Town of Altavista 2035 Transportation Plan

Final Report

June 2008

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EXECUTIVE SUMMARY

The Town of Altavista Transportation Plan was developed as a joint effort between the Virginia Department of Transportation (VDOT) and the Town of Altavista. The purpose of this study was to evaluate the existing transportation system and future demand in the Town of Altavista and to recommend a set of transportation improvements that could best meet existing and future transportation infrastructure needs.

Improved transportation systems are vital to Virginia's and to the local area's economic growth and development. Providing effective, safe, and efficient movement of people and goods is a basic goal of VDOT's transportation program. This guiding principle, together with consideration of environmental issues and local mobility needs, was the basis for the development of this transportation plan.

VDOT will use this plan when evaluating requests from the local governments for specific transportation projects and/or implementing projects that VDOT initiates. This list of recommendations will also be used in the statewide transportation planning process so that the magnitude of transportation needs statewide can be more accurately quantified.

Altavista is located on the southern border of Campbell County, just across the Roanoke River from the town of Hurt in Pittsylvania County. The town is approximately 20 miles south of Lynchburg along U.S. Route 29. Altavista is located in the fertile Piedmont region to the east of the Blue Ridge Mountains, and historically has been a commercial hub for the surrounding agricultural community. However, in recent years, the town's economy has been sustained by manufacturing. A key event happened in 1905, when three brothers in the Lane family founded the Lane Company as a box manufacturer. The company grew to become a major furniture manufacturer, and was a major employer and civic influence in Altavista until its recent closing.

The study area for the Town of Altavista 2035 Transportation Plan coincided with the boundary line of the corporate limits. Within this boundary line (commonly called a cordon line); a specific set of roadways was selected and designated as the urban thoroughfares. The analyses and recommendations were limited to these urban thoroughfares and any new facilities recommended in this study.

The development of the transportation plan followed a process that included data collection, review, and analysis. The data collected included information such as traffic counts, police accident reports, roadway geometric inventory data, bridge structural inspection reports, at-grade railroad crossing geometric data, tourism surveys, and goods movement surveys. Review and analysis of this data was combined with a review and analysis of previous transportation and land-use plans and other studies. Furthermore, meetings were held with local staff throughout the study process to gather additional input.

Summary of Approach and Analysis Methods

The Plan was developed as a part of a structured approach with five basic components:

- Data collection
- Forecasting of future traffic demands
- Development of recommendations to meet existing and future
- Coordination with Altavista citizens and government officials
- Environmental overview and Plan documentation

Recommendations for the Altavista 2035 Transportation Plan are based on a comprehensive review of the capacity, safety, and geometry of the existing roadway system. They are based on other issues that affect the area's transportation system (such as parking, other modes of transportation, and goods movement).

The recommendations are divided in to three phases. Phase One recommendations apply to existing deficiencies and the most immediate transportation needs of the area. Phase Two recommendations apply to transportation improvements needed by the interim year 2020, and Phase Three recommendations are long-term projects needed by 2035.

A summary of the Town of Altavista recommendations is as follows:

Phase One: Base Year (2010)

The following segments have been identified for short-term improvements as part of the Town of Altavista 2035 Transportation Study:

- **Main Street and Pittsylvania Avenue**

  Based on the accident history at this intersection, it is recommended to widen Pittsylvania Avenue from two to four lanes as well as widening the turning radius and lane reconfiguration at the intersection of Main Street.

- **Lynch Mill Road & Altavista Elementary School**

  Construction of new left-center turn lane and right turn lanes at existing elementary school entrances.

- **Main Street Corridor**

  Modify and consolidate entrance ways to improve safety and access along the corridor.

- **Main Street Bridge over Staunton River**

  Construct new two-lane bridge with multi-use trail over Staunton (Roanoke) River.

Phase Two: Interim Year (2020)

The following segments have been identified for interim year improvements as part of the Town of Altavista 2035 Transportation Study:

- **Main Street and Lynch Mill Road**

  Add dedicated right turn lane on Lynch Mill Rd. Widen corners of intersection on Lynch Mill Road to improve turning radius and extend culvert.

- **Lynch Mill Road and Clarion Road**

  The recommendation is for the realignment, widening, and lane reconfiguration of the intersection of Clarion Road and Lynch Mill Road.

Phase Three: Study Year (2035) Recommendations

The following segment was identified for long-term improvement as part of the Town of Altavista 2035 Transportation Study:

- **Main Street Widening**

  Widen Main Street to four lanes from 7th Street to Corporate Limits.

Local Recommendations

- **Clarion Road Connector**

  Construct new two lane road connecting Clarion Road and 7th Street.

OTHER MODES AND GOODS MOVEMENT RECOMMENDATIONS

The *Altavista 2035 Transportation Plan* includes an assessment of the availability of modes of transportation other than private automobiles. The Plan also considers the quality of the local transportation system for the movement of goods for commercial purposes.

Regarding other modes of travel, the plan makes the following recommendations:

- Town officials should encourage the reestablishment of a Greyhound bus stop in the town.
- Altavista's Comprehensive Plan supports the inclusion and connectivity of sidewalks, trails, and bicycle accommodations as a modal choice. The *Downtown Altavista Master Plan, September 2006* identifies specific pedestrian accommodations. Pedestrian and bicycle access should be expanded to connect residential areas and with recreational, schools and other major activity centers in the area.
- Regarding goods movement, several of the proposed roadway recommendations will improve truck access for shippers by reducing congestion and making turning movements easier.

Accident Data Analysis

The following data details the high accident intersection from years 2003 – 2005. This data compared to the original 2020 Plan assisted in determining Recommendations for this Plan. Intersections are listed by highest to lowest incident counts:

- Main Street and Pittsylvania Avenue (Highest Accident Rate Intersection)
- Main Street and Amherst Avenue
- Main Street and 7th Street
- Main Street and Lola Avenue
- Main Street and Hughes Street
- Main Street and Lynch Mill Road

Capacity and Level of Service (LOS) Data Analysis

Utilizing current traffic counts, future traffic volumes were generated as well as determining future capacity. In general, traffic volumes on most thoroughfares have declined over the past years and Levels of Service (LOS) has improved. Reasons for this can be directly associated to the loss of major business' such as Lane in the Central Business District. As a part of this analysis, traffic forecast utilized a standard 1% Growth Rate for all routes except Clarion Road (3%). With the addition of a major retail center at the edge of town, which includes a Wal-Mart Supercenter, Clarion Road could see significant growth in the coming years.

Public Involvement

Public involvement efforts during the development of this plan included press releases, an internet web site for public review, council presentations and public informational meetings. Comments were solicited via public informational meetings that gave citizens an opportunity to speak with VDOT representatives regarding the plan and to submit written comments. Additionally, the plan can be reviewed at the VDOT District, Residency and Town offices.

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CHAPTER ONE
INTRODUCTION

Purpose and Scope of the Study

The Altavista 2035 Transportation Plan was developed as a joint effort between the Virginia Department of Transportation (VDOT) and the Town of Altavista. The purpose of this study was to evaluate the existing transportation system and future demand in Altavista and to recommend a set of transportation improvements that could best meet existing and future transportation infrastructure needs.

Improved transportation systems are vital to Virginia's and to the local area's economic growth and development. Providing effective, safe, and efficient movement of people and goods is a basic goal of VDOT's transportation program. This guiding principle, together with consideration of environmental issues and local mobility needs, was the basis for the development of this transportation plan.

VDOT will use this plan when evaluating requests from the local governments for specific transportation projects and/or implementing projects that VDOT initiates. This list of recommendations will also be used in the statewide transportation planning process so that the magnitude of transportation needs statewide can be more accurately quantified.

Study Area and Thoroughfare System

Altavista lies at the junction of U.S Route 29 and Virginia Primary Route 43. From Altavista, Route 29 leads north to Lynchburg, and south to Danville. Route 43 extends northwest to Bedford. Going southeast out of town, Pittsylvania Avenue goes to U.S. Route 501, which travels south to South Boston.

At the south and north ends of Altavista, Route 29 splits into bypass and business sections, with the business section going through the central business district (CBD) of the town as Main Street, while the bypass section travels around the west side of the CBD.

In addition to these routes, the thoroughfare system in Altavista includes all or portions of Clarion Road, Lynch Mill Road, Ogden Road, Frazier Road, Avondale Drive, 7th Street, Franklin Avenue, 11th Street, 12th Street, Broad Street, and Pittsylvania Avenue.

The study area for the 2035 Transportation Plan coincided with the boundary line of the corporate limits. Within this boundary line (commonly called a cordon line); a set of specific roadways was selected and designated as the urban thoroughfares. The analyses and recommendations were limited to these urban thoroughfares and any new facilities recommended in this study. **Figure 1-1** illustrates the designated thoroughfare system and plan boundary area.

Thoroughfares are defined as facilities that operate as arterials or collector routes. The distinction between functional classifications (arterial, collector, local street) is based on whether the facility primarily serves "through-traffic" or provides direct access to adjacent land. General descriptions of classifications are provided in **Table 1-1**. Thoroughfare roadways in cities and towns with populations over 5,000 have an "urban" designation and those in cities and towns with populations less than 5,000 are designated "rural".

Roadways not classified by this system, but deemed important by local governments, may be in the 2035 Transportation Plan as "non-thoroughfare" roadways. Typically, these are planned roadways or improvements that will be built with funds (public or private) other than VDOT funds.

Figure 1-1
Study Area

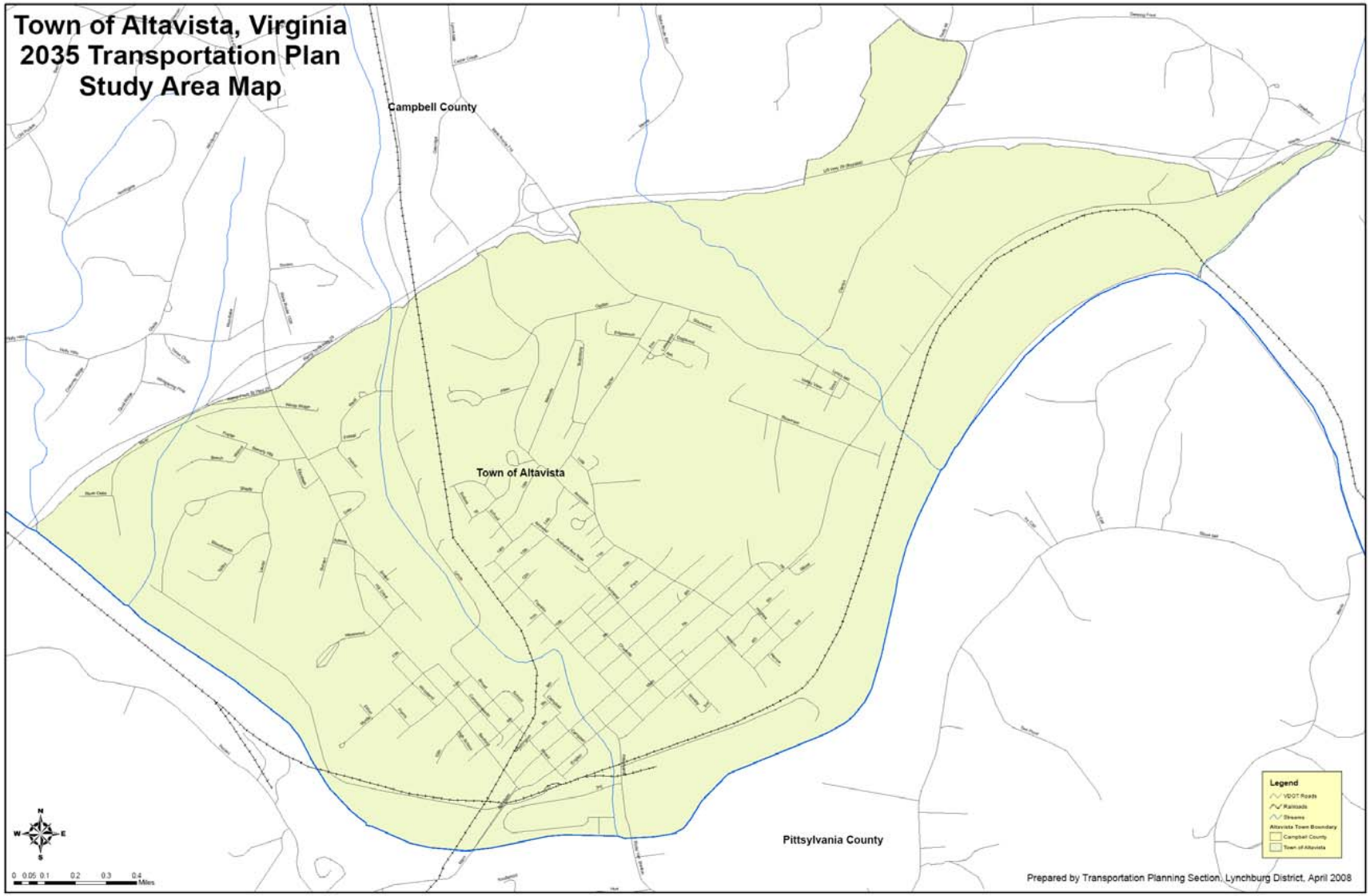

Table 1-1
Functional Classification System Definitions

RURAL
Principal Arterial – These highways provide an integrated network of roads that connect principal metropolitan areas and serve virtually all urban areas with a population greater than 25,000. They serve long distance travel demands such as statewide and interstate travel.
Minor Arterial – These highways link cities and large towns and provide an integrated network for intrastate and intercounty service. They supplement the principal arterial system so that all geographic areas are within a reasonable distance of an arterial highway. They are intended as routes that have minimum interference to through movement.
Major Collector – These highways provide service to any county seat, large towns, or other major traffic generators not served by the arterial system. They provide links to the higher classified routes and serve as important intracounty travel corridors.
Minor Collector – These highways collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road. They provide service to small communities and link important local traffic generators with the rural areas.
Local – These roads provide access to adjacent land and serve travel of short distances as compared to the higher systems.
URBAN
Principal Arterial – These highways are the most significant roads in the urban area that serve the major centers of activity, constitute the highest traffic volume corridors, serve the longest trip desires, carry the major portion of through traffic in the urban area, and provide continuity between rural arterials. These include interstate highways.
Minor Arterial – These highways interconnect and supplement the principal arterial system with a greater emphasis on land access and a lower level of traffic mobility. They provide intracommunity service as well as connecting rural collectors to the urban highway system.
Urban Collector – These highways provide land access service and traffic circulation within residential, commercial, and industrial areas. They collect local traffic and distribute it to the arterial system.
Local – These streets provide direct access to adjacent land and provide access to the higher systems. Service to through traffic is discouraged.

Demographic Overview

Population

In the U.S. Census conducted in 2000, the population of Altavista was recorded as 3,425. This represents a moderate 7.1 percent decline from the town's 1990 population of 3,686. It is important to note, however, that this decline reflects directly to the closure of of numerous manufacturing companies in and around Altavista.

Based upon a review of the interim year population estimates since 2000 as well as input from local officials, the town's population is expected to remain constant through the 20-year horizon of this study, with a projected growth of approximately 0.6 percent per year. The lasted confirmed counts for 2006 indicate a population of 3,385 which relates to a slight decline over the last six years, however, it is reasonable to assume that a .5 percent per year rate is feasible based upon the current economic happenings in the town.

Employment

Campbell County, which includes the Town of Altavista, supports a civilian labor force of over 15,000 workers (2007). The Town of Altavista employment patterns continued to be primarily distributed among the manufacturing. Overall, most employment sectors have had a gradual decline since the first report, however, new employment sectors have begun to locate in the Town (through a recent joint boundary adjustment of just over 80 acres with Campbell County). For future projections, it appears that Altavista will remain constant with its employment numbers if not show a 1% gain over time. The primary industries in Altavista include Abbott Laboratories, BGF Industries Inc., Moore's Electrical and Schrader Bridgeport International. Major retail companies include Wal-Mart, Food Lion and the YMCA. Five of the top 10 Largest Employers for Campbell County are located within the Town limits of Altavista, and

representatives for each company expect the number of jobs with each of these local employers to remain steady for the foreseeable future.

Summary of Approach and Analysis Methods

The development of the transportation plan followed a process that included data collection, review, and analysis. The data collected included information such as traffic counts, police accident reports, roadway geometric inventory data, bridge structural inspection reports, at-grade railroad crossing geometric data, tourism surveys, and goods movement surveys. Review and analysis of this data was combined with a review and analysis of previous transportation and land-use plans and other studies. Furthermore, meetings were held with local staff throughout the study process to gather additional input.

For public involvement activities, press releases and an Internet web site were prepared to publicize the study and to gather public comments on proposed recommendations. In addition, one public meeting was conducted to encourage further public input into the plan's development.

Traffic data collected for the study included vehicle counts on key thoroughfare segments, as well as turning movement counts at major intersections in the Town. This data was compared to the historic traffic volumes collected at similar locations within the study area. Traffic growth rates were then determined based upon linear analysis of the historic data while considering future population and economic growth. These traffic growth rates were then applied to determine future year (2035) traffic volumes.

Capacity analysis was performed for existing conditions and future year conditions using standard practices adapted from the HCS+ version of the *Highway Capacity Manual* (HCM). This analysis included intersections where all thoroughfare road segments counts were taken in the study area.

Accident analysis was conducted by reviewing and classifying traffic accident reports from a three-year period. This analysis identified accident trends and safety issues that may lead to recommended improvements.

Roadway geometric data such as travel lane width, shoulder width, and the presence of curb and gutter were compared to current roadway design standards to identify potential geometric improvements.

Bridge structure analysis was based upon review of the VDOT database of bridge structures for the Town of Altavista. The analysis included a review of the "sufficiency" ratings for each structure that considers the specific conditions for individual components of the structures such as the deck, substructure and superstructure. Bridge sufficiency is measured on a scale from 0 to 100. A bridge that has a rating of 100 would represent an entirely sufficient bridge and zero percent would represent an entirely insufficient or deficient bridge. Numerically, bridges with sufficiency ratings below 50 are eligible for replacement or rehabilitation using federal funds while those with ratings between 50 - 80 are eligible for funds to cover rehabilitation only.

Tourism and goods movement analysis was based on contacts with tourism and freight-shipping officials in the Town. A standard set of questions regarding both general and site-specific issues was provided to the Town and responses were collected via email and telephone interviews.

Environmental analysis was performed for study locations that had proposed roadway widening or new facilities on a new location (right of way). In these instances, environmental overviews were conducted to provide a cursory identification of potential impacts to wetlands, forested areas, agricultural reserves, trout streams, endangered species, hazardous material storage facilities, and historic and archaeological resources.

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CHAPTER TWO
EXISTING TRANSPORTATION NETWORK

Roadways

The most prevalent form of transportation in the Altavista is the use of the private automobile operated on a network of roadways maintained by the Town and VDOT. VDOT provides state funding for maintenance and construction of facilities on the thoroughfare highway system within the corporate limits. These funds are allocated to the Town by VDOT's Local Assistance Division. The thoroughfare highway system includes major roadways that connect Altavista to other cities, towns, and localities in the region. These roads are classified as “collector” or “arterial” roadways and typically serve through-traffic more than local traffic.

