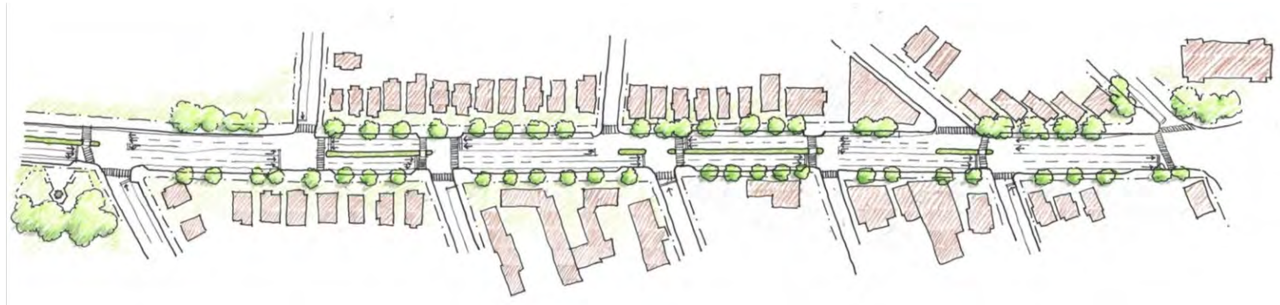
CITY OF NEW HAVEN

Whalley Avenue Corridor Study



Prepared for:

South Central Regional
Council of Governments

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Prepared by:

Parsons Brinckerhoff

with

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CHAPTER 1: INTRODUCTION

STUDY OVERVIEW

The Whalley Avenue Corridor Study was initiated by the South Central Regional Council of Governments (SCRCOG) on behalf of the City of New Haven in 2009-10. The study presents recommendations for improving the corridor with respect to both transportation functions and the contextual relationship with adjoining neighborhoods. The study was prepared in partnership with key stakeholders from the Westville Village Renaissance Alliance (WVRA), Whalley Avenue Special Services District (WASSD) and New Haven Economic Development Corporation (EDC), all of whom are working to revitalize this important corridor. The study assesses current transportation and land use conditions, identifies issues and opportunities along the corridor, and recommends actions and strategies for future development of the corridor.

WHALLEY AVENUE CORRIDOR AND STUDY AREA

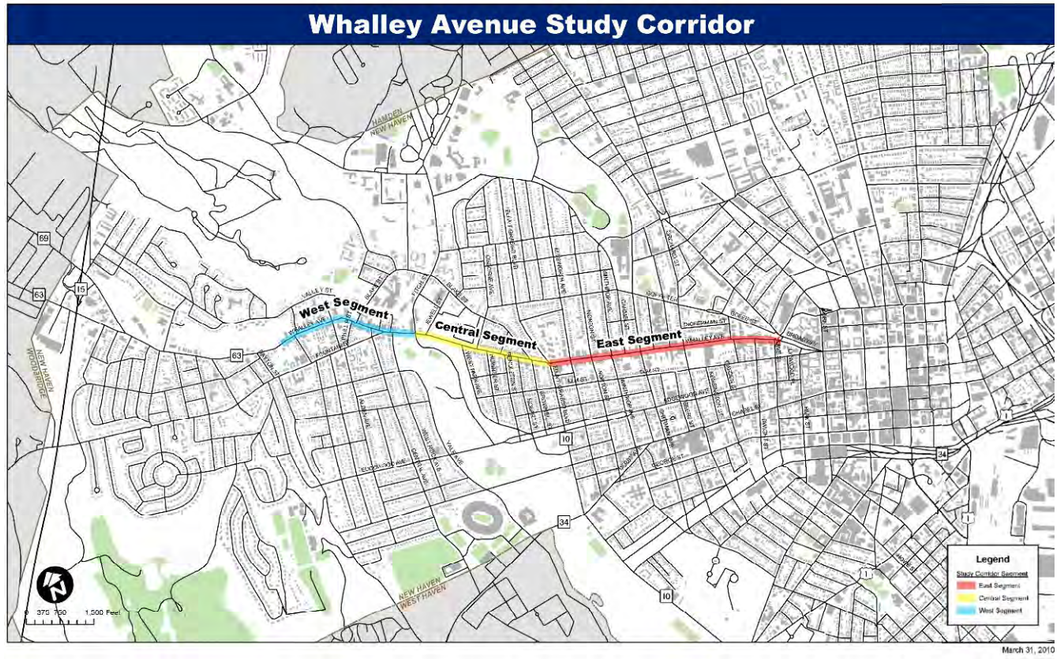
Whalley Avenue is a principal arterial linking downtown and neighborhoods to the west/northwest, including Dwight, Dixwell, Beaver Hills, Edgewood, Westville, West Rock and Amity. In Amity, Whalley Avenue divides to Amity Rd (CT 63) and Litchfield Ave (CT 69), which connects to the Wilber Cross Parkway (CT 15).

This study focuses on a 2-mile segment of Whalley Avenue between Emerson St at the western edge of Westville and Howe St, which is just east of Broadway, Yale University and downtown (Exhibit 1-1). Three distinct corridor segments were identified to help organize corridor assessment and recommendations:

- *West segment*: This segment spans Emerson Street to Fitch Street, and is largely located in Westville. Here, Whalley Avenue is designated as a state highway, CT 63, and connects to CT 243 at Fountain Street.
- *Central segment*: Whalley Avenue is designated CT 10 between Fitch Street and Ella Grasso Blvd, which is designated the central segment in this study. CT 10 turns and continues north on Fitch St and south on Ella Grasso Blvd at either end of this segment.
- *East segment*: From Ella Grasso Blvd to Howe Street, Whalley Avenue is a local principal arterial.

In addition to neighborhoods and commercial districts, the corridor is a key access route to Southern Connecticut State University (north of Whalley Avenue on Fitch St) and Yale University (just east of the study area).

Exhibit 1-1: Study Corridor



Transportation and land use conditions in the study area are detailed further in *Chapter 2, Existing Conditions*.

STUDY PROCESS AND ORGANIZATION

The recommendations of the study were developed to respond to issues identified through an assessment of existing conditions, consultation with staff from the City of New Haven and community organizations, and the community outreach process. Current corridor conditions and identified issues are summarized in *Chapter 2, Existing Conditions*, and study findings are presented in *Chapter 3, Recommendations*.

Study Team

A study team was convened, meeting four times from December, 2009 through June, 2010 to review study progress, provide information, and discuss next steps in the study process. Team members also assisted with organizing, publicizing and presenting information at the two public workshops. The team comprised participants from:

- South Central Regional Council of Government (SCRCOG)
- City of New Haven - City Plan Dept; Dept of Transportation, Traffic, and Parking; Public Works Dept; Engineering Dept; and Office of Economic Development.
- Connecticut Department of Transportation (CTDOT)
- New Haven Economic Development Corporation (EDC)
- Whalley Avenue Special Services District (WASSD)
- Westville Village Renaissance Alliance (WVRA)
- The Consultant Team

Consultant Team

The Whalley Avenue Corridor Study was conducted by Parsons Brinckerhoff, with assistance from Fitzgerald & Halliday, Inc.

Public Outreach

Two public meetings were held during the study. The first meeting, held April 8, 2010 at the Beecher Street School in New Haven, included a presentation of existing conditions and a workshop to engage attendees in identifying corridor issues and potential solutions. The second meeting was held on June 28, 2010 at the Village Café at Marrakesh on Whalley Avenue. Preliminary recommendations were presented, followed by a discussion period with meeting attendees. Comments received at the second meeting and from the public following review of the draft report were considered in finalizing the corridor study.

CHAPTER 2: EXISTING CONDITIONS

CORRIDOR SETTING – LAND USES AND ENVIRONMENTAL CONTEXT

Open Spaces and Natural Features

The project study area extends along Whalley Avenue between Emerson Street and Howe Street. These areas are largely developed and urban in character. The two primary open spaces are Beecher Park, a neighborhood park located on Whalley Avenue at Harrison Street, and Edgewood Park, located just east of Westville Village.

Beecher Park is located adjacent to the Mitchell Branch of the New Haven Public Library. The park includes gardens, paths, and seating as well as a memorial gateway. The 1915 gateway, located at the corner of Whalley Avenue and Phillip Street, honors residents who served in the Civil War.

At over 120 acres, Edgewood Park is one of the City's largest and more important open spaces. Designed by Fredrick Law Olmsted, Jr. in 1910, the park is now managed by the City of New Haven, Parks and Recreation Department. The park provides year round recreational opportunities that include walking trails, a skate park, playing fields, basketball court, tennis courts and a playground. The West River runs through the park, and a Greenway (walking/bicycle path) is being established along the river as it continues to the north. The Greenway connects Edgewood Park to preserved open space at West Rock.

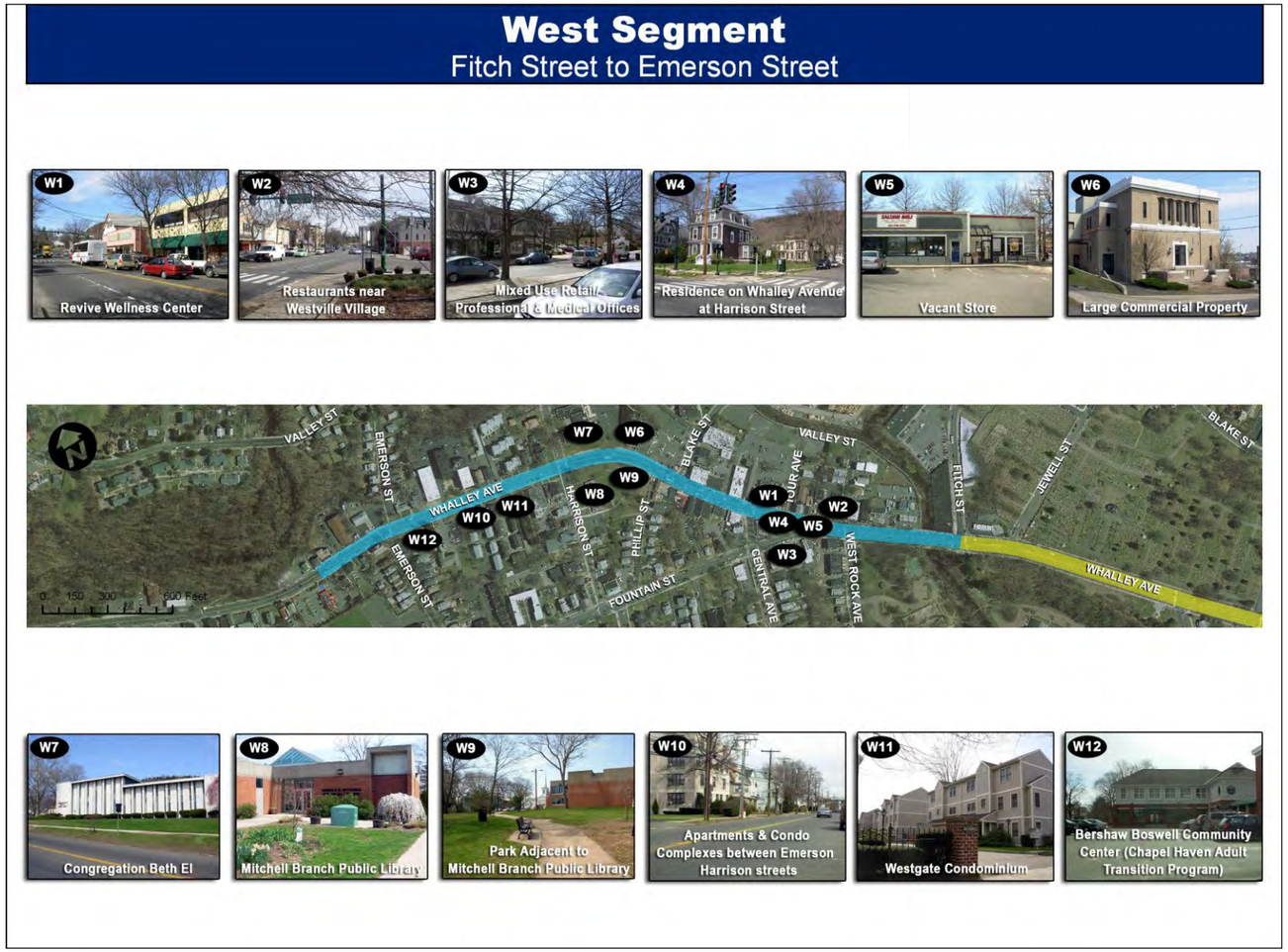
Character of Land Use in the Corridor

Extending two miles from Westville to downtown New Haven, the study corridor is part of a longer commercial and residential spine that extends from downtown New Haven to Route 15. Land uses along the corridor are mostly low to moderate density residential and commercial. Commercial developments within the study area serve adjacent residential areas to the north and south as well as broader city and regional markets.

Several recent residential and commercial developments indicate a promising economic potential for the study area. There are also some transitional areas, vacancies, and underutilized parcels, however, that reflect struggling economic conditions.

The following description of land use in the study area is divided into three segments – East, Central and West – as defined in *Chapter 1, Introduction* (see Exhibit 1-1).

Exhibit 2-1: Current Land Uses, West Segment



West Segment

The West segment of the study area extends from Emerson Street to Fitch Street and includes Westville Village, a National Registered Historic District (Exhibit 2-1).

Properties between Emerson and Harrison Streets are predominantly residential, including several apartments and condominium complexes, of which Westgate condominium complex is one of the largest. The Bershaw Boswell Community Center (Chapel Haven Adult Transition Program) is located here as well, set back from Whalley Avenue with parking in front.

East of Harrison Street, Whalley Avenue curves and descends toward Westville Village. This block includes a vacant building (formerly a gymnastics school), the Congregation Beth El temple, a doctor's office and the Mitchell Branch Public Library.

Westville Village has a well defined, diverse, and pedestrian-oriented retail core. This neighborhood center contains many older, single- and

multi-story mixed use structures. The mix of businesses in these districts has evolved over the years, but the architectural character and district boundaries have been retained, which is reflected in its designation on the National Register of Historic Places. Stores include antique shops, galleries, banks, a wellness center and several restaurants. These pedestrian-oriented storefronts and commercial buildings are located within convenient walking distance of nearby residential neighborhoods. Some buildings contain retail shops on the ground floor and professional offices, medical offices, or residential units on the upper levels. Whalley Avenue is two lanes with on-street parking in the Village.

At the intersection of Whalley Avenue and Fountain Street two retail spaces, Dunkin Donuts and the now vacant Salumi Deli, with off street parking for approximately 15 vehicles, face onto a small open space. East of Fountain Street, the corridor has less of a "village center" character and is instead characterized by a more "surburban" feel dominated by a five-lane segment of Whalley Avenue. Several gas/service stations are located on this stretch of the corridor.

Central Segment

The Central portion of the study area, extending from Fitch Street to Ella Grasso Blvd (Exhibit 2-2), is characterized by open spaces to the west and a mix of residential and street-front retail to the east.

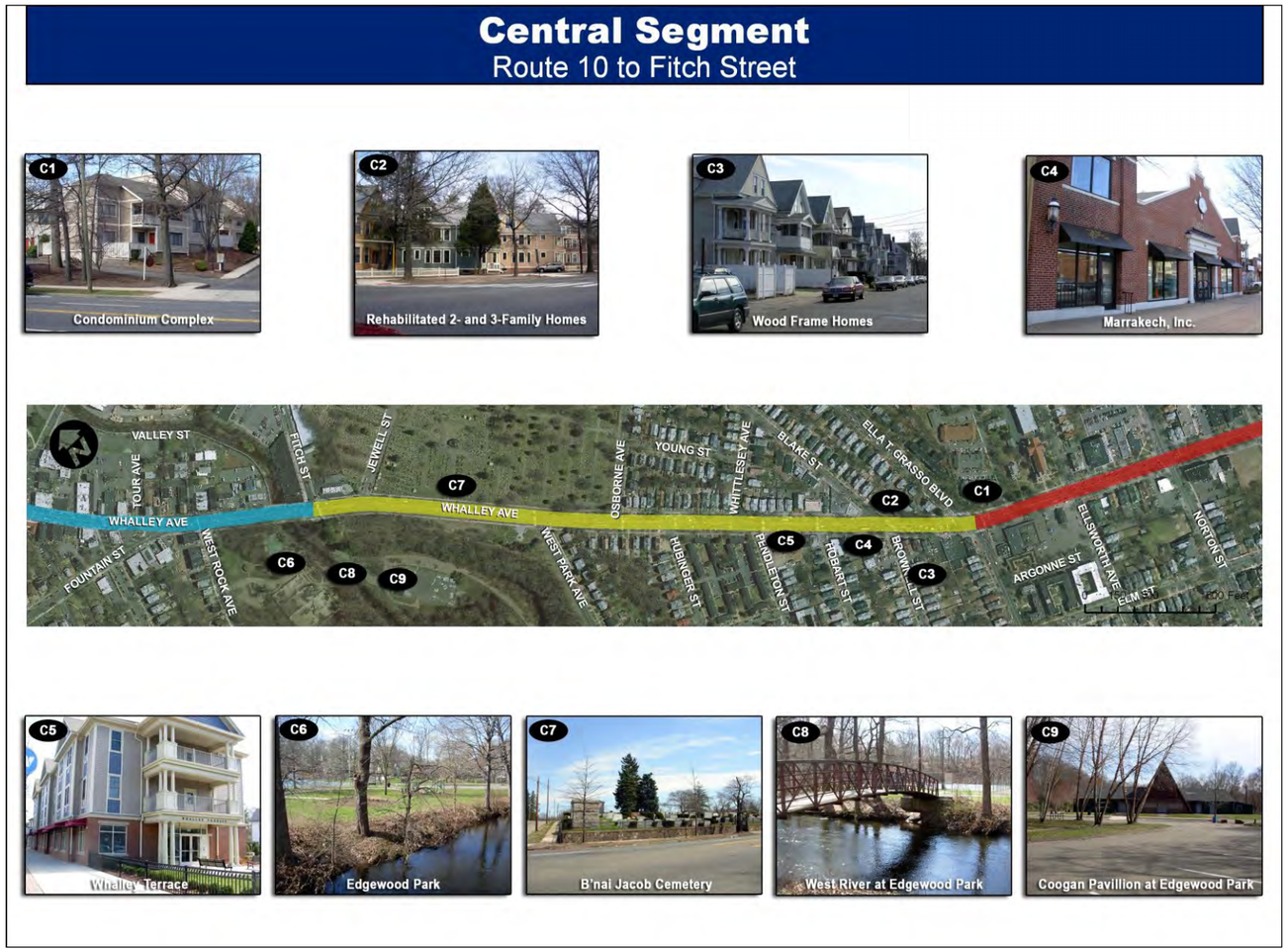
Edgewood Park borders Whalley Avenue to the south between West Rock Avenue and West Park Avenue. A Holocaust Memorial Monument is located at the southwest corner of Whalley and West Park Avenues. Several cemeteries are located opposite the park on the north side of Whalley Avenue.

An entrance to Edgewood Park is located at Fitch Street. To the north on Fitch Street, Southern Connecticut State University is a growing state university with 12,000 students. Nearly 70 percent of the students commute to the University from the surrounding area. Whalley Avenue is an important access route to the campus from the west and south.

West of West Park Avenue are several blocks of well maintained, wood frame older homes. Many of the buildings here have a unified and attractive street presence with front porches on the first and second levels, Marrakech, Inc., located at Hobart Street, occupies a series of connected new and renovated buildings. This attractive complex includes a restaurant, and Learning Initiative Center.

Whalley Terrace, located at Pendleton Street, is a new residential complex on three levels with street level retail uses. Ground level commercial uses with residential uses on the second level are common in this area. Residential uses in this segment also include 1960's era garden style apartments.

Exhibit 2-2: Current Land Uses, Central Segment



Near the corner of Ella Grasso Boulevard, five multi-family homes have been recently rehabilitated and are for sale. Across Ella Grasso Boulevard, A contemporary design condominium complex is well landscaped and maintained. Driveways from Whalley Avenue provide access to the complex.

East Segment

The East segment of the study corridor forms the boundary between the Edgewood and Beaver Hills neighborhoods west of Sherman Avenue and the Dwight and Dixwell neighborhoods to the east. Beyond the study limits at Howe Street, the corridor connects to the Broadway retail district adjacent to the campus of Yale University and just west of downtown. Large residential areas are located immediately to the north and south.

Most of the properties along the east segment are commercial and retail uses, though development patterns, access provisions, and building types vary considerably (Exhibit 2-3). Only a few structures from the early development of this area remain. The mix of design styles, uses and time

period of development results in a less cohesive appearance on this segment than the Central or West sections of the study area.

While some buildings front the street and rely on on-street parking for customer access, off-street parking is much more prevalent on this section of Whalley Avenue (especially west of Sperry Street), even for smaller scale establishments. In most cases, the parking lot, rather than the building, fronts the street and buildings are set back. The density of driveways is very high, which inhibits pedestrian movement along sidewalks and increases conflicts among vehicular traffic.

