Route 72 Corridor
Land Use and Transportation Master Plan

City of Bristol, CT

Prepared by:

Fitzgerald & Halliday, Inc.

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INTRODUCTION

Study Background and Purpose

Route 72 is an important arterial road serving both local and commuter traffic through the City of Bristol. It is currently a two-lane road that extends from the Bristol-Plainville line into downtown Bristol (and beyond, into Plymouth) along East Main Street, Broad Street, and Riverside Avenue. The Connecticut Department of Transportation (ConnDOT) is soon expected to start construction on its "Route 72 Relocation Project", the primary result of which will be a new divided arterial highway from the Bristol-Plainville line to the intersection of Pine Street and Todd Street. From there, taking the place of Broad Street, the new Route 72 will continue westbound along Pine Street to Middle Street (Route 229) (see Figure 1). This new road and route will have a considerable impact not only on travel patterns in this section of Bristol but also on future land use patterns. The new road will change access to land throughout the area, affect where new development and redevelopment are induced to occur, and potentially change the character of some established neighborhoods.

In anticipation of the Route 72 Relocation Project, the City of Bristol initiated this corridor study to develop a creative and proactive land use and traffic management plan for the broad area that is expected to be impacted by the relocation of Route 72. For the purposes of the study, the corridor study area was defined as an area approximately three miles in length, from the Bristol-Plainville line to Main Street, and of varying width (see Figure 1). This study sought to take a comprehensive approach in its examination and analysis of the corridor. It examined existing land use as well as existing and projected traffic patterns, documented the community's vision for the future of the area, and developed an array of land use and traffic management recommendations and implementation tools to guide future development in a manner consistent with the study's objectives.

The Route 72 Corridor Study had three tasks:

- Analysis of existing conditions
- Projection of future conditions
- Development of a future land use plan, transportation system plan, and implementation tools

A variety of traffic flow and land use information collected for the corridor study area formed the framework for identifying issues within the corridor and developing potential alternatives to address those issues. In addition, ongoing input from a citizens' advisory committee and the community at large was utilized throughout the study to further inform each of its steps. The goal was to develop a community-based consensus on both future land use and transportation system improvements within the corridor built upon all of the information, technical analysis, and community input gathered during the course of the study.

Community Involvement Process

In order for a plan to be useful, relevant, and implementable, it must be home-grown rather than imposed from outside the community. To this end, one of the most important aspects of the Route 72 Corridor Study was the community outreach and involvement process. Its three major components were:

- A citizens' advisory committee, established at the beginning of the study, whose members communicated the views and concerns of the community at large, provided feedback on the study process and products, and shared their knowledge of the corridor with the study team.

- A community workshop at which members of the local community shared their vision for the corridor and discussed issues of concern for its future.

- An Internet Website devoted to the study, set up and maintained by the City of Bristol, accessible through the city's homepage, and updated periodically as new study findings and materials became available.

Corridor Vision

Whenever a road changes significantly, so too does development pressure (both positively and negatively) in the communities that the road serves. It is an all-too-familiar scenario that a new or substantially improved road is followed by unchecked development, resulting in sprawl and the deterioration of local character. Aware of this possibility, the City of Bristol undertook the Route 72 Corridor Study in order to think ahead about what land use and travel changes the new/relocated Route 72 might induce, so that the character of Bristol's neighborhoods could be protected at the same time that beneficial economic development could be fostered. The city recognized that this should be accomplished while still accommodating travel by local residents and business patrons as well as Route 72 through traffic.

As with many similar roads throughout Connecticut and elsewhere, Route 72 must serve dual purposes which are not always mutually compatible. As a state road, owned and maintained by ConnDOT, it must be able to carry through traffic safely and efficiently, while as a vital travel spine in Bristol, it must provide access to local businesses and residents. It is also along Route 72 that many travelers get their first impressions of Bristol; as such, the corridor should show the city to its best advantage.

Taking all of these factors into account, a "Vision Statement" was developed for the Route 72 Corridor. Such a statement is a description, a consciously created image, of the ideal future of a community (or, in this case, a corridor study area). The Vision Statement for the Route 72 Corridor is as follows:

Future development in the Route 72 Corridor should respect the diverse character of the corridor while protecting existing residential neighborhoods, enhancing the visual qualities of the corridor, strengthening access to the Pequabuck River, and sustaining sound economic development. Improvements to the roadway system and development in the corridor should complement one another. The roads in the Route 72 Corridor should provide a safe transportation network for Bristol's residents, visitors, and through travelers. They should also provide improved accommodations for pedestrians and bicyclists, promoting connectivity between major points of activity.

CORRIDOR OVERVIEW

Historic Land Use Patterns

In many ways, Bristol is a typical industrial city that grew up around large manufacturing businesses and then prospered and declined with those manufacturers' fortunes. The Route 72 Corridor is home to many of Bristol's former factories, as well as to several of its well-established, longstanding residential neighborhoods. The area has changed slowly over the past fifty years; neighborhoods have remained relatively stable, a limited amount of new development has occurred, and a number of the old factories have become unoccupied or underutilized. Traditional industrial uses have often been replaced with a disparate mix of activities that do not necessarily make the best use of the former factory spaces. One unique area of the corridor is the village of Forestville. Fully established by the late 1800s, today, it is striving to sustain its distinctive neighborhood character.

Current land use in the corridor is reflective of these historical development patterns (see Figure 2 and Table 1). Though the most dominant single land use is residential, the area nevertheless contains an equally significant amount of land devoted to commercial and industrial uses, as is typically found in an urban setting. Of note, too, is a variety of institutional uses (e.g., schools, fire station, and library), public parks and open spaces, as well as several properties listed on or eligible for the National Register of Historic Places. All of these features help to define the character of the neighborhoods where they are located.

Table 1: Land Use Within The Route 72 Corridor Study Area, 2004

Use	Acres	Percent of Total
Residential	188	28%
Industrial	127	19%
Vacant/Unoccupied	118	18%
Open Space/Parks	76	11%
Commercial	63	10%
Motor Vehicle Sales/Service	37	6%
Institutional	28	4%
Office	22	3%
Utilities	8	1%
Total	667	100%

Source: Fitzgerald & Halliday, Inc., September 2004

Among the most significant buildings and resources of the corridor are the following:

- Memorial Boulevard School
- Greene-Hills School
- U.S. Post Office (in Forestville Center)
- Manross Memorial Library
- Memorial Boulevard Park (also called Boulevard Park)
- Veterans Memorial Park
- Forestville Fire Station
- New England Carousel Museum
- Sessions Clock Company
- Forestville Passenger Station
- Pequabuck River
- Pine Lake/Pine Lake Open Space

Demographic Overview

Based on data from the 2000 U.S. Census, the Route 72 corridor study area has a population of approximately 4,490 persons, which represents about seven percent of the total population of the City of Bristol. While the overall population in Bristol declined slightly between 1990 and 2000, the population of the study area grew by slightly more than four percent. Table 2 contains some comparative demographic data for the study area, the city, and the region. The data indicate that the study area is generally one of growing ethnic diversity, relatively low unemployment, moderate incomes, and a significant percentage (59%) of rental housing.

Table 2: Comparative Demographic Data, Route 72 Corridor Study Area

	Route 72 Study Area	City of Bristol	Central CT Planning Region
Population			
Total Population	4,490	60,062	226,695
Percent Pop. Change 1990 - 2000	4%	-1%	-0.4%
Median Age	34	37.32	37
Percent Elderly (65+ Years)	11%	15%	15%
Percent Minority	10%	8%	14%
Income/Employment			
Percent Unemployed	3%	5%	5%
Median Household Income	$36,920	$47,422	$56,401
Percent Below Poverty	18%	13%	16%
Housing/Households			
Households	2,055	24,886	89,997
Percent Owner Occupied	41%	62%	64%
Percent Renter Occupied	59%	38%	36%
Median Household Size	2.2	2.4	2.5

Source: 2000 U.S. Census

Relocated Route 72 and Travel Patterns

As currently configured, Route 72 changes from a limited access highway to a major arterial road just east of the Bristol-Plainville line. In the corridor study area, Route 72 follows East Main Street through the center of Forestville, where it becomes Broad Street, and then takes a jog along King Street/Middle Street to follow Riverside Avenue. From there it enters downtown Bristol at Main Street. In 2000 (the most recent year for which such data were available), average daily traffic (ADT) volumes along Route 72 ranged from a low of 12,200 vehicles on Broad Street to a high of 27,400 vehicles on Riverside Avenue (see Figure 3). Peak travel times occurred in the morning from approximately 7:00 A.M. to 8:00 A.M. and in the afternoon from about 4:00 P.M. to 5:00 P.M. On East Main Street, near the center of Forestville, traffic congestion tends to persist later into the morning, often until 9:00 A.M. or later. Similarly, congestion often begins to build earlier in the afternoon, at about 3:00 P.M., at some locations in the study area, including on East Main Street near the center of Forestville and on Pine Street near Central Street.

Based upon their accident rates, four locations within the Route 72 corridor study area were included by ConnDOT on its 1998-2000 list of state road segments and intersections having 15 or more accidents per year during a three-year analysis period. Those locations were:

- East Main Street between Lincoln Avenue and Central Street
- The intersection of Broad Street and King Street
- Riverside Avenue between Mellen Street and Warner Court
- Main Street between Riverside Avenue and Memorial Boulevard

Construction of the new/relocated Route 72 (see Figure 4) is expected to begin sometime in 2005 or 2006. As currently designed, the project will include the following components:

- Construction of a new, limited access section of expressway, from the Bristol-Plainville line to Todd Street; a portion of this road segment will be depressed below the existing grade
- Installation of three new traffic signals, at the intersections of the expressway portion of Route 72 with Lincoln Avenue, Central Street, and Todd Street
- Upgrading of Pine Street from Todd Street to Middle Street to include two lanes in each direction and new sidewalks
- Closure of direct access from several side streets to Route 72/Pine Street and the associated construction of cul-de-sacs at the north ends of Sylvester Street, Benham Street, Balsam Street, and Evergreen Street
- Construction of a new section of Route 72 from Pine Street to Middle Street, terminating at a four-way intersection with Riverside Avenue, and installation of a new traffic signal where this new section of Route 72 diverges north from Pine Street
- Relocation of the commuter parking lot from Todd Street to the vicinity of Middle Street and Lake Avenue

The Route 72 Relocation Project is expected to cause some substantial shifts in travel patterns. ConnDOT has projected traffic volumes for the new/relocated Route 72 to a twenty-year horizon of 2025. Their projections show steady traffic growth in the corridor consistent with statewide trends. However, the new/relocated Route 72 is expected to divert traffic from East Main Street, Broad Street, and the eastern end of Pine Street such that volumes on those road segments will actually be lower in 2025 than they were in 2000. Meanwhile, traffic volumes on the Route 72

portion of Pine Street, as well as on Riverside Avenue, are projected to increase significantly. See Figure 3.

