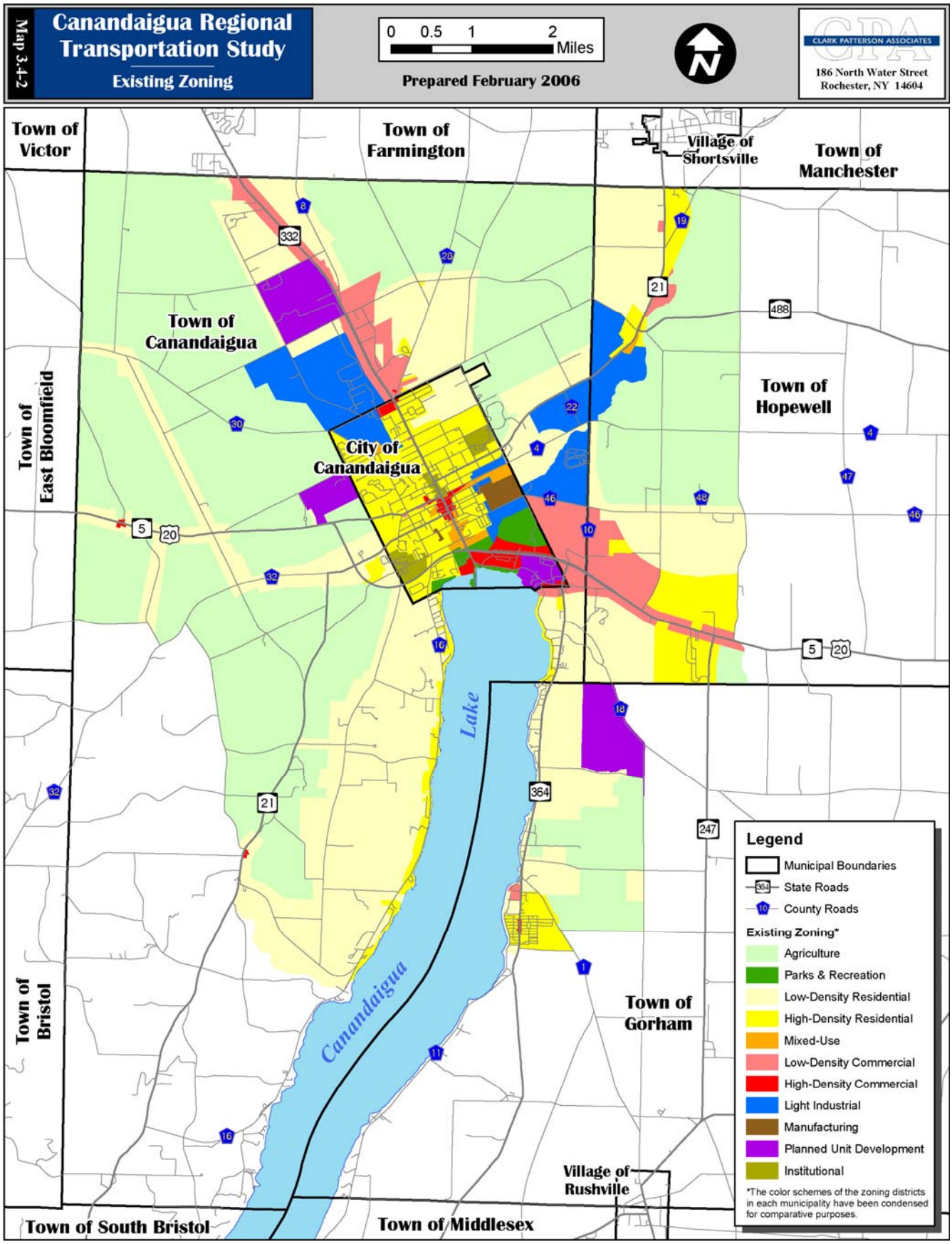
where commercial strip style development blurs the Town-City transition. The land uses located along the boundaries of the Town of Canandaigua–with the Towns of Farmington and East Bloomfield–are chiefly agricultural. Similarly, agricultural land dominates the northern portion of the Canandaigua-Hopewell townline, while there are a variety of uses along the southern section of the border.

C. Zoning Overview

As shown in Map 3.4-2 and Table 3.4-2, the most significant zoning designations in the study area are agriculture and residential, with almost one-half of the study area zoned for agricultural use and approximately 37 percent for residential. Commercially and industrially-zoned areas each account for slightly over five percent of the study area.

City of Canandaigua

The City of Canandaigua includes four commercial districts, including the Restricted Commercial District (C-1), which is distributed in small nodes along Main Street and West Avenue; the Central Business District (C-2), located along Main Street in the heart of the City; the Heavy Commercial District (C-3), situated along Routes 5&20 east of Main Street; and the Commercial Lakefront District (CL), positioned along Lakeshore Drive. The C-1 district allows limited retail and office uses that service adjacent residential neighborhoods. The C-2 district allows small retail and service uses on the first floor and commercial/office space on upper stories. Residential uses are allowed by special permit on upper floors in C-2. In addition to providing community and large scale retail, the C-3 district permits motels, hotels, auto service stations, office and light manufacturing operations. The CL district permits a variety of


Map 3.4-2
Canandaigua Regional Transportation Study
Existing Zoning
0 0.5 1 2 Miles
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of Canandaigua
Town of East Bloomfield
City of Canandaigua
Town of Hopewell
Lake
Canandaigua
Town of Bristol
Town of Gorham
Village of Rushville
Town of South Bristol
Town of Middlesex
Legend
Municipal Boundaries
State Roads
County Roads
Existing Zoning*
Agriculture
Parks & Recreation
Low-Density Residential
High-Density Residential
Mixed-Use
Low-Density Commercial
High-Density Commercial
Light Industrial
Manufacturing
Planned Unit Development
Institutional
*The color schemes of the zoning districts in each municipality have been condensed for comparative purposes.

general and tourist-oriented retail and service uses on the first floor of buildings. Upper floor principal uses in CL include commercial and community facility uses.

In terms of residential districts, the City includes a low density Single-Family District (R-1A) which is primarily situated in the outlying northeastern and southwestern portions of the City. The R-1B district allows for higher density single-family residential development and is largely located north of the West Avenue/Ontario Street corridor. The Two-Family Residential District (R-2) surrounds the downtown area and the Multiple-Family Residential District (R-3) is comprised of a few areas scattered throughout the City. The Residential Lakefront District (R-L) is located west of Main Street and along Atwater Meadows and Canandaigua Lake in the southwestern portion of the City. Single-family, two-family and multiple-family residential uses are permitted in R-L. In addition, there is a Mobile Home District (M-H) located in the southern portion of the City, east of Main Street.

There are two manufacturing districts in the City. The Light Industrial District (M-1) is largely located in the northwestern portion of the City, with a few smaller areas to the east. The Heavy Industrial District (M-2) is also located in the eastern portion of the City along the Town of Canandaigua boundary. The M-1 district allows processing, assembly, packaging or repair of previously prepared or refined material; and other uses of a light industrial nature. The M-2 district permits uses of a heavy industrial or commercial nature that meet specific performance standards which are stipulated in the City's zoning ordinance.

Other districts in the City include the Residential Institutional (R-I) and Residential Office (RO) mixed-use districts, the Health-Related District (HR), and the Parks/Recreational District (PR). The R-I district, located along Main Street south of downtown, permits a mix of institutional uses—such as hospitals, nursing homes, and charitable organizations—and single family dwellings. Government, religious, home occupations, and other office uses are special permit uses in R-I. The R-O district—situated along Main Street, south of downtown—acts as a transition area between commercial and residential districts, allowing a mix of residential, office, and limited commercial uses. The HR district—which straddles Parish Street in the western portion of the City—allows for uses associated with health care including hospitals, medical offices and laboratories, adult-care facilities and senior housing. Finally, the PR district—located in a few areas in the southern portion of the City, including part of the lakeshore— allows for parks, beaches, picnic areas, as well as various indoor and outdoor recreation facilities.

Town of Canandaigua

The largest district in the Town of Canandaigua, comprising over 50 percent of the Town's land, is the Agriculture Rural Residential District (AR-1). Most of the AR-1 district is located in the outlying northwestern and northeastern portions of the Town, as well as adjacent to the western boundary of the study area. The AR-1 district is intended to protect the Town's rural character and agricultural resources, while allowing compatible uses such as low density residential on land that does not have sewer or water infrastructure. Single-family dwelling units are allowed on lots that are at least one-acre.

The Rural Residential District (RR-3) is located in the southwestern portion of the Town, primarily along the southern edge of the study area and south of the study area. This district allows single-family housing units on lots of at least three acres, in areas where no water or sewer infrastructure is accessible. The R-1-30 district permits single-family residential units on 30,000 square-foot lots in areas that have water lines but no sewers. The R-1-30 district is primarily located west of the Lake and east of SR 21. Other areas in the Town designated as R-1-30 include an area north of the City and along a few roadways branching primarily to the west from the City.

Higher density residential development is provided by the R-1-20 district in areas equipped with both sewer and water infrastructure. The R-1-20 district allows single-family units on lots of at least 20,000 square feet and two-family dwellings on 30,000 square-foot lots. The Residential Lakeshore District (RLD) is located on a narrow strip of land along the Lake and is intended to protect the Lake's water quality as well as the scenic quality of its shoreline. The Town's Multiple-Family Residential District (MR) is located in a few scattered locations proximate to the City.

There are three commercial districts in the Town, including the Community Commercial District (CC), the Restricted Business District (RB) and the Neighborhood Commercial District (NC). The CC district is located along the SR 332 and 5&20 corridors, to the north and east of the city, respectively. Large scale commercial development is allowed in the CC district including big box retailers, malls and plazas. This district is intended to provide comparison shopping opportunities for a broad range of goods and services, serving the broader region. The RB district, located just north of the City, allows for various professional and medical offices as well as research and development facilities. The NC district allows for convenience goods and service establishments to be located in primarily residential areas and is intended to promote pedestrian activity as well as neighborhood convenience. The NC district is located in a few small areas scattered throughout the Town.

The Town's Limited Industrial District (LI) is located adjacent to the Town of Hopewell between CR 4 and SR 21. The LI district allows light industrial, research and development, high-technology, retail and warehousing operations. The Industrial District (I) is positioned in two areas, to the north and east of the City. The I district is intended to allow for a well-balanced industrial environment that does not impose negative impacts on adjacent land uses and the overall community well-being. Permitted uses in the I district include all allowed uses in the LI district, as well as manufacturing and assembly facilities, motor vehicle sales, mobile home sales, public buildings and utilities, and a number of other industrial uses.

Town of Hopewell

Roughly one-half of the Town of Hopewell, within the study area, is zoned for agricultural use. In addition to farming, the Town's Agriculture District (AG) permits single-family residential units on 40,000 square foot lots. The residentially-zoned areas in the Hopewell portion of the study area are largely situated to the south. A smaller cluster of residential districts is situated to the north along SR 21 and adjacent to the Town of Canandaigua boundary. The R-1 district allows single-family housing on 30,000 square-foot lots, as well as single-family cluster developments on 20-acre sites and mobile home parks on eight-acre sites. Higher density residential is permitted in the R-2 district, which allows single-family homes on 22,500 square-foot lots and two-family dwellings on 25,000 square-foot lots.

The part of Hopewell's Commercial District (C-1) that is within the study area, is mainly located along Routes 5&20. The C-1 district permits a variety of retail and services, offices, hotels and motels and other commercial uses. A very small area along SR 21 is designated as the Small Business Multiple Use District (SBMU), and allows small commercial establishments and various community services to be mixed in with existing dwellings.

The Industrial District (I) is situated along SR 21 and adjacent to the Town of Canandaigua boundary. Light manufacturing, machine shops and fabrication activities, as well as research and development facilities are principal uses in the I district, while junk yards and trucking and transfer stations are allowed via special permit.

D. Development Permit Trends

Countywide analysis of the number and type of development permits issued by each municipality in the region provides insight into which communities have been under significant development pressure in recent years. The Town of Victor has dominated Ontario County's development scene over the past several years. Table 3.4-3 shows the number of permits issued for residential, commercial and industrial developments between 2000 and 2002, for area municipalities and Ontario County as a whole.

Residential

From 2000 to 2002, Victor approved permits for 541 residential units, representing approximately one-third of the County's 1,651 residential permits over the same period. The Towns of Canandaigua and Farmington also experienced strong residential growth, approving permits for 148 and 146 residential units, respectively.

Commercial

From 2000 to 2002, the Town of Victor issued 52 commercial building permits, more than any other Ontario County municipality and accounting for nearly half of the County's total commercial building permit activity. The only other municipality in the study area that issued more than four permits over the same period was the City of Canandaigua with 19 (17 of which were approved in 2000).

TABLE 3.4-3
PERMITS ISSUED FOR RESIDENTIAL, COMMERCIAL AND INDUSTRIAL USES, AREA MUNICIPALITIES, 2000 - 2002

Municipality	Residential			Commercial			Industrial		
	2000	2001	2002	2000	2001	2002	2000	2001	2002
Canandaigua (C)	32	39	29	17	-	2	-	-	-
Canandaigua (T)	62	32	54	1	-	2	3	2	-
Hopewell	5	19	14	1	-	1	-	-	-
Gorham	22	28	22	-	-	-	-	-	-
Farmington	33	44	69	2	-	-	4	2	1
Victor	162	192	187	12	4	36	9	9	10
East Bloomfield	14	18	22	1	3	-	3	-	-
Manchester	24	34	37	1	2	-	-	-	-
Ontario County	490	591	570	42	20	47	20	14	13
Study Area municipalities are highlighted in gray									
Source: Genesee/Finger Lakes Regional Transportation Council, *2002 Rural County Land Use Monitoring Report*									

Industrial

The Town of Victor also led the County in industrial activity with 28 permits issued or about 60 percent of the industrial permits issued in Ontario County between 2000 and 2002. Other area municipalities which saw industrial development between 2000 and 2002 were the Towns of Farmington, Canandaigua and East Bloomfield, which issued seven, five and three industrial permits, respectively.

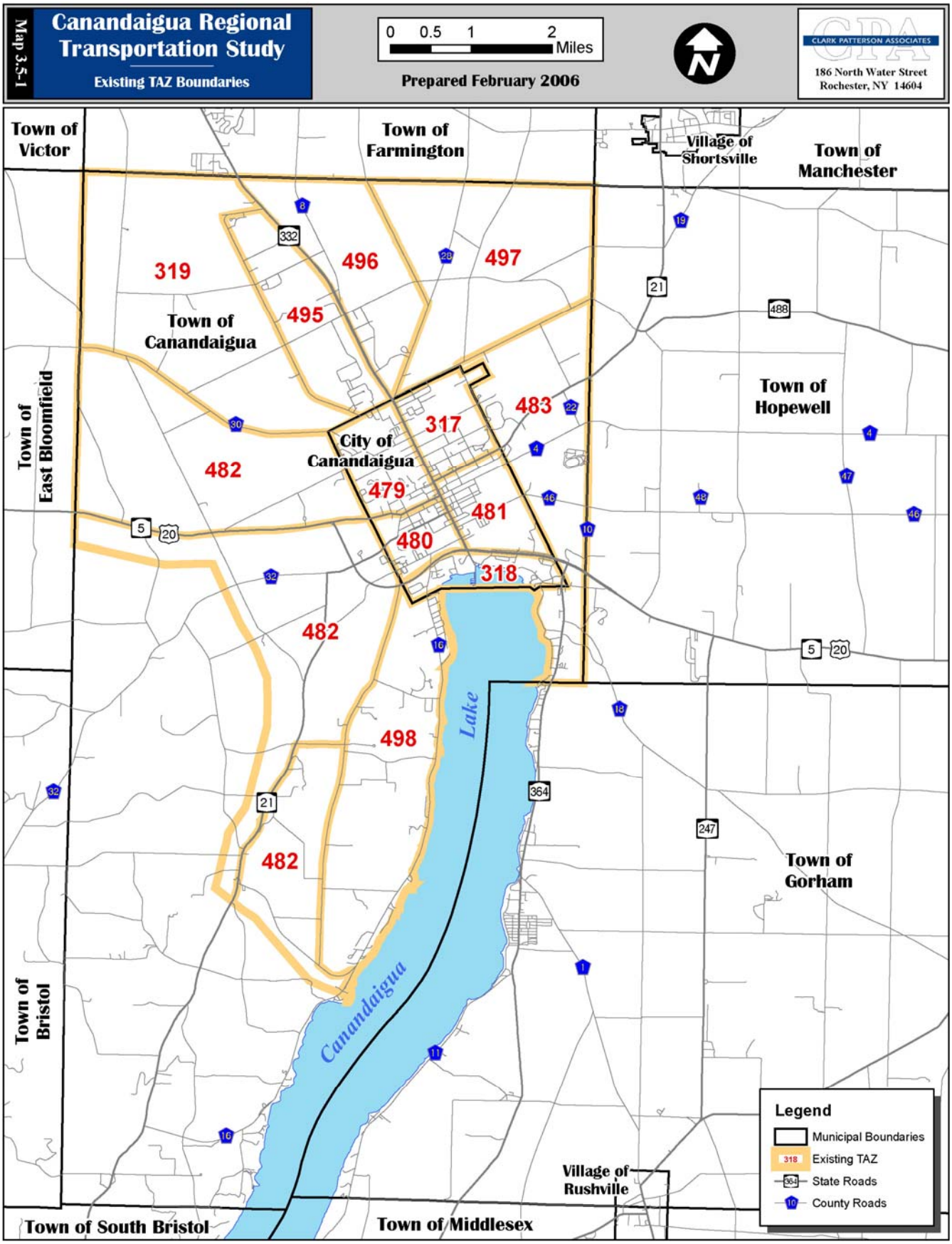
Summary

Growth pressure from the City of Rochester and Monroe County has spurred development in the northwestern portion of Ontario County, particularly in the Town of Victor. Municipalities in the region that have seen relatively strong residential growth include the Towns of Canandaigua and Farmington. While a few study area municipalities have seen some commercial and industrial development, the Town of Victor is the only municipality in Ontario County that has seen a consistent flow of non-residential development in recent years. However, the increased capacity of SR 332 (which was recently widened from two lanes to four lanes), coupled with the current residential growth trends, may further increase the rate of growth in the study area over the next several years.

3.5 Transportation Analysis Zones

Transportation Analysis Zones (TAZ) are geographic boundaries, usually based on socio-economic and land use similarities, that are used for transportation forecasting. A majority of travel demand models use the TAZ as the standard unit of data aggregation. The number of zones in a given area determine, to a large extent, the level of detail and anticipated accuracy of the modeling conducted in these areas.

The Genesee Transportation Council model originally included 10 zones within the study area (see Map 3.5-1). Although these zones had been adequate for previous regional transportation system modeling, the zones were updated during the course of this Study to allow for more detailed analysis within the study area. The new TAZ boundaries can be found on Map 4.3-1. The new TAZ boundaries, which are defined and discussed in Section 4.3 of this report, were defined primarily using Census Tract boundaries. This simplified data collection efforts and will allow for continued monitoring of socio-economic changes that could impact transportation and land use issues and trends in the future.


Map 3.5-1
Canandaigua Regional Transportation Study
Existing TAZ Boundaries
0 0.5 1 2 Miles
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of Canandaigua
Town of East Bloomfield
City of Canandaigua
Town of Hopewell
Town of Gorham
Town of Bristol
Town of South Bristol
Town of Middlesex
Village of Rushville
Lake Canandaigua
319
496
497
495
483
317
482
479
481
480
318
482
498
482
Legend
Municipal Boundaries
Existing TAZ
State Roads
County Roads

SECTION 4—FUTURE CONDITIONS

4.1 FUTURE LAND USE AND ECONOMIC CONDITIONS

A. Overview

This section reviews market conditions and opportunities relative to commercial and residential development in the study area. For the most part, information on the County as a whole provides a framework for understanding conditions in the study area. This information takes into consideration future land use plans identified by the municipalities (see Map 4.1-1).

B. Industrial Market

Ontario County offers a variety of industrial and office land, parks and buildings in nearly every community.

The pattern of development of industrial and corporate space reflects the County's prime location in the region and its great advantage in having four interchanges of the New York State Thruway within it. The interchange areas are natural locations for industrial, office and other commercial types of development. While other routes offer good access for the most part, the best corporate properties are in the north and northwest, and development opportunities decline with distance from the interstate. In some respects this advantage gives the County a great opportunity to focus growth in its northern area while preserving the rural character around the Finger Lakes to the south.

Table 4.1-1 shows the locations of the nearly 1,400 acres of land "available for development," according to the County's web site. Properties in the study area account for nearly a third of this property (433 acres, 31.5 percent).

The County Economic Development Office estimates that there is a total of approximately 800,000 square feet of industrial space available around the County in some 100-120 properties. This would suggest that most of the available properties are relatively small (in the range of 5,000-10,000 square feet).

A full assessment of the industrial and corporate land and space development is beyond the scope of this Study. However, it appears at this level of analysis that the Thruway provides very good development opportunities and there is a substantial amount of industrial land available to support development in the 10- to 20-year planning framework.