Several parcels are quite large, including the former Shaw's site, CVS, Walgreens, Minore's Market and AutoZone. The latter is one of many automotive uses located along this segment, reflecting the history of this area as an automotive center. These include an auto parts store, repair shops, a car wash, car/truck rental, and custom window tinting shop.

The area also include many neighborhood scale retail uses, including small deli and food shops, hair salons, nail salons, and convenience stores. In addition to retail uses, there are several medical and professional offices and banks. There are a few two and three level office buildings, including a dentist's office and visiting nurse association. In addition, office space is located on the second level of several commercial buildings.

This area also includes St. Brendan's Roman Catholic Church and St. Luke's Episcopal Church (010). The John Downey Juvenile Courthouse is also located in this section.

Shaw's supermarket, one of the few supermarkets in downtown New Haven, closed at the end of March. Its closing is a significant loss for the surrounding neighborhoods and the City. A few other vacancies were noted within this segment as well (as of April, 2010).

The east end of the segment includes some uses that serve the downtown and Yale communities, such as the Marriott Courtyard Hotel and several casual dining and fast food restaurants.

Zoning in the Study Area

The far western end of the Whalley Avenue study corridor is zoned for residential uses; primarily RM-2 (Middle to High Density) with some RM-1 (Low to Middle Density) on the north side of Whalley Avenue across from Beecher Park. Westville Village is zoned BA (General Business), and is bordered to the east by Park and Cemetery zones. A one-block wide row of houses on West Park Avenue fall under a RS-1 zone, which limits development to single family dwellings, consistent with the current character of the street.

To the east of West Park Street, most of the corridor is zoned for business uses, with RM-2 residential zones surrounding the business core to the north and south, as well as covering a two-block segment of Whalley Avenue between (approximately) West Park Avenue and Pendleton Street.

Properties along Whalley Avenue are zoned BA (General Business) west of Sherman Avenue and BB (Auto Sales) to the east. The BB zoning reflects past concentration of auto uses on this portion of the corridor, but still allows many of the same business and residential uses as BA (General Business) zones. A special overlay district has been applied to the corridor between Ella Grasso Blvd and Sherman Avenue. The Whalley Avenue Overlay District specifies additional zoning and development requirements aimed at revitalizing this segment of the corridor. In addition, the former Shaw's site was established through a Planned Development District.

Exhibit 2-3: Current Land Uses, East Segment

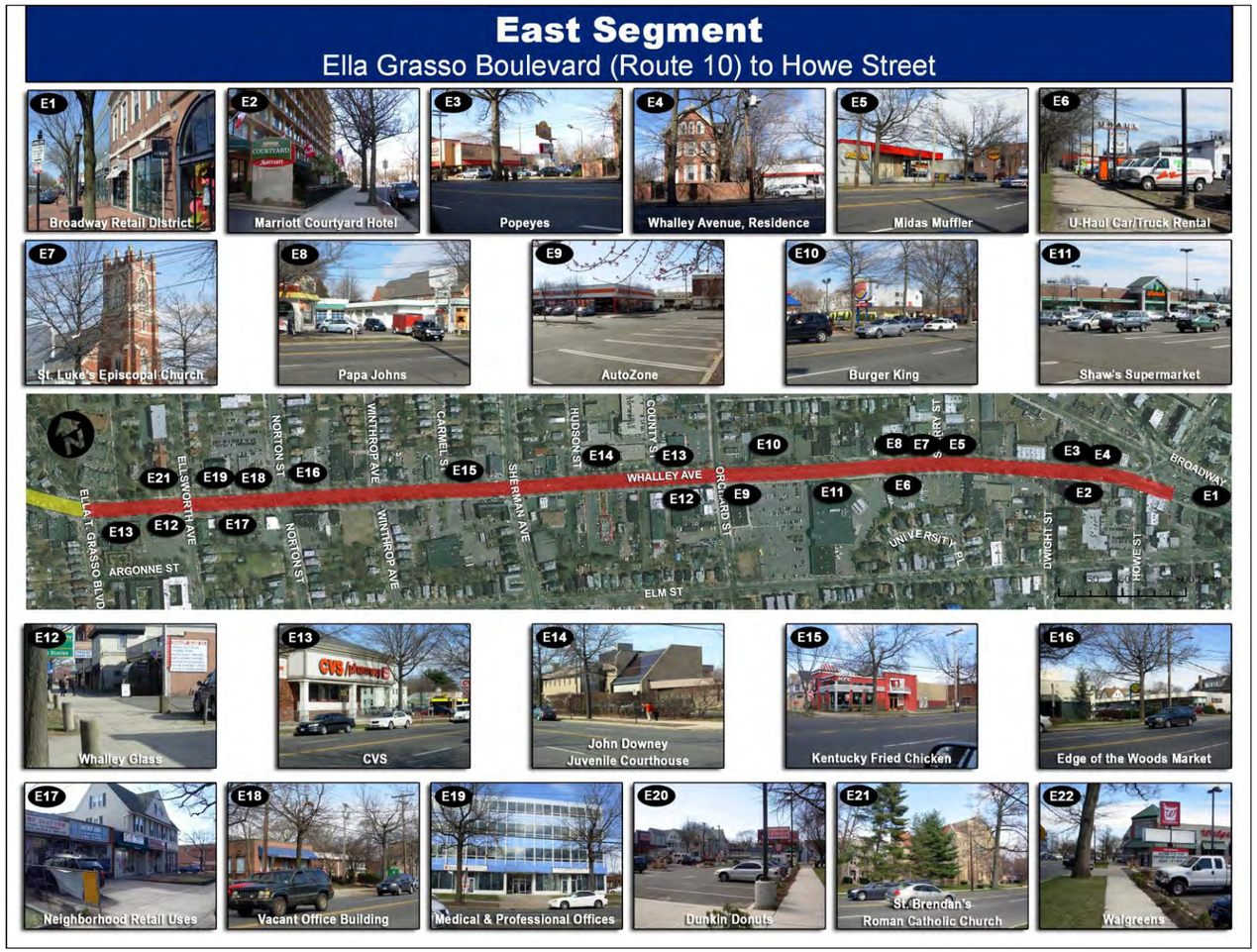
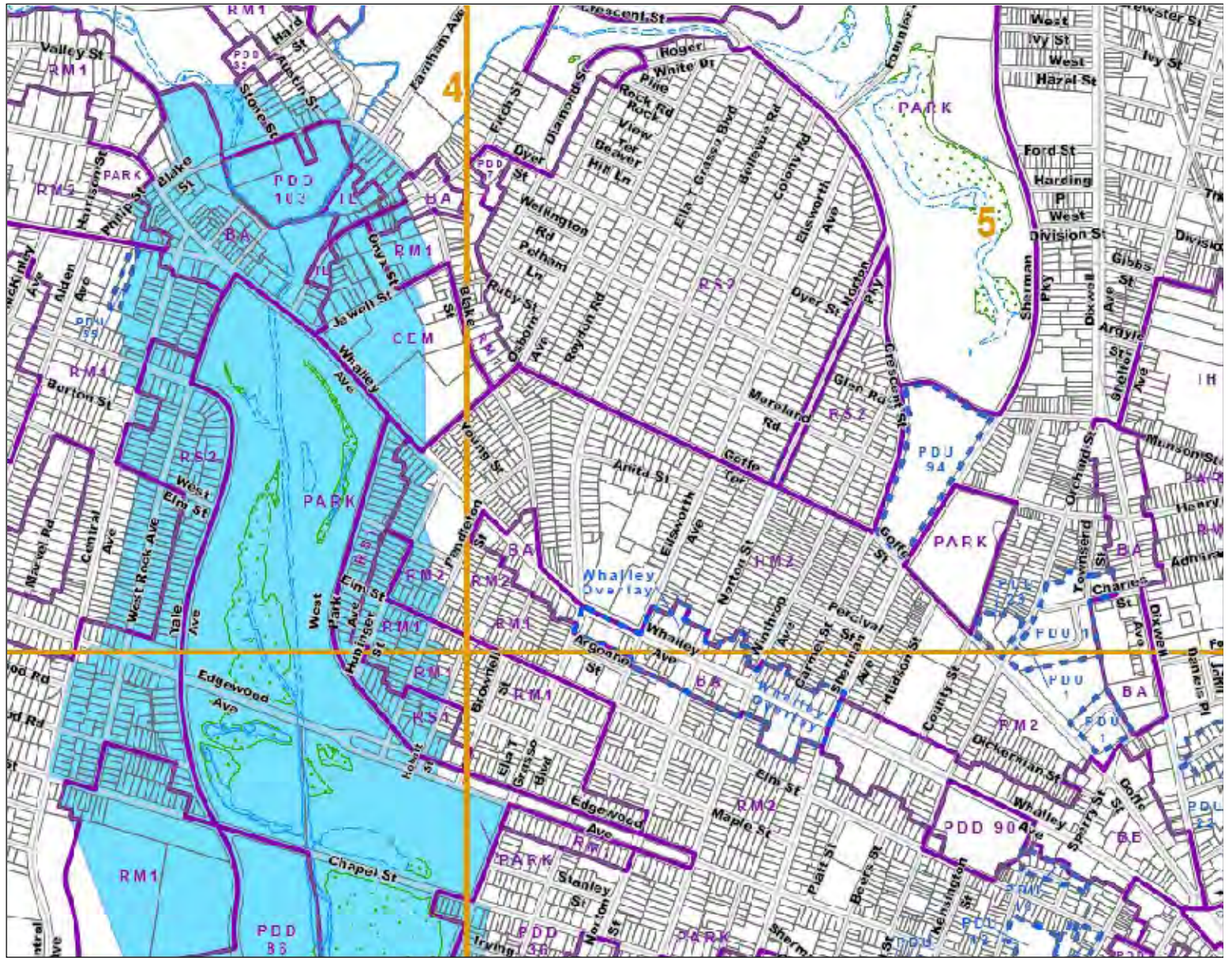


Exhibit 2-4: Current Zoning



Source: New Haven Zoning Map, updated February 19, 2010

City of New Haven Zoning Districts

The following zoning districts are established along the study corridor. They are established by the Zoning Code of the City of New Haven (Codified through Ordinance No. 1598, enacted September 8, 2009).

BA District (General Business)

A predominantly retail oriented district that provides concentrations of convenience stores, specialty shops, and services for adjacent neighborhoods.

BB District (Auto Sales)

Establishes zones for the sale of new and used vehicles and excludes non-related uses to promote the development of automobile sales and related uses.

RM-1 District (Low-Middle Density)

Protects low-middle density areas and limits dwellings to a density of approximately 12 dwelling units per acre, and to non-residential uses that generally support a middle density area.

RM-2 District (High-Middle Density Residential)

High-middle density dwellings and limits density to approximately 22 dwelling units per acre, and to non-residential uses that generally support a middle density area.

Park District

Protects areas that are publicly or semi-publicly owned and designated as public parks and open spaces.

Cemetery District

Sets aside and protects areas that have been or are being developed predominantly for cemeteries.

RS 1 District (Special Single Family)

Preserves low-density residential areas by limiting the use of land and buildings within these areas to single-family homes.

Whalley Overlay District

The Whalley Avenue Overlay District, which extends from Ella Grasso Boulevard (Route 10) to Sherman Avenue, was created to encourage the revitalization of this area and to reinforce Whalley Avenue as a commercial corridor. Within the Overlay District, businesses fronting on Whalley Avenue are limited to allowed uses for BA zoning districts, with the exception of certain uses. Uses that are not allowed include pawn shops, auto racing clubs, motels, and automobile repair and rental. The Whalley Overlay District also establishes design standards that are intended to promote this retail district.

PDD (Planned Development District)

A special district that allows large tracts to be developed or redeveloped in an integrated manner.

RELEVANT PLANS AND STUDIES

Prior Studies of Whalley Avenue

Route 10 Corridor Study

South Central Connecticut Council of Governments, June 2008.

The Route 10 Corridor Study assessed conditions on Connecticut Rt 10 in New Haven and Hamden, including the segment on Whalley Avenue (Ella Grasso Blvd – Fitch Street). Recommendations from this study that are germane to the Whalley Avenue corridor include:

- Encourage in-fill development in Westville Center.
- Establishment of bicycle lanes on Ella Grasso Blvd south of Whalley Avenue (effectively extending the existing lanes from north of Whalley Avenue).
- Reconstruction of Whalley Avenue between West Park Street and Ella Grasso Blvd to provide 8-foot parking lanes, two 11-foot travel lanes in each direction, and a center 11-foot flush median. This configuration would require that the existing roadway be widened by 5 feet.
- Provide improved visibility crosswalks (colored or painted) and curb extensions.
- The study noted that the bicycling community had expressed interest in establishing bicycle lanes on Whalley Avenue, though such changes were not part of the recommended plan due to space constraints and suitability of other routes. The study estimated that 15-feet of widening would be needed between West Park Avenue and Ella Grasso Blvd to accommodate bicycle lanes.

Whalley Avenue Market and Redevelopment Study

Whalley Avenue Special Service District, 2002.

This study evaluated conditions affecting businesses within the Whalley Avenue Special Services District. Its findings indicated that business owners/representatives in the district shared several concerns relating to transportation and access:

- Lack of convenient parking was identified as a problem in some locations.
- The corridor's role as a primary travel corridor was deemed important for the vitality of businesses.
- Streetscape and pedestrian conditions needed to be improved.
- Left turn access to/from driveways is problematic.

The study also included a concept plans for streetscape elements and a cross-section for Whalley Avenue showing four travel lanes, widened sidewalks with curb extensions at intersections. The proposed cross-section did not provide for turn lanes or a median, however.

Whalley Avenue Draft Retail Assessment & Strategy

Whalley Avenue Special Service District, March 2009.

A key conclusion of this recent assessment was that Whalley Avenue was best positioned to accommodate convenience shopping hubs and niche markets, rather than as a comparison shopping destinations. The study recommends improved streetscape, improved synchronization of traffic signals, a new pedestrian crossing at Whalley Avenue/Carmel Street and pursuit of shared or public parking opportunities.

Other Transportation Plans and Studies

The state-wide, regional and local planning efforts that are most relevant to this study include the following:

- Connecticut on the Move: Strategic Long-Range Transportation Plan (2009-2035). Places new emphasis on achieving a safe, efficient, multimodal transportation system that balances mobility, quality of life and economic vitality objectives.
- Connecticut Statewide Bicycle and Pedestrian Plan Map (2009): Identified Whalley Avenue west of Fitch Street as part of the Cross-State Bicycle Route. Identifies Whalley Avenue between Fitch Street and West Park Avenue as least suitable for biking, based on average daily traffic volumes and shoulder width. Identifies Whalley Avenue between West Park Avenue and Ella Grasso Blvd as more suitable for biking based on average daily traffic and shoulder width.
- SCRCOG Long Range Transportation Plan (2007-2035): Establishes a balanced mix of policies focusing on improving travel options, supporting economic vitality, promoting system efficiency and preservation, and protecting the environment.
- SCRCOG New Haven Truck Study (2007): Identified Whalley Avenue, Fitch Street and Ella Grasso Blvd among truck routes in New Haven.
- SCRCOG Regional Bicycle and Pedestrian Plan (2007): Identified Ella Grasso Blvd south of Whalley Avenue as having a high number of bicycle and pedestrian crashes and recommends improvements along this segment. The plan also identifies Whalley Avenue as an existing bicycle route east of Fitch Street, and Edgewood Avenue and Goffe Terrace/Street as bicycle routes parallel to Whalley Avenue.
- SCRCOG Implementation of the Regional Transit Study Final Report (2008): Identifies Westville Center as a potential transit hub location (but notes site constraints). Proposes minor modifications to B, Z, and Q routes.
- SCRCOG Traffic Calming Resource Guide (2008): identified applicable speed and volume control measures and appropriate contexts.
- New Haven Plan for Greenways and Cycling (2004): Identifies Greenway along West River through Edgewood Park.
- New Haven Pedestrian and Bicycle Gap Analysis (2009): Introduces a plan for Shared Lane Markings ("Sharrows") and Bike Boxes in the downtown area.
- Elm City Cycling 2010 Bike Plan: Recommends bike route/facility improvements, bike parking and public awareness actions. Maps recommended route improvements, including new (2009) on-street routes on Edgewood and Chapel Streets and recent Yale Avenue route into Westville Village.

Land Use and Comprehensive Plans

South Central Connecticut Plan of Conservation and Development

South Central Connecticut Council of Governments, June 2008

The 2008 Plan's primary land use goal is to focus growth in the region's existing developed corridors that have transportation, employment and utility infrastructure while conserving the region's open space and undeveloped areas.

City of New Haven Comprehensive Plan of Development

City of New Haven, 2003

The Transportation Element of New Haven's Comprehensive Plan advocates for a more balanced, multimodal approach to transportation:

- Identifies a new bus service opportunity for Cross Town service with potential Transit Oriented Development at a juncture with Whalley Avenue.
- Calls for completion of the West River Greenway Trail.
- Advocates for further development of bicycle facilities.
- Emphasizes context-sensitive design on Whalley Avenue and other corridors.

Other elements of the Comprehensive Plan recognizes the importance of the neighborhood commercial districts to the City:

"As a city built around the fabric of its neighborhoods, the city's smaller commercial districts are an integral component to the quality of life in New Haven." (pg. V-12)

Among the Planning Considerations for Housing and Neighborhoods are:

"The city's neighborhoods have unique and organic qualities, which contribute to a profound "sense of place" and an agreeable urban living environment. The prevailing land use pattern is a classic example of "new urbanist" design philosophy (higher densities, pedestrian and transit connections, high quality aesthetics, etc.)

"The city's most stable neighborhoods, in general, are pedestrian-oriented, aesthetically pleasing and environmentally sound. There are walk-to-work options and convenience goods in accessible locations. Community services, including schools, parks and playgrounds are within a reasonable walking distance of many homes. Tree-lined residential streets, as well as the surrounding commercial areas, enhance this urban environment.

"This contextual urban environment is among the city's most important assets and must be stewarded against inappropriate infill, conversions, encroachments and other potentially deleterious / nuisance influences."

"Affordable housing remains an integral component to the city's housing strategy. "

As noted in the Comprehensive Plan, "Over time, the encroachment of incompatible urban design weakens the overall viability of the district." (pg. V-12)

The Comprehensive Plan also notes that "The city's neighborhood commercial districts… are unique assets that must be stewarded from incompatible suburban-oriented redevelopment. Design review and targeted business development are prime issues for these districts." "Smaller, neighborhood-oriented commercial districts are essential to the quality of life in the city's neighborhoods."

The development of new retail uses is limited by the lack of suitable, large development sites along Whalley Avenue. There is an opportunity for infill development in retail centers along the corridor, particularly specialized neighborhood oriented retail.

ROADWAY NETWORK

Applicable Design Standards and Current Best Practices

CTDOT design standards for Principal Urban Arterials apply to the portion of Whalley Avenue east of Ella Grasso Blvd. Applicable standards are presented in Exhibit 2-5. Also shown are recent design guidelines published by the Institute of Transportation Engineers (ITE), in conjunction with Congress for the New Urbanism (CNU), that reflect current best practices for establishing walkable, context-sensitive urban thoroughfares. Guidelines for commercial areas are shown; those for residential areas are similar. The ITE/CNU guide mirrors national trends toward allowing flexibility in the design process to better relate to neighborhood context and recognize a broader range of objectives.

Both CTDOT design standards and the ITE/CNU guidance form a basis for assessing current corridor conditions and developing the recommendations presented in chapter 3 of this study. An overarching objective of the study, however, is to remake Whalley Avenue in a manner that is more consistent with the ITE/CNU recommendations for "Avenues" in recognition of context and varied functional requirements of the corridor.

Notable differences between the CTDOT design standards and ITE/CNU recommendations include:

- Narrower lane widths (10 to 11 feet for avenues) recommended by the ITE/CNU guidance, compared to CTDOT standards (11 feet to 12 feet)
- Allowance for narrower medians when the median does not include a left turn lane.
- Narrower parking lane widths (7 to 8 feet) recommended by the ITE/CNU guidance, compared to CTDOT standards (10 feet to 11 feet)
- Substantially wider streetside (sidewalk and planting strip) spaces recommended by the ITE/CNU guidance.
- Specific shoulder widths identified in CTDOT standards, whereas the ITE/CNU guidance advocates eliminating shoulders in urban areas (except when used as bicycle lanes) as a means of discouraging higher travel speeds.

Complete Streets

A "Complete Streets" approach to planning and design considers all users of the transportation system, including pedestrians, transit users, bicyclists, and motorists of all ages and abilities. The State of Connecticut enacted Complete Streets legislation in 2009 that calls for"… accommodations for all users to be a routine part of the planning, design, construction, and operating activities of all highways in the state." Similarly, the City of New Haven in 2008 passed a resolution creating a Complete Streets Policy and Complete Streets Design Guidelines. The resolution calls for the safe and convenient accommodation of all users and prioritizes walking, transit and biking.