(The designation of existing Route 72 in Bristol as a major arterial derives from ConnDOT's *functional classification* of the state roadway system. A functional classification is a category assigned to roads by ConnDOT based upon the road's volume or traffic-carrying capacity and its role relative to the surrounding network. For example, the primary role of a major arterial road is to carry relatively high volumes of through traffic from one community to the next, in addition to serving land uses that adjoin it. A road's functional classification dictates its physical dimensions and configuration. Roads with a higher functional classification such as Route 72 have a greater width and broader shoulders to accommodate expected traffic volumes and speeds than those with a lower functional classification. Lessening a road's functional classification allows a reduction of the design standards required by ConnDOT. If this occurs, some of the excess road width within the existing right-of-way may be reallocated to other uses such as bike paths or sidewalks.)

Pedestrians, Bicyclists, and Transit

Options for travel in the Route 72 Corridor aside from the automobile are limited. There are no bicycle facilities such as designated bike lanes or off-road paths. While the roadway shoulders on Broad Street and some sections of Pine Street are wide enough to accommodate bicyclists, they are not conducive to bicycle travel due to poor maintenance, the general speed of traffic, and the presence of heavy trucks. Similarly, there are sidewalks along most of Pine Street and portions of Broad Street and East Main Street, but they are neither continuous nor consistently maintained. The street widths as well as traffic speeds throughout most of the corridor make crossing the street challenging in most locations.

Transit service in the area is provided by the New Britain Transportation Company, a division of CT Transit. The Plainville-Bristol line makes hourly runs through the study area from 7 A.M. to 5 P.M. on weekdays, traveling along East Main Street, Emmett Street, Pine Street, Mountain Road and South Street. This service proceeds to downtown Bristol and continues to New Britain and Plainville. On Saturdays, the Bristol Local line makes hourly runs through the study area from 9 A.M. to 4 P.M., traveling along the same roads. This service proceeds to downtown Bristol and continues to Farmington and Plainville. All of the buses will pick up passengers at any point along the route. There is no service on Sundays.

CORRIDOR CONDITIONS, ISSUES, AND OPPORTUNITIES

Corridor Focus Areas

In the course of this study, the heterogeneous character of the Route 72 Corridor became increasingly evident. An unusually diverse area with multiple 'personalities', the corridor contains a number of distinctive neighborhoods with differing development patterns and varied travel demands. The study team agreed that the most effective way to plan for the future of the corridor would be to develop land use and transportation recommendations that recognize and account for the differences among these neighborhoods while, at the same time, utilizing the Vision Statement to articulate a common goal and to bind together the different areas of the corridor. To this end, the Route 72 Corridor was segmented for planning purposes into five interconnected focus areas, each characterized by its own particular development and traffic flow patterns. The five focus areas were designated as follows (see Figure 5):

- *Downtown Gateway:* along Riverside Avenue, Memorial Boulevard, and South Street/Mountain Road between Main Street and Middle Street
- *Broad Street Environs*: along and adjacent to Broad Street between Middle Street and Todd Street
- *Future Route 72/Pine Street West:* along and adjacent to Pine Street between Middle Street and Todd Street
- *Pine Street East*: along and adjacent to Pine Street between Todd Street and the Bristol-Plainville line
- *Forestville Village*: along and adjacent to Broad Street and East Main Street between Todd Street and the Bristol-Plainville line

The following discussion of conditions and issues is presented for each of the five focus areas, followed by a discussion of issues that apply to the entire corridor.

Downtown Gateway

<u>Land Use Patterns</u>

The *Downtown Gateway* focus area encompasses the area of South Street/Mountain Road, Memorial Boulevard, and Riverside Avenue between Main Street and Middle Street. The land uses along each of these streets are distinctive. The south side of South Street is primarily lined with older one- and two-family houses, while the north side is mainly occupied by Boulevard Park and Memorial Boulevard Middle School. Memorial Boulevard is the spine of Boulevard Park. This is perhaps the city's most impressive public park, distinguished by its formal, well-maintained grounds, several war memorials, a fishing pond, and the Pequabuck River along its north edge. The very western end of Memorial Boulevard contains several commercial uses as well as an industrial facility. Riverside Avenue is a veritable hodgepodge of automotive, manufacturing, retail, office and even residential uses of varying scale, condition, quality, and appearance. Most notable among its many buildings are the former Sessions Clock factory and the New England Carousel Museum (itself a former factory building).

Transportation System Conditions

The three major roads in the *Downtown Gateway* focus area are as distinctive as the land uses that distinguish them. South Street is one lane in each direction, with wide shoulders and relatively free-flowing traffic; it has sidewalks on both sides of the street. Memorial Boulevard is a parkway, with four lanes divided by a landscaped median along most of its length. Traffic flow is slowed and controlled at two stop sign-controlled intersections. There are sidewalks along the length of the park and limited off-street parking nearby. By contrast, Riverside Avenue is two lanes wide, with limited sight distances in multiple locations, narrow shoulders and numerous (and often ill-defined) curb cuts. Traffic flow is controlled along Riverside Avenue at four signalized intersections. According to ConnDOT, the average travel speed on Riverside Avenue (measured near Blakeslee Street) is about 38 miles per hour.

Issues and Opportunities

The varied land use and transportation conditions which exist in the *Downtown Gateway* focus area pose a wide array of issues for the future of this section of the Route 72 Corridor. One dominant concern is its status as the principal entryway (or gateway) into downtown Bristol from the east. As such, its character creates the first impressions for travelers as to what the city might have to offer in terms of services, convenience, safety, aesthetics, and amenities. Another concern is the stark contrast between Riverside Avenue and Memorial Boulevard and the underutilization of the Pequabuck River, which separates them. The river has the potential to unite these two areas both aesthetically and physically, though this connection does not now truly exist.

Summary

- Status of Riverside Avenue as a gateway to downtown Bristol
- Relationship among the Pequabuck River, Memorial Boulevard, and Riverside Avenue
- Re-use/redevelopment of underutilized and vacant properties
- Possibility of Brownfield sites (i.e., abandoned, idled, or underused industrial or commercial facilities with environmental contamination)
- Preservation and adaptive reuse of historic properties
- Aesthetics of the Riverside Avenue environment/streetscape
- Traffic movement at the intersection of Riverside Avenue and Memorial Boulevard

Broad Street Environs

Land Use Patterns

Properties in the *Broad Street Environs* focus area – Broad Street and the area immediately surrounding it – have historically been used primarily (though not exclusively) for manufacturing purposes. Though it retains much of its industrial character, in recent years the area has undergone somewhat of a gradual transformation. Several former industrial sites have been re-used or redeveloped in whole or in part for such varied activities as motor vehicle repair garages, self-storage units, and offices. At the same time, additional commercial development

has occurred along Broad Street at and near its intersection with Emmett and Andrews Streets. The former Boston & Maine rail line, currently owned and operated by Guilford Rail, defines the southern edge of this focus area.

Transportation System Conditions

Currently a part of existing Route 72, Broad Street has two wide lanes and broad shoulders along much of its length. It carries a mix of local and commuter traffic, including a substantial amount of truck traffic. In 2000, traffic volumes on this segment of Route 72 were 12,200 ADT, a figure expected to decline to 9,800 ADT by 2025 with the completion of the Route 72 Relocation Project. However, given the number of industrial facilities and heavy commercial businesses in the area, the amount of truck traffic along Broad Street is not expected to experience a comparable reduction.

According to ConnDOT, the average travel speed on Broad Street (measured west of Emmett Street) is about 40 miles per hour.

Sidewalks are located intermittently along Broad Street and are generally separated from the travelway by a wide, grassy strip.

Issues and Opportunities

The *Broad Street Environs* focus area is expected to experience relatively limited development pressure and associated land use change in the future, and no residential neighborhoods are expected to be directly impacted by traffic issues on this road. Nonetheless, Broad Street serves as a gateway into Forestville Center and provides a transition to the village ambience there. Therefore, the future traffic, land use, and aesthetics on Broad Street will have an indirect impact on the future sustainability of Forestville.

An additional concern for Broad Street is the presence of a handful of large, developable properties, some of which are situated between Broad Street and Pine Street to the south. When the Route 72 Relocation Project is completed, there may be increasing pressure for their development commercially, as they may offer the only attractive locales for large-scale retail establishments or new shopping centers. The nature of the future use of these properties has the potential to alter traffic patterns within the *Broad Street Environs* focus area, resulting in unanticipated traffic congestion along local streets such as Emmett Street and Todd Street. This change would be inconsistent with the community vision for the area.

Summary

- Re-use/redevelopment of underutilized and vacant properties
- Possibility of Brownfield sites
- Transition from the industrial character of area into Forestville Center
- Future status of Broad Street as a major arterial
- Potential for traffic to cut through side streets to avoid traffic congestion on Pine Street (e.g., Todd Street and Emmett Street) following completion of the Route 72 Relocation Project
- Future status of Broad Street as a designated truck route
- Compatibility of commercial land uses with industrial land uses

Future Route 72/Pine Street West

Land Use Patterns

The section of Pine Street between Middle Street and Todd Street forms the spine of the *Pine Street West* focus area. From its western end at Middle Street to its intersection with Todd Street, Pine Street is dotted with a disparate mix of small retail and service businesses, residences, automotive uses, and a large industrial plant. Closer to its intersection with Todd Street, Pine Street and the side streets to the north take on a more residential character. To the south of Pine Street is a well-established residential neighborhood composed primarily of small lots and modestly sized residences.

Transportation System Conditions

Western Pine Street is two lanes with shoulders of varying widths, left-turn lanes at some intersections, and numerous curb cuts along its length. There are two traffic signals, one at Emmett Street and one at Middle Street. There are also sidewalks along both sides of the road, but their condition varies and locations of crosswalks are limited.

Traffic from the new expressway portion of Route 72 will be directed primarily to this western end of Pine Street, as this becomes designated the new state route. Pine Street will be upgraded as part of the Route 72 Relocation Project and will include:

- Upgrading of Pine Street from Todd Street to Middle Street to include two lanes in each direction and new sidewalks
- Closure of direct access from several side streets to Route 72/Pine Street and the associated construction of cul-de-sacs at the north ends of Sylvester Street, Benham Street, Balsam Street, and Evergreen Street
- Construction of a new section of Route 72 from Pine Street to Middle Street, terminating at a four-way intersection with Riverside Avenue, and installation of a new traffic signal where this new section of Route 72 diverges north from Pine Street
- Relocation of the commuter parking lot from Todd Street to the vicinity of Middle Street and Lake Avenue

Traffic volumes on the western end of Pine Street are projected to nearly double from 17,400 ADT in 2000 to 31,000 ADT by 2025 west of Emmett Street and from 16,400 ADT in 2000 to 29,800 ADT by 2025 between Emmett Street and Todd Street.

Issues and Opportunities

As both local and commuter traffic are redirected to the western end of Pine Street, issues will arise with the significant increase in traffic and changes in access to adjacent land uses and neighborhoods. It will become more difficult to turn onto Pine Street from side streets, and peak hour congestion may encourage traffic to bypass Pine Street along neighborhood streets. While the proposed cul-de-sacs and new traffic signals as part of the Route 72 Relocation Project are intended to alleviate this potential situation, it is inevitable that the character of Pine Street in this area will change with the heavy traffic flow. This may well impact the quiet residential character of the abutting neighborhoods. The presence of much more traffic will also invite

redevelopment of land along Pine Street for quick-access retail outlets and services such as banks, restaurants, and convenience stores. The increasing number of actively used access drives serving these businesses could create a plethora of potential conflicting movements among vehicles and between vehicles and pedestrians. While Pine Street is not very conducive to walking today, it may be even less so in the future.