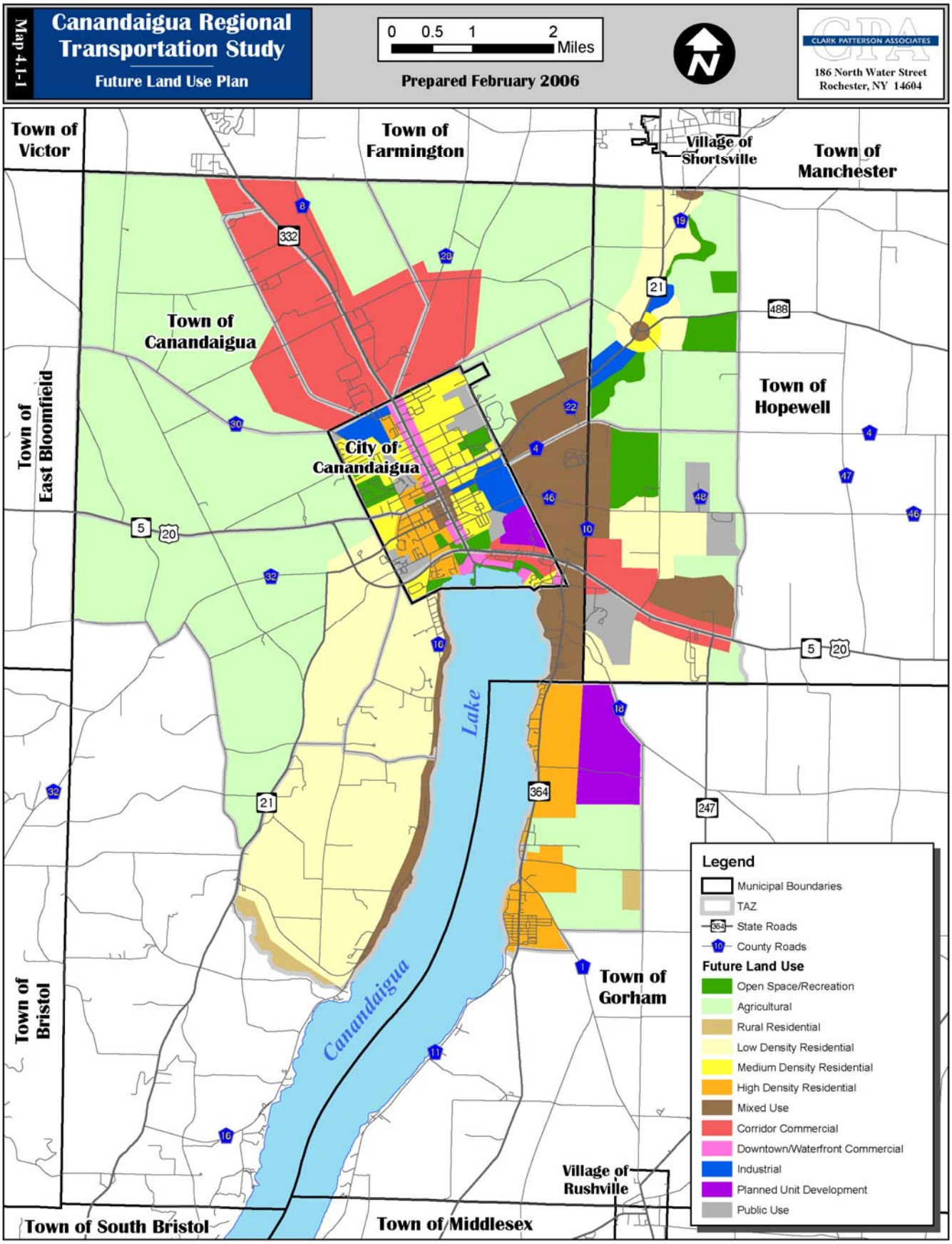

Map 4.1-1
Canandaigua Regional Transportation Study
Future Land Use Plan
0 0.5 1 2 Miles
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of Canandaigua
City of Canandaigua
Town of East Bloomfield
Town of Hopewell
Lake Canandaigua
Town of Gorham
Town of Bristol
Village of Rushville
Town of South Bristol
Town of Middlesex
Legend
Municipal Boundaries
TAZ
State Roads
County Roads
Future Land Use
Open Space/Recreation
Agricultural
Rural Residential
Low Density Residential
Medium Density Residential
High Density Residential
Mixed Use
Corridor Commercial
Downtown/Waterfront Commercial
Industrial
Planned Unit Development
Public Use

TABLE 4.1-1
AVAILABLE INDUSTRIAL PROPERTIES, ONTARIO COUNTY

Town	*Property Name*	*Location*	*Size (acres)*
Farmington		6030 Victor-Manchester Road	19.0
	Blackwood Business Center	CR 8 and 14	81.0
	Centrepointe Park N.	SR 332	64.0
		CR 41	2.3
		CR 41	9.3
		CR 41/SR 332	6.9
		CR 41/SR 332	78.9
	Collett Rd. Industrial Park	6016 W. Collett Road	17.4
		W. Collett Road	35.1
		W. Collett Road	9.7
Victor	Victor-Phillips Industrial Park	Phillips Road	15.7
	Victor Heights Corporate Park		7.0
		6484 Victor-Manchester Road	6.4
		689 Phillips Road	99.0
		760 Canning Parkway	3.2
	Canning Corp. Hi-Tech Park	Victor-Mendon Road	19.0
	Creekside Commercial Ind. Park	Victor-Mendon Road	24.0
	Eastview Hi-Tech Office Park	Victor Heights Parkway	5.5
		Fishers Run	27.1
Phelps		Phelps Junction Road	10.3
Geneva		1145 Routes 5&20	33.6
		Gates Avenue	2.0
	Geneva Industrial Park	SR 14 and Forge Avenue	50.0
		Pre-Emption Street	21.0
Canandaigua		2362 SR 332	89.0
		2486 Rochester Rd	109.8
		6335 SR 21	39.0
	Centerpointe Park	SR 332	150.0
		CR 22, CR 4	4.8
		CR 22, CR 4	5.3
		CR 22, CR 4	2.7
		CR 22, SR 21	33.0
Bloomfield		Centerpoint W, Routes 5&20	80.0
		Centerpoint W, Routes 5&20	55.0
Bristol		Daisy Meadow Subdivision, SR 64	73.0
		US 20A	15.4
Richmond		CR 37/US 20A	72.0
		Total	**1,376**

Source: Ontario County Office of Economic Development

C. Commercial Development

Ontario County is a large and dynamic retail market because of its own growth and as a result of the proximity of its northwest sector in Victor to a large portion of the Rochester market area population. The study area has shared in the expansion of retail activity, primarily through the development of superstores and highway-oriented malls in the southeast part of the City of Canandaigua. The downtown has held its own for the most part against the competition of the regional mall to the northwest and the big box stores to the east but its progress has been lukewarm and limited to a relatively small part of Main Street.

One can see that Ontario County has a strong position in the regional retail scene. The figures in Table 4.1-2 summarize data on "effective buying income" (EBI) and retail sales in the counties in the Rochester metropolitan area and the City of Rochester. EBI represents the portion of total income available for retail purchases. The figures in the table indicate the ratio of income in each county to total income in the area, and the relationship of this figure to the same proportion for retail sales. Negative figures (shown in parentheses) in the "inflow-outflow" column represent outflow, or loss of sales, while positive figures indicate inflow, or a net gain over the pattern that the standard relationship between income and sales would predict.

TABLE 4.1-2
INFLOW AND OUTFLOW OF RETAIL SALES, 2003,
ROCHESTER AREA AND SELECTED COUNTIES

County/Area	EBI ($000)	% Of Total EBI	Total Retail Sales ($000)	% Of Total Sales	Inflow-Outflow ($000)
Genesee	60	5.4%	$ 908,765	4.8%	$ (122,922)
Livingston	64.9	5.9%	$ 920,843	4.8%	$ (195,099)
Monroe	740	67.0%	$ 13,384,165	70.4%	$ 660,022
Rochester (City)	218	19.7%	$ 2,679,488	14.1%	$ (1,068,976)
Ontario	101.8	9.2%	$ 1,763,398	9.3%	$ 12,969
Orleans	44.3	4.0%	$ 577,158	3.0%	$ (184,571)
Wayne	94.2	8.5%	$ 1,449,350	7.6%	$ (170,399)
Total	**1105.2**	**100.0%**	**$ 19,003,679**	**100.0%**	-

Source: Sales and Marketing Management, 2003 Survey of Buying Power; Thomas Point Assocs.

Ontario County was one of only two counties in the region that experienced inflow; Monroe County was the other and was the leader, by a large margin, in total retail sales. There was retail outflow from all other counties and the city of Rochester, in a fairly specific range from $122 to $195 million in the four counties. Outflow from the City was over $1 billion, according to these figures. In summary Ontario County holds its own in the regional retail scene and fares

far better than four other counties in the region in terms of capture of regional spending.

There appears to be sufficient retail space in the market for the level of demand that presently exists. In the absence of significant growth in the underlying factors that fuel retail growth (increased population and business/recreation travel, and redevelopment of existing retail space) additional retail development will take supportive demand away from existing locations.

Table 4.1-3 summarizes "retail trade potential" for the areas of interest. There is no unusual feature to this pattern of retail sales and no strong differences among markets in the three areas. One might conclude that the $329 million in sales in the primary market area would support approximately 1.5 million square feet of retail space at the relatively low level of sales of $200 per square foot, or 1.0 million square feet at the $300 sales per square foot figure. By these gross measures the area would seem to have more than enough retail space given the size and strength of its economy. However, aggregate measures are rather unreliable and may provide insight into conditions but not a basis for decision-making.

TABLE 4.1-3
RETAIL TRADE POTENTIAL: PRIMARY MARKET AREA, CITY AND COUNTY

	Primary Market Area		City of Canandaigua		Ontario County	
Description	*No.*	*Percent*	*No.*	*Percent*	*No.*	*Percent*
Apparel and Accessory Stores	$14,589,883	4.4%	$7,755,647	4.4%	$64,650,344	4.4%
Automotive Dealers	$85,485,396	25.9%	$45,739,306	25.8%	$378,544,792	26.0%
Auto and Home Supply Stores	$2,040,460	0.6%	$1,105,829	0.6%	$8,979,685	0.6%
Drug and Proprietary Stores	$12,072,236	3.7%	$6,513,557	3.7%	$53,400,775	3.7%
Eating and Drinking Places	$27,578,965	8.4%	$14,709,034	8.3%	$121,995,890	8.4%
Food Stores	$46,206,050	14.0%	$24,878,540	14.0%	$204,123,707	14.0%
Furniture and Home Furn. Stores	$7,778,284	2.4%	$4,163,595	2.3%	$34,382,409	2.4%
Home Appliance, Radio, and T.V.	$4,164,171	1.3%	$2,204,285	1.2%	$18,502,836	1.3%
Gasoline Service Stations	$24,434,819	7.4%	$13,202,243	7.4%	$107,723,480	7.4%
General Merchandise	$46,956,132	14.2%	$25,191,032	14.2%	$207,527,242	14.2%
Department Stores	$40,403,174	12.2%	$21,702,285	12.2%	$178,189,311	12.2%
Hardware, Lumber and Garden	$16,533,170	5.0%	$8,890,664	5.0%	$73,060,184	5.0%
Total Retail Sales	**$329,902,514**	**100.0%**	**$177,406,852**	**100.0%**	**$1,457,009,709**	**100.0%**

Source: Claritas, Inc.; Thomas Point Associates, Inc.

Restaurants and accommodations seem diverse and sufficient in relation to existing levels of support. This is a market with seasonal peaks and it is difficult to justify additional development without an increase in the fundamental sources of demand.

D. Residential Market

In general, the housing market in the primary market area seems strong and healthy. Most units in the area are single-family/one unit detached houses. However, nearly a fourth of units in the City are in multi-family housing (see Table 4.1-4).

Single family homes in the primary market area are, for the most part, of more recent vintage. The median year of construction was 1967, and about a third of primary market area structures were built in the period 1970-1990. There has also been a greater proportion of houses built in the study area since 1995 than in the City or the County.

According to estimates in Table 4.1-5, median value of housing in the primary market area is significantly higher (9.4 percent) than for housing in the County as a whole. This is rather surprising in view of the rough equivalence of the two

TABLE 4.1-4
HOUSING UNIT CHARACTERISTICS, 2003: PRIMARY MARKET AREA, CITY AND COUNTY

Characteristic	Primary Market Area		City of Canandaigua		Ontario County	
Housing Units by Units in Structure*	*No.*	*Percent*	*No.*	*Percent*	*No.*	*Percent*
1 Unit Attached	641	6.6%	510	9.8%	2,052	4.7%
1 Unit Detached	5,234	53.6%	2,011	38.8%	28,748	65.5%
2 Units	768	7.9%	686	13.2%	2,387	5.4%
3 to 19 Units	1,851	18.9%	1,293	24.9%	5,130	11.7%
20 to 49 Units	144	1.5%	133	2.6%	505	1.2%
50 or More Units	384	3.9%	367	7.1%	869	2.0%
Mobile Home or Trailer	749	7.7%	183	3.5%	4,144	9.4%
Boat, RV, Van, etc.		0.0%		0.0%	40	0.1%
Total	**9,771**	**100.0%**	**5,183**	**100.0%**	**43,875**	**100.0%**
Housing Units by Year Structure Built*	*No.*	*Percent*	*No.*	*Percent*	*No.*	*Percent*
1999 to present	558	5.7%	180	3.5%	2,159	4.9%
1995 to 1998	491	5.0%	128	2.5%	1,864	4.2%
1990 to 1994	568	5.8%	185	3.5%	2,842	6.5%
1980 to 1989	1,495	15.3%	571	11.0%	5,891	13.4%
1970 to 1979	1,477	15.1%	698	13.5%	7,530	17.2%
1960 to 1969	926	9.5%	535	10.3%	4,003	9.1%
1950 to 1959	766	7.8%	493	9.5%	3,211	7.3%
1940 to 1949	366	3.7%	230	4.4%	1,811	4.1%
1939 or Earlier	3,124	32.0%	2,163	41.7%	14,564	33.2%
Total	**9,771**	**100.0%**	**5,183**	**100.0%**	**43,875**	**100.0%**
2003 Est. Median Year Structure Built*	1967		1954		1966	

Source: Claritas, Inc.; Thomas Point Associates, Inc.

TABLE 4.1-5
HOUSING UNITS BY VALUE, 2003: PRIMARY MARKET AREA, CITY AND COUNTY

Characteristic	Primary Market Area		City of Canandaigua		Ontario County	
	No.	*Percent*	*No.*	*Percent*	*No.*	*Percent*
Value of Owner-Occupied Housing						
Less than $20,000	260	4.6%	107	4.4%	1,380	4.7%
$20,000 - $39,999	176	3.1%	55	2.2%	1,305	4.5%
$40,000 - $59,999	268	4.8%	113	4.6%	2,146	7.4%
$60,000 - $79,999	683	12.2%	343	14.0%	4,371	15.0%
$80,000 - $99,999	1,189	21.2%	610	24.8%	6,119	21.0%
$100,000 - $149,999	1,674	29.9%	722	29.4%	7,254	24.9%
$150,000 - $199,999	677	12.1%	284	11.6%	3,311	11.4%
$200,000 - $299,999	416	7.4%	162	6.6%	1,939	6.7%
$300,000 - $399,999	92	1.6%	27	1.1%	641	2.2%
$400,000 - $499,999	54	1.0%	19	0.8%	302	1.0%
$500,000 - $749,999	59	1.1%	6	0.2%	228	0.8%
$750,000 - $999,999	40	0.7%	8	0.3%	83	0.3%
$1,000,000 or more	9	0.2%	2	0.1%	32	0.1%
Total	**5,597**	**100.0%**	**2,458**	**100.0%**	**29,111**	**100.0%**
Median Value: Owner-Occupied Housing	$106,657		$100,104		$97,497	

Source: Claritas, Inc.; Thomas Point Associates, Inc.

areas with respect to most of the measures that have been discussed. It is also interesting that housing values in the City are higher than in the County.

E. Tourism

According to a recent study (*Tourism Research, Strategic Organization and Marketing Plan*, Finger Lakes Association, 2002) Ontario County fared well in tourism from an economic perspective in the late 1990's. In fact, the County experienced the fastest growth among counties in the entire Finger Lakes region between 1995 and 1999 when comparing annual expenditures. Table

TABLE 4.1-6
TOURISM AND RECREATION EXPENDITURES, SELECTED COUNTIES, 1995-1999

Annual Expenditures (Estimated in $000's)					
County/Area/State*	***1995-96***	***1996-97***	***1997-98***	***1998-99***	***Avg Annual % Change***
Livingston	$ 9,574	$ 10,114	$ 9,185	$ 10,151	1.5%
Monroe	$ 435,986	$ 429,819	$ 444,817	$ 470,786	2.0%
Ontario	$ 47,027	$ 46,510	$ 63,641	$ 75,674	15.2%
Seneca	$ 20,045	$ 19,853	$ 20,331	$ 18,843	-1.5%
Wayne	$ 10,785	$ 9,025	$ 7,387	$ 8,349	-5.6%
Finger Lakes Region	$ 1,121,710	$ 1,113,957	$ 1,169,469	$ 1,202,739	1.8%
New York State	$ 26,200,000	$ 31,200,000	$ 35,700,000	$ 37,100,000	10.4%

Note: not all counties in the Finger Lakes Region are shown.
Source: New York State Department of Economic Development; Thomas Point Associates, Inc.

4.1-6 compares Ontario County with other counties in the region and with the State in terms of annual expenditures. The County is far ahead of the State in its average annual growth rate (15.2 percent).

Moreover, according to these figures Ontario County increased its share of the Finger Lakes regional tourism industry (a 1.2 billion dollar pie) by 50 percent in this four-year period.

There are some 44 tourism/recreation attractions in the County to capture tourist dollars, according to the study inventory. These included clusters of attractions, like "Canandaigua dining" and "hotels/motels/B&B's." It also included the seven specific places shown in Table 4.1-7 that are within the study area.

TABLE 4.1-7
TOURISM ATTRACTIONS IN STUDY AREA

1. Canandaigua: City and Downtown
2. County Tourism Visitors Center
3. Finger Lakes Performing Arts Center
4. Granger Homestead and Carriage Museum
5. Ontario County Historical Society Museum
6. Roseland Waterpark
7. Sonnenberg Gardens
Source: Tourism Research, Strategic Organization and Marketing Plan, 2002

The table does not include the lodging, restaurants and boat tours, mostly within the study area. These represent a significant component of tourism activity in the area. The study identified thirteen hotels, motels, inns and B&B's in and near the City, offering very diverse types of accommodations.

In summary, there is a range of tourist attractions in Ontario County and many are within the study area. The County seems to have fared well in the tourism industry in the late-1990's, and this cluster of activity accounted for spending of almost $76 million in 1999.

F. Market Information Summary

Industrial

Ontario County offers a variety of industrial and office land, parks and buildings in nearly every community. While other routes offer good access, the best corporate properties are in the north and northwest along the Thruway, and development opportunities decline with distance from the interstate.

Retail

The County is a large and dynamic retail market because of its own growth and as a result of proximity to a large portion of the Rochester market area population. It has been one of only two counties in the region that experienced inflow of retail sales. The study area has shared in the expansion of retail activity, primarily through retail development in the southeast part of the City of Canandaigua, but progress downtown has been limited to a relatively small part of Main Street. Restaurants and accommodations seem diverse and sufficient in relation to existing levels of support. This is a market with seasonal peaks and it is difficult to justify additional development without an increase in the fundamental sources of demand.

Residential

Most units in the area are single-family/one unit detached houses. However, nearly a fourth of units in the City are in multi-family housing. Single family homes in the study area are, for the most part, of more recent vintage. The median year of construction was 1967, and about a third of study area structures were built in the period 1970-1990. Median value of housing in the study area is significantly higher (9.4 percent) than in the County as a whole.

Tourism

The County seems to have fared well in tourism from an economic perspective in the late 1990's. There were some 44 tourism/recreation attractions in the County to capture tourist dollars, including the seven places that are within the study area. In fact, the County experienced the fastest growth among counties in the entire Finger Lakes region between 1995 and 1999 (15.2 percent) and this cluster of activity accounted for spending of almost $76 million in 1999.

E. Conclusion

The development situation appears to be a zero-sum game, for the most part. There appears to be sufficient retail space in the market for the level of demand that presently exists. In the absence of significant growth in the underlying factors that fuel retail growth (increased population and business/recreation travel, and redevelopment of existing retail space), additional retail development will take supportive demand away from existing locations. The corporate/industrial situation is similar in that there are good location opportunities to meet likely demands.

4.2 FUTURE GROWTH PROJECTIONS

The following buildout analysis, which was based on that used by G/FLRPC, was conducted to examine the potential for development to occur by the years 2010, 2020 and 2030, based on current zoning regulations. For the purposes of this analysis, only sections of the Towns of Canandaigua and Hopewell that lie within the study area, as well as the entire City of Canandaigua, were considered.

A. Methodology

In order to determine potential development, study area parcels were categorized as either fully developable, partially developable or fully built out.

Fully Developable Parcels
All parcels coded as vacant and agricultural use parcels that were not included in one of the Ontario County Agricultural Districts were considered to be fully developable.