Exhibit 2-5: Applicable Design Standards and Guidance

CTDOT Design Standards		ITE Walkable Streets Recommendations		
Classification	Principal Urban Arterial	Boulevard	Avenue	Thoroughfare Type
Lanes	Two-lane or Multilane	4 – 6	2 – 4	Lanes (both directions)
Land Use	Built up (urban)	General Urban (Commercial)	General Urban (Commercial)	Land Use
On-Street Parking	Sometimes	Optional	Yes	On-Street Parking
Design Speed	30 – 45 mph	30 – 35 mph	25 – 30 mph	Desired Operating Speed
LOS	LOS B - D	15,000 – 50,000 ADT	1,500 – 30,000 ADT	Typical Traffic Volumes
Lane widths	11' – 12'	10' – 12'	10' – 11'	Lane widths
Right shoulder width	4' – 8'			Right shoulder width
Left Shoulder width	2' – 4' *			Left Shoulder width
Turn lane width	11' – 12'			Turn Lane width
Parking lane width	10' – 11'	8'	7' – 8'	Parking lane width
Median width (raised island)	8' – 20' *	4' – 18' Required	4' – 18' Optional	Median width (raised island)
Sidewalk width	5' minimum	19' total width for streetside space (12' total in constrained settings) 8' minimum sidewalk width 7' minimum planting strip width	16' total width for streetside space (12' total in constrained settings) 6' minimum sidewalk width 6' minimum planting strip width	Sidewalk width
Bicycle lane width	5'	5' – 6' Bike lanes or designate parallel route	5' – 6' Bike lanes or shared use of roadway	Bicycle lane width
Operational offset (obstruction free)	1.5'			Operational offset (obstruction free)

*applies to multilane roadways

Sources: CTDOT Highway Design Manual, 2003 Edition with Revisions to January 2009
Designing Walkable Streets: A Context Sensitive Approach, Institute of Transportation Engineers (ITE), 2010

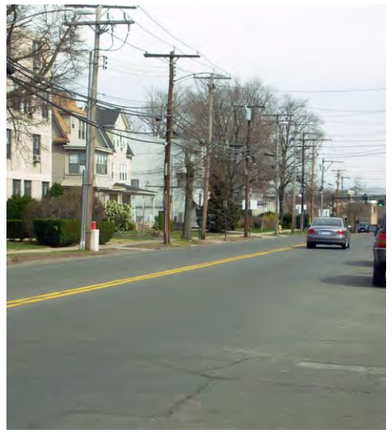
Roadway Characteristics

The physical attributes of Whalley Avenue vary along the study corridor, as summarized in Exhibit 2-6.

Emerson Street – Fountain Street

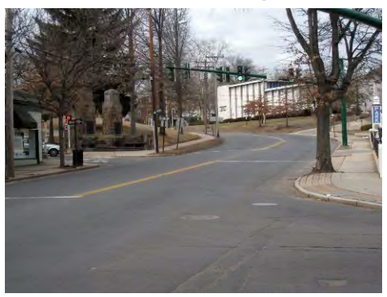
West of Fountain Street, one travel lane is provided in each direction. On-street parking is allowed, except between Harrison Street and Blake Street. Parking spaces are not striped or delineated from the travel lane by pavement markings. As a result, travel lanes appear to be quite wide when on-street parking spaces are unoccupied (Exhibit 2-7). The combined travel lane and parking lane width ranges from 19 to 20 feet, which presuming an 8-foot parking lane translates to travel lanes of 11 to 12 feet.

Exhibit 2-7: Unstriped Parking Lane



East of Harrison Street, the corridor turns and travels down-grade into Westville Village. On-street parking is prohibited on this segment (between Harrison Street and Blake Street), which results in a wide travel lane of approximately 20 feet (Exhibit 2-8). These characteristics tend to encourage higher travel speeds, and speeding on this segment was an issue noted through the public outreach process.

Exhibit 2-8: Whalley Avenue entering west side of Westville Village



Left turn pockets on Whalley Avenue are provided at Harrison Street, but not to Emerson Street, Phillip Street, Blake Street or Central Avenue. The width of travel lanes west of Blake Street does allow a vehicle to pass to the right of left-turning vehicles is the turning vehicle positions itself near the centerline.

The public right-of-way ranges from 60 to 70 feet, and the existing total street width (curb-to-curb) ranges from 40 to 44 feet.

Exhibit 2-6: Roadway Elements

Segment	EB Lanes	WB Lanes	Turn Lane/ Median	Typical Lane Width [1]	R.O.W Width	Typical Pavement Width	On-Street Parking	Total width: Planting Strip + Sidewalk	Typical Sidewalk width
Emerson St – Harrison St	1	1	Left turn pocket at Harrision St.	11' – 12'	62' - 65'	40'	Yes	11' – 14'	5' – 6'
Harrison St – Blake St	1	1	None	20'	60' – 70'	40'	None	9' – 16'	6' – 9'
Blake St - Fountain St	1	1	None	11' – 12'	60'	42' – 44'	Yes	8' – 12'	8' – 12' A
Fountain St – W Rock Ave	3	1 thru lane	10.5' WB left turn lane	11' – 13'	90'	66' – 70'	WB side	10'	10' [A]
W Rock Ave – Fitch St	3/2 [3]	2	10' turn pockets	9' – 11'	88' typ.	67'	WB side	10' – 12'	6' – 10'
Fitch St – W Park Ave	2	2	11' flush median	11' inside 16' outside	93' typ.	68'	None	11' – 14'	5' – 6'
W Park Ave –Brownell St	2	2	10' flush median w/ turn pockets	9' – 10'	95' – 100'	66'	Yes	15' – 20'	6' – 8'
Brownell St – Ella Grasso Blvd	2	2	None	11' – 12'	95'	64'	Near Brownell	16' – 20'	7' - 8'
Ella Grasso Blvd – Ellsworth Ave	2	2	10' WB left turn pocket	10' – 11'+	95' – 100'	61'	None	17' – 20'	7' - 8'
Ellsworth Ave – Sherman Ave	2	2	No, except at Sherman	10' – 12'	100'	62' [4]	Yes	16' – 20' [5]	10'
Sherman Ave – Orchard St	2	2	No, except at Sherman	11' – 12'	100'	62' [4]	Yes	15' – 20' [5]	6' – 13'
Orchard St – Sperry St	2	2	No [6]	11'	95 – 100'	65' [6]	Yes	12' – 18' [7]	7' – 9'
Sperry St – Howe St	2	2	No	11'	90'	60' – 62'	Yes	14' – 18'	7' – 9'

[1] In locations where on-street parking is provided, lane widths reported do not account for 8' that is presumed dedicated to the unmarked parking lane.
[2] Sidewalk width includes tree wells. Effective width of sidewalk narrower next to street trees.
[3] Outside eastbound lane merges west of Fitch.
[4] Widens to 72' at Sherman to allow for WB left turn pocket.
[5] Narrows to 12' at Sherman intersection.
[6] Widens to 72' at Shaw's site to allow for WB left turn pocket.
[7] Southside planting strip in front of Shaw's site narrows to 12 feet; 9 foot sidewalk with 3 foot planting strip.

Fountain Street – Fitch Street

At Fountain Street, Rt 10 joins Whalley Avenue (Rt 63), and the roadway widens to accommodate the combined traffic from both routes. In the eastbound direction, Whalley Avenue widens to two travel lanes one block prior to the Fountain Street intersection, and a third lane is added east of Fountain (Exhibit 2-9). The third eastbound lane is channelized (striped with pavement markings) to allow for uninterrupted flow from Fountain Street (i.e. – eastbound traffic can travel through the intersection from both Fountain Street and Whalley Avenue simultaneously). The third eastbound travel lane ends between West Rock Avenue and Fitch Street, with the outside lane merging into the adjacent lanes.

Westbound, two travel lanes are provided east of Fountain Street. The inside travel lane turns to Fountain Street via a left turn, while the outside lane continues into Westville Village on Whalley Avenue. Additional turn pockets are provided westbound to West Rock Avenue and eastbound to Fitch Street.

Exhibit 2-9: Whalley Ave/Fountain St Intersections

Travel lanes on this segment range from 11 to 13 feet west of West Rock Avenue, but narrow considerable to the east. When accounting for

adjacent parking, the outside westbound travel lane between Fitch Street and West Rock Avenue is 9 feet wide. One of the eastbound lanes on the three-lane sections is also striped at 9 feet.

The right-of-way for this segment is approximately 90 feet (or just under), with street width of 66 to 70 feet.

Fitch Street – Ella Grasso Blvd

East of Fitch Street, Whalley Avenue comprises two travel lanes in each direction. A 10-foot (typical) flush center median provides separation between directions of travel and accommodates turn pockets westbound to Hobart Street and eastbound to Jewell Street, Osborne Avenue and Whittlesey Avenue.

Exhibit 2-10: Whalley Avenue at Osborne St

On-street parking is prohibited between Fitch Street and West Park Avenue, where Whalley Avenue is bordered by cemeteries and Edgewood Park. An 11-foot inside travel lane and 16-foot outside travel lane are provided here. Excessive traffic speeds on this segment is an issue identified during the study's first public meeting.

On-street parking is allowed between West Park Avenue and Brownell Street, and travel lanes narrow to between 9 and 10 feet.

The right-of-way between Fitch Street and Ella Grasso Blvd ranges from 95 to 100 feet, while street widths varies from 64 to 68 feet.

Left Turn Lanes on Whalley Avenue

Eastbound (EB)	Westbound (WB)
• EB to Harrison St	• WB to Harrison St
• EB to Fitch St	• WB to Fountain St
• EB to Jewell St	• WB to West Rock Ave
• EB to Osborne Ave	• WB to Hobart St
• EB to Whittlesey Ave	• WB to Ella Grasso
• EB to Sherman Ave	• WB to Sherman Ave
• EB to parcels east of Orchard St	• WB to former Shaw's site

Ella Grasso Blvd – Howe Street

Two travel lanes in each direction continue east of Ella Grasso Blvd, ranging in width from 10 to 12 feet. Left turn pockets are provided eastbound to Sherman Avenue and to two driveways east of Orchard Street. Westbound left turn pockets provided to Ella Grasso Blvd, Sherman Avenue, and the former Shaw's Grocery Store site.

A 100-foot right-of-way and 62-foot street width are typical between Ellsworth Avenue and Sperry Street, except where the roadway widens at Sherman Avenue and east of Orchard Street to accommodate turn pockets. Between Sperry Street and How Street, the right-of-way is 90 feet, with a 62- to 65-foot street.

On Street Parking

On-street parking is allowed on most sections of the corridor, except for the following locations:

- Between Harrison Street and Blake Street.
- Eastbound between Fountain Street and Fitch Street.
- Bordering Edgewood Park and the cemeteries between Fitch Street and West Park Avenue.
- Between Ella Grasso Blvd and Ellsworth Avenue.
- Eastbound adjacent to the former Shaw's grocery store site east of Orchard Street.

Parking is also prohibited during declared snow emergencies, and on a site-specific basis at bus stop locations, driveways, and in front of fire hydrants. There is no charge to park on-street within the study corridor.

All day parking is allowed in most residential areas, while time restrictions (typically 2-hour) are common in commercial areas. Signs prohibit on-street parking in Westville Village (Fountain Street – Blake Street) eastbound in the morning and westbound in the afternoon.

Traffic Control

A posted 25-mph speed limit applies to the length of Whalley Avenue.

Traffic control is governed by traffic signals at major intersections or stop signs that control access from side streets. New traffic signals have been recently installed at intersections between Harrison Street and West Rock Avenue.

Driveways and Access Management

A low degree of access management is employed along most of Whalley Avenue. The commercial areas between Ella Grasso Blvd and Sperry Street are characterized by large off-street parking lots and frequent driveways. In most locations, vehicles can enter commercial driveways from either direction of travel, though left turns are typically made from the inside travel lane (turn lanes are not provided).

Conversely, buildings east of Sperry Street as well as those in Westville Village tend to front the street, with fewer driveways and off-street parking areas.

Residential areas west of Ella Grasso Blvd and between Emerson Street and Harrison Street also tend to have numerous driveways, though these are used much less frequently.

Traffic Signals on Whalley Avenue

Cross-Street	Owner	Notes
Emerson St	CTDOT	• Older signal on mast arm
Harrison St	CTDOT	• Newer signal
Phillip St	CTDOT	• Newer signal, shares controller with Blake St
Blake St	CTDOT	• Newer signal, shares controller with Phillip St
Central Ave	CTDOT	• Newer signal
Fountain St	CTDOT	• Newer signal on mast arm • Eastbound Fountain St currently operates in "Flashing yellow" state. • Shares controller with W Rock Ave
West Rock Blvd	CTDOT	• Newer signal on mast arms • Westbound signal heads on far side of offset intersection. • Shares controller with Fountain St
Fitch St	CTDOT	• Newer signal on mast arms.
Osborne St	CTDOT	• Older signal heads on wire.
Pendleton St	CTDOT	• Older signal heads on wire.
Ella Grasso Blvd	New Haven	• Older signal heads on wire.
Ellsworth Ave	New Haven	• Older signal heads on wire.
Norton St	New Haven	• Older signal heads on wire.
Winthrop Ave	New Haven	• Older signal heads on wire.
Sherman Ave	New Haven	• Older signal heads on wire.
Orchard St	New Haven	• Older signal heads on wire.
Sperry St	New Haven	• Older signal heads on wire.
Dwight St	New Haven	• Older signal heads on wire.
Howe St	New Haven	• Older signal heads on wire.

TRAFFIC VOLUMES AND OPERATIONS

Traffic Volumes

Exhibit 2-11 shows available Average Daily Traffic (ADT) as well as morning (AM) and evening (PM) peak hour traffic volumes. The busiest segment of Whalley Ave is between Fountain St and Fitch St, with an ADT of 30,600 vehicles. During peak hours, traffic volumes are 30% higher eastbound during the AM commute, and westbound during the PM commute.

To the west, Whalley Avenue and Fountain Street form a major juncture, with nearly two-thirds of corridor traffic remaining on Whalley Avenue (18,700 vehicles) and 10,700 vehicles turn to or from Fountain Street.

Traffic destined to Southern Connecticut State University (SCSU) exits the corridor at Fitch Street, resulting in a considerable drop in ADT to the east.

ADT were not available west of Ella Grasso Blvd, but available peak hour counts near Sherman Avenue are similar to those west of Ella Grasso Blvd, indicating that ADT is likely around 20,000 vehicles here as well. Peak hour volumes show similar directional splits as further to the west, with hourly volume peaking at 920 vehicles in the westbound direction during the PM.

Growth Trends

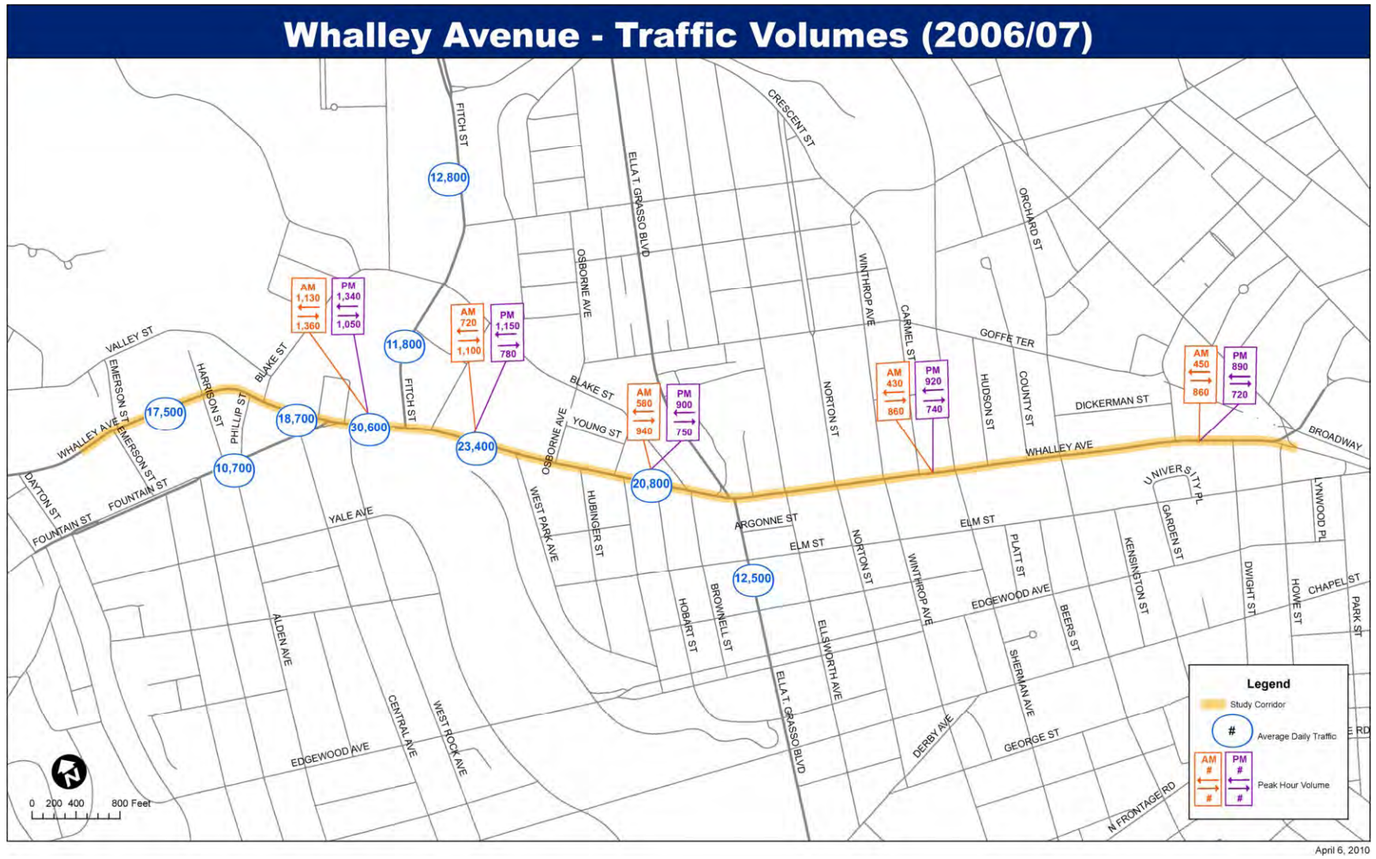
Future traffic volumes were not developed for this study. Review of historic traffic counts available from CTDOT indicates that traffic on the corridor has grown since 1994, though the available data is not sufficient to precisely estimate growth rates over time. In general though, both daily and peak hour volumes appear to have grown at average rates of less than 1% annually since 1994.

The *Route 10 Corridor Study* (SCROCG 2008) presumed a background growth rate of 1% annually on the corridor, including Whalley Avenue between Fitch Street and Ella Grasso Blvd. A 1% annual growth rate through the year 2030 on Whalley Avenue would correspond to a 4,200 to 7,300 increase in ADT compared to today's traffic volumes, depending on location. More intensive development of properties on the corridor, growth elsewhere in the region, or continued growth of SCSU are factors that could draw additional traffic to the corridor, possibly resulting in greater increase in traffic. Conversely, a number of factors could also limit or reduce the rate of traffic growth on the corridor in the future, including:

- Mixed use and infill growth patterns (relative to sprawl development).
- Increased transit ridership, walking, carpooling or biking,
- Capacity constraints elsewhere in the road network that cap peak vehicle throughput that can access the corridor.
- Other changes in economic conditions related to transportation costs.

In particular, the capacity of the roadway network feeding the corridor is likely to limit peak period traffic growth to some degree, even if daily traffic volumes continue to grow at higher rates.

Exhibit 2-11: Daily and Peak Hour Traffic Counts



AM and PM Peak Hour Operating Conditions

Current traffic conditions for ten signalized intersections were evaluated for the AM and PM peak hours using Synchro traffic analysis software (Highway Capacity Manual methodology) to estimate Level of Service (LOS).

Level of Service (LOS)

Level of Service, or LOS, is a common measure of operational effectiveness for transportation facilities. LOS is reported as a letter grade ranging from LOS A (best conditions) to LOS F (very poor conditions). For signalized intersections, LOS is based on the estimated average vehicle delay for traffic at the intersection. LOS A designates little to no delay typical of uncongested conditions, whereas LOS F indicates very congested conditions with long delays. In urban settings, LOS conditions of D or better are generally considered satisfactory during the peak hour. LOS E conditions indicate an intersection that is operating at or near peak capacity, while LOS F intersections cannot effectively meet peak demand.