Summary

- Potential for a new 'Route 6' condition in terms of traffic speeds, volumes, safety, pressure for commercial development, and aesthetics
- Interface between Pine Street commercial and residential areas, particularly neighborhoods to the south
- Number and location of driveways along Pine Street relative to future traffic volumes
- Sensitivity and appropriateness of the design of Route 72 along Pine Street relative to pedestrian and neighborhood needs
- Access from residential neighborhoods to other destinations in Bristol

Pine Street East

Land Use Patterns

The *Pine Street East* focus area extends along Pine Street from Todd Street at its west end to the Bristol-Plainville line at its east end. The western portion of this focus area is dominated by Pine Lake, with its associated open space, a commuter parking lot, and a number of single-family residences. East of Daley Street, a noticeable change occurs, as the largely residential character of the landscape gives way to the Greene-Hills Elementary School, a shopping center, a sizeable auto dealership, and other commercial uses. As Pine Street leaves Bristol, the focus area again becomes almost entirely residential in character.

Transportation System Conditions

The eastern end of Pine Street is a two-lane road with generally narrow shoulders that vary in width. There are two traffic signals, one at Central Street/Daley Street and one at the main access drive to the Forestville Commons shopping center. There are sidewalks along both sides of the road, yet they are discontinuous. Traffic volumes here are comparable to those along the western end of the road but are somewhat lower than volumes on the parallel road of East Main Street. ConnDOT projects that traffic volumes will drop along the eastern end of Pine Street following the Route 72 Relocation Project from 15,400 ADT in 2000 to 13,200 ADT by 2025.

Issues and Opportunities

Eastern Pine Street today is a relatively quiet residential road with increased levels of activity and traffic near the shopping center and the elementary school. Children still walk to school from the surrounding neighborhoods. The Pine Lake area provides a nice buffer between this area and the more commercial portion of Pine Street to the west. However, public access to the recreation area is constrained by a shortage of parking and by limited pedestrian or bicycle

access. The construction of the expressway portion of Route 72 will change circulation patterns in the neighborhood to the north of this section of Pine Street and add traffic to Central Street and Lincoln Avenue. This is expected to impact the character of these local roads. Other concerns for this segment of the corridor include the safety of children and other pedestrians near Greene-Hills School and the Forestville Commons shopping center and preserving the viability of businesses on eastern Pine Street.

Summary

- Re-use of vacated commuter parking lot property
- Access to Pine Lake Open Space
- Enhancement of Pine Lake Open Space
- Number and location of commercial driveways along Pine Street near the shopping center
- The need to manage the traffic impacts of the Route 72 Relocation Project on Central Street and Lincoln Avenue
- Pedestrian safety, especially for school children
- Access from residential neighborhoods to other destinations in Bristol

Forestville Village

Land Use Patterns

The *Forestville Village* focus area encompasses the heart of Forestville as well as the environs of East Main Street eastward to the Bristol-Plainville line. Traversed by the Pequabuck River, the area contains an eclectic mix of residential neighborhoods, a pedestrian-scale commercial center, and a variety of institutional uses such as a post office, a branch library, and a fire station. While Forestville's center possesses a village character that lends it a real sense of place, the eastern end of East Main Street deteriorates into an incongruent, incompatible, and often poorly maintained collection of old industrial buildings (many underutilized), small businesses, and a handful of residences.

Transportation System Conditions

Route 72 through Forestville currently conveys most of the traffic from the highway portion of Route 72 in Plainville through to Broad Street and thence to King Street. It is a two-lane road with narrow shoulders and numerous curb cuts and access drives. There are signalized intersections at Lincoln Avenue and Central Street, and traffic generally flows freely from the Bristol-Plainville line until just about Forestville Center. Traffic congestion occurs frequently in Forestville Center due to road geometry, the traffic island, insufficient room to bypass turning vehicles, heavy truck traffic,

and backup of westbound traffic turning left at the signal at East Main, Central, and Broad Streets. Crossing through this intersection can be confusing, as there are a multitude of possible movements both at this intersection and across the bridge over the Pequabuck River at Church Avenue. Sidewalks are intermittent until Forestville Center, where they exist on both sides of the road. However, traffic volumes and speeds make crossing the road there challenging.

In 2000, traffic volumes on East Main Street were about 17,800 ADT. With the completion of the Route 72 Relocation Project, traffic volumes along East Main Street are expected to drop to 12,800 ADT by 2025.

A recent count of traffic conducted at the intersection of Central Street and Church Avenue in Forestville Center indicates that the leg of Central Street north of this intersection has a markedly lower traffic volume than the leg of Church Avenue west of this intersection, both during the peak hours of travel and throughout the day.

Issues and Opportunities

Forestville is a well-recognized and valued village center in Bristol. The heavy volume of Route 72 through traffic has, to date, undermined the character of the village center, making it less conducive to walking and impeding access to village businesses. As the new/relocated Route 72 diverts traffic from East Main Street, there will be an opportunity to recapture the village character by reclaiming the pedestrian environment, improving access to businesses, and enhancing the streetscape's aesthetics and amenities. The eastern end of East Main Street has a number of redevelopment opportunities. Equally important, it serves as an entryway to Forestville Center and to the City of Bristol overall. However, the poor aesthetics and hodgepodge of development create an undesirable impression of what the village center and city in general may have to offer.

Summary

- Re-use/redevelopment of underutilized and vacant properties
- Possibility of Brownfield sites
- Preservation and adaptive reuse of historic properties
- Relationship between East Main Street and Central Street/Church Avenue areas
- Disparity between the eastern end of East Main Street and Forestville Center
- Pedestrian access from Forestville Village to Pine Street East
- Forestville Center conditions, including traffic flow, inadequate parking, traffic speeds, limited/inadequate signage, and aesthetics
- Potential for traffic to cut through side streets to avoid traffic congestion on the new/relocated Route 72
- Need to manage traffic impacts of the Route 72 Relocation Project on Central Street and Lincoln Avenue

Corridor-wide Issues and Opportunities

The reconstruction and relocation of Route 72 will create both some general concerns and unique opportunities for future development in this part of Bristol. The new road will redirect traffic flow, sending traffic to areas that do not today experience high traffic volumes while easing traffic flow in areas where congestion today has detracted from the quality of life. Overall, this will impact future development patterns, encouraging development where there is increased

access to passing traffic and business patrons and offering opportunities to enhance land use to recapture and support community character.

Summary

- Preservation of neighborhood character
- Inconsistent quality of aesthetics throughout the corridor
- Opportunities to expand public open space
- Access by transportation modes other than the automobile (i.e., bicycle, walking, and transit)
- Inadequate wayfinding and similar informational signage
- Traffic speeds and public safety
- Inconsistent and poorly developed pedestrian environment
- Future status of former Route 72 when East Main Street and Broad Street are declassified as state roads

CORRIDOR OBJECTIVES

While the Vision Statement for the Route 72 Corridor is a description of ideal future conditions in the corridor, related objectives are statements of achievement that can lead to the realization of that vision. In both the short and long term they can provide indicators of progress. Objectives were developed for the Route 72 Corridor targeted to the conditions and issues in each of the five focus areas; these served as an essential component in the formulation of the corridor recommendations.

Corridor Objectives by Focus Area

Downtown Gateway

1. Preserve and enhance the character of Memorial Boulevard and its aesthetic qualities.
2. Promote a mix of small-scale land uses along Riverside Avenue that are complementary to one another.
3. Improve the aesthetics of Riverside Avenue as a gateway to downtown Bristol.
4. Strengthen the linkage between Riverside Avenue and Memorial Boulevard Park.
5. Improve traffic flow along Riverside Avenue and into downtown Bristol.
6. Provide a connected, cohesive system of sidewalks.
7. Improve public access to the Pequabuck River.
8. Protect the residential character of the existing neighborhood located on the south side of South Street between Mountain Road and Hull Street.

Broad Street Environs

1. Encourage a broad range of industrial land uses along Broad Street including light manufacturing, offices, and research and development facilities but also accommodate complementary commercial development.
2. Improve the aesthetics of both the public streetscape and abutting properties along Broad Street.
3. Encourage the adaptive re-use of older industrial buildings, especially Brownfield sites.

Future Route 72/Pine Street West

1. Protect the residential character of the existing neighborhood located on the south side of Pine Street West.
2. Focus new commercial activity on the north side of Pine Street West.
3. Minimize the number, location, and width of curb cuts along Pine Street to avoid a proliferation of driveways and poor traffic circulation patterns.
4. Provide a connected, cohesive system of sidewalks.
5. Slow vehicular traffic on local residential streets, particularly those subject to cut-through traffic.
6. Maintain access from residential neighborhoods to commercial centers.
7. Improve the aesthetics of both the public streetscape and abutting properties along Pine Street West.

Pine Street East

1. Protect the residential character of the existing neighborhoods both north and south of Pine Street East.
2. Improve public access to the Pine Lake Open Space.
3. Enlarge the Pine Lake Open Space and encourage its use for passive recreation purposes such as hiking and picnicking (rather than active recreation purposes such as ball fields).
4. Encourage a mix of land uses along Pine Street East east of Central Street complementary to the retail center located there.
5. Slow vehicular traffic on local streets.
6. Provide a connected, cohesive system of sidewalks.
7. Provide bicycle access to recreational areas.
8. Provide adequate and appropriate parking.
9. Improve the aesthetics of both the public streetscape and abutting properties along Pine Street East.

Forestville Village

1. Preserve and strengthen the cohesiveness of Forestville Center.
2. Improve the aesthetics of both the public streetscape and abutting properties.
3. Encourage village-scale development in Forestville Center and extend the village character further east and west.
4. Recapture and redefine old Route 72 through roadway redesign and streetscaping that are appropriate to meet the locally based, reduced traffic demand expected there.
5. Provide a pedestrian-friendly environment which includes a connected, cohesive system of sidewalks.
6. Provide and manage parking to support current and future development.
7. Slow vehicular traffic through Forestville.
8. Improve connectivity to the Pequabuck River.
9. Encourage the adaptive re-use of older industrial buildings, especially Brownfield sites.

CONCEPTUAL MASTER PLAN

Future Land Use Plan

The Future Land Use Plan for the Route 72 Corridor (see Figure 6) was developed in the context of the conditions, issues, and objectives identified and articulated for the corridor. The guiding principles used to develop the Plan's future land use categories and its recommendations were as follows:

- Protect established neighborhoods.
- Increase the amount of open space.
- Encourage mixed-use development to reduce sprawl and stimulate infill.
- Promote economically viable adaptive re-use and redevelopment of Brownfield sites.
- Provide a comfortable transition between contrasting uses.
- Create a compatible interface between land use and traffic.
- Protect and incorporate historic resources into the land use scheme.

