

TECHNICAL APPENDICES

APPENDIX A: Summaries of Technical Reports #1-3

Brief summaries of Technical Reports #1-3 provide the framework for Technical Report #4: Intermunicipal Implementation Strategy. The full text of these three Technical Reports may be accessed directly at the Tompkins County Planning Department at http://www.tompkins-co.org/planning/transportation_choices/Route96Ifno.htm

Technical Report #1

Technical Report #1 examines existing conditions in the study area including land use, zoning, development, transportation characteristics, traffic conditions, and resident response to a community survey about quality of life along the corridor. Technical Report #1 identifies a large variety of land uses, zoning, and development that exist today, as the corridor transitions from mostly rural agriculture in the northwest reach of the study area to dense residential and commercial development in the City of Ithaca.

The transportation characteristics presented in Technical Report #1 are the corridor's physical description and condition; sidewalks, bike lanes, and trails; park and ride lots; and transit. Route 96 is found to have a wide roadway throughout the extent of the study area except for the portion within the city, where topography limits the roadway to a narrow passage and homes and businesses are immediately adjacent to the right of way. Physically the road is in good condition, however, there are very limited pedestrian amenities and no designated bike lanes on the corridor. Transit servicing the corridor consists of two bus lines - one that culminates at the hospital and the second that travels beyond the study area through Trumansburg; both routes originate in the city. There are no official park and ride lots in the study area at this time to support transit ridership or carpool.

Traffic conditions described in Technical Report #1 include peak travel times and traffic volume; intersection capacity analysis; and access density (number of driveways per mile). Peak travel times on Route 96 are 7:45-8:45AM in the morning and 4:30-5:30PM in the evening. In 2006, the annual average daily traffic (AADT) along Route 96 between the Route96/Route 89 intersection and Perry City Road, as reported by NYSDOT 8,847 vehicles per day. As the study area extends beyond Perry City Road north through the Hamlet of Jacksonville to the Village of Trumansburg municipal boundary and south past Route 89 to Fulton Street, it can be assumed that the study area has an annual average daily traffic count exceeding 9,000 vehicles. The five key intersections identified on Route 96 for intersection capacity analysis to evaluate operating conditions are:

- Route 96/Taughannock Park Rd/Rabbit Run Road
- Route 96/Jacksonville Road
- Route 96/Perry City Road
- Route 96/Cayuga Medical Center/Overlook
- Route 96/Route 89

A review of both AM and PM capacity analysis finds that all of the study intersections are currently operating at levels of service equal to or better than average capacity levels with the exception of the Route 96/Route 89 intersection at the PM peak hour on the northbound (Route 89) approach due to queuing on Route 96 from the Fulton Street intersection. Access density review reveals 331 driveways (including access roads to side streets) along the 9.8 mile stretch of the Route 96 corridor study area. This factor is important to consider because as driveway density increases, the potential for collisions also increases. Access density on the corridor is greatest within the City of Ithaca, followed by Town of Ithaca.

Time travel runs were conducted by driving the length of the corridor in both directions during peak traffic hours (following the posted speeds) with GPS units affixed to the vehicles to determine various

performance measures like traffic delay, stop delay, running speed, and average speed. Findings for the trips are as follows:

Northbound on Route 96 – Overall, northbound shows very little congestion or delay during both AM and PM peak time periods.

- Northbound on Route 96 (AM) – There is a delay of approximately 1.8 minutes between the free-flow travel time and the most congested run at 7:11am. This equates to a difference in average running speed of 5.9 mph (47 mph at free-flow vs. 41.1 mph peak travel). The most significant area of congestion is located between Bundy Road and Route 96/Route 89 intersection.
- Northbound on Route 96 (PM) – As the peak flow direction during the PM commuter time, this route experiences a difference of 0.8 min and 2.8 mph between free-flow and peak travel conditions. The areas of congestion appear to be mostly related to the signalized intersection at the hospital.

Southbound on Route 96 – Overall, there is a minor delay experienced for a brief period during the AM peak trip, and there is hardly any heading southbound during the PM peak.

- Southbound on Route 96 (AM) – The southbound direction peak flow occurs during the morning commuter peak travel. The data show the majority of the congestion and delay occurring at the Route 96/Route 89 intersection. There is approximately a 4.6 minute delay between the free flow travel time and the run that depicts the most congested conditions at 7:49 AM. This equates to a difference in average running speed of 12.7 mph (47 mph off-peak vs. 34.3 mph peak travel). The difference in corridor travel time is a combination of delay and congestion at Route 89 as well as minor delays at the Hospital/West Hill Drive intersection. It should be noted that this delay is witnessed during approximately a 15-minute window between prior to 8:00am.
- Southbound on Route 96 (PM) - Route 96 southbound at the PM study time shows little delay.

