

# Transportation and Infrastructure

## GOALS:

1. Strive to improve the safety along streets and highways.
2. Improve traffic circulation and access throughout the Town.
3. Improve opportunities for pedestrian and bicycle circulation where feasible.
4. Continue to provide reliable water service and high quality drinking water to Owasco Water District customers.
5. Continue to provide reliable sanitary sewer service to Owasco Sewer District customers.
6. Consider extending sanitary sewer service in other areas of the Town when the density is sufficient to make such extensions cost effective.
7. Continue to ensure that adequate stormwater drainage is provided to prevent flooding and the ponding of stormwater in existing developed areas and in future development.



### Residents Survey Highlights

*63% of respondents were very concerned about the volume and speed of truck traffic along route 38A.*

*72 % of respondents residing in the Hamlet of Owasco think that sanitary sewer service is at least somewhat needed.*

*74% of respondents were at least moderately concerned that additional development would occur as a result of a sanitary sewer line extension.*

*62% of respondents were very concerned about the volume and speed of truck traffic along Owasco Road and the remainder of Route 38-A.*

*84% of respondents were at least moderately concerned about the overall volume of traffic on Owasco Road and the remainder of Route 38-A.*

*56.3% of respondents indicated they supported the construction of a pedestrian / bicycle path between the Oakridge Heights subdivision and Owasco Elementary School.*

### Residents Survey Highlights *(continued)*

## Existing Conditions

### Pedestrian and Bicycle Facilities

What few sidewalks that exist in the Town of Owasco are in the "Avenues." These sidewalks are sporadically interspersed, and are not interconnected. A cinder pedestrian and bicycle path that once ran along the west side of Owasco Road from the "Avenues" to Emerson Park has become overgrown with grass from disuse, and no longer exists.

### Streets and Roadways

The network of streets and roads in the Town of Owasco make up the backbone of its infrastructure. The development of subdivisions continues to add new roads to the system. New York State Route 38A, portions of which include "Owasco Road" and "East Lake Road," is the main road through town. Route 38A, which is the only State road in the Town, extends from the City of Auburn, through the Hamlet of Owasco and continues into the Town of Skaneateles. Many of the other roadways in Owasco are County roads. Town roadways include the streets in the "Avenues" and a few of the other roads as Map10 illustrates. Existing roads are inspected and maintained annually by the appropriate jurisdiction.

### Water Service

The Town of Owasco provides water service for the more densely developed residential areas within the Town including nearly all of Route 38A, Rockefeller Road and the Hamlet of Owasco as illustrated in Map 11. The less densely populated and agricultural areas of the Town rely mainly on private groundwater wells to provide drinking water.

The Town of Owasco's water filtration plant is located on Route 38A near the intersection of Swartout Road and draws water directly from Owasco Lake. The Town is currently permitted to draw an average daily amount of 1 million GPD from the Lake, and the plant has the ability to treat up to 1.5 million gallons per day (GPD). The average daily demand varies depending on the time of year with a range of 450,000 GPD up to 800,000 GPD during summer dry spells. The water is filtered and chlorinated before it is transported to users via the distribution system of watermains, storage tanks, and associated appurtenances.

The Town owns and maintains two water storage tanks, one is located on Melrose Road near Oakridge Road and has a capacity of 500,000 gallons. The second is located on Martin Road near the intersection of Route 38A and has a capacity of 250,000 gallons. The water distribution system has two valved connections to the City of Auburn water supply which can be opened in an emergency situation.

### Sanitary Sewer Service

The Town of Owasco contains two sanitary sewer districts as illustrated in Map 12. Only Sewer District No. 1 contains a sewage collection system at this time. As Sewer District No. 2 is newly formed, the sewers have not yet been constructed. The remainder of the Town relies on private, subsurface sewage disposal systems.

The sewage collection system in Sewer District No. 1 consists of 8 and 12 inch diameter sanitary sewer mains which run along Owasco Road/ Route 38A from Havens Avenue to Willowbrook Drive. The system serves the adjacent developed areas including the "Avenues," Brookside Trace, Oakridge Heights and Oakridge Road. The ultimate disposition of the sewage generated from the Town is directed to and treated by the City of Auburn wastewater treatment facility.

