Chapter 6 Highways and Bridges

Herkimer and Oneida Counties, like the rest of New York State, are confronting the challenges of a mostly built out and aging transportation system, in which investments are not keeping pace with needs. The thrust of the highway and bridge effort is to improve overall mobility through operational, safety, and infrastructure improvements on existing facilities. Since the last Plan update, Herkimer Oneida Counties Transportation Study (HOCTS) and New York State Department of Transportation (NYSDOT) Region 2 have continued to deliver timely, cost effective investments in the two-County area. However, that being said, highway and bridge infrastructure is unfortunately beginning to reach a critical state. Infrastructure preservation on a desired life cycle basis has become a moot point with difficult trade-off decisions being made daily based on safety, risk, and vulnerability.

Further, while funding levels have remained relatively constant over the past decade, inflation has taken a large bite out of buying power. Since 2003, area asphalt prices have risen more than 150% and steel prices have risen approximately 120%. With program funding not keeping pace, this rapid inflation translates into the inability to deliver as many projects as were originally planned. As a sign of these times, several stretches of state highways, including Routes 46, 274 & 294 in Oneida County have been posted with Rough Road signs. In addition, the difficult decision to close some local bridges has compromised the goal of improving access and mobility.

Essentially, the two Counties are at a point where numerous roadways are beyond maintenance treatments being effective, and deficiencies greatly affect the mobility and serviceability of the road. Many state and county routes represent "Main Street" to their municipality and the pavement condition creates both real and perceived adverse economic effects. These effects are further complicated by the overlapping, and relatively short, tourism and construction seasons of Upstate New York. Peak tourism occurs between the 4th of July and Labor Day and construction activities during these eight weeks are sometimes the source of contentious debate.

In general, congestion mitigation, safety and infrastructure needs are implemented on a prioritized project by project basis. This includes the addition of turning lanes, traffic signal coordination, Intelligent Transportation Systems (ITS) technologies, addressing sight distance problems, improvements for pedestrian and bicycle safety, and drainage improvements.

In an effort to improve mobility, a major theme is to incorporate transportation planning and access management concepts into the local land use planning process. Land use planning provides the basis for community development and infrastructure investment decisions.

Public input continues to be an important part of the highway and bridge planning process. The public brings issues to the surface early on in the process. HOCTS and NYSDOT are committed to providing opportunity for public participation in the planning process by conducting public information meetings, coordination with local officials, providing public comment forms, website, development, media outreach, meetings with local officials and variable message signs.

TRAFFIC SAFETY

Safety of the traveling public remains of paramount importance despite funding levels remaining flat over the last decade. Working with traffic safety partners to improve safety for all users is an increasingly important effort of HOCTS. HOCTS and NYSDOT Region 2 work closely together to promote the implementation of capital projects that improve the safety and reliability of the regional transportation system. HOCTS staff also has developed a closer working relationship with the Oneida County Traffic Safety Advisory Board and continues to participate in the statewide Safety Working Group (SWG) established by the NYS Association of MPOs (NYSMPO). In 2008, the SWG formed a Human Behaviors subcommittee which has been working closely with federal, state and regional traffic safety partners to further this effort. HOCTS staff currently serves as the chair of this subcommittee.

NYSDOT develops capital projects using information received through a variety of methods. The most common method used to identify and treat safety deficiencies and accident problems is the use of a list of Priority Investigation Locations (PIL). In addition, Safety Deficient Locations (SDL), which provide accident data supplied via the Department of Motor Vehicle's Accident Information Management System (AIMS), links with the NYSDOT Safety Information Management System (SIMS).

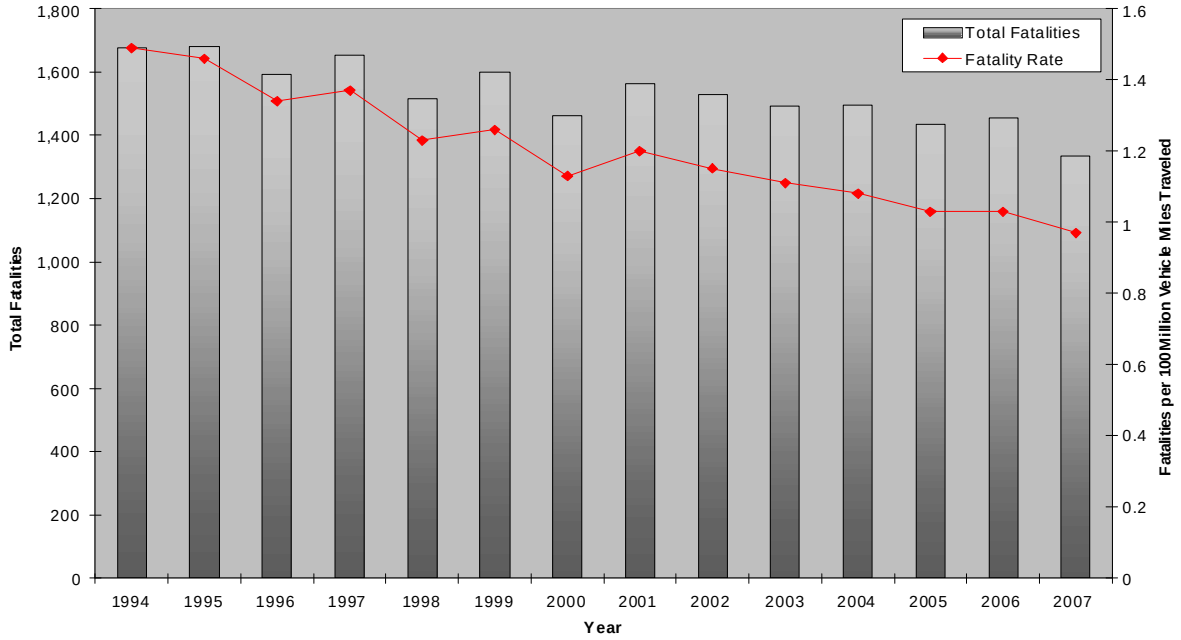
These locations are analyzed for conditions and needs, and recommendations are suggested to reduce, minimize, or eliminate the problem. These recommendations are implemented through Highway & Bridge Capital Projects, Safety Capital Projects, Capital Program Safety Enhancements, Non-Capital Safety Improvements, and STAR (Short-Term Accident Reduction) Projects. Treatment recommendations come in a variety of means, such as improved signals, pavement markings, anti-skid treatments, intersection safety improvements, and sight distance improvements.