Exhibit 2-12 shows that several intersections experience high levels of travel delay and congestion, as indicated by LOS E or F conditions, whereas others operate under relatively uncongested conditions. Locations found to operate at LOS E or F conditions are:

- Phillip Street and Blake Street intersections. These two closely spaced intersections are controlled by a single traffic signal controller. Traffic delay at this intersection is predominately associated with eastbound left turns to Blake Street blocking through traffic and the timing requirements associated with providing an exclusive pedestrian phase, during which no vehicle movements occur.
- Fitch Street. Travel delays at Fitch Street are associated with high traffic volumes turning between Whalley Avenue and Fitch Street, the provision of a single travel lane on southbound Fitch Street, and timing requirements associated with providing an exclusive pedestrian phase.
- Ella Grasso Blvd. This intersection accommodates both high levels of east-west traffic on Whalley Avenue and traffic turning between Ella Grasso Blvd and Whalley Avenue. Westbound movements operate relatively well, but other movements experience considerable congestion during peak periods. Ella Grasso Blvd itself is limited to a single travel lane.

Movements on Whalley Avenue at Sherman Avenue experience moderate to high levels of delay during the PM peak hour, though overall intersection LOS is D. LOS at other study area intersections is favorable, indicating low levels of congestion even during peak periods.

Exhibit 2-12: Current AM and PM Peak Hour Level of Service (LOS)

Phillip Street	EB Whalley	WB Whalley	NB Phillip	SB driveway	Intersection Total
AM Peak Hour	F	A	B	B	F
PM Peak Hour	F	A	C	B	F

Blake St	EB Whalley	WB Whalley	SB Blake		Intersection Total
AM Peak Hour	F	D	D		F
PM Peak Hour	F	F	B		F

Fountain Ave	EB Whalley	WB Whalley	EB Fountain		Intersection Total
AM Peak Hour	C	B	C		B
PM Peak Hour	C	B	C		B

W Rock Ave	EB Whalley	WB Whalley	NB West Rock	SB Tour	Intersection Total
AM Peak Hour	B	A	C	C	B
PM Peak Hour	A	B	C	C	B

Fitch St	EB Whalley	WB Whalley	NB Edgewood Park	SB Fitch	Intersection Total
AM Peak Hour	E	F	B	C	F
PM Peak Hour	F	F	B	D	F

Ella Grasso Blvd	EB Whalley	WB Whalley	NB Ella Grasso Blvd	SB Ella Grasso Blvd	Intersection Total
AM Peak Hour	F	B	E	E	E
PM Peak Hour	F	D	F	F	F

Sherman Ave	EB Whalley	WB Whalley	NB Sherman	SB Sherman	Intersection Total
AM Peak Hour	A	C	C	C	B
PM Peak Hour	D	E	C	C	D

Orchard St	EB Whalley	WB Whalley	NB Orchard	SB Orchard	Intersection Total
AM Peak Hour	A	A	C	D	B
PM Peak Hour	A	A	C	C	B

Sperry St	EB Whalley	WB Whalley	SB Sperry		Intersection Total
AM Peak Hour	A	A	B		A
PM Peak Hour	B	A	D		B

Dwight St	EB Whalley	WB Whalley			Intersection Total
AM Peak Hour	B	A			B
PM Peak Hour	A	B			B

SAFETY

MotorVehicle Collision History

Collision data compiled from CTDOT's Traffic Accident Viewing System (TAVS) for a three-year period (2006-08) is summarized in Exhibits 2-13 through 2-15. Since TAVS data is limited to state highways, only the portions of Whalley Avenue between Emerson Street and Ella Grasso Blvd are included.

344 motor vehicle collisions were reported on Whalley Avenue over the three-year period reviewed. Corresponding crash rates show that collisions occurred at substantially higher rates east of Fountain Street than to the west (Exhibit 2-15).

Fitch Street – Ella Grasso Blvd

Of the 207 collisions reported on the Fitch Street– Ella Grasso Blvd segment, 59 occurred at the intersection with Ella Grasso Blvd, including 33 rear-end collisions. This intersection has been identified by CTDOT for inclusion on the Suggested List of Surveillance Sites (SLOSS) based on the high frequency of collisions (see sidebar). Rear-end and sideswipe collisions are the two most common collision types on this segment. Eight collisions involving pedestrians were reported as well. Five of these occurred at or near the Ella Grasso Blvd intersections, while three collisions involved pedestrians crossing Whalley Avenue between Brownell Street and Fitch Street. No collisions involving bicycles were reported.

Exhibit 2-13: Collision History (2006-08)

Segment	Total Collisions	Type							Severity	
		Rear-end	Turning - Intersection	Turning – Opposite direction	Sideswipe – Same direction	Parking	Pedestrian	Other	Property Damage Only	Injury
Emerson St – Fountain St	69	35 *50.7%*	10 *14.5%*	3 *4.3%*	6 *8.7%*	6 *8.7%*	0 *0.0%*	9 *13.0%*	55 *79.9%*	14 *20.1%*
Fountain St – Fitch St	68	18 *26.5%*	3 *4.4 %*	10 *14.7%*	25 *36.8%*	1 *1.5%*	1 *1.5%*	10 *14.7%*	49 *72.1%*	19 *27.9%*
Fitch St – Ella Grasso Blvd	207	70 *33.8%*	24 *11.6%*	17 *8.2%*	53 *25.6%*	5 *2.4%*	8 *3.9%*	30 *14.5%*	149 *72.0%*	58 [1] *28.0%*
Corridor Total	344	123 *35.8%*	37 *10.8%*	30 *8.7%*	84 *24.4%*	12 *3.5%*	9 *2.6%*	49 *14.2%*	253 *73.5%*	91 *26.5%*

Percentages may not add to 100% due to rounding.

[1] Includes one fatality.

Data Source: CTDOT TAVS

Exhibit 2-14: Collision Contributing Factor (2006-08)

Segment	Total Collisions	Following too Closely	Failed to Grant the R.O.W.	Speed too Fast for Conditions	Improper Lane Change	Violated Traffic Control	Other
Emerson St – Fountain St	69	29 *42.0%*	13 *18.8%*	0 *0.0%*	1 *1.5%*	0 *0.0%*	26 *37.7%*
Fountain St – Fitch St	68	15 *22.1%*	14 *20.6 %*	0 *0.0%*	13 *19.1%*	7 *10.3%*	19 *27.9%*
Fitch St – Ella Grasso Blvd	207	64 *30.9%*	48 *23.2%*	7 *3.4%*	15 *7.3%*	11 *5.3%*	62 *30.0%*
Corridor Total	344	108 *34.4%*	75 *21.8%*	7 *2.0%*	29 *8.4%*	18 *5.2%*	107 *31.1%*

Data Source: CTDOT TAVS

Fountain Street – Fitch Street

The short segment between Fountain Street and Fitch Street experienced 68 reported collisions for the period studied. Sideswipe collisions were particularly common here, which may be in part a result of traffic positioning for turns to West Rock Avenue, Fitch Street and Fountain Street. The situation may be exacerbated by allowing simultaneous westbound movements from Fountain Street and Whalley Avenue.

At the study's public meetings, red light running was reported to be a problem eastbound at the West Rock Avenue intersection. The higher rate of collisions involving drivers who violated traffic control (Exhibit 2-14) is further evidence in this regard. Collectively, the Fountain Street and West Rock Avenue intersections have the second highest rate of collisions (after Ella Grasso Blvd) of those studied.

One collision involving pedestrians and three involving bicycles were reported on this segment.

Exhibit 2-15: Collision Rates (2006-08)

Segment	Total Collisions	Approx. Segment Length	Approx. Segment ADT	Million-vehicle miles	Collision Rate (CPMVM)
Emerson St – Fountain St	69	0.16 miles	18,100 vehicle	7.906	8.73
Fountain St – Fitch St	68	0.35 miles	30,600 vehicles	4.678	14.54
Fitch St – Ella Grasso Blvd	207	0.63 miles	22,100 vehicles	15.204	13.61

Note: Includes all collisions at intersections and midblock within the identified segments.

Data Source: CTDOT TAVS

Locations with higher than typical collision rates
(CTDOT Suggested List of Surveillance Study Sites)

Intersections (Whalley Ave @)

- Ella Grasso Blvd — 3.26 CPMV
- Brownell/Blake — 1.19 CPMV
- West Park Ave — 0.69 CPMV
- Fitch St — 1.41 CPMV
- Fountain St/W Rock Ave — 2.62 CPMV
- Central Ave — 1.30 CPMV
- Blake/Phillip — 1.01 CPMV

"Spot" Segments

Short segments of less than 0.1 miles in length are reported as "Spot" collision locations and reported in CPMV.

- Jewell St – Fitch St — 0.89 CPMV
- Fitch St - W Rock Ave — 0.62 CPMV
- Central Ave – Blake St — 1.00 CPMV

Segments

- Harrison St – Emerson St — 5.66 CPMVM

CPMV = Crashes per million vehicles
CPMVM = Crashes per million vehicle-miles
Data available only for locations east of Ella Grasso Blvd

Source: CTDOT 2002-04 Traffic Accident Surveillance Report (TASR)

Emerson Street – Fountain Street

West of Fountain Street, collisions occur less frequently, though still frequently enough that most of this segment merits inclusion on the SLOSS. A majority of collisions here are rear-end crashes. The abrupt transition in neighborhood character and roadway characteristics in Westville Village compared to the roadway segments leading to it was identified as an issue of concern. No pedestrian collisions were reported during the time period 2006-08. Two crashes involving bicycles – both riding in the wrong direction – were reported.

Collisions Elsewhere on Whalley Avenue

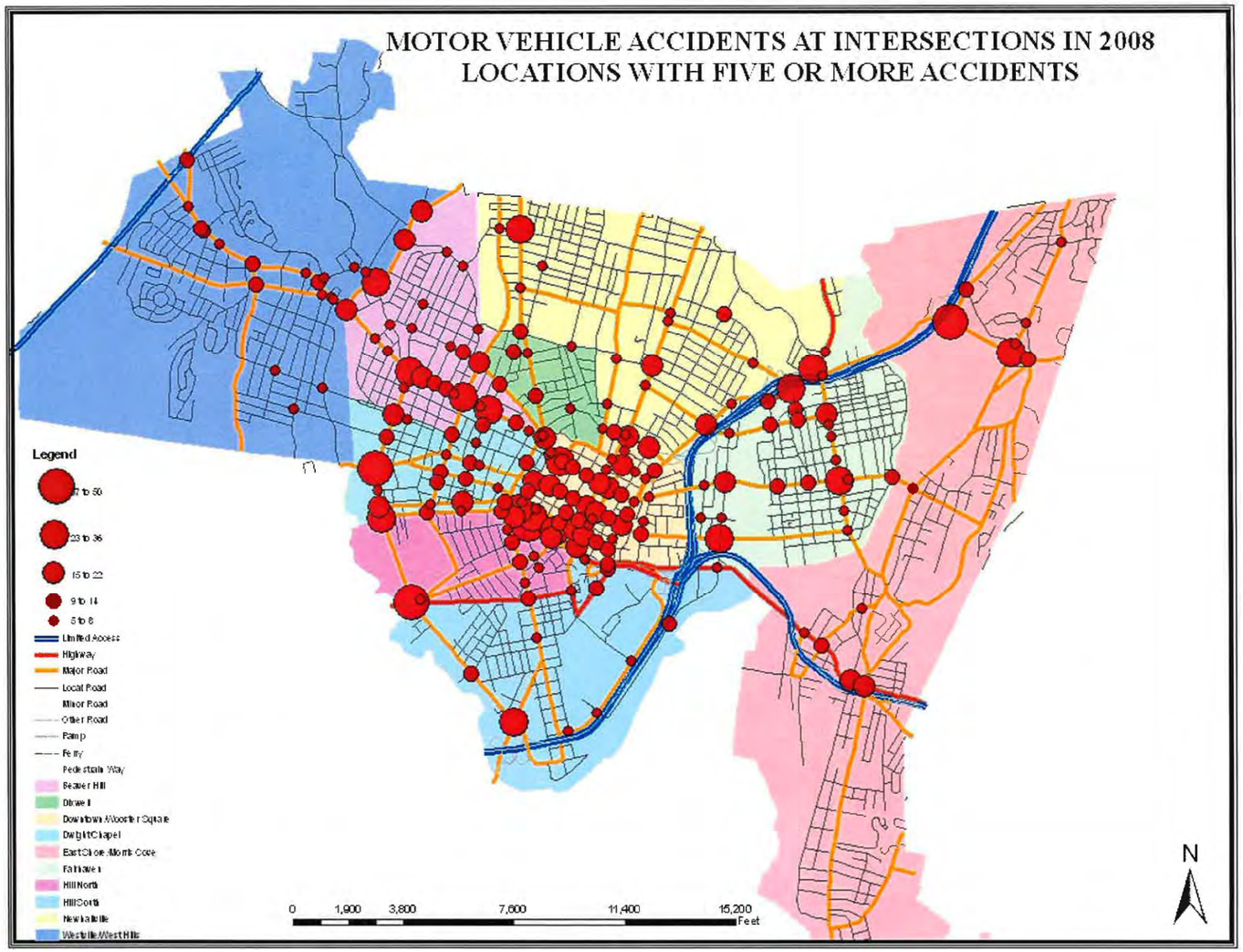
The City of New Haven Provided a map of collisions reported at intersections city-wide in 2008 (Exhibit 2-16). The data shows high rates of collisions at all intersections between Ella Grasso Blvd and Orchard Street, as well as at Sperry Street.

Other Concerns Identified through the Public Outreach Process

A number of issues concerning the safety of pedestrians, bicyclists and motorists on the corridor were raised through the public outreach process. Key concerns raised at public meetings included:

- Excessive traffic speeds throughout the corridor, but especially between Harrison Street and Blake Street (entering Westville Village) and between Fitch Street and Osborne Street. In both cases, wide travel lanes and lack of visual cues to alert the driver to the neighborhood context are likely contributing factors.
- Lack of opportunities for pedestrians to safely cross Whalley Avenue and busier cross streets is a concern throughout the corridor. This issue is discussed further in the subsequent section on pedestrian accommodations.
- Red light running, including at West Rock Avenue as discussed previously.
- Traffic conflicts and difficulty positioning in the correct lane between Fountain Street and Fitch Street.
- Left turns to and from Whalley Avenue and the frequency of driveways, particularly east of Ella Grasso Blvd.
- Lack of bicycle accommodation in conjunction with high motor vehicle volumes and speeds.

Exhibit 2-16: Collisions at Intersections in 2008



Source: City of New Haven, Department of Transportation, Traffic and Parking

PEDESTRIANS

Existing Facilities

Sidewalks are provided on both sides of the roadway along the entire length of Whalley Avenue, though their characteristics vary throughout the corridor. Sidewalk and street-side (sidewalk + planting strip) width were presented previously in Exhibit 2-6, and are summarized again here:

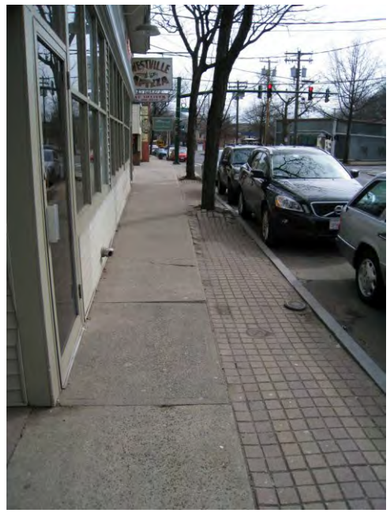
Emerson St to Phillip St/Blake St.

n the residential area west of Harrison Street, 5 to 6-foot sidewalks are provided, buffered from the street by planting strips and on-street parking. Between Harrison St and Blake St, the sidewalk width varies between 8 feet and 9 feet. A planting strip is provided along most of the segment, except east of Phillip Street and on the north side of the street approaching Phillip Street. The only pedestrian crossing (crosswalk) across Whalley Avenue at the eastern end of this segment is across the east side of the Blake Street intersection.

Phillip St to Fountain Street.

In Westville Village, sidewalks range from 8 to 12 feet. Tree wells and brick pavers line the curb (Exhibit 2-17), which largely reduces the effective width of the walkway to between 4 and 8 feet. The condition of the sidewalks – particularly the brick paved areas – is poor in many spots. Some street furniture such as benches, waste cans, and planters are present, but the width of street-side space limits the placement of such items.

Exhibit 2-17: Sidewalks and Streetscape in Westville Village



Crosswalks across Whalley Avenue are provided on the east sides of Phillip Street and Central Avenue, and at Fountain Street. To continue walking on the south side of Whalley Avenue between the Village and Edgewood park, pedestrians must cross Fountain Street. The crosswalk here is located well back from the intersection (see Exhibit 2-9 previously), and pedestrians must be alert for traffic turning from Whalley Avenue as well as eastbound traffic on Fountain Street, which does not stop at the intersection.

Fountain Street to Fitch Street

Sidewalks between Fountain Street and West Rock Avenue are 10-feet wide, though those on the south side of the street are not buffered from traffic by on-street parking. A long crosswalk crosses the six lanes of Whalley Avenue on the west side of the West Rock Avenue intersection. No crossing is provided on the east side of the intersection.

Sidewalks along the south side of Whalley Avenue border Edgewood Park and are typically 6 feet wide with a 5 foot planting strip of mature trees providing a buffer from the street. The sidewalk along the north side of the roadway is approximately 10 feet, with street trees to the west, but no planting strip or street trees approaching Fitch Street.

Crosswalks are provided on all sides of the intersection at Fitch Street.

Fitch Street to West Park Ave

Between Fitch Street and West Park Avenue, 5 to 6-foot sidewalks with 5 to 8-foot planting strips are typical. The north side planting strip tends to be wider and includes occasional street trees. Because on-street parking is prohibited on this segment, the planting strip is the only buffer between the roadway and sidewalks.

Jewell Street is the only cross street on this segment. The intersection is not signalized, and crosswalks are not provided today, though protected crossing are provided at Fitch Street 200 feet to the west. Both Fitch Street and Jewell Street provide access to nearby Beecher School.

While no crosswalks are provided between Fitch Street and West Park Avenue, the segment is undeveloped (park and cemetery). At West Park Avenue, a crosswalk on the west side of the intersection is provided across Whalley Avenue. The intersection is 68 feet across and not signalized, however. The nearest signalized crossing is another 400 feet to the east at Osborne Avenue.

West Park Street to Ella Grasso Blvd

The residential and mixed use areas along this segment are served by 6 to 8 foot sidewalks with wide planting strips (8 to 12 feet) that include mature trees. On-street parking also buffers the sidewalk from the adjacent roadway.

Signalized pedestrian crossings of Whalley Avenue are provided on the east sides of the Osborne Avenue and Pendleton Street intersections, as well as at Ella Grasso Blvd. Additional crosswalks are provided at Hubinger Street, Hobart Street and Brownell Street, though these locations are unsignalized.

Pedestrian Accommodations at Signalized Intersections

Emerson St	• Crosswalks all sides. • Pedestrian signal heads and activation for crossing Whalley Ave.
Harrison St	• Crosswalks all sides. • Pedestrian signal heads and activation for crossing Whalley Ave.
Phillip St	• Crosswalk on Phillip St with pedestrian signal head and activation. • No crosswalks on Whalley Ave.
Blake St	• Crosswalks on Blake St and east side of Whalley Ave. • Pedestrian signal heads and activation.
Central Ave	• Crosswalks on Central Ave and east side of Whalley Ave. • Pedestrian signal heads and activation.
Fountain St	• Crosswalk on Whalley Avenue and Tour St. Crosswalk on west side Fountain St is placed well-back of the intersection. • Current operation of signal does not stop the flow of traffic on Fountain St. Pedestrians must cross at their own discretion.
West Rock Ave	• Crosswalk on west side of Whalley and W Rock Ave. • Pedestrian signal heads and activation.
Fitch St	• Crosswalks all sides • Pedestrian signal heads and activation.
Osborne St	• Crosswalks on east side of Whalley Ave. • Pedestrian signal heads and activation to cross Whalley Ave.
Pendleton St	• Crosswalks on east side of Whalley Ave and Pendleton St. • Pedestrian signal heads and activation to cross Whalley Ave.
Ella Grasso Blvd	• Crosswalks on all sides. • Pedestrian signal heads and activation.
Ellsworth Ave	• Crosswalks on all sides. • Pedestrian signal heads and activation.
Norton St	• Crosswalks on all sides. • Pedestrian signal heads and activation.
Winthrop Ave	• Crosswalks on all sides. • No pedestrian signal heads or activation. • ADA curb cut needed on southwest corner (northbound)
Sherman Ave	• Crosswalks on all sides. • Pedestrian signal heads and activation.
Orchard St	• Crosswalks on all sides. • Pedestrian signal heads and activation.
Sperry St	• Crosswalks on Sperry St and west side of Whalley Ave.
Dwight St	• Crosswalks on Dwight St and west side of Whalley Ave. • Pedestrian signal heads and activation.
Howe St	• Crosswalks on Howe St and east side of Whalley Ave.