Partially Developable Parcels
All parcels in the Towns of Canandaigua and Hopewell that were at least twice the size of the minimum lot area allowed in their designated zoning districts were considered to be partially developable (i.e., parcels with some existing development, but that were large enough to be subdivided, were considered to have further potential development capacity). Based on aerial photography of the study area, partially developable parcels were weighted with a 0.6 factor to account for existing development (i.e., 60 percent could still be developed).

Fully Built Out Parcels
These are parcels that were assumed not to have further potential development capacity, including all City parcels that were not coded as vacant or agriculture (the City was considered to be completely built out, except for vacant and agricultural land). This also includes all parcels coded for community services, public services, and public parks.

This approach is based upon zoning and availability of land and is not meant to represent the expected or potential development pattern for the study area. In fact, this analysis calls attention to the over-abundance of land zoned for particular uses in the region based upon expected growth potentials.

B. Potential Development Capacity

Table 4.2-1 shows the potential development capacity for the City of Canandaigua, and the Towns of Canandaigua and Hopewell, respectively.

City of Canandaigua
The City of Canandaigua includes 17 zoning districts including six residential (R-1A, R-1B, R-2, R-3, RL and MH), three mixed use (RI, RO and R-1AH), four commercial (C1, C2, C3 and CL), two industrial (M1 and M2), one park (PR) and one planned unit development (PUD) district. There is capacity for about 1,800 residential units in the residential and PUD districts, about half of which is located in scattered vacant parcels zoned for multiple-residential use (R-3) and one-quarter of the potential residential development is situated in the low-density residential (R-1A) district— primarily in the large vacant area in the northeastern portion of the City. In addition, there is capacity for almost 2.0 million square feet (SF) of new commercial and industrial development, including over 1.5 million SF of potential commercial development in the mixed use, commercial and PUD districts, and about 420,000 SF in the City's industrial districts (see Table 4.2-1).

Town of Canandaigua
There are 12 zoning districts in the Town of Canandaigua including one agriculture (AR-1), five residential (RR-3, R-1-30, R-1-20, RLD and MR), three commercial (RB-1, NC, and CC), two industrial (LI and I) and one planned unit development (PUD) district. In the agriculture, residential, and PUD districts, there is available capacity for 8,300 residential units. If the county agriculture districts are not considered a strong impediment to residential development in agriculturally-zoned areas, the Town has capacity for an additional11,151 housing units or a total of about 19,500 units. In the Town's commercial and PUD districts—predominantly along the SR 332 and Routes 5&20 corridors— there is capacity for about 8.2 million square feet of commercial development. The industrial districts have room for an additional 9.6 million square feet of industrial space (see Table 4.2-1).

Town of Hopewell
Within the study area, the Town of Hopewell includes six zoning districts, including one agriculture (AG), two residential (R-1 and R-2), two commercial (SBMU and C1) and one industrial (I) district. The agriculture and residential

districts have capacity for 4,100 dwelling units, assuming no development takes place on parcels that are currently used for farming and that lie within county agriculture districts. If the county agriculture districts are not considered a strong impediment to residential development in agriculturally-zoned areas, the Town has capacity for an additional 2,388 housing units or a total of over 6,500 units. There is room for 5.4 million square feet of commercial space—primarily along the Routes 5&20 corridor— and almost 3.4 million SF of space in its industrial zone along the Town of Canandaigua boundary.

Overall Study Area Capacity

Overall, the study area has capacity for over 14,000 residential units. If residential development in County agriculture districts is considered, an additional 13,539 housing units could be built, for a total capacity of almost 28,000 units. In addition, there is capacity for over 15 million SF of commercial development and more than 13 million SF of industrial space (see Table 4.2-1).

TABLE 4.2-1
BUILDOUT CAPACITY SUMMARY

Municipality	Residential (Units)	Commercial (SF)	Industrial (SF)
Canandaigua (C)	1,827	1,541,459	419,372
Canandaigua (T)	8,339	8,202,561	9,561,080
Hopewell	4,148	5,386,134	3,365,794
Total	**14,312**	**15,130,154**	**13,346,246**

Source: G/FLRPC, Ontario County Department of Planning

C. Buildout Scenarios

This section presents the likely timeline for potential development to occur in the study area. Specifically, buildout scenarios are projected for the years 2010, 2020 and 2030 for the City of Canandaigua, Town of Canandaigua and Town of Hopewell (see Table 4.2-2). Population projections from the G/FLRPC were divided by each municipality's average household size (2000 Census) to estimate the number of dwelling units that would likely be built by the years 2010, 2020, and 2030. Probable commercial and industrial development was based on recent building permit data from the Genesee/Finger Lakes Regional Planning Council's *2002 Rural County Land Use Monitoring Report.* These buildout scenarios may change significantly with regional development trends, such as further expansion of the suburbs and/or significant economic growth.

As shown on Table 4.2-2, the expected development in the study area is a small fraction of the capacity allowed by current zoning regulations. By 2030, an estimated 701 new residential units will be built in the study area, including 457 units in the Town of Canandaigua, 190 in the City and 54 in Hopewell. Also, if current commercial and industrial trends continue, about 2,467,800 SF of commercial and industrial space will be constructed within the Study Area by 2030, including 1,080,000 SF of commercial and 1,387,800 SF of industrial space.

TABLE 4.2-2
BUILDOUT SCENARIOS

Municipality	2010	2020	2030	Total
Canandaigua (C)				
Residential Units	77	68	45	190
Commercial SF	112,000	160,000	160,000	432,000
Industrial SF	22,400	32,000	32,000	86,400
Canandaigua (T)				
Residential Units	180	152	125	457
Commercial SF	112,000	160,000	160,000	432,000
Industrial SF	315,000	450,000	450,000	1,215,000
Hopewell				
Residential Units	22	18	14	54
Commercial SF	56,000	80,000	80,000	216,000
Industrial SF	22,400	32,000	32,000	86,400
Total	279 units, 639,800 SF	238 units, 914,000	184 units, 914,000	701 units, 2,467,800 sf

Note: Residential unit projections were based on population projections, which were divided by each municipality's average household size (2000 Census) to estimate the number of units. Commercial and industrial SF projections were based on recent building permit data and available development capacity. Based on recent Ontario County building permit data, it is assumed that new commercial developments will average 16,000 square feet and new industrial development will average 27,000 square feet.

Sources: G/FLRPC, *Regional Population Forecasts, December 2003;* G/FLRPC, *2002 Rural County Land Use Monitoring Report;* US Census Bureau

D. Summary

Under the existing zoning regulations there is capacity in the study area for a very large amount of growth. However, based on the population projections and building permit trends outlined in Section 3, future development over the next few decades is expected to be steady but not overwhelming.

It should be noted that a small number of large commercial or industrial projects could increase the study area's future development significantly, surpassing the amounts anticipated by this scenario. For example, one additional "big box" commercial development could quickly add 100,000 SF to the study area's commercial mix, which would account for 36 percent of the scenario's anticipated commercial development by 2010.

In addition, if a large percentage of future development occurs in a concentrated area, there could be a significant impact on the region's transportation system, particularly during peak traffic periods. A large proportion of recent residential development in the study area has been concentrated in the Town of Canandaigua, along the western side of Canandaigua Lake, where a considerable amount of developable land is still available. In addition, commercial development in the area is focused along the Routes 5&20 corridor (east of Main Street) and to a lesser degree along SR 332. There is a significant amount of land available for future development along both of these corridors. Therefore, though development will likely not approach the study area's total capacity in the foreseeable future, significant growth concentrated in specific areas may put a substantial strain on the existing transportation network.

4.3 FUTURE TAZ-BASED BUILDOUT

Given the disparity of land uses, transportation issues and the large geographic coverage areas in the existing Transportation Analysis Zones (TAZ), additional TAZ boundaries were created for the Study Area (see Map 4.3-1). This allowed for more detailed information gathering. Consequently, the question of future buildout needed to be revisited in light of the more narrowly defined sub areas within the study.

The following future buildout projections detail the anticipated development in each TAZ, broken down by development type (i.e., residential, commercial, industrial). The estimates are based on:

- Extrapolated data regarding development potential based on the Genesee/Finger Lakes Regional Planning Buildout Analysis released in 2004;
- Assessment and location of current and known future development projects;
- Input and modifications of estimated development potential from the County Planning Department and project consultants; and
- Feedback and confirmation from municipal leaders regarding the estimated development potential in their communities.

Future buildout analysis is a critical component of evaluating future transportation and land use needs. This information guided the development of the alternatives, recommendations and implementation identified in subsequent phases of this Study.

A summary of the breakdown is contained in Table 4.3-1. This data is also displayed on Map 4.3-2.

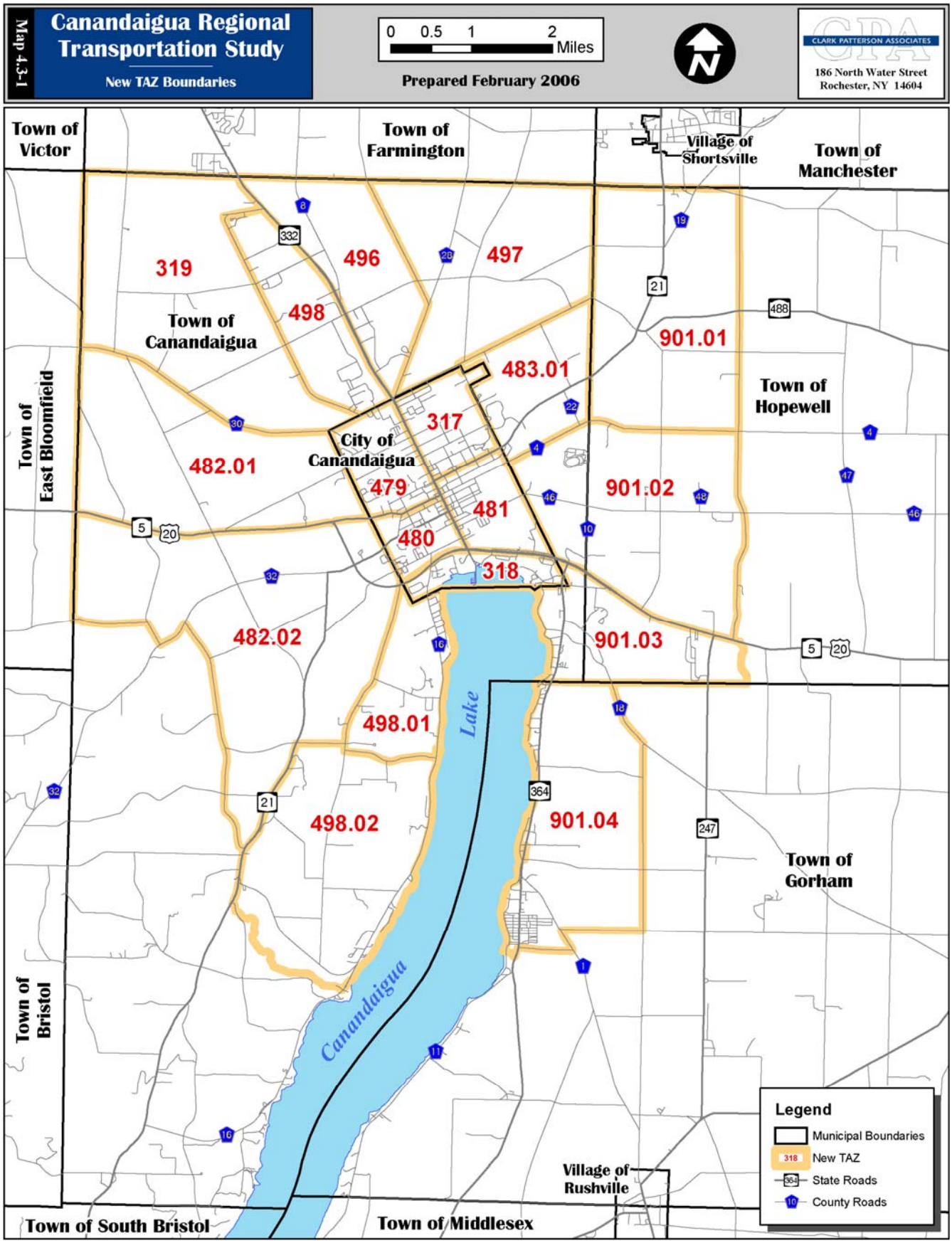
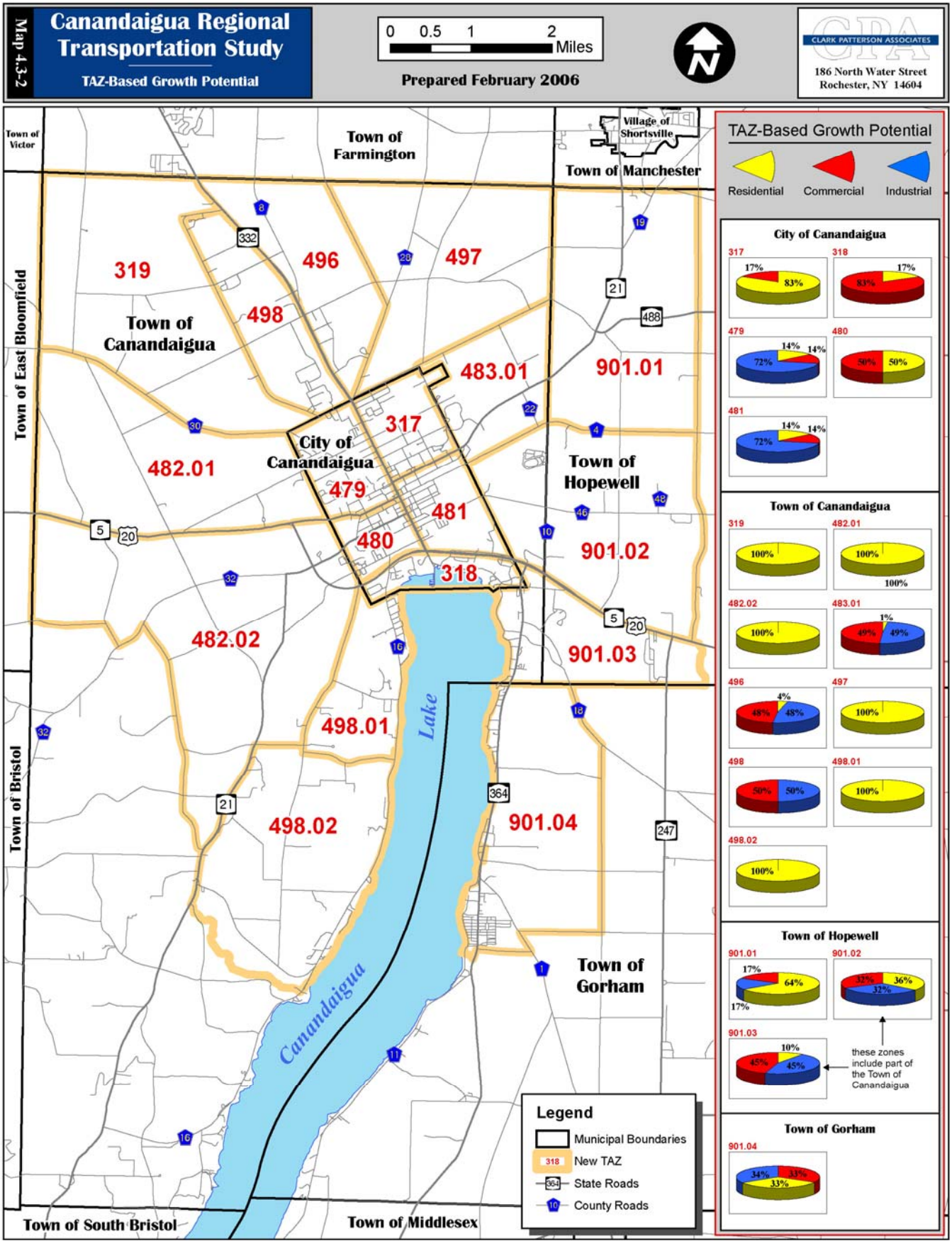

Map 4.3-1
Canandaigua Regional Transportation Study
New TAZ Boundaries
0 0.5 1 2 Miles
Prepared February 2006
CPA
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of Canandaigua
Town of East Bloomfield
Town of Hopewell
City of Canandaigua
Town of Gorham
Town of Bristol
Town of South Bristol
Town of Middlesex
Village of Rushville
Lake Canandaigua
319
496
497
498
483.01
317
482.01
479
481
480
318
901.01
901.02
901.03
901.04
482.02
498.01
498.02
Legend
Municipal Boundaries
New TAZ
State Roads
County Roads

TABLE 4.3-1
Development Potential: Allocation to Study Area by Jurisdiction and Transportation Analysis Zone (TAZ) for 2025

			Development Projection 2025				
			Residential		Commercial		Industrial
Canandaigua (T)	*% of Study Area*	*% of TAZ*	Acres 1/	*% of TAZ*	Sq. Ft. 2/	*% of TAZ*	Sq. Ft. 2/
2004: Potential			17,411		5,927,139		5,294,561
2025							
Percent			10.95		3.69		1.07
Number			1,906		218,860		56,850
Study Area Portion	0.95		1,811		207,917		54,008
319		5%	91	0%	-	0%	-
482.01		10%	181	0%	-	0%	-
482.02		10%	181	0%	-	0%	-
483.01		1%	18	30%	62,375	30%	16,202
496		3%	45	35%	72,771	35%	18,903
497		3%	45	0%	-	0%	-
498		0%	-	35%	72,771	35%	18,903
498.01		40%	724	0%	-	0%	-
498.02		29%	525	0%	-	0%	-
Canandaigua (C)							
2004: Potential			347		389,718		310,724
2025							
Percent			31.28		14.59		18.31
Number			109		56,860		56,878
Study Area Portion	1		109		56,860		56,878
317		50%	54	10%	5,686	0%	-
318		10%	11	50%	28,430	0%	-
479		10%	11	10%	5,686	50%	28,439
480		20%	22	20%	11,372	0%	-
481		10%	11	10%	5,686	50%	28,439
Gorham							
2004: Potential			20,870		138,251		407,212
2025							
Percent			1.09		1.27		0.43
Number			228		1749		1756
Study Area Portion	0.5		114		874		878
901.04		100%	114	100%	874	100%	878
Hopewell							
2004: Potential			7,811		94,906,390		785,826
2025							
Percent			2.54		0.0588		0.22
Number			199		55,758		1,748
Study Area Portion	0.8		159		44,606		1,399
901.01		40%	64	10%	4,461	20%	280
901.02		50%	79	45%	20,073	60%	839
901.03		10%	16	45%	20,073	20%	280

Source: Regional Development Analysis, G/FLRPC, 2004; Thomas Point Associates, Inc.


Map 4.3-2
Canandaigua Regional Transportation Study
TAZ-Based Growth Potential
0 0.5 1 2 Miles
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of East Bloomfield
Town of Canandaigua
City of Canandaigua
Town of Hopewell
Town of Bristol
Town of Gorham
Town of South Bristol
Town of Middlesex
Canandaigua Lake
319
496
497
498
483.01
901.01
317
482.01
479
481
480
318
901.02
482.02
901.03
498.01
498.02
901.04
TAZ-Based Growth Potential
Residential
Commercial
Industrial
City of Canandaigua
Town of Canandaigua
Town of Hopewell
Town of Gorham
these zones include part of the Town of Canandaigua
Legend
Municipal Boundaries
New TAZ
State Roads
County Roads

4.4 FUTURE VOLUMES AND OPERATIONS

A. Traffic Volumes

AADT volumes were projected for the year 2025 based on a no-build scenario. The volumes were projected using growth rates from the Travel Demand Model (TDM) developed by Kimley Horn for this Study. The existing and 2025 No Build AADT volumes for the project roadway segments are presented in Table 4.4-1.

TABLE 4.4-1
SUMMARY OF AADT INFORMATION
EXISTING & FUTURE NO BUILD CONDITIONS

SEGMENT	EXISTING (2002)	2025 NO BUILD
SR 332: Routes 5&20 to Canandaigua City Line	30,272	33,905
SR 332: Canandaigua City Line to Canandaigua-Farmington Townline Road	20,500	21,730
Routes 5&20: Cooley Road to West Ave	8,900	11,748
Routes 5&20: West Ave to SR 21	7,900	10,823
Routes 5&20: SR 21 to SR 332	11,208	13,562
Routes 5&20: SR 332 to SR 364	23,558	39,342
Routes 5&20: SR 364 to CR 10	12,000	15,000
Routes 5&20: CR 10 to Smith Road	12,000	15,120
Routes 5&20: Smith Road to Freshour Road	12,000	15,120
SR 21: CR 32 to Routes 5&20 Overlap	5,050	6,313
SR 21: SR 332 Overlap to Canandaigua City Line	10,000	11,200
SR 21: Canandaigua City Line to SR 488	8,475	10,679
SR 364: Canandaigua-Gorham Townline Road to Routes 5&20	4,176	5,095
CR 4: SR 332 to Canandaigua City Line	7,610*	9,741
CR 4: Canandaigua City Line to CR 10	7,610*	9,741
CR 4: CR 10 to Freshour Road	7,610*	9,741
CR 46: SR 332 to Canandaigua City Line	5,988	11,677
CR 46: Canandaigua City Line to CR 10	5,988	11,677
CR 46: CR 10 to Freshour Road	5,988	11,677
CR 10: Routes 5&20 to CR 46	9,968	13,656
CR 10: CR 46 to CR 4	6,926	8,865

* Note: No AADT information available. Assume AADT is PM Peak x 10.

