



Executive Summary

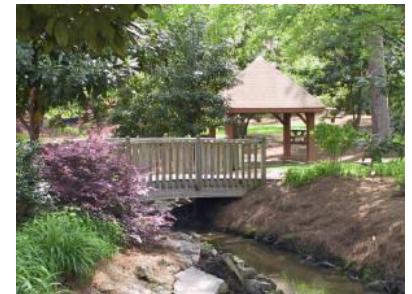
Prized by its residents for its “small town” feel, Fuquay-Varina remains true to its historical roots. Two communities grew together around the development of the local transportation network and tobacco farming, a combination that established them as trading centers for southern Wake and neighboring counties. This document presents a logical and sustainable transportation plan for Fuquay-Varina, its citizens, and its business community.

The Town is presently at a point where decisions made regarding growth and development will greatly influence the direction of the community. From 1970 to 2000, the population more than doubled, growing from 3,576 residents to 7,898. In developing the *Community Transportation Plan*, consideration is given to forecasts that project a population of nearly 25,200 residents (15,500+ new residents) and 15,500 employees (8,800+ new employees) by the year 2020.

This plan is intended to serve as a tool and guide for the future success in the implementation of Fuquay-Varina’s transportation system. The vision for that system is grounded in significant work by volunteers and professionals, all working toward the goal of giving Fuquay-Varina the transportation system that will work for its citizens in the context of their community.



*Varina Union Station
(Wake County Government)*



*Fuquay Springs Park Pavilion
(Fuquay-Varina Revitalization Association)*

Guiding Principles

An effective plan requires both a broad vision and a disciplined investment strategy. The document describes a multimodal plan that seeks to promote system preservation; sensitivity to the natural, social, and built environments; and the use and integration of alternate modes. These are mutually consistent with the vision described in locally-adopted plans.

The following guiding principles are embodied in this plan:

- § Maintain the quality of life for which Fuquay-Varina is recognized
- § Respect the rich heritage
- § Natural resources will be protected
- § Support planned growth of this community
- § New development at the planning area fringe will be examined closely before the Town makes any commitment to extend public services

Transportation is focused on providing the basis for neighborhoods and communities that function well, serve their people, respect their heritage, and offer new and enlarged opportunity.



- § Provide transportation that works with land use
 - a. We all need to get where we're going, when we need to be there
 - b. People want choices about how they can best deal with traffic
 - c. Convenience and access are the main considerations in mobility
 - d. Inefficient road design, increases in population and car ownership are some factors causing traffic congestion
 - e. It appears that congestion is likely to get worse before it gets better

Regional Planning

Because Fuquay-Varina is located in a metropolitan area that extends well beyond the influence of the Town, it is imperative to examine regional transportation planning issues. Study team members and Town staff met with staff from NCDOT, CAMPO, Wake County Planning Department, the Town of Holly Springs and the Town of Angier.

Supporting Economic Vitality

The Plan includes projects to reinforce the viability of commerce in the Town Center. In particular, a relocation of the freight-dominated railroad tracks in downtown Fuquay-Varina is illustrated in Figure 5.3. The Plan envisions mass transportation services to and eventually throughout the community, including space for a passenger rail station someday. The Plan also recognizes the positive impact of transportation improvements on quality of life, specifically as a valuable recruitment characteristic for a trained workforce and related economic development initiatives. Figure 3.1 illustrates the recommended thoroughfare plan.

Safety

Both traffic and pedestrian safety recommendations are identified in the *Transportation Plan*. In Chapter 3, the Plan includes an evaluation of causal factors and recommendations for improvements to the 10 most frequent crash locations.

Accessibility and Mobility

The significant expansion of the roadway system identified in the Plan, specifically as it relates to new parkways and collector streets, provides improved trip-making choices for motorized and non-motorized forms of transportation. The expansion is characterized by improved connectivity throughout the

The Comprehensive Growth Management Plan Policy Guidelines Vision The community of Fuquay-Varina shall embrace a plan that is based on community support and involvement where the village character is a social and economic mainstay; traditional values for all citizens reflects a safe, mental and physical harmony between the environment and a growing community; the past is a bridge to the future that forges timeless settings promoting character and livability; and the community supports a plan that embraces change over time as an opportunity to reinforce the "sense of community, quality of life, and pride."



community. Chapters 3 and 4 further discuss the enhanced accessibility via improved designs. In addition, the incremental expansion of the local public transportation system shown in Figure 5.1 will improve transportation choices and further local efforts to improve accessibility to the transportation system.