In order to maintain a declining trend in accident rates, safety measures are typically designed into infrastructure projects. In conjunction with the recommendations above, the following design and operational improvements are designed into projects: improved signing, street lighting, reflective pavement markers and ITS technologies, among others. Consideration is also given to roadway reconfiguration where appropriate and NYSDOT staff continually monitors signal operations and considers modifications to improve safety.

Crash Data Analysis

Traffic fatalities have declined in recent years, particularly when measured against the number of vehicle miles traveled (VMT). The New York State traffic fatality rate has declined from 1.47 to 0.97 fatalities per 100 million VMT since 1994 and the national fatality rate has decreased from a high of 5.5 fatalities per 100 million VMT in 1966 to 1.36 in 2007 (See Figure 6-1). These improvements are the result of the coordinated efforts of all traffic safety partners to improve education and enforcement efforts and to make operational improvements that make the transportation network safer.

Figure 6-1. Statewide Traffic Fatalities, 1997 – 2007

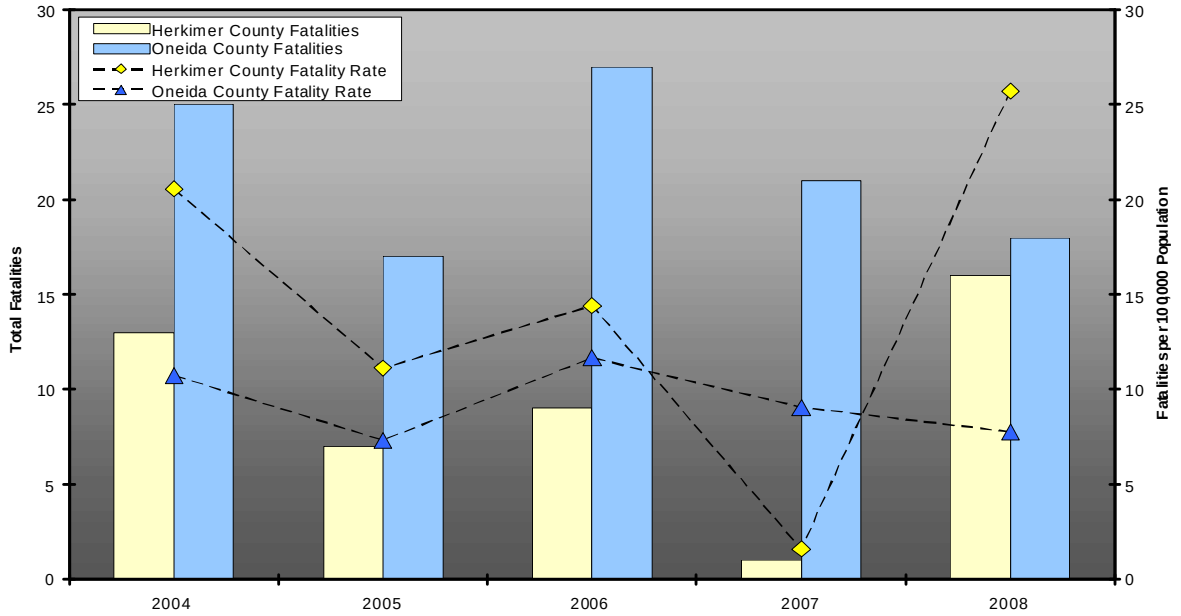


Crash data show that there have been significantly more traffic fatalities in Oneida County than in Herkimer County. However, the fatality rate – when population is taken into account – is nearly 60% higher in Herkimer County (see Figure 6-1). Figure 6-2 shows a comparison between the number of fatalities and the fatality rates for the two Counties.

Figure 6-2. Fatality Rates by County, 2004 – 2008

	Average Annual Fatalities	Average Fatality Rate (per 100,000 Population)
Herkimer County	9.2	14.68
Oneida County	21.6	9.31

Figure 6-3. Traffic Fatalities, 2004 - 2008



Of particular interest are those users who are at greater risk of injury when involved in crashes, specifically motorcyclists, bicyclists and pedestrians. Trends show that the rate of injury or death is higher for these populations.

Figures 6-4 and 6-5 show that over 90% of crashes involving pedestrians and bicyclists in Herkimer and Oneida Counties result in injury, compared to 52% - 57% of all crash types.

Figure 6-4. Bicycle and Pedestrian Crashes in Oneida County, 2005 - 2007

Oneida County	Total Crashes	Number of Injuries or Deaths	Percentage of Crashes Resulting in Injury or Death
Total Crashes	12,137	6,889	56.8%
Pedestrian / Motor Vehicle Crashes	224	221	98.7%
Bicyclist / Motor Vehicle Crashes	154	150	97.4%

Oneida County Traffic Safety Data, ITSMR, 2009: http://www.safeny.com/07data/ONEIDA-07.pdf

Figure 6-5. Bicycle and Pedestrian Crashes in Herkimer County, 2005 - 2007

Herkimer County	Total Crashes	Number of Injuries or Deaths	Percentage of Crashes Resulting in Injury or Death
Total Crashes	2,771	1,450	52.3%
Pedestrian / Motor Vehicle Crashes	36	33	91.7%
Bicyclist / Motor Vehicle Crashes	18	17	94.4%

Herkimer County Traffic Safety Data, ITSMR, 2009: http://www.safeny.com/07data/HERKIMER-07.pdf

From 2005 to 2007 there were 344 crashes involving motorcyclists in Herkimer and Oneida Counties; 88 and 256, respectively. Although these crashes represent a relatively small proportion of the total number of crashes, data show that motorcyclists are particularly at risk for injury or death when involved in traffic crashes. Analysis conducted by the National Highway Traffic Safety Administration (NHTSA) indicates that, per vehicle mile traveled in 2006, motorcyclists were about 35 times more likely than passenger car occupants to die in a motor vehicle traffic crash and 8 times more likely to be injured[1].