Each of the Plan's future land use categories is intended to reflect a predominant type of use while recognizing that other, mutually compatible or complementary uses should also be accommodated. For example, second-story apartments might be appropriate as part of a neighborhood-oriented commercial development, while offices might be complementary to a low-impact industrial facility. Allowing for this kind of mix could help to:

- Strengthen and protect the vibrancy of Forestville, which is already characterized by a dynamic mix of varied land uses.
- Create a pedestrian-friendly environment where residents can walk (or make shorter vehicle trips) to stores for basic goods and services.
- Reduce the number and length of employee vehicle trips, allowing workers to walk or make shorter trips to employment centers and other destinations.
- Establish more effective transit routes, which would become more feasible if varied destinations were clustered together.

The Future Land Use Plan establishes seven general categories of land use within the Route 72 Corridor:

Residential: Uses such as single-family residences that maintain the character of existing residential neighborhoods, characterized by medium- to small-sized lots on local streets.

Limited Commercial: Low-intensity uses such as small-scale offices, personal service establishments, and one-to-three-family residences that serve as a transitional land use and buffer between residential neighborhoods and more intensive commercial development.

Community Commercial: Uses such as retail sales, retail services, personal service establishments, business offices, and professional offices that serve the surrounding neighborhoods and the entire city, as well as multi-family residences. Automotive/motor vehicle uses are excluded from this category.

Village Center: Uses typically found in a traditional, small-scale village or town center characterized by:

- a functionally diverse but visually unified community focal area
- higher density development but with modestly sized and scaled buildings and streets
- a mix of complementary uses
- design that accommodates and promotes pedestrian travel
- design that promotes a diversity of household types, age groups, and income levels

Industrial: Uses such as manufacturing, warehousing and distribution, research and development, technology services, and offices, that require safe, convenient and direct access to an arterial route. Heavy commercial uses could be considered secondarily.

Open Space/Greenway: Uses such as parks and natural areas that provide aesthetic gateways to significant community focal points and/or that preserve, enhance, or enlarge existing public open space.

Community Facilities: Uses such as schools, churches, and public safety facilities that contribute to community character, provide essential community services, and may provide community meeting and gathering locations.

Land Use Recommendations

In addition to the generalized land use categories shown on the Future Land Use Plan, there are a number of thoroughfare-specific and site-specific land use recommendations that are also essential components of the Future Land Use Plan. They are as follows:

A. As opportunities arise, acquire additional land for park/open space purposes, particularly adjoining the Pine Lake Open Space, Memorial Boulevard Park, and the Pequabuck River.
B. On the eastern and western ends of Riverside Avenue, create an attractive gateway into downtown Bristol.
C. Promote the adaptive re-use/redevelopment of vacant and/or underutilized properties, particularly Brownfield sites, especially along East Main Street, Broad Street, and Riverside Avenue.
D. Improve the aesthetics throughout the corridor through both public and private enhancement projects.
E. On the eastern end of Broad Street, create an attractive gateway into Forestville Center.
F. On the south side of Pine Street, limit commercial development between the vicinity of Benham Street and the vicinity of Bishop Street to low-intensity, small-scale uses that serve as a transition/buffer between more intensive commercial uses in the area and the residential neighborhood to the south.
G. Following completion of the Route 72 Relocation Project, acquire the leftover land of the former commuter parking lot on Todd Street and utilize it to expand and/or provide parking for the Pine Lake Open Space.
H. Extend the “village center” concept outward from Forestville Center, especially to the east along East Main Street and to the west along Broad Street to Todd Street.
I. Where feasible, develop a publicly accessible greenway along the north side of the expressway (i.e., limited access) portion of Route 72.
J. On the eastern end of East Main Street near the Bristol-Plainville line, create an attractive gateway into Forestville Center.

Future Transportation System Plan

The Future Transportation System Plan for the Route 72 Corridor (see Figures 7-9), which identifies potential improvements to the transportation network and to travel by alternate modes, was developed in response to the traffic and transportation conditions, issues, and objectives identified and articulated for the corridor. (Definitions of common traffic engineering terms that may be useful in understanding the recommendations are provided in Appendix A.) The guiding principles used to develop the Plan's recommendations were as follows:

- Address all modes of travel.
- Respond to and accommodate future expected travel volumes and patterns.
- Plan for improvements complementary to ConnDOT's design for the Route 72 Relocation Project.
- Identify areas of complex traffic movement where conditions may warrant more in-depth study/design.
- Utilize access management, traffic calming, and similar contemporary techniques to also improve traffic conditions.

"Access management" is the process of managing the location, number, and design of driveway openings along a roadway. Access management helps to improve roadway safety and preserve roadway capacity by minimizing the number of potential conflict points between vehicles and interruptions to traffic flow. A "conflict point" occurs when the path or traffic movement of one vehicle has the potential to intersect or conflict with the traffic movement of another (e.g., when a car turns out of a side street, crossing the lane of traffic traveling in the opposite direction). Access management seeks to minimize the number of locations where such conflict points can occur. Tools that can be used to achieve access management include zoning regulations, a driveway curb-cut plan, and physical changes to roadway design, such as medians and turn lanes.

"Traffic calming" involves modifying the design of a street or streets to reduce traffic speeds, improve safety for pedestrians and bicyclists, and strengthen neighborhood character through a better pedestrian environment. Traffic calming can be achieved with the addition of roadway features as simple as new striping and signage to more costly measures such as construction of curb extensions, roundabouts, and speed humps. In addition, aesthetic improvements to the streetscape such as street trees, decorative light fixtures, curbing, and textured sidewalks and crosswalks can change the visual environment for drivers to create the impression of a narrower roadway. This also encourages drivers to travel more slowly.

Transportation System Recommendations

<u>Downtown Gateway</u>

1. Install traffic calming measures on Mountain Road and South Street.
2. Continue the aesthetics of Memorial Boulevard Park along Riverside Avenue from Downs Street to Middle Street, including the installation of a landscaped median.
3. Conduct an in-depth study to evaluate options for reconfiguring the intersection of Memorial Boulevard, Blakeslee Street, Downs Street, and Riverside Avenue. Such options might include installing a roundabout, closing Downs Street to through traffic, and/or making Downs Street one way (either northbound or southbound).

4. Develop additional off-street parking on strategically located small lots for access to Memorial Boulevard Park, particularly off of Riverside Avenue and Downs Street.
5. Evaluate the safety and convenience of operations of the stop signs at the intersection of Mellen Street and Memorial Boulevard.
6. Utilize access management techniques to limit the number, design, and location of driveways along Riverside Avenue.

Broad Street Environs

1. As part of the Route 72 Relocation Project, install signage directing westbound truck traffic from new/relocated Route 72 to Broad Street via Todd Street.
2. Following the completion of the Route 72 Relocation Project, change the functional classification of Broad Street from a major arterial to a minor arterial. Where feasible, establish a bike lane within the existing street right-of-way.
3. Reconfigure the intersection of Todd Street and Broad Street to improve sight lines and turning movements.

Future Route 72/Pine Street West

1. Following the completion of the Route 72 Relocation Project, monitor the Route 72-designated portion of Pine Street for traffic flow problems and identify opportunities to "spot fix" them.
2. As part of the Route 72 Relocation Project, restrict turning movements at Bishop Street, Lois Street, Poplar Street, and Hemlock Street to only right turns both from and onto the Route 72-designated portion of Pine Street, while making any necessary accommodations for emergency vehicle access.
3. Extend Sycamore Street to Pine Street; modify its intersection at Pine Street.
4. Install traffic calming measures on Sycamore Street and Margerie Street.
5. Assess the need for a traffic signal at the intersection of Sycamore Street and Emmett Street.
6. Utilize access management techniques to limit the number, design, and location of driveways along the non-residential segments of the Route 72-designated portion of Pine Street.

Pine Street East

1. Provide a continuous sidewalk/pedestrian pathway along Pine Street east of Todd Street.
2. Provide a continuous sidewalk/pedestrian pathway along Forest Street, Kenney Street, Hillcrest Court, and Bingham Street to create a pedestrian connection from Pine Street to Forestville Center.
3. Install traffic calming measures on Kenney Street.
4. Install streetscaping on Central Street and Lincoln Avenue south of the relocated Route 72.
5. Assess the need for a traffic signal at the intersection of Lincoln Avenue and Pine Street
6. Utilize access management techniques to limit the number, design, and location of driveways along the non-residential segments of Pine Street East.
7. Provide a crosswalk across Pine Street near the Pine Lake Open Space.

Forestville Village

1. Strengthen the identity of Forestville Center through the use of "context-sensitive" design and signature/logo signage.
2. Enhance the streetscape in the village through the use of uniform design elements and pedestrian amenities.
3. Improve/increase the amount of off-street parking; improve signage directing motorists to it.
4. Install parking meters and uniform street lighting
5. Conduct an in-depth study to evaluate options for reconfiguring the intersection of East Main Street and Central Street and the intersection of Central Street and Church Avenue. Such options might include:
    - installing a roundabout
    - restricting turning movements
    - closing Bingham Street, and using leftover street stub for parking
    - realigning East Main Street to meet with Broad Street at their intersection with Central Street (south of Nuchie's Restaurant)
    - realigning Central Street
    - making Bingham Street one-way westbound, and modifying traffic signal timing accordingly
    - realigning the intersection of Central Street and Church Avenue so that the Central Street leg intersects Church Avenue perpendicularly
6. As part of the intersections study in Forestville Center, evaluate access patterns at the Post Office.
7. Following the completion of the Route 72 Relocation Project, change the functional classification of East Main Street from a major arterial to a minor arterial. Where feasible, establish a bike lane within the existing street right-of-way.
8. Evaluate adding a westbound left-turn lane on Lincoln Avenue at its intersection with East Main Street.

Corridor-wide

1. Establish a multi-modal bicycle/pedestrian path between Forestville and downtown Bristol. Where feasible, use the existing rights-of-way of East Main Street and Broad Street (after their functional classification has been changed from major arterial to minor arterial).
2. Establish a formal process by which residents can request the installation of traffic-calming measures in their neighborhood.
3. Install wayfinding and directional signage at key locations throughout the corridor to direct drivers to public parking, to provide information on nearby attractions, and to serve as gateway enhancements.
4. Upgrade/add transit shelters.

IMPLEMENTATION

The City of Bristol will have primary responsibility for implementing the recommendations contained in the Future Land Use Plan and the Future Transportation System Plan. Where appropriate, the city should also actively seek the cooperation, support (financial and otherwise), and involvement of other interested parties such as the Central Connecticut Regional Planning Agency (CCRPA), ConnDOT, the local business community, and local residents. As a first collaborative step, the city should work with CCRPA to identify priority projects for inclusion in the Regional Transportation Plan and the Statewide Transportation Improvement Program. Ongoing coordination with ConnDOT will also be especially important for those recommendations that involve traffic improvements related to the new/relocated Route 72. In addition, effective implementation of the plan's recommendations would benefit from periodic review of their status by the Bristol Planning Commission or other designated body. Consideration should also be given to having the citizens' advisory committee that assisted with this study continue in a formal capacity, playing an advocacy and oversight role for the implementation of the plan's recommendations.