Environment, Energy Conservation, and Quality of Life

As the community of Fuquay-Varina continues to urbanize, impacts to the surrounding environment have become heightened. As the environmental impacts increase, it becomes imperative to manage and minimize their effects. The Plan is responsive to both natural and built environments. The Plan also promotes energy conservation by improving system performance, including signal system enhancements, access management, and system-wide connectivity. These enhancements will help reduce congestion and travel delays and promote alternate travel modes. In total, the transportation system described in the Plan enhances quality of life through improved choice, enhanced connectivity, and the creation of walkable environments. Figure 2.2 illustrates the environmental features found within the study area.

Enhanced Integration

The *Fuquay-Varina Transportation Plan* goes beyond planning for thoroughfares by including a specific collector street plan, as shown in Figure 4.2. The construction of collector streets enhances the overall system connectivity. The integration of modes is best exemplified by the provision for sidewalks along all new roadways and the addition of wide outside shoulders or dedicated bike lanes. Figure 6.3 and 6.4 illustrate proposed pedestrian and bikeway plan, respectively. No longer are roads viewed as conduits merely for automobiles; rather they are transforming into “complete streets” intended for use by multiple modes of travel.

Systems Management and Operations

Transportation plans often overlook the use of management strategies as a means to improve safety and efficiency. Chapter 7 describes corridor specific recommendations. Improvements to access management and the use of technology (e.g., coordinated signal system) will prove beneficial tools for the management of the existing system and improved integration as the system is expanded.



System Preservation

The preservation of the existing transportation system is largely accounted for through the maintenance plans described in the *CAMPO Transportation Plan* for Wake County. However, through changes in development patterns, access management, and improved signal coordination, key corridors can be enhanced incrementally, thereby maintaining their relevance to the overall transportation system for years to come.

Advancing Transportation Projects

The North Carolina Board of Transportation decides how to allocate over-subscribed transportation monies across the myriad of jurisdictions statewide and, in the interest of equal opportunity among urban and rural districts, it spreads funds evenly across 14 zones according to the “equity formula” that divides by population but not by traffic congestion. To make up for spending what some considered to be more than a fair share in the recent past, NCDOT has released a draft expenditure plan (dated August 2005) listing Wake and Durham Counties near the bottom statewide in terms of planned transportation expenditures per capita from 2006 through 2012.

The Town of Fuquay-Varina submitted several projects to CAMPO in May 2004 for consideration in the project review process. The resulting list of priority projects submitted by CAMPO to NCDOT for consideration by the State Board of Transportation includes only 2 projects located within or immediately adjacent to the Town of Fuquay-Varina:

- § Western Wake Expressway (future Interstate 540) from Morrisville to Holly Springs (ranked 4th)
- § NC 55 widening from State Route 1152 to Holly Springs Bypass (ranked 16th)

Many believe that Wake County can no longer rely on the State of North Carolina to meet our entire transportation needs. A transportation bond is recommended for consideration by the Fuquay-Varina Board of Commissioners for the near future.

Community Involvement

This plan is for the citizens of Fuquay-Varina — today’s residents as well as future newcomers. Because transportation projects will affect them in the future, it only makes sense to actively engage citizens in the development of “their” plan. Professional planners, engineers, and landscape architects helped frame the debate and draft this report, but the plan contains the essence of what was learned from citizens at the following events:

- § Public Open House Meetings held June 2 and 7, 2005 at Town Hall
- § Public Meetings – presentation of the draft plan to the Town Planning Board on October 24, 2005
- § Citizens Advisory Committee (CAC) formed and engaged early in the process to fully develop the vision for this plan. Fourteen volunteers participated as committee members. There were seven committee meetings.

