

## **Chapter 6: Strategic Plan Elements**

The preceding chapter presented the plan elements and a breakdown of the strategies that will be utilized to complete the 10-year Sussex County vision. This chapter presents a descriptive view of specific plan elements. These strategies are developed as a macro look at the strategies that will be needed to make the transportation network in Sussex County more efficient. Each of these strategies will need to be reviewed by local decision makers and further investigated for detailed development prior to implementation. The strategies should be applied to the county strategic growth plan to provide a transportation efficiency element to the overall county plan. As was stated in the previous chapter, these strategies alone are not sufficient to fight congestion and transportation issues that affect local economic conditions. Land use policies are the primary vehicle for intelligent growth patterns and will need to be considered in tandem with these strategies.

### **Smart Growth/ Transit Oriented Development**

Smart Growth and Transit Oriented Development applications will be of critical importance both to increase efficiency of the system and to tie together all plan elements. The preceding chapter presented a long checklist of items that will need to be included in Smart Growth plans for each of these locations. A 1998 Sussex County Cross-Acceptance Report provides an initial step in Smart Growth planning. The County's recently adopted Sussex County Strategic Growth Plan will guide future Smart Growth planning in the County. Comprehensive Smart Growth plans should be developed for those locations (nodes) identified in this section. There may be a need or desire for other portions of the county to develop Smart Growth and Transit Oriented Development (TOD) plans which is encouraged, but this report will present major locations.

Smart Growth and TOD plan development should adhere to the principles set forth in the previous chapter. The State of New Jersey has set forth design elements and checklists that can assist the county and these communities to address planning for TOD and Smart Growth. These plans will benefit from the recommendations in the following sections as they address many transportation issues in the locations identified for additional planning.

The following locations have been identified as areas that should be addressed with Transit Oriented Development and Smart Growth Planning.

- *Newton* – Newton is the county seat and considered a Regional Center according to New Jersey Smart Growth planning efforts. Newton serves as the center for many of the services offered in the county. The town center lies at the intersection of Routes 94 and 206 which are major corridors in the county. Newton is also the hub for SCTS service and is served by Lakeland commuter buses. As a designated regional center, Newton should be addressed for Smart Growth and TOD applicability. Compact mixed use development and pedestrian and transit friendly design will be important elements of Newton development.
- *Sparta* – Sparta Township is now one of the largest communities in Sussex County and is expected to continue this growth pattern. The O-D survey

identified Sparta as one of the major origins for trips during the survey period. These commuters were traveling to a variety of locations within Sussex and neighboring counties. Sparta is a stop on SCTS bus service and is under consideration as a location for a rail stop under the NYS&W rail plan which would include a 144-space parking area. The expected continued growth of this location indicates the need for intelligent development planning.

Sparta Township has identified three locations in their Cross-Acceptance report documents that can serve as a basis for Smart Growth and TOD techniques.

These are:

- Sparta Town Center
- Woodruffs Gap
- Blue Heron Center

These three locations all serve as excellent areas for the development of detailed Smart Growth plans. The Blue Heron Center is located along Route 15 and is home to an NJDOT Park & Ride lot. This busy corridor will be discussed in numerous sections of this chapter, as congestion along this corridor as it approaches Route 80 is considered to be the most congested location for Sussex County residents. This lot is being considered for expansion, and can play a significant role in implementation of corridor TDM measures. The Woodruffs Gap Center is slated for mixed use development and the Sparta Town Center can be enhanced to better serve the residents of this town through mixed use and as a transit-friendly design. These locations have great potential for development in the coming years that can promote intelligent development, reduce sprawl, and encourage adherence to TDM measures and transit usage.

- *Vernon* – Vernon is a key location for immediate action for Smart Growth and TOD. An NJDOT-funded Access Management Plan (AMP) for Route 94 is currently underway along Route 94 in Vernon. Located along Route 94, this town is home to Mountain Creek, formerly the Great Gorge and Vernon Valley ski areas. The plans for Mountain Creek indicate the following new and refurbished development in the area:
  - 575 Recreational Homes
  - 171,600 sq. ft. Specialty Retail
  - 20,660 sq. ft. General Office
  - 160 Room Hotel & Conference Center

This location is within one mile of the Vernon Town Center. The development of a well-planned Town Center will create an excellent link to this resort location. Peak hour weekday traffic projections are for more than 4,000 cars per day and just slightly less is expected on Saturdays. The plans for the resort location include traffic calming measures, access management, and new roadway design to address this traffic in the best manner possible. Vernon Township should consider development within its community that will accentuate the Mountain Creek development and create new economic possibilities for the town center. These

could involve transit, pedestrian, and bicycle links and design to accommodate mixed use and compact design within the Town Center.

It is important to note also, that a significant amount of development is taking place at Crystal Springs in Hardyston Township, along Route 94, which will also contribute to traffic on Route 94.

- *Stockholm* – This town is located along Route 23 in northeastern Sussex County. The town is located relatively close to Mountain Creek and Vernon and may serve as a rail link to these locations. A transit link to Vernon and rail development will need to be considered for this location.
- *Byram* – Byram Township, located along Route 206 is projected to continue to grow over the next ten year period, although only by 4%. The Township is located less than 2 miles from the Netcong rail station and serves as a stop for Lakeland Bus Express service that provides connections into neighboring counties for employees. The proximity to intermodal transit facilities, including the Netcong and Mount Olive rail stations, and its location along Route 206 make this a prime location for consideration of Smart Growth and TOD techniques.
- *Lafayette Village* – Lafayette Village is located at the intersection of Routes 94 and 15. This historic location is also a retail center and is a frequent concern of local motorists due to unusual traffic patterns and pedestrian unfriendliness. The area around this intersection should be addressed with TOD measures.