Thoroughfare System

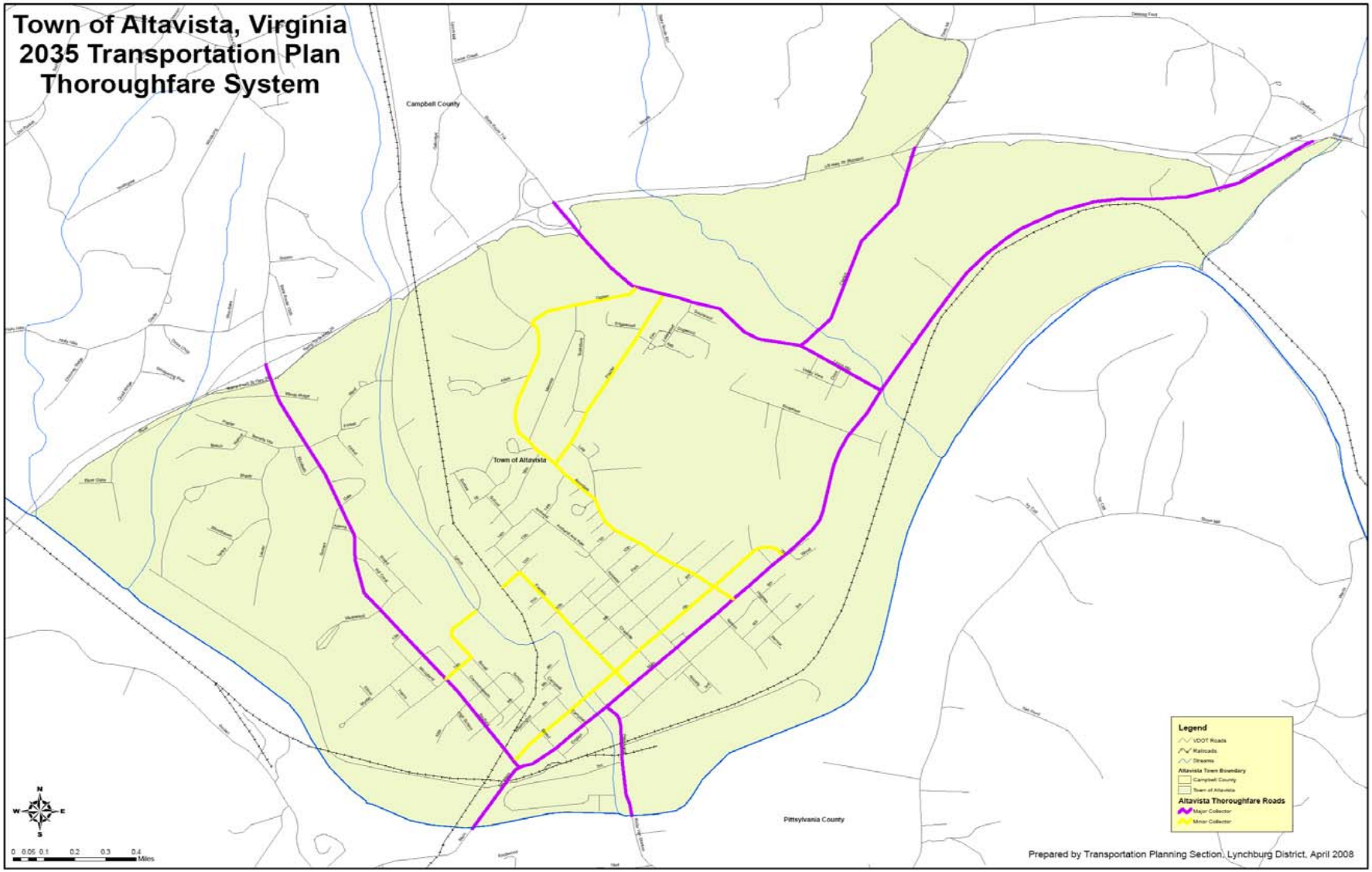
The thoroughfare highway system in Altavista is depicted in **Figure 2-1**. Roadway segments included in the thoroughfare highway system are listed in **Table 2-1** and described below.

Table 2-1
Thoroughfare System

Route #	Route Name	From	To	Length (Miles)	Travel Lanes	Functional Classification
0029	RR Maint Rd	SCL ALTAVISTA	BEDFORD AVE	0.1	2	Major Collector
0029	Main St	BEDFORD AVE	BROAD ST	0.1	2	Major Collector
0029	Main St	BROAD ST	PITTSLYVANIA AVE	0.3	2	Major Collector
0029	Main St	PITTSYLVANIA AVE	AMHERST AVE	0.3	4	Major Collector
0029	Main St	AMHERST AVE	LOLA AVE	0.3	4	Major Collector
0029	Main St	LOLA AVE	WOOD LN	0.2	4	Major Collector
0029	Main St	WOOD LN	LYNCH MILL RD	0.4	2	Major Collector
0029	Main St	LYNCH MILL RD	NCL ALTAVISTA	1.4	2	Major Collector
0043	Bedford Ave	WCL ALTAVISTA	BROAD ST	0.6	2	Major Collector
0043	Bedford Ave	BROAD ST	MYRTLE LN	0.5	2	Major Collector
0043	Bedford Ave	MYRTLE LN	7TH STREET	0.5	2	Major Collector
0043	Bedford Ave	7TH STREET	MAIN ST	0.1	2	Major Collector
0900	7th St	BEDFORD AVE	FRANKLIN AVE	0.4	2	Minor Collector
0900	7th St	FRANKLIN AVE	LOLA AVE	0.4	2	Minor Collector
0900	7th St	LOLA AVE	MAIN ST	0.6	2	Minor Collector
0901	11th St	BROAD ST	BEDFORD AVE	0.1	2	Minor Collector

Route #	Route Name	From	To	Length (Miles)	Travel Lanes	Functional Classification
0903	Avondale Dr	LOLA AVE EXT	FRAZIER RD	0.2	2	Minor Collector
0903	Avondale Dr	FRAZIER RD	OGDEN RD	0.6	2	Minor Collector
0904	Broad St	LYNCH RD	11TH STREET	0.1	2	Minor Collector
0905	Clarion Rd	SCL ALTAVISTA	ECL ALTAVISTA	0.8	2	Minor Collector
0906	Franklin Ave	BEDFORD AVE	7TH STREET	0.1	2	Minor Collector
0906	Franklin Ave	BROAD ST	12TH STREET	0.5	2	Minor Collector
0907	Frazier Rd	PITTSYLVANIA AVE	LYNCH MILL RD	0.7	2	Minor Collector
0908	Lola Ave	AMHERST AVE	7TH STREET	0.1	2	Minor Collector
0908	Lola Ave	LOLA AVE	11TH STREET	0.4	2	Minor Collector
0908	Lola Ave	WOOD LN	LOLA AVE EXT	0.1	2	Minor Collector
0909	Lynch Mill Rd	LYNCH MILL RD	CLARION RD	0.3	2	Major Collector
0909	Lynch Mill Rd	WCL ALTAVISTA	FRAZIER RD	0.5	2	Major Collector
0909	Lynch Mill Rd	BROAD ST	NCL ALTAVISTA	0.4	2	Major Collector
0910	Lynch Rd	MYRTLE LN	BROAD ST	0.2	2	Minor Collector
0911	Ogden Rd	7TH STREET	LYNCH MILL RD	0.4	2	Minor Collector
0912	Pittsylvania Ave	BEDFORD AVE	SCL ALTIVISTA	0.4	2	Major Collector

Figure 2-1
Functional Classified Roads



Thoroughfare System Roadways

Altavista lies at the junction of U.S Route 29 and Virginia Primary Route 43. From Altavista, Route 29 leads north to Lynchburg, and south to Danville. Route 43 extends northwest to Bedford. Going southeast out of town, Pittsylvania Avenue goes to U.S. Route 501, which travels south to South Boston.

At the south and north ends of Altavista, Route 29 splits into bypass and business sections, with the business section going through the central business district (CBD) of the town as Main Street, while the bypass section travels around the west side of the CBD.

In addition to these routes, the thoroughfare system in Altavista includes all or portions of Clarion Road, Lynch Mill Road, Ogden Road, Frazier Road, Avondale Drive, 7th Street, Franklin Avenue, 11th Street, 12th Street, Broad Street, and Pittsylvania Avenue.

Roadway Geometry

The thoroughfare highway system in Altavista varies throughout the Town. Roadways include 2-lane rural, 4-lane undivided highways, and downtown arterial streets with on-street parking. Over the course of the Town's growth and development, many streets that were once rural in character (with low traffic volumes and narrow pavement widths) have evolved into suburban and urban streets that now carry a higher volume of both local and through traffic. Geometric issues such as pavement width, shoulder width, horizontal and vertical alignment, and the lack of adequate turn-bays present safety and capacity problems when accompanied by larger traffic volumes, will cause the Level of Service to drop. The following sections identify locations in Altavista where specific geometric conditions may cause difficulties for vehicle circulation.

* Main Street & Pittsylvania Ave.
* Main Street & Lynch Mill Rd
* Lynch Mill Rd. & Clarion Rd
* Lynch Mill Rd @ Altavista Elementary School

Roadway Structures

There are eight VDOT-maintained structures on the Altavista thoroughfare system – seven bridges and one box culvert. In the town, there are seven railway crossings; four are railway bridges over rivers, two are railway bridges over roadways, and one is an at-grade crossing. The detailed database is as follows:

Table 2-2

Crossing	Type
Big Otter River	Railway Bridge
Pittsylvania Avenue	Railway Bridge
Staunton River (3 locations)*	Railway Bridge
Bedford Avenue	Railway Bridge
Broad Street	Railway Bridge

Existing Traffic Volumes and Travel Demand

Altavista traffic data was collected utilizing traffic counts taken in 2005. **Table 2-3** lists the locations where tube counts were conducted. Traffic counts were conducted using pneumatic counters for 26 separate roadway segments. These devices were operated for a minimum of 24 hours during weekdays only.

Table 2-3 Machine Counts – 48 continuous hours (weekday)

7th Street – Campbell Avenue to Franklin Avenue
7th Street – Franklin Avenue to Lola Avenue
7th Street – Lola Avenue to Main Street
Avondale Dr – Lola Avenue Ext to Frazier Road
Avondale Dr – Allen Road to Ogden Road
Franklin Avenue – Main Street to 7th Street
Franklin Avenue – Park Street to 10th Street
Frazier Road – Elm Avenue to Edgewood Avenue
Lola Avenue – Main Street to 7th Street
Lynch Road – Lynch Creek to Broad Street
Ogden Road – Avondale Dr to Melinda Dr
Pittsylvania Avenue – 3rd Street to 5th Street
Lynch Mill Road – Altavista NCL to Frazier Road
Lynch Mill Road – Main Street to Fauntleroy Street
Clarion Road – Lynch Mill Road to Altavista NCL
Main Street – Altavista SCL to Bedford Avenue
Main Street – Broad Street to Campbell Avenue
Main Street – Pittsylvania Avenue to Franklin Avenue
Main Street – Lynch Mill Road to Route 29 Bypass
Bedford Avenue – 7th Street to 10th Street
7th Street – Campbell Avenue to Franklin Avenue
7th Street – Franklin Avenue to Lola Avenue
7th Street – Lola Avenue to Main Street
Avondale Dr – Lola Avenue Ext to Frazier Road
Avondale Dr – Allen Road to Ogden Road
Franklin Avenue – Main Street to 7th Street

For the roadway segments where base year traffic counts were not collected, a trend line analysis of the historic count data was used to predict base year traffic volumes for the roadway segment.

Roadway Operations

The year 2005 Average Daily Traffic (ADT) counts and the Statewide Planning System (SPS) historic traffic volume data were used to develop the existing conditions analysis for the thoroughfare system. Existing roadway operations were analyzed in Altavista at the studied intersections and along the thoroughfare road segments. An existing year capacity analysis was performed for each roadway segment according to current year traffic volumes and roadway design characteristics. HCM+ methodology was used to determine current level of service (LOS) operations on each roadway segment.

Table 2-4 describes the various LOS categories.

Table 2-4
LOS Descriptions

LOS	Description	Congestion Level
A	Free traffic flow with low volumes and high speeds. Speeds controlled by driver desires, speed limits, and roadway physical conditions.	Low
B	Stable traffic flow, with operating speeds remaining near free flow. Drivers still have reasonable freedom to maneuver.	Low
C	Stable flow, but higher volumes more closely control speeds and maneuverability.	Moderate
D	Approach unstable flow with tolerable operating speeds maintained, but considerably affected by changes in operating conditions.	Moderate
E	Unstable flow with low speed and momentary stoppages.	Severe
F	Forced flow with low speed. Stop-and-go with stoppages for long periods is possible.	Severe

Source: HCM, United States Department of Transportation, 1994.

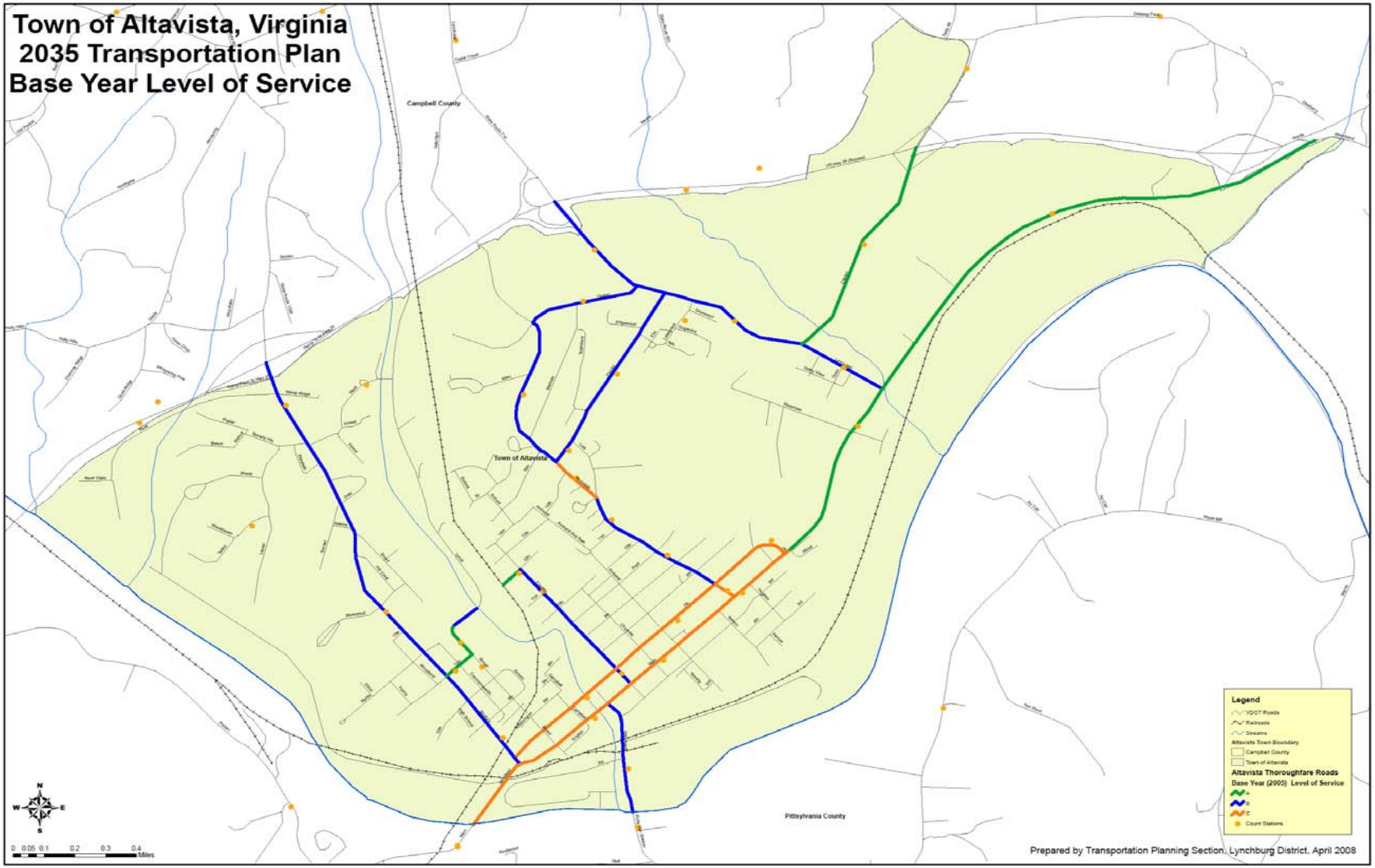
For the road segment analysis, a “planning" level approach was used rather than the more detailed approach known as “operations” level. Note that for some types of functional classifications, such as the 2-lane collector roads, a higher traffic volume may result in a worse LOS rating than a similar traffic volume along a roadway classified as an arterial. This is due to the different types of operational characteristics of each functional classification. See **Appendix A.3 - Capacity Analysis Methodology** for further discussion of capacity analysis techniques. The results of the existing roadway segment analysis are listed in **Table 2-5**. **Figure 2-2** depicts traffic count locations with their associated and LOS.

Table 2-5
Existing Conditions Roadway Segment Analysis

Route #	Route Name	From	To	Analysis Method	2005 ADT	2005 LOS
0029	RR Maint Rd	SCL ALTAVISTA	BEDFORD AVE	Urban Collector	7600	C
0029	Main St	BEDFORD AVE	BROAD ST	Urban Collector	9900	C
0029	Main St	BROAD ST	PITTSLYVANIA AVE	Urban Collector	9900	C
0029	Main St	PITTSYLVANIA AVE	AMHERST AVE	Urban Collector	13200	C
0029	Main St	AMHERST AVE	LOLA AVE	Urban Collector	12500	C
0029	Main St	LOLA AVE	WOOD LN	Urban Collector	12500	C
0029	Main St	WOOD LN	LYNCH MILL RD	Urban Collector	12400	A
0029	Main St	LYNCH MILL RD	NCL ALTAVISTA	Urban Collector	9600	A
0043	Bedford Ave	WCL ALTAVISTA	BROAD ST	Urban Collector	4200	B
0043	Bedford Ave	BROAD ST	MYRTLE LN	Urban Collector	4700	B
0043	Bedford Ave	MYRTLE LN	7TH STREET	Urban Collector	5200	B
0043	Bedford Ave	7TH STREET	MAIN ST	Urban Collector	5200	B
0900	7th St	BEDFORD AVE	FRANKLIN AVE	Urban Collector	3900	C
0900	7th St	FRANKLIN AVE	LOLA AVE	Urban Collector	3200	C
0900	7th St	LOLA AVE	MAIN ST	Urban Collector	1500	C
0901	11th St	BROAD ST	BEDFORD AVE	Urban Collector	300	A
0903	Avondale Dr	LOLA AVE EXT	FRAZIER RD	Urban Collector	2300	C
0903	Avondale Dr	FRAZIER RD	OGDEN RD	Urban Collector	500	B
0904	Broad St	LYNCH RD	11TH STREET	Urban Collector	200	A
0905	Clarion Rd	LYNCH MILL RD	ECL ALTAVISTA	Urban Collector	1500	A
0906	Franklin Ave	MAIN ST	7TH STREET	Urban Collector	1600	B
0906	Franklin Ave	7TH STREET	12TH STREET	Urban Collector	1800	B
0907	Frazier Rd	AVONDALE DR	LYNCH MILL RD	Urban Collector	2600	B

Route #	Route Name	From	To	Analysis Method	2005 ADT	2005 LOS
0908	Lola Ave	MAIN ST	7TH STREET	Urban Collector	3200	C
0908	Lola Ave	7TH STREET	11TH STREET	Urban Collector	3200	B
0908	Lola Ave	11TH STREET	LOLA AVE EXT	Urban Collector	3300	B
0909	Lynch Mill Rd	MAIN ST	CLARION RD	Urban Collector	4300	B
0909	Lynch Mill Rd	CLARION RD	FRAZIER RD	Urban Collector	3400	B
0909	Lynch Mill Rd	FRAZIER RD	NCL ALTAVISTA	Urban Collector	4600	B
0910	Lynch Rd	12TH STREET EXT	BROAD ST	Urban Collector	300	B
0911	Ogden Rd	AVONDALE DR	LYNCH MILL RD	Urban Collector	900	B
0912	Pittsylvania Ave	MAIN ST	SCL ALTIVISTA	Urban Collector	8200	B

Figure 2-2 Base Year (2005) Count Locations / LOS



Roadway Safety

Accident data was summarized from police data reports for the years 2003 through 2005 for all roadway segments and intersections within the study area. The accidents were grouped according to intersection location. **Table 2-6** reports the highest accident locations.

Table 2-6
Accident Data Summary (2003-2005)

Ranking	Route #	Location / Intersection	Accidents
1	US 29	Main Street and Pittsylvania Avenue	27
2	US 29	Main Street and Amherst Avenue	19
3	US 29	Main Street and 7th Street	16
4	US 29	Main Street and Lola Avenue	14
5	US 29	Main Street and Hughes Avenue	13
6	US 29	Main Street and Lynch Mill Road	12

There was an average of 87 accidents per year identified on the thoroughfare system in the Town of Altavista during the period 2003 to 2005. Of the total accidents, Rear End Collision was the highest accident type with 83 during the 3 year span (32% of all accident types), followed by Failure to Yield (81) and Reckless Driving (62).

A complete listing of the accident data analysis is included in **Appendix A.4 - Safety Analysis**. Specific roadway segments that experienced recognizable accident patterns are described below:

Main Street and Pittsylvania Avenue

The intersection of Main Street and Pittsylvania Avenue experienced approximately 10% of all accidents identified on the thoroughfare system from 2003 - 2005. There was a split between Rear End Collision and Reckless Driving accidents types.

Main Street and Amherst Avenue

The intersection of Main Street and Amherst Avenue accounted for the second-highest number of accidents. Approximately 7% of all accidents identified on the thoroughfare system occurred on this roadway segment. A significant number of these were a Failure to Yield accident type.

Main Street and 7th Street

The intersection of Main Street and 7th Street accounted for the third-highest number of accidents. Approximately 6% of all accidents identified on the thoroughfare system occurred on this roadway segment. A significant number of these were a Failure to Yield accident type.

Lynch Mill Rd @ Altavista Elementary School

Although the accident rate is low for this area, increasing concerns from the general public regarding existing and future conflicts between autos and pedestrians, gave reason to identify this area. Future plans for a Safe-Route-To-School program also provided just cause.

Parking

This study only provides a cursory overview of the current parking situation in the Town of Altavista. Currently, parking in the Town appears to be adequate with off street and on street parking available

throughout the town. The Town's Comprehensive Plan Transportation Chapter under the Goals and Objective details the need to ensure quality parking availability in all areas and for all uses.

Bicycle/Pedestrian

Bicycle and pedestrian considerations is an important component in building an integrated transportation system within a community. A bicycle and pedestrian friendly setting can provide a number of benefits to the Town of Altavista such as enhance quality of life and health, bolster tourism and economic development, benefit the environment, and improve safety for all users of the transportation network.