Ella Grasso Blvd to Orchard Street

Sidewalks are typically 10 feet between Ella Grasso Blvd and Sherman Avenue, and vary between 6 and 13 feet east of Sherman Avenue. Wide planting strips with mature trees establish public street-side spaces of 15 to 20 feet on either side of the roadway. Businesses often have additional pedestrian areas (on private property) adjacent to sidewalks that increase the perceived width of sidewalks and create oversized paved areas. Sidewalk condition in generally good – especially adjacent to recent developments – though a lack of a unifying streetscape throughout the corridor degrades the comfort of the pedestrian realm here. Exhibit 2-18 shows a sidewalk section between County Street and Orchard Avenue, which is representative of much of the street-side spaces on this segment.

Exhibit 2-18: Typical Streetscape near Orchard Street

Crosswalks are provided regularly at signalized intersection west of Sherman Avenue, but less frequently to the east.

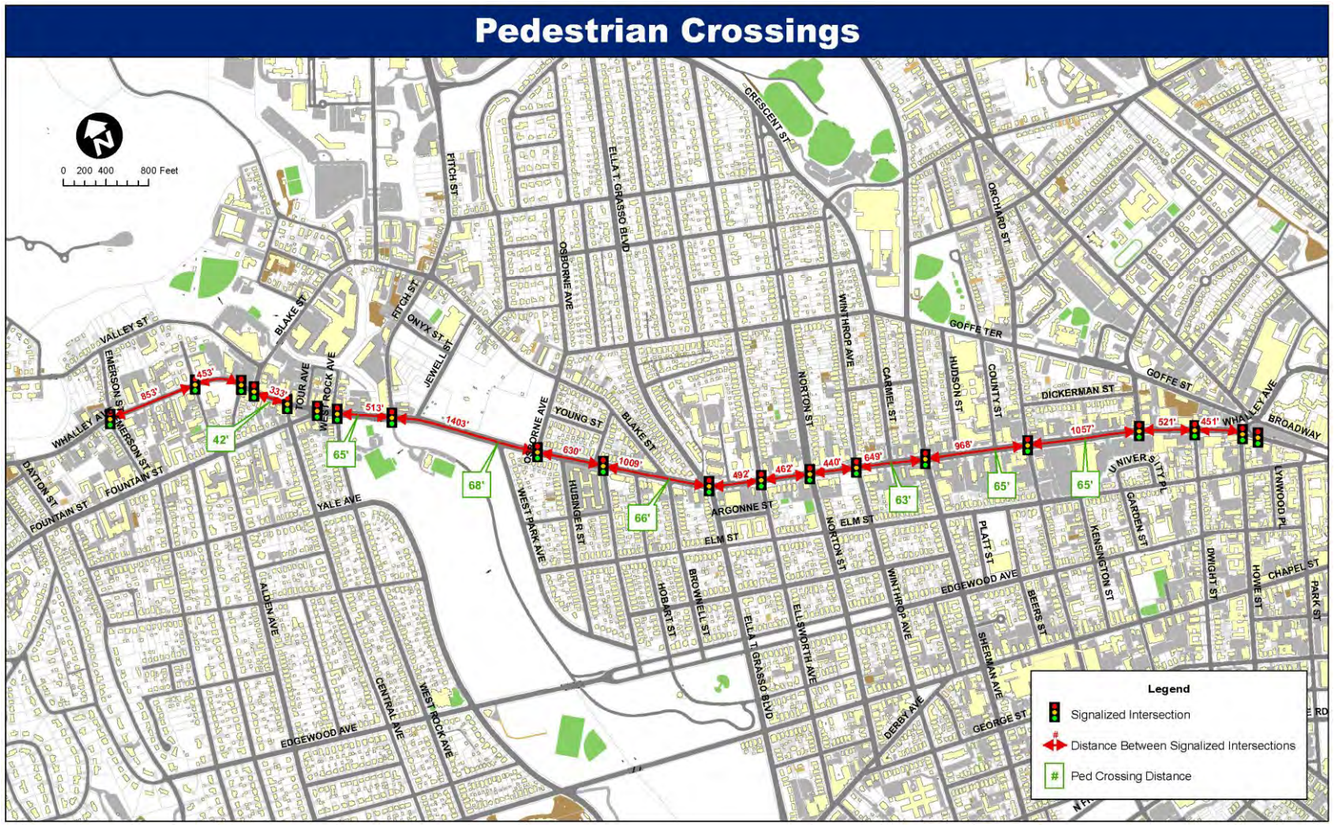
Orchard Street to Howe Street

West of Orchard Street, sidewalks are 7 to 9 feet wide with planting strips creating 14 to 18 feet of street-side space. Crosswalks are provided on the west sides of Sperry Street and Dwight Street, leaving considerable distance between Orchard Street and Dwight Street without a pedestrian crossing across Whalley Avenue. Further, while Howe Street is a signalized intersection, a crosswalk across Whalley Avenue is not provided. Lack of convenient pedestrian connections to the Broadway/Yale University area was also identified as an issue here during the study's first public meeting.

Crossing Opportunities

As described above, opportunities to cross Whalley Avenue are limited in many locations. This is especially a problem east of Fountain Street, where traffic volumes and speeds are higher, the width of Whalley Avenue is considerable (60 feet or greater), and signalized crossings are spaced far apart in several locations. Exhibit 2-19 shows the locations of pedestrian crossings at traffic signals, including the distance between these crossings and the width of Whalley Avenue at various locations throughout the corridor. Segments with considerable distance between signalized pedestrian crossings are:

Exhibit 2-19: Signalized Pedestrian Crossings



- Fitch St – Osborne Ave (1403 feet). An additional crosswalk is provided at West Park Avenue, but the crossing distance is 68 feet and a median pedestrian refuge is not provided.
- Osborne Ave – Pendleton St (630 feet) – Ella Grasso Blvd (1009 feet). Several additional crosswalks are provided, but the crossing distance is approximately 66 feet and each lack pedestrian refuges in the median.
- Winthrop Ave – Sherman Ave (649 feet). Crosswalks are not provided at Carmel Street, which is unsignalized.
- Sherman Ave – Orchard St (968 feet). Crosswalks are not provided at unsignalized cross streets.
- Orchard St – Sperry St (1057 feet). Crosswalks are not provided at unsignalized cross streets.

ADA Accessibility

ADA curb cuts are provided at intersections throughout the corridor. However, except in cases where sidewalks have been rebuilt as part of recent redevelopment, curb cuts typically do not meet current ADA standards for new installations in terms of dimensions and surface texture (landing pads).

BICYCLES

In Connecticut, bicycles are recognized as a vehicle and generally subject to the same rights and responsibilities as other vehicles as defined by the motor vehicle code.

Existing and Planned Bicycle Accommodations

Currently, Whalley Avenue does not have features specially designed to improve accommodation of bicyclists. Bicycles may ride with traffic throughout the corridor, and some segments of Whalley Avenue have wide curb lanes (Harrison St – Blake St; Fitch St – West Park Ave) that provide additional space for bicyclists, though these spaces are not designated for their exclusive use.

Many aspects of Whalley Avenue are not favorable in terms of encouraging and accommodating use by cyclists. On-street parking throughout the corridor poses a risk to cyclists in two ways; drivers of motor vehicles making parking maneuvers may not see cyclists when backing into a parking space, and vehicle doors on the driver's side of parked cars can open into the travel path of bicyclists who ride close the travel lane edge. East of Ella Grasso Blvd, frequent driveways on Whalley Avenue and associated turning conflicts are another issue of concern for bicyclists, pedestrians and motor vehicles alike. Finally, some cyclists will not feel comfortable riding in heavy traffic with buses, trucks and vehicles traveling at higher rates of speed.

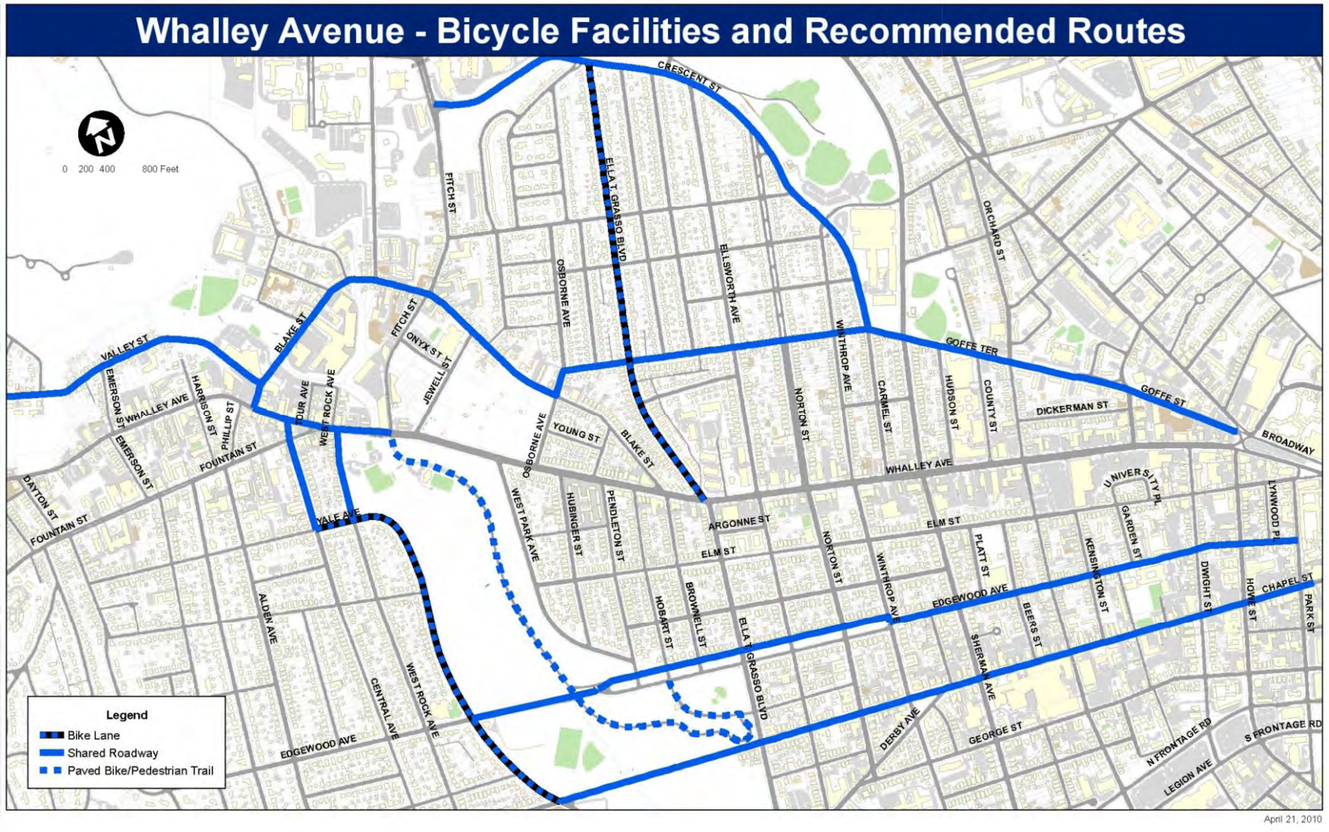
New Haven has installed bicycle facilities on nearby roadways as it works towards developing a bicycle network. Class II bicycle lanes have been designated on Ella Grasso Blvd north of Whalley Avenue, and to the south on Yale Avenue between Central Avenue Chapel Street. Further, a Class I shared use path is provided through Edgewood Park. While this path also extends north of Whalley Avenue along the West River, its limited width precludes use by bicycles. These routes provide connections to other streets identified by the City, in conjunction with Elm City Cycling, as being best suited for use by cyclists of varying abilities (Exhibit 2-20). These routes tend to have lower traffic volumes and travel speeds, wide outside lanes or paved shoulders in good condition, and traffic control measures to allow safe crossing of major cross streets. SCRCOG's Regional Bicycle and Pedestrian Plan (2007) identifies many of these same routes, including Edgewood Avenue and Goffe Terrace/Street. Whalley Avenue is identified by the City's Bike Map, the SCRCOG Plan and CTDOT's Statewide Bicycle and Pedestrian Plan map (2009) as a recommended bicycle route.

Recent efforts by the City of New Haven have focused on improving the Edgewood Avenue and Chapel Street corridors as access routes from western sections of the city and downtown. Central Avenue and West Rock Avenue have been identified as access routes from Whalley Avenue to these corridors (via Yale Avenue).

SCRCOG's Regional Bicycle and Pedestrian Plan (2007) recommends bicycle and pedestrian improvements to Ella Grasso Blvd south of Whalley Avenue, and SCRCOG's Route 10 Corridor Study (2008) recommends continuing bicycle lanes on Ella Grasso Blvd south of Whalley Avenue as well.

The City of New Haven has initiated a process to develop a Complete Streets Design Manual and a Long-term Bicycle Plan, though neither has been completed at the time of this study. To date, CTDOT's, SCRCOG's, the City's and Elm City Cycling's existing planning documents do not identify bicycle improvements to Whalley Avenue nor identify Whalley Avenue as a preferred routes east of Ella Grasso Blvd.

Exhibit 2-20: Existing Bicycle Facilities and Recommended Routes



Source: City of New Haven

TRANSIT SERVICE

Existing Bus Services

CT Transit operates three routes collectively known as Route B along Whalley Avenue, and Routes Q and Z on nearly corridors (Exhibit 2-21). Route B provides frequent, bidirectional service to and from downtown New Haven during peak periods, with buses every 10 to 15 minutes on average. Route B also operate throughout the day, from 4:30 AM to 1:30 AM. In Westville Village, Route B1turns north on Blake Street to serve SCSU and Hamden, while Route B2 and B3 continue west on Whalley Avenue. Routes B2 and B3 operate with less frequency than Route B1.

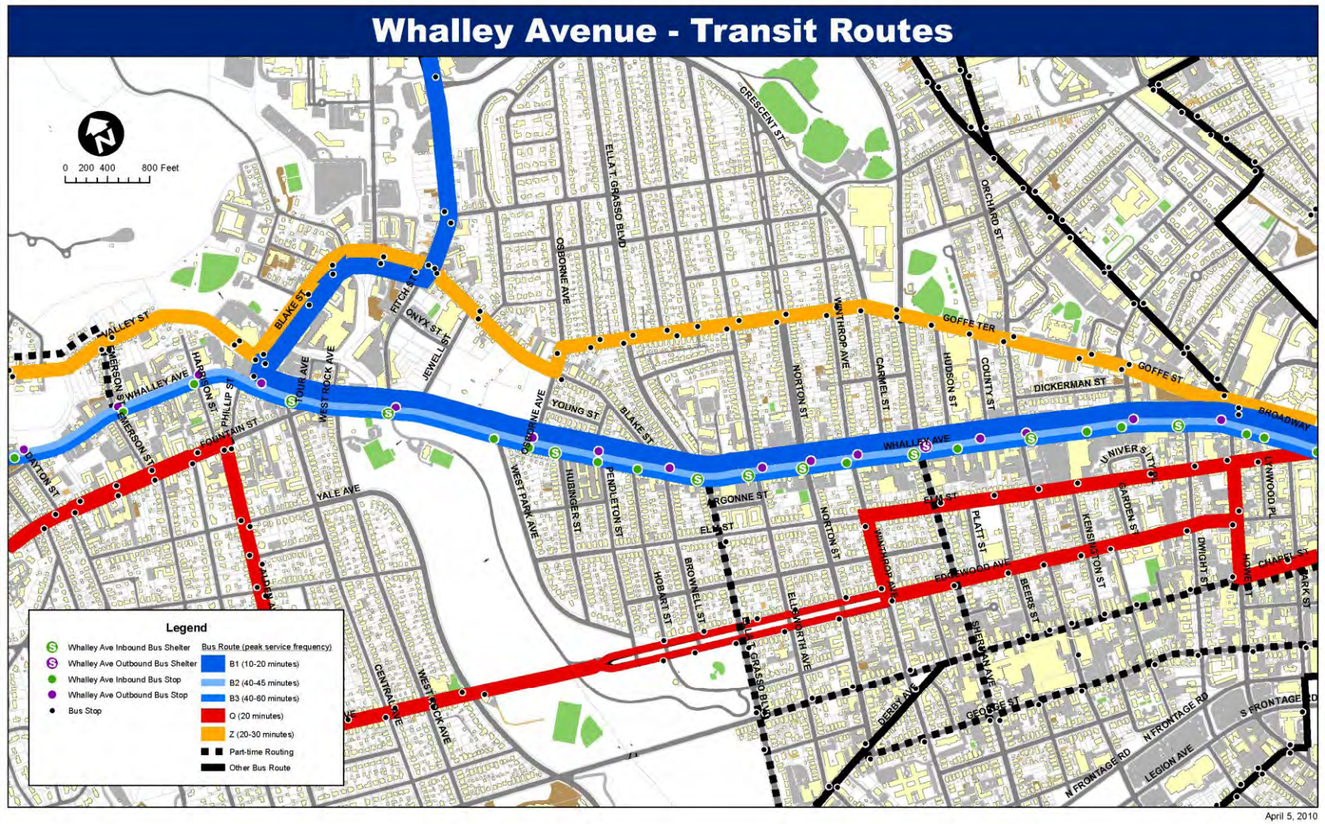
Nearby Route Z serves the Dixwell and Beaver Hills neighborhoods, SCSU and Westville Village by way of Goffe Terrace and Blake Street, while Route Q serves the Dwight, Edgewood and Westville neighborhoods along Edgewood Avenue, Alden Street and Fountain Street. Buses on these routes arrive approximately every 20 minutes. Certain off-peak Route B runs also deviate into the Dwight and Edgewood neighborhoods as well.

Current services all radiate from downtown. The City, working with SCRCOG and CTDOT, has identified a long-term need for cross town service linking the Whalley Avenue corridor to the Yale Medical Center area south of downtown.

Bus Stops and Shelters

Bus stops are typically located on the near of far side of intersections to facilitate pedestrian access (Exhibit 2-22).