Smart Growth and TOD development are considered to be key elements of this plan and will provide the highest return in the long-term. While it is difficult to attach cost and mode share numbers to these concepts, they incorporate land use and other principles that have long been understood as underlying keys to success for transit and TDM. Smart Growth and TOD measures should be implemented in the near term and be carried on throughout the ten-year period.

<b>Smart Growth &amp; TOD</b>	
Term for Implementation	Short Term
Probability of Successful Congestion Mitigation	High (over long term)
Costs	Unknown; based on action steps
Potential Funding Sources	Varied (see Chapter 5)
Locations	In-County Nodes

**Transportation Demand Management**

Transportation Demand Management activities should continue to be enhanced in the short term for Sussex County. These actions could benefit greatly from Smart Growth and TOD that will occur over the ten-year period. TransOptions, the regional Transportation Management Association, should be the lead agency for these measures based on the regional nature of their jurisdiction. Sussex County should work closely with the TMA to promote various TDM programs among Sussex County residents and their employers with particular focus on employers that lie outside of the county. Addressing TDM measures from the employer side is typically more beneficial and leads to the highest probability of success.

TDM measures require persuading commuters to change their travel habits, which has proved difficult over the years. However, with the implementation of Smart Growth policies and the continued frustration people experience over road congestion and lack of available modal alternatives, a continued push to demonstrate the financial savings and financial benefits of TDM programs should be an integral part of the overall strategy. One program that has enjoyed success is the mobility management program. Nearby Hunterdon County maintains a “concierge” for transit services who assists residents to complete trips in non-auto modes. The ability to connect people to ridesharing and other modes of transportation should be a major focus of the TDM programs.

The following programs should be implemented for TDM measures:

- Ridesharing & Vanpooling
- Emergency Ride Home Programs for Transit & Rideshare Users
- Park & Ride Lot Ride Information, Vanpooling, & Transit Options
- Telecommuting
- Work Shift Distribution
- Commuter Financial Incentive Programs
- Mobility Management

These programs should be implemented in association with TransOptions in the near future. These are low-cost programs based on the existence of a TMA organization. They also maintain a reasonable probability of assisting in congestion mitigation by directly addressing the out of county commuter who has been identified throughout the data gathering phase of this project. TDM programs should be implemented on a regional level. Since TransOptions is already the lead agency on TDM issues in the region, the implementation costs should be reasonably low.

<b>Transportation Demand Management</b>	
Term for Implementation	Immediate Term
Probability of Successful Congestion Mitigation	High
Costs	Low
Potential Funding Sources	TMA is funded for this work
Locations	Regional

## **Transit Options**

Transit options were identified in the previous chapter that will strengthen both intra and inter-county transit services and offer modal choices to commuters. Rail is a cornerstone of statewide efforts to decrease SOV share on roadways. Service expansion on existing NJ Transit lines (Morris & Essex and Boonton), and two potential new rail services (NYS&W and Lackawanna Cutoff) will positively impact Sussex County. The new services will include stations within the county. In addition to potential rail service development, express bus service and local bus services should be strengthened in the coming years. The following sections present more specific information for transit options

### *Rail Development*

NJTransit and other rail services play an important role in offering transit mode choices to Sussex County residents. The projected expansion of rail service provides a great opportunity for the county to address TOD concepts at these locations and examine multi-modal solutions to the congestion and transportation issues that are being faced by the county. The county will need to work with state and regional agencies with regard to service increases. The county may have little input into service levels at each station and may be more successful at providing connections to those stations and addressing mixed use development at those stations.

The towns of Dover and Netcong are addressing TOD measures around their rail stations as part of an effort to revitalize their communities. These rail stations, although outside of Sussex County, are frequently utilized by Sussex County residents. The following sections present information on each of the rail stations that are currently utilized by Sussex County residents or may be utilized if they are developed as part of either NYS&W or Lackawanna Cutoff plans.

- *Dover* – The Dover station, part of NJTransit Midtown Direct service, is undergoing development and is located just to the south of Sussex County along Route 15. With the high concentration of persons commuting to neighboring counties, efforts will be needed to connect Sussex travelers to the Dover station. This station is also a Park & Ride facility with a large parking supply. The traffic operations and roadway management section below suggests a queue bypass for busses on Route 15 at Berkshire Valley Road and near I-80 that would enable quicker connections to the Dover Station. With Midtown Direct service, this station should be considered for connections from Sparta and the Blue Heron Park & Ride. These roadway locations are outside of Sussex County jurisdiction, so the county will need to work closely with NJDOT, NJ Transit, and Morris County to address connection issues.
- *Roxbury* – A bus park-and-ride has recently been constructed at I-80 Exit 30 (Howard Boulevard) in Roxbury, and a future rail station is planned. This will be an important facility for Sussex County commuters because it is easily accessible from I-80 and the key Route 15 and Route 206 corridors, and a large supply of parking will be available. Sussex County should work with Morris County and NJ Transit to encourage appropriate rail service enhancements to maximize the frequency of rail service to this location. In addition, the opportunity to

implement bus shuttle services between this station and park-and-rides within Sussex County should be investigated.