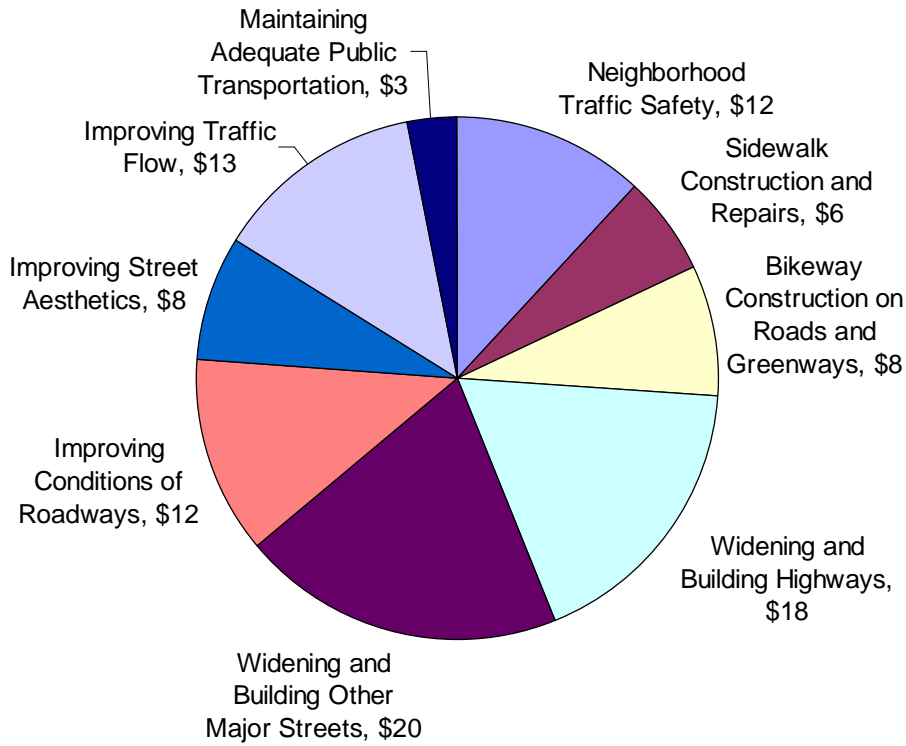


*CAC Meeting in Fuquay-Varina
Summer 2005*

CAC members and the general public provided responses to the question “If you were King or Queen of Fuquay-Varina for a day ... what would you do to improve transportation?” The most frequent responses are cited below:

- § Synchronize traffic signals to reduce delay at 2 critical locations:
 - North Main Street from Judd Parkway to NC 55/NC 42
 - North Ennis Street from Broad to Main Street
- § Construct alternate routes to avoid congested roads and intersections
- § Use public funds, rather than waiting for developers, to construct the remainder of Judd Parkway to complete the loop
- § Build new sidewalks and trails with a priority on closing gaps in disconnected sections of sidewalk
- § Reduce delays on Sunset Lake Road from North Main Street to Holly Springs

These specific answers, along with the results of a questionnaire completed by citizens at the open house and CAC members (presented in Chapter 2 and the Appendix), helped guide the development of this *Fuquay-Varina Transportation Plan*.



From the Transportation Questionnaire

Question: If you had \$100 to spend on transportation improvements, how would you spend it?

The chart below summarizes the survey results. Note that while nearly 2/3 of funds would be allocated for traditional roadway improvements, 17% of the respondents' funds would be allocated to sidewalk, bikeway, and transit improvements. Another 8% would be spent to improve street aesthetics while 12% would be used to improve neighborhood traffic safety.

For complete public questionnaire results see the Technical Report Appendix.



Thoroughfare Element

For a quick summary of recommended thoroughfare changes, refer to Figure 3.1 and Chapter 7 – Implementation.

Regional Access

Fuquay-Varina is located in the southwestern corner of Wake County, at the junction of US 401, NC 55, and NC 42. These major thoroughfares provide the primary regional access to Fuquay-Varina.

Cross-town routes are intended to provide greater mobility within the area; however, overlapping routes have produced traffic congestion on North Main Street. NC 55 is a two-lane state highway that runs in a primarily north/south direction through historic downtown Varina. Traveling south, NC 55 is a backbone corridor of the rural transportation network of Harnett County. NC 42 is a two-lane state roadway running primarily east/west through the study area.

Alternate Routes

The availability of alternate routes around Main Street and across the railroad tracks varies. And as growth has occurred, traffic volumes on once quiet roadways have increased. In response to these increases and with the understanding that existing development constrained the expansion of existing streets, two higher type thoroughfares are planned. These corridors will provide relief, but timing is critical.

Thoroughfares

As an update to the adopted *Thoroughfare Plan*, the following highlights only proposed changes to what is the adopted plan plus a few widely-used corridors. A more thorough listing of recommendations is in Chapters 3 and 7 and the Appendix.

North Main Street – Main Street is currently a four-lane section with a two-way continuous left turn lane from Ennis to NC 55. This roadway runs through the heart of Fuquay-Varina and as a result carries a large portion of the thru traffic. Future forecasts have this roadway operating at acceptable levels of service, mainly because of the completion of Judd Parkway and the Western Parkway, which will remove much of the traffic congestion. Potential future improvements include coordination of the traffic signal system and creating partial control of access onto the roadway to reduce the level of congestion and number of crashes.