### Stormwater Management

Stormwater drainage in the Oakridge Heights, Brookside Trace and Martin Point subdivisions is provided by storm sewers. Stormwater drainage in the "Avenues" and along Owasco Road is provided by a haphazard storm sewer system that serves this area. Stormwater drainage in the remainder of the Town is provided by ditches and culverts. Nearly all stormwater in Owasco is discharged directly or indirectly into Owasco Lake (See Map 6 following the Watershed Protection and Environmental Quality section.).

*79% of respondents view septic system leachate from dwellings close to Owasco Lake as a very serious threat to the water quality of the lake.*

### Other Relevant Information

*There are 222 septic systems located along the lake front of Owasco Lake; 70% of these are within 100 feet of the shore. More than one-half of the septic systems are at least 20 years old. (Cayuga County Health Department)*

### Relevant Studies

*In 2000, the Town of Owasco completed a comprehensive evaluation of its sewer system to identify ways to eliminate or at least reduce the frequency of sanitary sewer overflows. The Town has begun to implement the corrective measures identified in the study in accord with a consent order between the Town and the NYS Department of Environmental Conservation. The project has been divided into the two phases:*

#### Phase 1

- ◇ *the identification and repair of sewer line leaks to minimize ground water infiltration,*
- ◇ *the repair or replacement of substandard manholes, and*
- ◇ *the identification and elimination of sump pumps that discharge to the system.*

#### Phase 2

- ◇ *the construction of a high flow pumping station routed around the areas that are deficient within the system, and*
- ◇ *the installation of a storage tank to capture flows that are in excess of the allowable discharge to the City of Auburn system.*

## Issues and Opportunities

### Traffic Speed and Volume

A significant increase in the amount of commercial traffic along Route 38A has been realized in recent years. The number of tractor-trailer trucks, in particular, have recently increased. Although tractor-trailers and other commercial vehicles are an essential part of our economy, their presence is a direct contrast to the desired character of the Town. These large vehicles increase the level of noise and air pollution, and can also accelerate the rate at which road surfaces wear. The overall number and speed of all types of vehicles has been noticeably on the increase as well. This increased pressure has, in turn, decreased the ease and safety of pedestrian, bicycle and residential vehicular transportation.

### Circulation within the Town

Additional road issues may arise from the construction and development of new subdivisions. Subdivisions can produce streets that do not interconnect with existing streets and roads, and which may not allow for the proper ingress/egress of traffic. Streets that are not interconnected may also slow the response time of emergency vehicles as the vehicles may be forced to take circuitous routes to their destinations.

### Development Spurred by Sanitary Sewers

Sanitary sewers can allow for more densely concentrated development, and eliminate the need for subsurface sewage disposal systems. In areas in which sewers are made available, development may follow. Therefore, it is important that planning and zoning regulations are in place to control development.

The proposed extension of sanitary sewer services from Martins Point to Burtis Point has been identified, in particular, as a concern. This extension of sanitary sewer service does, however, have the potential to provide positive environmental and cost benefits. The extension will reduce the amount of homes using subsurface sewage disposal systems immediately adjacent to Owasco Lake. The groundwater and surface water quality in the area around the sanitary sewer extension should improve. Sanitary sewer service could provide residents in the extension area a realized cost benefit should the need for future individual system upgrades or replacement become necessary.

## **Sanitary Sewer Capacity**

A portion of the existing collection system has experienced some capacity problems. Although the design capacity is adequate for the existing and future service connections, excess flows attributable to groundwater infiltration and stormwater inflow, has caused untreated sewage to overflow into the Owasco Lake Outlet. The overflow has occurred most notably during the spring at the time of a heavy snow melt combined with a rain event. An increase in the numbers of users would, in turn, increase the amount of wastewater that would be conveyed by the existing system. Since the existing sanitary sewer system already has capacity related problems, a new extension is not possible until the capacity concern associated with the existing system is addressed.

If Emerson Park is developed in accord with the Emerson Park Master Plan, additional sewage can be expected to result. This will impact on the Town of Owasco as all sewage from Emerson Park is conveyed through Town sewers. Cayuga County, therefore, should be expected to contribute financially to sewer system improvements that benefit Emerson Park.

