

J. CIRCULATION

J-1.0 Introduction

The North Smithfield circulation system has evolved over the past 300 years to serve the needs of local residents and a larger regional population in Rhode Island and Massachusetts.

Initially, the regional system provided stagecoach links between Providence and Worcester and other important Massachusetts destinations. Great Road (Route 146A), Douglas Pike (Route 7) and Providence Pike (Route 5) all relate to historic north-south through traffic movements.

The more recent construction of Route 146, as a predominantly limited access highway between Providence and Worcester, provides a facility which now accommodates a large share of the interstate traffic. Within Rhode Island, Route 146 is a limited access roadway except for a one and one-half mile non-limited access section in North Smithfield between the Route 146A cutoff and the new Route 99 interchange in Lincoln immediately to the south of the Town line.

East-west traffic circulation in North Smithfield generally radiates from, and relates to, the urban concentration in Woonsocket; for many years, until the advent of highway shopping centers, downtown Woonsocket was the commercial and retail hub of North Smithfield. Main Street-School Street, St. Paul Street, Pound Hill Road, Sayles Hill Road and Greenville Road (Route 104/Farnum Pike) are the principal east-west roadways. Although Victory Highway (Route 102) serves east-west flows in North Smithfield, essentially it is a north-south road passing through the more rural sections of northern Rhode Island.

In times past the Town was served by several trolley and railroad lines; now all are gone save one. A freight-only spur line of the Providence and Worcester Railroad extends from the main line in Woonsocket and terminates at the Providence Pike.

Lacking a downtown area, North Smithfield does not have numerous off-street parking problems. Pursuant to the Town's Zoning Ordinance, off-street parking is provided by individual property owners. However, as a result of increased residential development, there are many more cars on the street and a greater need for sidewalks and traffic calming measures.

There is only one bus passing through the Town and linking Woonsocket and Providence; this services and stops in Park Square and areas to the south along Routes 146A and 146.

The Circulation Element addresses the need to improve and add to the present transportation system and to serve well the needs of local residents and business and the overall circulation system of Rhode Island.

J-2.0 Goals, Policies and Actions

1. CONTINUE IMPROVEMENT OF STREET SYSTEM THROUGH SELECTIVE ROADWAY ALIGNMENTS, WIDENINGS AND INTERSECTION IMPROVEMENTS

- A. Use combinations of local, State and Federal funds to make intersection improvements, undertake a pavement management program and implement the State's Transportation Improvement Program (TIP).
- B. Seek RIDOT Enhancement funds to conduct highway beautification projects, increase pedestrian access, village revitalization and intermodal transportation projects.
- C. Revise Subdivision and Land Development Regulations standards as they apply to local street widths.
- D. Enforce Zoning Ordinance regulations applying to visibility at intersections.
- E. Develop, prioritize and implement a Sidewalk Plan.
- F. Adopt and implement a Mapped Street Ordinance or alternative policy.
- G. Work with RIDOT on the proposed widening of the Slatersville Stone Arch Bridge and ensure that the historic character of the bridge is maintained.
- H. Develop and implement a road improvement program that includes assessment and prioritization of Town road projects.
- I. Encourage the development and implementation of access management plans to minimize access points to existing roadways in order to increase capacity and reduce delays, with special attention given to Industrial Drive and 146A through Park Square.

2. ELIMINATE TRAFFIC CONGESTION ON NON-LIMITED ACCESS SECTION OF ROUTE 146

- A. Encourage RIDOT to reestablish the Route 146/Sayles Hill Road interchange on the TIP and to begin discussions regarding feasible alternatives.

3. ENCOURAGE PRESERVATION OF RURAL CHARACTER OF COUNTRY ROADS

- A. Adopt and implement a Scenic Roads Inventory and develop a Scenic Road Ordinance.

4. ALLOW ONLY THAT DEVELOPMENT WHICH WILL NOT OVERBURDEN THE STREET SYSTEM

- A. Carefully evaluate traffic impacts and stipulate mitigation measures as part of development plan review for major development projects.

B. Limit curbcuts.

5. PROVIDE FACILITIES TO ENCOURAGE THE USE OF THE TRANSIT SYSTEM

- A. Increase public transportation opportunities.
- B. Work with RIDOT and/or RIPTA in developing local park-n-ride facilities for transit users and car poolers.
- C. Continue transportation services for the elderly and handicapped.

6. FACILITATE FREIGHT RAILROAD SERVICE TO MANUFACTURING AREAS

- A. Continue zoning allowing manufacturing uses which may require deliveries or shipments by railroad.

7. INCREASE OPPORTUNITIES FOR PEDESTRIAN AND BICYCLE ACCESS PARTICULARLY TO VILLAGE AREAS, NEAR PUBLIC FACILITIES, AND IN DENSELY SETTLED NEIGHBORHOODS

- A. The Planning Board should require all development proposals to include a pedestrian access component.