As with most small rural areas in Virginia, the Town of Altavista possesses a good sidewalk network within its central core. Bicyclists share the road with motor vehicles seeking streets with lower volume and speeds, and avoiding the major roadways. As development expands from the central core, the need occurs to link with new activity centers such as schools, parks, major employment centers, housing, and shopping areas. Additionally, other identified land opportunities include existing town parks, the internal road system, and the Staunton (Roanoke) River. Constraints (land barriers) include the Route 29 Bypass, railroads, and Bridges.

Figure 4-1 provides a mapped inventory of the existing roadways, sidewalks (on functionally classified roadways), bicycle facilities, and significant activity centers as well as proposed additions.

Intercity Rail, Intercity Bus, and Air Travel

Altavista is not served by intercity bus or passenger rail service. Intercity bus service ended in the 1980s with the Greyhound-Trailways merger. An Amtrak train passes through Altavista on its way from Lynchburg to Danville, but does not stop in the town. The nearest Amtrak and Greyhound stations are in Lynchburg, Chatham and Danville.

General aviation services are available out of the New London Airport, which is located in Forest, approximately 10 miles north of Altavista. This airport handles about 15 to 18 daily operations (an operation consists of a takeoff and landing.) The airport has one 3,200-foot asphalt runway, and is located on Route 709, approximately two miles north of Route 24. Commercial service is available out of Lynchburg Regional Airport, approximately 20 miles to the north.

Transit, Paratransit, and Taxi

There is no fixed-route bus service in Altavista.

Paratransit service in Altavista is provided both by Campbell County and a private, non-profit company. The County operates a free ride service during business hours (8:30 a.m. to 5 p.m.) on weekdays. If the demand for rides exceeds the capacity of the one full-time County driver, County social services staff contacts volunteers to handle the extra trip demand. In addition to the County ride service, an organization called the Senior Program provides meals delivery and medical appointment rides for elderly and disabled residents of Campbell County, including Altavista.

There are two taxi companies based in Altavista, Guss Cabs and U Save Cab Company, which are owned by the same individual. Each company has one vehicle, and operates from 7 a.m. to 6 p.m. from Monday through Saturday. On Sunday, no set hours exist; the owner takes calls at his home, and handles calls as necessary.

Goods Movement

Based on interviews with local shippers, Altavista is generally well able to accommodate the truck traffic produced by its industries. Most of its manufacturing facilities are located with relatively close and easy access to U.S. 29, the principal arterial highway in the area.

However, downtown Altavista is prone to congestion at the south end of the town, presenting traffic problems for manufacturers in Altavista. Several people attributed this problem to a growing number of traffic lights in the area, as well as the lights not being timed in the most efficient way. This portion of Town is also seeing greatly increased truck traffic servicing power plants in and out of town. There currently exists a joint agreement between the Town and Dominion Resources to limit truck traffic through the various residential corridors and it appears to be affective.

The construction of a new interchange at Route 711 and U.S. 29 will greatly ease the ability of trucks from Abbott Laboratories/Ross Products Division (Altavista's largest generator of truck trips) to access U.S. 29. The interchange will relieve traffic from the northern section of Main Street as well as Route 714. However, it appears it will be little used by other companies in town.

Abbott is the only company in Altavista that uses rail freight, and all companies interviewed reported very little use of air freight.

Tourism and Recreation

Altavista does not have a large number of tourist attractions, so the traffic impact due to tourism is minimal. Because the Route 29 Bypass bypasses the town, Altavista is not affected by tourism-related through traffic. Three sites or events were identified as traffic generators in Altavista: the annual Uncle Billy's Day festival, a twice-monthly flea market in the downtown area, and the historic Avoca House on Route 29 Business (Main Street).

As for Recreation, the Town of Altavista offers a variety of opportunities. Staunton Riverfront Park provides open area access adjacent to the Staunton River. Additional opportunities include Shreve Park and the Altavista YMCA as well as various smaller locations throughout the town

The Altavista Country Club provides a 9-hole golf course, swimming and tennis amenities.

Current VDOT Year 2020 Plan

In 2002, VDOT published the Altavista 2020 Transportation Plan, the most recent transportation plan prepared for the Town. **Table 2-7** lists the recommended improvements in the plan by roadway segment.

Table 2-7
2020 State Highway Plan Recommendations

Route #	Route Name	From	To	Dist	Recommendation	Typical Section	2000 Cost
29 BUS	Main Street (bridge)	South Corporate Limits	North end of bridge	0.05	Construct new four lane bridge over Staunton (Roanoke) River.	U2	$9,555,000
29 BUS	Main Street	7th Street	N/A	N/A	Improve intersection to provide for increased capacity from southbound Main Street onto southbound 7th Street and vice versa. Includes improvement to the 90 degree curve on 7th Street which is approximately 400 feet west of Main Street.	N/A	$200,000
29 BUS	Main Street	Lynch Mill Road	N/A	N/A	Widen corners of intersection on Lynch Mill Road to improve turning radius.	N/A	$150,000
29 BUS	Main Street	7th Street	North Corporate Limits	1.90	Widen Main Street to four lanes.	U2	$13,680,000
43	Bedford Avenue	West Corporate Limits	Main Street	1.70	Widen Bedford Avenue to four lanes.	U2	$12,240,000
43	Bedford Avenue	Main Street and 7th Street	N/A	0.25	Consolidate intersections; includes realignment and widening of Main Street between Roanoke River bridge and Bedford Avenue.	U2	$1,195,000
	Pittsylvania Avenue	Main Street	South Corporate Limits	0.40	Widen Pittsylvania Avenue to four lanes; includes intersection improvement at Main Street.	U2	$2,880,000
711	Clarion Road Connector	Bedford Avenue	Lynch Mill Road at Clarion Road	1.65	Construct a new roadway from Bedford Avenue to Lynch Mill Road at Clarion Road; includes new bridge over railroad.	N/A	$7,197,500

VDOT's Six-Year Improvement Plan Projects

The latest Six-Year Improvement Program (SYIP) adopted by the Commonwealth Transportation Board in June of 2007. The SYIP is a comprehensive listing of anticipated funding allocations and transportation projects scheduled for construction, improvement, or study over the next six fiscal years. Within the Town of Altavista, the following projects have been identified:

- Pittsylvania Avenue – Develop to 4 lanes
- Rte 43 – Widen to 2 lanes, with curb, gutter and sidewalk (Currently Under Construction)

Local Comprehensive Plan

The Comprehensive Plan for the Town of Altavista was recently revised and adopted by the Town in September 2003. Coordination between the comprehensive plan and this plan were sought for all thoroughfare highway segments. Local roadway projects included in this plan were obtained by reviewing the Comprehensive Plan, in addition to interviews with Town staff.

Other Plans

Downtown Altavista Master Plan

Completed in September 2006, this plan was developed for the revitalization for added streetscapes and building façade improvements. Recommendations and designs for pedestrian crossings were included for the Main Street and 7th Street corridors.

Region 2000 Greenways and Blueways Plan

Developed by the Local Government Council in 2003, this plan seeks to identify corridors in Campbell County that will be utilized for greenways and trails for multiple uses. Altavista serves as a destination and orientation point for multiple trail options.

English Park Master Plan

Recently completed (March 2008) and approved by the Board of Supervisor of Campbell County, the plan details the vision for the park, including multi-use trails, river access and recreational opportunities.

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CHAPTER THREE
FUTURE CONDITIONS

Forecast Methodology and Assumptions

Determining the mid- and long-term roadway needs for the Town of Altavista requires estimating the vehicular traffic demands on the roadway system for the years 2010, 2020 and 2035. In small urban areas such as the Town of Altavista, the standard approach used by traffic engineers to determine future traffic projections is to analyze historic traffic count data. It is also useful to review recent projections for population and/or employment in the area and special project-level forecasts that have been completed for individual transportation improvement projects.

Historic ADT count volumes for each segment from the TMS database, together with any current year supplemental ADT count information, were analyzed to determine an annual growth rate percentage. Other forecasting methods were applied to segments where historic and recent data was not available. These methods included deriving growth rates from population and employment forecasts prepared by other agencies. Also, traffic growth rates were obtained from specific transportation projects in the Town and from the previous (2020) long-range transportation plan for Altavista. All forecasted data is derived from existing data and does not consider redistribution of traffic that may result from planned improvements.

In general, traffic growth rates are typically higher on road segments that serve the CBD directly and areas near the corporate limits that have experienced new land development over the past several years. Some of the lowest growth rates can be applied to the developed sections of downtown, and other areas where recent history has indicated that development and traffic growth has occurred less vigorously. For this study, a standard 1% growth rate was applied to all thoroughfares except Clarion Road which had a 3% growth rate.

Year 2010, 2020 and 2035 Traffic Volumes & Roadway Deficiencies

Table 3-1 presents the projected 2010, 2020 and 2035 ADT for the roadway segments included in this Transportation Plan as well as the LOS resulting from the projected traffic volumes on the existing roadway segments. LOS for these years was determined for each roadway segment using the same analysis method that was used for the existing conditions roadway segment analysis. LOS D and worse ratings are typically used to identify capacity deficiencies.

Year 2010

The capacity analysis results indicate the following capacity concerns for the year 2010 and beyond:

All roadway segments are forecasted to operate at LOS C or better up to the year 2010. **Figure 3-1** depicts a sample of the 2010 ADT volume forecast and capacity analysis (LOS) at various locations. The 2010 ADT volume forecast and capacity analysis (LOS) results for all roadway segments are included in **Appendix A**.

Year 2020

The capacity analysis results indicate the following existing and future capacity concerns for the year 2020:

All roadway segments are forecast to operate at LOS C or better up to the year 2020. The 2020 ADT volume forecast and capacity analysis (LOS) results for all roadway segments are included in **Appendix A** and a sample of segments is illustrated in **Figure 3-2**.

Year 2035

The capacity analysis results indicate the following existing and future capacity concerns for the year 2035:

All roadway segments are forecast to operate at LOS C or better up to the year 2035. The 2035 ADT volume forecast and capacity analysis (LOS) results for all roadway segments are included in **Appendix A** and a sample of segments is illustrated in **Figure 3-3**.

Complete Roadway Segment Capacity Analysis Results and detailed inventory can be found in **Appendix A, Table A.3-1**. Bicycle Assessment and Analysis can be found in **Appendix A, Table A.3-2.**

Table 3-1
Annual Growth Rates and 2020 & 2035 Projected ADT and LOS

				Growth	2010		2020		2035	
Route #	Route Name	From	To	Rate	ADT	LOS	ADT	LOS	ADT	LOS
0029	RR Maint Rd	SCL ALTAVISTA	BEDFORD AVE	1.00%	8000	C	8800	C	9900	C
0029	Main St	BEDFORD AVE	BROAD ST	1.00%	10400	C	11300	C	12900	C
0029	Main St	BROAD ST	PITTSLYVANIA AVE	1.00%	10400	C	11300	C	12900	C
0029	Main St	PITTSYLVANIA AVE	AMHERST AVE	1.00%	13800	C	15100	C	17200	C
0029	Main St	AMHERST AVE	LOLA AVE	1.00%	13100	C	14400	C	16300	C
0029	Main St	LOLA AVE	WOOD LN	1.00%	13100	C	14400	C	16300	C
0029	Main St	WOOD LN	LYNCH MILL RD	1.00%	13000	A	14300	A	16100	B
0029	Main St	LYNCH MILL RD	NCL ALTAVISTA	1.00%	10000	A	11000	A	12500	A
0043	Bedford Ave	WCL ALTAVISTA	BROAD ST	1.00%	4400	B	4800	B	5500	B
0043	Bedford Ave	BROAD ST	MYRTLE LN	1.00%	4900	B	5400	B	6100	B
0043	Bedford Ave	MYRTLE LN	7TH STREET	1.00%	5500	B	6000	B	6800	B
0043	Bedford Ave	7TH STREET	MAIN ST	1.00%	5500	B	6000	B	6800	B
0900	7th St	BEDFORD AVE	FRANKLIN AVE	1.00%	4100	C	4500	C	5100	C
0900	7th St	FRANKLIN AVE	LOLA AVE	1.00%	3400	C	3700	C	4200	C
0900	7th St	LOLA AVE	MAIN ST	1.00%	1600	C	1800	C	2000	C
0901	11th St	BROAD ST	BEDFORD AVE	1.00%	330	A	360	A	400	A
0903	Avondale Dr	LOLA AVE EXT	FRAZIER RD	1.00%	2400	C	2600	C	3000	C
0903	Avondale Dr	FRAZIER RD	OGDEN RD	1.00%	500	B	600	B	650	B
0904	Broad St	LYNCH RD	11TH STREET	1.00%	210	A	230	A	300	A
0905	Clarion Rd	LYNCH MILL RD	ECL ALTAVISTA	3.00%	1800	A	2200	A	2900	A
0906	Franklin Ave	MAIN ST	7TH STREET	1.00%	1700	B	1800	B	2100	B
0906	Franklin Ave	7TH STREET	12TH STREET	1.00%	1900	B	2100	B	2350	B

				Growth	2010		2020		2035	
Route #	Route Name	From	To	Rate	ADT	LOS	ADT	LOS	ADT	LOS
0907	Frazier Rd	AVONDALE DR	LYNCH MILL RD	1.00%	2700	B	3000	B	3400	B
0908	Lola Ave	MAIN ST	7TH STREET	1.00%	3300	C	3600	C	4200	C
0908	Lola Ave	7TH STREET	11TH STREET	1.00%	3300	B	3600	B	4200	B
0908	Lola Ave	11TH STREET	LOLA AVE EXT	1.00%	3400	B	3800	B	4250	B
0909	Lynch Mill Rd	MAIN ST	CLARION RD	1.00%	4500	B	5000	B	5600	B
0909	Lynch Mill Rd	CLARION RD	FRAZIER RD	1.00%	3600	B	4000	B	4400	B
0909	Lynch Mill Rd	FRAZIER RD	NCL ALTAVISTA	1.00%	4800	B	5200	B	6000	B
0910	Lynch Rd	12TH STREET EXT	BROAD ST	1.00%	330	B	360	B	400	B
0911	Ogden Rd	AVONDALE DR	LYNCH MILL RD	1.00%	900	B	1000	B	1200	B
0912	Pittsylvania Ave	MAIN ST	SCL ALTIVISTA	1.00%	8600	B	9400	B	10700	B