In 2008, a resident community survey was sent to all residents along the Route 96 corridor in the study area to engage residents to determine what makes this corridor a desirable place to live, what makes it less than ideal, and what concerns residents have about future growth and development. The survey was addressed general livability issues, destinations and access, public transportation, and safety and traffic. Of the 592 surveys distributed to corridor residents, approximately 174 surveys were completed and returned by the deadline date. Of the returned surveys, 33 percent were from residents of the Town of Ulysses, 49 percent were from residents of the Town of Ithaca, and 18 percent were from residents of the City of Ithaca. The survey findings indicate that the five most critical issues along the corridor are (in order of importance):

1. Too much traffic when commuting into the City of Ithaca
2. Truck traffic
3. Speeding
4. Too much traffic when commuting out of the City of Ithaca
5. Noise

Technical Report #2

In Technical Report #2 two future development scenarios are evaluated for the Route 96 corridor. A Nodal Development scenario where mixed-use, compact, walkable development is compared to a more conventional, suburban style of development- the Trend Development scenario. In addition, Technical Report #2 provides the transportation analysis portion of the study and reviews access management issues, transit services, transportation system improvements, and overall aesthetic character of the corridor using traffic projections, traffic impact analysis, and opportunities and constraints analysis.

To establish what a Nodal Development scenario might look like, 75 percent of the total 436-871 projected new housing units are proposed for one of three nodes on the Route 96 corridor – the Village of Trumansburg, Hamlet of Jacksonville, and in the immediate vicinity of Cayuga Medical Center.

	<u>2018 (Mid range)</u>	<u>2028 (High range)</u>
Housing Units in Nodes (75% of total)	327	653

Cayuga Medical Center*	164	327
Village of Trumansburg	98	196
Hamlet of Jacksonville	65	131

**If proposed development (106 units) is approved, it would account for 65% of the total mid-range projection for housing units in the Cayuga Medical Center node.*

The following amount of land within each of the nodes would be needed to accommodate such projected housing units, based on current zoning:

	<u>2018 (Mid range)</u>	<u>2028 (High range)</u>
Land (in acres) - Nodes (75% of total)	84.9	170.1

Cayuga Medical Center	32.8	65.4
Village of Trumansburg	19.6	39.2
Hamlet of Jacksonville	32.5	65.5

When comparing the Trend Development and Nodal Development scenarios, trip reduction factors are derived to account for the positive effects of nodal development, based on the resident community survey responses in addition to Institute of Transportation Engineers and the Transportation Research Board data. As such, vehicular trips would be expected to decrease by the following percentages under a Nodal Development scenario:

- 5%-10% as a result of increased transit usage
- 2%-20% as a result of multi-use vehicular trips
- 2%-5% as a result of increased bicycle trips
- 5%-10% as a result of increased pedestrian trips

Several analyses are completed to compare the traffic impacts of growing under the Trend and Nodal Development scenarios, with the following results:

- A volume-to-capacity ratio analysis shows the corridor to be “under capacity” in both scenarios, except for PM peak hour near the Cayuga Medical Center where, under the Trend Development scenario, one transportation link operates at “near capacity” conditions in 2028. It is noted that this link operates “under capacity” in the Nodal Development scenario.
- The vehicle miles traveled under the Nodal Development scenario are projected to be approximately 8 percent (2.8 million miles) fewer than under the Trend Development scenario.
- Vehicle hours of delay (VHD), a measure of the amount of time it takes to travel a given distance during peak times compared to the time it takes to travel the same distance at the free flow speed, shows the Nodal Development scenario as having 2.27 hours fewer of delay or 6 percent less.
- Key intersections on the corridor are evaluated for their level of service (LOS) under both scenarios. The results show all study intersections as operating at levels of service equal to or better than average capacity levels with the two exceptions of the eastbound approach at Route 96/Taughannock Park Rd intersection during PM peak hour under Trend Development scenario (2028) future conditions – projected to operate at LOS D (poor/under capacity) and the northbound approach at Route 96/Route89 intersection during both peaks under both scenarios, which is projected to operate at LOS D (poor/under capacity). Three intersection approaches

(eastbound on Route 96/Taughanock Park Road- both peak intervals and westbound during the AM peak; eastbound Route 96/Jacksonville Road- AM peak; Route 96/Cayuga Medical Center intersection - northbound approach during the PM peak hour under 2018 future conditions.