Work Zone Safety

In addition to the safety elements inherent to NYSDOT Maintenance & Protection of Traffic (M&PT) plans, Herkimer and Oneida Counties benefit from an excellent working relationship with the New York State Police. They routinely patrol work zones beyond paid enforcement and have set up speed limit awareness road blocks in conjunction with speed limit reductions. A review of the NYSDOT capital program indicates that the number and scope of projects that will require paid enforcement should remain approximately the same. The Region has also made a significant investment in portable message boards to use in conjunction with construction and maintenance work zones. All work zone M&PT is now routinely reviewed as part of the Surface Traffic Control function within the Regional Traffic Operations Center (TOC). In addition, the Regional Traffic Office participates in annual Work Zone training for both the Regional Construction and Regional Maintenance Staff and works with designers on M&PT related matters.

Intersection Safety

Based on accident frequency and severity, intersections play an important role in developing safer transportation systems. Therefore, intersection improvements represent a major component of the NYSDOT Region 2 Safety Program. Due to the proven reduction in frequency and severity of accidents, roundabouts are given priority consideration when evaluating accident patterns and potential intersection improvements. There is one roundabout in operation on Route 825 in Oneida County and at least two new roundabouts are scheduled to be incorporated into currently programmed NYSDOT capital projects. When reviewing results of the HSIP program for selected intersections; lane, signal and signing modifications are also evaluated to determine the appropriate corrective actions.

As mentioned above, Regional System Optimization staff continually review field signal operations to evaluate the need for alternative coordination plans, timing changes and detector programming modifications to reduce accident potential and improve overall operations. Needed infrastructure changes such as improved pedestrian facilities, installing full-presence detection and advanced warning applications are also indentified and implemented under the Region's Signal Requirements Contract.

The NYSDOT Regional office's signal controller project is proceeding on schedule. At this time there are 161 units deployed in the field. NYSDOT signal maintenance staff is installing them at a rate of 15 units per month when the equipment is available. At this rate the upgrades will be completed within the next two years. Additionally, NYSDOT continues to install pedestrian

[1] NHTSA, Traffic Safety Facts, 2007 Data

countdown signals at existing signal locations and on signal reconstruction projects. As of 2009, there are 80 countdown timers in operation throughout NYSDOT Region 2.

Driver Behavior

Region 2 NYSDOT staff actively participate in the annual Department-wide Driver Behavior initiatives (i.e., aggressive driving campaign, Work Zone awareness, Buckle Up campaign, etc.) and partner with the Association of General Contractors, State Police and local media regarding these programs. In conjunction with the new Regional Operations Office, $350,000 has been allocated within the annual capital program for Intelligent Transportation System (ITS) initiatives with a primary goal of affecting driver behavior during both planned and unplanned events/incidents. Notice of upcoming Regional work zone activity is published weekly in local area newspapers. Message boards are used to provide advance notice to drivers regarding capital construction, major maintenance projects and detours. The Region actively supports the Department's traveler information systems, the TIG and CARS. The use of the State Police for enforcement of Work Zone Speed Zones has also been effective in modifying driver behavior. In addition, NYSDOT school and community safety programs are reaching 2,000-3,000 citizens annually. NYSDOT Region 2 plans to include Work Zone Safety Education as part of these outreach efforts which are intended to affect people's awareness behind the wheel and long-term driver behavior.

HIGHWAY AND BRIDGE INFRASTRUCTURE

There are 1,532 miles of highways in Herkimer County, of which 687 miles are municipally-owned, 579 miles are county roads, 241 miles are State highways and 26 miles are roads owned by other agencies (i.e. NYS Thruway Authority). In Oneida County, there is a total of 2,864 miles of highways consisting of 1,793 miles of municipally-owned roads, 594 miles of county roads, 425 miles of State highways and 50 miles of roads owned by other agencies (i.e. NYS Thruway Authority).

Figure 6-6. Highway Ownership by Mileage

County	State Touring Route *	Municipal	County	NYSDOT	Other
Herkimer	268	687	579	241	26
Oneida	443	1,794	594	425	51
Total	712	2,481	1,172	666	77

* Roads designated as State Touring Routes may fall under municipal, County or State jurisdiction

Functional Classification of Roads

Functional Classification is the process by which streets and highways are grouped into classes, or systems, according to the character of the service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel needs independently, most travel involves movement through a network of roads. This network contains roads with different purposes depending on their connectivity to other roads in the network. One of the primary elements of a road's functional classification is whether the road provides local distribution or whether it transmits traffic from one area to another. The road's purpose or function is what determines the proper functional classification. Roads that transmit

more traffic and provide regional mobility should be designated with higher classifications. Conversely, roads that transmit less traffic and provide local mobility should be designated with lower classifications.

The data and criteria for determining the functional classification of a road are numerous and can be subjective. The data items listed below are some of considerations when determining the functional class of a road.

General functional class criteria considered:
1) Lane width
2) Number of Lanes
3) AADT (Annual Average Daily Traffic)
4) Heavy vehicle percentage
5) Network Connectivity
6) Surrounding land uses
7) Travel Patterns
8) Population centers

Ultimately, the functional classification of a road also determines whether or not it is eligible for federal funding. Any work done to a particular segment of road can consume federal funds if it is functionally classified above the dashed line in the Figure below.

Figure 6-7. FHWA Functional Classification

Functional Classification Chart		
Urban	**Rural**	
Functional Class	**Functional Class**	
Interstate	Interstate	
Principal Arterial (Expressway)	Principal Arterial	
Principal Arterial (Street)	Minor Arterial	
Minor Arterial	Major Collector	federal-aid eligible
Collector	Minor Collector	not federal-aid eligible
Local	Local	