B. Level of Service (existing and future)

Future No Build turning movement volumes were projected for all key study intersections. The Future No Build volumes were projected for the year 2025 using growth rates from the TDM for the Canandaigua area. The 2025 No Build turning movement volumes for the key study intersections are presented in Appendix B.

A capacity analysis was conducted for each of the key intersections within the study area to establish the existing and future Levels of Service (LOS). LOS is a quality measure describing operational conditions at a given location or roadway segment, taking into consideration such service measures as speed and delay. A letter grade is assigned to these locations, with similar implications to grades given in an academic setting. LOS E or F is generally considered failing.

The capacity analysis was completed using Synchro 6.0. Release 6.0 will produce a capacity analysis output compatible with the 2000 version of the Highway Capacity Manual. Table 4.4-2 presents the LOS and delay for each intersection during the PM peak period for Existing and Future No Build conditions.

TABLE 4.4-2
FUTURE LEVEL OF SERVICE SUMMARY

Intersection Name		S/U	Existing		2025 No Build	
			Delay	LOS	Delay	LOS
North Rd & Allen Rd		U				
EB	LT		0.9	A	1.1	A
SB	LR		9.8	A	11.9	B
SR 21 & CR 22		U				
WB	LT		4.7	A	5.2	A
NB	LR		14.3	B	18.2	C
SR 21 & Andrews Rd		U				
EB	LT		2.5	A	2.8	A
SB	LR		12.1	B	14.0	B
SR 21 & SR 488 / Schutt Rd		U				
EB	LTR		38.9	E	283.3	F
WB	LTR		46.8	E	329.2	F
NB	LTR		0.3	A	0.5	A
SB	LTR		1.8	A	1.8	A
Routes 5&20 & SR 364		S				
EB	L		10.6	B	12.4	B
	T		17.4	B	21.0	C
	R		6.6	A	6.9	A
WB	L		10.3	B	10.9	B
	T		18.3	B	18.3	B
	R		2.2	A	2.5	A
NB	L		33.3	C	36.2	D
	LTR		32.1	C	34.5	C
SB	L		32.0	C	32.0	C
	TR		33.0	C	33.0	C
	Overall		**18.6**	**B**	**20.1**	**C**

S – Signal controlled intersection
U – Stop sign controlled intersection
**: Delay is incalculable

TABLE 4.4-2
FUTURE LEVEL OF SERVICE SUMMARY (CONT'D)

Intersection Name		S/U	Existing		2025 No Build	
			Delay	LOS	Delay	LOS
Routes 5&20 & CR 10		S				
EB	L		21.4	C	155.1	F
	TR		2.8	A	3.1	A
WB	L		17.6	B	17.6	B
	TR		22.4	C	24.5	C
NB	L		17.3	B	18.8	B
	TR		18.1	B	19.6	B
SB	L		20.6	C	30.3	C
	T		18.2	B	19.8	B
	R		18.1	B	24.6	C
	Overall		**16.9**	**B**	**40.2**	**D**
Routes 5&20 & Smith Rd		U				
EB	LT		0.7	A	8.8	A
SB	LR		18.5	C	26.9	D
Routes 5&20 & Freshour Rd		U				
EB	LTR		1.9	A	2.3	A
NB	LTR		33.2	D	55.7	F
SB	LTR		16.9	C	23.6	C
CR 4 & CR 22		U				
EB	LT		1.6	A	2.2	A
SB	LR		241.7	F	893.0	F
CR 4 & CR 10		U				
WB	LT		3.5	A	4.6	A
NB	LR		526.9	F	**	F
CR 46 & CR 10		U				
EB	LTR		16.1	C	22.5	C
WB	LTR		17.6	C	23.1	C
NB	LTR		153.3	F	397.8	F
SB	LTR		80.6	F	254.9	F
	Overall		**95.7**	**F**	**258.2**	**F**
CR 46 & Smith Rd		U				
EB	LTR		0.9	A	0.8	A
WB	LTR		0.4	A	0.3	A
NB	LTR		11.8	B	12.3	B
SB	LTR		11.9	B	12.4	B
CR 46 & Freshour Rd		U				
EB	LTR		2.8	A	2.8	A
NB	LTR		11.9	B	12.1	B
SB	LTR		11.1	B	11.2	B

S – Signal controlled intersection
U – Stop sign controlled intersection
**: Delay is incalculable

TABLE 4.4-2
FUTURE LEVEL OF SERVICE SUMMARY (CONT'D)

Intersection Name	S/U	Existing		2025 No Build	
		Delay	LOS	Delay	LOS
Canandaigua-Farmington Townline Rd & SR 332	S				
EB L		53.9	D	53.9	D
TR		50.9	D	51.3	D
WB L		49.4	D	49.4	D
TR		49.6	D	49.6	D
NB L		12.9	B	16.2	B
TR		3.5	A	3.7	A
SB L		3.8	A	4.2	A
TR		4.6	A	4.9	A
Overall		**6.8**	**A**	**7.0**	**A**
North Rd & SR 332	S				
EB L		30.5	C	30.6	C
T		29.9	C	29.2	C
R		28.2	C	27.4	C
WB L		39.3	D	41.1	D
TR		29.6	C	29.3	C
NB L		8.7	A	11.1	B
TR		16.4	B	19.9	B
SB L		13.4	B	18.2	B
TR		12.1	B	15.4	B
Overall		**17.0**	**B**	**20.0**	**C**
Ontario Street & SR 332	S				
EB L		20.9	C	19.9	B
TR		22.0	C	21.2	C
WB L		37.5	D	44.9	D
TR		20.7	C	19.8	B
NB L		13.1	B	32.7	C
T		46.0	D	117.7	F
R		11.6	B	13.6	B
SB L		15.8	B	16.4	B
T		24.0	C	53.0	D
R		10.0	B	11.2	B
Overall		**31.7**	**C**	**70.4**	**E**
Routes 5&20 & SR 332	S				
EB L		73.2	E	73.4	E
TR		65.3	E	89.0	F
WB L		73.3	E	73.6	E
T		51.1	D	53.2	D
R		18.0	B	20.2	C
NB L		41.8	D	51.4	D
TR		43.5	D	51.1	D
SB L		79.5	E	166.4	F
T		54.4	D	83.2	F
R		33.7	C	37.3	D
Overall		**53.4**	**D**	**82.8**	**F**

TABLE 4.4-2
FUTURE LEVEL OF SERVICE SUMMARY (CONT'D)

Intersection Name		S/U	Existing		2025 No Build	
			Delay	LOS	Delay	LOS
Buffalo Road & Pearl St		U				
WB	LT		4.1	A	4.3	A
NB	LR		26.1	D	58.4	F
Parish Street & West Lake Drive		S				
EB	TR		0.4	A	0.5	A
WB	TL		26.6	C	89.6	F
NB	L		28.1	C	28.3	C
	R		27.2	C	27.2	C
	Overall		**16.6**	**B**	**43.4**	**D**
Parish Street & Pearl St		S				
EB	TL		13.5	B	18.0	B
WB	TR		0.1	A	0.1	A
SB	L		30.5	C	33.6	C
	R		24.7	C	24.2	C
	Overall		**13.3**	**B**	**15.4**	**B**
SR 21 & Routes 5&20		S				
EB	LTR		13.9	B	13.7	B
WB	LTR		16.6	B	18.5	B
NB	L		10.2	B	31.9	C
	TR		6.3	A	8.1	A
SB	L		5.8	A	7.5	A
	TR		8.4	A	11.5	B
	Overall		**10.4**	**B**	**15.1**	**B**
CR 32 & SR 21		U				
WB	LT		3.8	A	4.9	A
NB	LR		10.1	B	11.5	B
Routes 5&20 & Cooley Road		U				
EB	LTR		0.3	A	0.5	A
WB	LTR		1.1	A	1.3	A
NB	LTR		35.6	E	**	F
SB	LTR		276.4	F	**	F

S – Signal controlled intersection
U – Stop sign controlled intersection
**: Delay is incalculable

C. Level of Service (LOS) Locations

Under 2025 No Build conditions, locations operating at LOS E or F under existing conditions will continue to degrade. Due to the increased volumes caused by heavy growth in the Canandaigua area additional locations will begin to experience LOS E or F (see Table 4.4-2). The following is a summary of all locations with LOS E or F during 2025 No Build Conditions:

SR 21 / SR 488 & Schutt Road:	EB LTR – LOS F: 283.3 seconds delay WB LTR – LOS F: 329.2 seconds delay
Routes 5&20 / CR 10:	EB L – LOS F: 155.1 seconds delay
Routes 5&20 / Freshour Road:	NB LTR – LOS F: 55.7 seconds delay
CR 4 / CR 22:	SB LR – LOS F: 893.0 seconds delay
CR 4 / CR 10:	NB LR – LOS F: delay is incalculable
CR 10 / CR 46:	Overall – LOS F: 258.2 seconds delay NB LTR – LOS F: 397.8 seconds delay SB LTR – LOS F: 254.9 seconds delay
SR 332 / Ontario Street:	Overall – LOS E: 70.4 seconds delay NB T – LOS F: 117.7 seconds delay
SR 332 / Routes 5&20:	Overall – LOS F: 82.8 seconds delay EB L – LOS E: 73.4 seconds delay EB TR – LOS F: 89.0 seconds delay WB L – LOS E: 73.6 seconds delay SB L – LOS F: 166.4 seconds delay SB T – LOS F: 83.2 seconds delay
Buffalo Road / Pearl Street:	NB LR – LOS F: 58.4 seconds delay
Parish Street / West Lake Drive:	WB TL – LOS F: 89.6 seconds delay
Routes 5&20 / Cooley Road:	NB LTR – LOS F: delay is incalculable SB LTR – LOS F: delay is incalculable

KEY

EB—Eastbound NB—Northbound SB—Southbound WB—Westbound
LTR—Left, Through, and Right Movements LOS—Level of Service

D. Conclusions

Among the intersections listed on the previous page, four were identified as being a lower priority from a regional perspective, and were thus not included in the final list of project intersections.

- Routes 5&20 @ Freshour Rd.
- SR 332 @ Ontario St.
- Buffalo Rd. @ Pearl St.
- Parish St. @ W. Lake Dr.

Additionally, two of these locations had relatively low traffic volumes, raising the concern that costly improvements to these intersections would not benefit the regional population as much as the other high-volume locations. Therefore, the following intersections were identified as critical intersections with regards to their future LOS:

- Routes 5&20 @ Cooley Rd.
- CR 10 @ CR 46
- Routes 5&20 @ CR 10
- SR 332 @ Routes 5&20
- CR 4 @ CR 10
- CR 4 @ CR 22
- SR 21 @ SR 488/Schutt Rd.

Capacity analyses were conducted for these intersections with proposed improvements. The results of these analyses were compared to the Existing and 2025 No Build conditions to determine the impact the improvements will have on the Level of Service (LOS). The capacity analysis was completed using Synchro 6.0. Release 6.0 will produce a capacity analysis output compatible with the 2000 version of the Highway Capacity Manual.

SECTION 5—SUMMARY OF IDENTIFIED PROBLEMS

5.1 LAND USE AND DEVELOPMENT PRESSURES

Future land use and economic condition projections indicate that development in the study area will remain steady, while specific areas of concentrated growth could affect the existing transportation network. A significant proportion of recent residential development has occurred in the Town of Canandaigua along the western side of Canandaigua Lake. In addition, recent commercial development is occurring along the Routes 5&20 corridor and, to a lesser degree, along sections of SR 332.

The future land use plan predicts a higher concentration of commercial, residential, and mixed-use development in the north and eastern portions of the study area, while agricultural and lower density residential are expected along the western portion of the study area. The SR 332 corridor would continue to see increased commercial development north of the City of Canandaigua. A large portion of the Town of Canandaigua and a portion of the Town of Hopewell, along the CR 10 corridor, would become more developed with mixed uses. While the eastern portion of the Routes 5&20 corridor would continue to be developed with commercial and mixed uses. Even a portion of the Town of Gorham is projected to see higher density residential development along the SR 364 corridor.

5.2 SAFETY AND OPERATIONS

Eight of Ontario County's 44 tourism/recreation attractions are located within the study area. The tourism industry in the County grew by over 15 percent between 1995 and 1999. In order to continue to capture this important source of revenue, travel/access was deemed critical to the success of the industry. Improvements along SR 332, including wayfinding signage for attractions, increased pedestrian and bicyclist accommodations, and enhanced streetscaping features were all identified.

Analysis of existing traffic data indicates that seven intersections and two roadway segments experience above significant safety issues (see page 34). One of the two roadway segments experiencing significant safety issues is SR 332 in the City of Canandaigua. A total of fourteen pedestrian accidents occurred on this roadway segment, with a majority at intersections. One pedestrian fatality occurred on SR 332 at the intersection of Fort Hill Avenue.

Existing traffic volumes and operations indicate that six intersections within the study area experience significant delay and operate with unacceptable levels of service on various turning movements. Future traffic volumes and operations indicate that seven intersections within the study area, one more than under existing conditions, would experience increased delays and would operate with unacceptable levels of service on various turning movements.

Three of the intersections that are currently experiencing delays are also experiencing significant safety issues. Four of the intersections that will experience future delays are currently experiencing significant safety issues.

Table 5.2-1 presents a summary of the 12 locations considered critical in terms of safety and/or LOS. Note that three of these locations have been modified since the data was collected and therefore were not included for final consideration as project recommendations. It is recommended that these locations be monitored and screened when there is sufficient accident data available, after the implementation of the improvements, to determine whether the improvements have corrected the safety issues or if additional improvements are necessary.

TABLE 5.2-1
SUMMARY OF IDENTIFIED PROBLEMS

Intersection	Accident Rate			Level of Service (Movement)	
	Existing [1]	Statewide Average	Rank [2]	Existing	2025 No-Build
Routes 5&20 at SR 332	--	--	NR	E (SB & WB Left, EB)	F (SB & EB), E (WB Left)
Routes 5&20 at SR 21	0.82	0.59	S1	--	--
Routes 5&20 at SR 364	0.56 [3]	0.46	S7	--	--
SR 21 at SR 488 / Schutt Road	--	--	NR	E (EB & WB)	F (EB & WB)
Routes 5&20 at CR 10	0.91 [3]	0.46	S6	--	F (EB)
Routes 5&20 at Cooley Road	0.96	0.35	S3	E (NB), F (SB)	F (NB & SB)
CR 10 at CR 46	0.59	0.35	S4	F (NB & SB)	F (NB & SB)
CR 4 at CR 10	0.57	0.16	S5	F (SB)	F (SB)
CR 4 at CR 22	--	--	NR	F (NB)	F (NB)
Parish Street at West Lake Drive	0.45 [3]	0.35	S9	--	--
Segment					
SR 332: Routes 5&20 to City Line	3.15	5.05	S2		
Routes 5&20: SR 364 to CR 10	5.92 [3]	5.66	S8		

1. Accident Analysis was performed for the 5-year period from June 1997 to May 2005.
2. S1=Most Significant Safety Issues, S10=Least Significant Safety Issues (See Page 34)
3. Modifications have been made to this location since the analysis. Accident rate is expected to drop.

NR = Not Ranked

Although the Routes 5&20 and SR21 intersection had an above average accident rate, it did not have any notable LOS problems, either existing or in the future, reducing its regional significance as a critical intersection for improving overall traffic circulation. It is recommended that this intersection be considered for modifications that will improve safety conditions. However, this study does not recommend specific improvements to the intersection because, from a regional perspective, its LOS is adequate. Conceptual plans for the remaining eight locations (seven intersections and one segment) are outlined in Section 6.

5.3 IDENTIFYING CRITICAL INTERSECTIONS AND PROJECT RECOMMENDATIONS

The following steps summarize the process of identifying project recommendations within the study area. Each of these steps takes into consideration information provided by the Steering Committee, stakeholders, focus groups, and the general public.

Step	Action	Page Reference
1	Identify study area goals.	10-13
2	Identify key regional roadways and intersections.	14-15
3	Collect traffic data (turning movements, traffic volumes, accident history, etc.) as well as anecdotal information for these roadways and intersections.	16-31
4	Create a list of locations with notable safety concerns.	34
5	Create a list of non-vehicular transportation issues in the study area, including public transit systems, bicycle amenities, and pedestrian environments.	40-42
6	Create a list of intersections with Level of Service (LOS) E or F (which is generally considered failing) under 2025 no build conditions.	89
7	Among these three lists, identify areas where infrastructure improvements would have a notable positive effect on safety, operations, regional circulation, and overall quality of life. Additionally, improvements should be consistent with and support the future land use objectives of municipalities in the region.	**
8	Develop conceptual plans and specific recommendations for improving conditions in areas identified in step #7.	101-116
9	Evaluate and prioritize these specific projects, considering their impact on safety, operations, regional circulation, and the environment, as well as their estimated costs.	117-119
10	Create a phasing and implementation plan for these potential projects, recommending them as near-, medium-, and long-term projects.	120-122

** This step is not limited to a specific section in this Study, but rather is the culmination of all data analysis, transportation planning, traffic engineering, and public input.

SECTION 6—IMPROVEMENT ALTERNATIVES

The alternatives examined respond directly to the data collected and analysis conducted related to transportation, land use and development issues present in the study area and surrounding region. The future improvements outlined and reviewed in this section pertain to four key areas:

- Bypass Options
- Intersection Improvements
- Main Street Pedestrian Improvements
- Multi-Modal Enhancements

The following section includes an examination of the alternatives developed as a result through the Study process.

6.1 BYPASS OPTIONS

Throughout the planning process, bypass options were presented and discussed as potential solutions for current and perceived traffic congestion along SR 332 in the City of Canandaigua. The purpose of constructing a bypass around the east, west, or both sides of the City of Canandaigua would be to provide congestion relief for SR 332 (Rochester Road and Main Street) and an alternative route for through traffic. A travel demand model based on existing regional modeling and projections developed as part of this study was used in the evaluation of each proposed bypass alternative. The model, based in TransCAD, develops travel demand forecasts for the 2002 and 2025 PM peak hours. The model was used to study the existing (2002), future (2025) no-build, and future (2025) build (with bypass) conditions. Adjustments to the model were made based on updated socio-economic data for more refined traffic analysis zones (TAZs) within the 2025 model.

The model evaluation focused on the impact of each alternative with respect to three measures-of-effectiveness (MOEs): vehicle miles traveled (VMT), vehicle hours traveled (VHT), and vehicle hours of delay (VHD). A study of the MOEs helped to identify the regional impact of each alternative with respect to reduction in the distance the public would have to travel to reach a desired destination (VMT), the time required to make a trip (VHT), and the amount of delay that would be encountered while traveling (VHD). To supplement the study of these MOEs, the model was also used to evaluate the shift in traffic patterns that would occur if a bypass was constructed.

In addition to evaluations prepared using the travel demand model, an intersection-level analysis was completed for the SR 332/Routes 5&20 intersection using Synchro and aaSidra software. This intersection was evaluated as a conventional signalized intersection as well as a modern roundabout. Intersection level of service and delay were developed and are reported for each scenario studied.