- Total greenhouse gas emissions (including carbon dioxide, nitrous oxide, carbon monoxide, sulfur oxide, volatile organic compounds, and particulate matter) are found to be approximately 8 percent lower under the Nodal Development scenario.
- In keeping with current development patterns, the Trend Development projection assumes the number of driveways along Route 96 is increased by 10%. Under the Nodal scenario driveways are only added in the within the new nodes.
- Safety is often perceived, according to the resident community survey, as being related to local speeds traveled by vehicles along the corridor. No changes to speed limits are assumed under the Trend Development scenario, whereas under the Nodal Development scenario, the speed limits in the Hamlet of Jacksonville and Cayuga Medical Center are reduced by 10 mph.
- The analysis of future accident rates along Route 96 in the study area under the Nodal Development scenario suggests a 2-12% reduction under the trend growth scenario.
- No new traffic signals are assumed under the Trend Development scenario, as the driveways and traffic volumes will be spread out and unlikely to support the need for a traffic signal. One new traffic signal is added in each of the two nodes, under the Nodal Development scenario. As a result, the travel time rate under the Nodal Development scenario is approximately 12-15% higher in each direction than under the Trend growth scenario.

In a more qualitative analysis, 12 Livability Benchmarks rank specific quality of life issues along the corridor under both the Trend and Nodal Development scenarios. These were determined by feedback received from the community through the resident community survey and from public comments received at the public information meeting and business focus groups. The issues identified affecting livability on the corridor: speeding, traffic volume, convenience, rural and scenic character, commute time, access density, noise, connectivity, transit, pedestrian safety, design guidelines, and accident rates. Each Livability Benchmark is ranked using a scale of 1-5 to determine which development pattern would have fewer negative implications on those living along, and using, the Route 96 corridor. Under the Trend Development scenario, the total ranking scores 19 of a possible 60, while the Nodal Development scenario scores 46 of 60 points.

The Opportunities and Constraints analysis examines both scenarios' positive and potentially negative attributes. The Nodal Development scenario has a much longer list of both opportunities and constraints when compared to the Trend Development scenario. However, the potential opportunities include social/community, environmental, economic, and health benefits. The potential constraints are chiefly related to creating a new model for local development. On the other hand, the Trend Development scenario is fairly easy to implement as it is already in place and well known, but the potential negative aspects include a loss of traditional population centers, loss of agricultural and natural areas, as well as increased taxes and traffic.

Technical Report #2 concludes that a Nodal Development scenario has fewer negative impacts and more overall positive impacts, on the physical transportation system and the quality of life along the corridor, and is therefore, determined to be the preferred development scenario. The Nodal Development scenario has a greater chance of success to enhance the quality-of-life of residents and mitigate associated traffic impacts. It is stated that in order for the preferred nodal development scenario to be implemented within the Study area, each of the individual communities will need to pledge to promote this type of development.

Techniques that are suggested to advance the preferred, Nodal Development scenario include developing corridor design principles; traffic demand management/traffic reduction strategies, land use strategies, access management techniques, and regulatory principles.

Initial conceptual renderings of the Hamlet of Jacksonville and the Cayuga Medical Center nodes are presented in Technical Report #2.

Technical Report #3

Technical Report #3 provides a series of recommendations and tools to assist each of the involved municipalities in implementing the preferred corridor vision of a Nodal Development scenario. Revised conceptual renderings of the Hamlet of Jacksonville and Cayuga Medical Center depict how these areas could look as nodal communities with a variety of housing types, businesses, mixed-use buildings, neighborhood roads, bus stops, recreation amenities, and entrance gateways. Together with these concepts, specific development recommendations for each of the nodes is presented for land use, vehicular circulation, pedestrian and bicycle connections, transit, traffic calming techniques, and gateway treatments. Recommendations are then provided for the broader corridor, outside the nodes, as well as for the area within the City of Ithaca where traffic is most keenly felt.

General recommendations for promoting safety at key intersections, preserving quality of life along the corridor, and establishing design principles both within and outside nodes are proposed. Model regulatory language is also presented in Technical Report #3 to assist municipalities develop controls that will shape development that is in line with the vision of the Study. The key intersection recommendations for five identified intersections on the Route 96 corridor seek to mitigate existing trouble spots, traffic volumes, and/or potential future development. Project sheets summarizing recommended physical modifications to each these intersection are included in the Technical Report #3 Appendix (pgs. 48-52)

Finally, a series of design principles and regulatory recommendations are proposed as models for future updates to municipal zoning regulations and design standards. Themes addressed in the design principles include residential development, site and setting, architectural vocabulary, connections and linkages, public areas and landscaping, pedestrian amenities, and streets and vehicular spaces. Regulatory recommendations are presented for both within and outside nodes on Route 96. In the Hamlet of Jacksonville and Cayuga Medical Center nodes, a mixed-use zoning district is recommended to promote and foster a medium to high-density cluster of activity that allows a variety of uses. This zone would include residential, commercial, office, institutional, and open space and would encompass the ½ mile nodal area. Also, design guidelines are recommended for each node to slow traffic and create a human-scaled development pattern that is pedestrian friendly. These guidelines would define lot size and coverage, yard dimensions, parking, access density and architectural styles. The goals for the broader corridor – outside the nodes – would be to retain its current character, preserving open space, views, and natural areas. Regulatory recommendations would limit the density of development on the corridor, outside of nodes, in an effort to protect the existing character and focus higher densities of development within the nodal centers.