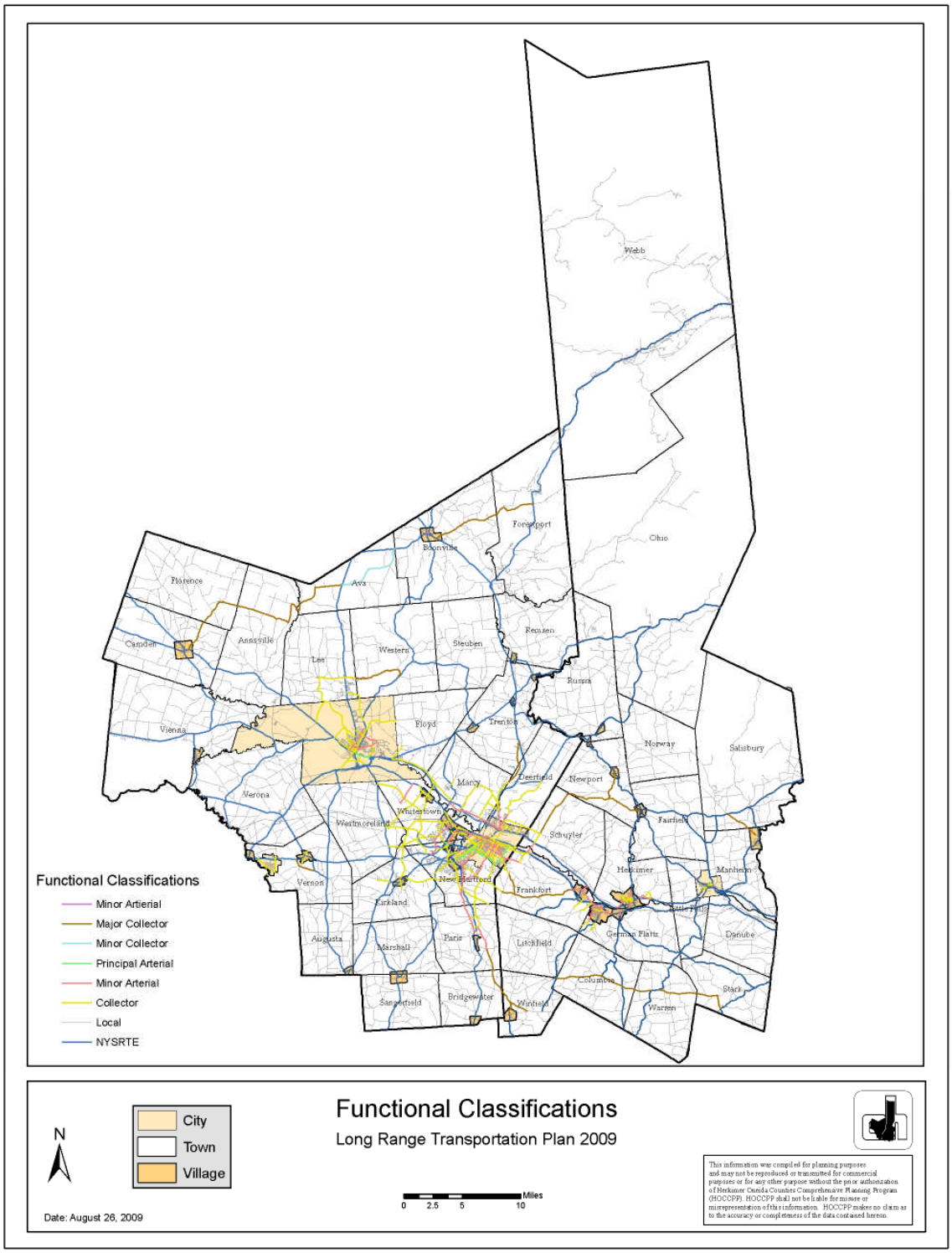
HOCTS monitors regional travel patterns and traffic volumes to determine necessary modifications to the federal-aid road system. When conditions warrant modification, HOCTS coordinates with NYSDOT and FHWA to add or remove roads. The Figure below provides a summary of the number of miles of each functional classification within the non-state federal-aid system in Herkimer and Oneida Counties.

Figure 6-8. FHWA Functional Classification of Road Mileage by County

Federal-Aid Eligible Road Mileage					
Herkimer County			Oneida County		
Functional Class	**Numeric Code**	**Mileage**	**Functional Class**	**Numeric Code**	**Mileage**
Minor Arterial	6	0	Minor Arterial	6	0.3
Major Collector	7	43.6	Major Collector	7	43.4
Principal Arterial	14	0	Principal Arterial	14	12.4
Minor Arterial	16	12.0	Minor Arterial	16	50.3
Collector	17	17.3	Collector	17	159.8
Total		72.9	Total		266.1

The map below depicts the functional class of all the roads in the City of Utica vicinity. All roads are shown on the map, but those that have been elevated to a functional classification that is federal-aid eligible are colored. The functional classification network is contiguous and has a well-defined hierarchy of roads that start with local roads that distribute local traffic and slowly build to larger, higher functional classifications that transmit traffic through areas. Current maps depicting the functional classification of roads across the two Counties are available online at: www.hocts.org.

Map 6-1. Functional Classification of Roads



Highway Pavement Conditions

HOCTS conducts an annual pavement condition rating of the Non-State Federal-Aid Highway System in Herkimer and Oneida Counties, commonly referred to as the road scoring program. 2008 marked the twenty-first year of the HOCTS program and the sixth year that road scoring was performed using an automated system. NYSDOT assigns a pavement surface rating, that describes the severity and extent of pavement surface distress, for each segment of State highway. Both processes use the same rating scale ranging from 1 (poor, surface distress is frequent and severe) to 10 (excellent, no surface distress).

The HOCTS road condition data compliments data collected by NYSDOT. Together they comprise a complete report on the condition of the Federal-Aid Highway System in Herkimer and Oneida Counties, as well as aid in the production of functional-class mapping of the statewide Federal-Aid Highway System. Additionally, the annual NYSDOT Local Highway Inventory (LHI) provides an inventory of data on locally-owned roads that includes traffic volume, pavement condition, functional class, lane mileage and other information. The LHI data is incorporated into a formula that sets funding levels for the Consolidated Local Streets and Highways Improvement Program (CHIPS).

This information can assist municipalities in planning maintenance and capital needs. A municipal Pavement Management System (PMS) should minimally consist of a pavement condition survey and a needs estimating process. This information will also assist NYSDOT in the preparation of project reports, and will aid HOCTS in the understanding of the financial needs that will be required to maintain the federal system. The information is also used by the municipalities to help determine which roads need resurfacing.

There were 339 miles of Non-State Federal Aid roads scored in Herkimer and Oneida Counties for the 2008 report, 73 miles in Herkimer County and 266 miles in Oneida County. About 94% of the total non-state system for 2008 was in good to excellent condition. The percentage of roads in good condition increased to 76% in 2008 from 74% in 2005, while roads in excellent condition decreased from 19% in 2005 to 18% in 2008. Roads in fair condition remained the same for 2008 at 5%. Poor roads decreased from just over 1% in 2005 to less than 1% in 2008. The 2008 Herkimer County surface conditions were as follows: 28% excellent, 70% good, 2% fair, and less than 1% poor. In Herkimer County the roads in good to excellent condition increased to 98%; the percentage of fair roads decreased from 6% to 2%. Roads in excellent, fair and poor condition decreased while roads in good condition showed an increase. The 2008 Oneida County surface conditions were as follows: 15% excellent, 78% good, 6% fair, and <1% poor. In Oneida County the percentage of poor and fair roads remained relatively the same. Roads in good condition increased to and excellent condition decreased slightly. Figures 6-6 and 6-7 below show summaries of the surface conditions as identified in the 2008 report. Additional analysis is available and a description of the rating criteria, data collection technique and analysis methodology are contained in the Pavement Conditions Ratings Report, available online at www.hocts.org.