South Main Street — South Main Street is predominately a two-lane section from the Wake County/Harnett County line to Ennis Street. The future forecast predicts this section will operate at an acceptable level of service. The Town recently invested in a beautiful streetscape improvement with the addition of left-turn lanes at key intersections along several blocks of South Main Street. The town is currently planning a continuation of this project that would extend to North Ennis Street. Intervention is needed with the North Carolina Legislature to ensure that new-found interest in creating a multi-lane US 401 through Harnett County is well-coordinated with Town of Fuquay-Varina plans to route through traffic away from downtown and toward the Eastern and Western Parkways. As these parkways are not built or funded, interim strategies are needed.

Broad Street (Varina) — Between Ennis Street and Stephen's Ace Hardware Store, Broad Street is a two-lane undivided urban street with diagonal parking on the street and a walkable character. The speed limit of this section is 25 mph, however many citizens expressed concern for their safety if and when they walk across Broad Street. It is recommended that consideration be given to rerouting NC 55 along the Western Parkway corridor which would deflect much of the traffic from Broad Street onto the higher capacity facility. Additionally, signal upgrades along this corridor would provide pedestrian and side-street traffic related improvements.

Purfoy Road — Purfoy Road is a three-lane section with a continuous two-way left turn lane and shoulders between Main Street and the TYCO Electronics facility. Future improvements involve widening this roadway to four lanes median-divided by the year 2030. Future forecasts show this facility operating at an unacceptable level of service between Old Honeycutt Road and Main Street. This plan recommends additional widening between Old Honeycutt Road and Main Street to provide additional left turn storage approaching Main Street.

Sunset Lake Road — Sunset Lake Road is a two-lane undivided suburban section with shoulders between Broad Street and the northern study area boundary. Future improvements involve widening this roadway to four lanes median-divided by the year 2030. Despite these improvements, future forecasts show this facility operating at an unacceptable level of service. A more detailed corridor study performed in coordination with the Town of Holly Springs is recommended, with a particular focus on the intersection at Hilltop-Needmore Road. In the meantime, no new traffic signals should be installed in this corridor.

NC 42 East — NC 42 is a two-lane undivided rural section between NC 55 and Old Stage Road. Future improvements include widening this facility from two to four lanes.



NC 55 South — NC 55 is a two-lane suburban section with shoulders between Main Street and Maude Stewart Road. Future forecasts show this facility operating at an unacceptable level of service. Future improvements include widening this facility from two to four lanes. Further study is needed in coordination with NCDOT, Wake County, Harnett County, and CAMPO to align with other projects like the widening of US 401 through Harnett County and the potential Angier Loop. The proposed US 401 and NC 55 intersection is a key element in the coordination between the suggested governing agencies.

Judd Parkway — Judd Parkway is less than half-completed. Upon completion Judd Parkway will form a loop around the core area of the town. Most citizens participating in the development of this plan readily agreed that completion of Judd Parkway all the way around town is very important. In addition to completing Judd Parkway, this plan recommends upgrading current plans for the northeast and western (north of Norfolk Southern Rail lines) sections of the facility from two lanes with left turn lanes as necessary to four lanes divided. Additional study should be considered to determine the safest rail crossing for the Norfolk Southern line on southwest Judd Parkway.

Ennis Street — Ennis Street is a two-lane urban street that is very congested between Broad and Main Streets. Future forecasts predict that this section will operate at an acceptable level of service with the completion of Wake Chapel Road, Judd Parkway, Sunset Lake Road widening, and construction of the Eastern and Western Parkways.

NC 42 West — Academy Street is a two-lane urban section between the Wake County/Harnett County line and Judd Parkway. Future forecasts show sections of this roadway operating at unacceptable levels of service. Possible future improvements include widening from two to four lanes divided. Because of the proximity of this facility to the study area boundary and county line, additional coordination between NCDOT, CAMPO, Harnett County, and other local governing agencies should be considered to determine a solution that is beneficial to both communities. In addition to further coordination, intersection improvements may provide additional relief.

Piney Grove-Wilbon Road — Piney Grove-Wilbon Road is a two-lane rural facility between the county line and the northern boundary of the study area. Future forecasts predict this facility will operate at an unacceptable level of service; however, an ongoing update of the regional traffic model should produce different results by late 2006 after growth projections west of this corridor are revisited. Safety-oriented improvements, such as left turn lanes at intersections with arterials and collectors, are



envisioned at intersections along this corridor, but not wholesale widening of through lanes.