8. PROMOTE TRAFFIC SAFETY ON NEW AND EXISTING ROADWAYS

- A. Amend Subdivision and Land Development Regulations to include provisions for traffic calming measures such as reduced curve radii, reduced roadway width, street tree plantings, etc.
- B. Improve safety at West Acres interchange on Rt 146 (south to north U-turn).
- C. Implement a lanestripping program as a speed control measure on existing roadways and include a stripping provision in the Subdivision and Land Development Regulations.

J-3.0 Plan Description

J-3.1 Inventory

J-3.1.1 Functional Classification

Except for Route 146 (the North Smithfield Expressway) and sections of Route 146A between Park Square and Route 146, virtually the entire street system in North Smithfield is comprised of two-lane roadways of varying pavement widths. Although improved over the years, most of the local streets, other than in subdivided areas, originally were laid out to serve the needs of those who used a horse and buggy.

The Rhode Island Division of Planning, in cooperation with Rhode Island Department of Transportation (RIDOT), has developed a functional classification system for roadways. Essentially there are three major classes as follows:

- **Arterials** - Includes Interstates, other freeways and expressways

These highways emphasize a high level of mobility for through movement. They provide the highest level of mobility, at the highest speed, for long, uninterrupted travel. Arterials generally have higher design standards than other highways, often with multiple lanes and some degree of access control.

- **Collectors**

These highways provide a lower level of mobility but a larger level of property access than arterials. They are designed for travel at lower speeds and for shorter distances. Collectors typically are two-lane highways that gather and distribute traffic to and from the arterial system and the local system.

- **Local Streets**

These highways emphasize a high level of land access. They provide the highest level of property access, at the lowest speeds, and the lowest level of mobility. They generally have the lowest design standards and are typically two lane highways with no striping or other painted markings. They represent the bulk of the mileage in the public highway network.

The 1995-2005 Highway Functional Classifications for North Smithfield are shown on Map J - 1 and are described as follows:

Urban Principal Arterial – Interstate – None.

Freeway / Expressway – Urban - (9.8 miles) - Route 146 from Lincoln to the Massachusetts line. Route 146 is a limited access highway except for the section between the 146A turnoff and the Lincoln Town line; according to the Department of Transportation, the one and one half mile section providing access to local businesses in North Smithfield remains the only non-limited access stretch of 146 between Providence and Massachusetts.

Route 146 has grade separated interchanges with the North Smithfield street system as follows: Victory Highway, Pound Hill Road and Greenville Road/Farnum Pike (Route 104). For the non-

limited access sections there are at grade intersections with Eddie Dowling Highway (Route 146A) and Sayles Hill Road. A stop light at Sayles Hill Road creates a significant traffic hazard and traffic backups during peak travel periods.

Urban Principal Arterials -; Victory Highway (Route 102) from the Route 146A to the Burrillville town line; and Route 146A from Route 146 to Park Square; Douglas Pike (Route 7) from Burrillville line to Smithfield line;.

Urban Minor Arterials - (10.6 miles) - Route 146A from Park Square to Victory Highway; Sayles Hill Road from Route 146 to Lincoln Town line; Greenville Road/Farnum Pike (Route 104) from Route 146A to the Smithfield town line; Saint Paul Street; North Main Street/Quaker Highway (Ironstone Street) from Main Street to Massachusetts line; Providence Pike (Route 5) between Main Street and Smithfield town line; Central Street and Manville Road from Lincoln to Woonsocket municipal lines.

Urban Collectors - (23.8 miles) - Mendon Road; Rhodes Avenue; Canal Street;; Green Street; Pound Hill Road; North Smithfield Industrial Drive; Main Street/School Street; ; Follett Street Greenville Roadand Iron Mine Hill Road.

Local Non Classified Streets - All streets not identified as collectors are local streets. These include many older roadways which served the former rural and farming communities as well as newer subdivision streets. The new subdivisions present a sharp contrast between the older roadways which are narrow (often 22 to 24 feet of paving) and have a soft edge, i.e. no curbs. The new streets are curbed or have berms and have a 24-30 foot paved width..