- *Sparta* – Sparta is a proposed station for NYS&W service that may connect north to Stockholm. This station is proposed to be located off of the intersection of the County Route 517 Bypass and Route 15. Sparta should be considered for TOD service as indicated in the above section. The station would have 144 parking spaces which would be sufficient to accommodate commuters. Rail storage yard issues still need to be addressed for this project.
- *Stockholm* – Stockholm is a proposed station for NYS&W service. This location is close to the proposed Mountain Creek development in Vernon and may be an important rail connection for both visitors and commuters related to this resort and residential area. Sussex County should investigate providing shuttle connections between Stockholm station and Vernon/Mountain Creek as this proposed service is implemented. In addition direct rail excursion service could be provided right to Mountain Creek, since the NYS&W rail line runs directly to their parking lots.
- *Andover* - Andover is a proposed station for Lackawanna Cutoff service. Preliminary numbers indicate potential ridership levels of 150 boardings per day, although estimates have not been finalized. This would indicate a need for at least 50-75 parking spaces at the station. NJ Transit is currently finishing the Environmental Assessment (E/A) and FTA Section 5309 Requirements for this line that would connect Pennsylvania and New York City. If this service is implemented, Sussex County should seek to take advantage of the opportunity for T.O.D. and/or an intermodal transit village at this site.

The cost of development at rail stations will depend on the measures that are taken to develop transit villages and the level of service that is provided at and to those stations. Unit costs are provided below for shuttle services to Dover and Netcong stations. These hourly rates are based on current operating experience for rail shuttle service at similar locations. Projections are also provided for parking additions should this be considered necessary. It is difficult to project absolute numbers based on the lack of available data and the strategic nature of this plan.

In addition it should be noted that costs would be similar for shuttle or "feeder" bus service, that would travel around Sussex County to pick up rail riders and drop them off at proposed rail stations in Sussex County. The success of this service might be limited due to the number of mode changes and the additional time required to travel around the County in a shuttle bus, on top of the time required to commute by rail. This concept will require further analysis.

Service	Unit Cost Operations	Unit Cost Annual Weekday	Unit Cost Capital
<b>Shuttle Service to Dover Station</b>	\$45 per hour	\$99,450	\$250,000
<b>Shuttle Service to Netcong Station</b>	\$45 per hour	\$99,450	\$250,000
<b>Additional Parking</b>	n/a	n/a	\$2,500 per space

Rail services should be considered as part of the overall growth plan. Efforts to connect Sussex County residents to rail stations in neighboring counties and the development of transit villages

around proposed station locations will assist the county in addressing Smart Growth plans and will encourage population growth that is not reliant on the auto for their work trips. Although much of this development is outside of the county and forces the county to react to statewide planning efforts, the potential to utilize rail connections as a growth tool will provide a high level of success for the county.

#### *Inter-County Express Bus Service*

The origin-destination survey pointed to widespread employment locations of Sussex County residents. Consequently fixed route services such as commuter rail are unable to provide acceptably convenient service to the majority of county residents as they travel to their work places. Express bus, which is currently operated by NJ Transit and Lakeland Bus, provides connections to Morris and Passaic counties, as well as some connections to New York City. Both NJ Transit and Lakeland bus service are provided on varying schedules and only on weekdays. Lakeland bus service is generally operated on schedules adequate to service commuter needs. Sussex County should make efforts to expand NJ Transit 967 service to hourly service frequencies. Current ridership reflects the limited schedule. A higher frequency of service will offer guaranteed service to the large share of people that are commuting between Sussex County and destinations that lie along Wheels 967.

The unit cost for NJ Transit service, based on National Transit Database figures is approximately \$65 per hour. On an annualized basis, this would be \$165,750 per bus for a 10-hour day. Capital unit costs are approximately \$250,000 per vehicle.

#### *Intra-County Service Improvements*

Sussex County has not responded to the findings of multiple studies and surveys that have pointed out the importance of Sussex County Transit Service (SCTS) to the economic health of the county. A recent TransOptions study indicated that the service is providing low-income residents of the county employment trips, despite the limited schedule of service. Increased development within the county which responds to population growth typically brings retail and service sector jobs that are filled by many low-income residents. The limited schedules on SCTS are an impediment to job growth in the county and an impediment to providing jobs to persons who might otherwise require state and county assistance.

SCTS service has made efforts to improve its ridership and cost measures over recent years in response to lack of funding. SCTS has experienced ridership growth of 11% over the past year despite having to alter service and cost structures to respond to budgetary needs.

In order to continue to strengthen intra-county services and respond to growing needs, Sussex County should make the following improvements to SCTS service.

- *Maintain Service on Loop A&B* – These primary routes for SCTS should be maintained to provide full-day service.
- *Identify New FlexRoute Options* – Based on budget cuts, SCTS replaced its routes 2 and 5 with demand response service for the general public. If service levels are

adequate to replace some or all of this service with flexible fixed route service, this should be favored over demand response service.

- *Implement Route 94 Service* – Connections between Newton and Vernon/ Mountain Creek along the growing Route 94 corridor will provide connections to retail and service jobs at Mountain Creek and to locations along this major corridor. SCTS has applied for Jobs Access/ Reverse Commute funding for this project which will assist to implement this service. Service estimates of \$475,300 for weekday, night, and weekend service to Vernon and Mountain Creek have been developed by SCTS.
- *Expand Demand Response Service* – Concurrent with the SCTS JARC grant application, expansion of the demand response services in the county should be undertaken to enhance rural public transit connections. A cost estimate of \$177,500 has been developed by SCTS for this service. This service would be to assist in employment connections for low-income residents of Sussex County which is the primary market for SCTS.
- *Enhance Customer Service* – SCTS information is available at select locations, but service is not widely understood within the county. In addition, a poor customer service phone system limits the ability of SCTS to respond to the public. Upgrading customer service networks and adding customer service staff should be addressed in the short term of this plan
- *Infrastructure Improvements* – SCTS should make improvements to its service infrastructure to develop a clearer identity of service. The establishment of shelters at major stop locations and pole stops at other stop locations will allow service to increase efficiency by offering consistently marked waiting areas.