Other Corridors — Several segments should be either upgraded or downgraded in classification based on the current CAMPO *Thoroughfare Plan*. This re-designation would require most facilities to be downgraded, while other facilities will be upgraded and therefore rehabilitated to accommodate larger traffic volumes and provide better accessibility facilities. The following roadways should be considered for a classification change based on the current CAMPO *Thoroughfare Plan*:

- Rouse Road – downgrade from Major Thoroughfare to Local Street
- Wade Nash Road – downgrade from Major Thoroughfare to Local Street
- South Main Street – from county line to Judd Parkway, downgrade from Boulevard to Major Thoroughfare
- Main Street – from Judd Parkway to Ennis Street, downgrade from Major Thoroughfare to Minor Thoroughfare
- Vance Street – from Main Street to Angier Road, downgrade from Major Thoroughfare to Minor Thoroughfare
- Angier Road – from Vance Street to Judd Parkway, downgrade from Major Thoroughfare to Minor Thoroughfare
- Academy Street – from the western Judd Parkway alignment to the eastern Judd Parkway alignment, downgrade from a Major Thoroughfare to a Minor Thoroughfare
- Broad Street – from Judd Parkway to Main Street, downgrade from a Major Thoroughfare to a Minor Thoroughfare
- Main Street/US 401 – from Ennis Street to Johnson Pond Road, downgrade from Boulevard to Major Thoroughfare
- Main Street/US 401 – Johnson Pond Road to Ten Ten Road, upgrade from Boulevard to Expressway
- Kennebec Road – from NC 42 to Bud Lipscomb Road, downgrade from Major Thoroughfare to Minor Thoroughfare
- Lake Wheeler Road – from Ten Ten Road to Hilltop Needmore Road, downgrade from Major Thoroughfare to Minor Thoroughfare



- § Three new alignments should be added to the thoroughfare plan.
 - The extension of Broad Street between Sunset Lake Road and Johnson Pond Road to allow better connectivity on the north side of the railroad tracks and to decrease congestion at railroad crossings.
 - Lake Wheeler Road should be extended from US 401 to intersect with Hilltop Road. This connection would provide relief for the intersection of US 401 with Hilltop Needmore Road, Air Park Road, and Hilltop Road, which currently operates at an unacceptable level.
 - The realignment of the intersection between NC 42 and NC 55 south to create more spacing between this intersection and the intersection of Fayetteville Road with NC 55/NC42.
- § Re-designate US 401 to follow the route of the planned Eastern Parkway. Eastern Parkway is proposed to operate at 45 mph. Re-designate NC 55 to follow the route of the planned Western Parkway. Western Parkway is proposed to operate at either 45 or 55 mph. Re-designate NC 42 to follow the route of the planned Eastern Parkway. These future state road designations can be seen in Figure 7.1.

Traffic Safety and Crash History

Three years (2001–2004) of crash data maintained and provided by the North Carolina Department of Transportation (NCDOT) were examined. During this period, the intersection of Main Street and Purfoy Road/Sunset Lake Road experienced the highest crash frequency with 68 crashes reported.

For this study, 10 intersections with the highest crash rates were analyzed and schematic diagrams created showing countermeasures to reduce the crash rate, as shown in Chapter 3.

Table 3.1 — Ten Intersections With Highest Crash Rates

Rank	Intersections	Crash Rate	Crashes	Injuries	% Injury Crashes	Fatalities
1	Hilltop-Needmore and Johnson Pond	209.75	20	14	70%	0
2	NC 42 and Old Stage	197	19	12	63%	0
3	US 401 Fayetteville and Banks	244.79	11	6	55%	0
4	Angier and Purfoy	182.48	11	6	55%	0
5	Main and Sunset Lake-Purfoy	151.33	68	18	26%	0
6	US 401-NC 42-NC 55-Main St and NC 42-NC 55	124.42	45	15	33%	0
7	NC 42 and Hilltop	98.26	14	9	64%	0
8	Purfoy and Old Honeycutt	111.84	19	8	42%	1
9	Judd Parkway and East Broad Street	132.14	21	7	33%	0
10	US 401 Fayetteville and Chandler Ridge-Wake Tech	70.42	23	12	52%	0

Source: North Carolina Department of Transportation

Notes:

- Total crashes reported from October 2001 to September 2004
- Severity Index = $(76.8*(F+A) + 8.4*(B+C) + PDO) / TOTAL\ CRASHES$
- Crash rate is the number of crashes divided by the product of the length of roadway, daily traffic volume, and the factor 100,000,000.