Figure 3-1
2010 Projected ADT and LOS

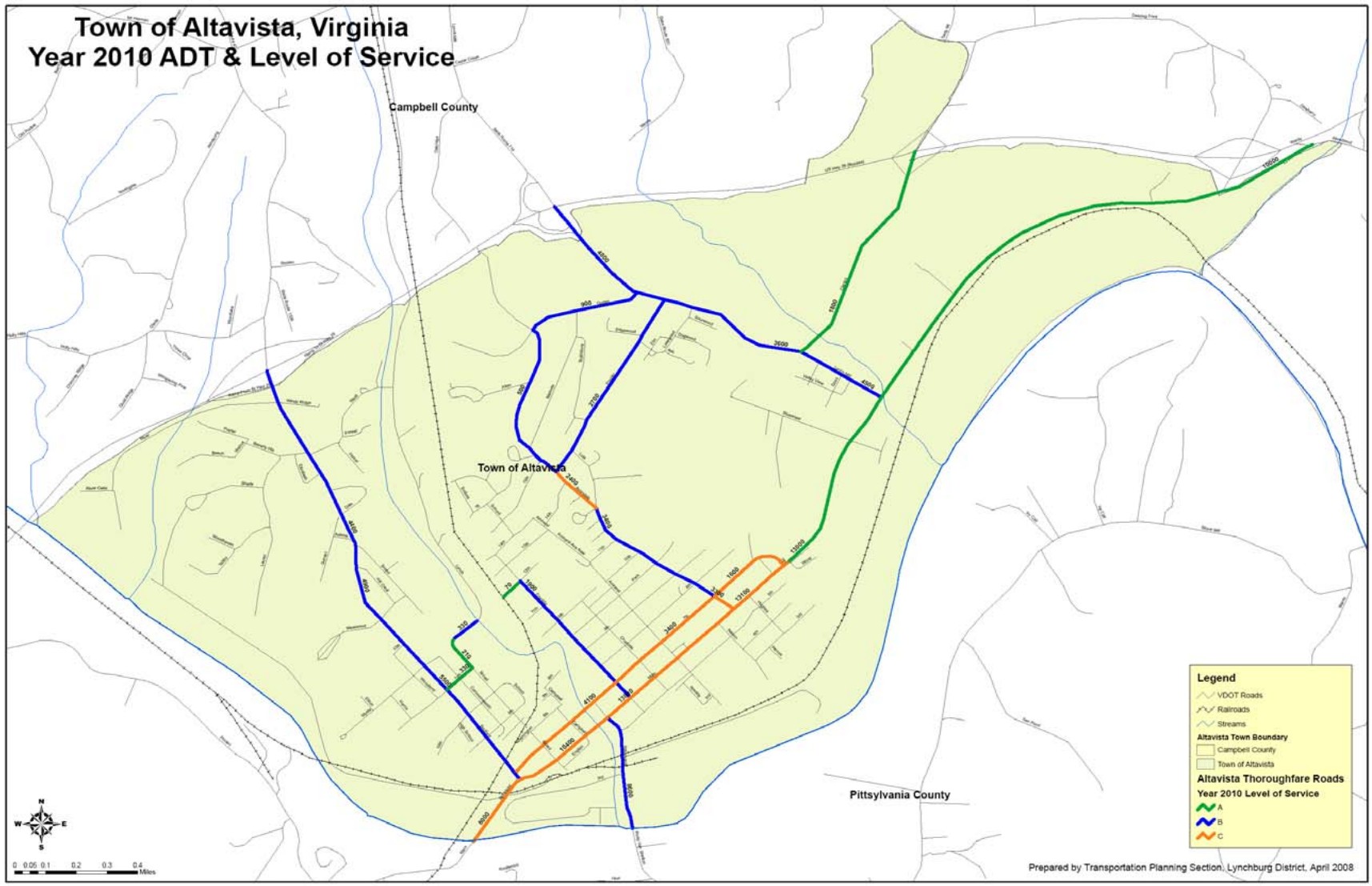


Figure 3-2
2020 Projected ADT and LOS

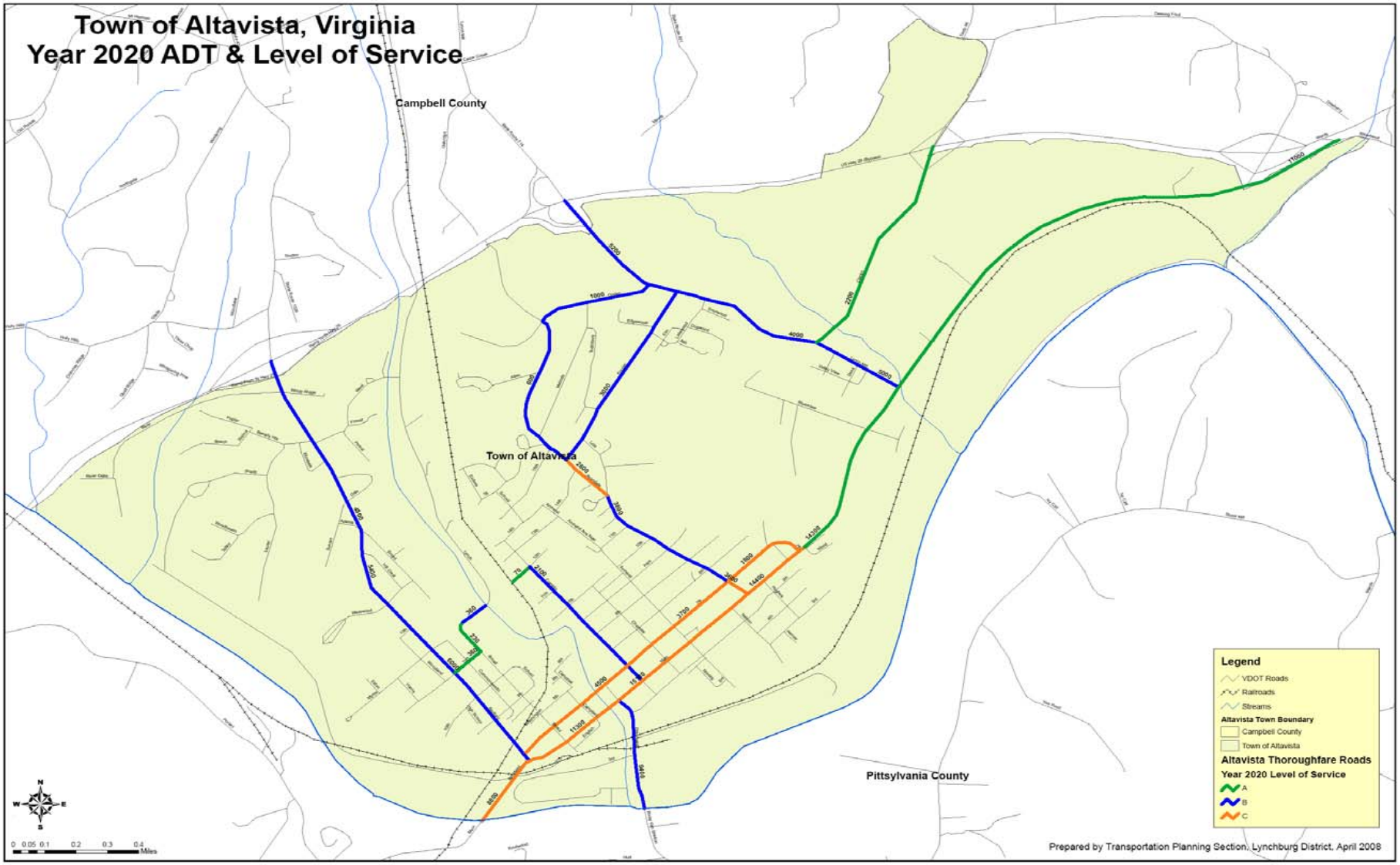
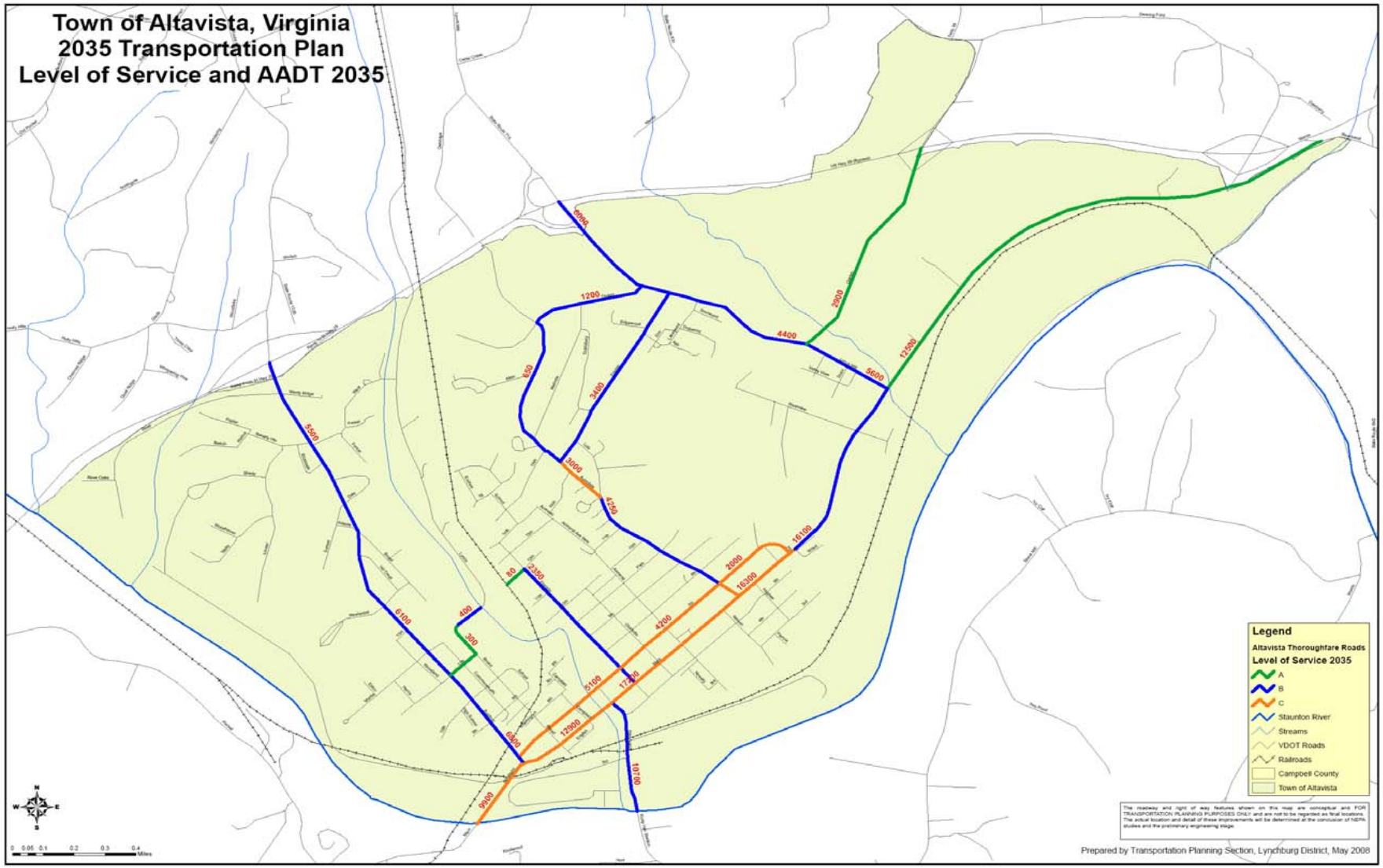


Figure 3-3
2035 Projected ADT and LOS



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CHAPTER FOUR
TRANSPORTATION RECOMMENDATIONS

Development of the Recommendations

Recommendations for the Altavista 2035 Transportation Plan are based upon a comprehensive review of the highway capacity, safety, geometry, and other local issues affecting the performance of the transportation system serving the Town. Transportation recommendations are included in the plan as phased recommendations or other recommendations.

Phased recommendations are generally improvements to the VDOT-maintained roadway system and have been phased to establish a basis for prioritization. Phased recommendations are divided into three phases:

- Phase One recommendations are base year (2010) improvements intended to address the most immediate needs of the Town.
- Phase Two recommendations are interim study year (2020) improvements. Typically, these improvements are not needed in the immediate future. However, planning and budgeting for their future implementation may allow them to be in place for the interim study year.
- Phase Three recommendations are long-term (2035) improvements that do not have an immediate or short-term need. However, in the long-term, as traffic grows and existing facilities age, their importance will become more apparent. Long-term recommended improvements may also be re-evaluated as this plan is updated to determine if the need for their implementation has been met, or whether they should be deferred into the future again when their need may develop. In some instances, long-term recommended improvements may be removed from the transportation planning effort if their need does not develop or if other circumstances cause a change of priorities in the study area.

Other recommendations focus on parking, bicycle/pedestrian facilities, intercity rail, intercity bus, air travel, transit, paratransit, taxi, and goods movement and may include areas of special concern. These items are not typically funded as part of the urban transportation plan, but may include components addressed by any of the phased recommendations.

Costing Methodology

The development of cost estimates included for each proposed recommendation in this plan was based upon a series of unit costs developed by VDOT's Transportation Planning Division. These estimates cover a wide range of proposed road, bridge, intersection, and interchange improvements. However, they do not and cannot provide an accurate estimate for every proposed improvement possible across the Commonwealth of Virginia. Therefore, the costs presented in this document are of a preliminary planning basis only. Further refinement of these cost estimates should occur at each phase of project development. The VDOT cost estimating spreadsheet is included in **Appendix A.6 – Costing Methodology**.

Phased Recommendations

Table 4-1 at the end of this chapter contains the recommended improvements and cost estimates for the Town of Altavista. The primary recommendations for the Town's transportation system are described below:

Phase One: Base Year (2010)

The following segments have been identified for short-term improvements as part of the Town of Altavista 2035 Transportation Study:

- **Main Street and Pittsylvania Avenue**

  Based on the accident history at this intersection, it is recommended to widen Pittsylvania Avenue from two to four lanes as well as widening the turning radius and lane reconfiguration at the intersection of Main Street.

- **Lynch Mill Road & Altavista Elementary School**

  Construction of new left-center turn lane and right turn lanes at existing elementary school entrances.

- **Main Street Corridor**

  Modify and consolidate entrance ways to improve safety and access along the corridor.

- **Main Street Bridge over Staunton River**

  Construct new two-lane bridge with multi-use trail over Staunton (Roanoke) River.

Phase Two: Interim Year (2020)

The following segments have been identified for interim year improvements as part of the Town of Altavista 2035 Transportation Study:

- **Main Street and Lynch Mill Road**

  Add dedicated right turn lane on Lynch Mill Rd. Widen corners of intersection on Lynch Mill Road to improve turning radius and extend culvert.

- **Lynch Mill Road and Clarion Road**

  The recommendation is for the realignment, widening, and lane reconfiguration of the intersection of Clarion Road and Lynch Mill Road.

Phase Three: Study Year (2035) Recommendations

The following segment was identified for long-term improvement as part of the Town of Altavista 2035 Transportation Study:

- **Main Street Widening**

  Widen Main Street to four lanes from 7th Street to Corporate Limits.

Other Recommendations

Parking

A detailed parking study was not undertaken as a part of this transportation study. Based upon the general analysis of the current parking situation, it appears that parking is adequate throughout the town with both on and off street parking opportunities. Specific areas that may need further analysis would be Broad Street (angled on street parking) and the southern segment of Main Street near the Central Business District (on street parking on a high traffic volume segment) A peripheral study could also assist in determining adequate signage, better utilization of spaces and design standards.

Bicycle/Pedestrian

As part of the public facilities component of a Comprehensive Plan, localities are encourage to address bicycle and pedestrian needs as part of the transportation element. Three specific studies have been completed that identify potential bicycle / pedestrian opportunities in the Town of Altavista, they are: The Region 2000 Greenways and Blueways Plan, the Downtown Altavista Master Plan and the Campbell County Parks Plan. It is the recommendation that the Town support this Plans as they support the Altavista Comprehensive Plan goal of providing for adequate bicycle and pedestrian access in areas where access is appropriate. Each of the Plans components are detailed below:

The **Region 2000 Greenways and Blueways Plan** identifies two potential multipurpose trails that could benefit Altavista. These trails are:

- Altavista to Buffalo Creek Natural Area
- Multi-purpose corridor from Altavista to Rustburg

The **Downtown Altavista Master Plan** was developed to assist in the revitalization of the Central Business District (CBD) and specifically focuses on building facades and streetscapes. As a part of the streetscapes design, pedestrian connectivity and visual aesthetics were highlighted.

The **Campbell County Parks Plan** includes a new park to be developed in the Town. The 125 acre English Park straddles the Staunton River and will include new multi-purpose trails that will connect into the already existing Staunton Riverfront Park. The overall development of the Park will be a joint venture between Campbell County and the Town. Additionally, Blueways access along the two parks and at the Manchin Bridge would provide for a unique recreational water experience.

The Town of Altavista should continue to pursue bicycle and pedestrian opportunities through the development of a Bicycle and Pedestrian Plan that provides specific information regarding bicycle and pedestrian needs and determines appropriate accommodations. The Plan should be comprised of the following major elements:

- Establishing goals and objectives
- Inventorying existing system
- Identifying land opportunities and constraints
- Identifying and selecting potential corridors
- Selecting specific routes and facility types
- Evaluating the overall network
- Identify potential support programs
- Develop implementation strategies

The 2035 Transportation Plan will provide the basic background information for the Town of Altavista to establish a Bicycle and Pedestrian Plan. This includes the inventory of the existing system along the functionally classified roadways, the identification of land opportunities and constraints, identifying potential corridors, and identifying potential support programs. **Table A.3-2** the Bicycle Level of Service (BLOS) and Bicycle Compatibility Index (BCI) Measures, which serve as a guide in selecting the appropriate facility type and configuration (width and striping) for bicyclists on a given roadway.

Figure 4-1 provides a mapped inventory of the existing roadways, sidewalks, bicycle facilities; significant activity centers as well as identifies potential corridors to consider providing bicycle and pedestrian accommodations. A complete list of bicycle and pedestrian accommodations along with planning level cost estimates can be found below.

Physical facilities are only part of the bicycle and pedestrian planning process. It is equally important to establish support programs such as education, encouragement, and enforcement as promoted through the Safe Routes to School Program. The Safe Routes to School Program (SRTS) program was established by the Federal Transportation Act SAFETEA-LU and is administered by VDOT on behalf of Federal Highways Administration. The goal of this program is to enable and encourage children (K-8th Grade), including those with disabilities, to walk and bicycle to school.

Federal funding for SRTS program consists for two separate grants, a Program Grant and a Project Grant. The program grant is used for aspects of the SRTS program that do not involve infrastructure improvements such as the development of a SRTS plan, and provide training for teachers or students. After a SRTS plan has been created, the locality is eligible to apply for project grants that will pay for infrastructure improvements such as sidewalks, painted street crossing, signage, and bicycle facilities. Opportunities exist to implement a SRTS program at both the Altavista Elementary School and Altavista's Combined Middle and High School.

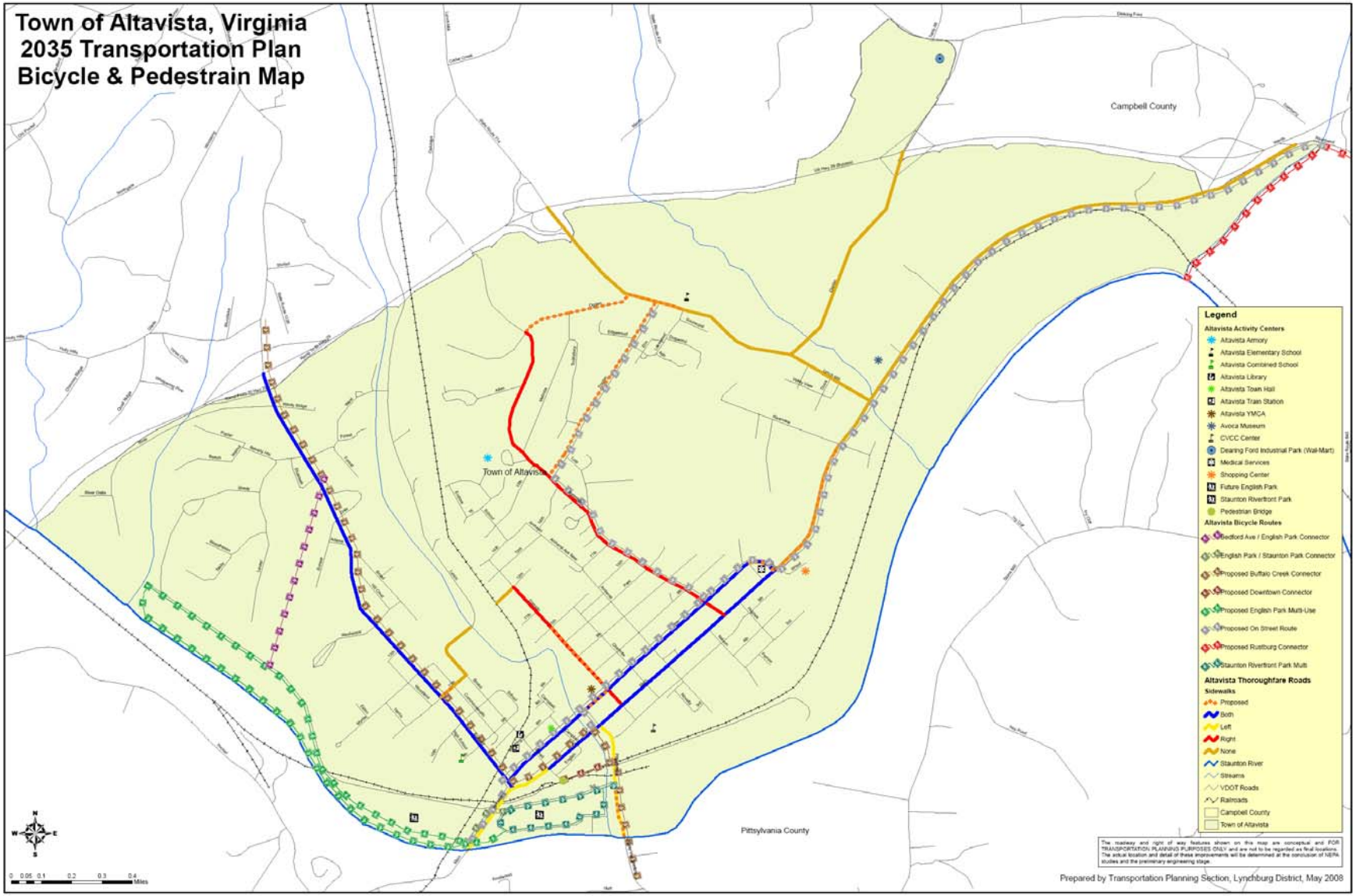
RECOMMENDATIONS:

PEDESTRIANS-	***ESTIMATED COST (2008)***
Provide Sidewalk on Frazier Rd. from Avondale Dr. to Lynch Mill Rd. with Curbing	$175,000
Provide Sidewalk on Ogden Rd. from Avondale Dr. to Lynch Mill Rd. with Curbing	$100,000
Provide Sidewalk and painted crosswalks on Lynch Mill Rd. from Ogden Rd. to Lakewood Dr. to serve the elementary school	$150,000
Provide Sidewalk on Westside of Franklin St. between 7th Street and 10th Street to serve YMCA	$35,000
Provide Sidewalk on Southside of 7th Street between Pittsylvania Ave. and Franklin St. to serve YMCA	$25,000
Extend Sidewalk on 7th St. to North Main St.	$15,000
Extend Sidewalk on Pittsylvania Ave. from N&S RR Overpass to SCL Altavista	$35,000
Extend Sidewalk on North Main Street from Wood Street to Riverview	$60,000
Implementation of the Downtown Altavista Master Plan	$1.4 million

BICYCLIST-	***ACCOMIDATION RECOMMENDATIONS and ESTIMATED COST (2008)***
Route 43 (Bedford Ave.) from WCL Altavista to Main Street	Shared Road
Pittsylvania Ave. from Main St. to SCL Altavista	Shared Road
Main St (Rte 29 Bus.) from Bedford Ave. to Pittsylvania Ave.	Shared Road
Pittsylvania Ave. from 7th Street to Main Street	Shared Road
Pittsylvania Ave. from Main Street to SCL Altavista	Paved Shoulder – $130,000
7th Street from Bedford Ave. to Franklin St.	Shared Road
7th Street from Franklin St. to Main St.	Wide Outside Lane
Main St. from 7th Street to NCL Altavista	Paved Shoulder – $580,000
Lola Ave. from 7th Street to Lola Ave. Extension	Wide Outside Lane
Avondale Dr. from Lola Ave. Ext. to Frazier Rd	Wide Outside Lane
Frazier Rd. from Avondale Dr. to Lynch Mill Road	Shared Road

MULTI-PURPOSE TRAILS -	***ESTIMATED COST (2008)***
Construct multi-purpose trail along Pittsylvania Avenue from 3rd Street to Bridge over Staunton River	$640,000 Per Mile + ROW
Construct multi-purpose trails to connect Staunton Riverfront Park with English Park	$640,000 Per Mile + ROW
Downtown Multi-Use Connector	$640,000 Per Mile + ROW
Main St. (Rte 29 Bus) from SCL Altavista to Bedford Ave.	$140,000

Figure 4-1


Town of Altavista, Virginia
2035 Transportation Plan
Bicycle & Pedestrain Map
Campbell County
Town of Altavista
Pittsylvania County
Legend
Altavista Activity Centers
Altavista Armory
Altavista Elementary School
Altavista Combined School
Altavista Library
Altavista Town Hall
Altavista Train Station
Altavista YMCA
Avoca Museum
CVCC Center
Dearing Ford Industrial Park (Wal-Mart)
Medical Services
Shopping Center
Future English Park
Staunton Riverfront Park
Pedestrian Bridge
Altavista Bicycle Routes
Bedford Ave / English Park Connector
English Park / Staunton Park Connector
Proposed Buffalo Creek Connector
Proposed Downtown Connector
Proposed English Park Multi-Use
Proposed On Street Route
Proposed Rustburg Connector
Staunton Riverfront Park Multi
Altavista Thoroughfare Roads
Sidewalks
Proposed
Both
Left
Right
None
Staunton River
Streams
VDOT Roads
Railroads
Campbell County
Town of Altavista
Prepared by Transportation Planning Section, Lynchburg District, May 2008

Intercity Rail, Intercity Bus, and Air Travel, Transit, Paratransit, and Taxi

Altavista has a limited number of other modes of travel available, which is typical for a town of its small size. Paratransit service and taxi service are the only other modes of travel directly available in Altavista itself. However, within a short drive of Altavista there are a number of other options. Intercity bus service, intercity passenger rail service, and commercial air service are available out of Lynchburg, located about 25 miles to the north.

Providing a wide variety of other travel options in a town as small as Altavista is typically, not financially feasible. However, this plan recommends the Town conduct a study to review the feasibility of developing a fixed route local transit option. In addition, the plan recommends that Town officials encourage the re-establishment of an intercity bus stop for Greyhound. Greyhound operates a line along Route 29 and buses on this line could be detoured into the town to make a stop.

Goods Movement

Regarding goods movement, several of the proposed roadway recommendations will improve truck access for shippers by reducing congestion and making turning movements easier. These recommendations were compared to the survey responses from the local freight movers to insure compatibility.