Figure 6-9. Summary of Miles by Condition, 2008

	Poor	Fair	Good	Excellent	Total Miles
Herkimer County	<1	1	52	21	74
Oneida County	2	17	211	41	271
Herkimer and Oneida Counties	2	18	263	62	345

NOTE: Mileage has been rounded

Source: HOCTS Pavement Condition Ratings, 2008

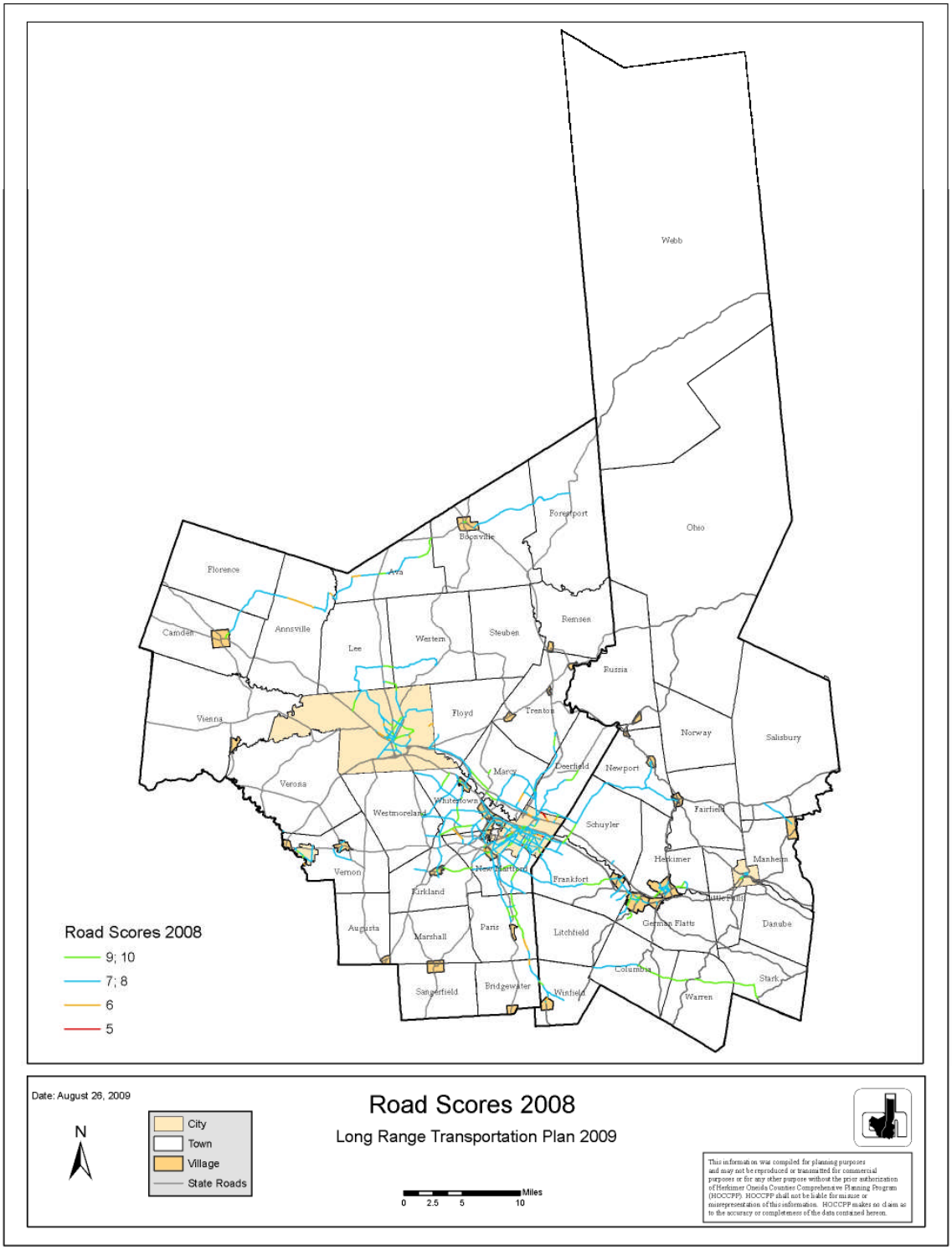
Figure 6-10. Condition of Road Surface by Percentage

Year	Poor	Fair	Good	Excellent
2005	1%	5%	75%	19%
2008	<1%	5%	76%	18%

Source: HOCTS Pavenment Condition Ratings, 2008

According to the 2007 State Pavement Condition Survey by the NYSDOT Region 2 Office, approximately 5.9% of state highways in Herkimer County and 1.5% of the state highways in Oneida County are presently in poor condition. While this represents a slight increase from 5.5% poor in 2002 , the average condition of all State highways in Herkimer County increased from 6.85 in 2002 to 6.91 in 2007. For State highways in Oneida County, the percentage of poor pavement fell to 1.5% in 2007 from 2.1% in 2002, with the average condition rating increasing from 6.98 to 7.04 over this five year period.

Map 6-2. Pavement Conditions.



Bridge System

Herkimer County has 99 state-maintained bridges and 117 locally maintained bridges. In Oneida County, there are 238 bridges maintained by NYSDOT and 222 maintained by municipalities. The Oneida County Department of Public Works and the Herkimer County Department of Highways conduct biannual structure inventories to assess the condition of bridges less than 20 feet in length; NYSDOT inventories local structures over 20 feet long.

Since 1994 the overall condition of bridges has improved. Figure 6-8 summarizes the condition of all bridges in Herkimer and Oneida Counties.

Figure 6-11. 2009 Bridge Conditions

Herkimer County	Count	Deficiency	Oneida County	Count	Deficiency
State	99	21%	State	238	26%
Local	117	34%	Local	222	41%
Other	24	58%	Other	28	61%

Bridge Safety
At least once every two years each structure is inspected to identify any safety deficiencies. NYSDOT also relies on its Bridge Management System (BMS) to organize and implement activities to plan, design, construct, maintain, rehabilitate and replace bridges which are vital to the highway network.