Ranking corridors by crash frequency is one method of identifying high crash locations, but it also is important to consider other variables such as crash rate, severity index, and whether or not any fatalities occurred when identifying high crash locations. Table 3.2 indicates the top 10 corridors for the study area according to the aforementioned variables.

Table 3.2 — Ten Corridors With Highest Crash Rates

Rank	Corridor	From/To	Total Crashes	Severity Index	Fatal	Crash Rate (per 100 MVMT)
1	Judd Parkway	US 401 to Holland Road	57	4.54	1	1015.15
2	Purfoy Road	US 401/NC 42/Main to Harnett Co	124	4.61	1	735.16
3	Angier Road	US 401 to Harnett Co Ln	35	8.5	2	641.57
4	Holland Road	Angier Road to NC 55	20	7.75	0	588.27
5	Banks Road	Old Stage Road to Fayetteville Road	42	7.08	0	551.86
6	Johnson Pond Road	Ten Ten Road to Fayetteville Road	74	6.77	1	423.84
7	Fanny Brown Road	Ten Ten Road to Old Stage Road	54	7.4	2	407.53
8	James Slaughter Road	NC 55 to Bass Lake Road	29	8.01	0	393.05
9	Ten Ten Road	Fanny Brown Road to Bells Lake Road	190	4.41	1	392.06
10	Wagstaff Road	US 401 to Harnett Co	24	13.56	0	300.34

Source: North Carolina Department of Transportation

Notes:

- Total crashes reported from October 2001 to September 2004
- Severity Index = $(76.8*(F+A) + 8.4*(B+C) + PDO) / TOTAL\ CRASHES$
- Crash rate is the number of crashes divided by the product of the length of roadway, daily traffic volume, and the factor 100,000,000.

Collector Street Element

The primary purpose of the collector street system is to spread local traffic out across a connected street network and, in so doing, support the major street system.

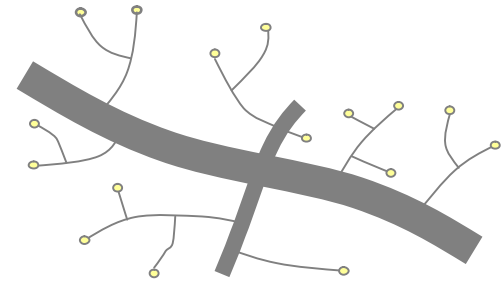
Within Fuquay-Varina, collector streets have a wide range of physical characteristics, some of which are attributable to the neighborhoods in which they exist. Though different, the one commonality is that of providing good connectivity. Examples of collector streets in Fuquay-Varina include:

- § Fuquay Avenue
- § Spring Street
- § Buck Rowland
- § Coley Farm Road
- § Whitted Road

The existing collector street network in Fuquay-Varina is shown in Figure 4.1. The recommended network is shown in Figure 4.2.

Recommendations include:

- § Local Streets — One connection along a collector should be in place every 750-1,500 feet. There are cases that will necessitate a variation in this guideline. Approval for these cases will be the responsibility of the Town Engineer and State Division Engineer who will consider traffic impacts, land access, property rights, and environmental conditions.
- § Collector Streets — One public street intersection along a collector or an arterial should be in place every 1,200 to 2,000 feet in a suburban context and every 500 feet to 1,000 feet in the context of heavily developed areas or the central business district. As determined by the Town Engineer, variations in spacing requirements will depend on traffic impacts, land access, property rights, and environmental conditions.



Fragmented Street Network



Connected Street Network

Transit and Rail Element

Existing transit and rail facilities were studied and discussed with the public. On June 2 and 7, 2005, the Town held public workshops to elicit comments and ideas from the community. Each participant was asked to fill out a survey. Out of the 19 respondents, 8 reported the transit service to be "poor," 9 reported "don't know," 1 reported "fair," and 1 did not respond. The taxi service similarly received 7 "poor," 11 "don't know," and 1 "fair" response.

The participants also identified additional transit services needed in Fuquay-Varina as the following:

- § Light rail/commuter service
- § Bus/van service to downtown Raleigh
- § Frequent shuttle services that would include stops at grocery stores, drug stores, etc.
- § Shuttle service to RDU airport, malls, RTP, and downtown Raleigh

In addition to the formal distributed surveys, the workshop participants and committee members discussed the railroad in the community. Concerns about each railroad crossing were repeatedly identified. The community also expressed concern about the railroad dividing the two historic areas of Fuquay and Varina, making it impractical to join the two separate town centers that were established before the community was united.