Tourism and Recreation

Several initiatives were identified during the development of this plan to accommodate tourist-related traffic and recreation. These recommendations are specific to Parking and Bicycle / Pedestrian initiatives.

Environmental Issues

An environmental overview was conducted for the Altavista thoroughfare roadway recommendations that included widening (providing additional travel lanes) or development of new roadway facilities. To conduct the environmental overview, secondary data from VDOT and other readily available sources was used. **Appendix A.5** describes the environmental overview methodology and the resources that were evaluated. **Table 4-2 Environmental Overview** at the end of this chapter lists the recommendations that were reviewed and the potentially impacted resources. The following is a brief summary of potentially impacted resources:

The estimates in this report are intended to represent the worst-case scenario of impacts. Further evaluation of environmental impacts resulting from each of these recommendations should occur once they are developed in more detail. Local projects included in this plan are for information purposes only and are not necessarily supported by VDOT. Therefore, they were not reviewed as part of the environmental overview. There were no additional environmental features identified in Altavista that would preclude implementation of any of the recommendations.

Local Projects[1]

The following local roadways have been identified for improvement by the Town of Altavista. Although outside the jurisdiction of the VDOT thoroughfare roadway system, they are listed to provide continuity

[1] Local recommendations are included for information purposes only and are not necessarily supported by VDOT.

and consistency between local plans and VDOT plans. Costs for local projects were derived using the same methodology as the thoroughfare improvements.

- **Clarion Road to 7th Street Connector**

  In order to accommodate increasing traffic demand and to provide an alternative ingress / egress into and out of the Town, a new two lane connector between Clarion Road and 7th Street is recommended.

Transportation Plan Adoption

The Altavista Town Council approved the Altavista 2035 Transportation Plan on 06/10/2008.

Table 4-1
Recommended Improvements

Route #	Route Name	From / At	To	Length	Recommendation	Cost (Yr 2008 $)	Existing Typical Section (Width)	Recom. Typical Section (Width)	Average Daily Traffic (ADT)		
									2010	2020	2035
29 BUS	Main Street (bridge)	SCL	North end of bridge	0.05	Construct new two lane bridge with multi-use trail over Staunton River and reconstruction of approaches.	$18,062,000	U2	U4	8000	8800	9900
	Lynch Mill Road	Altavista Elementary School		.10	Construct new left center turn lane and two right turn lanes at existing elementary school entrances.	$1,600,000	U2	N/A	3600	4000	4400
29 BUS	Main Street	7th Street	Bedford Ave	N/A	Modify and consolidate entrance ways to improve safety and access along corridor.	$500,000	U4	N/A	13800	15100	17200
29 BUS	Main Street	Lynch Mill Road	N/A	N/A	Widen corners of intersection on Lynch Mill Road to improve turning radius and install 200' dedicated right turn lane on Lynch Mill Road and extend culvert.	$700,000	U2	N/A	13000	14300	16100
29 BUS	Main Street	7th Street	NCL	1.90	Widen Main Street to four lanes.	$18,810,000	U2	U4	10,000	11000	12500
	Clarion Road	Lynch Mill Road	N/A	N/A	Realignment, widening and lane reconfiguration of the intersection to improve sight distance and turning movements.	$1,700,000	U2	U2	1800	2200	2900
	Pittsylvania Avenue	Main Street	SCL	0.40	Widen Pittsylvania Avenue to four lanes; includes intersection improvement at Main Street.	$3,972,000	U2	U4	8600	9400	10700
711	Clarion Road Connector	Lynch Mill Road	7^{th} Street	0.70	Construct a new roadway from 7^{th} Street to Lynch Mill Road at Clarion Road; includes new bridge over culvert.	$4,248,000	N/A	U2	N/A	N/A	N/A

Figure 4-2

Recommandations Map

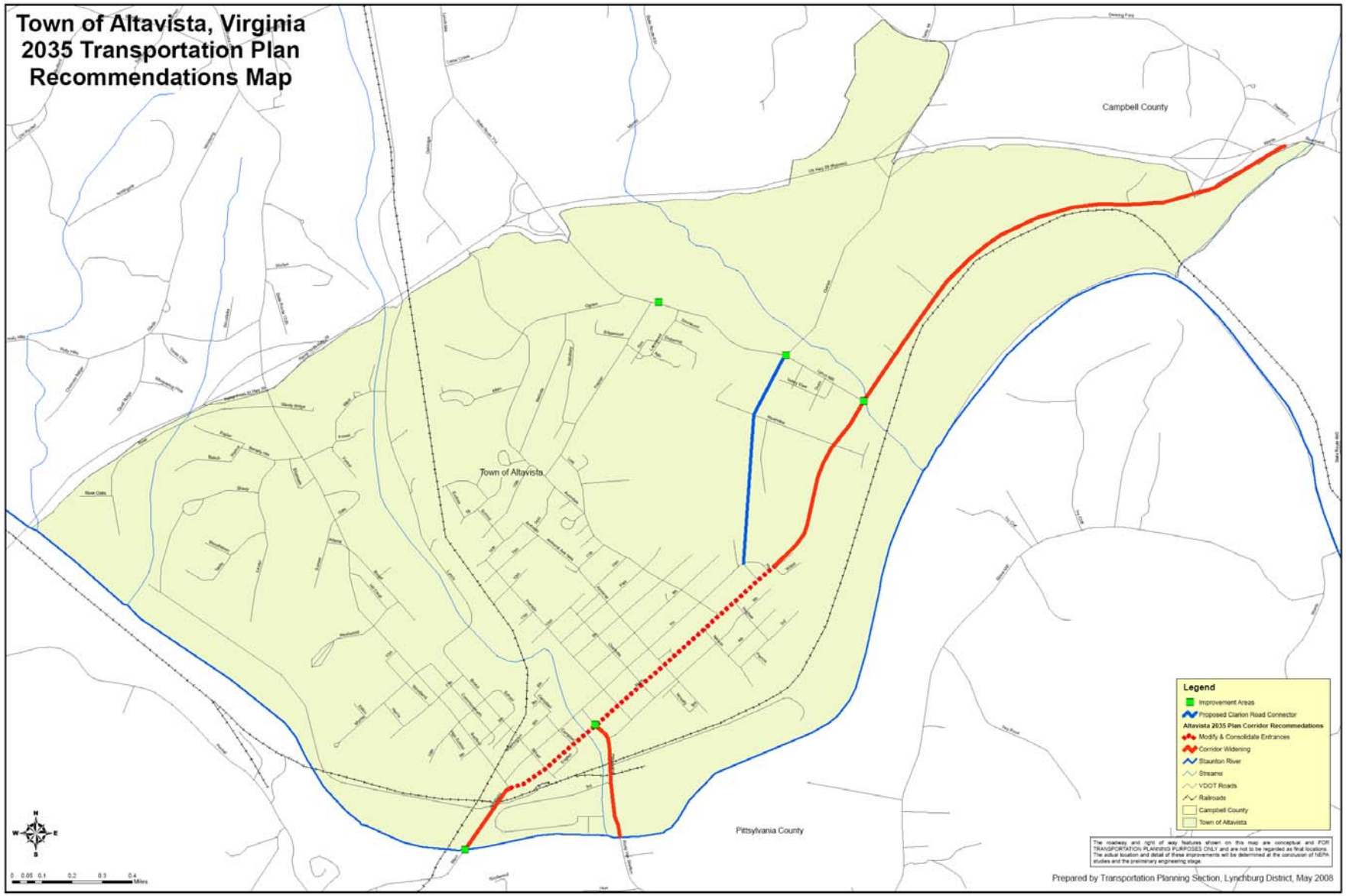


Table 4-2
Environmental Overview

TOWN OF ALTAVISTA - Transportation Plan Year 2035															
Project Description							Purpose	Needs					Env. Issues	Alternatives	History
Route	Project Description	From	To	Proposed Typical Section	Length (miles)	Cost	Summary of Project Purpose	Forecasted LOS - Build and No build / show	Existing year AADT	Future Year AADT	Existing Volume to Capacity Ratio	Capacity (C), Roadway (R) or Safety Deficiency (S), Route Continuity (RC), Transportation Demand (TD), Modal Connectivity	Environmental Concerns	Alternatives Considered	Project History
29 B (Main St.)	Construct new two lane bridge with multi-use trail over Roanoke (Staunton) River	0.1 Mi S. SCL Altavista	Rte 43 (Bedford Ave)	U2	0.4	$18,062,000	Replace existing substandard structure (Suf. Rating 14.7) & add multi-use path	B,C	7,600	9,900	0.36	R,S	Water Quality Permits, Cultural Resources, Endangered Specie Study	None	Identified in Altavista's 2020 Transportation Plan
29 B (Main St.)	Modify and consolidate entrance ways to improve safety and access along corridor.	Bedford Ave.	7th St.	U4	1.4	$500,000	Utilize access management principals to improve safety and mobility of corridor	C,C	13,200	17,200	0.36	C,S	Cultural Resources, Conservation/Park Lands	None	Accident History
29 B (Main St.)	Widen corners of intersection on Lynch Mill Road to improve turning radius and install 200' dedicated right turn lane on Lynch Mill Road and extend culvert.	@ Lynch Mill Rd.		R2		$700,000	Provide right turn lane for SB Rte 29 Bus to improve safety and operation	B,B	12,400	16,100	N/A	C,S	Water Quality Permits, Cultural Resources, Endangered Specie Study	None	Congestion & Safety Issues
29 B (Main St.)	Widen from two to four lanes	7th St.	NCL Altavista	U4	1.9	$18,810,000	Address future safety and capacity needs as corridor develops commercially	A,B	9,600	12,500	0.45	RC	Cultural Resources, Endangered Specie	Construct center reversible turn lane	Identified in Altavista's 2020 Transportation Plan
Pittsylvania Ave	Widen Pittsylvania Avenue to four lanes; includes intersection improvement at Main Street.	SCL	Main St.	U4	0.4	$3,972,000	Address safety and capacity needs to serve industrial and recreational areas	A,B	8,200	10,700	0.45	C,R,S,MC	Cultural Resources, Conservation/Park Lands	Construct center reversible turn lane	Identified in Altavista's 2020 Transportation Plan
Lynch Mill Road	Construct new left center turn lane and two right turn lanes at existing Altavista Elementary School entrances.	Ogden Rd.	Lakewood Dr.	U2	0.2	$1,600,000	Provide for safe storage and turning movements to elementary school	A,B	4,600	6,000	0.19	C,S	Cultural Resources, Endangered Specie	Construct right turn lanes at school entrances	Traffic Congestion at School Drop-off and Pick-up
Clarion Road	Realignment, widening and lane reconfiguration of the intersection with Lynch Mill Road to improve sight distance and turning movements.	@ Lynch Mill Rd.		U2	n/a	$1,700,000	Realign intersection to improve sight distance and safety	A,A	1,500	2,900	N/A	S	Cultural Resources	None	Sight Distance Problem and Accident History
Clarion Road Connector	Construct a new roadway from 7th Street to Lynch Mill Road at Clarion Road; includes new bridge over culvert.	7th St.	Lynch Mill Rd.	U2	0.7	$4,248,000	Extends parallel street system (7th & Main) to serve residential, commercial and industrial areas	N/A, A	N/A	1,500	N/A	RC,TD	Water Quality Permits, Cultural Resources, Endangered Specie Study	Extend Clarion Rd on new alignment from Lynch Mill Rd. to Bedford Ave. (2020 Plan)	Identified in Altavista's 2020 Transportation Plan

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APPENDIX A - DATA COLLECTION AND ANALYSIS

A.1 - Bridge Sufficiency Data

Bridge structure analysis was based on a review of the VDOT database of bridge structures in the Town of Altavista. The analysis focused on a review of the "sufficiency" rating for each structure. The sufficiency rating indicates the overall condition of the bridge and is developed by analyzing individual bridge structures including the deck, substructure and superstructure. Bridge sufficiency is measured on a scale from 0 to 100. A bridge that has a rating of 100 would represent an entirely sufficient bridge and zero would represent an entirely insufficient or deficient bridge. Bridges with sufficiency ratings below 50 are eligible for replacement or rehabilitation using federal funds. Those with ratings between 50 and 80 are eligible for funds to cover rehabilitation only. Data from the VDOT bridge sufficiency database for Altavista is listed on the following page in **Table A.1-1**

Table A.1-1
Bridge Sufficiency Data

Route #	Structure #	Over	Suff. Rating	Last Insp.	Type	Built
29 Bus	1981	Staunton River	14.8	01/2007	Concrete	1929

A.2 - Existing and Forecast Growth Count Data

Forecast Growth Methodology

Determining the mid- and long-term roadway needs for Altavista required estimating the vehicular traffic demands on the roadway system for the years 2010, 2020 and 2035. In small urban areas such as Altavista, the standard approach used by traffic engineers to determine future traffic volumes is to analyze historic traffic count data. For Altavista, it was also useful to review recent projections for population and/or employment in the area and to consider special project-level forecasts that may have been completed. The following sections describe the analysis performed to determine the appropriate growth factors for use in forecasting traffic volumes in Altavista.

Historic Traffic Counts

Part of the basis for the forecast growth analysis was historic trend line data. Available daily traffic volumes covering the period from 1995 to 2005 were collected from VDOT historic traffic records. The records were compiled for streets on the thoroughfare highway system only and included 32 data collection sites that are routinely counted by VDOT. The majority of these sites have been collected on a biannual basis between 1995 and 2005. This traffic data was used to identify average annual growth rates based upon linear regression analysis. This process assumes that, in the absence of information to the contrary, these patterns of change will continue to the horizon year of 2035. The average annual traffic growth is represented by a fixed increase (or decrease) in the number of vehicular trips per year on a roadway segment. This figure is determined by dividing the total percent change by the number of study years.

Two criteria were used in establishing a level of confidence in the calculated trend line. The first is the r-squared value, which indicates the extent to which the variation in traffic across the years is explained

by the trend line equation. An r-squared value of 1.0 indicates that the calculated line explains all of the variation. For this application, data points with an r-squared value of less than 0.75 were not considered reliable. For several locations, data points that did not conform to the trend line were removed in order to improve the R-squared value into the acceptable range. The second criterion is the number of available data points (or, in this case, the number of years for which data was available from the VDOT databases). Not all roadway segments were analyzed using this straight-line forecasting methodology. Only the segments that contained three or more historic data points are included.

Based on this analysis, the average traffic growth estimates on the segments with acceptable criteria were between one percent and four percent per year. No segments indicated a reduction in traffic.

A.3 - Capacity Analysis Methodology

Roadway Inventory

To analyze the thoroughfare roadway system in Altavista, the study team utilized the Statewide Planning System (SPS) database of roadway conditions. The SPS database includes all thoroughfare highways in the state, identified by roadway segment. Each segment of the road is delineated based upon intersections with other roadways or by significant changes in the geometry of the roadway segment (number of lanes, pavement width, etc.). The database contains information about both sides of the road, and therefore uses a convention of northbound or eastbound orientation to maintain consistent references to the right and left sides of the road.

The contents of the database were compared to data collected during field observations for every thoroughfare roadway in Altavista. The fieldwork enabled identification of geometric deficiencies such as limited sight distances, obstructions near the travel way, limited pavement width, and other operational issues. Each variable in the database was compared to actual conditions noted in the field. In addition to observation, the roads were videotaped and photographed to enable further review without additional field observations. The variables reviewed in the SPS database included the following:

- *Pavement Width* – the width of pavement from curb to curb measured in feet (total roadway pavement width).
- *Number of Through Lanes* – the number of lanes available for through traffic in both directions of permitted travel.
- *Access Control* – the type of access control provided on the road (local streets have no access control, freeways and major divided highways usually have full access and limited access control respectively).
- *Type of Operation* – the type of roadway operation (either one way or two-way travel).
- *Median Type* – the type of median the road contains (none, raised, depressed, flush, or center turn lane).
- *Median Width* – the width of the median from edge to edge measured in feet.
- *Left Shoulder Width* – the width of the left shoulder of the road measured from the pavement edge to the travel lane edge.
- *Right Shoulder Width* – the width of the right shoulder of the road measured from the pavement edge to the travel lane edge.
- *Curb and Gutters* – the presence of curb and gutter along the roadway (either none, both sides of the street, left side only, or right side only).
- *Sidewalks* – the presence of sidewalks along the roadway segment (either none, both sides of the street, left side only, or right side only).

- *Number of Traffic Signals* – the number of traffic signals located on the road, including the beginning and ending intersections of the road segment.
- *Posted Speed Limit* – the speed limit posted along the road segment.

Capacity Analysis

Intersections

The approach used in the capacity analysis for this study was to use planning level analysis techniques as established in the 2000 Highway Capacity Software and (HCS+), Version 5.2. If the intersection was identified as a deficiency (near or over capacity), the analyst would run HCS "Operations" analysis to develop improvement recommendations. The following tables describe the methodology for analyzing traffic operations:

For the signalized intersection, the following input assumptions and guidelines were used:

Variable	Assumption	Additional Remarks
Traffic volumes	Use actual count volumes for intersection. If using year other than 2005, grow volumes to represent 2005 conditions (state growth factor assumptions in technical documentation).	Use individual intersection peak volumes, rather than an area-wide common peak, unless there is a good reason for using area-wide and it is explicitly stated in the assumptions.
Peak hour factor (PHF)	Use PHF based on traffic counts.	Use 0.60 as minimum
Area Type	Use "Other"	
Cycle length	Use minimum of 60 seconds, maximum of 90 seconds	
Parking	Reflect actual conditions.	
Coordination	Reflect actual conditions.	

For unsignalized intersections, this analysis used the following input assumptions and guidelines:

Variable	Assumption	Additional Remarks
Traffic volumes	Use actual count volumes for intersection. If using year other than 2005, grow volumes to represent 2005 conditions (state growth factor assumptions in technical documentation).	Use individual intersection peak volumes, rather than an area-wide common peak, unless there is a good reason for using area-wide and it is explicitly stated in the assumptions.
Peak hour factor (PHF)	Use PHF based on traffic counts.	Use 0.60 as minimum
Percent heavy vehicles	Use values from traffic counts. Unless it is broken down by movement, use the same percentage for all movements related to the approach.	
Pedestrian volumes	Enter flow rate and lane width. For speed, use HCM default of 4 feet per second.	
Median type and storage	Use actual conditions.	
Right turn flare	Use actual conditions.	
Percent grade	Use actual, if available. Otherwise, use default of 0.	
Upstream signal data	As per HCM, unless signalized intersection is within 1300 feet (0.25 mile), assume signal is isolated. Otherwise, use information from HCS analysis of upstream intersection.	

Roadways

For Arterial Roadways, this analysis used the following input assumptions and guidelines:

Variable	Assumption	Additional Remarks
Traffic volumes	Use a weighted average (weight by segment lengths) of the actual volume. The software calls for total two-way daily traffic. Either use daily traffic or peak hour traffic * 10 (then put 0.10 in for the planning analysis hour factor).	Ensure that volumes represent 2005conditions (state growth factor assumptions in technical documentation).
Peak hour factor (PHF)	Use 0.90 (HCS default)	
Adjusted saturation flow rate	Use 1800 (HCS default)	
Percent turns from exclusive lanes	Unless you have field data, use 30 percent	
Number of through lanes	Reflect number of through lanes that go all the way through the analysis section	
Arterial class	Reflect actual conditions and use definitions in HCM.	Most of the arterial sections through our towns will be Type III or IV.
Free-flow speed	Use HCS default for type of arterial	
Length	Reflect actual conditions	
Median	Reflect actual conditions over majority of arterial length	If conditions change drastically, you should break the arterial into individual analysis sections.
Left turn bays	Reflect actual conditions over majority of arterial length	If conditions change drastically, you should break the arterial into individual analysis sections.
Number of signalized intersections	Reflect actual conditions	
Arrival type	Unless you have field data that indicates otherwise, use HCS default of 3 to reflect an average across the arterial section	
Signal type	Unless you know that none of the signals are actuated, use actuated.	
Cycle length	Since, in most cases, you will not be analyzing every intersection in the arterial section, use 60 seconds.	
Green/cycle ratio	Use 0.75	

For rural or urban 2-lane collectors on the thoroughfare system, a planning-level approach was used based on look-up tables for 2-lane collectors. The look-up values were derived from the 2000 Highway Capacity Manual (HCM). Ideal flow rates were obtained from Figure 7-3 of the HCM. The flow rates were then adjusted assuming typical roadway characteristics for the small urban areas. These parameters included an undivided facility with rolling terrain, 11-foot lanes and 4-foot shoulders to be consistent with the assumptions for rural highways. A free-flow speed of 30 mph and access point density of 10 per mile was assumed to represent the urbanized setting. The flow rates were also adjusted for typical small urban area traffic characteristics. A peak hour factor of 0.90 and 10 percent heavy vehicles represent average traffic conditions for these areas.

For the lookup table below, a 2-lane collector would be deficient at more than 500 vehicles per hour per lane per direction (LOS D).