A. Bypass Alternatives

Four bypass alternatives are described below and are shown in Map 6.1-1:

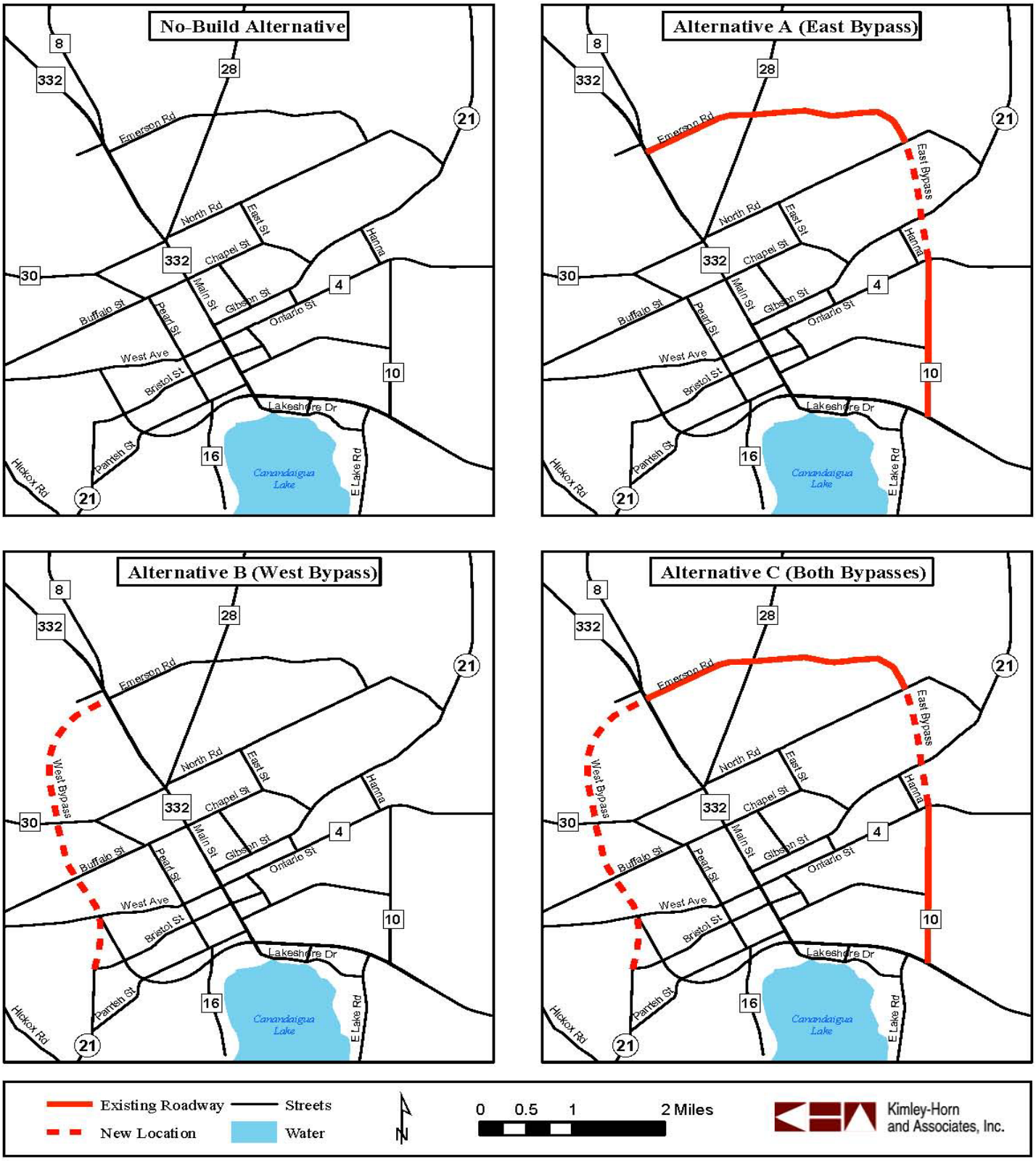
No-Build Alternative
The 2025 GTC model was run without the addition of a bypass. Consistent with other alternatives studied, updated and refined land use data forecasted for 2025 was loaded onto the network to develop future traffic volumes.

Alternative A (East Bypass)
This alternative examined the effect of the construction of a bypass to the east of downtown Canandaigua. The East Bypass would extend northeasterly on Routes 5&20 (Eastern Boulevard) on the south and follow CR 10 to CR 4. Between CR 4 and North Road, a new section of road would be constructed. North of North Road, the bypass would utilize Allen and Emerson Roads until reaching SR 332. The bypass was assumed to be two lanes with a 45 miles per hour (mph) speed limit for the combination of roads.

Alternative B (West Bypass)
This alternative examined the effect of the construction of a bypass to the west of downtown Canandaigua. The West Bypass would extend southerly from CR 332 north of the City. It would start with Thomas Road heading west and then turn south on new alignment near the airport and cross CR 30, Buffalo Street, and West Avenue. The bypass would tie into CR 32 and SR 21 at its south terminus. The bypass was assumed to be two lanes with a 45 mph speed limit.

Alternative C (both bypasses)
his alternative examined the effect of having two bypasses around downtown Canandaigua—one to the east (Alternative A) and one to the west (Alternative B). In this alternative, both bypasses were assumed to be two lanes and have a speed limit of 45 mph.

Map 6.1-1


No-Build Alternative
Alternative A (East Bypass)
Alternative B (West Bypass)
Alternative C (Both Bypasses)
East Bypass
West Bypass
Emerson Rd
North Rd
East St
Chapel St
Main St
Gibson St
Ontario St
Hanna
Buffalo St
Pearl St
West Ave
Bristol St
Lakeshore Dr
Parrish St
Hickox Rd
E Lake Rd
Canandaigua Lake
8
332
28
21
30
4
10
16
Existing Roadway
New Location
Streets
Water
N
0 0.5 1 2 Miles
Kimley-Horn and Associates, Inc.

B. Evaluation of Alternatives

Alternatives were evaluated on a system and corridor basis. The system evaluation considered the effect of the bypass on the entire model network, whereas the corridor evaluation studied the effect of the alternatives on SR 332. The system was evaluated by computing the differences in VMT, VHT, and delay between alternatives. The corridor was evaluated through a study of total volume, average speed, and vehicle delay differences on SR 332 between Routes 5&20 and Emerson Road. The technical memorandum containing the detailed evaluation is included in Appendix D of this Study.

C. Summary of Findings

A bypass around the east, west, or both sides of the City of Canandaigua would likely provide long-term traffic benefits, such as reducing traffic volumes on Main Street. However, in the near term, additional analysis of potential construction costs should be conducted to weigh these benefits against the potential costs. Based on forecasts from the regional model, significant traffic increases (i.e., greater than 20 percent) are not expected in the next 20 years. While a bypass may be a suitable long-term improvement, there are a number of near-term measures that could be implemented. These measures have the potential to improve traffic operations in the City while maintaining the character of SR 332 as Main Street in Canandaigua. In addition, the US Environmental Protection Agency designated the six-county Metropolitan Statistical Area as being a non-attainment of federal standards for ground-level ozone. As such, the construction of any new roads would require much more stringent standards to be met in order to qualify for federal funding.

6. 2 INTERSECTION IMPROVEMENTS

Seven critical intersections (taken from Table 5.2-1) were identified in the study area as high priorities for future improvements (see process outlined on page 93):

Intersection	Project Alternative # (see Map 6.2-1)
Routes 5&20 @ Cooley Road	1
SR 21 @ SR 488 and Schutt Road	2
CR 10 @ CR 46	3
Routes 5&20 @ CR 10	4
SR 332 @ Routes 5&20	5
CR 4 @ CR 10	6
CR 4 @ CR 22	7

Map 6.2-1 illustrates their locations within the study area, and the subsequent eight pages contain preliminary concept plans for each intersection. The concepts provide current and projected operations, illustrations, and narrative describing the conceptual improvements, project considerations and preliminary cost estimates. Each intersection contains a brief overview of the following elements:

Problem Identification
A brief description of current and/or future safety and operation failures as well as other conditions (pedestrian access, land use, etc.) that warrant future improvement and enhancement.

Proposed Improvements
A summary of recommendations for improving intersection operation and safety.

Multi-modal Options
A review of opportunities to improve bike, pedestrian or transit access at the location, if any exist or are needed.

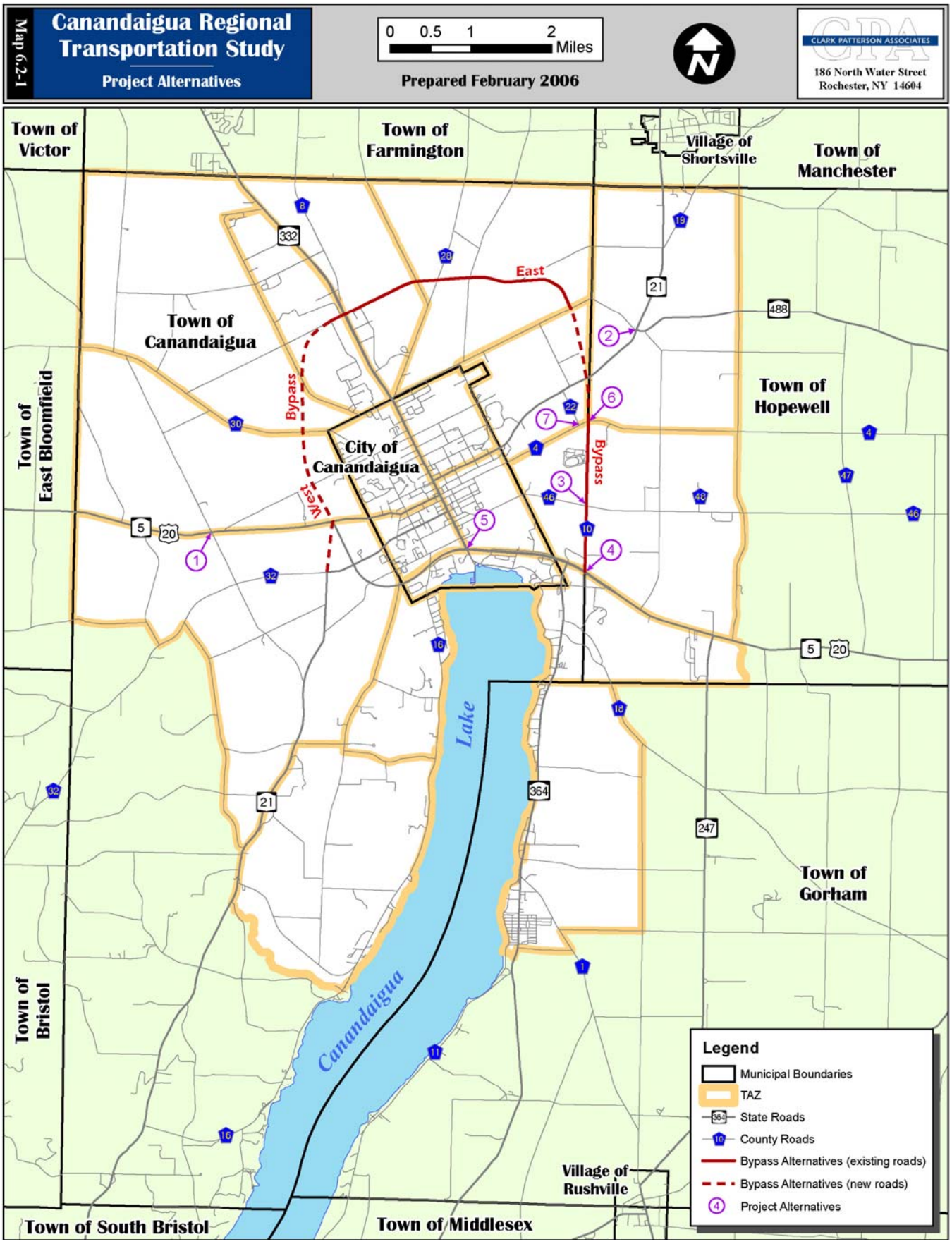
Environmental, Economic, Quality of Life
Archeological sites, historic places, wetlands and hazardous waste sites proximate to the intersections could affect the timing, cost or feasibility of a proposed improvement. These issues, identified in Map 6.2-2, are addressed for each of the proposed concepts.

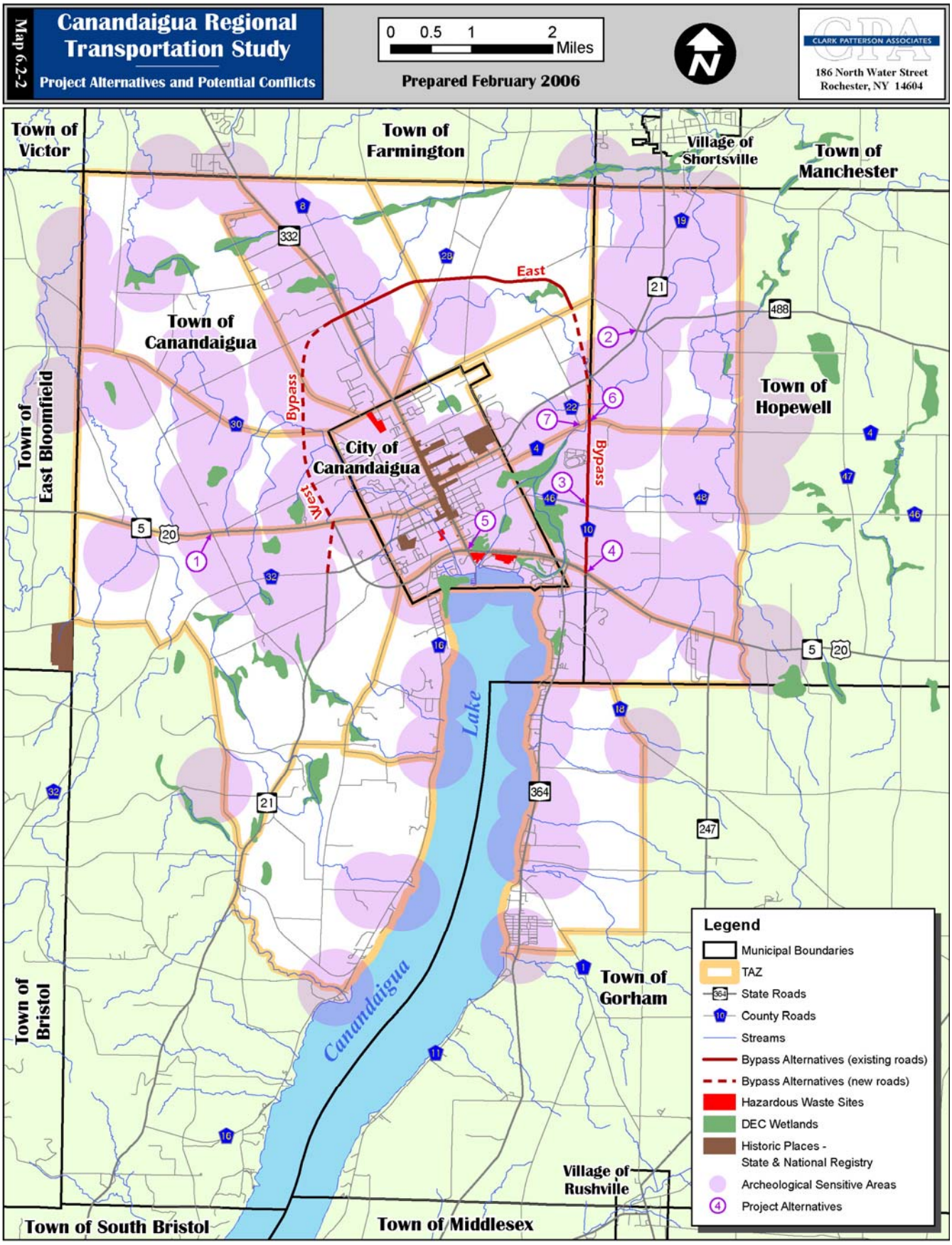
Preliminary Cost Estimate
A preliminary cost estimate has been provided for each proposal. Estimates are based on 2005 NYSDOT Average Weighted Unit Bid Price, except for roundabout estimates, which were based on similar NYSDOT projects. The cost estimates do not include costs associated with environmental issues (e.g. hazardous waste and wetlands) or right-of-way acquisition.

Anticipated Benefit
A summary of benefits resulting from proposed improvements.

These elements of the conceptual plans were incorporated in the improvement ranking addressed in Section 7 of this Report. It should be noted that proposed improvements at each of the intersections were developed to support NYSDOT standards and guidelines.

Ultimately, these conceptual plans will assist the County and municipalities with future capital improvement decisions as well considerations for future roadway reconstruction projects undertaken by NYSDOT.


Map 6.2-1
Canandaigua Regional Transportation Study
Project Alternatives
0 0.5 1 2 Miles
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of Canandaigua
Town of East Bloomfield
Town of Hopewell
City of Canandaigua
East
Bypass
West
Bypass
Lake
Canandaigua
Town of Bristol
Town of Gorham
Village of Rushville
Town of South Bristol
Town of Middlesex
Legend
Municipal Boundaries
TAZ
State Roads
County Roads
Bypass Alternatives (existing roads)
Bypass Alternatives (new roads)
Project Alternatives


Map 6.2-2
Canandaigua Regional Transportation Study
Project Alternatives and Potential Conflicts
0 0.5 1 2 Miles
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of Canandaigua
Town of East Bloomfield
Town of Hopewell
City of Canandaigua
East
West
Bypass
Bypass
Lake
Canandaigua
Town of Gorham
Town of Bristol
Town of South Bristol
Town of Middlesex
Village of Rushville
Legend
Municipal Boundaries
TAZ
State Roads
County Roads
Streams
Bypass Alternatives (existing roads)
Bypass Alternatives (new roads)
Hazardous Waste Sites
DEC Wetlands
Historic Places - State & National Registry
Archeological Sensitive Areas
Project Alternatives

1. ROUTES 5&20 AT COOLEY ROAD

EXISTING

PRELIMINARY CONCEPT

Problem Identification

Future 2025 conditions with high peak hour left-turn volumes from Cooley Road along with high right-turn volumes and travel speeds from Routes 5&20 yield unacceptable LOS F conditions on both Cooley Road approaches to Routes 5&20.

A total of 18 intersection accidents were identified for the period covering 06/97— 05/02. This yields an intersection accident rate of 0.96 which is ***above*** the state-wide average rate of 0.35 for this type intersection. Right angle accidents were the predominant accident type (44%). High travel speeds for motorists traversing the intersection, and limited sight distance for vehicles entering Routes 5&20 are probable causes for these accidents.

Proposed Improvements

Future improvements needed to address 2025 conditions:

- SB left-turn lane on Cooley Road
- WB right-turn lane on Routes 5&20
- New traffic signal

Traffic Operations/Level of Service Results

Intersection Name		Existing 2004		No Build 2025		Full Build 2025	
		Delay	LOS	Delay	LOS	Delay	LOS
Rt. 5/20 & Cooley Rd. (U/S*)							
EB	LTR	0.3	A	0.5	A	9.3	A
WB	LTR (LT)	1.1	A	1.3	A	11.9	B
	(R)	n/a	n/a	n/a	n/a	6.1	A
NB	LTR	35.6	E	**	F	15.5	B
SB	(L)	n/a	n/a	n/a	n/a	27.0	C
	LTR (TR)	276.4	F	**	F	16.5	B
	Overall	**n/a**	**n/a**	**n/a**	**n/a**	**13.5**	**B**

S/U: Signalized/Unsignalized
* Signalized in Full Build
** Delay is incalculable
(T) Values in parenthesis represent Full Build conditions

Multi-modal Options The proposed project will include widened shoulders and pedestrian signal indicators as needed.

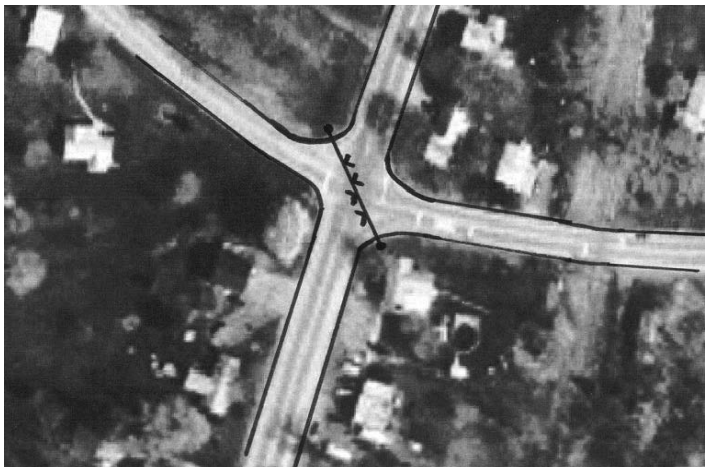
Environmental, Economic, QOL The project is situated in a potentially sensitive archeological area. No identified state wetlands are located within the project area. The project will serve to better accommodate the local and regional flow of trucks and goods movement and tourism traffic.

Preliminary Cost Estimate Total cost estimate for improvements is $320,000, includes a 25% contingency.

Anticipated Benefit Acceptable operating and delay conditions indicative of LOS C or better will be achieved on all intersection approaches with the recommended improvements in place. Additionally, the proposed improvements will improve safety at the intersection.

2. SR 21 AT SR 488 AND SCHUTT ROAD

EXISTING



PRELIMINARY CONCEPT

Problem Identification

Future 2025 conditions with high east/west peak hour volumes on Schutt Road and SR 488 yield unacceptable LOS F conditions on both approaches to SR 21. Acceptable operating and delay conditions indicative of LOS B or better will be achieved on all intersection approaches with the recommended traffic signal improvements in place.

A total of 6 intersection accidents were identified for the period covering 06/97 - 05/02. This yields an intersection accident rate of 0.34 that is ***near*** the statewide average accident rate of 0.35 for this type intersection.

Traffic Operations/Level of Service Results

Intersection Name	Existing 2004		No Build 2025		Full Build 2025	
	Delay	LOS	Delay	LOS	Delay	LOS
Rt. 21 & Schutt Rd. (U/S*)						
EB LTR	38.9	E	283.3	F	15.6	B
WB LTR	46.8	E	329.2	F	18.1	B
NB LTR	0.3	A	0.5	A	8.0	A
SB LTR	1.8	A	1.8	A	8.2	A
Overall	n/a	n/a	n/a	n/a	11.5	B

S/U: Signalized/Unsignalized; * Signalized in Full Build

Proposed Improvements

Future improvements needed to address 2025 conditions:

- New traffic signal

Multi-modal Options: Pedestrian/bicycle enhancements will be considered at the advanced planning and design level, since residential pedestrian generators are adjacent to the intersection.