*N. Ennis Street and Broad Street
Source: Mike Cole (CAC Member)*

Existing Transit Services

Currently, Fuquay-Varina does not have a primary transit system. However, the town does have access to county-wide services and existing services in Garner and Raleigh, including Wake Coordinated Transportation Services (WCTS) — a dial-a-ride system that is grant funded with financial aid from Fuquay-Varina — and one taxicab company located within the town limits.

Future Transit Services

Fuquay-Varina is in need of efficient, effective, and convenient transit services, especially as the area's population and congestion problems grow. Adequate transit service should provide additional convenient links to the Raleigh, Durham, Chapel Hill, and surrounding areas.

Recommendation 1: It is recommended that additional funding sources be explored to extend express bus service along the NC 55 bypass in Holly Springs to a park-and-ride lot located between Holly Springs and Fuquay-Varina. Figure 5.1 illustrates this bus service extension. The destination of this service would be the transit center along NC 54 in Research Triangle Park where connections could be made to other TTA routes.

Recommendation 2: It is recommended that a subsidized taxi program be considered for the Fuquay-Varina area. This program would allow those in the community in need of public transportation an opportunity to take advantage of services offered in Fuquay-Varina and surrounding areas.

Existing and Future Rail Conditions

Railroads have been a prominent facet of Fuquay-Varina since before the two communities were joined. The railroad currently



runs through the heart of downtown Fuquay-Varina and connects Fuquay-Varina with Raleigh to the northeast and Fayetteville to the south. The current services are limited to freight.

As part of this plan, Norfolk-Southern was contacted regarding any planned or expected rail service growth in the Fuquay-Varina area. Although potential for growth in the Fuquay-Varina area exists, no study or plans have been made for rail service expansion in this area.

Potential Rail Realignment

During this transportation study, the concept for a rail realignment surfaced. The sections of rail to consider are the Norfolk-Southern tracks that run parallel to US 401/South Main Street between Ennis Street and the (future) Judd Parkway Southwest corridor. Trains would follow new tracks laid farther west of downtown Fuquay, using the same corridor as the planned Judd Parkway, just south of Academy Street. The new tracks would tie into the existing tracks that run parallel to Academy Street.

NCDOT Rail Division was contacted during the development of the *Fuquay-Varina Community Transportation Plan*. Offering insight into the potential realignment, NCDOT noted that the proposed crossing at W. Academy Street would probably need to be grade separated for safety concerns. NCDOT also pointed out the potential advantage of using the abandoned track for commuter rail, thereby separating it from the freight. An interest was expressed in this possible scenario, suggesting the potential project merited further study.

Recommendation: It is recommended that the idea of rail realignment be considered. It would then be necessary to further study the project to determine cost and feasibility. Additional funding sources would then need to be identified.

Pedestrian and Bicycle Element

The Town of Fuquay-Varina is emphasizing the revitalization of its “Traditional Commercial District,” centered along South Main Street. The Town is also pursuing the creation of a walkable business district near the junction of the two rail tracks (where NC 55 meets US 401/NC 42), as well as embarking on an expansion of the South Main streetscape project that would allow for pedestrian and bicycle access in this area.

The Town might want to consider pursuing one or more greenways as transportation projects. This plan identifies one new greenway that would be a rail with trail along the existing railroad corridor just west of South Main Street.



Community Support

Comments provided by the Transportation Plan Citizen Advisory Committee and citizens that participated in the public workshops include the following suggestions relative to walking and bicycling:

- § Sidewalks and street lights are needed to connect all destination points within Fuquay-Varina
- § Allow bikes on sidewalks
- § Sidewalks are needed on Main Street between downtown and uptown
- § Greenway connections are needed to downtown
- § More greenways are needed within the town.
- § More routes to safely ride bicycles to downtown and nearby parks are needed
- § Need continuous sidewalks to the high school and Wal-mart

Based on a survey taken by participating citizens, they ranked existing facilities as poor to fair. The citizens said that they would like to spend 14% of the transportation budget on pedestrian and bicycle facilities, a substantial amount more than currently spent.

Pedestrian Plan

In the time since the adoption of the *Greenway System Master Plan* in 1999, Fuquay-Varina has demonstrated a commitment to pedestrian improvements. Current opportunities to develop pathways in Fuquay-Varina focus on the construction of new interconnected streets.