The sewers for Sewer District No. 2 have been designed to have sufficient capacity to accommodate existing and new service connections, including future sewer connections to existing residences and cottages along Rockefeller Road. As development occurs north of Burtis Point, the Town should ensure that adequate sewer capacity is reserved for the future Rockefeller Road service area.

## **Tools and Techniques**

### **Pedestrian and Bicycle Access**

Town officials and residents have identified the need for a suitable system of sidewalks and bike paths. The Town should consider the construction of sidewalks and bike paths as a requirement of development when it lends itself to desired destinations such as Owasco School or areas of recreational opportunity frequented by the general public. If such amenities do not appear practical at the time of proposed development, an easement for future access should be considered.

#### **Owasco Road Pathway**

Special consideration should be given to the reconstruction of a pedestrian/bicycle path along Owasco Road possibly where the foot path was formerly located. This would provide an access from the prominently developed areas to Emerson Park and Owasco Lake. These improvements could help improve access to Owasco Elementary School for students, and improve the overall safety of all pedestrians and bicyclists within the Town. State and federal grants such as Intermodal Transportation funds could be pursued to construct sidewalks and path in areas that are currently developed such as the Owasco Road corridor.

#### **Rights-of-Ways / Easements**

As utilities are constructed in the Town, easements over these utilities should be secured in such a way that they may be utilized for pedestrian walkways and/or access routes, and for utility maintenance. This would provide future opportunities as the need may arise for pedestrian and bicycle paths and interconnections to existing trails.

An existing 20 foot wide Town right-of-way between the Owasco Elementary School and the Oakridge Heights subdivision could readily be developed as a pedestrian and bicycle path. This would provide elementary students who reside in the subdivision ready access to the school.

#### **Pedestrian Walkway Across Owasco Outlet**

A pedestrian walkway connecting Owasco with the City of Auburn currently exists over top of the dam on Owasco Lake. The walkway is very narrow and has only waist-high railings on either side for pedestrian safety. Crossing the open-grated walkway can also be unnerving for pedestrians. Also, there is no formal access path or walkway to the outlet crossing. If an ease-

ment were obtained, perhaps from the end of Swift Street Extension and a safer and more formal walkway constructed, pedestrian access to the City of Auburn would be greatly improved. Owasco high school students walking to and from school would particularly benefit.

### **Traffic Study / Traffic Calming Methods**

To address the problem of increased volume and speed of commercial and residential traffic the Town of Owasco should consider a traffic study of the main roads that run through the Town. Such a study would allow for the quantification of the actual volume, speed, and weight of vehicles. As Route 38A has been identified as the road of most notable concern, and is under State jurisdiction, coordination with the NYS Department of Transportation will be required for both the study phase and implementation phase.

Typical solutions to address the identified concerns may consist of modifying speed limits, weight limits, and other driving restrictions. Techniques that could be employed on Town streets to help calm traffic in selected areas could be the installation of speed humps, boulevards, rumble strips, roundabouts, landscaping and minimization of long straight sections of road.

### **Interconnecting Streets and Roadways**

To promote the interconnection of streets, the subdivision and site plan review must be used to ensure that the design of new roads will achieve this goal. This may require that road right-of-ways be designated and reserved to provide future access to adjacent developable lands. Curb cut locations and access to newly developed areas should also consider adequate line of sight distances in order to allow for safe ingress and egress.

### **Elimination of Subsurface Sewage Systems**

Subsurface sewage systems located near the lakeshore and lake tributaries are of particular concern due to the ever present potential for failures to contribute to lake pollution. In order to reduce the number of active subsurface sewage disposal systems and enhance water quality, sanitary sewer service could be extended to areas that carry sufficient residential density to make the installation cost effective. When practical, utility access easements for the extension of sanitary sewer service to adjacent properties should be considered at the time of subdivision review and approval. Planning and zoning regulations will assist to ensure that sanitary sewer service does not promote accelerated development in areas that would compromise the rural character of the Town.

### **Water Service**

In order to ensure the continuation of reliable water service and drinking water quality, the Town should continue to appropriate funds for maintenance and upgrades to the water filtration facility and distribution system as needed. The Town may wish to consider extending water through the formation of new water districts to serve developed areas that rely on private wells that produce poor water quality or quantity, as and when such areas have become sufficiently developed to sustain the cost of such an endeavor.