Regionally Significant Highway & Bridge Corridors
HOCTS and NYSDOT Region 2 have established a priority network of the most important travel corridors for the Region. Use patterns, detour lengths, trade routes, commuting routes and tourism considerations, as well as traffic volumes, were used to recognize the varying needs of different highway segments. The only designated statewide corridor in the Region is the *Mohawk-Erie Multi-Modal Transportation Corridor (I-90 Corridor)*, which includes I-90/Thruway and its support arteries, CSX rail lines and the Erie Canal. However, the Region does have a number of routes which are identified in the Statewide Support Network for Trade Corridors.

To complement I-90 and the Statewide corridor system, the Region has been working to establish program priorities that support mobility along these corridors. These corridors are intended to provide east-west and north-south connections between Interstates 90, 81 and 88, as well as a regional route between Thruway interchange 31 in Utica, the City of Rome, and interchange 33 in Verona. In addition, a system of corridors was identified that provide connections between the major urban and rural economic centers. The identification of these corridors involved consideration of:

- Truck travel volume thresholds (i.e. 1,200 or greater per day).
- Connectivity between the Statewide Trade corridor and the Region's economic centers, as well as connectivity among those economic centers.
- Location of employment and business centers.
- Traffic volume thresholds (i.e. traffic volumes of greater than 1,200 vehicles per hour).

- Connections between developing communities and the Thruway interchanges.
- Corridors with high transit use or intercity travel service.

In addition, tourism is a vital component of the Mohawk Valley economy, as evidenced by its statewide Tourism Gateway designation. In addition to several gateway routes into the Adirondack Park, the area is home to the Turning Stone Casino & Resort as well as numerous significant historic sites, tourist attractions and community events. These types of activities create different user needs on the roadway system as their traffic volumes fluctuate based on seasonal demand, weather conditions, planned events, etc. In addition, for tourism purposes, connectivity between Thruway interchanges and the urban centers and gateways; Utica, Rome, Little Falls and Oneida/Verona becomes of importance when considering potential capital investments. The Region's Statewide Support Network and Other Regionally Identified Corridors are as follows:

Routes 5/8/12 (North-South Arterial) Corridor

The North-South Arterial in the City of Utica is the most heavily trafficked highway corridor in the Mohawk Valley. The NYSDOT Bridge Inspection Program revealed that the aging viaduct that carries Routes 5, 8, and 12 over Columbia Street, Lafayette Streets and Oriskany Boulevard (intersection of State Routes 5A and 5S) is nearing the end of its useful life and is in need of replacement. The need for this project is also reflected in the Utica North-South Arterial Corridor Study that was initiated in 2006 by HOCTS in cooperation with the City of Utica, Oneida County and NYSDOT. The focus of the study was to develop a concept plan and vision to improve the operation, safety, mobility, and aesthetics of the Arterial. The vision and concept recommended by the study was an expressway that included an interchange at the intersection with Court Street and a new alignment for the viaduct.

Several design alternatives are being considered for the Court Street intersection

The primary purpose of this project is to maintain the structural integrity of the viaduct. The reconfiguration is also intended improve vehicular traffic flow on the Arterial and Court Street while addressing documented vehicle and pedestrian safety concerns along the corridor. To these ends, several interchange and bridge configurations are being considered which replace the viaduct and are consistent with the vision identified in the study. At a replacement cost of between $60-$70 million, the project remains beyond the scope of current funding allocations. Therefore it is likely that the project will be implemented in phases beginning in 2013. As NYSDOT has progressed through the early stages of the project development process, there have been several opportunities for public involvement and comment. The end product of this process

will be the selection of a feasible preferred alternative which will be progressed through design and constructed.

Statewide Trade Corridor Support Network

- Route 12 [Binghamton to Utica (I-790)];
- Route 12 [Utica (I-790) to Watertown];
- Routes 49/365 (Thruway Exit 31 to Thruway Exit 33);
- Route 69 [Route 365 (City of Rome) into Madison County];
- U.S. Route 20 through southern Herkimer and Oneida Counties;
- North Genesee Street (Route 5S to Thruway Exit 31);
- Route 5S (East-West Arterial) between Route 5/8/12 and North Genesee Street.

Other Regionally Identified Corridors

- Route 5 through southern Herkimer and central Oneida Counties;
- Route 8 (Utica into Madison and Otsego Counties);
- Route 12B (Route 20 to Route 5);
- Route 233 (Route 12B to Route 365);
- Route 365 (Route 5 to Thruway Exit 33);
- Route 13 (Route 5 to Thruway Exit 34);
- Route 46 (Black River Boulevard-Rome);
- Route 5A/5B (Route 5 to Route 5S);
- Route 5S (North Genesee Street to Herkimer)

Through public outreach meetings, other transportation projects and needs have been identified. A list of these projects and issues can be found in the appendix.

Freight Truck Traffic

The U.S. Federal Highway Administration projects a doubling of truck traffic in the next 20 years. The State of New York is projected to follow that trend with expected increases occurring in urbanized areas and the interstate highway system. Currently, 90% of freight flowing in and out of New York moves by truck. A significant increase in truck traffic will have a negative impact on highway/bridge infrastructure, air quality, mobility and safety.

A projection analysis using 2002 baseline data obtained from the Highway Performance Monitoring System for truck networks within Herkimer-Oneida Counties indicates that certain routes or highways within that network will see a significant increase in truck traffic by 2035. In particular, the number of light, service type trucks is expected to increase significantly due to more e-commerce and customers' need for "just in time" delivery; see Figure 6-9.

Figure 6-12. Anticipated Freight Truck Increases, 2002 - 2035

Route or Highway	Heavy Trucks	Light Trucks
I - 90 (Thruway)	56%	20%
I-790	18%	242%
Route 365	20%	93%
Route 12	30%	181%
Route 20	12%	117%
Routes 46\49	37%	121%
Routes 5A\5S	39%	98%

MOBILITY & ECONOMIC DEVELOPMENT

Mobility throughout the transportation network depends upon the amount and character of roadside interference with through traffic. Most of this interference is caused by vehicular movements to and from connecting streets, businesses, residences and other developments along the roadway. Mobility investments focus on improvements, which provide efficient and safe operation of the highway and achieve optimum use of highway and land use investments. A major component of this strategy involves coordinating access to land development, while preserving the flow of traffic on the surrounding road system in terms of safety, capacity and speed. It also involves the promotion of transit and other non-automotive modes of travel. Owners of land which abuts highways have certain rights of access, and highway users have concerns for safe and efficient travel. An effective capital program involves a reconciliation of these interests to maximize the potential benefits.