Unit costs have been developed for SCTS service planning. The unit costs vary slightly from the program total costs for operational issues for Route 94 service and expansion of demand response service. Unit costs are provided to allow the county to make projections for future cost needs. Rail shuttle costs are presented in this table to stress the importance of this service to the county.

Service	Unit Cost Operations	Unit Cost Annual Weekday	Unit Cost Capital
SCTS Service	\$35 per hour	\$89,250	\$250,000
Route 94 Service	\$35 per hour	\$89,250	\$250,000
Customer Service Upgrade	n/a	n/a	\$10,000
Customer Service Staff	\$50,000 (annual loaded)	n/a	n/a
Shelter & Pad	n/a	n/a	\$5,000
Pole Stops & Bench	n/a	n/a	\$500
Rail Shuttles	\$45 per hour	\$99,450	\$250,000

Transit service will be an important part of the overall transportation network in Sussex County. These strategies will assist the county to offer non-auto modes of travel within the county and between Sussex and neighboring counties. The potential for congestion mitigation for commuters is not as high as other strategy elements if transit options are performed without the other elements of the strategy. These options should be commenced in the short term and continue throughout the implementation term.

<b>Transit Options</b>	
Term for Implementation	Short
Probability of Successful Congestion Mitigation	Medium
Costs	Low
Potential Funding Sources	Combination of federal, state, and local
Locations	Inter and Intra-county

### Traffic Operations & Roadway Management

The final strategic plan element involves improvements to traffic operations and roadway management. As has been repeatedly pointed out in this plan, important congestion hot spots lie outside of Sussex County boundaries. The strategic efforts that are presented in this section should be utilized in addition to capacity expansion on Sussex County roadways and roadways in neighboring communities.