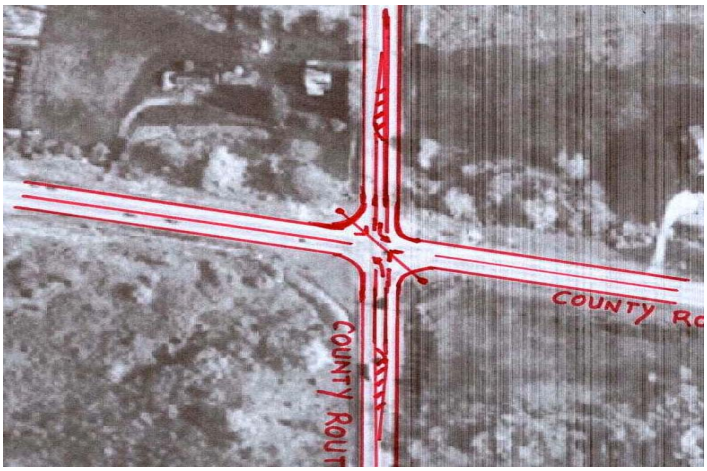
Environmental, Economic, QOL: The project is situated in a potentially sensitive archeological area. No identified state wetlands are located within the project area. The project will serve to better accommodate the local and regional flow of traffic in the area.

Preliminary Cost Estimate: Total cost estimate for improvements is $112,500 which includes a 25% contingency.

Anticipated Benefit: Adding a traffic signal to this intersection will increase safety and raise the LOS to B.

3. CR 10 AT CR 46

EXISTING



PRELIMINARY CONCEPT

Problem Identification

Future 2025 conditions with high peak hour volumes on CR 10 yield unacceptable LOS F conditions at the current four-way stop-controlled intersection. Acceptable operating and delay conditions indicative of LOS C or better will be achieved on all intersection approaches with the recommended improvements in place.

A total of 14 accidents were identified at this intersection. This equates to a 0.59 intersection accident rate, which is ***above*** the 0.35 state-wide average intersection accident rate for this type intersection. Right angle accidents were the predominant accident type (42.9%). Rear-end crashes accounted for 35.7% of the total accidents. Common accident causes included failure to yield the right-of-way, and disregard for traffic control.

Proposed Improvements

Future improvements needed to address 2025 conditions:

- NB & SB left-turn lanes on CR 10
- New traffic signal control

Traffic Operations/Level of Service Results

Intersection Name		Existing 2004		No Build 2025		Full Build 2025	
		Delay	LOS	Delay	LOS	Delay	LOS
CR 10 & CR 46 (U/S*)							
EB	LTR	16.1	C	22.5	C	16.9	B
WB	LTR	17.6	C	23.1	C	28.6	C
NB	(L)	n/a	n/a	n/a	n/a	9.9	A
	LTR (TR)	153.3	F	397.8	F	11.0	B
SB	(L)	n/a	n/a	n/a	n/a	5.1	A
	LTR (TR)	80.6	F	254.9	F	9.8	A
	Overall	95.7	F	258.2	F	13.3	B

S/U: Signalized/Unsignalized; * Signalized in Full Build
(T) Values in parenthesis represent Full Build conditions

Multi-modal Options The proposed project will include widened shoulders and pedestrian signal indications as needed.

Environmental, Economic, QOL The project is situated in a potentially sensitive archeological area. No identified wetlands are located within the project area. The project will serve to better accommodate growth and near-by development and land use destinations serving Ontario County, and local traffic circulation needs around the City of Canandaigua.

Preliminary Cost Estimate Total cost estimate for improvements is $320,000, includes a 25% contingency.

Anticipated Benefit Recommended improvements will improve operating and delay conditions to LOS C or better on all approaches. Additionally, the proposed improvements will improve safety at the intersection.

4. ROUTES 5&20 AT CR 10

EXISTING

PRELIMINARY CONCEPT

Problem Identification

Increased traffic from local and regional traffic growth through this intersection yields future 2025 traffic conditions with long delay conditions for EB left-turns into CR 10, and overall intersection LOS D conditions. Increased queues on CR 10 adversely impact adjacent driveways.

This intersection was identified as a high accident location by NYSDOT. A total of 40 accidents were identified for the period covering 06/97—05/02. This yields an accident rate of 0.91which is ***above*** the 0.46 state-wide average for this type intersection. It is important to note that modifications have been made to this intersection since the years in which the accident data were collected. The intersection has been re-striped to separate left-turns from the mainline. This intersection should be screened again when there is sufficient accident data after the date of the re-striping modification.

Proposed Improvements

Future improvements needed to address 2025 conditions:

- WB right-turn lanes on Routes 5&20
- Existing traffic signal modifications
- Driveway access management on CR 10
- Sidewalks

Traffic Operations/Level of Service Results

Intersection Name		Existing 2004		No Build 2025		Full Build 2025	
		Delay	LOS	Delay	LOS	Delay	LOS
Rt. 5/20 & CR 10 (S)							
EB	L	21.4	C	155.1	F	20.3	C
	TR	2.8	A	3.1	A	3.9	A
WB	L	17.6	B	17.6	B	22.8	C
	TR (T)	22.4	C	24.5	C	31.4	C
	(R)	n/a	n/a	n/a	n/a	18.3	B
NB	L	17.3	B	18.8	B	32.4	C
	TR	18.1	B	19.6	B	41.7	D
SB	L	20.6	C	30.3	C	32.6	C
	T	18.2	B	19.8	B	21.7	C
	R	18.1	B	24.6	C	22.6	C
Overall		16.9	B	40.2	D	22.6	C

S/U: Signalized/Unsignalized
(T) Values in parentheses represent Full Build conditions

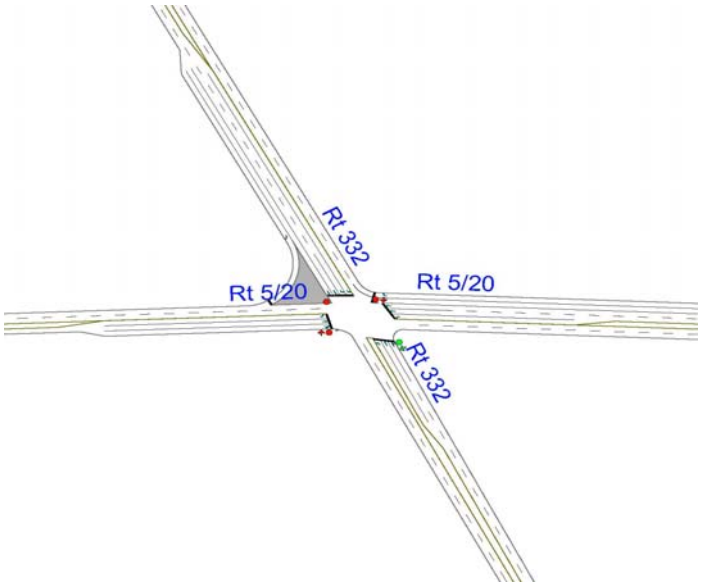
Multi-modal Options The project will include bike lanes, sidewalks and pedestrian signal indications.

Environmental, Economic, QOL The project is situated in a archeologically sensitive area. No identified state wetlands are located within the project area. The project will serve to better accommodate local near-by growth in development and local traffic circulation needs around the City of Canandaigua.

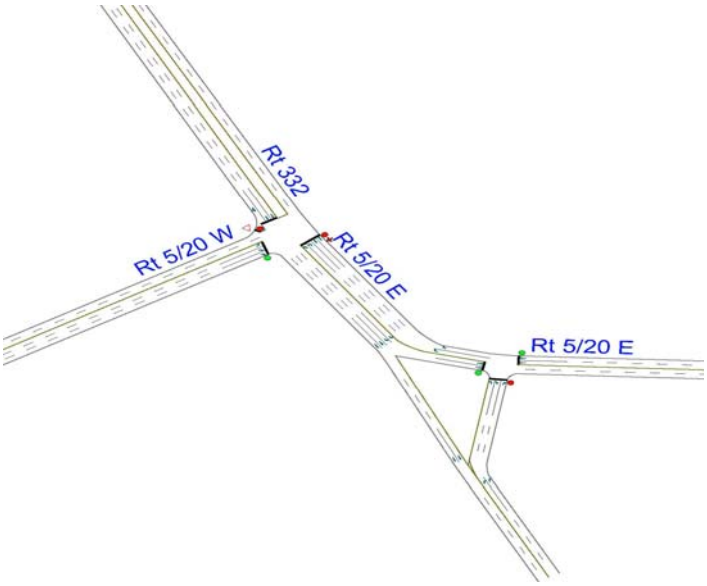
Preliminary Cost Estimate Total cost estimate for improvements is $57,500, includes a 25% contingency.

Anticipated Benefit Acceptable operating and delay conditions indicative of LOS C or better will be achieved for all intersection traffic movements with the recommended improvements in place. Improvements will also increase safety at the intersection.

5. SR 332 AT ROUTES 5&20



EXISTING



PRELIMINARY CONCEPT

Problem Identification

This intersection is the confluence for all major travel through the City of Canandaigua and this region. As such, it services very high traffic volumes throughout the year with sharp increases in tourist and recreational traffic during the summer months. It provides for major goods movement through the region and serves as a gateway to the northern lakeshore of Canandaigua Lake. Traffic is expected to increase from both significant local developments (e.g. New York State Wine & Culinary Center) and regional growth in traffic. Long signal cycle lengths and future 2025 traffic conditions yield unacceptable LOS F delay conditions overall and most adversely for the southbound left-turns from SR 332 to eastbound Routes 5&20.

A total of 45 accidents were identified at this intersection for the period covering 06/97—05/02. This equates to a 0.52 intersection accident rate, which is ***marginally above*** the 0.46 state-wide average for this type intersection. *Four (4) ped/bike related accidents occurred at this intersection.* Signal improvements have been made to this intersection since the years in which the accident data were collected.

Traffic Operations/Level of Service Results

Intersection Name		Existing		2025 No Build		2025 Build	
		Delay	LOS	Delay	LOS	Delay	LOS
Rt. 5/20 & Rt. 332 (S)							
EB	L	73.2	E	73.4	E	n/a	n/a
	TR	65.3	E	89.0	F	n/a	n/a
WB	L	73.3	E	73.6	E	n/a	n/a
	T	51.1	D	53.2	D	n/a	n/a
	R	18.0	B	20.2	C	n/a	n/a
NB	L	41.8	D	51.4	D	n/a	n/a
	TR	43.5	D	51.1	D	n/a	n/a
SB	L	79.5	E	166.4	F	n/a	n/a
	T	54.4	D	83.2	F	n/a	n/a
	R	33.7	C	37.3	D	n/a	n/a
Overall		53.4	D	69.9	E	n/a	n/a
Route 332 & Rt. 5/20 (S)							
EB	L	n/a	n/a	n/a	n/a	46.0	D
	R	n/a	n/a	n/a	n/a	29.6	C
NB	L	n/a	n/a	n/a	n/a	37.1	D
	T	n/a	n/a	n/a	n/a	2.6	A
SB	TR	n/a	n/a	n/a	n/a	34.3	C
Overall		n/a	n/a	n/a	n/a	n/a	C
Lakeshore Blvd. & Rt. 5/20 (S)							
EB	T	n/a	n/a	n/a	n/a	14.4	B
WB	T	n/a	n/a	n/a	n/a	18.5	B
NB	L	n/a	n/a	n/a	n/a	38.7	D
	R	n/a	n/a	n/a	n/a	18.9	B
Overall		n/a	n/a	n/a	n/a	n/a	C

S/U: Signalized/Unsignalized

5. SR 332 AT ROUTES 5&20 (CONT'D)

Proposed Improvements

Future improvements needed to address 2025 conditions:

- Intersection reconfiguration to create separate Routes 5&20 West-SR 332 intersection and Routes 5&20 East/Lakeshore Boulevard-SR 332 intersection
- New traffic signals with crosswalks and pedestrian signal indications at each intersection
- Continuation of Main Street median treatment with pedestrian refuge at the SR 332/Routes 5&20 W intersection
- New sidewalks and bike lanes linking both intersections
- Gateway pocket park treatment in newly created triangle area at Routes 5&20 East/Lakeshore Boulevard/SR 332 intersection

Multi-modal Options: The project will enhance pedestrian safety and mobility and better accommodate bike lanes with two downsized intersections with reduced pavement widths, a pedestrian refuge median treatment, and simplified traffic movements and signal phasing .

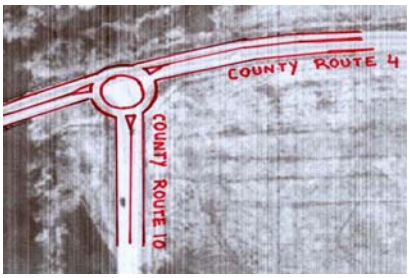
Environmental, Economic, QOL: The project is situated in a potentially sensitive archeological area; it likely impacts adjacent state wetlands and a potentially hazardous waste site adjacent to the project area. Significant air quality improvements are anticipated with reduced delay and idling emissions. The project will serve to sustain significant local and regional growth and development as well as enhance travel, safety, and aesthetics for local, visitor, recreational, and commercial traffic through the region. The downsizing of the existing and expansive intersection and reconfiguration into two smaller, more context appropriate intersections, will provide improved community continuity, both visually and functionally, between Main Street and this southern part of the City.

Preliminary Cost Estimate: Total cost estimate for improvements is $1,465,000, includes a 25% contingency. The cost estimate factors in the potentially significant land acquisition required for this option.

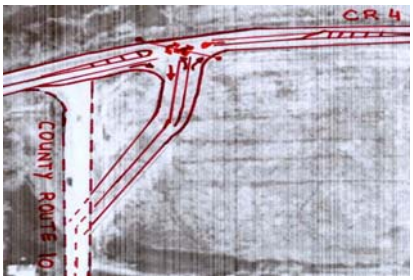
Anticipated Benefit: Recommended improvements will improve operating and delay conditions to LOS C or better on all approaches. Improvements will increase safety and enhance the non-motorized transportation options in the city.

6. CR 4 AT CR 10

EXISTING



PRELIMINARY OPTION A



PRELIMINARY OPTION B

Problem Identification

Future 2025 conditions with high peak hour left-turn volumes from CR 10 and right-turn volumes from CR 4 yield unacceptable LOS F conditions on CR 10.

A total of 12 intersection accidents were identified for the period covering 06/97 -05/02. This yields an intersection accident rate of 0.57 that is ***above*** the state-wide average accident rate of 0.16 for this type intersection. The predominant accident type involved rear-end crashes (25%), mainly attributable to driver inattention and failure-to-yield.

Proposed Improvements

Future improvements needed to address 2025 conditions:

OPTION A:

- Modern Single Lane Roundabout

OPTION B:

- Realign CR 10 approach to CR 4
- Two NB approach lanes on CR 10
- EB right & WB left-turn lanes on CR 4
- New traffic signal

Traffic Operations/Level of Service Results

Intersection Name		Existing 2004		No Build 2025		Option A 2025		Option B 2025	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
CR 4 & CR 10 (U/S*)									
EB	TR (T)	0.0	A	0.0	A	12.0	B	11.5	B
	(R)	n/a	n/a	n/a	n/a	n/a	n/a	0.9	A
WB	(L)	n/a	n/a	n/a	n/a	n/a	n/a	13.9	B
	LT (T)	3.5	A	4.6	B	5.4	A	12.9	B
NB	LR (L)	526.9	F	**	F	9.0	A	20.6	C
	(R)	n/a	n/a	n/a	n/a	n/a	n/a	9.9	A
Overall		**n/a**	**n/a**	**n/a**	**n/a**	**9.7**	**A**	**11.2**	**B**

S/U: Signalized/Unsignalized
* Signalized in Option B
** Delay is incalculable
(T) Values in parentheses represent Option B conditions

Multi-modal Options: Inherent with the roundabout are the typical pedestrian accommodations. Wider and improved shoulder treatments are recommended within the project limits. No other pedestrian/bicycle enhancements are proposed since no significant pedestrian generators are near-by, nor adjacent to the intersection.

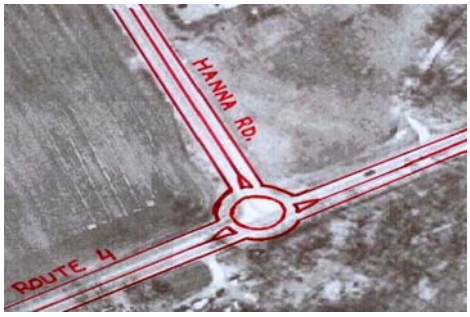
Environmental, Economic, QOL: The project is situated in a archeologically sensitive area. No identified state wetlands are located within the project area. The project is adjacent to and may impact the Canandaigua outlet stream. The project will serve to better accommodate area development and growth, serving the adjacent towns and local traffic circulation needs around the City of Canandaigua.

Preliminary Cost Estimate: Total cost estimate: $450,000 for Option A, and $503,750 for Option B, including 25% contingency.

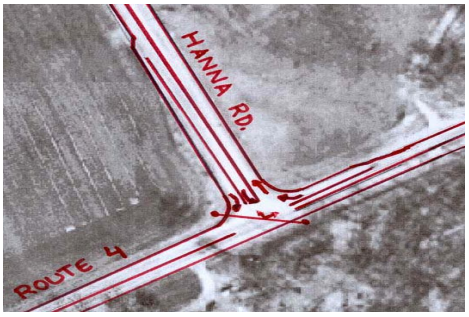
Anticipated Benefit: Acceptable operating and delay conditions indicative of LOS C and better will be achieved on all intersection approaches under both concepts. Concept A with the modern roundabout provides less overall intersection delay and greater safety and is the preferred alternative for this intersection.

7. CR 4 AT CR 22

EXISTING



PRELIMINARY OPTION A



PRELIMINARY OPTION B

Problem Identification

Future 2025 conditions with high peak hour through volumes in both directions on CR 4 and high WB right-turn volumes on CR 4 yield unacceptable LOS F conditions on CR 22.

A total of 1 intersection accident was identified for the period covering 06/97 - 05/02. This yields an intersection accident rate of 0.06 which is ***below*** the state-wide average accident rate of 0.16 for this type intersection.

Proposed Improvements

Future improvements needed to address 2025 conditions:

OPTION A:

- Modern Single Lane Roundabout

OPTION B:

Provide two SB approach lanes on Hanna Road

- WB right-turn lanes on CR 4
- New traffic signal

Traffic Operations/Level of Service Results

Intersection Name		Existing 2004		No Build 2025		Option A 2025		Option B 2025	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
CR 4 & Hanna Rd. (U/S*)									
EB	LT	1.6	A	2.2	A	9.0	A	11.4	B
WB	TR (T)	0.0	A	0.0	A	8.4	A	5.3	A
	(R)	n/a	n/a	n/a	n/a	n/a	n/a	0.6	A
SB	LR (L)	241.7	F	893.0	F	5.4	A	25.6	C
	(R)	n/a	n/a	n/a	n/a	n/a	n/a	19.4	B
Overall		**n/a**	**n/a**	**n/a**	**n/a**	**8.1**	**A**	**10.2**	**B**

S/U: Signalized/Unsignalized
* Signalized in Option B
(T) Values in parentheses represent Option B conditions

Multi-modal Options: Inherent with the roundabout are the typical pedestrian accommodations. Wider and improved shoulder treatments are recommended within the project limits. No other pedestrian/bicycle enhancements are proposed since no significant pedestrian generators are near-by nor adjacent to the intersection.

Environmental, Economic, QOL: The project is situated in a potentially sensitive archeological area. No identified state wetlands are located within the project area. The project will serve to better accommodate area development and growth, serving the adjacent towns and local traffic circulation needs around the City of Canandaigua.

Preliminary Cost Estimate: Total cost estimate for improvements is $450,000 for Option A, and $287,500 for Option B, includes a 25% contingency.

Anticipated Benefit: Acceptable operating and delay conditions indicative of LOS C and better will be achieved on all intersection approaches under both concepts. Concept A with the modern roundabout provides less delay and greater intersection safety and is the preferred alternative for this intersection.

6.3 SEGMENT IMPROVEMENTS

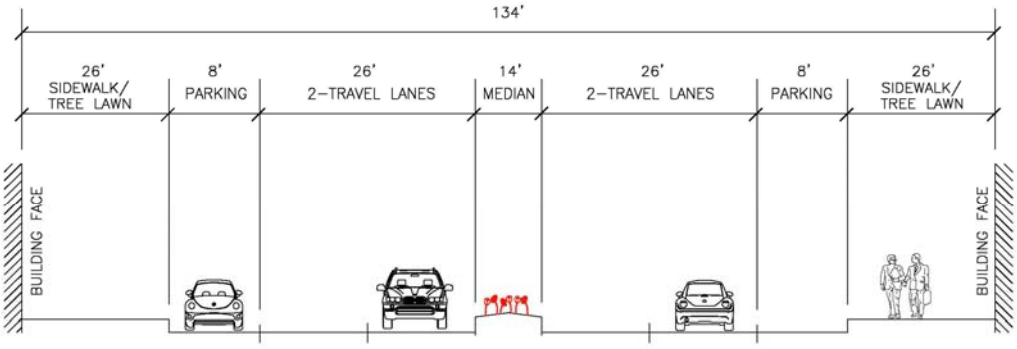
Main Street Pedestrian Enhancements

Pedestrian access along SR 332 in the City of Canandaigua was identified as a critical concern, particularly in the Central Business District located between North Street and Routes 5&20.