Integration of mobility and access management concepts into municipal plans and ordinances is critical in maintaining mobility while simultaneously promoting economic development throughout the region.

Mobility is an important issue within several critical corridors in the Mohawk Valley. Development along the suburban highway network continues to create mobility challenges and has the potential to compromise system safety and reliability.

As such, several strategies for addressing mobility issues are utilized including:

- Coordination with local governments to implement land use management.
- Proactive environmental review.
- Implementation of remedies to alleviate congestion.
- Promotion of access management techniques.
- Support of multimodal development.
- Implementation of ITS strategies.
- Involvement of local governments in project planning.

Traffic Operations

The NYSDOT Region 2 Traffic Operations Center (TOC) includes a traffic management component in conjunction with a Systems Optimization Unit. Over the past year, the Region has been expanding the functions of this office to provide better communication of roadway conditions. The office allows NYSDOT staff to monitor a variety of information systems including weather and road conditions, road closures and portable camera images for special events. In its initial state, the TOC has operated as both a regional conduit for advice and support for work zone traffic control as well as coordination with other agencies in handling daily incidents and planned events. Road work, incident and weather related information is provided to state and local Police, 911, other state agencies and the media.

The Optimization Unit provides traffic signal management, traffic engineering and analysis for system optimization as well as the development and implementation of the Region's ITS Plan. NYSDOT operates closed loop traffic signal systems allowing signal timing plans, traffic counts and system monitoring to be managed remotely. It is intended to have these closed loop systems further supported and monitored through the use of cameras being progressed in future ITS projects. The TOC has the protocols and expertise to handle routine events and incidents and its function is supplemented with support from the Emergency Operations Center (EOC) when needed.

The Region has developed event management plans for four major area events. These plans will provide a systematic traffic management approach to handling scheduled major events, such as the Boilermaker Road Race, Turning Stone Professional Golf Association (PGA) Event and others.

Intelligent Transportation Systems (ITS)

In June 1999, a report entitled, "A Strategic Plan for Intelligent Transportation Systems in Rural and Small Urban Areas" was prepared by an ITS consultant. Part of this plan included an "ITS Toolbox" with recommendations and priorities for Herkimer-Oneida Counties. The identified priorities include tourism and traveler information, traffic and transit management and improving safety and security of travelers.

These priorities have been pursued through collaborative efforts to solve smaller, location-specific problems, or through partnerships with other agencies and groups. This collaborative strategy is intended to demonstrate early successes with only low to moderate levels of investment, and consequently to increase both awareness and support for ITS solutions in the public and private sectors, and with the general public.

Since the development of that report, implementation of these priorities or use of the ITS Toolbox has been focused on low-cost technical measures such as:

Implemented Regionally
- Pedestrian Countdown Timers
- Closed-Loop Signal Monitoring Systems
- Permanent Traffic Counting Systems

Implemented Statewide
- Electronic Hauling Permits and GIS "Best" Route Information
- Targeted Integrated Road/Weather Information System
- AMBER Alert System
- 511 New York

Future ITS projects may include:
- Variable Message Signs
- "Real-Time" Bus Dispatch Software
- Heat and Motion Sensing Animal Warning System
- "Wayfinding" System for Tourists

Asset Management

While the current funding environment makes the discussion fundamentally more about risk management than asset management, HOCTS and NYSDOT remain committed to the philosophy of routine inspections and life cycle replacement of transportation system assets. Ultimately, the idea is to develop a strategic approach to managing assets and for asset management to become "a way of doing business".

Data on the highest priority assets – bridges and pavement – have been collected for a number of years and have a high degree of maturity, not only in the inventory gathering, but also in development of software programs to analyze inspection results. Procedures have been developed to inventory additional assets and are being referenced to both GIS and the NYS Highway Sufficiency system. While the inventory collection process is quite straightforward, it is very labor intensive. Staff is using field surveys, contract plans, high resolution aerial and satellite imagery and other historical data in the collection process. Presently, only the large culvert, bridge and pavement inventories have been inspected and assigned a quality rating based on a condition rating system. A similar standardized rating system for remaining assets will help make more efficient use of maintenance resources.

Land Use

It is the goal of HOCTS and NYSDOT to promote efficient land use practices by working with local municipalities to improve the coordination of land use and transportation investment. Coordination will result in the development and implementation of projects that effectively anticipate and address the transportation implications of new development and redevelopment. Efficient, coordinated land use policies promote access management on the local and state highway system and the use of public/private financing in the development of transportation investments.

Transportation demand management and system management techniques will go a long way in improving mobility throughout the transportation system.

Congestion & Access Management
The Mohawk Valley does not have the congestion volumes which plague other areas of the state, and Herkimer and Oneida Counties are within an EPA-designated attainment area for air quality. Therefore, HOCTS and NYSDOT do not access Congestion Mitigation and Air Quality (CMAQ) funds to address congestion. However, mobility is still an important issue with spot congestion occurring at specific locations within critical corridors. Commercial and residential development along the suburban and rural highway network continues to create traffic, access, mobility, and maintenance challenges. Continued emphasis on system safety and reliability, proactive coordination with municipalities, investment in transit and alternative modes as well as implementation of ITS strategies will maintain and improve system-wide performance. The MPO planning process promotes cost-effective strategies which reduce congestion in identified locations while improving access, mobility and economic development opportunities.

Economic Development
The advancement of economic development opportunities through targeted improvements remains a critical component of transportation investment. HOCTS and NYSDOT are willing partners in initiatives that foster economic growth. The regional focus of infrastructure investment is corridor based, which is consistent with supporting economic development. Examples of regional economic development partnerships include, but are not limited to:

- Frankfort Business Park (a.k.a. Pumpkin Patch site)
- Griffiss Business & Technology Park
- Marcy Nanotech site
- New Hartford Business Park
- Oneida County Business Park (former Oneida County Airport site)
- Schuyler Business Park

HIGHWAY PROJECT IMPLEMENTATION

There continues to be three ways for municipalities to pursue implementation of a highway project. The first involves requirements of the developer of the land adjacent to provide the cost of needed highway improvements regarding access improvements and mitigation. The second is for the municipality to take the lead by using local funding. The third, if the road is eligible for Federal Aid, is to use the Federal and State highway improvement funds allocated through the established programming process.