Level of Service	No left turn lanes Vehicles Per Hour Per Lane
A	<= 200
B	201 – 350
C	351 – 500
D	501 – 600
E	601 – 900
F	> 900

Table Base Assumptions:

1 Uninterrupted flow conditions, 2-lane undivided roadway, free flow speed = 30 mph; 10 percent trucks (all heavy vehicles are trucks); PHF = 0.90; lane widths = 11 ft; shoulder width = 4 feet; rolling terrain

2 Roadways that showed a deficiency (lower than LOS D) under existing geometric conditions were recommended for capacity improvements under the future conditions analyses.

For rural or urban multi-lane highways on the thoroughfare system, a planning-level approach was used based on look-up tables for multi-lane highways. The look-up values were derived from the 2000 Highway Capacity Manual (HCM). Ideal flow rates were obtained from Figure 7-3 of the HCM. The flow rates were then adjusted assuming typical roadway characteristics for the small urban areas. These parameters included a divided facility with rolling terrain, 12-foot lanes and 6-foot shoulders to be consistent with the assumptions for rural highways. A design speed of 60 mph and access point density of 20 per mile was assumed to represent the rural setting. The flow rates were also adjusted for typical small urban area traffic characteristics. A peak hour factor of 0.90 and 10 percent heavy vehicles represent average traffic conditions for these areas.

For the lookup table below, a multi-lane highway would be deficient at more than 1,130 vehicles per hour per lane per direction (LOS D).

Level of Service	Vehicles Per Hour Per Lane
A	<= 500
B	501 – 830
C	831 – 1130
D	1131 – 1350
E	1351 – 1580
F	> 1580

Table Base Assumptions:

Design speed = 60 mph; 10 percent trucks (all heavy vehicles are trucks); PHF = 0.90; lane widths = 12 ft; access points = 20 per mile, each side; shoulder width > 6 feet; divided highway; rolling terrain

For rural or urban 2-lane highways on the thoroughfare system, a planning-level approach was used based on look-up tables for 2-lane highways. The look-up values were derived from the 2000 Highway Capacity Manual (HCM). Ideal flow rates were obtained from Figure 7-3 of the HCM. The flow rates were then adjusted assuming typical roadway characteristics for the small urban areas. These parameters included rolling terrain, 11-foot lanes and 4-foot shoulders to be consistent with the assumptions for rural highways. A design speed of 60 mph, 80 percent no passing, and a directional split of 60/40 was used to represent the rural setting. The flow rates were also adjusted for typical small urban area traffic characteristics. A peak hour factor of 0.90 and 10 percent heavy vehicles represent average traffic conditions for these areas.

For the lookup table below, a 2-lane highway would be deficient at more than 479 vehicles per hour in both directions (LOS D).

Level of Service	Total Vehicles in Both Directions
A	<= 69
B	70 – 240
C	241 – 479
D	480 – 735
E	736 – 1557
F	> 1557

Table Base Assumptions:
Design speed = 60 mph; 10 percent trucks (all heavy vehicles are trucks); PHF = 0.90; lane widths = 11 ft; shoulder width = 4 feet; rolling terrain; 80 percent no-passing; directional split 60/40

Bicycle Level of Service and Bicycle Compatibility Index

Bicycle Level of Service (BLOS) and Bicycle Compatibility Index (BCI) measures serve as a guide in selecting the appropriate facility type and configuration (width and striping) for bicyclists on a given roadway. BLOS may best be defined as an evaluation of geometric and physical elements directly affecting bicycling; whereas, BCI is an applied feel/experience of the bicyclist based on surveys of cyclist's perceptions of a specific roadway environment under similar roadway and physical conditions. Similar to the roadway level of surface measures both the BLOS and BCI carry an A, B, C, D, E &F rating in order of descending quality. A summary of the BLOS and BCI measures for both 2005 and 2035 based on current conditions may be found in **Table A.3-2**.

Conditions that affect bicyclists include:

- Effective travel width for bicyclist
- On-street parking encroachments
- Volume of motor vehicles
- Speed of traffic
- Proportion of heavy vehicles
- Pavement surface conditions

Generally, the most critical variable affecting on-road cycling is pavement width. Adequate roadway for bicycle travel may be achieved by providing paved shoulders, wide outside lanes, or bike lanes as described below.

Shared Roadway – Paved Shoulders

Paved shoulders should be at least four feet wide (five feet when side obstructions are located to the right such as guardrail, utility poles, and other static obstructions) when Design Year ADT is greater than 2000 VPD, with Greater than 5% total truck and bus usage. Where four foot widths cannot be provided, a minimum of two feet is better than none. [VDOT Bicycle and Pedestrian Policy: 2004]

Additional shoulder width may be appropriate under the following conditions:

- High bicycle usage is expected
- Motor vehicle speeds exceed 50 mph
- Steep grades are present
- Percentage of trucks, buses, and recreational vehicles is high

Shared Roadway – Wide Outside Lanes

Wide outside lanes (or wide curb lanes) are outside vehicle travel lanes that provide adequate width for both motor vehicles and bicycle travel. For vehicle speeds less then 30 mph, wide outside lanes consist of a minimum fourteen feet of useable lane width defined from the edge strip to lane strip or from the longitudinal joint of the gutter pan to lane strip (the gutter pan should not be included as usable width).

A slightly wider outside lane width (15 feet) may be necessary under the following conditions:

- On stretches of roadways with steep grades
- Adjacent to on street parking (22 feet minimum)
- Where drainage grates and raised reflectors reduce the effective width

Bike Lanes

Bike lanes are typically appropriate for urban and suburban settings. Delineating bike lanes is not recommended within a required paved shoulder area. Drainage grates, railroad crossings, traffic control devices, etc. must be evaluated and modified, if necessary, when considering bike lanes.

The recommended width for bike lanes can vary depending on the roadway cross section, edge treatment, and traffic characteristics. The following are minimum widths for bicycle lanes:

- Four foot minimum on roadways with curb and gutter (not counting width of gutter)
- Five foot minimum when adjacent to barrier curb or other static side obstruction
- Five foot minimum when adjacent to on-street parking
- Six foot minimum when substantial truck traffic is present or where motor vehicle speeds exceed 50 mph.

Signed Shared Roadway

Signed shared roadways are streets that have been identified by signage as preferred bike routes. Sighed shared roadways can include a variety of different bicycle facilities including paved shoulders, wide outside lanes, and bike lanes.

There are several reasons for designating signed bicycle routes:

- The route provides continuity to other bicycle facilities such as bike lanes and shared use paths
- The road is a common route for bicyclists through a high demand corridor
- In rural areas the route is preferred for bicycling due to low motor vehicle traffic volume or paved shoulder availability
- The route extends along local neighborhood streets and collectors that lead to an internal neighborhood destination such as a park, school, or commercial district.

Selecting the appropriate bicycle accommodation for any given corridor is based on the intended usage, physical conditions, riding perception, and the classification of predominate bicyclist (commuters/recreational/family) that it will serve. The establishment of a Bicycle Advisory Committee will be a good resource in determining the best method of accommodation.

Table A.3-1
Existing Conditions
Roadway Segment Capacity Analysis Results

JRS	Route #	Functional Class	Route Name	From	To	Length	# thru Lanes	Pavement Width	Median Width	Median Type	Left Shoulder Width	Right Shoulder Width	Curb and Gutter	Sidewalk	# of Signals	Speed Limit	Growth Rate	Base ADT	Base LOS
1620029010	0029	MC	RR Maint Rd	SCL ALTAVISTA	BEDFORD AVE	0.1	2	36	0	None	0	4	L	L	1	25	1.00%	7600	C
1620029015	0029	MC	Main St	BEDFORD AVE	BROAD ST	0.1	2	36	0	None	0	4	L	L	2	25	1.00%	9900	C
1620029020	0029	MC	Main St	BROAD ST	PITTSLYVANIA AVE	0.3	2	40	0	None	0	0	B	B	2	25	1.00%	9900	C
1620029030	0029	MC	Main St	PITTSYLVANIA AVE	AMHERST AVE	0.3	4	42	0	None	0	0	B	B	3	25	1.00%	13200	C
1620029040	0029	MC	Main St	AMHERST AVE	LOLA AVE	0.3	4	40	0	None	0	0	B	B	2	25	1.00%	12500	C
1620029050	0029	MC	Main St	LOLA AVE	WOOD LN	0.2	4	40	0	None	0	0	B	B	1	25	1.00%	12500	C
1620029060	0029	MC	Main St	WOOD LN	LYNCH MILL RD	0.4	2	24	0	None	6	8	N	N	2	45	1.00%	12400	A
1620029070	0029	MC	Main St	LYNCH MILL RD	NCL ALTAVISTA	1.4	2	24	0	None	6	8	N	N	1	45	1.00%	9600	A
1620043010	0043	MC	Bedford Ave	WCL ALTAVISTA	BROAD ST	0.6	2	24	0	None	6	6	N	N	0	35	1.00%	4200	B
1620043020	0043	MC	Bedford Ave	BROAD ST	MYRTLE LN	0.5	2	40	0	None	0	0	B	L	0	35	1.00%	4700	B
1620043030	0043	MC	Bedford Ave	MYRTLE LN	7TH STREET	0.5	2	40	0	None	0	0	B	B	1	35	1.00%	5200	B
1620043040	0043	MC	Bedford Ave	7TH STREET	MAIN ST	0.1	2	40	0	None	0	0	B	B	2	25	1.00%	5200	B
1620900010	0900	MIC	7th St	BEDFORD AVE	FRANKLIN AVE	0.4	2	40	0	None	0	0	B	B	4	25	1.00%	3900	C
1620900020	0900	MIC	7th St	FRANKLIN AVE	LOLA AVE	0.4	2	24	0	None	8	8	N	L	3	25	1.00%	3200	C
1620900030	0900	MIC	7th St	LOLA AVE	MAIN ST	0.6	2	34	0	None	0	0	B	B	2	25	1.00%	1500	C
1620901010	0901	MIC	11th St	BROAD ST	BEDFORD AVE	0.1	2	31	0	None	0	8	N	N	0	25	1.00%	300	A
1620903010	0903	MIC	Avondale Dr	LOLA AVE EXT	FRAZIER RD	0.2	2	28	0	None	6	0	R	R	0	25	1.00%	2300	C
1620903020	0903	MIC	Avondale Dr	FRAZIER RD	OGDEN RD	0.6	2	28	0	None	6	0	R	R	0	25	1.00%	500	B
1620904010	0904	MIC	Broad St	LYNCH RD	11TH STREET	0.1	2	18	0	None	6	4	N	N	0	25	1.00%	200	A
1620905010	0905	MC	Clarion Rd	LYNCH MILL RD	ECL ALTAVISTA	0.8	2	27	0	None	6	6	N	N	0	35	3.00%	1500	A
1620906010	0906	MIC	Franklin Ave	MAIN ST	7TH STREET	0.1	2	36	0	None	0	0	N	R	2	25	1.00%	1600	B
1620906020	0906	MIC	Franklin Ave	7TH STREET	12TH STREET	0.5	2	22	0	None	6	6	N	R	0	25	1.00%	1800	B

JRS	Route #	Functional Class	Route Name	From	To	Length	# thru Lanes	Pavement Width	Median Width	Median Type	Left Shoulder Width	Right Shoulder Width	Curb and Gutter	Sidewalk	# of Signals	Speed Limit	Growth Rate	Base ADT	Base LOS
1620907010	0907	MIC	Frazier Rd	AVONDALE DR	LYNCH MILL RD	0.7	2	22	0	None	6	6	N	N	0	35	1.00%	2600	B
1620908010	0908	MIC	Lola Ave	MAIN ST	7TH STREET	0.1	2	27	0	None	0	0	N	R	2	25	1.00%	3200	C
1620908020	0908	MIC	Lola Ave	7TH STREET	11TH STREET	0.4	2	28	0	None	0	0	R	R	1	25	1.00%	3200	B
1620908030	0908	MIC	Lola Ave	11TH STREET	LOLA AVE EXT	0.1	2	30	0	None	0	0	R	R	0	25	1.00%	3300	B
1620909010	0909	MC	Lynch Mill Rd	MAIN ST	CLARION RD	0.3	2	22	0	None	6	6	N	N	1	35	1.00%	4300	B
1620909020	0909	MC	Lynch Mill Rd	CLARION RD	FRAZIER RD	0.5	2	22	0	None	6	6	N	N	0	35	1.00%	3400	B
1620909030	0909	MC	Lynch Mill Rd	FRAZIER RD	NCL ALTAVISTA	0.4	2	22	0	None	6	6	N	N	0	35	1.00%	4600	B
1620910010	0910	MIC	Lynch Rd	12TH STREET EXT	BROAD ST	0.2	2	18	0	None	6	4	N	N	0	25	1.00%	300	B
1620911010	0911	MIC	Ogden Rd	AVONDALE DR	LYNCH MILL RD	0.4	2	20	0	None	6	6	N	N	0	35	1.00%	900	B
1620912010	0912	MC	Pittsylvania Ave	MAIN ST	SCL ALTIVISTA	0.4	2	24	0	None	0	0	B	L	1	25	1.00%	8200	B

Table A.3-2
Existing & Future Conditions
Bicycle Assessment Results

Route #	Functional Class	Route Name	From	To	Length	# thru Lanes	Pavement Width	Median Width	Median Type	Left Shoulder Width	Right Shoulder Width	Curb and Gutter	Sidewalk	# of Signals	Speed Limit	2005 BICYCLE ASSESSMENT			2035 BICYCLE ASSESSMENT		
																2005 ADT	2005 BLOS	2005 BCI	2035 ADT	2035 BLOS	2035 BCI
29	MC	RR Maint Rd	SCL ALTAVISTA	BEDFORD AVE	0.1	2	36	0	None	0	4	L	L	1	25	7600	D	D	9900	D	D
29	MC	Main St	BEDFORD AVE	BROAD ST	0.1	2	36	0	None	0	4	L	L	2	25	9900	C	D	12900	D	D
29	MC	Main St	BROAD ST	PITTSLYVANIA AVE	0.3	2	40	0	None	0	0	B	B	2	25	9900	C	D	12900	D	D
29	MC	Main St	PITTSYLVANIA AVE	AMHERST AVE	0.3	4	42	0	None	0	0	B	B	3	25	13200	D	D	17200	D	D
29	MC	Main St	AMHERST AVE	LOLA AVE	0.3	4	40	0	None	0	0	B	B	2	25	12500	D	D	16300	D	D
29	MC	Main St	LOLA AVE	WOOD LN	0.2	4	40	0	None	0	0	B	B	1	25	12500	D	D	16300	D	E
29	MC	Main St	WOOD LN	LYNCH MILL RD	0.4	2	24	0	None	6	8	N	N	2	45	12400	E	E	16100	E	E
29	MC	Main St	LYNCH MILL RD	NCL ALTAVISTA	1.4	2	24	0	None	6	8	N	N	1	45	9600	D	D	12500	E	E
43	MC	Bedford Ave	WCL ALTAVISTA	BROAD ST	0.6	2	24	0	None	6	6	N	N	0	35	4200	C	C	5500	C	C
43	MC	Bedford Ave	BROAD ST	MYRTLE LN	0.5	2	40	0	None	0	0	B	L	0	35	4700	C	C	6100	C	C
43	MC	Bedford Ave	MYRTLE LN	7TH STREET	0.5	2	40	0	None	0	0	B	B	1	35	5200	D	D	6800	D	D
43	MC	Bedford Ave	7TH STREET	MAIN ST	0.1	2	40	0	None	0	0	B	B	2	25	5200	D	D	6800	D	D
900	MIC	7th St	BEDFORD AVE	FRANKLIN AVE	0.4	2	40	0	None	0	0	B	B	4	25	3900	C	C	5100	D	D
900	MIC	7th St	FRANKLIN AVE	LOLA AVE	0.4	2	24	0	None	8	8	N	L	3	25	3200	C	C	4200	C	C
900	MIC	7th St	LOLA AVE	MAIN ST	0.6	2	34	0	None	0	0	B	B	2	25	1500	C	B	2000	C	B
901	MIC	11th St	BROAD ST	BEDFORD AVE	0.1	2	31	0	None	0	8	N	N	0	25	300	A	C	400	A	C
903	MIC	Avondale Dr	LOLA AVE EXT	FRAZIER RD	0.2	2	28	0	None	6	0	R	R	0	25	2300	B	C	3000	C	C
903	MIC	Avondale Dr	FRAZIER RD	OGDEN RD	0.6	2	28	0	None	6	0	R	R	0	25	500	A	C	650	B	C
904	MIC	Broad St	LYNCH RD	11TH STREET	0.1	2	18	0	None	6	4	N	N	0	25	200	A	C	300	A	C
905	MC	Clarion Rd	LYNCH MILL RD	ECL ALTAVISTA	0.8	2	27	0	None	6	6	N	N	0	35	1500	C	C	2900	C	C
906	MIC	Franklin Ave	MAIN ST	7TH STREET	0.1	2	36	0	None	0	0	N	R	2	25	1600	A	C	2100	B	C
906	MIC	Franklin Ave	7TH STREET	12TH STREET	0.5	2	22	0	None	6	6	N	R	0	25	1800	B	C	2350	B	C

Route #	Functional Class	Route Name	From	To	Length	# thru Lanes	Pavement Width	Median Width	Median Type	Left Shoulder Width	Right Shoulder Width	Curb and Gutter	Sidewalk	# of Signals	Speed Limit	2005 BICYCLE ASSESSMENT			2035 BICYCLE ASSESSMENT		
																2005 ADT	2005 BLOS	2005 BCI	2035 ADT	2035 BLOS	2035 BCI
907	MIC	Frazier Rd	AVONDALE DR	LYNCH MILL RD	0.7	2	22	0	None	6	6	N	N	0	35	2600	C	D	3400	D	D
908	MIC	Lola Ave	MAIN ST	7TH STREET	0.1	2	27	0	None	0	0	N	R	2	25	3200	B	C	4200	C	C
908	MIC	Lola Ave	7TH STREET	11TH STREET	0.4	2	28	0	None	0	0	R	R	1	25	3200	C	C	4200	C	C
908	MIC	Lola Ave	11TH STREET	LOLA AVE EXT	0.1	2	30	0	None	0	0	R	R	0	25	3300	C	C	4250	C	C
909	MC	Lynch Mill Rd	MAIN ST	CLARION RD	0.3	2	22	0	None	6	6	N	N	1	35	4300	D	D	5600	D	D
909	MC	Lynch Mill Rd	CLARION RD	FRAZIER RD	0.5	2	22	0	None	6	6	N	N	0	35	3400	D	D	4400	D	D
909	MC	Lynch Mill Rd	FRAZIER RD	NCL ALTAVISTA	0.4	2	22	0	None	6	6	N	N	0	35	4600	D	D	6000	E	E
910	MIC	Lynch Rd	12TH STREET EXT	BROAD ST	0.2	2	18	0	None	6	4	N	N	0	25	300	A	C	400	A	C
911	MIC	Ogden Rd	AVONDALE DR	LYNCH MILL RD	0.4	2	20	0	None	6	6	N	N	0	35	900	C	C	1200	D	D
912	MC	Pittsylvania Ave	MAIN ST	SCL ALTIVISTA	0.4	2	24	0	None	0	0	B	L	1	25	8200	D	D	10700	D	D

Bicycle Level of Service (BLOS) and Bicycle Compatibility Index (BCI) indicate comfort level for specific geometrics and traffic conditions. Roadways with a better score are more attractive and safer for cyclist.

A.4 - Safety Analysis

Traffic safety was analyzed based upon a historic review of traffic accidents in the Town of Altavista. Accident reports for a period of three years (2003, 2004, and 2005) were collected from the Altavista Police Department. Each report uses a standardized form developed by the state police to enable tracking and analysis of accident trends in Virginia. For this study, only accidents on the thoroughfare roadways were analyzed (accident reports for incidents on local roads were not collected). The accident reports were sorted and analyzed by street segment in order to isolate roadway segments that contained large numbers of accidents. Where large numbers of accidents occurred, an attempt at identifying common causes and accident trends was made in order to develop potential safety improvements and recommendations. Due to the large amount of detail available on each accident report, only the most basic information was pulled from the report. For each road segment, the following information was reviewed:

- Location of accident – the specific address or geographic location of the accident.
- Type of collision - this was important to help identify potential causes of the accidents. Choices included rear end, sideswipe, T-bone, head-on, and fixed object.

The results of the accident study are included in **Table A.4-1**.