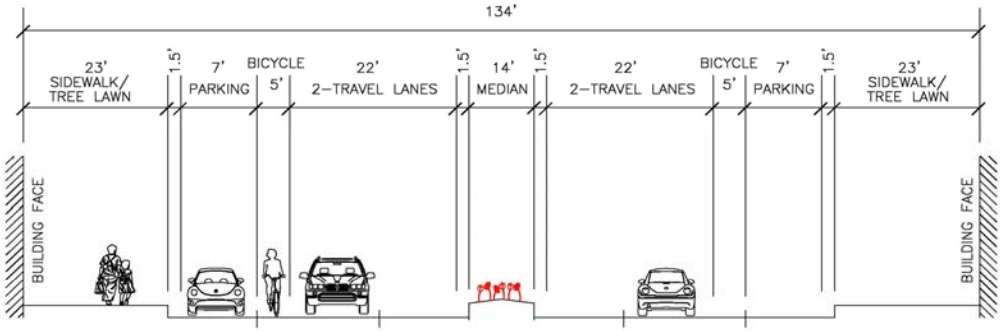
The City of Canandaigua recently completed a comprehensive analysis of all Main Street's sidewalks. Based on location and proximity, the City has decided to eliminate three non-signalized (mid-block) crosswalks and to improve the existing mid-block crosswalks. The planned improvements are illustrated in Map 6.3-1. The City has indicated that it will work with transportation experts from NYSDOT or the Genesee Transportation Council (GTC) to design improvements that increase pedestrian safety.

In keeping with the City's desired course of action, this Study has identified a series of improvements that can be made to improve pedestrian access. The details of those improvements are provided in the conceptual improvement plan on the following pages. Map 6.3-2 highlights current crosswalk conditions as well as existing and planned trails on and near the Main Street area.

MAIN STREET - SR 332



EXISTING CROSS SECTION



PRELIMINARY CROSS SECTION

Problem Identification

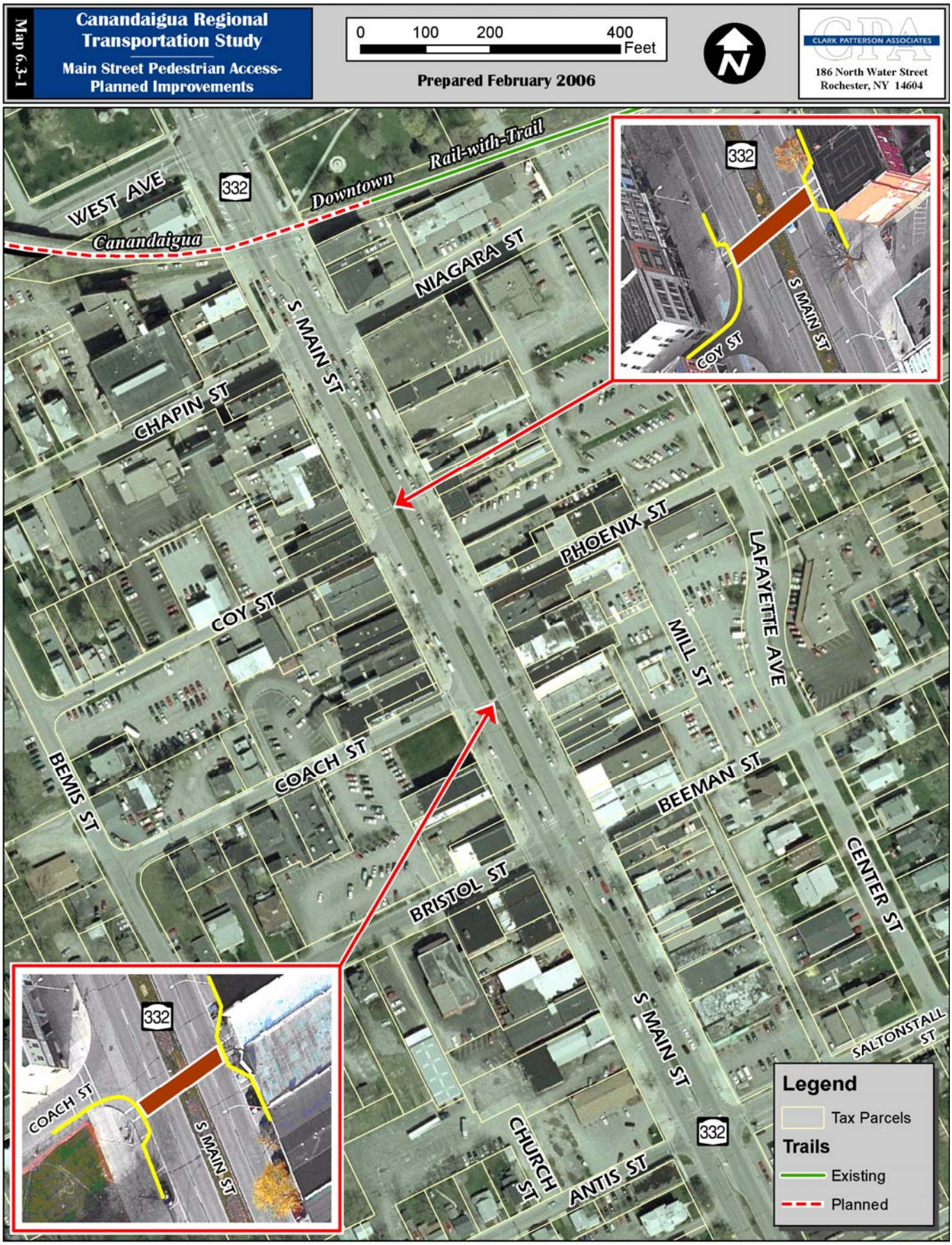
Wide travel lanes in the corridor contribute to higher travel speeds, presenting safety issues and detracting from the pedestrian scale environment. High traffic volumes and multi-lane roadway traffic operations contribute to driver inattention and reduced visibility to detecting pedestrians crossing Main Street. There are no bicycle lane provisions linking downtown to the Canandaigua Lake recreational area.

A total of 14 pedestrian accidents were identified on SR 332 between Routes 5&20 and the north city line. Five(5) of these accidents occurred at Bristol Street, and two(2) each at SR 332 and W. Gibson Street, Howell Street, and Fort Hill Avenue. One fatality occurred at Fort Hill Avenue involving a southbound vehicle and westbound pedestrian. A total of 378 vehicular accidents were identified on this segment. This equates to an accident rate of 3.15 for this segment, which is **below** the 5.05 state-wide average for this type of roadway segment.

Proposed Improvements

Currently, Main Street carries approximately 30,270 vehicles per day (vpd) and is projected to increase to 33,905 vpd by 2025. The existing cross section between Parrish Street and West Avenue consists of two 13' travel lanes in each direction, a 14' center raised median, and 8' of parking space on each side. Proposed improvements include:

- Reduce travel lanes to 11' wide, retaining the 14' raised median
- Designated bicycle lanes on both sides of street, 5' feet wide


Map 6.3-1
Canandaigua Regional Transportation Study
Main Street Pedestrian Access-Planned Improvements
0 100 200 400 Feet
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
WEST AVE
332
Downtown Rail-with-Trail
Canandaigua
NIAGARA ST
S MAIN ST
CHAPIN ST
COY ST
PHOENIX ST
MILL ST
LAFAYETTE AVE
BEMIS ST
COACH ST
BEEMAN ST
BRISTOL ST
CENTER ST
SALTONSTALL ST
CHURCH ST
ANTIS ST
Legend
Tax Parcels
Trails
Existing
Planned


Map 6.3-2
Canandaigua Regional Transportation Study
Main Street Pedestrian Access-Recommended Improvements
0 500 1,000 2,000 3,000 Feet
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Legend
City Boundary
Tax Parcels
Existing Crosswalks
Missing Crosswalks
Existing Trails
Planned Trails
ROCHESTER RD
NORTH RD
NORTH ST
SENECA DR
CANANDAIGUA AVE
GIBBS ST
OLD ENGLISH MNR
MIDLAKES DR
MAIN ST
CAMELOT CT
CHAPEL ST
BUFFALO ST
PERRY PL
GRANGER ST
ACADEMY PL
FORT HILL AVE
SCOTLAND RD
HOVELL ST
DUNGAN ST
WILCOX LA
BROOK ST
E GIBSON ST
W GIBSON ST
GORHAM ST
GREIG TER
ONTARIO ST
NIAGARA ST
WEST AVE
CHAPIN ST
COY ST
PHOENIX ST
COACH ST
BEEMAN ST
BRISTOL ST
SALTONSTALL ST
ANN ST
FOSTER ST
CLARK ST
PHELPS ST
PARRISH ST
GREEN ST
LAKESHORE DR
Canandaigua - Downtown
Canandaigua
Rattlesnake Trail
Connector Trail
Canal
Feeder
28
30
332
32
21
4
46
5
20

MAIN STREET - SR 332 (CONT'D)

- Reduce on-street parking along both sides to 7' wide
- Create pedestrian refuge areas in median at designated crosswalks
- Supplemental pedestrian crossings with overhead warning signs on context appropriate poles; additional traffic calming treatments to include curb-bulb outs, enhanced crosswalks or surface treatments

Multi-modal Options: The proposed project will include bicycle lanes and traffic calming/pedestrian crossing improvements for increased pedestrian safety.

Environmental, Economic, QOL: The project is situated in a potentially sensitive archeological area; no adjacent state wetlands nor potentially hazardous waste sites are adjacent to the project area. Significant pedestrian safety improvements that support the high pedestrian volumes, particularly in the retail area of Main Street, are anticipated. The project will serve to sustain significant local and regional recreational and tourism needs and enhance travel, safety, and aesthetics for local, visitor, and recreational traffic in the City.

Preliminary Cost Estimate: Total cost estimate for improvements is $2,000,000 which includes a 25% contingency.

6.4 MULTI-MODAL CONSIDERATIONS

Trails

Existing and planned trails within the study area are identified on Map 6.4-1. The planned multi-use trails will provide important linkages for non-motorized modes of transportation, namely walking and biking. Additionally, these recommendations will enhance connections to the regional trail system. They will increase accessibility, promote healthy and sustainable transportation choices, and enhance overall quality of life in the region.

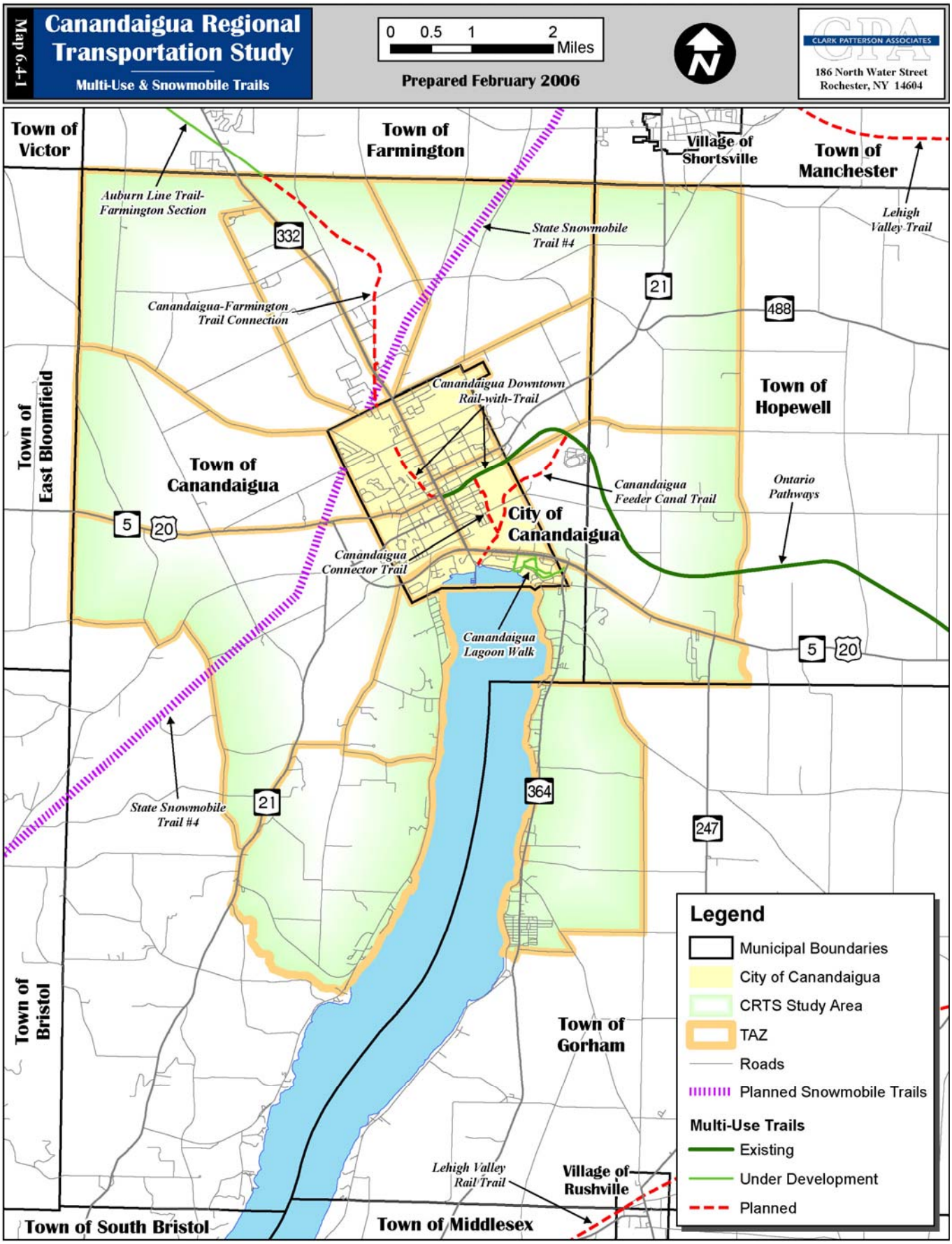
Public Transit

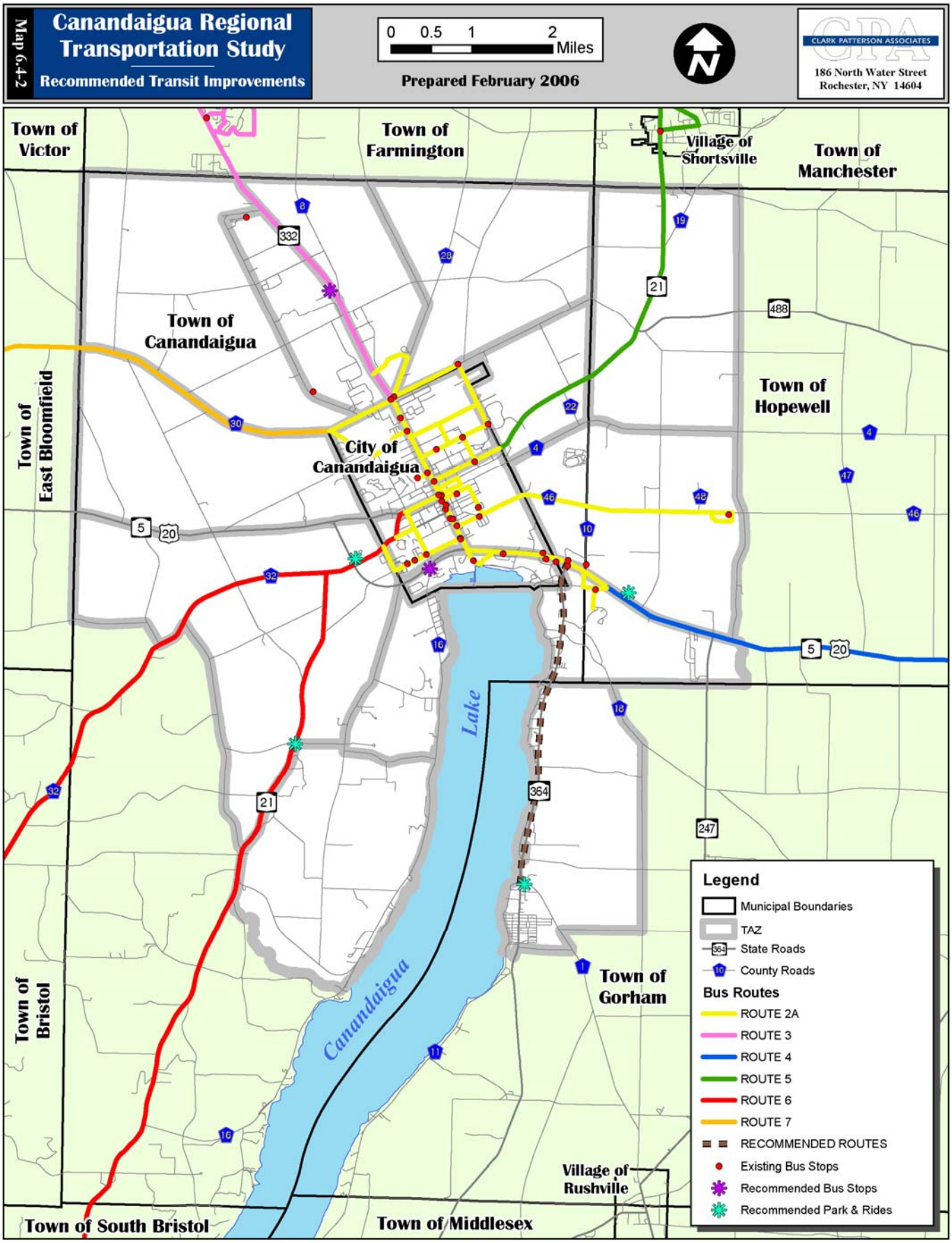
While the existing service provided by CATS has adequately served the region, there are opportunities for future expansion and integration that should be explored. Map 6.4-2 depicts existing routes and stops within the study area. The map also identifies recommended bus stop locations, park and ride areas as well as a new route to service the Town of Gorham along the eastern shore area of Canandaigua Lake.

Anecdotal reports indicated that the specific bus stop locations are not a primary concern at this time because bus drivers will often stop anywhere along the designated bus route to pick up a passenger. However, if that practice were to change over time, in response to fuel consumption concerns or safety issues, specific bus stop locations would need to be considered more carefully. The additional park and ride locations were developed based on anticipated development trends within the area. Offering convenient access to transit services may increase ridership and people's willingness to utilize public transportation to travel to employment, commercial and service centers within the region.

The proposed route, heading south along SR 364 in the Town of Gorham, is proposed to provide public transportation access to an area that seems to be underserved. As residential development in this area increases over time, the need for reasonable access to bus service increases. A small park and ride at the route's terminus would allow the line to service the rural surrounding area.

In addition to the proposed enhancements within the study area, options for linkages to surrounding regional transit systems should be explored in the future. By connecting services offered by RGRTA and LATS, the Canandaigua area can improve public transit access across multiple centers for employment, housing and commercial centers in the Finger Lakes Region.


Map 6-4-1
Canandaigua Regional Transportation Study
Multi-Use & Snowmobile Trails
0 0.5 1 2 Miles
Prepared February 2006
CPA
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Auburn Line Trail-Farmington Section
State Snowmobile Trail #4
Lehigh Valley Trail
Canandaigua-Farmington Trail Connection
Town of East Bloomfield
Canandaigua Downtown Rail-with-Trail
Town of Hopewell
Town of Canandaigua
Canandaigua Feeder Canal Trail
Ontario Pathways
City of Canandaigua
Canandaigua Connector Trail
Canandaigua Lagoon Walk
State Snowmobile Trail #4
Town of Bristol
Town of Gorham
Lehigh Valley Rail Trail
Village of Rushville
Town of South Bristol
Town of Middlesex
332
21
488
5
20
364
247
Legend
Municipal Boundaries
City of Canandaigua
CRTS Study Area
TAZ
Roads
Planned Snowmobile Trails
Multi-Use Trails
Existing
Under Development
Planned


Map 6.4.2
Canandaigua Regional Transportation Study
Recommended Transit Improvements
0 0.5 1 2 Miles
Prepared February 2006
CLARK PATTERSON ASSOCIATES
186 North Water Street
Rochester, NY 14604
Town of Victor
Town of Farmington
Village of Shortsville
Town of Manchester
Town of Canandaigua
Town of East Bloomfield
City of Canandaigua
Town of Hopewell
Lake Canandaigua
Town of Gorham
Town of Bristol
Village of Rushville
Town of South Bristol
Town of Middlesex
Legend
Municipal Boundaries
TAZ
State Roads
County Roads
Bus Routes
ROUTE 2A
ROUTE 3
ROUTE 4
ROUTE 5
ROUTE 6
ROUTE 7
RECOMMENDED ROUTES
Existing Bus Stops
Recommended Bus Stops
Recommended Park & Rides

SECTION 7—EVALUATION OF ALTERNATIVES

7.1 RANKING ALTERNATIVES

Given the large number of proposed intersections, as well as the Main Street pedestrian access improvements and the multi-modal considerations, the alternatives were evaluated and prioritized to guide the State, County and local municipalities with future investments and decision-making related to these proposed projects. Each project was evaluated based on impact on safety, operations, regional circulation, the environment, and anticipated costs. For each category, projects were rated on a scale of one to three, with three being the best score and one being the lowest. The scale for each category is described below.