Near-term opportunities may arise if a transportation bond initiative is presented to the voters in a referendum. Use of abandoned rail corridors could be considered in such a bond referendum, including corridors traveling northwest and southeast from the Varina district that are no longer used by the owner.

Retrofit of some facilities should be considered, and the design standards for residential streets should include sidewalks on both sides unless it is a short street with a cul-de-sac. Development sites should be designed with pedestrian and bicycle access in mind. Safe and convenient facilities at intersections are needed, too. Community awareness of these needs and the opportunity to provide facilities and services to citizens could be enhanced through clubs and other volunteer activities.

The predominant type of pedestrian facility in the future will be sidewalks on both sides of all streets built after 2005, in addition to short sections of connector walkways linking subdivisions, neighborhoods, shopping areas, and community facilities. The plan shows 190 miles of public streets in the urban service area with sidewalks on at least one side of the street. Figure 6.3



shows the recommended Pedestrian Plan with sites expected to generate pedestrian trips.

Bicycle System Plan

The residents of Fuquay-Varina encompass a wide range of bicycle skill levels and facility preferences. The bicycle plan map, illustrated in Figure 6.4, represents a system of interconnected facilities that, when implemented, will provide the basic necessities for all skill levels. This map is a critical part of the annual transportation planning process, and should be used as a guide for future capital projects. Consideration also should be given to providing bicycle parking to key destination points throughout the town.

Implementation Considerations

New Routes and Signage Improvements — A policy to improve bicycle route signage and directional signage will show connections between the routes. It is recommended that bicycle signage be implemented town-wide to provide a comprehensive, understandable system. The bicycle plan identifies potential locations for bicycle signage.

Norfolk Southern Railroad — The railroad tracks represent a barrier for bicycle traffic. Just as with motor vehicle travel, the infrequent crossings of the railroad that runs parallel to Main Street increase the trip length of many bicycle trips.

Restriping Improvements — The plan identifies several minor improvements (each project less than \$10,000) that could be implemented in group packages. Several restriping improvements are recommended to existing facilities. The stripe provides bicyclists the comfort of being delineated from the motorist travel lane.

Safety, Education, and Promotion

A part-time bicycle and pedestrian coordinator and periodic training will help to achieve the full integration of bicycles into our everyday lives.



Sidewalk Requirements

Currently, sidewalk implementation is required on both sides of collector streets. It is recommended that this process be amended to require developers to construct a sidewalk on both sides of collector streets and most local streets (except cul-de-sacs). Cul-de-sac streets should have connector paths at the ends to connect with adjacent parcels. Additionally, sidewalks should be required on both sides of major and minor arterials. It is not recommended that sidewalks be required on cul-de-sacs.

Local Ordinances

The following bicycle and pedestrian ordinances and enforcement initiatives are recommended for the planning area:

Recommendation — Work with the Chief of Police to increase enforcement on the following offenses:

- § Motorists and bicyclists running stoplights and stop signs
- § Motorists failing to yield right-of-way to pedestrians at intersections
- § Motorists failing to share the road with bicyclists
- § Bicyclists riding the wrong way down the street
- § Bicyclists riding at night without lights

Recommendation — Increase police patrols, preferably with police on bicycles.

Recommendation — Enforce state law requiring bicyclists under the age of 17 to wear safety helmets when riding on a public facility.

Recommendation — This plan proposes projects contiguous to sewer, fiber optics, TV cable, phone line, or natural gas rights-of-way (ROW). As a result, the town should consider modifying its policy to allow a shared-use easement along these types of utility ROW, which would alleviate the cost associated with ROW acquisition and renegotiations.

Recommendation — Fuquay-Varina's current sidewalk policy restricts riding bicycles on the sidewalk. Obviously, a limited space of 5 feet is inadequate for both pedestrians and bicyclists. However, this ordinance should not apply to sidewalks along high-speed roadways where an alternative bikeway facility would add considerable distance to a bicycle trip.



Recommendation — Retrofitting Existing Streets: Under the North Carolina General Statutes Article 10 of G.S. 160A, special assessments may be used to finance sidewalks and pedestrian projects. Currently, the town reserves the right to construct sidewalks without petitions from abutting property owners. It is recommended that the Town establish a policy of requiring that 75 percent of the project cost be paid by the property owners and the Town be responsible for 25 percent. This policy should apply to all new residential, commercial, and industrial development, as well as those pedestrian facilities identified on the plan.