APPENDIX B: Local Plans and Studies Supporting Nodal Development

Several local planning efforts and municipal studies acknowledge and identify nodal development as an effective growth pattern for Tompkins County that can help advance a number of local social, economic, and environmental goals. These include:

1. Tompkins County Comprehensive Plan (2004)

The 2004 Tompkins County Comprehensive Plan The County Comprehensive Plan states “The development patterns reflected in the existing villages, Hamlets, and the City of Ithaca’s downtown area and neighborhoods should be promoted as key components of the built environment that greatly contribute to the vitality of the local economy and community life.

Specific policies of the Tompkins County Comprehensive Plan that support nodal development in the County, which are relevant to the Route 96 corridor study area include:

- Strengthen and enhance the villages and hamlets of the county as vital service and community centers.
- Increase the amount and density of housing and business space in the central business districts throughout the county.
- Concentrate appropriate commercial, industrial, and retail development onto relatively small amounts of land, in close proximity to housing and consumers, in existing areas of concentrated development.
- Develop or identify model development design standards that address how to maintain a distinct edge between the urban/village areas and the rural countryside.
- Evaluate and modify the following programs for consistency with and furtherance of the nodal development patterns: review of development proposals under General Municipal Law 239, Economic Development Revolving Loan Fund, Agricultural Districts, and advisory boards’ work programs.
- Work with municipalities to develop land use scenarios consistent with the Comprehensive Plan and with local land use plans and policies.

2. Route 13/366 Corridor Study, Town of Dryden Model (2008)

The scope of the Route 13/366 Corridor Study completed by the Town of Dryden and the Tompkins County Planning Department is similar in that both seek to attribute future growth on corridors to mitigate predicted negative impacts of associated growth of traffic. The Route 13/366 Corridor Management Plan, again like the Route 96 Corridor Management Study, evaluates future development under the current development pattern along the corridor versus a nodal development scenario.

The Nodal Development Scenario focused the next 20 years of development at three distinct node points along the corridor. This represented a drastic difference from the Existing Development Scenario. Most notably, the remaining agricultural / vacant frontage parcels along the corridor were left undeveloped under the Nodal Development Scenario. In addition, a significant portion of the scattered residential development shown in the Existing Development Scenario was consolidated into the three node points. Under this development scenario, residential development density was increased to an average of at least two dwelling units per acre, consistent with local planning efforts to reduce the overall amount of developed land. This study has found that nodal development can have a significant positive impact on the Route 13/366 corridor and can addresses many of the residents’ primary concerns. The study recommends the Town, Village, and Hamlet in Dryden should use regulatory language to revise the local code to promote nodal concepts.

3. Tompkins County Housing Strategy (2007)

The Tompkins County Housing Strategy proposes that affordable housing be developed in a sustainable manner. To mitigate increased traffic concerns associated with affordable housing development, the housing strategy recommends land use management policies be employed to encourage this new housing to be located near job centers and in a nodal development pattern along major highway corridors. Developing in this manner helps to support increased TCAT service. New housing developed in a nodal pattern could thus improve transit service and make it more cost-effective, reduce auto dependence, and enhance community vitality. The location of new housing near major employment centers also offers more opportunities for persons to reside where they may commute as pedestrians or bicyclists. Improvements to the transportation system should encourage such alternative modes of travel, and, whenever possible, priority should be given to funding multi-modal improvements on projects that support new housing proximate to employment centers and in nodal development patterns in accordance with the County Comprehensive Plan. Affordable housing can be incorporated into higher density, mixed use and multi-family developments and should be constructed to be as energy efficient as possible to assure long-term affordability and sustainability.

One tool the housing strategy proposes to encourage the development of affordable housing in the County is to institute coordinated intermunicipal, inclusionary and incentive zoning in targeted areas. Municipalities could offer incentives such as density bonuses and streamlined approval processes. Local municipalities have the authority to amend their local zoning ordinances to incorporate these strategies. Zoning changes will be most effective – in producing affordable housing while combating rural sprawl – if there is coordination among municipalities.