J-3.1.2 Roadway Characteristics

The following is a summary of the characteristics of the principal and minor arterials:

Table I-3.1.2 Characteristics of Major Roadways

	Shoulder(s)	Lanes	Center Offset
Route 146A at Landmark Medical	2 @ 8' each	4 @ 12' each	2'
Route 102 (Victory Highway)	2 @10' each	2 @13' each	None
Sayles Hill Rd (east of Rt 146)	2 @6' each	2 @ 13' each	None
Route 146	2 @8' each	4 @ 12' each	2'
St. Paul Street	2 @ 1.5' each	2 @ 13' each	None
Route 7	2 @ 2' each	2 @ 12' each	None
Route 146 A at Maple St	2 @ 10' each	4 @ 12' each	None
Route 5	2 @ 1' to 4' each	2 @ 12 ' each	None
Ironstone St (Quaker Highway)	2 @ 10' each	2 @14' each	None
Route 146A at Pound Hill Rd	2 @ 5' each	2 @ 13' each	None
Route 104	2 @ 1 to 2' each	2 @ 12' each	None

J-3.1.3 Traffic Generators

The major traffic generators in North Smithfield include the following: 1) the industrial areas along and near North Smithfield Industrial Drive and at the Branch River Industrial Park complex; 2) retail development at the intersection of Route 5 and Victory Highway; 3) retail, commercial and office development along Route 146A, particularly at Park Square; and 4) the commercial activities along the non-limited access portions of Route 146.

Regionally, major out of town destinations include businesses and industries in the City of Woonsocket, the mall and office parks in Lincoln and the interchange of I-295 and Route 146. Route 146 provides direct access to areas to the north and south and I-295, which passes within one half mile of the southern boundary of the Town, facilitates movement to points to the east, west and south. Route 99, an Industrial Highway which connects with Route 146 immediately to the south of the town line funnels off considerable amounts of regional traffic which used to pass through North Smithfield on its way to destinations in Woonsocket; approximately two-thirds of the traffic traveling north to the industrial areas of Woonsocket uses Route 146 and 146A.

J-3.1.4 Traffic Volumes

Volumes and Projections

The Department of Transportation compiles annual 24 hour average daily traffic (AADT) for the major streets and highways throughout the State. In 2005, the most heavily traveled highway was Route 146 between the Lincoln line and the 146 A turnoff; AADT was 31,000. This was followed by the section of Eddie Dowling Highway (Route 146A) between the Route 146 and Park Square where AADT was 18,400 and Route 146 north of the Route 146A turnoff where AADT was 16,400. Victory Highway from the Route 146 interchange to the Burrillville line, with an AADT of up to 14,300, was also one of the most heavily traveled local roads. The traffic counts are generally lower than those recorded in the 1992 Comprehensive Plan because Route 99 was constructed since the previous Plan was adopted.

When contacted in 2005, both Statewide Planning and the DOT stated that traffic projections are generated for particular sites based on particular projects, but not randomly or for all roads statewide. As such, the Town does not have current traffic projections other than what it receives as part of local development applications which are on file in the Planning Department.

J-3.1.5 Problem Areas

The Town of North Smithfield, through its Department of Public Works, has a continuing 5-year program for the repair and resurfacing of the local street system. Where necessary, crowns are being added to the streets to facilitate drainage.

At the State level the Rhode Island Department of Administration, Division of Planning, in cooperation with local towns and cities and the Department of Transportation, prepares a six year Transportation Improvement Program (TIP). The TIP sets priority schedules for state and federal-aid roadways.

The North Smithfield Police Department has identified the following intersections as being prone to accidents: Douglas Pike at the northerly and southerly points where Route 5 joins the roadway at an angle; Victory Highway at North Main and Main Streets; Route 146 at Sayles Hill Road; Route 146A at Landmark Medical Center light, South Main Street (Woonsocket), Lapre Road, Mendon Road, St. Paul Street, and Great Road/East Harkness Road. A review of a 1961 traffic study for North Smithfield showed Victory Highway and Route 146A were then, as now, the most accident prone streets in the community.

Because of the rolling terrain, there are a number of intersections with poor sight distances. These are reviewed below. This is most apparent along Route 146A, but also is evident in other parts of Town. At many points vegetation blocks views as a car approaches an arterial or collector roadway from a local street.

Due to the lack of sidewalks and the narrow pavement widths in outlying neighborhoods, many areas in Town are not conducive to safe bicycling or walking by children. As a consequence, many families must operate a taxi system to get their children to non-school activities.

J-3.1.6 Intersection Analysis

There are 9 traffic signals in North Smithfield located as follows: Route 146/Sayles Hill Road; Route 146A intersections at Fogarty Hospital, Park Avenue, Greenville Road, South Main Street and St. Paul Street; Victory Highway at the Halliwell School and North Main Street; and on the Providence Pike at the Primrose Fire Station. The school and fire station signals are activated only as necessary for traffic safety at these facilities.

The following is a traffic engineering analysis of some of the key intersections in North Smithfield:

Route 7/Route 104 and 5 - South End

This is a large and inadequately defined intersection. An attempt has been made to "T-up" the intersection by curving the centerline on Route 5 to be perpendicular to Route 7. The stop bar, however, has been placed well back from Route 7, making it impossible to look south. Tree trimming and the proper stop-bar placement would solve the sight distance problem. As a temporary measure, striped islands will help to channelize the traffic. A more detailed design with raised islands has been proposed in the state Resurfacing, Restoration and Rehabilitation (RRR) design study of Route 104.