The matrix below summarizes the recommendations and identifies a generalized timetable for their implementation. The timetable is as follows:

- Short-term: within the next one to three years
- Medium-term: by the completion of the Route 72 Relocation Project
- Long-term: following the completion of the Route 72 Relocation Project
- Ongoing: within the next year and continuing beyond as necessary

Table 3: Summary Matrix of Route 72 Corridor Study Area Recommendations

	Short Term	Medium Term	Long Term	Ongoing
Downtown Gateway Recommendations				
B. On the eastern end of Riverside Avenue, create an attractive gateway into downtown Bristol		●		
B.2 On the western end of Riverside Avenue, create an attractive gateway into downtown Bristol	●			
1. Install traffic calming measures on Mountain Road and South Street		●		
2. Continue the aesthetics of Memorial Boulevard Park from Downs Street to Middle Street		●		
3. Conduct a study to evaluate options for reconfiguring the intersection of Memorial Boulevard, Blakeslee Street, Downs Street, and Riverside Avenue	●			
4. Develop additional off-street parking on strategically located small lots for access to Memorial Boulevard Park	●			
5. Evaluate the safety and convenience of operations of the stop signs at the intersection of Mellen Street and Memorial Boulevard	●			
6. Utilize access management along Riverside Avenue				●

	Short Term	Medium Term	Long Term	Ongoing
Broad Street Environs Recommendations				
E. On the eastern end of Broad Street, create an attractive gateway into Forestville Center	●			
1. As part of the Route 72 Relocation Project, install signage directing westbound truck traffic from new/relocated Route 72 to Broad Street via Todd Street.		●		
2. Change the functional classification of Broad Street from a major arterial to a minor arterial. Where feasible, establish a bike lane within the existing street right-of-way.			●	
3. Reconfigure the intersection of Todd Street with Broad Street to improve sight lines and turning movements	●			
Future Route 72/Pine Street West Recommendations				
F. On the south side of Pine Street, limit commercial development between the vicinity of Benham Street and the vicinity of Bishop Street to low-intensity, small-scale uses				●
1. Monitor the Route 72-designated portion of Pine Street for traffic flow problems and identify opportunities to "spot fix" them			●	
2. Restrict turning movements at Bishop, Lois, Poplar, and Hemlock Streets to only right turns both from and onto the Route 72-designated portion of Pine Street		●		
3. Extend Sycamore Street to Pine Street; modify its intersection at Pine Street			●	
4. Install traffic calming measures on Sycamore Street and Margerie Street		●		
5. Assess the need for a traffic signal at the intersection of Sycamore Street and Emmett Street				●
6. Utilize access management along the non-residential segments of the Route 72-designated portion of Pine Street				●
Pine Street East Recommendations				
G. Acquire the leftover land of the former commuter parking lot on Todd Street and utilize it to expand and/or provide parking for the Pine Lake Open Space			●	
1. Provide a continuous sidewalk/pedestrian pathway along Pine Street east of Todd Street		●		
2. Provide a continuous sidewalk/pedestrian pathway along Forest Street, Kenney Street, Hillcrest Court, and Bingham Street		●		
3. Install traffic calming measures on Kenney Street		●		
4. Install streetscaping on Central Street and Lincoln Avenue south of the relocated Route 72			●	
5. Assess the need for a traffic signal at the intersection of Lincoln Avenue and Pine Street			●	

	Short Term	Medium Term	Long Term	Ongoing
6. Utilize access management along the non-residential segments of Pine Street East				●
7. Provide a crosswalk across Pine Street near the Pine Lake Open Space		●		
Forestville Village Recommendations				
H. Extend the "village center" concept outward from Forestville Center, especially to the east along East Main Street and to the west along Broad Street to Todd Street				●
I. Where feasible, develop a publicly accessible greenway along the north side of the new expressway (i.e. limited access) portion of Route 72			●	
J. On the eastern end of East Main Street near the Bristol-Plainville line, create an attractive gateway into Forestville Center	●			
1. Strengthen the identify of Forestville Center through the use of "context-sensitive" roadway design and signature/logo signage		●		
2. Enhance the streetscape in the village, including uniform design elements and pedestrian amenities		●		
3. Improve/increase the amount of off-street parking; improve signage directing motorists to it				●
4. Install parking meters and uniform street lighting			●	
5. Conduct a study to evaluate options for reconfiguring the intersections of East Main Street/Central Street and Central Street/Church Avenue			●	
6. Assess access patterns at the Post Office			●	
7. Change the functional classification of East Main Street from a major arterial to a minor arterial. Where feasible, establish a bike lane within the existing street right-of-way.			●	
8. Evaluate adding a westbound left-turn lane on Lincoln Avenue at its intersection with East Main Street			●	
Corridor-wide Recommendations				
A. As opportunities arise, acquire additional land for park/open space purposes, particularly adjoining the Pine Lake Open Space, Memorial Boulevard Park, and the Pequabuck River				●
C. Promote the adaptive re-use/redevelopment of vacant and/or underutilized properties, particularly Brownfield sites, especially along East Main Street, Broad Street, and Riverside Avenue				●
D. Improve the corridor's aesthetics through both public and private enhancement projects				●
1. Establish a multi-modal bicycle/pedestrian path between Forestville and downtown Bristol. Where feasible, use the existing rights-of-way of East Main Street and Broad Street.			●	

	Short Term	Medium Term	Long Term	Ongoing
2. Establish a formal process by which residents can request the installation of traffic-calming measures in their neighborhood	●			
3. Install wayfinding and directional signage at key locations throughout the corridor				●
4. Upgrade/add transit shelters			●	

Implementation Tools

There are a variety of tools that can be used to achieve the Future Land Use and Transportation System Plans envisioned through this study for the Route 72 Corridor. These include administrative approaches such as zoning, financing strategies, and collaborative activities such as public/private partnerships for redevelopment. A summary description of these implementation tools is provided below. Inasmuch as the primary tools available to the city for managing future land use are its zoning regulations and zoning map, these options are discussed in greater detail.

Zoning

The current Bristol Zoning Regulations became effective in December, 1990 and have been amended periodically since then. The following is an overview of the current zoning designations within the Route 72 Corridor:

Zoning District	Title	Purpose
R-10, R-15, R-40	Single-Family Residential	To provide suitable areas for appropriate residential development on a range of lot sizes and to accommodate certain non-residential uses compatible with residential uses while preserving neighborhood character and property values
RM	Mixed Residential	To accommodate two- and three-family dwellings in existing neighborhoods designated as “Mixed Residential” in the city’s Plan of Conservation and Development and in those neighborhoods elsewhere in the city which contain a predominance of existing two- and three-family dwellings
A	Multi-family Residential	To provide areas appropriate for low- and medium-density multi-family residential development outside of downtown Bristol
BN	Neighborhood Business	To accommodate but be generally limited to small convenience-type retail stores and service establishments that primarily serve the daily needs of the neighborhood in which they are located
BG	General Business	To accommodate larger retail and service establishments that primarily serve the needs of the entire city, including automobile-oriented uses

Zoning District	Title	Purpose
BD	Downtown Business	To accommodate the major retail, governmental, institutional, office, and cultural activities of the city within a concentrated, compact, pedestrian-oriented central business district and to accommodate high-density residential development in support of such activities.
I	General Industrial	To accommodate traditional industrial uses and heavy commercial operations

The Bristol Zoning Regulations are largely traditional in nature in that they establish zoning districts that generally separate residential uses from commercial uses from industrial uses. They include the common range of site development requirements as allowed by Connecticut statute, such as minimum lot size, minimum building setbacks, maximum building height, and maximum building coverage. However, the regulations also contain a number of contemporary zoning techniques such as open space development, the adaptive re-use of non-residential buildings for residential purposes, the adaptive re-use of historic dwellings for office or multi-family residential purposes, and the use of overlay districts.

While the Bristol Zoning Regulations and Zoning Map provide a good foundation for the implementation of the Future Land Use Plan presented in this study, the current zoning districts in the Route 72 Corridor do not correspond to the future land use categories proposed there. As such, it will be necessary for the city's Zoning Map to be reviewed and adjustments made where appropriate to tailor the zoning to meet the corridor's land use objectives. In addition, the city's Zoning Regulations as currently written cannot fully manage development to help achieve the character and mix of uses called for in the Future Land Use Plan. For example, Section VIII.D. of the regulations ("Driveways") establishes requirements for the spacing and number of driveways on individual lots but does not include other access management techniques such as incentives for shared driveways or driveway spacing requirements based upon the functional classification of the road being accessed. These should be key features of an Access Management Overlay zone for portions of Pine Street and Riverside Avenue.

Two fundamental aims of the future land use categories in the Route 72 Corridor are *to provide for a mix of uses in each area* and *to manage the scale of development to achieve desired character*. There are two approaches the city can take to meet those aims: one would be to broaden the range of uses allowed in existing zoning districts and establish more detailed site layout requirements; the other would be to create one or more new zoning districts crafted specifically to provide for the mix of uses and level of design detail specified in the Future Land Use Plan.

The advantage of modifying existing zoning districts is that such changes would refine but otherwise maintain the existing zoning in the Route 72 Corridor. Conversely, modifying existing zoning districts would impact all properties elsewhere in the city where those zones also occur. The advantage of creating new zoning districts is that they can be tailored to the vision for the Route 72 Corridor without otherwise impacting similar zoning districts elsewhere in the city. The disadvantage may be that the administrative and decision-making processes would become increasingly complex for both the Zoning Commission and development applicants.

Given this, it is recommended that the additional zoning tools that may best achieve the envisioned development pattern include:

- modification of the regulations of one or more of the existing industrial and commercial districts to allow for a greater diversity of uses
- creation of a new access management overlay zone
- creation of a new zoning district for the Forestville Village area
- modification of existing site design standards and/or addition of new design standards for each of the zoning districts within the corridor to better manage the scale and character of development
- use of regulatory incentives

An example of zoning language representative of these tools is provided in Appendix B.

At present, Connecticut's planning and zoning statutes do not permit municipal zoning commissions to control the architectural details of a proposed development. Design review boards can be established but may conduct reviews only in an advisory capacity. The exception is for properties "within public view" within a designated village district as described in more detail below. Nonetheless, there are a variety of other site design elements that zoning commissions can regulate which can help to define the scale of development; these include building height, number of stories, building footprint, location of parking, amount of parking, landscaping, buffers, and building setbacks.

Access Management Overlay Zone
An access management overlay zone is a special zoning district that is generally applied to properties along a roadway where development pressures, traffic congestion, and safety are of particular concern. This type of zone establishes a set of criteria for the location, number, and design of all access points along the roadway within the geographic area it covers. It is applied as an "overlay", which means that the use requirements and other standards of the underlying zoning district still apply to the affected properties. The access design standards established by an access management overlay zone are tied to the functional classification of the road being accessed. For example, while driveways might be safely spaced 100 feet apart on a local residential street with a low volume of daily traffic, they might need to be separated by as much as 2,500 feet on a major arterial road that carries heavy traffic volumes at relatively high average travel speeds.