Table A.4-1
2003-2005 Accident Summary

LOCATION / INTERSECTION	YEAR	DAY	TYPE
7th Street	2003	PM	Reckless Driving
7th Street	2004	PM	Failure to Yield
7th Street	2005	PM	Failure to Yield
7th Street	2005	PM	Failure to Yield
7th Street	2005	AM	Failure to Yield
7th Street Count		5	5
7th Street and Amherst Avenue	2004	AM	Failure to Yield
7th Street and Amherst Avenue Count		1	1
7th Street and Bedford Avenue	2003	PM	Rear End Collision
7th Street and Bedford Avenue Count		1	1
7th Street and Broad Street	2003	PM	Failure to Yield
7th Street and Broad Street	2003	AM	Failure to Yield
7th Street and Broad Street	2004	PM	Failure to Yield
7th Street and Broad Street Count		3	3
7th Street and Campbell Avenue	2004	PM	Reckless Driving
7th Street and Campbell Avenue	2005	PM	Failure to Yield
7th Street and Campbell Avenue Count		2	2
7th Street and Franklin Avenue	2003	AM	Reckless Driving
7th Street and Franklin Avenue	2003	AM	Reckless Driving
7th Street and Franklin Avenue	2004	PM	Reckless Driving
7th Street and Franklin Avenue Count		3	3
7th Street and Lola Avenue	2003	PM	Failure to Yield
7th Street and Lola Avenue	2005	PM	Rear End Collision

7th Street and Lola Avenue Count		2	2
7th Street and Pittsylvania Avenue	2003	PM	Failure to Yield
7th Street and Pittsylvania Avenue	2005	PM	Reckless Driving
7th Street and Pittsylvania Avenue	2005	PM	Other - Deer
7th Street and Pittsylvania Avenue Count		3	3
Avondale Drive	2003	PM	Failure to Yield
Avondale Drive Count		1	1
Avondale Drive and 14th Street	2003	PM	Failure to Yield
Avondale Drive and 14th Street	2004	AM	Failure to Yield
Avondale Drive and 14th Street	2004	PM	Rear End Collision
Avondale Drive and 14th Street Count		3	3
Avondale Drive and 15th Street	2005	PM	Other - Deer
Avondale Drive and 15th Street Count		1	1
Avondale Drive and Frazier Road	2003	PM	Reckless Driving
Avondale Drive and Frazier Road	2003	PM	Failure to Yield
Avondale Drive and Frazier Road Count		2	2
Avondale Drive and Ogden Road	2005	AM	Reckless Driving
Avondale Drive and Ogden Road Count		1	1
Bedford Avenue and 10th Street	2004	PM	Reckless Driving
Bedford Avenue and 10th Street Count		1	1
Bedford Avenue and 13th Street	2003	PM	Other - Deer
Bedford Avenue and 13th Street	2004	PM	Failure to Yield
Bedford Avenue and 13th Street	2005	PM	Rear End Collision
Bedford Avenue and 13th Street Count		3	3
Bedford Avenue and 7th Street	2003	AM	Reckless Driving
Bedford Avenue and 7th Street	2004	AM	Reckless Driving
Bedford Avenue and 7th Street Count		2	2

Bedford Avenue and 9th Street	2003	PM	Failure to Yield
Bedford Avenue and 9th Street	2004	PM	Reckless Driving
Bedford Avenue and 9th Street	2005	PM	Rear End Collision
Bedford Avenue and 9th Street Count		3	3
Bedford Avenue and Beverly Heights	2003	PM	Other - Deer
Bedford Avenue and Beverly Heights Count		1	1
Bedford Avenue and Broad Street	2003	PM	Rear End Collision
Bedford Avenue and Broad Street Count		1	1
Bedford Avenue and Highway 29	2005	PM	Reckless Driving
Bedford Avenue and Highway 29 Count		1	1
Bedford Avenue and Hill Crest Drive	2005	PM	Other - Deer
Bedford Avenue and Hill Crest Drive Count		1	1
Bedford Avenue and Myrtle Lane	2004	PM	Reckless Driving
Bedford Avenue and Myrtle Lane Count		1	1
Bedford Avenue and West Road	2005	PM	Rear End Collision
Bedford Avenue and West Road Count		1	1
Bedford Avenue and Windy Ridge Road	2003	PM	Other - Deer
Bedford Avenue and Windy Ridge Road Count		1	1
Clarion Road and Lynch Mill Road	2003	PM	Other - Deer
Clarion Road and Lynch Mill Road Count		1	1
Franklin Avenue and 7th Street	2003	PM	Rear End Collision
Franklin Avenue and 7th Street	2005	PM	Rear End Collision
Franklin Avenue and 7th Street Count		2	2
Frazier Road and Lola Avenue	2004	PM	Failure to Yield
Frazier Road and Lola Avenue Count		1	1
Frazier Road and Lynch Mill Road	2003	AM	Other - Deer
Frazier Road and Lynch Mill Road Count		1	1

Frazier Road and Toddsbury Road	2003	AM	Other - Deer
Frazier Road and Toddsbury Road Count		1	1
Lola Avenue and 10th Street	2003	AM	Rear End Collision
Lola Avenue and 10th Street Count		1	1
Lola Avenue and 7th Street	2004	PM	Failure to Yield
Lola Avenue and 7th Street	2005	PM	Failure to Yield
Lola Avenue and 7th Street Count		2	2
Lola Avenue and 8th Street	2003	PM	Other
Lola Avenue and 8th Street	2003	AM	Failure to Yield
Lola Avenue and 8th Street Count		2	2
Lola Avenue and 9th Street	2003	PM	Failure to Yield
Lola Avenue and 9th Street	2004	PM	Other - Ped
Lola Avenue and 9th Street	2005	PM	Reckless Driving
Lola Avenue and 9th Street Count		3	3
Lola Avenue and Frazier Road	2005	PM	Other
Lola Avenue and Frazier Road Count		1	1
Lynch Mill Road	2004	PM	Other - Deer
Lynch Mill Road Count		1	1
Lynch Mill Road and Clarion Road	2004	PM	Reckless Driving
Lynch Mill Road and Clarion Road Count		1	1
Lynch Mill Road and Doss Street	2004	AM	Reckless Driving
Lynch Mill Road and Doss Street Count		1	1
Lynch Mill Road and Frazier Road	2003	PM	Rear End Collision
Lynch Mill Road and Frazier Road Count		1	1
Lynch Mill Road and Lakewood Drive	2003	PM	Reckless Driving
Lynch Mill Road and Lakewood Drive Count		1	1
Lynch Mill Road and Ogden Road	2004	PM	Other

Lynch Mill Road and Ogden Road	2004	AM	Reckless Driving
Lynch Mill Road and Ogden Road Count		2	2
Main Street (CBD)	2003	PM	Reckless Driving
Main Street (CBD)	2003	PM	Failure to Yield
Main Street (CBD)	2003	PM	Reckless Driving
Main Street (CBD)	2003	PM	Failure to Yield
Main Street (CBD)	2003	PM	Rear End Collision
Main Street (CBD)	2004	PM	Reckless Driving
Main Street (CBD)	2004	PM	Failure to Yield
Main Street (CBD)	2004	PM	Rear End Collision
Main Street (CBD)	2004	PM	Failure to Yield
Main Street (CBD)	2005	PM	Rear End Collision
Main Street (CBD)	2005	PM	Rear End Collision
Main Street (CBD)	2005	PM	Failure to Yield
Main Street (CBD)	2005	PM	Failure to Yield
Main Street (CBD)	2005	PM	Reckless Driving
Main Street (CBD)	2005	PM	Failure to Yield
Main Street (CBD) Count		15	15
Main Street (Near Rte. 712)	2003	PM	Reckless Driving
Main Street (Near Rte. 712)	2003	PM	Rear End Collision
Main Street (Near Rte. 712)	2003	PM	Rear End Collision
Main Street (Near Rte. 712)	2003	PM	Other - Deer
Main Street (Near Rte. 712)	2004	PM	Other - Deer
Main Street (Near Rte. 712)	2004	AM	Other - Deer
Main Street (Near Rte. 712)	2005	PM	Rear End Collision
Main Street (Near Rte. 712)	2005	PM	Rear End Collision
Main Street (Near Rte. 712)	2005	PM	Other - Deer

Main Street (Near Rte. 712) Count		9	9
Main Street and 7th Street	2003	AM	Other - Deer
Main Street and 7th Street	2003	PM	Reckless Driving
Main Street and 7th Street	2003	PM	Rear End Collision
Main Street and 7th Street	2004	PM	Reckless Driving
Main Street and 7th Street	2004	AM	Reckless Driving
Main Street and 7th Street	2004	PM	Rear End Collision
Main Street and 7th Street	2004	PM	Rear End Collision
Main Street and 7th Street	2004	PM	Rear End Collision
Main Street and 7th Street	2004	PM	Reckless Driving
Main Street and 7th Street	2005	PM	Reckless Driving
Main Street and 7th Street	2005	PM	Failure to Yield
Main Street and 7th Street	2005	PM	Failure to Yield
Main Street and 7th Street	2005	PM	Failure to Yield
Main Street and 7th Street	2005	PM	Rear End Collision
Main Street and 7th Street	2005	PM	Other - Deer
Main Street and 7th Street	2005	PM	Rear End Collision
Main Street and 7th Street Count		16	16
Main Street and Amherst Avenue	2003	PM	Reckless Driving
Main Street and Amherst Avenue	2003	PM	Other - Ped
Main Street and Amherst Avenue	2003	PM	Rear End Collision
Main Street and Amherst Avenue	2003	PM	Reckless Driving
Main Street and Amherst Avenue	2003	PM	Failure to Yield
Main Street and Amherst Avenue	2003	PM	Failure to Yield
Main Street and Amherst Avenue	2004	PM	Rear End Collision
Main Street and Amherst Avenue	2004	PM	Reckless Driving
Main Street and Amherst Avenue	2004	PM	Reckless Driving

Main Street and Amherst Avenue	2004	PM	Rear End Collision
Main Street and Amherst Avenue	2004	PM	Failure to Yield
Main Street and Amherst Avenue	2004	PM	Failure to Yield
Main Street and Amherst Avenue	2005	PM	Failure to Yield
Main Street and Amherst Avenue	2005	PM	Failure to Yield
Main Street and Amherst Avenue	2005	PM	Failure to Yield
Main Street and Amherst Avenue	2005	PM	Failure to Yield
Main Street and Amherst Avenue	2005	PM	Failure to Yield
Main Street and Amherst Avenue	2005	PM	Failure to Yield
Main Street and Amherst Avenue	2005	PM	Other - Ped
Main Street and Amherst Avenue Count		19	19
Main Street and Avoca Lane	2003	AM	Other - Deer
Main Street and Avoca Lane	2004	PM	Other - Deer
Main Street and Avoca Lane	2004	PM	Rear End Collision
Main Street and Avoca Lane	2005	PM	Other - Deer
Main Street and Avoca Lane Count		4	4
Main Street and Bedford Avenue	2003	PM	Rear End Collision
Main Street and Bedford Avenue	2003	AM	Rear End Collision
Main Street and Bedford Avenue	2003	PM	Reckless Driving
Main Street and Bedford Avenue	2003	PM	Rear End Collision
Main Street and Bedford Avenue	2004	PM	Rear End Collision
Main Street and Bedford Avenue	2005	PM	Rear End Collision
Main Street and Bedford Avenue	2005	PM	Rear End Collision
Main Street and Bedford Avenue Count		7	7
Main Street and Broad Street	2003	PM	Failure to Yield
Main Street and Broad Street	2004	PM	Rear End Collision
Main Street and Broad Street	2005	PM	Rear End Collision

Main Street and Broad Street Count		3	3
Main Street and Campbell Avenue	2003	PM	Reckless Driving
Main Street and Campbell Avenue	2004	PM	Rear End Collision
Main Street and Campbell Avenue	2005	PM	Rear End Collision
Main Street and Campbell Avenue	2005	PM	Rear End Collision
Main Street and Campbell Avenue	2005	PM	Failure to Yield
Main Street and Campbell Avenue Count		5	5
Main Street and Charlotte Avenue	2003	PM	Reckless Driving
Main Street and Charlotte Avenue	2003	PM	Rear End Collision
Main Street and Charlotte Avenue	2004	PM	Failure to Yield
Main Street and Charlotte Avenue	2005	PM	Failure to Yield
Main Street and Charlotte Avenue Count		4	4
Main Street and Franklin Avenue	2003	AM	Failure to Yield
Main Street and Franklin Avenue	2004	PM	Reckless Driving
Main Street and Franklin Avenue	2004	PM	Rear End Collision
Main Street and Franklin Avenue	2004	PM	Failure to Yield
Main Street and Franklin Avenue	2004	PM	Failure to Yield
Main Street and Franklin Avenue	2005	PM	Rear End Collision
Main Street and Franklin Avenue	2005	PM	Rear End Collision
Main Street and Franklin Avenue	2005	PM	Reckless Driving
Main Street and Franklin Avenue	2005	PM	Failure to Yield
Main Street and Franklin Avenue Count		9	9
Main Street and Hughes Avenue	2003	PM	Failure to Yield
Main Street and Hughes Avenue	2003	AM	Rear End Collision
Main Street and Hughes Avenue	2003	PM	Rear End Collision
Main Street and Hughes Avenue	2003	PM	Failure to Yield
Main Street and Hughes Avenue	2003	PM	Failure to Yield

Main Street and Hughes Avenue	2004	PM	Failure to Yield
Main Street and Hughes Avenue	2004	AM	Failure to Yield
Main Street and Hughes Avenue	2004	PM	Reckless Driving
Main Street and Hughes Avenue	2004	PM	Reckless Driving
Main Street and Hughes Avenue	2004	PM	Rear End Collision
Main Street and Hughes Avenue	2004	PM	Failure to Yield
Main Street and Hughes Avenue	2005	PM	Failure to Yield
Main Street and Hughes Avenue	2005	PM	Failure to Yield
Main Street and Hughes Avenue Count		13	13
Main Street and Lola Avenue	2003	PM	Rear End Collision
Main Street and Lola Avenue	2003	PM	Reckless Driving
Main Street and Lola Avenue	2003	PM	Failure to Yield
Main Street and Lola Avenue	2003	PM	Rear End Collision
Main Street and Lola Avenue	2003	AM	Rear End Collision
Main Street and Lola Avenue	2004	PM	Failure to Yield
Main Street and Lola Avenue	2004	PM	Failure to Yield
Main Street and Lola Avenue	2004	AM	Failure to Yield
Main Street and Lola Avenue	2005	AM	Reckless Driving
Main Street and Lola Avenue	2005	PM	Failure to Yield
Main Street and Lola Avenue	2005	PM	Rear End Collision
Main Street and Lola Avenue	2005	PM	Rear End Collision
Main Street and Lola Avenue	2005	PM	Failure to Yield
Main Street and Lola Avenue	2005	PM	Reckless Driving
Main Street and Lola Avenue Count		14	14
Main Street and Lynch Mill Road	2003	PM	Rear End Collision
Main Street and Lynch Mill Road	2003	PM	Failure to Yield
Main Street and Lynch Mill Road	2003	PM	Reckless Driving

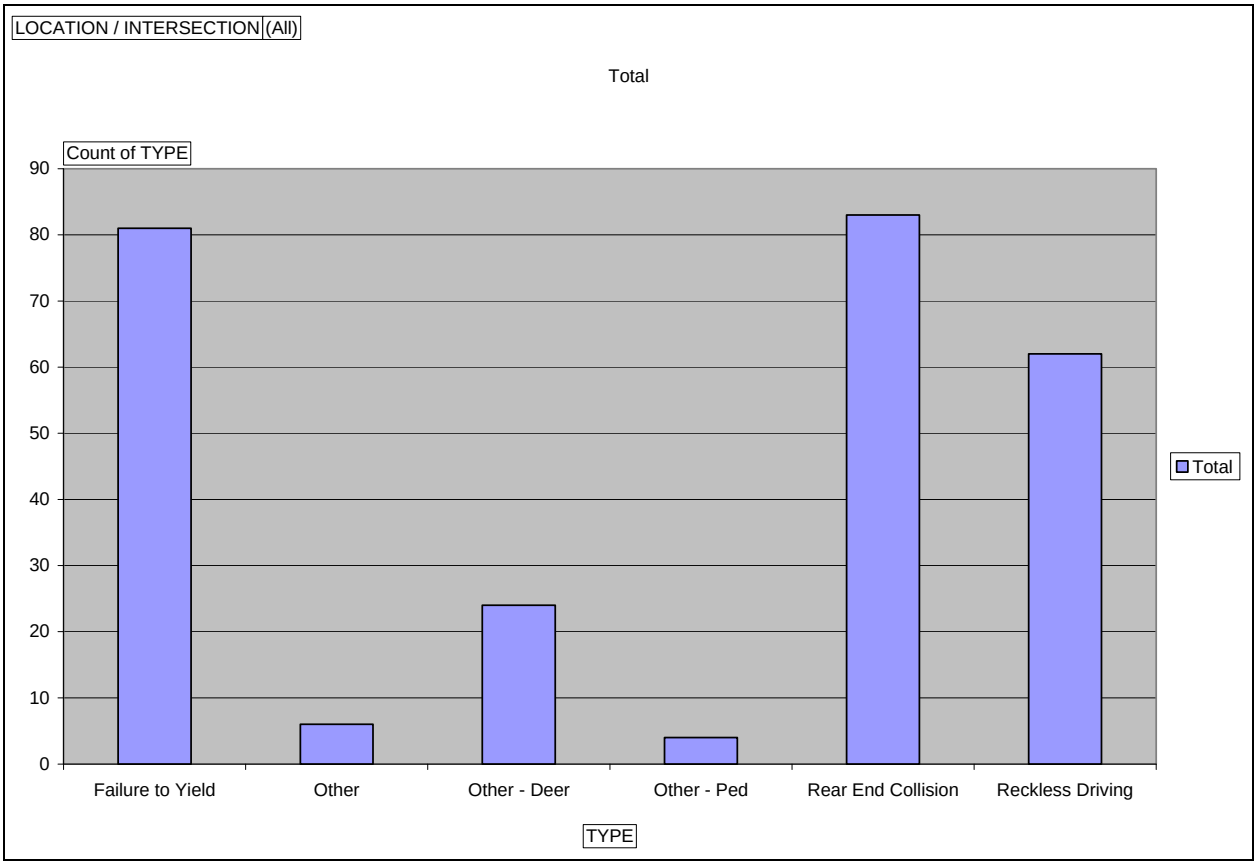
Main Street and Lynch Mill Road	2003	PM	Reckless Driving
Main Street and Lynch Mill Road	2003	AM	Other
Main Street and Lynch Mill Road	2003	PM	Other - Deer
Main Street and Lynch Mill Road	2004	PM	Rear End Collision
Main Street and Lynch Mill Road	2005	PM	Rear End Collision
Main Street and Lynch Mill Road	2005	AM	Rear End Collision
Main Street and Lynch Mill Road	2005	PM	Failure to Yield
Main Street and Lynch Mill Road	2005	AM	Rear End Collision
Main Street and Lynch Mill Road	2005	AM	Rear End Collision
Main Street and Lynch Mill Road Count		12	12
Main Street and Nelson Avenue	2003	PM	Failure to Yield
Main Street and Nelson Avenue	2004	AM	Failure to Yield
Main Street and Nelson Avenue	2004	PM	Other - Ped
Main Street and Nelson Avenue	2005	PM	Reckless Driving
Main Street and Nelson Avenue	2005	PM	Rear End Collision
Main Street and Nelson Avenue Count		5	5
Main Street and Pittsylvania Avenue	2003	PM	Rear End Collision
Main Street and Pittsylvania Avenue	2003	PM	Rear End Collision
Main Street and Pittsylvania Avenue	2003	PM	Reckless Driving
Main Street and Pittsylvania Avenue	2003	PM	Reckless Driving
Main Street and Pittsylvania Avenue	2003	PM	Rear End Collision
Main Street and Pittsylvania Avenue	2003	PM	Reckless Driving
Main Street and Pittsylvania Avenue	2003	PM	Reckless Driving
Main Street and Pittsylvania Avenue	2003	PM	Rear End Collision
Main Street and Pittsylvania Avenue	2003	AM	Reckless Driving
Main Street and Pittsylvania Avenue	2003	AM	Reckless Driving
Main Street and Pittsylvania Avenue	2003	PM	Rear End Collision

Main Street and Pittsylvania Avenue	2003	PM	Other - Deer
Main Street and Pittsylvania Avenue	2004	PM	Rear End Collision
Main Street and Pittsylvania Avenue	2004	PM	Rear End Collision
Main Street and Pittsylvania Avenue	2004	PM	Reckless Driving
Main Street and Pittsylvania Avenue	2004	PM	Rear End Collision
Main Street and Pittsylvania Avenue	2004	AM	Failure to Yield
Main Street and Pittsylvania Avenue	2004	AM	Rear End Collision
Main Street and Pittsylvania Avenue	2004	AM	Rear End Collision
Main Street and Pittsylvania Avenue	2004	PM	Failure to Yield
Main Street and Pittsylvania Avenue	2004	PM	Failure to Yield
Main Street and Pittsylvania Avenue	2005	PM	Rear End Collision
Main Street and Pittsylvania Avenue	2005	PM	Failure to Yield
Main Street and Pittsylvania Avenue	2005	PM	Failure to Yield
Main Street and Pittsylvania Avenue	2005	PM	Rear End Collision
Main Street and Pittsylvania Avenue	2005	AM	Reckless Driving
Main Street and Pittsylvania Avenue	2005	PM	Other
Main Street and Pittsylvania Avenue Count		27	27
Main Street and Riverbend Road	2004	PM	Rear End Collision
Main Street and Riverbend Road	2004	PM	Other
Main Street and Riverbend Road	2004	AM	Reckless Driving
Main Street and Riverbend Road	2005	PM	Failure to Yield
Main Street and Riverbend Road Count		4	4
Main Street and Riverview Drive	2003	PM	Rear End Collision
Main Street and Riverview Drive	2003	PM	Failure to Yield
Main Street and Riverview Drive	2003	PM	Reckless Driving
Main Street and Riverview Drive	2003	PM	Rear End Collision
Main Street and Riverview Drive	2003	PM	Rear End Collision