Route 102/Main Street and Mount Pleasant Road

This is a well-defined four leg intersection. There is good sight distance on most of the approaches. The sight line looking south from Mount Pleasant Road is slightly inhibited by a stone wall. Driver error is the most likely cause of accidents here.

Route 102/Route 146A and North Main Street

This is a large four leg signalized intersection. The signal appears to be semi-actuated and operates relatively well under present conditions. A study of the signal and its timing is currently underway in order to confirm that it is functioning at its maximum level of effectiveness. The sight distance is adequate in all directions and the approach speeds are reasonable.

Route 5/Main Street

This intersection has two parts. Both parts have three legs and have been repaved as part of the Route 5 Resurfacing, Restoration and Rehabilitation (RRR) project. The western most part has Route 5 approaching Main Street at a sharp skew. A right turn from Route 5 to Main Street is next to impossible for a truck due to the sharp angle and steep slope. The Route 5 approach is stop sign controlled. Intersection ahead and a flashing light may help here.

The second part is approximately 303 feet east of the first part. It is a perfect "T" intersection. It is controlled by a three-way flashing beacon. It appears to operate safely primarily because of the low volumes that pass through the area.

The ideal situation would be to bring the two parts together. The terrain and the historical nature of the area, however, will not allow for any major changes. Improvements to the Slatersville Stone Arch Bridge (No. 273) and its approaches have been designed. Construction, delayed due to concerns about the affects of the project on the bridge's historic components as well as the need to coordinate improvements with the proposed changes to the adjacent historic Slatersville Mill Complex, is scheduled to begin in the spring of 2006.

Route 146A/Great Road (East Harkness Road)

Great Road intersects Route 146A at a moderate skew. The sight distance to the west is poor due to a slope and overhanging foliage. The ideal solution is to relocate Great Road to exit opposite School Street on Route 146A. This would require land-takings and possibly doing some major earthwork.

Route 146A/St. Paul Street.

This intersection is a signalized "T" configuration. There have been a substantial number of accidents at the intersection. Proper channelization will probably help to reduce accidents. Widening each approach would also help, but it appears that the right-of-way is narrow through this area. The sight distance is adequate on all of the approaches. A left-turn arrow at the easterly approach on 146A should be explored.

Route 146A/Mendon Road

This is a skewed "T" intersection. Mendon Road enters Route 146A at a moderate downslope. Vehicles either exiting Mendon Road to the right or vehicles entering from the west have to negotiate an initial sharp rise on the western side of Mendon Road. Longer cars actually are creating divots in the pavement because their frames are striking the ground. The obvious solution is to have Mendon Road intersect Route 146A at a right angle; considerable land taking and earth work would be necessary.

Route 146A/Lapre Road

Lapre Road at Route 146A is a "T" intersection. Lapre Road is wide for a minor subdivision road. It also intersects a railroad bridge that passes under Route 146A. The railroad bridge severely inhibits the westerly sight lines. There is only one small opening behind the parapet through which to see west. The area appears to be well lit. Possible mitigating measures could be to provide "Intersection Ahead" signs and/or flashing beacons.

Route 146 A/South Main Street

This is a five leg signalized intersection. It primarily acts as a three leg intersection because the cemetery entrance and Park Drive carry negligible amounts of traffic. The signal is designed to handle those entrances anyway. The westbound Route 146A corner radii should be increased to better accommodate truck turning movements. The right-of-way is very narrow in this area and there is a historic monument on the same corner so any improvements will be difficult. The signal appears to run well. Sight distances also are good. A left-turn arrow at the easterly approach on 146A should be explored.

Route 146A/Central Street

This is a five-leg stop sign controlled intersection which is large and undefined. Traffic volumes could grow in this area with the development of nearby sites for industry. Initial improvements could be striping to define vehicle movements. At some future date, raised channelization or realignment may be desirable.

Route 146A/Landmark Medical Center

This is a four leg signalized intersection. Route 146A has four lanes in this area. The intersection has an unconventional alignment, but operates well. Old Louisquisset Pike enters the intersection at a skew between the Landmark Medical Center entrance and Route 146A northbound. There are traffic detectors on every approach so that even the small volumes from Old Louisquissett Pike are accounted for. A major redesign of the intersection is proposed to accommodate a proposed mixed-use project in this area – this proposal and future proposals associated with the area behind Landmark Medical will require careful analysis.