Elements that might be included in an access management overlay zone are:
- a set of definitions related to the terminology used
- an explanation as to how the requirements of the zone will be administered
- the requirements for:
  - number and spacing of driveways relative to adjacent properties and intersections
  - corner clearances
  - length of driveway throats (to provide stacking room for waiting cars)
  - sight distances
  - location of opposing driveways
  - double frontage lots
  - emergency vehicle and transit access
  - signal spacing and turn lanes
- provisions for shared driveways
- site plan information requirements related to access design
- provisions for non-conforming access drives and resolution of situations where the standards of the zone cannot be achieved

- provisions for regulatory relief or bonuses where particularly beneficial access design is proposed
- standards for when a traffic impact report would be required to substantiate the proposed access design

(See Appendix B for example: “Sullivan Avenue Access Management Zone”, South Windsor, CT)

New Forestville Village Zoning District
Two unique types of zoning districts tailored to strengthening and preserving the character of a village center – and which thus may be particularly applicable for Forestville – are a Village District (CGS Section 8-2j) and a Neighborhood Design Development zone.

Village District. The Village District Act (Public Act 98-116) was passed by the Connecticut legislature in 1998 and amended in 2001 to authorize Connecticut municipalities to establish Village Districts as part of local zoning regulations. Such a district is intended to protect the “distinctive character, landscape and historic structures of such areas”. The zoning provisions adopted for a Village District may regulate alterations, improvements, substantial reconstruction, and rehabilitation of properties within the district and in view of public roadways. The regulatory requirements can consider the design and placement of buildings, the maintenance of public views, the design and placement of public roads, as well as the color, size, height, and proportion of openings, roof treatments, building materials, and landscaping of commercial or residential property, and other elements that the zoning commission deems are important to maintaining the village district’s character. In addition, the design, arrangement, and orientation of any proposed new construction should be compatible with the immediate neighborhood. Regulations adopted to control the exterior of a structure or site must be consistent with standards established by the Connecticut Historical Commission and the U.S. Secretary of the Interior. The Village District Act requires that all applications be reviewed by an architect or architectural firm designated (and/or contracted) to do so by the commission.

(See Appendix B for example: “East Avenue Village District”, Norwalk, CT)

Neighborhood Design Development. A Neighborhood Design Development is a zoning district that permits a variety of development styles and a mix of uses while still preserving the existing landscape or community character. Such a district provides considerable flexibility for the variety of allowable uses and focuses more on a limited number of prohibited uses rather than a static list of permissible ones. The purpose of a Neighborhood Design Development is to encourage creative and innovative site layout and design that both makes the best use of the property and integrates well with the character of the surrounding community. The requirements for the district are often phrased in the form of performance standards, which are general statements of purpose intended to promote development that, for example:

- makes efficient use of land, facilitating an economical arrangement of buildings, circulation, land use, and utilities
- provides for uninterrupted pedestrian and bicycle paths, to the greatest extent possible
- is harmoniously related to the land and surrounding developments
- recognizes and is consistent with the character of adjoining residential uses
- has its street circulation and access designed in a manner that minimizes impacts on area streets
- provides adequate space for public transit

(See Appendix B for example: “Neighborhood Design District Zone”, Enfield, CT)

Modification of Site Design Standards
Site design standards typically focus on creating uniformity of site layout within a zoning district and the separation and/or buffering of uses from one another. Traditional building setback and lot coverage requirements often result in the greatest possible physical separation of uses and structures, as well as the maximum height and most extensive parking possible in each zone. Such design standards are not generally crafted to achieve a particular scale or character of overall development within a neighborhood but rather to manage the intensity of use of each individual lot. Consequently, typical design standards do not generally serve the broader design objectives for an urban neighborhood, village center, or hamlet.

By contrast, design standards for a village center or urban neighborhood can be phrased to encourage an overall scale of development in keeping with the existing and/or desired community character, including design that is compact, provides for a mix of uses, reduces or minimizes the scale of each use, and allows small, individual lots to be more effectively used. As the Future Land Use Plan for the Route 72 Corridor calls for land use patterns that respect and reinforce neighborhood character, it would be appropriate to reconsider the design standards for each zoning district within the corridor and modify or add to them to achieve that objective. Such new design standards might include:

- low maximum building height (e.g., two stories)
- zero (or very minimal) front yard and side yard building setbacks
- smaller minimum lot sizes, thus allowing for more dwelling units per acre
- no maximum lot coverage for buildings or structures
- allowance for alleys behind buildings that front on the street
- placement of all parking behind buildings that front on the street
- fewer parking spaces required where on-street and public off-street parking is available
- a maximum number of allowed parking spaces; designation of any parking spaces in excess of the maximum as public parking
- shared parking and shared driveways
- required sidewalks
- prohibition of businesses with drive-up windows

Design standards can be incorporated into the zoning regulations in two ways. They can be associated with a specific zone – applicable only to the uses in that zone – or they can be included as part of an overlay district that affects a number of different zones. The advantage of an overlay district is that it supplements the requirements of the underlying zone and adds requirements such as specific design standards wherever they are most approriate, regardless of the underlying uses. The disadvantage also lies in the the fact that an overlay district adds requirements and review time to zoning approval, thus making the review and decision-making process somewhat more complex.

(A useful resource of information about site design standards is *Crossroads, Hamlet, Village, Town: Design Characteristics of Traditional Neighborhoods, Old and New*, Randall Arendt, American Planning Association, 1999.)

Regulatory Incentives
Along with provisions that control the use and the intensity of land development, zoning regulations can also offer incentives to developers to develop properties in a manner consistent with the quality and character of development that the community is seeking. Such incentives can take the form of regulatory relief or bonuses, or they can be financial in nature.

For example, regulatory relief from certain parking requirements might be granted by the zoning commission for a development that provides bicycle parking, connections to area sidewalks or paths, and/or easy access to a transit stop. The benefit to the developer would be reduced development costs and a more favorable environment for approval of his/her proposal. The advantage to the community would be strides towards reducing vehicle congestion, improving pedestrian and/or bicyclist access, and support for the use of the transit system.

Similarly, the regulations might offer a financial incentive to a developer to make use of specific sites targeted for redevelopment. For example, the zoning commission might waive all fees associated with the application process for any proposed development within a given geographic area targeted for enhancement (e.g., along Riverside Avenue).

The range of incentives for proposed developments that meet and exceed zoning objectives might include:

- allowing an increase in the maximum number of dwelling units or maximum building size
- allowing an increase in the maximum amount of lot coverage
- allowing a reduction in the amount of required parking
- providing relief from some signage, landscaping, or buffer requirements
- allowing greater flexibility for accessory uses (either by location on a lot or by usage)
- waiving of application fees
- allowing phasing of a development to ease project financing for an applicant
- providing a streamlined application process to shorten the time for development proposal review

<u>Financing Strategies</u>
In addition to administrative approaches, there are also direct financing strategies that can support the realization of the Future Land Use Plan and Transportation System Plan for the Route 72 Corridor. These include measures to encourage private developers to meet future land use objectives with their proposal, measures to directly support the viability of neighborhoods, and strategies for funding the desired transportation system infrastructure. An overview of each is provided below.

Strategies to Encourage Desirable Development
In broad terms, the land use objectives for the Route 72 Corridor call for the adaptive re-use of vacant and/or underutilized properties, infill development, neighborhood (or village) preservation, improvements to the aesthetics of the corridor, and additions to public open space and parks. The following financial strategies can help to achieve these objectives.

- Financial incentives to developers as noted above

- Other direct financial incentives to developers for use of targeted properties, including tax deferments, tax abatements, and creative financing arrangements

- Ongoing funding of improvements to infrastructure (utilities, facilities, and roads) through the city's Capital Improvements Program to support the economic viability of new development as well as the quality of existing neighborhoods

- Establishment of Business Improvement Districts (BID). A Business Improvement District is a geographic area of a community – identified by local businesses and formally approved or established by the municipality – whose purpose is to deliver supplemental services such as sanitation and maintenance, public safety and visitor services, marketing and promotional programs, capital improvements, and beautification in the targeted area. BIDs are typically funded by a special assessment paid by property owners within the district. The municipality works with commercial property owners and businesses to assist them in forming BIDs and managing BID services on an ongoing basis.

- Creation of an Open Space Acquisition Fund. Parks, greenways, and open spaces have been identified as an important community asset within the Route 72 Corridor. One means by which the city could pay for the acquisition of additional land for such purposes – both to enlarge existing "green" areas and to create new ones – would be through the use of a dedicated Open Space Acquisition Fund. Monies from the city's annual capital improvements budget and other revenue sources (e.g., the fee-in-lieu-open-space provisions of the city's subdivision regulations) could be earmarked each year for such a fund and utilized as appropriate to purchase land for parks, greenways, and open spaces, based upon a priority listing of locations identified by the city.

Transportation System Funding Strategies

Funding for transportation system projects in Connecticut is typically provided through ConnDOT via the process of placing projects on the Regional Transportation Plan and subsequently on the Statewide Transportation Improvement Plan. The state plan is updated annually and covers a five-year planning horizon. The state's funds are provided through the state budget; however, other sources of transportation program funds are also available. These include:

- Federal Highway Administration funding through the Transportation Equity Act for the 21st Century (TEA-21). The TEA-21 program – which replaces and expands the Intermodal Surface Transportation Efficiency Act program (known as "ISTEA") – makes certain funding allocations available to each state for defined transportation projects, including bicycle and pedestrian pathways and recreational trails. In order for a project to be considered for TEA-21 funding, it must first be submitted to the regional planning agency.