Exhibit 2-21: Existing Bus Routes and Bus Stop Locations



Source: CT Transit Bus Schedules (2010)

Exhibit 2-22: Pedestrian Access to Bus Stops

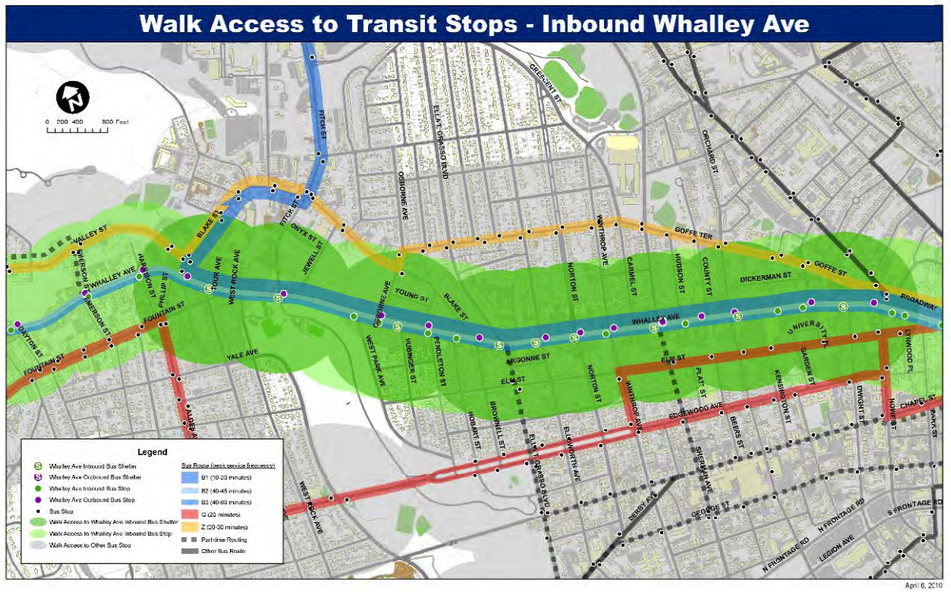
	Eastbound			Westbound			Intersection Characteristics				
	Location	Type		Location	Type			Crosswalks			
		Bus Shelter	Bus Stop		Bus Shelter	Bus Stop	Signalized Crossing	WEST (Whalley Ave)	EAST (Whalley Ave)	NORTH (Cross Street)	SOUTH (Cross Streets)
Emerson St	Far side		✓	Far side		✓		✓	✓	✓	✓
Harrison St	Far side		✓	Near side		✓	✓	✓	✓	✓	✓
Blake St				Near side		✓			✓	✓	✓
Central Ave	Far side	✓					✓		✓	✓	✓
Fitch St	Near side	✓		Near side		✓	✓	✓	✓	✓	✓
West Park Ave	Near side		✓					✓		✓	✓
Osborne Ave				Far side		✓	✓		✓		✓
Hubinger St	Near side	✓							✓	✓	
Pendleton St	Near side		✓	Far side		✓			✓	✓	✓
Hobart St	Far side		✓					✓		✓	✓
Blake St				Near side		✓		✓			✓
Ella Grasso Blvd	Near side	✓					✓	✓	✓	✓	✓
Ellsworth Ave	Near side	✓		Near side		✓	✓	✓	✓	✓	✓
Norton St	Near side	✓		Near side		✓	✓	✓	✓	✓	✓
Winthrop Ave	Near side		✓	Near side		✓	✓	✓	✓	✓	✓
Sherman Ave	Near side	✓		Near side	✓		✓	✓	✓	✓	✓
Hudson St	Far side		✓								
County St				Far side		✓					
Orchard St	Far side	✓		Near side		✓	✓	✓	✓	✓	✓
Shaw's site	Mid block		✓								
Sperry St	Near side		✓	Near side		✓		✓		✓	✓
Dwight St	Near side	✓						✓		✓	✓
Howe St				Far side		✓					

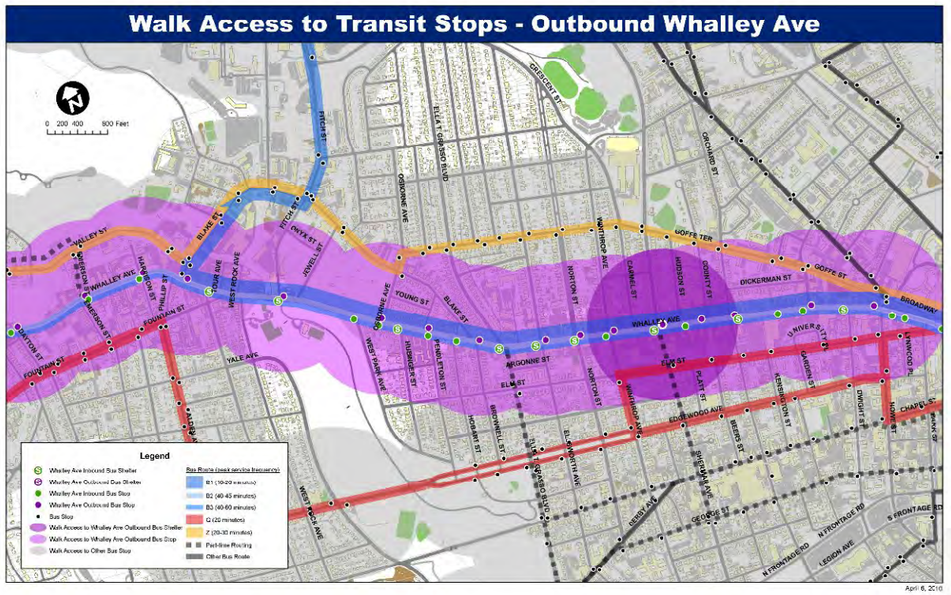
* Designates that cross street is not present (i.e. "T" intersection)

Bus stops on Whalley Avenue are located in close proximity to each other; in some locations every block. While such frequency minimizes walking distance to bus stop locations, it also increase bus travel times and can reduce travel time reliability. Each stop also displaces on-street parking as well to reserve access to the stop location for buses.

Exhibit 2-23 shows the density of bus stops on Whalley Avenue. A 1000-foot shaded radius drawn around each stop shows those areas that are within walking distance of bus stop locations and highlights the redundancy of coverage in some locations. Green areas show inbound bus stops (those on the south side of Whalley Avenue), while purple corresponds to outbound (north side) bus stops. Darker shading represents locations served by covered shelters, while lighter shading shows areas served by uncovered bus stops. While most inbound bus stops include shelters, only one shelter is provided in the outbound direction. The condition of shelters is poor in some locations.

Exhibit 2-23: Walking Distance to Bus Stops





CHAPTER 3: CORRIDOR RECOMMENDATIONS

OVERVIEW OF RECOMMENDATIONS

The recommendations of the study were developed with the purpose of addressing in a balanced manner a number of key objectives that were identified through analysis of existing conditions, collaboration with stakeholders, and the community outreach process;

- *Improve traffic safety*
  Implement improvements that are aimed at dramatically reducing the frequency and severity of collisions, especially those involving pedestrians and bicyclists, who are particularly vulnerable in crashes.
- *Improve accommodations for pedestrians and bicyclists*
  Create an environment that is more conducive to walking and bicycling in terms of comfort level and safety. Support development of bicycle networks in New Haven.
- *Enhance transit services*
  Improve access to transit, encourage use of transit, and support efficient bus operations in the corridor.
- *Address traffic operations at key locations*
  Traffic operations problems are for the most part limited to a few locations along the corridor. The improvement strategies recommended focus on addressing these specific issues in balance with the other study objectives.
- *Support economic development and improve neighborhoods*
  Improvements should support businesses in the corridor and support the City's efforts to further develop the area with high-quality uses. This includes improving the ability for customers and residents to conveniently and safely access properties, improving neighborhood character, and linking transportation and land use actions over time.

The study recommendation are described in context with each of these objectives below, and further detailed by corridor segment later in this chapter.

Improve Transportation Safety

Improving transportation safety for all users of the corridor is a single, overarching goal of the study. To this end, a program of traffic calming, pedestrian and bicycle improvements, access management changes and specific roadway design refinements is recommended.

Many of the recommendations are intended to discourage speeding:

- Narrow travel lanes to 10 or 11 feet where appropriate.
- Stripe an edge line to identify parking areas and make travel lanes appear narrower than they do today.
- Use curb extensions and center medians to break up expanses of pavement.
- Provide other visual cues through landscaping and streetscape improvements to change the scale and character of the corridor.
- Replace the high-speed merge of Fountain Street and Whalley Avenue with a typical urban intersection.
- Ensure that traffic signal progression is set to encourage travel at the posted speed limit of 25 mph.

Slowing traffic will improve the safety of all corridor users, and in particular, pedestrians and bicyclists. Other measures that specifically address pedestrian and bicycle safety are subsequently described under the objectives relating to those modes of travel.

To reduce rear-end and turning collisions, medians with left turn pockets are recommended between Harrison St and Blake Street, and between Fitch Street and Sperry St. The proposed changes would consolidate and reduce the number of locations where left turns are allowed between Ella Grasso Blvd and Sperry Street, which is an issue currently due to the number of driveways along this segment.

Proposed medians also separate directions of travel, reducing the chances of head-on collisions between opposing directions of travel.

Establish a Walkable Corridor

A walkable corridor is one that is safe and convenient for pedestrians of all ages and capabilities to use.

One of the most important issues on the corridor today is increasing the number of safe locations where pedestrians may cross Whalley Avenue. Several recommendations specifically address this need:

- Build curb extension that reduce the distance required to cross Whalley Avenue and major side streets. These will also allow pedestrians to better see oncoming traffic while still on the sidewalk, and conversely improve drivers' views of pedestrians as they approach a crosswalk. New curb ramps would be built to current ADA standard as part of their installation. Curb extensions also provide additional sidewalk space that can be used for landscaping, bicycle parking, or to locate other street furniture. Curb extensions typically extend six feet or so into the roadway and are only provided where on-street parking is also present.
- Provide pedestrian refuges in the center of the roadway. These allow pedestrians to cross wide streets at locations that do not have traffic signals to stop traffic. Pedestrian refuges enable the pedestrian to focus on one direction of traffic at a time and provide a protected location in the center of the street to wait for suitable gaps to complete their crossing.
- Establish additional crosswalks, including across all sides of intersection where appropriate. At some intersections, traffic movements or signal timing requirements may preclude crosswalks on all sides, however.
- Use high visibility crosswalk marking, such as "ladder" style markings with horizontal stripes. Colored and/or textured pavements could be integrated into streetscape plans for Westville Village and commercial areas east of Ella Grasso Blvd.

The study also recommends rebuilding existing sidewalks and upgrading streetscape and landscaping in Westville Village and east of Ella Grasso Blvd. The existing sidewalks and landscaping elements are typically in poor condition in both areas. A unifying streetscape design that specifies landscaping, pedestrian level lighting, paving materials and street amenities should be prepared to guide the redevelopment.

Improve Bicycle Accommodation

The City of New Haven's Complete Streets policy and forthcoming Complete Streets Design Manual call for consideration of all users – including bicyclists – in the planning, design and rehabilitation of public streets. While recognizing that the types of treatments best suited to accommodate bicycles will vary from street to street, the policy emphasizes the importance of encouraging nonmotorized transport, improving nonmotorized safety by slowing vehicle speeds, and providing connected and redundant nonmotorized routes and networks within the city.

The selection of treatments to accommodate bicycles on the Whalley Avenue corridor took into account a number of considerations, including:

- Other bicycle facilities and routes, especially those that intersect or run generally parallel to Whalley Avenue.
- Sites likely to generate high levels of bicycle traffic.
- The geometric characteristics of the street segment and available right-of-way.
- Access characteristics and on-street parking needs.
- Needs of other travel modes and users.
- Amount and type of traffic.
- Amount and type of vehicle traffic.

Bicycle paths or shared-use trails located off street are well-suited for park settings and exclusive rights-of-way (e.g. converted rail corridors). They are not recommended for use adjacent to urban streets however, where the prevalence of cross-streets, driveways and store fronts result in conflicts that have significant safety and operational implications. The AASHTO Guide for the Planning, Design and Operation of Bicycle Facilities (2010) recommends establishing bicycle paths under these conditions only when other options, including parallel routes, are not feasible. The northern border of Edgewood Park is the only segment of Whalley Avenue that is physically compatible with a shared-use trail.

Approaches that dedicate roadway space to bicyclists were given top consideration by the study team throughout the corridor. These include establishing bicycle lanes adjacent to the outside travel lane, or alternatively creating cycle tracks, which function similar to bicycle lanes but provide further separation from traffic and parked vehicles. Representatives of Elm City Cycling expressed a strong preference for this class of facility on Whalley Avenue at the second public meeting and following review of the draft report.

Physical constraints are a primary impediment to establishing on-street bicycle facilities on the Whalley Avenue corridor. Exhibit 3-1 illustrates the various ways in which on-street bicycle lanes could be designated on Whalley Avenue considering the existing roadway cross-section, overall right-of-way, and other uses in the corridor. Depending on the specific design characteristics, cycle tracks would require an addition two to four feet of roadway space compared to what is presumed in Exhibit 3-1 for bicycle lanes.

Four segments in particular have physical constraints that either preclude or would involve considerable impacts to implement bicycle lanes:

- The street right-of-way through Westville Village (Blake Street to Fountain Street) is too narrow to accommodate bicycle lanes, and widening is not possible. Further, on-street parking along this segment is vital to businesses and buffers the narrow sidewalks in the village from traffic, so eliminating on-street parking in not an option here.
- The street segments between Emerson Street and Harrison Street and between West Park Avenue and Ella Grasso Blvd are insufficiently wide to accommodate bicycle lanes. The street cross-section would need to be widened by approximately 11-feet in both locations to provide sufficient space for bicycle lanes. Alternatively, on-street parking could be banned on one side of the roadway and the roadway widened by 3-feet. This later option would have less of a physical impact (it likely wouldn't impact street trees or utilities), but would reduce on-street parking by 50 percent along both segments.

Exhibit 3-1: Options for Physically Accommodating Bike Lanes (or Cycle Tracks)

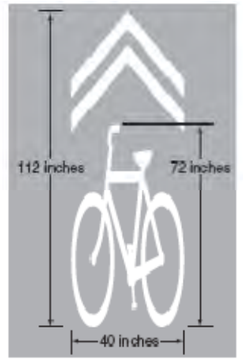
Segment	Accommodation Options and Constraints
Emerson St – Harrison St	Would require one of the following roadway widening options: • Widen street by 11 feet. • Remove parking on one side of street and widen by 3 feet.
Harrison St – Blake St	Could be accommodated in existing roadway.
Blake St – Fountain St	Precluded by Insufficient right-of-way.
Fountain St – West Rock Ave	Could be accommodated if proposed sidewalk widening in not undertaken. May reduce on-street parking on north side of roadway near West Rock Ave intersection.
West Rock Ave – Fitch St	Would eliminate on-street parking on north side of roadway and would be provided in lieu of proposed shared-use path.
Fitch St – West Park Ave	Could be accommodated in lieu of proposed shared-use path.
Park St – Ella Grasso Blvd	Requires roadway widening: • Widen street by 11 feet. • Remove parking on one side of street and widen by 3 feet.
Ella Grasso Blvd – Ellsworth Ave	Requires roadway widening: • Widen street by 11 feet. • Remove parking on one side of street and widen by 3 feet.
Ellsworth Ave – Sperry Ave	Would require one of the following roadway widening options: • Reduce outside lane widths 10 feet. Reduce center median width to 11 feet. Widen street and reduce width of sidewalks and landscaping to approximately 9.5 feet. • Eliminate proposed center median and left turn lanes. • Eliminate on-street parking on one side of roadway and reduce width of sidewalks and landscaping to approximately 12 feet.
Sperry Ave – Howe St	Could be accommodated via conversion of 4-lane section into 2-lane with center turn lane/median section ("Road diet").

Note: segment definitions identified beginning on page 3-4.

- East of Ella Grasso Blvd, bicycle lanes could only be incorporated by eliminating some other feature of the proposed cross section, such as on-street parking or the center median. The center median was deemed essential to pedestrian safety, and is also central to the access management strategies recommended on that segment. To establish bicycle lanes, 12-feet would need to be eliminated from other features of the cross section. A cycle track could require additional width and would be difficult to safely implement given the frequency of driveways along this segment.

Given these constraints, bicycle lanes on Whalley Avenue are not part of the study recommendations. Instead, a coordinated program of other bicycle and bicycle-supportive improvements are recommended. These include:

- A shared use path on the north edge of Edgewood Park linking Westville, Fitch Street (and Southern Connecticut State University) and West Park Avenue.
- Continued development of bicycle accommodations and a bicycle network city-wide, including parallel routes on Edgewood Avenue and Chapel Street and north south corridors such as West Park Avenue to provide additional route choices for bicyclists.
- Continuation of the bicycle lanes on Ella Grasso Blvd south of Whalley Avenue with "bike boxes" to better accommodate bicycle movements at the intersection. Bike boxes provide a space for bicycles in front of stopped traffic at the intersection, allowing bicycles to proceed through the intersection ahead of motor vehicles.
- Application of Shared Lane Markings, popularly known as "Sharrows," is recommended throughout the corridor wherever on-street parking is provided. Sharrows are a visual reminder to motorists that bicycles can be expected in the roadway and additional mark the where bicyclists should ride in the travel lane to maintain sufficient distance from parked cars. Sharrows have not yet been approved for use on Connecticut State highways, but are included in the new (2009) edition of the Federal Highway Administration's (FHWA) Manual of Uniform Traffic Control Devices (MUTCD). Also, the recent City of New Haven Downtown



Shared Lane Marking (Figure 9C-9 from the 2009 Edition MUTCD)

Pedestrian and Bicycle Gap Analysis (2009) recommended application of sharrows elsewhere in the City.

- Traffic calming and access management features described earlier also support bicycle use of the corridor by slowing traffic and decreasing the number of locations where left turns are made.
- Route and cycling wayfinding programs being developed in coordination with Elm City Cycling and other community groups are valuable as well and should be coordinated with implementation of the bicycle, pedestrian and streetscape changes recommended in this study.
- Establishment of bicycle parking areas in commercial districts is also recommended. These could be provided by the City or mandated for future developments through changes to the zoning code.

Enhance Transit Services

Recommendations for improving access to buses and supporting efficient bus operations on this key transit corridor are:

- Consolidate bus stop locations to provide stops every 1000 to 1200 feet, expect in the case of major destination, to improve bus travel times and travel time reliability.
- Upgrade existing bus shelters and provide shelters for outbound (westbound) trips as well as inbound.
- Consider in-lane stops in locations where two travel lanes are provided. Construction of larger curb extensions could accommodate in-line stops.
- Longer-term, look for opportunities to create a mini-transit hub to facilitate transfers between existing routes and new cross town service. Westville Village and the area near Ella Grasso Blvd are two candidate locations.

Address Traffic "Hot Spots"

Traffic operations problems are for the most part limited to a few locations along the corridor. The improvement strategies recommended focus on addressing these specific issues in balance with the other study objectives.

- Create a westbound left turn lane at Blake Street
- Provide southbound left turn lane on Fitch Street at Whalley Avenue
- Maintain a four lane roadway section with median and center turn lanes between Fountain Street and Sperry St.
- Add a northbound right turn pocket to Ella Grasso Blvd at Whalley Avenue.

Support Economic Development and Improve Neighborhoods

A key aspect in supporting the economic vitality of the corridor is ensuring convenient access to businesses and residences. The improvements described to this point improve access for pedestrians, bicyclists, bus riders and motorists alike. Other recommendations to allow customers and residents to conveniently and safely access properties along the corridor are:

- Stripe parking lanes to clarify and maximize on-street parking locations.
- Provide additional on-street parking on the south side of Whalley Avenue near West Rock Avenue.
- Maintain on-street parking where it's provided today
- Eliminate the signed peak period parking prohibition in Westville Village.
- Initiate an access management improvement program that includes strategies such as driveway consolidation, shared use parking, and cross-access easements.

The plan recommendations described above will also help establish neighborhood character by improving the visual appearance of the corridor, taming traffic and making access safer and more convenient, whether by foot, car or other travel mode. To support the long term viability and continued improvement of the corridor, recommended land use actions are:

- Promote in-fill development and a mix of residential, commercial and retail land uses, including transit oriented development proximate to bus lines.
- Orient development toward the street through zoning regulations and the development review process. Support street front uses by providing attractive streetscapes, safe and convenient pedestrian environments and on-street parking.
- Consider changes to zoning and devolvement codes to allow shared use parking and implement flexible parking requirements. Minimize unnecessary curb cuts that interrupt sidewalks, limit streetscape potential, and create conflicts for bicyclists and motorists.
- Take advantage of development opportunities to improve network connectivity. The street grid is not well interconnected in many locations. Large scale developments may present opportunities to establish missing links for pedestrians, bicycles and/or motor vehicles)
- Require transportation amenities from new developments (streetscape, transit stops, bicycle parking, access management, as appropriate).

WEST CORRIDOR IMPROVEMENTS

The proposed changes in the West Corridor emphasize improving safety and for all users and establishing a more comfortable environment for pedestrians, bicyclists and bus riders. One focus is reducing speeding through traffic calming measures and by establishing transitions into the center of Westville Village. Additional pedestrian crossings are proposed as are improvements to make existing crossings more convenient.

This section of the corridor is identified by CTDOT, SCRCOG and New Haven as a preferred bicycle route. Space constraints preclude establishing a contiguous segment of bicycle lanes along the west corridor, so measures to draw attention to cyclists in the roadway are suggested.

The West Corridor is subdivided into five sections in order to detail specific recommendations:

- Emerson St – Harrison St (W1)
- Harrison St – Blake St (W2)
- Blake St – Fountain St (W3)
- Fountain St – West Rock Ave (W4)
- West Rock Ave – Fitch St (W5)

Emerson St – Harrison St (W1)

No changes are proposed to the alignment or cross-section of this section. Applicable traffic calming measures could be employed to slow traffic and improve the pedestrian and bicycling environments.

Recommendations

- Add edge line striping to define an 11-foot lane and establish the location of on-street parking.
- Stripe shared lane markings, or "Sharrows" to indicate to motorists that bicyclists can be expected in the travel lane and encourage cyclists to ride a safe distance from parked cars.
- Retrofit curb extensions at the Emerson Street intersection as a traffic calming measure and improve the pedestrian crossing. Curb extensions both shorten the crossing distance for pedestrians and improve sight lines between pedestrians and motorists.

Harrison St – Blake St (W2)

Recommendations

- Landscaped center median on Whalley Ave (Harrison St – Phillip St)
- Add crosswalks at Phillip St/Blake St
- Westbound turn pocket to Blake St.
- Shared Lane Markings ("Sharrows") for bicycle on Whalley Ave (Harrison St – W Rock Ave)
- Adjust traffic signal timing at Phillip St/Blake St

Discussion

The recommended improvements for the segment between Harrison Street and Blake Street focus traffic calming by narrowing this wide section of roadway and establishing driver awareness of a change in character as motorists approach Westville Village.

A two lane section with center median is proposed, allowing for a raised landscaped median and center left turn pockets at both Blake and Harrison Streets. Exhibit 3-2 shows proposed cross-sections midblock and at either intersection. The proposed improvements fit within the existing curb lines of Whalley Avenue, avoiding impacts to street-side trees and utilities.