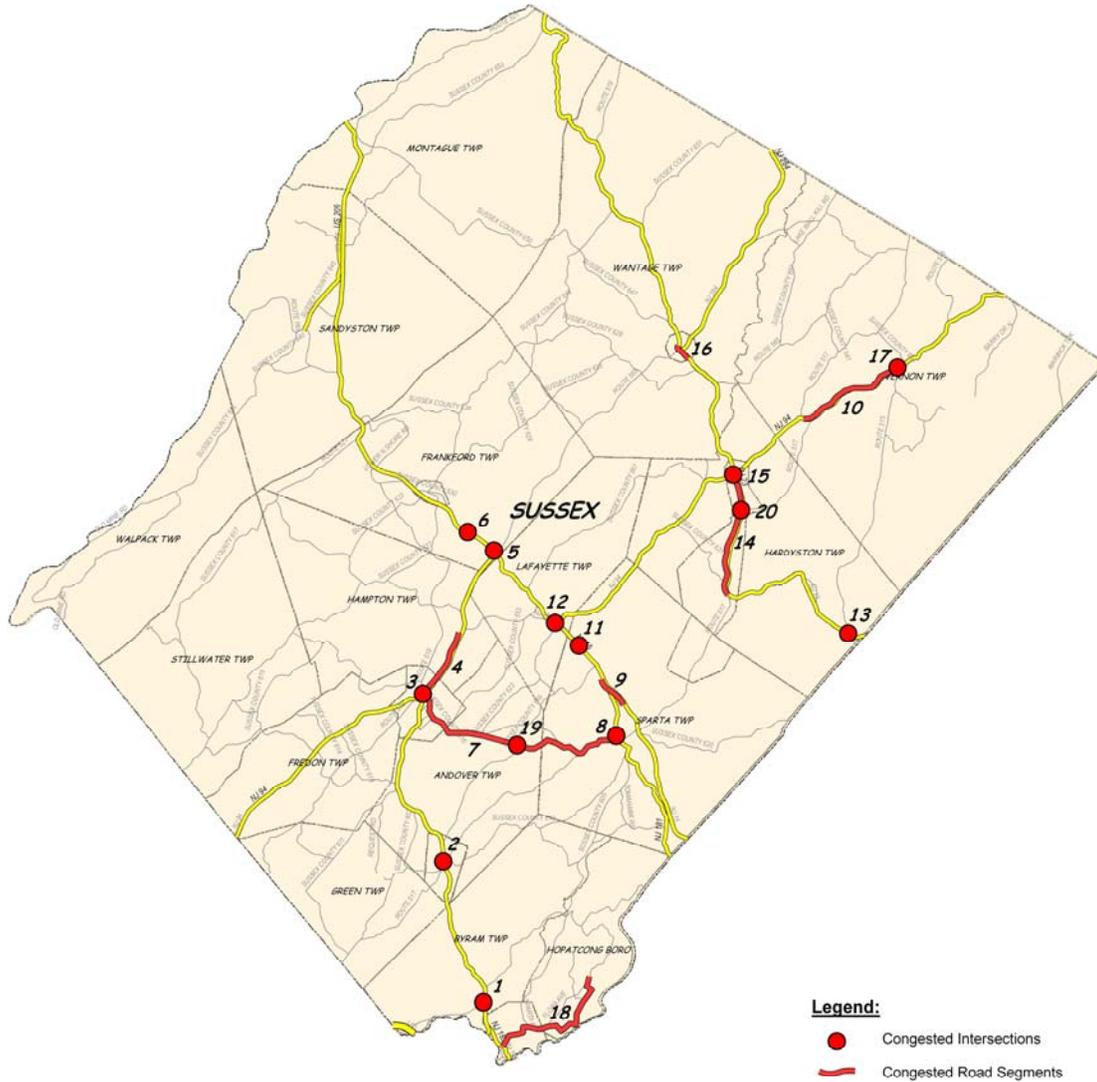
#### *Intra-County Roadway Work*

There are many locations within the county that will warrant future investigation for operational management, roadway design, and safety issues. The following is a list of eighteen locations that have been identified as being congested and in need of investigation, based on responses to the web-based survey, County staff input, and Consultant evaluation. Projects that already appear on the Transportation Improvement Program (TIP), or that are being addressed through a current study, are so noted. Figure 6-58 identifies these locations on the County's highway system:

1. Route 206 and Route 604 intersection, Byram (TIP)
2. Route 206 and Route 517 intersection, Andover
3. Route 206 and Route 94 / Spring Street intersection (The Square), Newton
4. Route 206 and Route 94 roadway, Newton and Hampton
5. Route 206 and Route 15 / Route 565 intersection (Ross Corner), Frankford
6. Route 206 and Augusta Hill Road intersection, Frankford
7. Route 616 (Spring Street and Newton – Sparta Road) roadway, Newton / Andover, Sparta (Scoping Study)
8. Route 181 and Route 517 intersection, Sparta
9. Route 15 at the northerly end of the freeway, Sparta
10. Route 94 Vernon (Access Management Plan Study)
11. Route 15 and White Lake Road / Wilson Drive intersection, Sparta
12. Route 15 and Route 94 intersection, Lafayette
13. Route 23 and Route 515 intersection, Hardyston
14. Route 23 roadway, Franklin and Hamburg
15. Route 23 and Route 94 intersection, Hamburg (TIP)
16. Route 23 roadway, Sussex (TIP)
17. Route 94 and Route 515 intersection, Vernon (County Project)

18. Route 602 and Route 607 roadway, Stanhope and Hopatcong (mitigated by Route 605 Extension (Scoping study))
19. Route 616 and Route 669, Andover (Scoping Study)
20. Route 23 and Route 517, Hamburg

**Figure 6-58: Identified Congested Locations**



**Key:**

- |  |  |
|--|--|
| 1 Route 206 and Route 604  | 11 Route 15 and White Lake Road / Wilson Drive, Sparta |
| 2 Route 206 and Route 517, Andover                                   | 12 Route 15 and Route 94 (north), Lafayette            |
| 3 Route 206 and Route 94 / Spring Street (the Square), Newton        | 13 Route 23 and Route 515, Hardyston                   |
| 4 Route 206 / 94, Newton / Hampton                                   | 14 Route 23, Franklin / Hamburg                        |
| 5 Route 206 and Route 15 / Route 565 (Ross Corner), Frankford        | 15 Route 23 and Route 94, Hamburg                      |
| 6 Route 206 and Augusta Hill Road / Plains Road (Augusta), Frankford | 16 Route 23, Sussex                                    |
| 7 Route 616 / Spring Street, Andover / Newton / Sparta               | 17 Route 94 and Route 515 (south), Vernon              |
| 8 Route 181 and Route 517, Sparta                                    | 18 Route 602 and 607, Stanhope and Hopatcong           |
| 9 Route 15, end of freeway, Sparta                                   | 19 Route 616 and 669, Andover                          |
| 10 Route 94, Vernon  | 20 Route 23 and 517, Hamburg                           |

To provide a framework for understanding the relative importance of these locations within the County's project development process, the locations were ranked on the basis of a composite performance index. This performance index contains the following four categories:

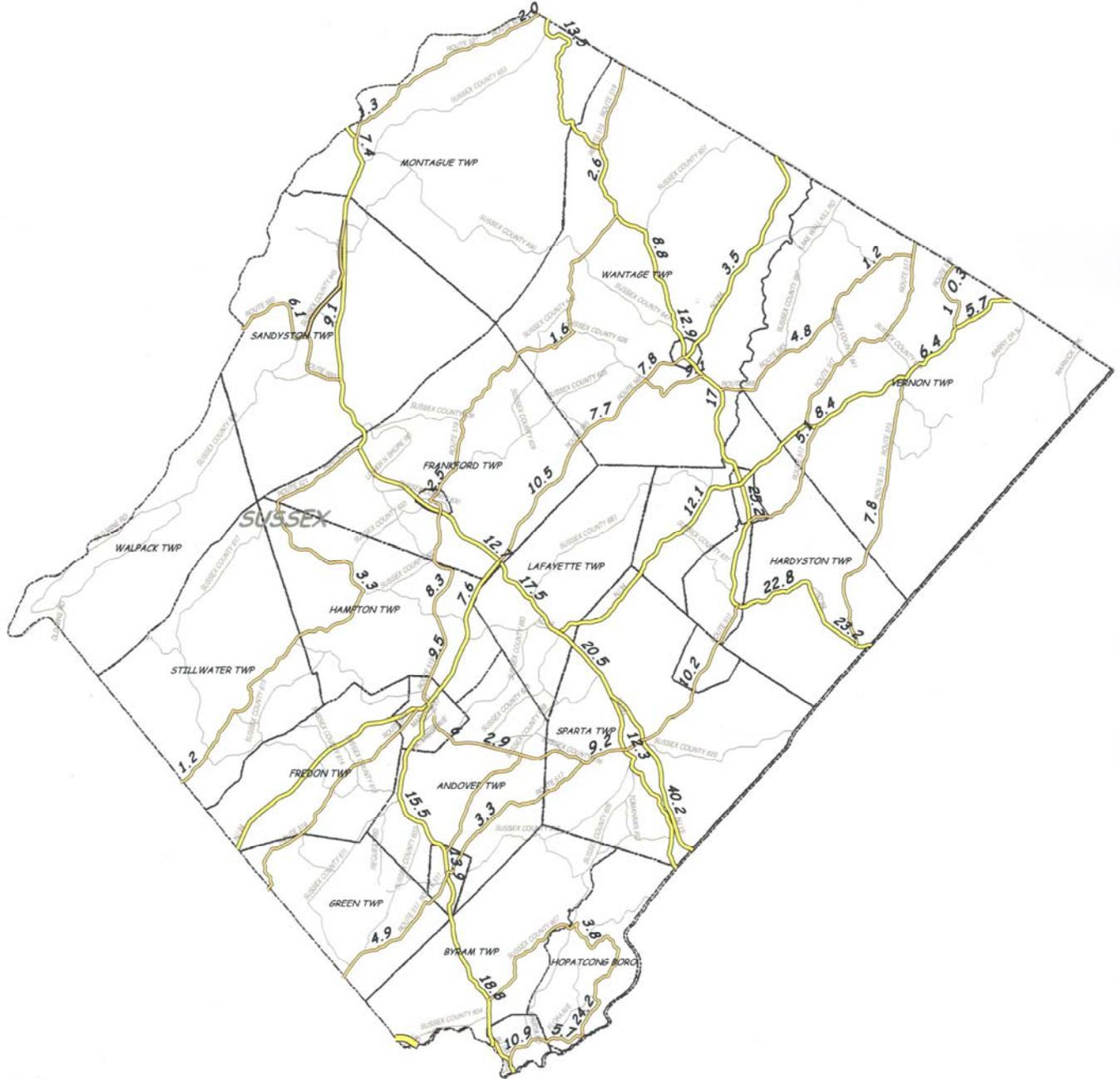
- **Magnitude**      The amount of traffic using the street or intersection, represented by the total daily traffic volume;
- **Severity**        The intensity of congestion at the location, represented by hourly traffic volume per lane;
- **Function**        The role of the facility in the County's overall hierarchy of streets and highways, as represented by the roadway's Functional Classification; and
- **Context**         Presence of the location in a designated Center or strategic development area.

Table 6-31 presents the results of the performance evaluation. The following method was used to compute each of the components of the performance index:

**Magnitude of the Problem** – This is measured by the Average Daily Traffic (ADT) at the location, as illustrated in Figure 6-59. Volumes were obtained from the County's traffic count database. At intersection locations the volume was computed as the sum of the highest conflicting approach volumes, and at roadway locations it was the total two-way traffic volume. The Score is the difference between the location's volume and the minimum volume, divided by 1,000. A value of 1.0 is added to all scores so that the minimum score is 1.0.

**Severity of the Problem** – This measure represents the intensity of traffic flow relative to available capacity, and is essentially the peak hour volume per lane. For intersections the volume is the peak hour approach volume (10 percent of the above sum of conflicting approach volumes), and the number of equivalent lanes is the total number of through lanes on conflicting approaches, plus 40% of the turning lanes on conflicting approaches. For roadway locations the volume is the two-way peak hour volume (10 percent of the above daily total), and the equivalent number of lanes is the two-way total width. The Score is the difference between the location's peak hour volume per lane equivalent and the minimum of all locations, divided by 10. A value of 1.0 is added to all scores so that the minimum score is 1.0.