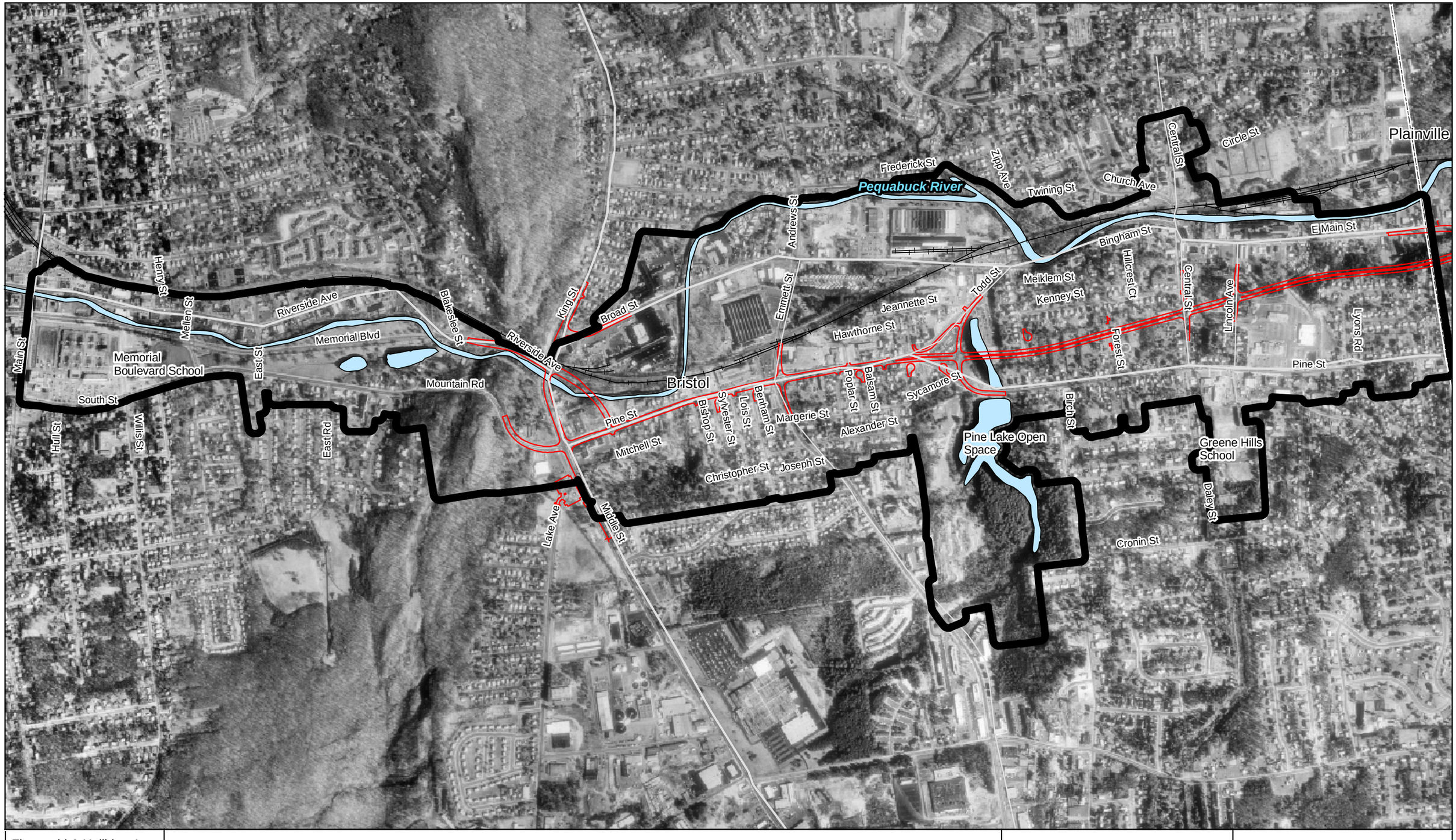
- Other Federal Highway Administration funding through the Transportation and Community and System Preservation Pilot Program (TCSP). The TCSP program is a comprehensive initiative of research grants to investigate the relationships between the transportation system and the community, to explore strategies for transportation system preservation, and to examine private sector-based initiatives. States, local governments, and metropolitan planning organizations are eligible for discretionary grants to plan and implement strategies that improve the efficiency of the transportation system; reduce environmental impacts of transportation; reduce the need for costly future public infrastructure investments; ensure efficient access to jobs, services, and centers of trade; and examine private sector development patterns and investments that support these goals.

- Payment of a Fee In Lieu of Parking Requirements. Per Section 8-2c of the Connecticut General Statutes, a zoning commission may, under conditions specified in its zoning regulations, allow developers of certain types of proposed development projects to pay a fee to the community instead of providing the required amount of parking spaces for that project. The fees collected under this provision must be set aside in a fund designated solely for the "acquisition, development, expansion or capital repair of municipal parking facilities" or other transportation-related facilities or projects.

Collaborative Activities

Public/private partnerships. Cities in Connecticut can enter into cooperative agreements with private parties to undertake multifaceted developments; a prime example of such an arrangement is the Adrien's Landing development in Hartford. To facilitate the creation of such public/private partnerships, a municipality needs to first identify key parcels of land that it wishes to target for development, then develop conceptual plans for those properties, determine what kinds of partnership arrangements might be feasible between the municipality and a prospective developer, improve the infrastructure in the vicinity of such "preferred development" sites, and actively market the identified parcels to the private development community.

Brownfields Redevelopment Program. Sites where buildings, the ground, and/or groundwater are contaminated by hazardous materials pose particular challenges for re-use and redevelopment. A municipality can facilitate the redevelopment process by first clearly identifying where such sites exist and then proactively planning for their re-use. The federal Environmental Protection Agency has a handful of programs to help municipalities clarify liability issues and to provide funding for site remediation. The key to successful Brownfield redevelopment is for a community to have a plan and process in place ahead of time to address these sites when potential developers express an interest in them.



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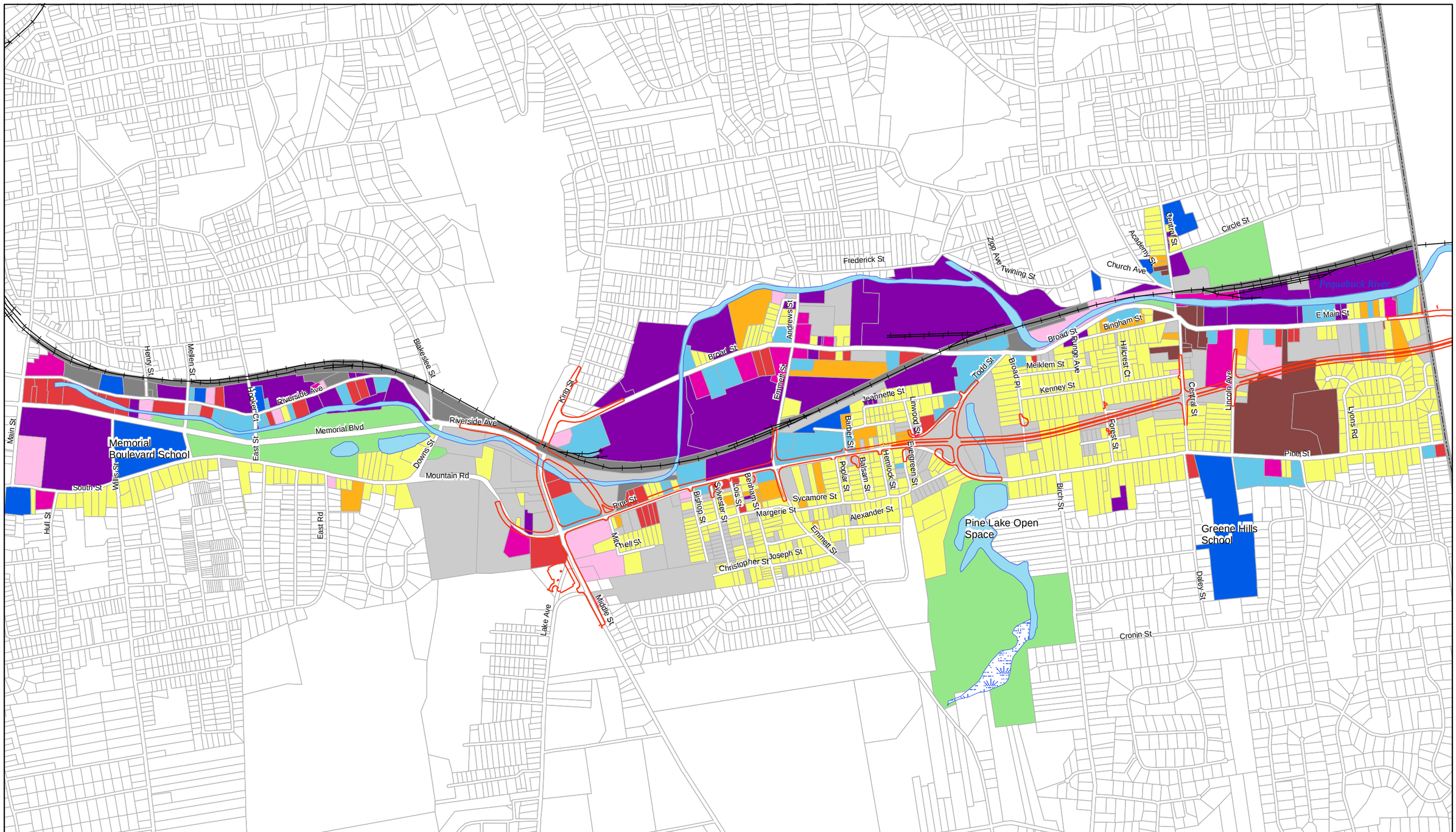
Study Area
Reconfigured Route 72 ROW

0 0.1 0.2 0.3 0.4
Miles

Source: FHI; Basemap: ConnDOT/DEP
Aerial Photo Dated 1990

Route 72 Corridor Study
Bristol, Connecticut

Figure 1
Study Area
December 2004



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- Industrial
- Utilities
- Institutional
- Motor Vehicle Sales/Service
- Shopping Center/Mixed Use Retail
- Commercial - General Retail
- Commercial - Banks/Services/Restaurants
- Office
- High Density Residential
- Residential-Single & Two-family
- Open Space/Recreation/Cemeteries
- Vacant/Unoccupied Land
- Reconfigured Route 72