Route 146/Sayles Hill Road

This is a four leg signalized intersection. The area is heavily traveled and commercialized. The signal is unexpected, particularly for traffic traveling south on Route 146. The combination of down slopes leading to the intersection and the large volumes of traffic which has been "velocitized" traveling in the expressway section north of the intersection, create very dangerous situations. RIDOT maintains a list of the 250 non-interstate intersections that generate the most traffic accidents. In 2001, the Route 146/Sayles Hill Road intersection was the only one that made this list in North Smithfield. Various designs for the intersection have been reviewed over the years including a grade separated interchange. The most recent design RIDOT is considering includes the elimination of the signal, limited widening and addition of acceleration lanes

Route 104/Route 5

This is a four leg signalized intersection. There is excellent sight distance from each approach. The intersection was modified as part of the Route 5 RRR project. Current traffic volumes and accident data do not warrant a traffic signal at this intersection at this time.

J-4.0 The Plan

The Circulation Element has been prepared in concert with the other elements of the Comprehensive Plan and is supportive of the Land Use Plan. The major proposals are shown on Map J - 1, Circulation Plan.

J-4.1 Proposed Roadways/ Roadway Improvements

The basic framework for the North Smithfield Roadway system has been established. Existing land development as well as the constraints imposed by North Smithfield's rolling terrain and drainage system limit the options for any significant improvements. For example, there are only three bridges over the Branch River and all are on State numbered routes. The following are the major roadway recommendations:

Route 146/Sayles Hill Road Intersection

Elimination of the present hazardous traffic signal and conversion to a grade-separated intersection was recommended in the 1992 Plan. However, in 2005, it may be more realistic from a cost perspective to recommend the reconfiguration of this intersection. This will require a combined traffic and land use study by RIDOT, in collaboration with the Town, to determine both the constraints and opportunities posed by this improvement. Various options, including those retaining some form of access to existing businesses and/or homes, should be considered.

Although there are several viable businesses benefitting from direct access to Route 146, there also are a number of business property vacancies and marginal businesses, along with numerous homes, which suggest this is not necessarily a prime commercial area under present conditions.

Pound Hill Road

Pound Hill Road is the Town's only east-west through-street in the large area south of the Branch River and north of Greenville Road/Route 104. Although the roadway has several sharp turns and traverses some steep terrain, it is the only collector road in the central portions of North Smithfield. Steps should be taken to improve the roadway to collector road standards.

School Street Extension / East Harkness Road Extension

Of those intersections along Route 146A, one of the most hazardous is at Old Great Road. With the recent purchase of the nearby Blackstone River Gorge area by the State as a recreational and scenic resource, it is anticipated that traffic at the intersection will increase. Additionally, East Harkness Road (the northerly extension of Old Great Road) will ultimately be extended to Harkness Road at the Rhode Island-Massachusetts line. This extension will provide an alternative entrance and exit route for the several subdivisions using access from Harkness Road in both North Smithfield and Millville, Massachusetts.

The recommended solution is to close off the intersection to all but several adjoining homes. School Street would then be extended at Route 146A to connect with Old Grange Road. Since State action to increase the accessibility of the Gorge may be a major cause of increased traffic, the Town should request that any planning for the Gorge area be coupled with an evaluation of the School Street and East Harkness Road extensions.

Access Road Behind Landmark Medical

As part of the Land Use Plan, a large area to the south of Landmark Medical Center and extending to the Woonsocket line has been proposed for Mixed Use development, in conjunction with compatible activity in Woonsocket. Traffic-wise, it is suggested that planning for the area should focus on providing one major access road and a new or redesigned intersection with Eddie Dowling Highway. This would not only enhance the value and character of the area but also eliminate the problems associated with numerous curb cuts on a divided highway. As recommended in the Economic Development Element, RIDOT should be approached for assistance in the traffic planning of the area.

J-4.2 Intersection Improvements

Though local street improvement programs and the State's Resurfacing, Restoration and Rehabilitation (RRR) and design program efforts should be directed towards improving safety at the key intersections cited above.

The Town should continue to enforce the Section of the Zoning Ordinance titled "Visibility at Intersections". Under this regulation, a visibility triangle free of walls, fences, or plantings which would obscure intersection visibility, is to be maintained between the heights of 2- 1/2 and 10 feet on all corner lots.

The Development Plan Review Ordinance (Site Plan Review) has allowed the Planning Board to consider proposed new and enlarged non-residential development with respect to its impacts on any adjoining streets and intersections. Where the anticipated impacts are significant, the Planning Board may require the submission of a Traffic Impact Assessment. If there are serious traffic intersection problems, as a condition of approval, the Planning Board may require provisions to undertake or fund mitigating improvements.

J-4.3 Pavement Management

The Town of North Smithfield should bring its repaving program into conformance with the requirements of the Rhode Island Department of Transportation's Pavement Management Program. The program calls for a systematic inventory of roadway conditions and the establishment of priorities for improvement based on these conditions. The lack of State funding to municipalities has delayed implementation.