Cost

Projects were grouped by cost. High cost projects received a one. Low cost projects received a three. A summary of the project costs is included in Table 7.1-1. Estimates are based on 2005 NYSDOT Average Weighted Unit Bid Price, except for roundabout estimates, which were based on similar NYSDOT projects. The cost estimates do not include costs associated with environmental issues (e.g. hazardous waste and wetlands) or right-of-way acquisition.

TABLE 7.1-1
CONCEPTUAL ESTIMATES - COST SUMMARY

Intersection No.	Intersection Name	Subtotal Cost	Contingency (25%)	Total [1]
1	Routes 5&20 @ Cooley Rd.	$256,000	$64,000	$320,000
2	SR 21 @ SR 488/Schutt Rd.	$90,000	$22,500	$112,500
3	CR 10 @ CR 46	$256,000	$64,000	$320,000
4	Routes 5&20 @ CR 10	$46,000	$11,500	$57,500
5	SR 332 @ Routes 5&20	$1,172,000	$293,000	$1,465,000
6A	CR 4 @ CR 10	$450,000	$0 [2]	$450,000
6B	CR 4 @ CR 10	$403,000	$100,750	$503,750
7A	CR 4 @ CR 22	$450,000	$0 [2]	$450,000
7B	CR 4 @ CR 22	$230,000	$57,500	$287,500
			Grand Total:	**$3,966,250**

[1] Some figures are rounded to the nearest thousand

[2] Contigencies for roundabouts are figured into the estimated lump sum costs

Safety
Projects with low safety benefits received a one. Projects with high safety benefits received a ranking of three.

Operations
Projects with low operational benefits received a one. Projects with significant operational benefits received a three.

Regional Benefit
Projects with a low regional benefit received a one. Projects with a high regional benefit received a three.

Environmental
Projects with a significant negative impact received a one. Projects with low negative impact on the environment received a three.

Since some categories were perceived as more important in determining priorities than others, each category was weighted to reflect its significance relative to the others. The results of the evaluation are included in Table 7.1-2. The weight factors are shown in the last row of the table.

The first column indicates the project's overall ranking, which reflects the overall rating in the last column. When ranking intersections with multiple realignment options (see Section 6.2), the preferred option was considered. The results of this evaluation were factored into the Implementation and Phasing outlined in Section 8.

TABLE 7.1-2
PROJECT IMPROVEMENT RANKING

Overall Rank	Intersection Number	Intersection Name	Cost (weighted score)	Safety (weighted score)	Operations: Existing - 2025 (weighted score)	Circulation: Regional Significance, Existing - 2025 (weighted score)	Environmental (weighted score)	Overall Rating (see formula below)
1	6	CR 4 at CR 10	2 (2)	3 (6)	3 (3.75)	2 (3)	2 (2)	**16.75**
2	3	CR 10 at CR 46	2 (2)	3 (6)	2 (2.5)	2 (3)	3 (3)	**16.50**
3	1	Routes 5&20 at Cooley Road	2 (2)	3 (6)	2 (2.5)	1 (1.5)	3 (3)	**15.00**
4	5	SR 332 at Routes 5&20	1 (1)	2 (4)	3 (3.75)	3 (4.5)	1 (1)	**14.25**
5	7	CR 4 at CR 22	2 (2)	1 (2)	3 (3.75)	2 (3)	3 (3)	**13.75**
6	n/a	Main Street Pedestrian Enhancements	1 (1)	3 (6)	2 (2.5)	1 (1.5)	2 (2)	**13.00**
7	4	Routes 5&20 at CR 10	3 (3)	1 (2)	1 (1.25)	2 (3)	3 (3)	**12.25**
8	2	SR 21 at SR 488 and Schutt Road	3 (3)	1 (2)	2 (2.5)	1 (1.5)	3 (3)	**12.00**
Scores are Weighted by Significance			1	2	1.25	1.5	1	

Category Scores:

Cost: 1 = high cost, 3 = low cost

Safety: 3 = high benefit, 1 = low imapct

Operations: 3 = significant imapct, 1 = limited benefit

Circulation: 1 = low value, 3 = high value

Environmental: 3 = low benefit, 1 = high benefit

Overall Rating Formula:

(Cost score x Cost weight) + (Safety score x Safety weight) + (Operations score x Operations weight) + (Circulation score x Circulation weight) + (Environmental score x Environmental weight) = Overall Rating

SECTION 8—IMPLEMENTATION AND PHASING

Based on a review of the existing conditions, public input, and overall benefits as ranked in Section 7, the projects have been grouped into near-, medium-, and long-term implementation categories. Additionally, the total cost estimate of all intersection and roadway improvements is included, though it does not include estimates for improvements to the trail or public transportation systems.

When developing the phases of implementation, a project's ranking (see Table 7.1-2) and its proximity and/or coordination with other projects was considered. For example, Intersections 3 and 6 were considered high priority improvements and are in close proximity, thus they are recommended as short-term projects. Conversely, any further consideration of a bypass should be subject to analyzing the effects of short term improvements to relevant intersections.

8.1 NEAR-TERM IMPROVEMENTS (0-5 YEARS)

Intersection Improvement Cost Estimate: $1,220,000

- Intersection 3 – CR 10 at CR 46 ($320,000)
- Intersection 6 – CR 4 at CR 10 ($450,000)
- Intersection 7 – CR 4 at CR 22 ($450,000)
- Additional bus stops
- Canandaigua Lagoon Walk (currently under development)
- Canandaigua Downtown Rail-with-Trail (approximately 50 percent complete)

The intersection improvement projects can be completed individually or grouped into a single highway project. Either way, completion of these improvements would have a significant impact on reducing accidents, improving local traffic operations, and allow for the beginning of an effective alternative route around the City (similar to Alternative A – East Bypass).

Improving these intersections would also provide for increasing economic development opportunities in the Town along the CR 10 corridor. For the most part, mixed-use land uses are envisioned for the areas surrounding these intersections. Improving operations at these intersections will ensure safe, efficient operations, creating an environment conducive to future industrial, commercial and residential development.

CR 10 is already heavily used by local traffic to bypass SR 332. Improving this corridor would begin to eliminate more truck and commuter traffic currently using Main Street (SR 332). Wayfinding signage could be added to improve the awareness of this route and its use.

Additional bus stops will expand the valuable service provided by CATS and help reduce the regional dependence on automobiles. The completion of the trail projects will also promote alternative modes of transportation while improving pedestrian connectivity within the city.

8.2 MEDIUM-TERM IMPROVEMENTS (5-10 YEARS)

Intersection Improvement Cost Estimate: $2,842,500

- Intersection 1 – Routes 5&20 at Cooley Road ($320,000)
- Intersection 4 – Routes 5&20 at CR 10 ($57,500)
- Intersection 5 – SR 332 at Routes 5&20 ($1,465,000)
- Main Street Pedestrian Enhancements ($2,000,000)
- New bus route along SR 364
- Canandaigua Feeder Canal Trail
- Canandaigua Connector Trail
- Canandaigua-Farmington Trail Connection (Auburn Line)

After improvements are made to the CR 10 corridor, intersection improvements along the Routes 5&20 corridor and pedestrian and bicyclist improvements should be made along SR 332. Since the area around the SR 332 and Routes 5&20 intersection is currently being developed, completion of this intersection improvement project within a 5-10 year timeframe would allow the design of the roadway to be coordinated with the land development in an efficient manner that would best promote additional economic benefits.

The intersection improvements made under the near-term recommendations would provide an adequate detour route to maintain and protect while the SR 332 project is being constructed.

The pedestrian and bicyclist improvements on SR 332 will improve the quality of life and walkability of the Main Street commercial area. Ultimately, these improvements will assist in boosting economic development in the City's Central Business District. The three trail projects will improve pedestrian and bicycle linkages within the region and provide valuable recreation opportunities for the community.

8.3 LONG-TERM IMPROVEMENTS (10+ YEARS)

Intersection Improvement Cost Estimate: $112,500

- Intersection 2 – SR 21 at SR 488 and Schutt Road ($112,500)
- Bypass Alternatives Study
- Additional Park & Ride stations
- State Snowmobile Trail #4

Improving the SR 21 and SR 488 intersection will help address long term projections for residential and commercial growth on the east side of the study area. After the completion of the intersection and roadway improvements detailed in this report, the bypass options described in Section 6.1 could be reanalyzed if future traffic conditions warranted.

Adding additional Park & Ride stations to the CATS network will improve the functionality of the regional mass transit network and expand its services to the edges of the region.

APPENDICES

Appendix A—Public Input

-Focus Group Meeting Notes
-Study Area Goals

Appendix B—Traffic Data

-Traffic Counts
-Turning Movement Diagrams

Appendix C—Additional Economic Development Information

Appendix D—Bypass Analysis

Appendix E—Cost Estimates

Appendix A—Public Input

-Focus Group Meeting Notes

-Study Area Goals

STUDY AREA GOALS

Specific goals and objectives were identified through this Study. They are intended to guide the development of alternatives and recommendations for the County and municipalities. Section 2, which also addresses study area goals, contains only those goals which were ultimately addressed by the project recommendations.

TRANSPORTATION

Goal: Improve operation efficiency and safety at critical intersections within the study area.

Objectives

- Develop prioritized list of intersections requiring the addition of turning lane(s).
- Locate future traffic signals to serve intersections or driveways on both sides of the roadway(s).
- Ensure adequate storage bays for left turn lanes throughout the study area.

Goal: Determine the need for a bypass system on the east, west or both sides of the City to reduce congestion on Main Street.

Objectives

- Prioritize roadway improvements needed to accommodate future bypasses or alternative routing (road width, weight rating, etc.).
- Identify signage needs for alterative routes for trucks and "pass through" traffic to control volumes through Main Street.
- If a bypass is deemed necessary, complete a preliminary engineering report to better define the cost, feasibility and potential support and financing from state and federal agencies.

Goal: Improve pedestrian access and facilities within the study area.

Objectives

- Enforce speed limits as a way of improving pedestrian safety.
- Consider installation of traffic calming techniques, both physical and programmatic, in the core Main Street area and other locations with high pedestrian activity.
- Reroute non-destination and/or truck traffic away from Main Street.

Goal: Enhance roadway corridors to address the specific needs and functions based on existing and future user groups.

Objectives

- Increase driveway spacing standards to provide adequate site distance, response times and stacking space.
- Utilize speed limit to determine minimum spacing between driveways.
- Establish and/or enhance site design standards that address driveway throat length and design, on-site circulation, pedestrian access, cross and shared access, and landscaping buffering where necessary to improve the efficiency and safety of adjacent roadways.
- Consider widening shoulders and roads, re-striping and other measures to enhance pedestrian and bicycle access throughout the study area.
- Address specific road improvements needed to accommodate increased truck and vehicular traffic in areas of existing and proposed commercial, industrial and civic use (e.g. government facilities) development.
- Identify enhancements to County roads that would improve access and road-sharing for farming equipment in areas dominated by agricultural uses.

Goal: Enhance linkages among multi-modal transportation options within the study area.

Objectives

- Monitor availability and condition of sidewalks, trails and other pedestrian facilities to ensure adequate and appropriate pedestrian access in the study area.
- Explore ways to expand access to public transit (e.g. CATS) including the establishment of additional park and ride areas.
- Identify roadway improvements to support bicycle access throughout the region.

- Identify opportunities to enhance small aircraft service upon completion of the runway extension project, such as private charters, business use, etc.).

Goal: Enhance existing service and expand access to the public transit system.

Objectives

- Pursue the recommendations identified in the CATS Report (*Linking People to the Workplace*, 2003, pages 25 to 26).
- Identify opportunities for multi-modal partnerships (park and ride).
- Examine feasibility of commuter service to other major employment hubs in the immediate region and beyond.

LAND USE, DEVELOPMENT AND INFRASTRUCTURE

Goal: Support future land use goals of individual municipalities.

Objectives

- Encourage ongoing information sharing and collaboration among municipal leaders, local planning organizations and the County Planning Department regarding future land use and preferred development patterns.
- Give high priority to transportation improvement projects that address multiple land use and development goals, especially across municipal boundary lines.
- Engage study area communities in regional land use discussion and forums on a regular basis to ensure that land use preferences are consistent with existing planning documents (e.g. Comprehensive Plans).
- Implement zoning changes at the municipal level that support transportation and land use recommendations identified within this Study.
- Encourage development and infrastructure improvements that protect valuable agricultural lands and open space.
- Concentrate commercial and industrial development where adequate infrastructure is located.

Goal: Examine opportunities to address utility and infrastructure needs simultaneously in an effort to maximize investment dollars and grant funding resources.

Objectives

- Work with local utility providers and private developers to identify opportunities for improvements to existing utilities and infrastructure.
- Encourage cost-sharing approaches to commercial, industrial and residential developments that meet the stated needs of the communities in which they locate.

- Work with NYSDOT to identify future road reconstruction projects in which other infrastructure improvements and/or pedestrian access goals can be achieved.

Goal: Improve pedestrian safety within the Main Street corridor.

Objectives

- Examine opportunities for using traffic calming devices to improve pedestrian safety.
- Enhance the quality of life along Main Street for pedestrian scaled activities that will bolster businesses.
- Improve amenities for bicyclists in the corridor.
- Reduce truck traffic along the Main Street corridor, especially during periods when pedestrian activity peaks.

ECONOMIC DEVELOPMENT

Goal: Enhance transportation system to accommodate existing and future tourism activity.

Objectives

- Improve access to regional destinations such as FLPAC, the NYS Wine and Culinary Institute, etc., as well as to public parking and alternative routes to improve access and enhance the traveling experience for visitors to the area.
- Enhance "quality of life" along Main Street (e.g. reduce truck traffic) for pedestrian scaled activities that will bolster businesses.
- Improve the appearance and safety of the Main Street area.
- Encourage sidewalk seating where appropriate.
- Improve gateway features at key regional entryways, especially at the northern and southern City limits on SR 332.

Goal: Enhance transportation system to encourage and accommodate commercial and industrial development along the SR 332 corridor.

Objectives

- Consider completing an additional analysis to determine the feasibility and potential location for future traffic lights and median breaks that may be needed to accommodate development adjacent to the corridor. This would be based upon the future land use and growth projections outlined in this Study.
- Identify opportunities to improve and expand current cross-access drives and access roads that connect adjacent parcels along the corridor.

Goal: Explore multi-modal approaches for advancing economic development priorities.

Objectives

- Identify ways to enhance and expand park and ride opportunities within the study area to provide public transportation access to the labor market.
- Identify opportunities to improve the connectivity between neighboring area transit services, such as the Regional Transit Service (RTS) and the Livingston Area Transportation Services (LATS) to enhance linkages between employment, housing and commercial centers in the region.
- Identify best practices from other transit systems that be adapted to improve CATS service and operations.

Goal: Utilize the airport expansion to enhance existing businesses and attract new business development.

Objectives

- Consider economic development opportunities that hinge on access to air, rail and trucking, all of which can be provided in the study area.
- Identify necessary changes in zoning and future land use around the airport needed to encourage airport-dependent industrial and commercial developments.

Appendix B—Traffic Data

-Traffic Counts

-Turning Movement Diagrams

Appendix C—Additional Economic Development Information

Economic Development Policies and Issues

Introduction

Ontario County manages economic development in the study area outside the City and, by influence, to a large extent within the City. The County's Office of Economic Development and Industrial Development Agency is the management entity for the formal economic development process. The OED's priorities and strategy are quite relevant to this evaluation of economic issues associated with SR 332 and the study area and get special attention in this Appendix. For the City, the Comprehensive Plan presents the City's economic development issues, as discussed below.

County Economic Development Strategy and Priorities

The regional comprehensive economic strategy (CEDS, 2003) presented Ontario County's three areas of 'opportunity/need": further diversification of the manufacturing base, expanded employment in high value-added producer services and continued promotion of workforce development. The CEDS also highlights several ongoing efforts of top importance for the County:

- Completion of plans for the Cornell Agriculture and Food Technology Park in the City of Geneva is the County's highest priority project. The 70-acre park will house biotech research firms, service companies and food processing companies in incubators and on sites of diverse size. The objective is to diversify the County's economic base in food manufacturing and increase employment in value-added industry sectors.

- Continuation of the work of the Infotonics Technology Center, one of New York State's six "centers of excellence," is a second major priority. The Infotonics Center is a collaboration among universities and colleges and private companies, including Corning and Kodak. The objective is to create a world-class photonics (the CEDS describes photonics as the technology of generating and harnessing light) and microsystems prototype product facility.

The statement of priorities gives special attention to commercial and industrial land development:

"With development in Victor being privately driven, there is a need to provide technical and financial assistance for the creation and extension of infrastructure to sites with locational advantages already present. The Towns of Canandaigua, Farmington, Manchester and Phelps as well as the villages/cities within them have a limited amount of land ready for immediate development despite having excellent access to the NYS Thruway and north/south routes…"

Finally, the CEDS stresses workforce training and notes that Ontario County's Board of Supervisors has designated the County "the home of the technical worker" and the OED/IDA is committed to supporting this initiative.

The County's own strategy identifies five areas of strategic focus:

- Strengthen the "technology commercialization path" using technical assistance and funding to move projects from ideas to implementation.
- Keep building a world-class workforce through direct training as well as the attraction and retention of "knowledge workers."
- Retain and expand mature industries.
- Promote "quality of life" retail development to reposition retailers in East-view Mall and in the downtown.
- Initiate a "community prosperity preparedness program" to ensure that housing, schools and services meet the needs of the highly trained work-force.

The priorities and goals all have general bearing on potential development in the study area.

City of Canandaigua

The City has different but related priorities. Being a small subset of the County's population (11 percent) in a land area that is nearly built out, the City has a stronger focus on infill and redevelopment.

Industrial development takes place largely in two parts of the City. The 250-acre industrial district in the southeast sector of the City comprises older manu-facturing businesses and contains some underused structures. The area is a mix of a mostly small and large properties. This district is "a remnant of an industrial age that relied heavily on rail transportation." There is still one active rail line operated by Finger Lakes Rail. The Comprehensive plan calls for redevelop-ment of this area for "contemporary industrial uses, including warehousing, high technology and light manufacturing."

A second district of approximately 150 acres is in the northwest quadrant. This northern gateway includes approximately 30 properties on a total of 30 acres along the most northern part of North Main Street, extending approximately a third of a mile from the northern boundary of the City. The plan recognizes the importance of the intersection of North Main Street and North Street, where a Tops Supermarket recently developed. "The intersection is a very desirable commercial location and the development potential should be maximized; yet the role as a gateway should be a factor in maximizing this potential."

The plan also describes the challenge of ensuring an appropriate transition from commercial uses on the northern end of the street to residential neighborhoods in the sector closer to the downtown. Institutional uses on the west side of the street make the transition a gradual one while it is more abrupt on the east side, taking place at Seneca Drive. The plan proposes a new residential district to facilitate the transition between commercial and residential development in this area.

There are three commercial districts in the City where most retail and office activity takes place:

- The historic Downtown business district;
- The Eastern Boulevard commercial strip; and
- The lakefront commercial along Lakeshore Drive.

Downtown Business District

The downtown includes about 100 properties in a 40-acre area. Main Street has two moving lanes and parallel parking through the downtown. There are approximately 80 storefronts and a total of about 500,000 square feet of space. An estimated seven businesses turn over yearly and another seven remain vacant. This is a fairly normal range of activity for a downtown. The majority of businesses are small and "homegrown," and about half the occupants own their spaces.

The Eastern Boulevard Commercial Strip

The plan has this area continuing to develop with malls and superstores. The area currently contains approximately 500,000 square feet of commercial space in Parkway Plaza, Wegmans and the Lowe's (under construction). It also includes two hotels, nine restaurants and the Post Office that relocated from the downtown in 1992.

The Lakeshore Drive Commercial Area

The plan calls for continued development in this area of "balanced mixed-use" development focused on public access to Canandaigua Lake. It proposes restaurants, shops, hotels and other tourist-related development in a mixed-use pattern.

The City's economic goal as stated in the Comprehensive Plan is the following:

> "It is a priority of the City to promote economic development and capitalize on the unique aspects of the community to develop a sound niche market in the regional economy to improve the local sales tax base, increase property tax base, expand employment opportunities, raise household income levels and continue to encourage the expansion of the manufacturing base."

The City's plan emphasizes Canandaigua's competitive advantages in "the new economy:"

> "Recent trends...are placing a premium upon community character and quality of life. Companies are on the move and being drawn to communities that offer a good quality of life. They realize that their workers want to live in communities that offer reasonable commutes, a vibrant social life, environmental amenities, housing and transportation choices. To retain and attract their employees, companies must locate in such environments....Canandaigua must think of quality of life as a commodity that can be cultivated and managed and make the strategic decisions that improve rather than harm livability to make the City a more lucrative place for business and labor to locate."

In the course of preparing the Plan the City surveyed its citizens and asked for their views on the most significant problems and issues, and the top five, listed below, all have more or less important economic implications for the City and the study area:

1. High taxes and cost of living.
2. Traffic congestion.
3. Loss of community character or identity.
4. Lack of economic vitality.
5. Potential lake pollution threats.

Appendix D—Bypass Analysis

Appendix E—Cost Estimates

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