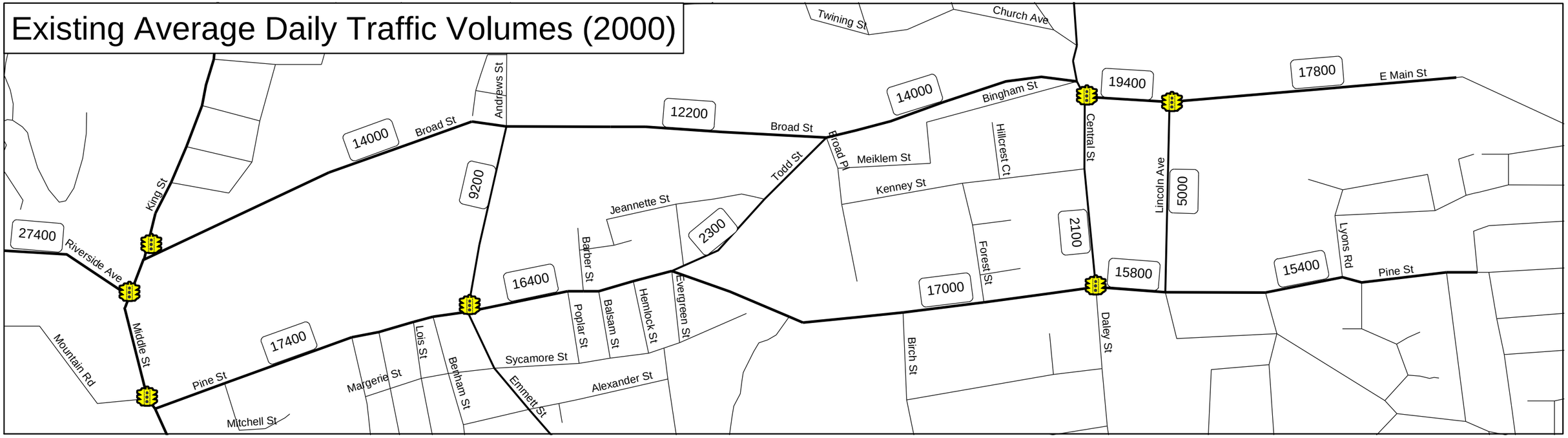
0 0.1 0.2 0.3 0.4
Miles

Source: FHI
Basemap: Conn. DEP/CCRPA

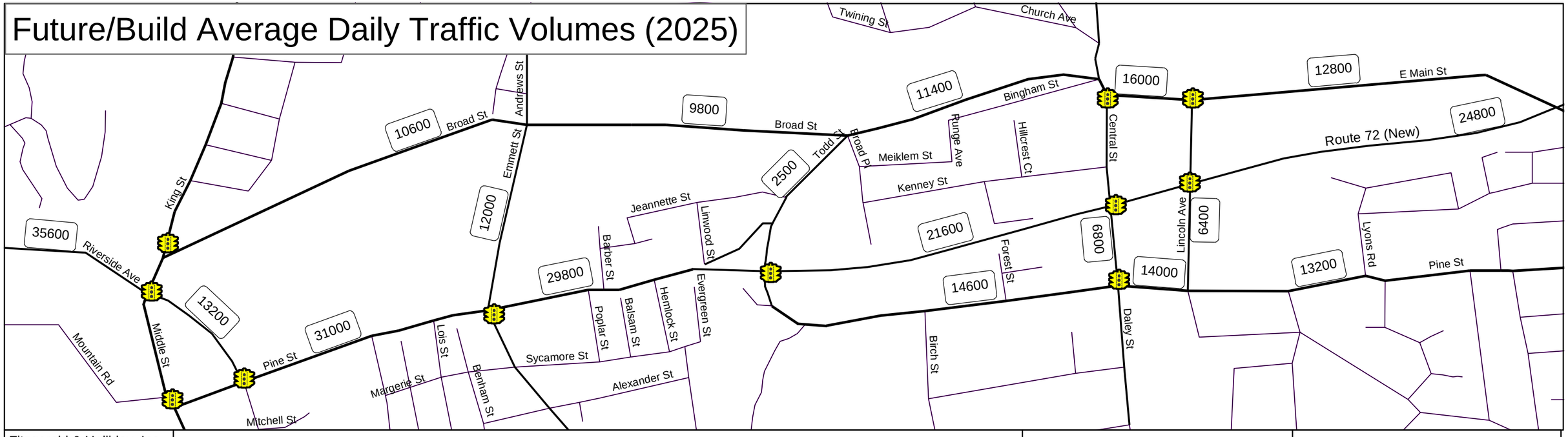
Route 72 Corridor Study
Bristol, Connecticut

Figure 2
Existing Land Uses
December 2004

Existing Average Daily Traffic Volumes (2000)



Future/Build Average Daily Traffic Volumes (2025)



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0000 Average Daily Traffic Volume

Traffic Signal

0 0.05 0.1 0.15 0.2

Miles

Source: FHI/ConnDOT

Basemap: Conn. DEP

Route 72 Corridor Study
Bristol, Connecticut

Figure 3
Volume Comparison
December 2004

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Study Area

Reconfigured Route 72

0 0.05 0.1 0.15 0.2

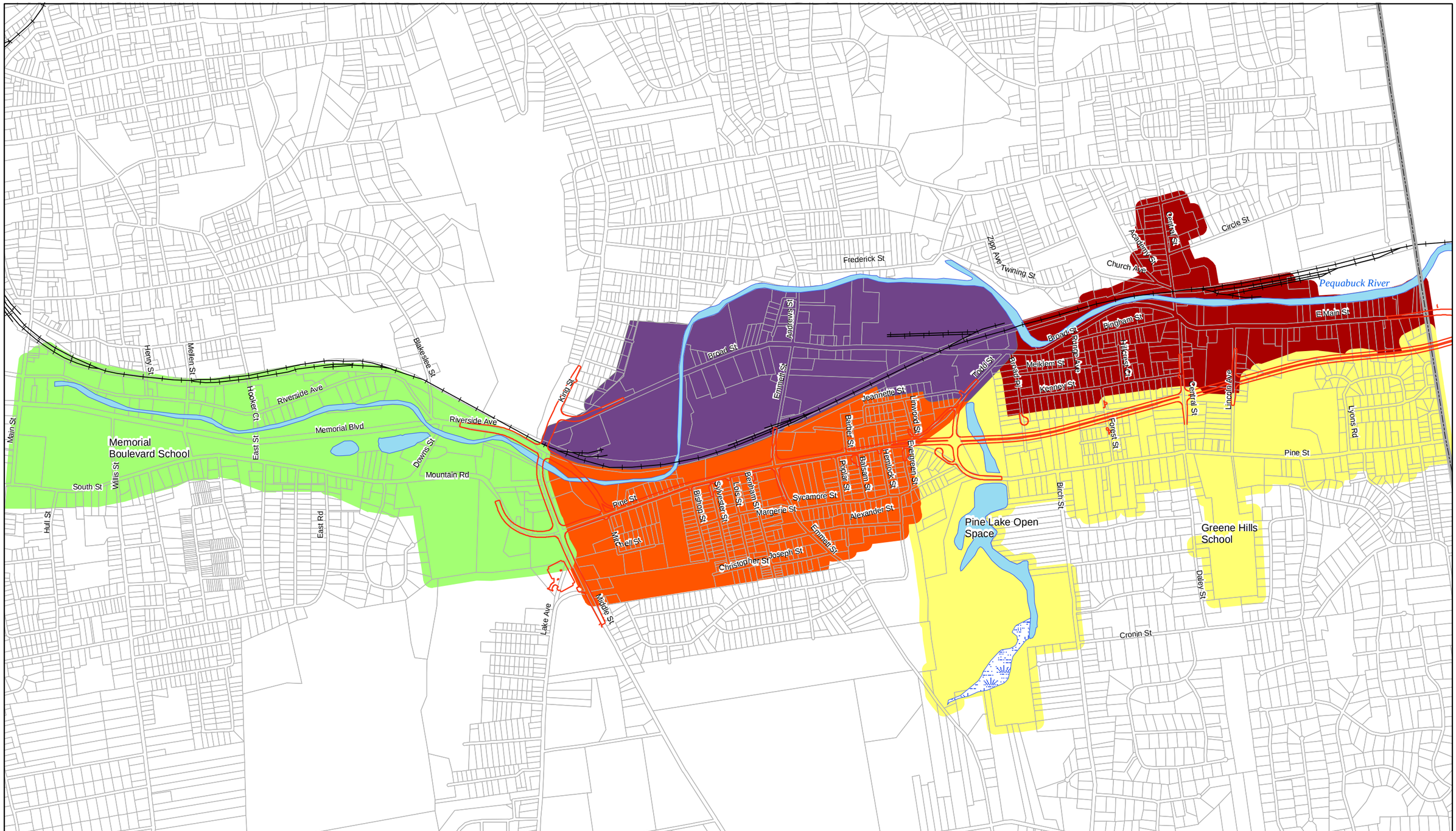
Miles

Source: FHI

Basemap: Conn. DEP/CCRPA

Route 72 Corridor Study
Bristol, Connecticut

Figure 4
Reconfigured Route 72
December 2004



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- Forestville Village
- Future Route 72/Pine Street West
- Broad Street Environs
- Downtown Gateway
- Pine Street East
- Reconfigured Route 72

0 0.1 0.2 0.3 0.4

Miles

Source: FHI
Basemap: Conn. DEP/CCRPA

Route 72 Corridor Study
Bristol, Connecticut

Figure 5
Corridor Focus Areas
December 2004

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Community Commercial
Industrial
Community Facilities
Limited Commercial
Village Center
Open Space/Greenway
Residential
Gateway Treatment
Reconfigured Route 72

0 0.1 0.2 0.3 0.4
Miles

Source: FHI
Basemap: Conn. DEP/CCRPA

Route 72 Corridor Study
Bristol, Connecticut

Figure 6
Future Land Use Plan
December 2004

Downtown Gateway

Gateway Treatment

Streetscaping

Improve pedestrian facilities and aesthetics. Install directional and signature/logo signage.

Conduct a design study to evaluate options for reconfiguring intersection

Streetscaping and a landscaped median along Riverside Avenue from Downs Street to Middle Street

Install wayfinding signage to parking facilities around Memorial Boulevard Park

Gateway Treatment & Signature Signage

Locate and construct additional parking to support use of Memorial Boulevard Park

Modify curbing for better roadway alignment around monument; re-evaluate traffic control at intersection to improve safety and circulation

Traffic Calming

Install traffic calming elements to discourage cut-through traffic

Main St
Henry St
Mellen St
Blakeslee St
Memorial Blvd
Riverside Ave
Hooker Ct
Memorial Boulevard School
Willis St
Cawley St
East St
Downs St
South St
Mountain Rd
King St
Middle St
Lake Ave
George St
Hull St
East Rd

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Access Management Area
Reconfigured Route 72

0 0.05 0.1 0.15 0.2
Miles

Source: FHI
Basemap: Conn. DEP/CCRPA

Route 72 Corridor Study
Bristol, Connecticut

Figure 7
Future Transportation System Plan:
Downtown Gateway
December 2004

Broad Street Environs

Revise functional classification to minor arterial

Reconfigure the intersection of Todd Street and Broad Street

Restricted Turn Movements

Restrict to right in/right out only

Install signage directing westbound truck traffic to Broad Street via Todd Street.

Modify intersection and configuration for safe operation and access

Extend Sycamore Street and open to traffic

Traffic Calming

Install traffic calming elements to discourage cut-through traffic

Assess need for traffic signal following volume shifts

Pequabuck River

Pine Lake Open Space

Andrews St
Emmett St
King St
Riverside Ave
Middle St
Mountain Rd
Middell St
Lake Ave
Pine St
Bishop St
Sylvester St
Lois St
Berlian St
Margerie St
Sycamore St
Alexander St
Joseph St
Christopher St
Jeannette St
Hawthorne St
Linwood St
Todd St
Meiklem St
Broad Pl
Kenney St
Barnes St
Poplar St
Balsam St
Hemlock St
Evergreen St

Future Route 72/ Pine Street West

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Planning Consultants

Access Management Area

Reconfigured Route 72

0 0.05 0.1 0.15 0.2
Miles

Source: FHI
Basemap: Conn. DEP/CCRPA

Route 72 Corridor Study
Bristol, Connecticut

Figure 8
Future Transportation System Plan:
Broad Street Environs &
Future Route 72/Pine Street West
December 2004

Forestville Village

Conduct a design study to evaluate options for reconfiguring intersections

Streetscaping

Improve pedestrian facilities and aesthetics. Install directional and signature/logo signage.

Increase and improve off-street parking. Install parking meters. Improve signage to parking.

Gateway Treatment

Revise functional classification to minor arterial

Reconfigure intersection of Todd Street and Broad Street

Gateway Treatment

Evaluate need for westbound left-turn lane at signal following volume shifts

Traffic Calming

Install traffic calming elements to discourage cut-through traffic

Evaluate Post Office access

Pedestrian Pathway

Improve pedestrian access through continuous sidewalks, enhanced crosswalks, and signage

Streetscaping

Assess need for traffic signal following volume shifts

Provide parking to support future use of Pine Lake Open Space

Provide a crosswalk across Pine Street near the Pine Lake Open Space

Pine Street East

Fitzgerald & Halliday, Inc.
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Access Management Area
Reconfigured Route 72

0.05 0 0.05 0.1 0.15
Miles

Source: FHI
Basemap: Conn. DEP/CCRPA

Route 72 Corridor Study
Bristol, Connecticut

Figure 9
Future Transportation System Plan:
Forestville Village & Pine Street East
December 2004