J-4.4 Transportation Improvement Program (TIP)

The six-year TIP is a biennial document developed by the Transportation Advisory Committee in cooperation with the RIDOT and the Rhode Island Public Transit Authority and adopted by the State Planning Council. It programs federal transportation dollars to individual projects and programs that are implemented primarily by the RIDOT and RIPTA.

The local municipalities participate in the process as it relates to state and federally aided projects impacting the community. While North Smithfield did not submit an application for inclusion in the 2005 TIP, in 2003 the Town applied for the extension and reconstruction of sidewalks in Slatersville and design of the northwest bicycle route/trail. Actually included in the 2003 – 2008 TIP are the following projects:

- Bridge Program: Slatersville Stone Arch Bridge #273 (2003, \$1.5 million)
- Enhancement Program: Blackstone River Navigational System (2006, \$.06 million)
- Enhancement Program: Kelly Park/Mammoth Mills Feasibility Study and Design (2005, \$.30 million)
- Study & Development: Rt 99 to Rt 146A (no timeframe or funds identified for any projects in S&D category)

North Smithfield should consider the recommendations contained in this Circulation Element as the priorities for submission to the RIDOT and inclusion in the TIP. A prime example is the study of the Sayles Hill Road/Route 146 intersection.

J-4.5 Subdivision Standards

Currently, North Smithfield's Subdivision and Land Development Regulations require a minimum curb-to-curb pavement width of 30 feet. As previously noted, this is an excessive width for local streets and exceeds the width standards of most comparable communities. By comparison, the recently improved sections of the Providence Pike, a collector street, have a pavement width of about 30 feet.

An alternative subdivision roadway standard should be considered by the Planning Board for incorporation into the revised the Subdivision Regulations.

J-4.6 Sidewalks

Sidewalks are found on residential streets in many parts of Town but there are many areas, particularly along collector and minor arterial streets completely lacking in any sidewalks. In the Union Village area, for example, it is common to see many walkers on Route 146A where there are no sidewalks. Undoubtedly, there are other popular walking streets which would benefit from the installation of sidewalks.

It is recommended that a Sidewalks Plan be developed, prioritized and implemented as part of the annual Capital Improvements Program. Nationwide, walking is the country's most popular recreational activity and one with health benefits for all age groups. This would be a joint effort of the Planning Division and the Department of Public Works possibly with the advice of a specially appointed committee.

Under the Subdivision and Land Development Regulations, a sidewalk is required on at least one side of the street in all subdivisions; where there are safety concerns, the Planning Board may require them on both sides. As part of its review of commercial and industrial area site plans, the Planning Board may require the installation of sidewalks where pedestrian traffic may be generated. Based on the 2001 Community Survey, 46% of respondents felt new sidewalks or sidewalk repair was important. 53% of respondents felt all subdivisions should have sidewalks. Linked to this matter of sidewalks is handicapped accessibility; 62% of survey respondents felt infrastructure improvements should incorporate accessibility measures.

The Slatersville Stone Arch Bridge project includes the construction of sidewalks along Main Street in front of the commercial buildings. Reconstruction of the sidewalks along Main Street and Smithfield Road was proposed in a 2005 RIDOT Enhancement Grant application. The Town plans to complete a sidewalk reconstruction project in the Smithfield Road neighborhood in 2005.

J-4.7 Mapped Streets

North Smithfield has had a continuing problem dealing with several streets which are in known private ownership. Additionally, there are many older streets where the title is not clear due to the absence of deeds. These issues surface when building permits, subdivision applications are filed on "private streets" or unimproved streets not meeting local standards.

As far back as 1971, the Planning and Development Division of the Rhode Island Department of Community Affairs in a *Mapped Street Ordinance Study - North Smithfield, RI* recommended that the Town adopt a Mapped Street Ordinance and an Official Map. The Official Map would identify all streets in the Town. Subsequent to its adoption, no building permit, except in rare cases, could be issued until a street on the Official Map had been improved to the Planning Board's standards.

The Mapped Streets Ordinance would also establish a procedure for making additions to the Official Map. Establishing an ordinance and map and determining public ownership, private ownership and the process by which the town will accept street dedications or acquire privately

owned roads is a complex process. Although the current Subdivision and Land Development Regulations allow the Planning Board to authorize offsite improvements and only allow the creation of new lots with access to public streets, an update of the 1971 inventory of streets and Town Council determination of public and private streets would greatly facilitate the dialogue between the Zoning and Planning Boards and the development community.

The adoption of a Mapped Streets Ordinance and an Official Map is recommended.