Main Street and Riverview Drive	2005	AM	Other - Deer
Main Street and Riverview Drive	2005	AM	Rear End Collision
Main Street and Riverview Drive	2005	PM	Rear End Collision
Main Street and Riverview Drive Count		8	8
Main Street and Wood Lane	2003	AM	Reckless Driving
Main Street and Wood Lane	2003	AM	Rear End Collision
Main Street and Wood Lane	2003	PM	Reckless Driving
Main Street and Wood Lane Count		3	3
Ogden Road and Lynch Mill Road	2004	PM	Reckless Driving
Ogden Road and Lynch Mill Road	2005	PM	Reckless Driving
Ogden Road and Lynch Mill Road	2005	PM	Reckless Driving
Ogden Road and Lynch Mill Road Count		3	3
Ogden Road and Melinda Drive	2005	PM	Failure to Yield
Ogden Road and Melinda Drive Count		1	1
Pittsylvania Avenue and 3rd Street	2003	PM	Other - Deer
Pittsylvania Avenue and 3rd Street	2004	PM	Rear End Collision
Pittsylvania Avenue and 3rd Street	2004	PM	Rear End Collision
Pittsylvania Avenue and 3rd Street	2004	PM	Other - Deer
Pittsylvania Avenue and 3rd Street Count		4	4
Pittsylvania Avenue and 5th Street	2003	PM	Failure to Yield
Pittsylvania Avenue and 5th Street	2003	PM	Reckless Driving
Pittsylvania Avenue and 5th Street	2004	PM	Rear End Collision
Pittsylvania Avenue and 5th Street	2004	AM	Failure to Yield
Pittsylvania Avenue and 5th Street	2004	PM	Failure to Yield
Pittsylvania Avenue and 5th Street	2004	AM	Failure to Yield
Pittsylvania Avenue and 5th Street	2004	PM	Failure to Yield
Pittsylvania Avenue and 5th Street	2005	PM	Rear End Collision

Pittsylvania Avenue and 5th Street Count		8	8
Pittsylvania Avenue and 7th Street	2003	PM	Rear End Collision
Pittsylvania Avenue and 7th Street Count		1	1
Grand Count		260	260

Graphical Representation of All Accidents Figure A-1



A.5 - Environmental Overview Methodology

An environmental overview was conducted for recommendations that involve roadway widening (providing additional travel lanes) or for the recommendations involving the development of new transportation facilities. In these cases, the following information was reviewed from available resources to determine potential impacts in the study area:

- *Agricultural and Forestal Districts* – Identification of whether or not the proposed recommendation is within an agricultural or forestal district was determined through coordination with the Virginia Department of Agriculture and Consumer Services and local contact with the County government of Washington County.
- *Hazmat Sites* – Location of any hazardous material storage or release sites near the proposed recommendation's location.
- *Historic Properties* – The number, location, and name of historic properties which are recorded in the files of the Virginia Department of Historic Resources or determined as locally significant through coordination with the local jurisdiction.
- *Wetlands* – The acreage and type of wetlands that could be impacted by the proposed recommendation. The source of the wetlands information was the National Wetlands Inventory (NWI) maps available for each study area.
- *Stream Crossings* – The number of stream crossings that could be impacted by the proposed action. The streams were identified from U.S.G.S. Topographic Quad sheets.
- *Trout Stream Crossings* – The number of trout stream crossings that could be impacted by the proposed recommendations. Native and stocked trout streams were identified from the Virginia Department of Game and Inland Fisheries trout stream survey, 1993.
- *Virginia Byway Locations* – The proximity of the proposed recommendation to any route that is currently designated as a Virginia Byway as identified on the 1999 Virginia Byways map.
- *Open Space Easements* – The proximity of the proposed recommendation to any open space easement that has been set aside and documented by the Virginia Outdoors Foundation.
- *Park & Recreation Sites* – The proximity and potential displacement required by the proposed recommendation to any park and recreation site that is in current operation in the Town. This information was obtained from local sources in each study area.
- *Potential Range of Business/Residential Displacements* – For each study area, a rough approximation based upon local jurisdiction input and field observation of the potential displacements by any proposed recommendation. The number of displacements was based upon standard right of way and limits of disturbance required for the construction of the type of proposed facility.

ENVIRONMENTAL CONSIDERATIONS

Long-range transportation planning is a cooperative process that involves the analysis of the transportation system's current and future conditions in order to identify and reach consensus on the transportation improvements needed to address the problems identified. The transportation planning process guides decision-making on where to invest limited revenues to improve the transportation system. These long-range plans generally outline the transportation system needs and requirements 20 to 25 years into the future and help shape local, regional, and state strategies for addressing economic growth, safety, congestion, air quality, and public mobility.

Through a process of intergovernmental cooperation and coordination at the state, federal and local level, as well as citizen involvement, long-range transportation planning helps bring all affected parties to the table in order to address the unique transportation needs of each locality and region while providing a

forum to address the overall growth and development for Virginia. Since the transportation system is dynamic in nature, these plans are continuously updated every 3 to 5 years in order to provide a comprehensive and accurate strategy for addressing the ever changing needs of Virginia's citizens and businesses.

Once project funding is allocated for the preliminary engineering (PE) phase of the project, the project development process is initiated. If the improvement involves a federal action it is subject to the National Environmental Policy Act (NEPA). As it relates to transportation improvements, the main purpose of NEPA is to require the environmental impacts of a project to be considered prior to implementation and to foster better decisions based on an analysis of environmental considerations and transportation needs.

Appropriate Environmental Data in Plans / Studies

The type of planning study determines the appropriate level of environmental data detail to be included in plans. As the following table indicates, the state long-range multimodal plan shall include a level I environmental analysis, corridor studies shall include a level I, II, III analysis and all other plans a level I and II analysis.

Environmental Study Level	CLRP	SUATS	RLRP	Corridor Studies	State Highway Plan	VTrans
I	✓					✓
II		✓	✓		✓	
III				✓		

Environmental Study Level II (Small Urban Area Transportation Studies –SUAS)

This level involves a more comprehensive overview of environmental resources that might be impacted by planned transportation improvements. These projects typically involve federal aid eligible activity on either new location or represent a capacity increase. VDOT's Environmental Division conducts these reviews using the GIS Integrator in CEDAR to assess potential environmental areas of concern. The review will consider the data layers in the folders for:

Hydrology	Land Management	Civil Infrastructure
Animals	Environmental Quality	Human History
Recreation		

The overview will be conveyed in a tabular form **(Figure 4.2)** depicting various environmental resources and include a summary of conclusions and recommendations.

Potential Environmental Mitigation Activities and Areas

The Long Range Transportation Planning effort is a process that is used to identify the transportation issues and needs in small urban areas such as the Town of Altavista. During the plan's development the locality together with VDOT planners examines land development patterns, demographics, travel patterns and trends to identify existing and future transportation problems. Alternatives are identified to meet current and projected future demands that will provide a safe and efficient transportation system that meets the needs of the traveling public while limiting adverse impacts to the environment.

The inclusion of a recommended improvement in the long range transportation plan represents preliminary regional support for that improvement. The time-tiered approach is a guidance tool to aide decision makers in determining when projects should be implemented. Transportation improvements go through several steps from conception to implementation and take many years to successfully complete.

The considerations and recommendations made during the Small Urban Area Long Range Transportation Planning process are preliminary in nature. Detailed environmental analysis conducted through the National Environmental Policy Act (NEPA) does not apply to long range transportation plans. With exceptions for regional ambient air quality, offsetting environmental impacts during the long-range planning process is not required.

Detailed environmental analysis of individual transportation projects occurs later in the project development process as the improvement approaches the preliminary engineering stage. At this stage, project features may be narrowed and refined, and the environmental impacts and environmental mitigation strategies can be appropriately ascertained. Virginia's State Environmental Review Process directs the project-by-project interagency review, study and identification of environmental concerns. Related requirements that typically apply at this stage involve public hearings, environmental permit-processing, and NEPA studies. Usually, a variety of environmental documentation, permit and mitigation needs are identified and environmental findings are closely considered and evaluated. Common project environmental mitigation measures (required silt-fence barriers, precautions to control dust, etc) are managed using Road and Bridge Standards that apply to all construction activities. Special environmental concerns, however, may differ widely by project and location. As environmental studies are conducted and undergo public and interagency review, needed mitigation plans are specified and committed to within the environmental documents on the particular transportation project or activity. Environmental management systems then are used to monitor, and ensure compliance with, the environmental mitigation commitments.

Potential environmental mitigation activities may include: avoiding impacts altogether, minimizing a proposed activity/project size or its involvement, rectifying impacts (restoring temporary impacts), precautionary and/or abatement measures to reduce construction impacts, employing special features or operational management measures to reduce impacts, and/or compensating for environmental impacts by providing suitable, replacement or substitute environmental resources of equivalent or greater value, on or off-site. Where on-site mitigation areas are not reasonable or sufficient, relatively large off-site compensatory natural resource mitigation areas generally may be preferable, if available. These may offer greater mitigation potential with respect to planning, buffer protection and providing multiple environmental habitat value (example: wetland, plant and wildlife banks).

Mitigation activities and the mitigation areas will be consistent with legal and regulatory requirements relating to the human and natural environment. These may pertain to neighborhoods and communities, homes and businesses, cultural resources, parks and recreation areas, wetlands and other water sources, forested and other natural areas, agricultural areas, endangered and threatened species, and the ambient air. The following table illustrates some potential mitigation activities and potential mitigation areas for these resources:

Resource	***Key applicable requirements***	***Potential mitigation activities for project implementation***	***Potential mitigation areas for project implementation***
Neighborhoods and communities, and homes and businesses	Uniform Relocation Assistance and Real Property Acquisition Policy Act at 42 USC 4601 et seq.	Impact avoidance or minimization; context sensitive solutions for communities (appropriate functional and/or aesthetic design features).	Mitigation on-site or in the general community. (Mitigation for homes and businesses is in accord with 49 CFR 24)
Cultural resources	National Historic Preservation Act at 16 USC 470	Avoidance, minimization; landscaping for historic properties; preservation in place or excavation for archaeological sites; Memoranda of Agreement with the Department of Historic Resources; design exceptions and variances; environmental compliance monitoring	On-site landscaping of historic properties, on-site mitigation of archeological sites; preservation in-place
Parks and recreation areas	Section 4(f) of the U.S. Department of Transportation Act at 49 USC 303	Avoidance, minimization, mitigation; design exceptions and variances; environmental compliance monitoring	On site screening or on-site replacement of facilities; in some cases, replacement of affected property adjacent to existing
Wetlands and water resources	Clean Water Act at 33 USC 1251-1376; Rivers and Harbors Act at 33 USC 403	Mitigation sequencing requirements involving avoidance, minimization, compensation (could include preservation, creation, restoration, in lieu fees, riparian buffers); design exceptions and variances; environmental compliance monitoring	Based on on-site/off-site and in-kind/out-of-kind sequencing requirements; private or publicly operated mitigation banks used in accordance with permit conditions. Mitigation areas will be limited by density of development and requirements for replacement within the affected area.
Forested and other natural areas	Agricultural and Forest District Act (Code of VA Sections 15.2-4305; 15.2-4307-4309; 15.2-4313); Open Space Land Act (Section 10.1-1700-1705, 1800-1804)	Avoidance, minimization; Replacement property for open space easements to be of equal fair market value and of equivalent usefulness; design exceptions and variances; environmental compliance monitoring	Landscaping within existing rights of way; replacement property for open space easements to be contiguous with easement; replacement of forestry operation within existing agriculture/forestal district
Agricultural areas	Farmland Protection Policy Act of 1981 at 7 USC 4201-4209, Agricultural and Forest District Act (Code of VA Sections 15.2-4305; 15.2-4307-4309; 15.2-4313)	Avoidance, minimization; design exceptions and variances; environmental compliance monitoring	Replacement of agricultural operation within existing agriculture/forestal district
Endangered and threatened species	Endangered Species Act at 16 USC 1531-1544	Avoidance, minimization; time of year restrictions; construction sequencing; design exceptions and variances; species research; species fact sheets; Memoranda of Agreements for species management; environmental compliance monitoring	Relocation of species to suitable habitat adjacent to project limits
Ambient air quality	Clean Air Act at 42 USC 7401-7671, and Conformity regulations at 40 CFR 93	Transportation control measures, transportation emission reduction measures	Within air quality non-attainment and maintenance areas

A.6 - Costing Methodology

The development of cost estimates for each proposed recommendation in the plan was based upon a series of unit costs developed by VDOT's Transportation Planning Division. These estimates cover a wide range of proposed road, bridge, intersection, and interchange improvements. However, they do not and cannot provide an accurate estimate for every proposed improvement possible across the Commonwealth of Virginia. Therefore please note that the costs presented in this document are of a preliminary planning basis only. Further refinement of these cost estimates should occur at each phase of project development. The unit cost estimates are presented in the following table.

Original costs estimates developed by VDOT Transportation Planning Division – 2006

3% Inflation Rate each year applied to achieve current year (2008)
Costs include 20% for engineering and contingencies.

Urban Typical Sections				Cost Per Mile (CPM)
2 lanes	U2	26'-30' pavement	Reconst or New	2,900,000
3 lanes	U3	36'-40' pavement	Reconst or New	5,500,000
4 lanes	U4	40'-48' pavement	Reconst or New	6,600,000
4 lanes divided	U4D	48' pavement	Reconst or New	7,900,000
6 lanes divided	U6D	72' pavement	Reconst or New	10,300,000
8 lanes divided	U8D	96' pavement	Reconst or New	12,500,000
Rural Typical Sections				**Cost Per Mile (CPM)**
2 lanes	R2	18' pavement	Reconst or New	480,000
2 lanes	R2	20' pavement	Reconst or New	800,000
2 lanes	R2	22' pavement	Reconst or New	950,000
2 lanes	R2	24' pavement	Reconst or New	1,400,000
4 lanes divided	R4D	48' pavement	Reconst	3,700,000
4 lanes divided	R4D	48' pavement	New	5,700,000
4 lanes divided	R4D-P	48' pavement	Parallel	2,900,000
4 lanes divided	R4D	48' pavement with 16' R med.	Reconst or New	4,000,000
6 lanes divided	R6D	72' pavement widen 4-6 lanes	Reconst	5,200,000
6 lanes divided	R6D	72' pavement	New	6,900,000
8 lanes divided	R8D	96' pavement widen 6-8 lanes	Reconst	5,200,000
8 lanes divided	R8D	96' pavement widen 4-8 lanes	Reconst	10,400,000

Right and Left Turn Lanes on a Four Lane Road				
Right turn lane	100' parallel and 100' taper.		@	110,000
Left turn lane	200' parallel and 200' taper.		@	130,000
Crossover			@	100,000
Provide new crossover with two right and two left turn lanes.			@	550,000
Right and Center Left Turn Lane on a Two Lane Road				
	Design speed 55 M.P.H.			
One left turn lane	500' parallel and two 700' taper	0.36MI.	@	760,000
Two left turn lanes	900' parallel and two 700' taper	0.44MI.	@	860,000
Right and left turn lane			@	860,000
Two right and two left turn lanes			@	1,060,000
Bridge Cost				
Over 25' to 200' in length	Widen Reconst or New		per sq ft.	120
Over 200' in length	Widen Reconst or New		per sq ft.	150
Other Improvement Cost				
Eliminate parking, restripe (Both sides)		CPM		90,000
Provide Signal at unsignalized intersection		@		250,000
Improve, replace Signal at intersection		@		130,000
Improve phasing of system, signalized intersections		@		170,000
Provide pedestrian signal phase		@		40,000
Provide pedestrian crosswalk		@		10,000
Downtown signage		CPM		25,000
Close open ditch drainage and provide curb & gutter		CPM		1,400,000
Widen radius for truck turning		@		34,000
Install railroad warning lights (no gates)		@		34,000
Lower railroad bed by 2 ft. for a 1,000 ft.		CPM		2,800,000
Provide park & ride facility		CPS		3,000
Provide 5' ft. sidewalk		CPM		90,000
Provide 10' Shared Use Path off road.		CPM		640,000
Improve grade separated interchange		@		32,000,000
Provide new grade separated interchange (Rural High)		@		53,000,000
Provide new grade separated interchange (Urban High)		@		74,000,000
Right of Way & Utilities Cost % of Cost Estimate				
Rural			25%	
Residential/Suburban low density			50%	
Outlying business/Suburban high density			60%	
Central business district			100%	

APPENDIX B - LOCAL COORDINATION

The development of the Altavista 2035 Transportation Plan included several coordination meetings with Town staff. The following list describes the number of meetings held, the meeting times, locations, and the purpose of each meeting.

Kick-off meeting: February 24, 2006. The meeting was held at 11 AM at the Altavista Town Hall. In attendance at the meeting were several members of the Town staff, including the Town Manager, and Director of Public Works. In addition, several Town Council members were in attendance including the Mayor. The kick-off meeting enabled the project team to discuss the purpose and scope of the study, the coordination process with local staff, and the schedule for data collection and plan preparation.

Existing Conditions Meeting: April 6, 2006. The meeting was held at 5 PM at the Altavista Town Hall. In attendance at the meeting were several members of the Town staff, including the Town Manager, and Director of Public Works. Town Council members were present. The existing conditions meeting allowed the project team to present the results of baseline and horizon year traffic analysis and also allowed local staff to communicate desired transportation needs.

Accident Data Collection Meeting #1: May 1, 2006. The meeting was held at 9 AM at the Altavista Town Hall. In attendance at the meeting was the Chief of Police. This meeting was held to discuss the accident history and begin the data collection process.

Recommendations Meeting #1: April 30, 2007. The meeting was held at 3PMat the Altavista Town Hall. In attendance were the Town Manager, Assistant Town Manager, Director of Public Works and some Town Council Members. At this meeting, the project team presented final existing conditions results and recommended alternatives. Recommendations incorporated comments from interviews and previous meeting, as well as conclusions from additional studies.

Recommendations Meeting #2: October 9, 2007. Meeting was held at 7:30 at the Altavista Town Hall. Presentation to the full Town Council with Executive Summary provided. Discussion with Town Council on data facts and next steps.

Update Meeting #1: March 11, 2008. Presentation to Town Council on current status and next steps. Establish dates for Town Council Work Session to discuss Final Draft.

Work Session #2: April 22, 2008. Met with Town Council and presented Final Draft with updated recommendations, maps, etc... Discussed Councils concerns and desires and established date for Public Information Session in May and Public Hearing in June.

Public Information Meeting: May 13, 2008. The meeting was held from 5 PM to 630 PM at the Altavista Municipal Building. The purpose of this meeting was to present the recommendations to Town officials, citizens and other interested parties, and to receive comments on the plan.

Public Hearing: June 10, 2008. A public hearing was held during the regular session of Town Council.

The Altavista 2035 Transportation Plan was put on display at the Town Hall, the Public Library and on the Town's Web Site to solicit public comments on the plan.

The Small Urban Area Transportation Plan for the Town of Altavista was adopted by the Altavista Town Council on June 10, 2008.

Information provided on this sheet is subject to public disclosure

Public Information Meeting

Town Of Altavista
2035 Transportation Plan

COMMENT SHEET

May 13, 2008

(PLEASE PRINT)

NAME: _____

ADDRESS: _____

_____

_____

1. Do you feel you have a clear understanding of the overall plan and the major proposed plan elements?
   YES _____ NO _____
   If no, please explain. _____

2. Do you feel that the proposed plan adequately identifies the Town's transportation issues?
   YES _____ NO _____
   If no, please explain. _____

3. Are there specific areas within the Town that are not identified in the plan that you feel should be considered?
   YES _____ NO _____
   If yes, please explain. _____

4. Are there any potential negative impacts related to the recommended improvements that concern you?
   YES _____ NO _____
   If yes, please explain. _____

5. Do you support the transportation plan recommendations?
   YES _____ NO _____ With Modifications _____
   Please identify these modifications. _____

Please use the back side of this sheet to provide any additional comments. Thank you for your input!

Please leave this comment sheet with a VDOT Representative

A public information meeting was held on May 13, 2008 to receive comments on the proposed update to the Town of Altavista's Transportation Plan for Year 2035. Approximately 9 citizens and local officials attended.

The majority of comments received supported the highway, bicycle and pedestrian recommendations. One landowner did state the proposed extension of Clarion Road from Lynch Mill Road to 7th Street was not how they envisioned connecting future development of their property to existing street network. Another comment was to provide a joint-use trail link from English Park to Bedford Avenue (Route 43).

Comments received at the public involvement meeting were shared with the Altavista Town Council at the public hearing for updating the Transportation Plan held on June 10, 2008.

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