Programming Projects on the TIP
The primary vehicle for a project to become programmed for funding and construction is the Transportation Improvement Program (TIP), which is a 5-year capital improvement program for highway, bridge and transit projects. The TIP represents the short range element of the Long Range Transportation Plan.

The first phase of the project selection process is the development of a fiscal plan that includes justification and the amount of Federal funds expected to be available for each funding source for transportation projects over the remaining years. The second phase is to develop a list of candidate projects for inclusion in the TIP. The third phase is to classify the projects by the appropriate funding category and year. The projects are also classified depending on the availability of funds and the degree of readiness of the project. The fourth phase is to evaluate proposed projects according to the project's objectives and characteristics. The Transportation Planning Committee evaluates the highway projects proposed for Federal Aid System Funds. The final decisions about project selection and priority are made by the Governmental Policy and Liaison Committee (GP&L) based on recommendations from the Transportation Planning Committee (TPC).

The TIP is amended as frequent as quarterly, as needed, to incorporate new capital investments or to make adjustments based on fluctuating funds. The current TIP FFY 2008-2012 was approved by the GP&L Committee in 2007 and submitted via NYSDOT to USDOT. The TIP can be viewed on the HOCTS website at www.hocts.org.

Financing Highways and Bridges

The Federal, State and various local governments in both counties play important roles in financing the maintenance, operation and safety of highway and bridge systems in Herkimer and Oneida Counties.

The Federal Highway Trust Fund continues to be the primary source of revenue for all transportation programs. The Federal government's commitment to transportation programs will assume to be continued through expenditures from the Highway Trust Fund and the anticipated approval of a new transportation bill.

The State of New York is also committed to multi-year financing for transportation by both matching Federal funds and 100% funding of state projects. The Dedicated Highway and Bridge Trust Fund was created and portions of the Petroleum Business Tax (PBT) revenues have been set aside for State transportation system maintenance and improvement. The State Dedicated Fund continues to be a long-term source for the State Transportation Improvement Program (STIP). NYSDOT Region 2 also allocates federal funds for local bridge and highway needs to Herkimer and Oneida counties as well as the Cities of Rome and Utica. Local governments also budget for long term bridge and highway needs using local funds and Consolidated Local Street and Highway Improvement Program (CHIPS) funds.

Financial Feasibility

Funding to implement goals and objectives identified in the Long-Range Plan is authorized through the TIP. SAFETEA-LU requires MPOs to develop a fiscally constrained TIP. This policy is meant to ensure that the TIP stays within a given funding allocation. The highest priority is given to projects that maintain the existing system in a state of good repair. Larger scale, new construction projects will require additional funds beyond the normal allocations.

Current Funding
For the federal fiscal years 2004-2006, approximately $65 million will be programmed for capital improvement projects in Herkimer and Oneida Counties. These amounts are combined total of federal funds and the State Dedicated Fund (SDF).

The Consolidated Local Street and Highway Improvement Program (CHIPS) continues to provide local governments with state-aid for operating, maintaining, and rehabilitating local roads and bridges under their jurisdictions. The Municipal Streets and Highways Program, commonly referred to as the Marchiselli Program, provides local governments with State funds to match Federal Aid for non-federal aid eligible highway and bridge projects. The Marchiselli Program provides up to 75% of the non-federal share for projects that develop infrastructure with a useful life of 10 years or more. These programs, however, are subject to annual allocations in the state budget. In times of economic distress, these programs can become threatened, making it more difficult for municipalities to plan and fund infrastructure investments.

Future Funding
The expiration of SAFETEA-LU on September 30, 2009 and current absence of a reauthorization bill make it difficult to predict future transportation funding allocations. Yet, regardless of funding levels, the emphasis on future project funding will be towards maintaining the existing highway network to a “good state of repair." Construction of new facilities by NYSDOT may be directed to mobility and economic sustainability corridors. The corridor and sub-areas identified in the plan will continue to be addressed as scheduling and funding for studies and projects are identified.

SUMMARY
The thrust of the highway and bridge investment is to improve overall mobility through operational, safety and infrastructure improvements on existing facilities. The construction of new facilities will depend on funding levels and the status of the Statewide Master Plan.

In general, congestion mitigation, safety and infrastructure will continue to be addressed on a project by project basis. This includes the addition of turning lanes, traffic signal coordination, ITS technologies, sight-distance improvements, improvements for pedestrian and bicycle safety, and drainage improvements.

Capital investments will continue to incorporate transportation planning and access management concepts into corridor projects and the local land use planning/developer mitigation process. In addition, transportation demand management and system management techniques will go a long way in improving mobility. The corridors, sites and sub-areas identified in the plan will continue to be addressed as scheduling and funding for studies and projects are identified.

Findings and Recommendations

Findings

- Pavement conditions have improved but are slipping as funds become scarce.
- State and local pavement conditions have improved.
- Local bridge conditions have deteriorated as funds for maintenance and repair become scarce.
- Increasing concern for driver safety.
- Less emphasis on building new facilities.
- Freight movement by trucks is projected to increase significantly in the next 20 years along I-90, US Route 20 and State Routes 12 and 365.
- Sprawl contributing to increased demand on local road system.
- Adequate and stable funding sources are needed.
- Current project selection process makes it difficult for local projects to obtain funding
- Environmental impacts and energy impacts will need to be addressed.
- Commuter options to driving are desired.

Recommendations

- Maintain and improve existing highway and bridge systems
- Advocate for necessary funding of identified long-range improvement corridors
- Explore new avenues for funding improvements on local systems
- Address high priority safety locations and implement highway and bridge infrastructure improvements which will address these locations
- Support safe driver programs
- Support the use of safety audits to assess the need for improvements
- Address the additional safety needs and requirements of an aging population
- Establish a fully functioning Safety Management System
- Continue to monitor State Master Plan and "Transformation" efforts to determine impact on the two-county area
- Continue traffic count program for the non-state federal-aid road system
- Determine the impact of freight movement by truck on the two-county area
- Identify right-of-way for new construction projects and minimize access points to new facilities
- Continue and expand upon the use of advanced technology to increase road safety and mobility