4. Cornell University - Workforce Housing and Transportation Initiatives (2008)

Cornell University's ten-year commitment to provide affordable housing within the community, alternative transportation options for people to travel to place of employment, and to preserve the Ithaca community reinforces the need to grow in a nodal pattern. Cornell University's transportation strategy for developing workforce housing calls for "supporting the principles of the t-GEIS study, increasing development around transportation nodes, and reducing the median commute distance of Cornell employees."

Similarly, two of the principles of Cornell's Transportation Initiative promote nodal development. The wellness and life safety principle supports projects with nodal housing accessible to Cornell's campus along transit corridors along with pedestrian and bicycle amenities. The sustainability principle encourages projects that make alternative/multi-modal means of transportation viable.

5. Town of Ithaca Transportation Plan (2007)

The Town of Ithaca Transportation Plan recognizes the importance of developing in a nodal pattern, whereby low density development and segregated land uses which instigate many more individual car trips are discarded in favor of bikable, walkable, and transit-friendly neighborhoods.

In support of nodal development, the Town of Ithaca Transportation Plan states that "combinations of higher densities and mixed-use zoning that connect residential and commercial land uses are important for promoting walking or bicycling as a reasonable alternative to driving." Further "zoning that supports mixed-uses and 'clustered' development offers a mix of complementary land uses that encourage residents to combine trips, to reduce the length of motor vehicle trips, and to make trips via bicycle or foot. Designs that emphasize human scale—with details that consider people, instead of cars—provide even more incentive for choosing a non-auto mode, thereby creating a more balanced transportation system. Providing many connections within the transportation network offers a greater number of route options and more direct routes (a common development pattern with a high degree of connectivity is the grid system of streets found in urban areas). Connectivity is important for non-motorized travel, because bicyclists and pedestrians are unlikely to travel far out of the way to get to their destination."

The Town of Ithaca Transportation Plan presents a number of compelling needs for which developing in a nodal pattern serve to alleviate future impact on the transportation network of the Town, two of which are:

- The Town needs to encourage land use patterns and development designs that do not preclude future transportation options. For example, the Town could consider amending the Zoning Code or Subdivision Regulations to encourage alternative land use patterns and zoning, such as development that channels residents into hamlets, or centers of population, separated by open space. This will help the Town to preserve its “rural” feel, while also permitting residents on the outskirts to live in a place that is serviceable by transit.
- The Town should work to expand the options for transportation via modes other than the private motor vehicle. The Town should promote walking, biking, and transit, as well as development patterns that are transit-friendly and bring goods and services within walking and biking distance of residents’ homes.

Several of the goals, objectives, and recommendations of the Town of Ithaca Transportation Plan are directly supportive of developing in a nodal pattern. The goals and objectives of the plan that focus on access and mobility, livability, coordination (with local and regional organizations), environment, and particularly land use planning taken together all support the Nodal Development scenario proposed in the Route 96 Corridor Management Study.

6. Town of Ulysses Town Comprehensive Plan (anticipated in 2009)

The Town of Ulysses is presently developing a new Town Comprehensive Plan. The current draft of this plan includes in its vision statement the goal of “protecting unique resources by promoting efforts that support agricultural sustainability, open space conservation, a balanced approach to economic development, and revitalization of village and hamlet centers.” Incorporating the Route 96 Corridor Management Plan recommendations with nodes at the Village of Trumansburg and the hamlet of Jacksonville is a stated action in the Sustainable Land Use and Development policy area of this draft plan. Additional actions in the Town of Ulysses Draft Comprehensive Plan that are supportive of nodal growth are:

- Prepare a Special Area Plan for Jacksonville with design guidelines sensitive to historic context, including streetscape and pedestrian amenities to define the hamlet.
- Develop an intermunicipal land use zone to promote cooperation and consistency with local comprehensive plans, particularly between the Town and Village of Trumansburg.
- Incorporate land use tools in the Zoning Law that encourage the clustering of residential development and efficient use of municipal services.
- In areas of the Town designated for higher density use, identify opportunities to make new road connections within the system that would encourage denser or cluster development.
- Locate high-density housing in multi-use nodes with proximity to goods, services, employment, and public transportation.
- Site future residential development in nodes and permit housing development outside these areas only when there are no opportunities within these designated nodes.

7. Town of Ithaca Town Comprehensive Plan Update (anticipated in 2010)

The Comprehensive Plan Steering Committee was appointed by the Town Board in early 2008. To date, the Committee members along with other town officials participated in a tour of the town; conducted a strengths, weaknesses, opportunities, and threats (SWOT) analysis; prepared a draft vision statement; and developed resident telephone survey was conducted in January 2009. The first public information meeting was held in September 2008 and focus groups began in February with more scheduled for 2009. The Committee began a series of focus group meetings to obtain information from residents and other stakeholders on a number of subjects that are important in the Plan update. Subjects include neighborhoods, housing, transportation, environment, agriculture, education, and energy, among others. The first meeting was held February 26, 2009, and focused on neighborhood issues. About 30 residents

from neighborhoods around the Town attended and provided comments and suggestions on topics ranging from growth and development to housing to neighborhood character to traffic and transportation. Common themes from residents were that the character of neighborhoods should be protected, that traffic through neighborhoods often creates safety concerns, that the addition of some small-scale neighborhood services might be beneficial in some areas of the Town, and that Cornell University and Ithaca College create unique impacts to neighborhoods. Focus group meetings will continue through April of 2009.