J-4.8 Scenic Roads

On the State level, a 1985 act established the Scenic Highway Board and authorizes RIDOT or any town council to apply to the Board for designation of a road as a scenic highway. The Scenic Roadways Board generated a list of roadways that possess scenic characteristics in 1996. This list includes the following in North Smithfield:

- Main Street, including alongside the Reservoirs in the Slatersville area
- Railroad Street
- Greene Street
- School Street
- Grange Road
- Providence Pike

Although their identification in the 1996 list does not automatically qualify them for Scenic Roadway designation, it will certainly help facilitate the designation process. Old Smithfield Road and the limited access sections of Route 146, particularly in the vicinity of Woonsocket Hill, may also be appropriate for designation as scenic roads.

As noted in the Natural and Cultural Resources element, there are several areas in North Smithfield which are listed or nominated for listing on the State and National Registers of Historic Places. Additionally, Union Village is also a local historic district where the North Smithfield Historic District Commission administers historic area zoning controls on the exterior appearance of structures in the district.

Currently, scenic and historical resources in North Smithfield other than structures are afforded some protection if state or federally funded projects impact a designated historic district. A good example is the historic Slatersville Stone Arch Bridge over the Branch River, which is located within the Slatersville Historic District.

Many changes in the scenic character of areas outside of the few designated historic areas may come about as the result of changes within the public right-of-way where trees or old walls are removed for street improvements or new subdivision streets. Gradually, if there is no reason to do otherwise, the soft rural edges are demolished to the scenic detriment of the community.

The recommended solution is for the Town to prepare and adopt a Scenic Roads Inventory which would require any public or private agency to obtain special review by a designated local Scenic

Road Board (or an existing town board) before modifying a street in a way which would alter its scenic characteristics. Obviously, there must be a careful balancing of traffic safety and scenic conservation concerns. Although the Scenic Road Board's function would be advisory, it would provide a basis for considering alternatives protecting the Town's heritage.

One of the strong recommendations of the Cultural Heritage and Land Management Plan for the Blackstone River Valley National Heritage Corridor is the preservation of the country roads which, along with the more densely developed mill villages, give the region its unique character.

J-4.9 Pedestrian Trails and Bicycle Paths

Because they are related more to recreational pursuits, pedestrian trails and bicycle paths are discussed within the Open Space and Recreation Element of this Comprehensive Plan.

J-4.10 Mass Transit Facilities

RIPTA'S Bus Route 54 between Woonsocket and Providence, is the only intercity transit facility serving North Smithfield. The routing from Providence follows Route 146 north to Route 146A and then turns into Woonsocket at Park Avenue. The trip from Woonsocket south reenters North Smithfield at Providence Street (Route 104) and then follows Route 146A and 146 to Lincoln and Providence. There are no park-n-ride facilities; the Stop & Shop parking lot in Park square has been used informally for this purpose. While RIPTA funding is constantly in jeopardy, it is critical that bus service from Providence and Woonsocket remains available to the residents of North Smithfield.

At some time during the next twenty years, the United States and the individual states will have to face realities and formulate an energy policy which reduces the number of single-occupancy car trips to major business centers such as downtown Providence. Given the spread-out nature of communities such as North Smithfield, it will continue to be necessary for commuters to converge at one point where there can be a transfer to a car pool or express bus service. RIDOT has developed park-n-ride facilities serving transit riders, car poolers and van poolers in other sections of the Providence metropolitan area.

This plan suggests several possible locations, subject to further investigation, for pooled parking facilities in North Smithfield as follows: utilization of space under the power lines near the School Street/Route 146A intersection and the southwest quadrant of the Pound Hill Road/Route 146 interchange in an area designated for Light Industrial/Research & Development in the Land Use Plan. Both sites are adjacent to State Highways. Coordination of possible locations should be done through the Planning Division of RIDOT.

The North Smithfield Mini Bus Service Inc. is a non-profit organization which is 100 percent financed by the Town. It provides on-call, free bus service to senior citizens and the handicapped. Two buses are now in operation. A third bus may be needed to respond to the growing senior citizen population. These buses are essential for those who cannot drive. The

second bus was added in 2004. Another bus should only be added to the system when the need has been thoroughly documented. (RIARC also has available transportation services.)

J-4.11 Railroads Plan

The Providence and Worcester Railroad (P&W) provides railroad service to the Town of North Smithfield. P&W's main line crosses the Town in two places as follows: in the eastern corner of Town between Manville Road and the Blackstone River; and in the Waterford area parallel to Canal Street. Because of the constraints of slope and adjacent canal or river, the main line can not be accessed for rail service.

Manufacturing, industrial and distributor firms along the north side of North Smithfield Industrial Drive and at the Branch River Industrial Park have access to P&W's Slatersville Secondary track which extends from P&W's main line in Woonsocket and terminates at the Providence Pike. Freight service only is available six days a week on an "as needed" basis. State Guide Plan Element 661, *Rhode Island Rail Plan* (August 1990), proposes the continuation and rehabilitation of the spur track.