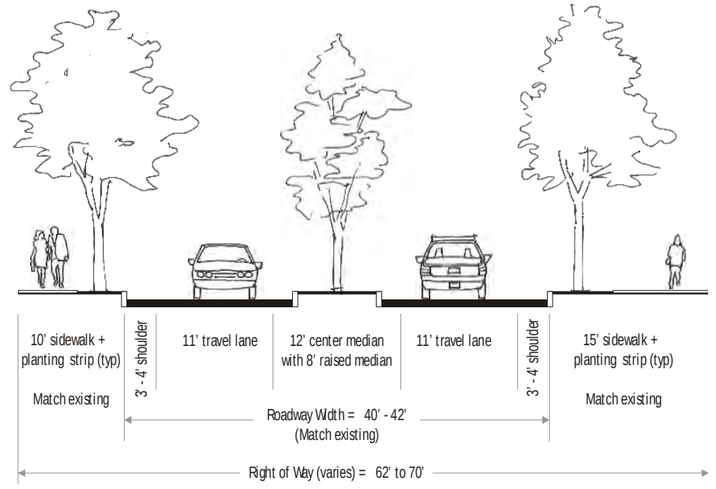
A second recommendation is to establish a westbound left turn pocket at Blake Street, which would decrease the potential for rear-end collisions and reduce congestion associated with queuing behind left-turning vehicles. Widening the sidewalk on the south side of Whalley Avenue through the Phillip and Blake Street intersections should be evaluated as part of the design process for this improvement. This would provide additional space for pedestrians in a currently confined area and allow installation of bollards or other devices to physically prevent motor vehicles from encroaching on the sidewalk.

Crosswalks are proposed across the west legs of the Blake Street and Phillip Street intersections with Whalley Avenue, completing full pedestrian access at the Blake St/Phillip St intersection complex.

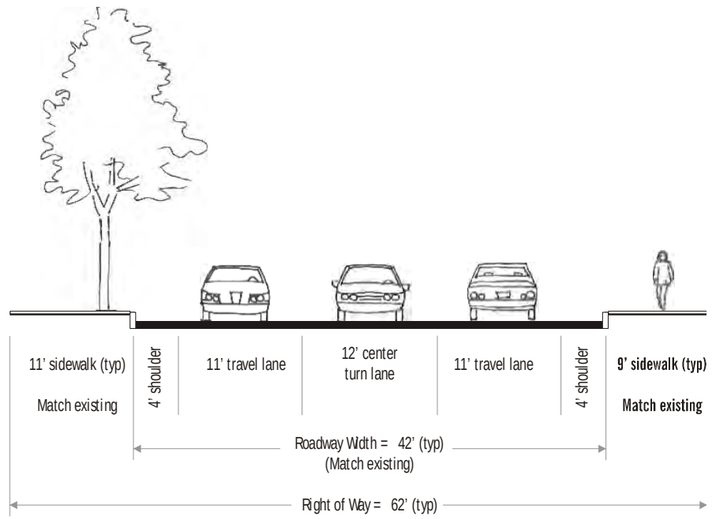
Exhibit 3-3 illustrates these recommendations in plan view.

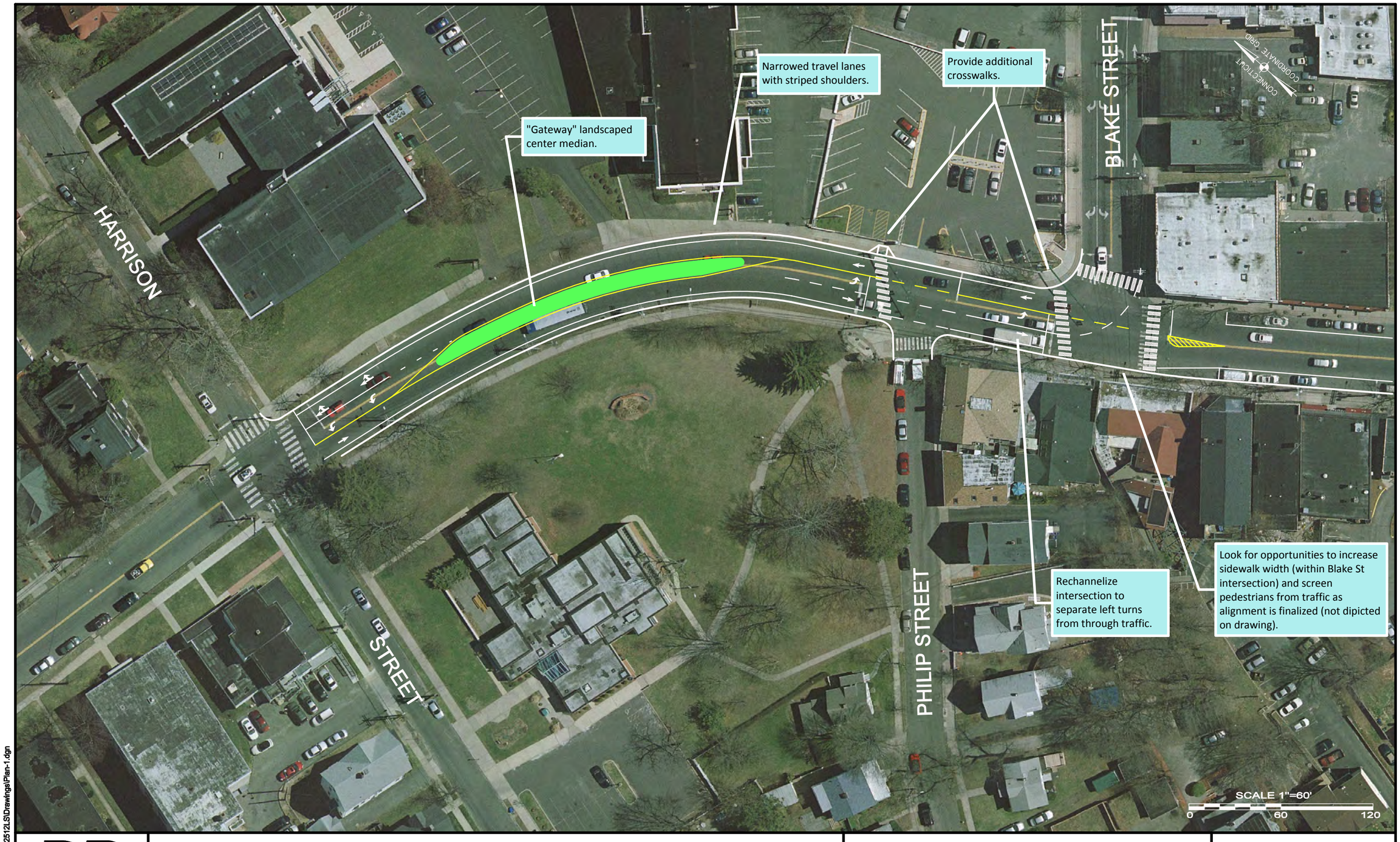
Exhibit 3-2: Proposed Whalley Ave Cross-sections

Midblock between Harrison St and Blake St



At Harrison St and Blake St intersections





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WHALLEY AVENUE
CORRIDOR STUDY

EXHIBIT 3-3

Harrison St to Blake St (segment W2)

While urban design aspects are not a focus of this study, the proposed changes would allow for a number of complementary urban design features. The new median provides an opportunity to establish a gateway into Westville Village, for example. Reconstruction of existing sidewalks is needed in the Village, which could include a coordinated design effort that considers the use of textured and/or colored pavement in crosswalks to draw attention to their location.

Though not yet approved for use by CTDOT on State Routes, Shared Lane Markings, or "Sharrows" are being introduced in the latest update of Federal Highway Administration's (FHWA) Manual of Uniform Traffic Control Devices (MUTCD) and have been approved for use elsewhere in New Haven. These marking are intended for use in applications where space constraints preclude establishment of bicycle lanes or off-street paths, and serve both to inform motorists that cyclists riding in the travel lane should be expected and to show cyclists where to safely position themselves to avoid parked cars. Sharrows are recommended on Whalley Avenue between Emerson St and West Rock Avenue, in conjunction with appropriate "Share the Road" signs directed toward motorists and direction signage for bicyclists.

A near-term recommendation is to further investigate and optimize traffic signal timings for Whalley Avenue intersections. Traffic operations analysis conducted for this study indicates that the Whalley Avenue intersection at Blake Street/Phillip Street (and as described later, at Fitch Street) may operate with less delay and at higher Levels of Service with modestly longer cycle lengths (100 seconds vs. 80 seconds today), partially because of timing requirements associated with the pedestrian phases. Such an effort would need to consider how traffic operations at nearby intersections might be affected, including Blake Street/Valley Street and the other intersections along Whalley Avenue, and may require changes to signal timings at those locations as well to maintain signal coordination. Updated intersection turning movement counts should be collected prior to any subsequent investigation of traffic signal timings.

Other considerations

- The proposed cross-section deviates slightly from applicable CT DOT standards in that the outside shoulder varies from 3 to 4 feet, rather than 4 feet as specified. While a consistent 4-foot shoulder width could be achieved through modest widening, moving the existing curbs could be avoided altogether though this minor deviation. Alternatively, the width of the center median could be varied to maintain a consistent 4-foot outside shoulder. Note that the shoulder provides additional space for bicyclists on this block.
- The existing bus stop on Whalley Avenue east of the Blake Street intersection can still be accommodated despite the lane shift necessary to allow for the eastbound left turn pocket. However, another location for this stop should be considered give the existing space constraints, lack of a stop in the opposing direction, and interference with right turning vehicles. Relocation of the bus stop would allow for a modest curb extension on the northwest corner (not shown in drawings), providing additional space for pedestrians and shortening the crossing distance across Whalley Avenue.
- The sidewalk on the south side of Whalley Avenue at the Blake Street intersection is narrow (approximately 8 feet) and located adjacent to vehicle traffic (on-street parking is not allowed). While alignment of the eastbound through lane will limit opportunities to widen the sidewalk in this location, a modest widening of up to two feet may be feasible and should be considered during the design process. Also, installation of bollards, planters or similar protective devices should be considered to shield the sidewalk from traffic at this location.
- Landscaping and maintenance of median areas will be an ongoing need and should be planned for in municipal maintenance planning activities. Landscaping should incorporate low maintenance plantings and designs.
- To accommodate the eastbound left turn lane to Blake Street, the existing on-street handicapped parking spot on the south side of Whalley Avenue east of Blake Street would need to be moved further to the east, eliminating one on-street parking spot.

Blake St – Fountain St (W3)

Recommendations

- Maintain on-street parking and stripe parking lanes
- Improve streetscape and rebuild sidewalks (Phillip St – W Rock Ave)
- Install bike racks in commercial areas
- Curb extensions and additional crosswalks at Central Ave and Tour Ave/Fountain St

Discussion

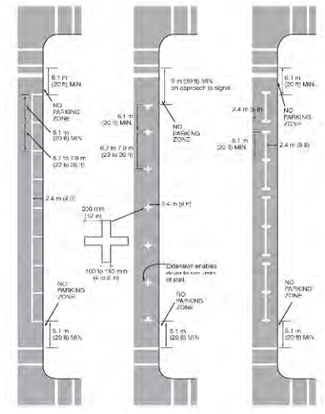
No changes are proposed to the cross section of Whalley Avenue through Westville Village, which balances the available right-of-way space between the roadway, on-street parking (vital to village businesses) and pedestrian areas. Maintaining the existing curb lines will also simplify reconstruction and reduce costs of improvements in the village.

Formalizing the location of on-street parking space by applying pavement markings (paint) is recommended in Westville Village for several reasons:

- As a means of taming traffic by visually "narrowing" the travel lane width;
- To encourage parking close to the curb;
- To improve driver's awareness of where on-street parking is allowed; and,
- As a means to potentially reduce the number of parking regulatory signs required.

Parking could be designated by a simple edge line, or more precisely by marking individual parking locations to both clarify where parking is or is not allowed as well to organize on-street parking in a way that maximizes spaces. Typical pavement marking approaches for on-street are shown in Exhibit 3-4.

Exhibit 3-4: Pavement Marking Options for Designating On-Street Parking



Source: 2003 MUTCD (Figure 3B-18), USDOT Federal Highway Administration

Provision of on-street parking throughout the day is recommended, and the current peak hour parking prohibition signs should be removed as part of this action. Parking provides an important buffer between the relatively narrow sidewalks and travel lanes in this area.

Reconstruction of existing sidewalks is needed in the Village. The existing streetscape is well worn and sidewalk conditions poor in many areas. Given that sidewalk widths are fairly narrow in some locations, a consistent paving surface should be considered for the full width of the sidewalk, rather than a separate, paver-style border as provided today. Reconstruction of sidewalks in Westville is also an opportunity to improve compliance with current Americans with Disability Act (ADA) requirements.

Pedestrian crossing improvements are proposed at Central Avenue and Fountain Streets, as shown in Exhibit 3-7 for the following segment (W4). An additional crosswalk along the west side of the Central Avenue intersection is recommended along with curb extensions to the southwest corner and north side of the intersection. These intersections would shorten the crossing distance for pedestrians, improve visibility of both

pedestrians and autos, and provide additional space for queued pedestrians, streetscape elements, and/or street furniture. The proposed landing on the north side of Whalley Avenue could provide space for a bicycle rack.

As noted previously, Bicycle Sharrows are recommended through Westville Center. Public bicycle parking should be provided in the Village, and the curb extensions noted above will provide additional space that could be considered for use by bike parking and street furniture.

Other considerations

- One or two on-street parking spaces would be eliminated by the proposed pedestrian improvements at Central Avenue.
- The block between Central Avenue and Fountain Street may be a better location for a westbound bus stop than the existing location near Blake Street. The proposed curb extensions may provide sufficient space for a bus shelter.

Fountain St – West Rock Ave (W4)

Recommendations

- Realignment, signalization and improved pedestrian crossing at Fountain St.
- Lane reduction, alignment improvements (Fountain St – east of W Rock Ave).
- Improve lane alignment and emphasize westbound stop line at West Rock intersection.
- Maintain on-street parking and stripe parking lanes.
- Improve streetscape and rebuild sidewalks (south sidewalk widened).

Discussion

In the near-term, activating the eastbound traffic signal phase for traffic on Fountain Street would help reduce motor vehicle conflicts east of the intersection and provide a protected signal phase for pedestrians to cross this busy route. The solid lane stripe separating Fountain St traffic from Whalley Avenue traffic could be restriped with normal dashed white lane markings, which would help clarify to Whalley Avenue traffic that the right lane should be used to make turns onto West Rock Avenue.

Over the longer-term, a realignment of Fountain Street (within existing right-of-way) and reduction of travel lanes on Whalley Avenue from the current five-lane section to a four-lane section is recommended for the segment between Fountain Street and West Rock Avenue (Exhibits 3-5 through 3-7). These changes would reconfigure the intersection in a manner more consistent with typical urban street design. The key benefits of the proposed configuration include:

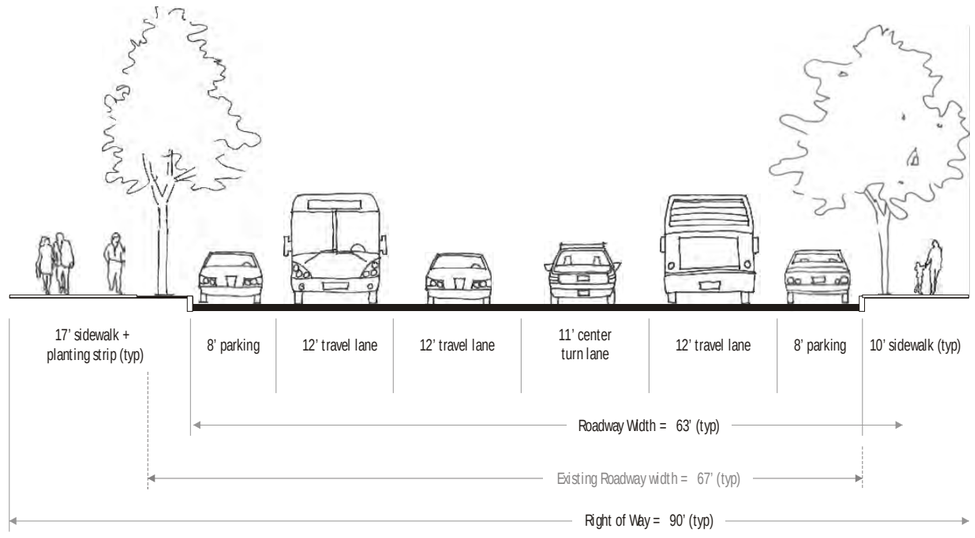
- Reduces the footprint of the intersection, allowing dedication of additional space to on-street parking, pedestrian and streetscape elements.
- Allows (requires) operation of all phases of the traffic signal at the Fountain Street intersection and requires a sharper turn between Fountain Street and Whalley Avenue, thereby taming traffic speeds, reducing conflicting eastbound vehicle movements between Fountain Street and Fitch Street, and stopping traffic to allow for pedestrian crossings.
- Allows for a wider sidewalk and creates a more direct pedestrian linkage along Whalley Avenue. Shortens the length of the pedestrian crossing across Fountain Street.
- Simplifies lane maneuvering for vehicles by reducing the number of lane choices and better balances capacity through the segment.
- Allows better alignment of travel lanes, include westbound lanes between Fitch Street and Fountain Street.

Streetscape improvements recommended for the prior segment (W3) should continue to West Rock Avenue. Curb extensions are recommended on the north side of Whalley Avenue at Tour Avenue/Fountain Street and West Rock Avenue. The reduction in travel lanes and curb extension at West Rock would shorten the crossing distance at that location by approximately 10 feet compared to the existing crossing.

Two to three on-street parking spaces on the north side of Whalley Avenue near Tour Avenue are located within the intersection zone today, where parking is typically not allowed. The curb extension shown here extends through the intersection, eliminating these spaces but providing a wider sidewalk zone with space for street furniture and amenities such as bicycle parking. A smaller curb extension could be provided instead

Exhibit 3-5 Whalley Avenue, Central Ave to West Rock Ave Concept Sketch

Exhibit 3-6 Proposed Whalley Ave cross-section between Fountain St and West Rock Ave



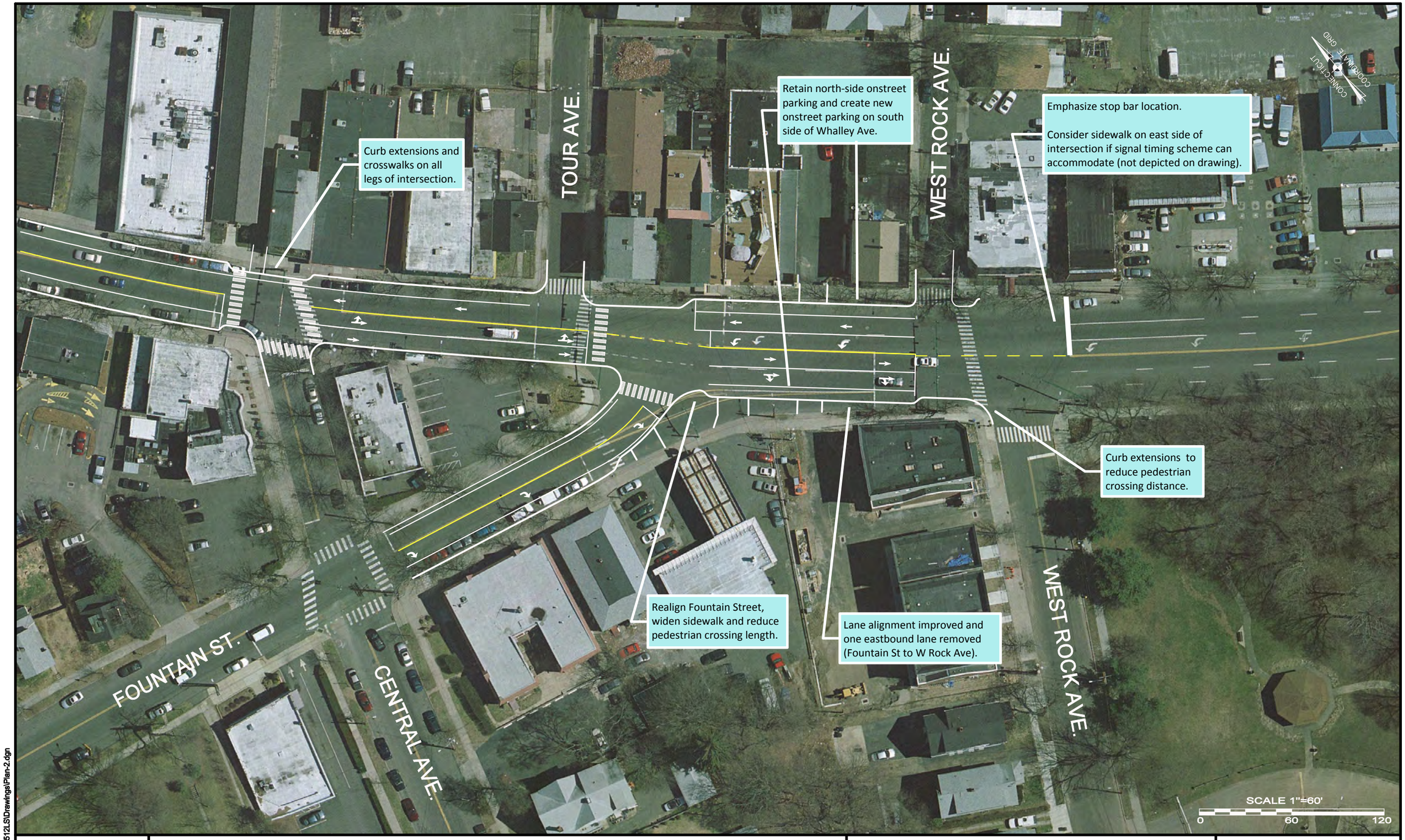


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EXHIBIT 3-7

Central Ave to W Rock Ave (segments W3 & W4)

should the decision be made to continue to allow parking within the intersection zone. One the south side of the street, one additional son-street space would be available on Fountain Street and up to three new spaces could be provided on Whalley Avenue west of West Rock Avenue.