The next steps in the process will be to review the goals and objectives stated in the 1993 Comprehensive Plan and revise and update them to reflect current conditions and future needs of the Town. Planning staff will also be working on updates of the 1993 Plan's inventory and analysis chapters.

The Committee is also coordinating with the City of Ithaca Comprehensive Plan Committee. Joe Wetmore attended City Comp Plan meetings, and the City will appoint a representative to attend Town Committee meetings.

8. Ithaca-Tompkins County Transportation Council Long-Range Transportation Plan update (2009)

The 2030 vision for the future of the Tompkins County transportation system embraces the concept of sustainable accessibility. This concept expands the current vision, transforming transportation systems into mobility networks that are responsive to pedestrians, bicyclist, transit, rail, freight, and motorists while meeting the vehicular congestion, energy and environmental concerns that are now an impending crisis. Sustainable accessibility can be defined as the ability to get to a destination or complete a task in an efficient, convenient, and reliable way, while using technologies and services that minimize environmental impacts, promote economic vitality and ensure equity in the provision of transportation to the community.

The challenge of sustainable accessibility is to identify opportunities and begin to integrate transportation modes (i.e. transit, bikes, walking, cars, car sharing, van pool, trucks, rail, etc.) so they address personal transportation and commercial needs in ways that will enhance our quality of life and promote sustainable growth in Tompkins County. Sustainable accessibility will serve as the organizing principle to develop clear transportation goals and objectives that respond to community needs and that can be implemented within an acceptable time frame. The vision of sustainability will require insight into the social structure as well as the infrastructure of the community so that the enhancements to the transportation system service all communities equitably.

The vision of sustainable accessibility will integrate transportation with land use planning for nodal development to promote land use patterns that reduce dependency in the automobile as a sole source of transportation. With sustainable accessibility at its core the transportation network will integrate multiple modes of transportation so that traveling by transit, bike, car share, car pool, etc. becomes as attractive, convenient and cost effective as private car ownership and use were in the second half of the 20th century. By bringing all modes to bear, the transportation system becomes more efficient and more resilient. This vision will also embrace new transportation options and technologies, which will emerge as more investments are made to address the challenges of energy descent and climate change.

9. City of Ithaca Comprehensive Plan (anticipated in 2011)

The City of Ithaca has been preparing to develop a new comprehensive plan. A steering committee was developed in late 2008 and has convened twice. The Committee has discussed a two-phase planning process, where phase one would entail the preparation of a Citywide vision statement that would set forth broad principles to guide future planning and development, and phase 2 would include the preparation of geographically-based neighborhood plans and other distinct thematically-based plans. The Comprehensive Plan Committee is also coordinating with the Town of Ithaca Comprehensive Plan Committee to ensure cross representation for both planning processes.

APPENDIX C: Route 96 Intersection Project Sheets (5)

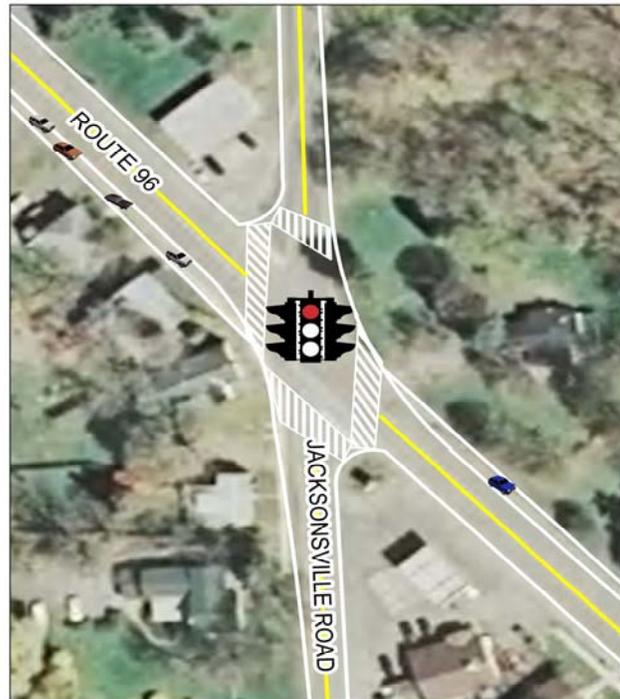
Five intersections on the Route 96 corridor were identified for focused analysis based on their existing and potential future conditions. These Project Sheets show existing conditions as well as recommended tools and conceptual alternatives.