Planning and zoning considerations need to be enacted to ensure that future development will encourage the cross-connection or “looping” of watermains and/or provide utility easement access to properties that possess future development capabilities. Cross connecting, or “looping” of watermains, increases water pressures and flows to effected residences and prevents the stagnation of water at dead ends.

### **Grant and Low Interest Loan Financing**

Grant funding and low interest loans are available for water service and sanitary sewer service projects from various funding sources. The U.S. Department of Housing and Urban Development will provide up to \$400,000 of grant funding through the Small Cities program. Eligibility, however, is based on household income. The U.S. Department of Agriculture provides grant funding and/or low interest loans through the Rural Development Program. The NYS Environmental Facilities Corporation provides grant and/or low interest loans through the Clean Water State Revolving Fund and the Drinking Water State Revolving Fund Programs.

### **Stormwater Management**

As the amount of impervious surface increases in the Town, the amount and placement of stormwater facilities must also increase. Proper stormwater management will help to prevent flooding of streets, houses and agricultural lands. To promote proper stormwater management, the Town must adhere to local planning and development regulations, and revise these regulations when necessary, to ensure that the design of future stormwater infrastructure and facilities will protect property from the potential of flooding and/or ponding of stormwater.

Water quality as it relates to continued development should also be strongly considered in order to protect the receiving bodies of water including Owasco Lake. Stormwater quality should be

incorporated into facility designs with consideration for retention, extended detention and/or constructed wetlands. When possible "regional" considerations should be given to facility design and location. Regional benefits include: enhanced water quality, the reduction of multiple backyard facilities on privately owned lots within subdivisions, less maintenance and increased wildlife habitat. The Town should secure easements over all storm sewers and management facilities so that the Town can perform maintenance, if necessary.

The agricultural community should also be encouraged to follow best management practices in regard to stormwater runoff such as those prescribed by local (Soil and Water Conservation Service), state (NYS Department of Environmental Conservation) and Federal (Natural Resource Conservation Service) agencies.

## **RECOMMENDED ACTIONS**

### **Pedestrian /Bicycle Circulation**

1. Re-establish the pedestrian/bicycle path along Owasco Road between the "Avenues" and Emerson Park.
2. Request that New York State construct a pedestrian walkway across the Owasco Lake outlet for use by Owasco High School Students who walk to school. The walkway could be incorporated into and made part of the Owasco Lake dam project.
3. Construct a pedestrian/bicycle path to link the Oakridge Heights subdivision with the Owasco Elementary School.

### **Streets and Traffic**

4. Ensure through subdivision and site plan review that the streets for proposed new residential developments interconnect or provide for the future opportunity to interconnect with each other and with existing Town streets to prevent the creation of excess or inappropriate dead-end streets/ culs-de-sac.
5. Conduct a traffic study of Owasco Road in conjunction with the NYS Department of Transportation. Based on the results of the study, work with NYS Department of Transportation to ensure that measures are taken to mitigate identified problems.

6. Incorporate traffic calming features on long residential streets, e.g., speed humps, boulevards, rumble strips, roundabouts and landscaping may be considered.
7. Appeal to the Cayuga County Sheriff and New York State Police to intensify speed enforcement on Owasco and Oakridge Roads.

### **Water Service**

8. Continue to provide high quality drinking water within the Town Water District. Continue to maintain the Town water filtration plant in good repair and upgrade the plant, as necessary, to ensure that the filtration plant is capable of meeting more stringent drinking water quality standards as they are enacted.
9. Extend water service in areas of the Town when sufficient density has been reached to make the installation cost effective.
10. Ensure that newly constructed watermains are interconnected or looped with each other and existing watermains to the extent feasible.

### **Sanitary Sewer Service**

11. Continue to maintain, repair and replace, when necessary, the existing sanitary sewer system in order to protect ground and surface water sources.

12. Extend sanitary sewers in areas of the Town that will carry sufficient density to make the installations cost effective, and to areas that will promote the protection of surface and groundwater resources.

### **Stormwater Drainage**

13. Incorporate stormwater quality management measures in facility designs with consideration for retention, extended detention and/or constructed wetlands.
14. Consider regional stormwater management measures when possible.