The Land Use Element of this Comprehensive Plan continues and to a limited extent expands the Manufacturing use area adjoining the tracks. Industries requiring bulk shipments or deliveries by rail would be an allowed use.

If abandonment of the line is considered at any future date, the right-of-way should be maintained with the Town of North Smithfield as the owner. It would provide a desirable route for a bikeway extending from the Blackstone River Bikeway to the Branch River Park and Slatersville. Such a proposal would support RIDOT's statewide rails-to-trails plan.

Although RIDOT also is investigating the use of rail lines for commuter rail transit, it does not appear there would be the density of development in North Smithfield to justify use of the spur line for commuter transit purposes.

J-4.12 Transmission Lines and Pipelines

A network of electrical transmission lines and a major pipeline circulate energy and energy resources through North Smithfield. In effect, these are in the nature of major arterials rather than the typical power lines found along a street.

As shown on Map J - 1, there is an extensive network of high voltage (115,000 volts to 340,000 volts) electrical transmission lines focused on substations in the vicinity of Todd's Pond and off Greenville Road northeast of the Route 146 interchange. Power line rights-of-way cover approximately 560 acres in North Smithfield. Percentagewise, North Smithfield has more land devoted to power line easements than any other Rhode Island community.

Recently, concerns have been raised as to the ill-health effects to nearby residents, schools, etc., from prolonged exposure to electromagnetic fields radiating from high voltage power lines. Fortunately, most of the power lines are somewhat removed from any concentrations of housing

in North Smithfield. Ideally, all power lines should be buried underground. Any proposed extensions should be buried. Decisions involving major improvements to high voltage lines should also consider that the Town would prefer to see these lines buried.

The Mobil Oil Pipeline is a 6" pipe which is used to pump petroleum products at a pressure of 1,400 PSI between East Providence and the Worcester area. The pipeline enters North Smithfield near the point where Sayles Hill Road crosses Crookfall Brook and exits where Central Street passes into Massachusetts. Located within the electrical power line easements, the Mobil Oil Pipeline generally is located to the east and parallel to Route 146 (See Map J-1).

A gas pipeline known as the Rhode Island Extension of the Tennessee Gas Pipeline Company supplies Providence Gas Company with natural gas from Canada and a mainline transmission pipe in Worcester County. The route through the western section of Town generally follows power line rights-of-way and abandoned rail rights-of-way but does cross both private and public lands including the grounds of the North Smithfield Elementary School.

J-5.0 Consistency Statement

The Circulation Element supports the goals of the Comprehensive Planning and Land Use Act and is consistent with relevant State Guide Plan elements. There are no traffic circulation proposals which adversely affect the arterial and collector roads passing into adjoining municipalities.

The significant consistencies between the North Smithfield Comprehensive Plan and State Guide Plan elements are as follows:

State Guide Plan Element 110, *Goals and Policies*

The Comprehensive Plan has related transportation proposals to the spatial distribution of land uses and proposes measures to improve traffic safety.

State Guide Plan Element 121, *State Land Use Policies and Plan 2010*

The various goals are furthered through the efficient use of the existing street system with selective improvements to relieve congestion or improve emergency vehicle access to isolated areas in town.

Mass transit usage is encouraged through suggested locations for park-n-ride facilities.

Development Plan Review (site plan review) and approval procedures will allow a better consideration of project impacts on the transportation system.

State Guide Plan Element 611, *Transportation 2020: Ground Transportation Plan*

A strong commitment to careful coordination with State transportation agencies is to be continued by the Town of North Smithfield.

The roadway plans of the Circulation Element encourage safe, convenient and dependable passenger travel.

State Guide Plan Element 610, *Transportation System Management Plan*

The Circulation Element makes maximum use of the existing roadway system and encourages measures such as intra town para transit bus service for the elderly and handicapped.

State Guide Plan Element 621, *Policy Statement: Proposals for New or Restructured Public Transit Facilities or Service*

The limited transit proposals of the Circulation Element assume cooperation with public transit services but do not discourage the role of private enterprise in meeting the need. For example, the North Smithfield Mini Bus Service Inc. is a non-profit, private organization which the Town has engaged to provide para transit services for the elderly and handicapped.

State Guide Plan Element 691, *Transportation Element of the State Implementation Plan for Air Quality*

Reduced air emissions are encouraged by proposals for park-n-ride facilities which will encourage the use of bus services and car-pooling.

State Guide Plan Element 661, *Rhode Island State Rail Plan*

Areas along the Slatersville Secondary Track are proposed for manufacturing uses which may require rail freight service.