1. ROUTE 96 AND JACKSONVILLE ROAD

HAMLET OF JACKSONVILLE



EXISTING



PRELIMINARY CONCEPT

Background

This location serves as the main intersection within the Hamlet of Jacksonville. The existing intersection is skewed resulting in an excessive expanse of pavement. The curbing surrounding the intersection is deteriorating. There are centerline, edgeline, and stop bar markings on Jacksonville Road. Route 96 has centerline markings only. The intersection is currently controlled by stop signs on the Jacksonville Road approaches to Route 96.

Concerns

- Excessively wide intersection geometry and pedestrian crossing paths
- Lack of delineation of wide travel lanes on Route 96 (in excess of 21 feet)
- No transition into “hamlet” environment of the node after leaving the City to the south
- High travel speeds on Route 96
- Pedestrian/bicyclist safety
- Preservation of mobility
- Potential pedestrian-vehicular conflicts
- Lack of pedestrian amenities
- Lack of bicycle amenities

Recommended Tools

- Enhanced ladder or piano key type crosswalks; potential for future traffic signal
- New sidewalk treatments on Route 96, provide connectivity throughout the node
- Install Bicycle and Share the Road signs on Route 96
- Street amenities, e.g. benches, bike racks
- New curbing
- Delineate and/or recess on-street parking



City of Ithaca, Town of Ithaca, and
Town of Ulysses, New York
Route 96 Corridor Management Study

September 2008

2. ROUTE 96 AND HARRIS B DATES DRIVE-WEST HILL DRIVE CAYUGA MEDICAL CENTER NODE



EXISTING



PRELIMINARY CONCEPT

Background

The intersection of Route 96 and Harris B Dates Drive-West Hill Drive currently provides access to the Cayuga Medical Center and the Overlook at West Hill residential development. The speed limit in this area is 45 mph. The intersection is signalized and provides pedestrian actuation for crossings on the north and east sides of the intersection.

Concerns

- Overall conflict between right-turns and crossing pedestrians;
- Travel speeds on Route 96
- Pedestrian/bicyclist safety
- Preservation of mobility
- Lack of bicycle amenities

Recommended Tools

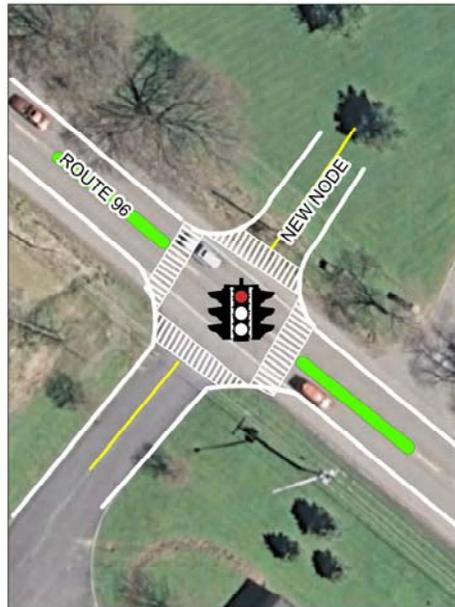
- Enhanced ladder/piano key type crosswalk treatment
- Landscaping: bulb-out, buffer areas, planters
- New sidewalk treatments on Route 96, provide connectivity throughout the node
- Street amenities, e.g. benches, bike racks
- Install Bicycle and Share the Road signs on Route 96
- New curbing

3. ROUTE 96 AND NEW CAYUGA MEDICAL CENTER NODE DRIVEWAY

CAYUGA MEDICAL CENTER NODE



EXISTING



PRELIMINARY CONCEPT
TRAFFIC SIGNAL



PRELIMINARY CONCEPT
ROUNDAABOUT

Background

This location serves the southern gateway to the new Cayuga Medical Center node . Route 96 is not curbed in this area and does not have any bicycle or pedestrian facilities aside from the wide paved shoulders. The speed limit in this area is currently posted at 45 mph.