Figure 6-59: Average Daily Traffic Volumes



**Legend**

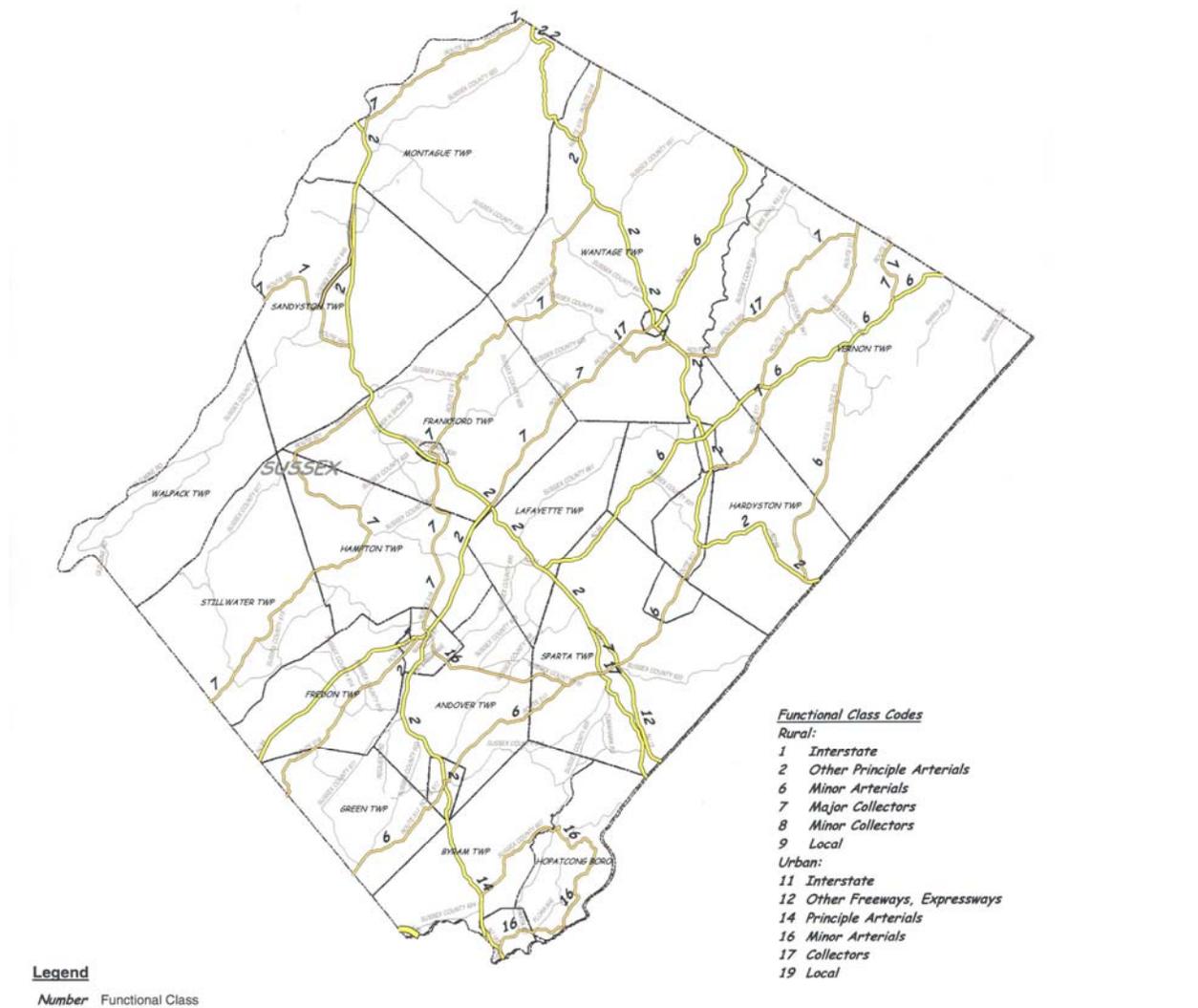
**Number** 2 Way ADT (thousands)

Table 6-31: Performance Evaluation and Ranking of Congested Locations

LOCATION	MAGNITUDE		SEVERITY			FUNCTION		CONTEXT		OVERALL PERFORMANCE INDEX	Committed Improvement	RANK
	Traffic Volume (ADT)	Score	Equivalent Lanes	Peak Hour Volume per Lane Equivalent	Score	Composite Functional Class	Score	Designation	Score			
1. Route 206 and Route 604, Byram	13,700	7.2	2.4	570	3.6	5.0	5.0	Proposed Center	5	20.8	Intersection Improvement (TIP)	9
2. Route 206 and Route 517, Andover	10,700	4.2	2.0	540	3.3	4.0	6.0	Proposed Center	5	18.5		14
3. Route 206 and Route 94 / Spring Street (The Square), Newton	12,700	6.2	3.0	420	2.1	4.0	6.0	Regional Center	10	24.3		5
4. Route 206 / 94, Newton / Hampton	7,600	1.1	2.0	380	1.7	2.0	8.0	Regional Center	10	20.8		10
5. Route 206 and Route 15 / Route 565 (Ross Corner), Frankford	16,800	10.3	3.8	440	2.3	2.0	8.0	Proposed Center	5	25.6		4
6. Route 206 and Augusta Hill Road / Plains Road, Frankford	10,000	3.5	2.4	420	2.1	4.5	5.5		0	11.1		19
7. Route 616 / Spring Street, Andover / Newton / Sparta	9,200	2.7	2.0	460	2.5	6.0	4.0	Regional Center	10	19.2	Scoping Study	11
8. Route 181 and Route 517, Sparta	12,900	6.4	3.8	340	1.3	6.5	3.5	Town Center	8	19.2		12
9. Route 15, End of Freeway, Sparta	20,500	14.0	4.0	510	3.0	2.0	8.0	Town Center	8	33.0		2
10. Route 94, Vernon	8,400	1.9	2.0	420	2.1	6.0	4.0	Town Center	8	16.0	Access Management Plan Study	17
11. Route 15 and White Lake Road / Wilson Drive, Sparta	14,700	8.2	2.4	610	4.0	4.5	5.5		0	17.7		15
12. Route 15 and Route 94, Lafayette	19,600	13.1	3.4	580	3.7	4.0	6.0		0	22.8		7
13. Route 23 and Route 515, Hardyston	18,600	12.1	3.4	550	3.4	4.0	6.0		0	21.5		8
14. Route 23, Franklin / Hamburg	25,200	18.7	2.0	1,260	10.5	2.0	8.0		0	37.2		1
15. Route 23 and Route 94, Hamburg	22,400	15.9	3.8	590	3.8	4.0	6.0		0	25.7	Intersection Improvement (TIP)	3
16. Route 23, Sussex	12,900	6.4	2.0	650	4.4	2.0	8.0		0	18.8	Route 23 Realignment (TIP)	13
17. Route 94 and Route 515, Vernon	9,700	3.2	2.2	440	2.3	6.0	4.0	Town Center	8	17.5		16
18. Route 602 and 607, Stanhope and Hopatcong	10,900	4.4	2.0	550	3.4	6.0	4.0		0	11.8	Route 605 Extension (Scoping Study) will mitigate	18
19. Route 616 and Route 669, Andover	7,500	1.0	2.4	310	1.0	6.5	3.5		0	5.5	Scoping Study	20
20. Route 23 and Route 517, Hamburg	18,900	12.4	2.4	790	5.8	4.5	5.5		0	23.7	Scoping Study	6

**Function** – All roadways in the State of New Jersey have been classified into a Functional Classification System which indicates the relative function of the roadway in the overall hierarchy of streets and highways. The standard codes range between 1 and 9 for rural areas and 11 and 19 for urban areas, and are illustrated in Figure 6-60.