Concerns

- No transition into “hamlet” environment of the node after leaving the City to the south
- Travel speeds on Route 96
- Pedestrian/bicyclist safety
- Preservation of mobility
- Potential pedestrian-vehicular conflicts
- Lack of pedestrian amenities
- Lack of bicycle amenities

Recommended Tools

- Option 1: Enhanced ladder or piano key type crosswalks; median gateway treatment; potential for future traffic signal
- Option 2: Modern single-lane roundabout; median gateway treatment
- Landscaping: gateways, bulb-outs, buffer areas, planters; landscaped roadside sign
- New sidewalk treatments on Route 96, provide connectivity throughout the node
- Street amenities, e.g. benches, bike racks
- Install Bicycle and Share the Road signs on Route 96
- New curbing

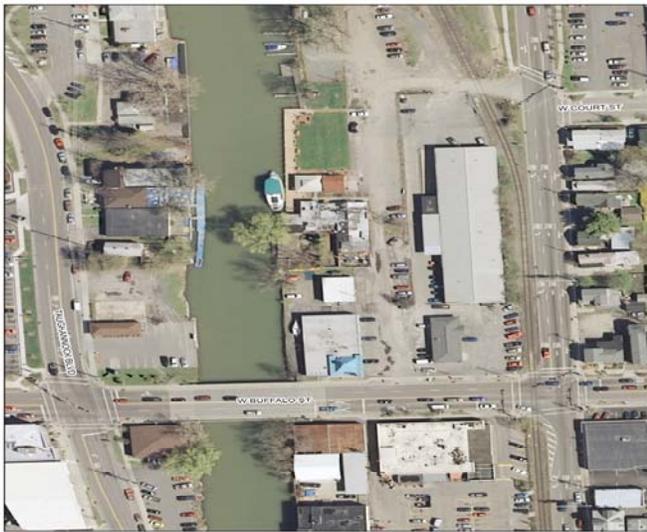


City of Ithaca, Town of Ithaca, and
Town of Ulysses, New York
Route 96 Corridor Management Study

September 2008

4. TAUGHANNOCK BOULEVARD

ROUTE 96 & TAUGHANNOCK BOULEVARD



EXISTING



PRELIMINARY CONCEPT

Background

The intersection of Route 96 and Taughannock Boulevard (Route 89) is a major entry point to downtown Ithaca. Cliff Street (NYS Route 96) and Taughannock Boulevard (NYS Route 89) are also two arterial state travel routes that service local and inter-community traffic. In this role, the intersection experiences significant and competing vehicular and pedestrian traffic. Traffic volumes on all approaches are relatively heavy, ranging from over 8,400 vehicles per day (vpd) on Route 96 to approximately 5,200 vpd on Route 89.

Concerns

- Overall conflict between right-turns and crossing pedestrians; No Turn On Red restrictions on all approaches compound the vehicular/pedestrian conflict
- Heavy left turn traffic from southbound Route 89 to eastbound Route 96
- Competing traffic volumes on Route 89 and Route 96 result in significant eastbound and westbound queuing during the AM and PM commuter peaks

Recommended Tools

- Enhanced ladder/piano key type crosswalk treatment
- New bridge connection from Route 89 directly to Fulton Street (Route 13 southbound) aligned with Court Street

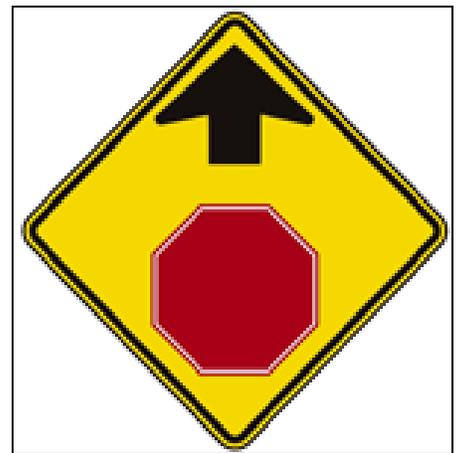


City of Ithaca, Town of Ithaca, and
Town of Ulysses, New York
Route 96 Corridor Management Study

September 2008

5. KRUM'S CORNERS

ROUTE 96 & KRUM'S CORNERS ROAD



Background

Krum's Corners Road is a relatively low volume roadway that intersects Route 96 south of Perry City Road. The topography Krum's Corners Road limits the view of Route 96 for eastbound motorists. The Town of Ulysses has had several residents of this area complain about a "blind" intersection, and during the focus group meetings with business owners this intersection was again mentioned as "dangerous". The Town of Ulysses Comprehensive Plan indicates the Krum's Corners area as a node for dense growth.

Concerns

- Eastbound visibility of the stop sign at Route 96 is limited by vertical curvature of Krum's Corners Road
- The existing "STOP AHEAD" sign on the eastbound approach to Route 96 is small and uses the "old style" sign
- The "STOP SIGN" on the westbound approach to Route 96 is obscured by vegetation

Recommended Tools

- Replace the existing "STOP AHEAD" sign on the eastbound approach to Route 96 with the new style "STOP AHEAD" sign (W3-1) size 48"x48"
- Remove vegetation obstructing the view of the westbound "STOP SIGN"