**Figure 6-60: Functional Classification of Roadways**



For scoring purposes a value of 10 was subtracted from all urban codes, so that all codes would be in the range 1 to 9. Then for intersection locations a composite functional class was computed by averaging the functional class code for conflicting approaches. For roadways, the adjusted functional class was used directly. The Score was computed by subtracting the composite functional class code from 10, essentially inverting it so the highest functional classes (i.e. freeways) would receive the highest score.

**Context** – As a matter of policy the State of New Jersey and Sussex County seek to give higher priority to the implementation of infrastructure improvements in designated Centers. This measure accounts for this policy priority by assigning a value of 10 to locations within a designated Regional Center, 8 to locations in other designated Centers, and 5 to locations that have been proposed as Centers but that have not yet received that designation.

**Overall Performance Index** – The overall performance index shown in Table 6-31 was computed by summing the above four scores. A review of the results indicates that without applying weights a reasonable relative magnitude among the four categories was achieved, and that the resulting ranking was reasonable. A set of weights could be developed and applied to the scores as a separate exercise, which would likely result in a different ranking.

Using the results as shown in Table 6-31, the ranking indicates the following relative importance among the identified congested locations:

**Locations that do not have a study or TIP improvement already in place:**

Rank	Location
1	Route 23 roadway, Franklin and Hamburg
2	Route 15 at the northerly end of the freeway, Sparta
4	Route 206 and Route 15 / Route 565 intersection (Ross Corner), Frankford
5	Route 206 and Route 94 / Spring Street intersection (The Square), Newton
7	Route 15 and Route 94 intersection, Lafayette
8	Route 23 and Route 515 intersection, Hardyston
10	Route 206 and Route 94 roadway, Newton and Hampton
12	Route 181 and Route 517 intersection, Sparta
14	Route 206 and Route 517 intersection, Andover Boro
15	Route 15 and White Lake Road / Wilson Drive intersection, Sparta
16	Route 94 and Route 515 intersection, Vernon
19	Route 206 and Augusta Hill Road intersection, Frankford

**Locations that already have a study or TIP improvement in place:**

Rank	Location
3	Route 23 and Route 94 intersection, Hamburg (TIP)
6	Route 23 and Route 517 intersection, Hamburg (Scoping Study)
9	Route 206 and Route 604 intersection, Byram (TIP)
11	Route 616 (Spring Street and Newton – Sparta Road) roadway, Newton / Andover, Sparta (Scoping Study)
13	Route 23 roadway, Sussex (TIP)
17	Route 94 Vernon (Access Management Plan Study)
18	Route 602 and Route 607 roadway, Stanhope and Hopatcong (mitigated by Route 605 Extension (TIP))
20	Route 616 and Route 669, Andover (Scoping Study)

There are opportunities to promote TDM measures in the county by expanding Park & Ride facilities throughout Sussex County. A new Park & Ride facility should be considered for Route 23, closer to the location of current congestion in Passaic County. In addition, expansion of local Park & Ride facilities as necessary should be addressed.

- New Park & Ride
  - Franklin, at Route 23
- Park & Ride Expansion
  - Blue Heron Road and Route 15 Interchange (TIP)
  - Ross's Corner
  - Sparta
  - Byram
  - Newton

#### *Out of County Traffic Operations & Roadway Management*

One of the major issues facing Sussex County is that congestion hot spots are located outside of county boundaries. Traffic operations and roadway management techniques should be developed to address these issues as part of the overall strategy.

- Route 15 approaching Interstate 80
  - Route 15 and I-80 Interchange
  - Queue bypass for buses on Route 15 at Berkshire Valley Road and near I-80.
- Computerized Signalization
  - Route 15 from Ross's Corner to I-80
- Park and Ride
  - Improved access to Mount Arlington and Dover Station rail stations

I-80 in Morris County has been heavily congested for decades, and each year the congestion becomes worse. As has been amply discussed above, most Sussex County residents who commute to the east must use I-80, so this corridor directly impacts the quality of life in the County. Several studies have been performed over the last 15 years, extensive data has been collected, and the conclusions all tend to indicate that further widening to accommodate single-occupant vehicles is impractical if not impossible. High Occupancy Vehicle (HOV) lanes have been attempted and discontinued.

Notwithstanding these failures, I-80 is a vital factor in the region's long term health. Therefore Sussex County needs to work closely and intensely with its neighboring counties, the New Jersey Department of Transportation, and NJ Transit to address mobility in the corridor. Actions on the roadway itself – ramp metering, bus-only lanes, localized bottleneck improvements – should all be pursued. Other actions off the roadway such as parallel corridor improvements, enhanced bus and rail service, (such as the Lackawanna Cut-Off) and improved travel demand management could provide meaningful alternatives. Sussex County's quality of life is at stake, and the County needs to be proactive on this topic.

**Traffic Operations & Roadway Management**

Term for Implementation	Mid to Long
Probability of Successful Congestion Mitigation	High
Costs	High
Potential Funding Sources	State, Federal
Locations	Inter and Intra-county