The proposed lane reduction, in conjunction with realignment of lanes between West Rock Avenue and Fitch Street, will result in improved alignment and consistency of lane geometry through the West Rock Avenue intersection compared to today. These changes should

reduce confusion for Whalley Avenue motorists approaching the West Rock Avenue intersection from either direction. Additional measures recommended to further guard against red light running in the westbound direction at West Rock Avenue are:

- Restripe the westbound stop line using a maximum width, 24-inch wide stop line.
- Add a "Stop Here on Red" sign at the stop line location (MUTCD R10-6)
- Add a supplemental near-side traffic signal head near the stop bar location.

R10-6

Source: 2003 MUTCD, USDOT FHWA.

Other considerations

- Community members expressed interest in provided a crosswalk on the east side of West Rock Avenue, in addition to the current crosswalk located west of the intersection. This would improve access from the north side of Whalley Avenue to Edgewood Park., and also provide a more visible cue to drivers showing where to stop at the intersection than offered by the existing stop bar. An exclusive pedestrian phase would need to be incorporated into the signal timing at to accommodate the additional crosswalk, which would substantially increase vehicular congestion here and at the adjacent Fountain Street intersection unless the two intersections could be operated by separate signal controllers. Preliminary analysis suggests that operating the two intersections on separate controllers may be feasible, but this should be confirmed through a more detailed traffic analysis using updated traffic counts.
- The proposed improvements at Fountain Street would eliminate the westbound right turn from Whalley Avenue to Fountain Street, which is allowed today but receives very little use. Most motorists instead turn right at Central Avenue, which is retained to provide for this traffic movement as well as the reciprocal movement described below. Streetscape improvements and curb extensions could be extended along Central Avenue as a means of traffic calming for the block between Whalley Avenue and Fountain Street.
- Left turns from Fountain Street would continue to be prohibited, instead relying on Central Avenue and cross streets to the west to provide this connectivity. While the revised geometry at Fountain Street could allow for left turns, signal timing requirements to allow for it would degrade intersection performance considerably.
- Requiring eastbound traffic from Fountain Street to stop at the intersection will increase motor vehicle delay for eastbound movementsat this intersection, though traffic analysis indicates that LOS D or better conditions can be achieved.

West Rock Ave – Fitch St (W5)

Recommendations

- Five-lane cross section with improved lane alignment and consistency
- Shared-use path (West Rock Ave – West Park Ave) for pedestrians and bicyclists adjacent to Edgewood Park
- Maintain on-street parking on north side of roadway
- Create turn lane to reduce congestion on Fitch Street

Discussion

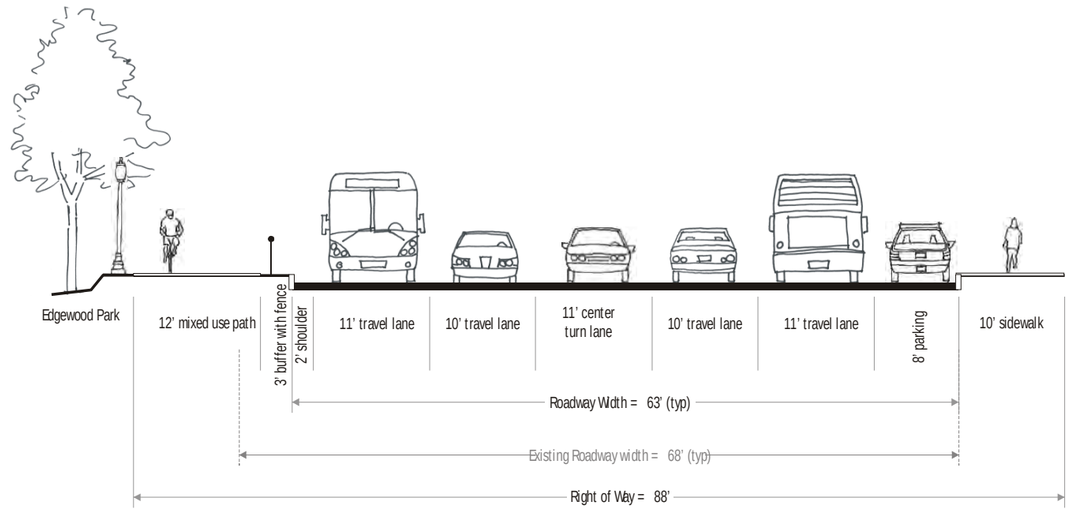
The recommended cross section for Whalley Avenue between West Rock Avenue and Fitch Street includes two travel lanes in each direction and a center turn lane (Exhibits 3-8 and 3-9). The existing third eastbound lane segment from West Rock Avenue would no longer be needed once improvements to the previous segment (Fountain Street – West Rock Avenue) were completed. On-street parking would be maintained on the north side of Whalley Avenue, as would the existing sidewalk (10-feet).

11-foot outside lanes and 10-foot inside lanes are recommended, which would provide a more consistent lane width than existing conditions and improve alignment across the West Rock Avenue intersection. This configuration would also increase the distance between westbound traffic and adjacent on-street parking.

A 12-foot wide shared- use path is suggested bordering the north side of Edgewood Park. The path would accommodate both pedestrians and bicycles. Due to right-of-way constraints and the width of the existing bridge over the West River, the path would be located 3-feet from the roadway and would therefore require a 42-inch high fence to provide separation from vehicular traffic on this segment.

Transitioning from two-directional travel back to mixed traffic is an issue that needs to be addressed for all shared-use paths. The paved area at the southeastern corner of the West Rock Avenue intersection with Whalley Avenue should be configured as an entrance/exit to the path. Directional signage would point cyclists and pedestrians to various destinations, such as Westville Village and the Yale Bowl. Further, signs should direct cyclists to cross the street using the traffic signal and continue in mixed traffic in the proper direction of travel. Sharrows, as recommended for Whalley Avenue west of here, would help reinforce the message of riding with the direction of traffic in the roadway. Similar provisions should be made at Fitch Street to provide space for cyclists who are waiting to cross Whalley Avenue at that traffic signal. Local cycling

Exhibit 3-8 Proposed Whalley Ave cross-section between West Rock Ave and Fitch St



clubs could be engaged to help determine how best to configure and sign these areas.

To address congestion on Fitch Street, creation of separate lanes for left and right turns to Whalley Avenue is proposed (Exhibit 3-9). An additional 8 to 10 feet of right-of-way would be required east of the existing roadway, on which the east sidewalk on Fitch Street would be relocated. This would impact the landscaped area of the gas station east of Fitch Street, but otherwise not affect that property. The new turn lane is expected to improve overall intersection operations from LOS F today to LOS C during the AM peak and LOS D/E during the PM peak.

Other Considerations

- Proposed 10-foot wide lanes will require a deviation from current CTDOT standards, but are recommended as appropriate given their consistent with ITE/CNU recommendations for urban thoroughfares. Currently, lanes as narrow as 9 feet wide are striped on this segment.
- Proposed two-foot shoulder on the south side of Whalley Avenue will require a deviation from current CTDOT standards. Alternatively, the center turn lane and westbound travel lanes could be narrowed to 10 feet to allow for a full 4-foot shoulder.
- Street trees on the south side of Whalley Avenue that are currently located street side of the existing sidewalk would be removed. Trees located on the Park side would remain.

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EXHIBIT 3-9
W Rock Ave to Jewell St (Segment W5 and C1)

CENTRAL CORRIDOR IMPROVEMENTS

Proposed Central Corridor improvements include traffic calming measures and pedestrian crossing improvements aimed at improving walkability providing safer ways to cross Whalley Avenue. The shared-use path introduced in the previous section is continued to West Park Avenue, which provides convenient bicycle access to other identified bicycle routes on Edgewood Avenue and Chapel Street.

The two sections considered for the Central Segment of Whalley Avenue are:

- Fitch St – West Park Ave (C1)
- Park St – Ella Grasso Blvd (C2)

Fitch St – West Park Ave (C1)

Recommendations

- Four-lane cross section with landscaped center median
- Wide outside lanes to provide space for bicyclists
- Pedestrian refuge in median at West Park Ave intersection
- Shared-use path (West Rock Ave – West Park Ave) for pedestrians and bicyclists adjacent to Edgewood Park

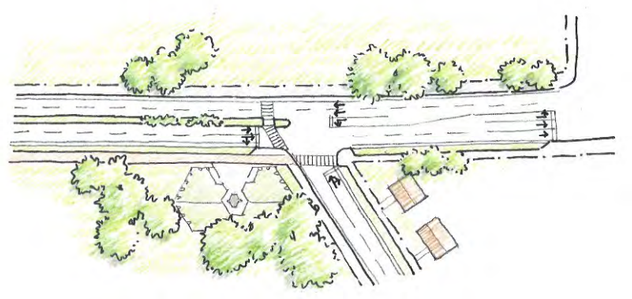
Discussion

A four lane section with a raised center median is proposed between Jewell Street and West Park Avenue (Exhibit 3-10). The landscaped median would serve to separate directions of travel, reduce the apparent width of the roadway, reduce impervious surfaces, and improve the visual appearance of the roadway adjacent to the park. A wide outside lane (11-foot lane plus 4-foot shoulder) would provide additional space for bicyclists who choose to ride in the roadway rather than use a shared-use path proposed along the northern border of Edgewood Park.

Shared-use paths are normally not recommended adjacent to roadway segments for a number of reasons, including conflicts with vehicles turning into driveways and onto cross-streets. In this case, however, a shared-use path is in keeping with the character of the adjacent park, crosses no driveways and only the park entrance at a traffic signal, and provides non-motorized access from West Park Avenue to signalized intersections at Fitch Street and West Rock Avenue.

At West Park Street, the proposed raised median would provide a refuge for pedestrians crossing Whalley Avenue (Exhibit 3-11). Pedestrian refuges can considerably improve the safety of street crossings by allowing pedestrians to cross half of the roadway at a time, focusing their full attention on one direction of traffic. Streetlight improvements to ensure that the crosswalk is well-lighted are recommended as well.

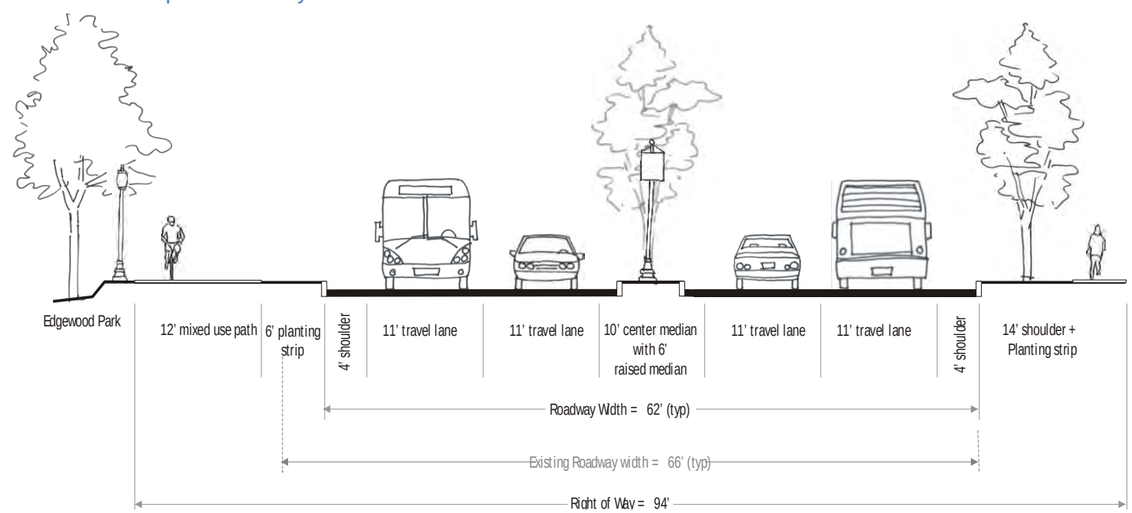
Exhibit 3-11: Concept sketch – Whalley Avenue at West Park St



Other Considerations

- Outside shoulders could be replaced with bike lanes by increasing their width to 5 feet. This could be accomplished by reducing the inside travel lanes to 10 feet (with a deviation from CTDOT standards). Right-of-way width is insufficient to continue bicycle lanes west of Fitch Street or east of West Park Avenue without widen the roadway, however.
- A wider 8-foot raised median could be created with a deviation allowing 1-foot inside shoulder clearance or provision of 10-foot inside lanes.

Exhibit 3-10: Proposed Whalley Ave cross-section between Jewell St and West Park Ave



- A full warrant analysis per Manual of Uniform Traffic Control Devices (MUTCD) could not be conducted at West Park Avenue using available data, but considering traffic levels on Whalley Avenue in conjunction with observed side street traffic and pedestrian volumes suggests that the location is unlikely to currently meet signal warrants. A full warrant analysis using current traffic and pedestrian counts should be conducted to confirm.
- A pedestrian activated flashing yellow warning beacon could be installed with the median and crosswalk improvements to increase awareness of the crossing.

West Park Ave – Ella Grasso Blvd (C2)

Recommendations

- Curb extensions at crosswalks
- Median islands with pedestrian refuges
- Shared bicycle lane markings (Sharrows)
- Extended bicycle lanes on Ella Grasso Blvd with bicycle boxes at intersection
- Minor reconfiguration of Ella Grasso Blvd intersection with northbound left turn pocket
- Operate northbound and southbound movements with split traffic signal phases.

Discussion

Between West Park Avenue and Ella Grasso Blvd, a series of curb extensions and raised median islands with pedestrian refuges are recommended to improve pedestrian safety (Exhibit 3-12). Curb extensions would shorten crossing distances at intersections, whether signalized or not, and provide space to rebuild ADA wheelchair ramps to current standards. Though this area is densely developed with residential and some commercial uses, there are currently few locations where pedestrians may comfortably cross Whalley Avenue. As proposed, raised islands in the median would provide pedestrian refuges at Hubinger Street, Hobart Street, and Brownell Street (relocating the existing crosswalk to the west side of the street to reduce the crossing distance).

The proposed medians would also consolidate left turns to fewer locations and provide physical separation between opposing directions of travel. A striped edge line to define parking areas and encourage parking close to the curb is recommended here. Given the narrow cross section in this location, consideration should be given to striping 7.5-foot parking lanes.

This segment is another location where Sharrows are recommended as a means of protecting cyclists from car doors and reinforcing the expectation of bicycle use of the travel lane.

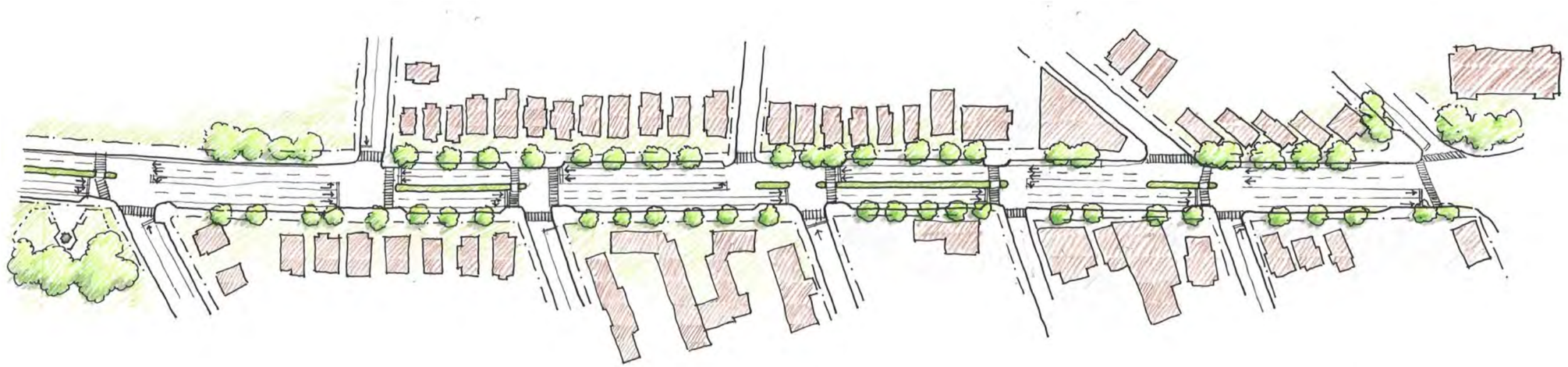
To preserve the character of the adjacent neighborhood, recommendations between West Park Avenue and Ella Grasso Blvd avoid roadway widening and stay within the existing curb-to-curb street space.

At Ella Grasso Blvd (Exhibit 3-13), the recommended concept addresses intersection safety and improves accommodation of bicyclists and pedestrians. Bicycle lanes on Ella Grasso Blvd would be extended through the Whalley Avenue intersection, enabling the continuation of bicycle lanes to the south as recommended previously in SCRCOG's Route 10 Corridor Study (2008). These lanes would become a key north-south route linking to east-west bicycle facilities on Edgewood Avenue and Chapel Street. Bike Boxes are proposed on Ella Grasso Blvd at the Whalley Avenue intersection to give cyclists the opportunity to get ahead of traffic when proceeding through the intersection, whether turning onto Whalley Avenue or continuing straight on Ella Grasso Blvd.

Pedestrian crossings are improved by extending the sidewalk on the northwest side of the intersection, which reduces the overall crossing distance and provides an improved landing zone.

Northbound, the parking lane transitions to a right turn pocket at the intersection. This would provide some improvement in traffic operations, but more importantly improves the alignment of travel lanes north and south of the intersection. To further improve safety, northbound and southbound travel lanes are separated by three feet at the intersection. Given the skew in the intersection, presence of bicycles, and high number of turning vehicles, operation of the intersection using a split phase signal timing for northbound and southbound movements (i.e. – only one movement occurs at a time) is recommended.

Exhibit 3-12: Concept Sketch – Whalley Avenue, West Park Street to Ella Grasso Blvd



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CORRIDOR STUDY

EXHIBIT 3-13
Ella Grasso Blvd (Segment C2)

EAST CORRIDOR IMPROVEMENTS

The East Corridor recommendations include a rebuild of the corridor that introduces pedestrian improvements, traffic calming and access management measures. Collectively, these recommendations are intended to improve transportation safety and establish a more consistent, attractive visual character to the area.

A central aspect of the East Corridor recommendations is establishment of center medians, which will provide pedestrian refuges allowing additional sidewalk crossing on Whalley Avenue and reduce vehicle turning conflicts to improve safety. The proposed improvements will also establish a new look along this segment of the corridor, which will be further defined through additional urban design work prior to construction. Establishment of landscaping, and street trees in particular, that are scaled such that businesses can be viewed and identified from the street and sidewalk was identified as an important need during the public outreach process. Also key to improving pedestrian safety and security (actual and perceived) is incorporating pedestrian scaled, low level street lighting that improves visibility at night and eliminates dark areas along sidewalks and crosswalks.

The East segment of Whalley Avenue is divided into three sections for consideration of long term corridor improvements:

- Ella Grasso Blvd – Ellsworth Ave (E1)
- Ellsworth Ave – Sperry Ave (E2)
- Sperry Ave – Howe St (E3)

Ella Grasso Blvd – Ellsworth Ave (E1)

The first block east of Ella Grasso Blvd will maintain the existing curb lines, which provide sufficient room to establish a cross section of four travel lanes and center turn lanes. This block will largely resemble the existing roadway, except establishment of the center median will allow an eastbound left turn pocket to Ellsworth Avenue and potentially a short raised median section midblock. As is the case today, on-street parking would not be provided on this block.

Because the roadway width is unaltered for this block, existing street trees and utilities would not be affected by the recommended changes.

Recommendations

- Landscaped median island with turn pockets at intersections.
- New streetscape and sidewalks (curb location unchanged).
- Driveway consolidation on south side of roadway.

Ellsworth Ave – Sperry Ave (E2)

Recommendations

- Landscaped median islands with turn pockets at intersections and key mid-block locations
- Curb extensions at crosswalks
- Pedestrian refuge islands at unsignalized crossings
- Shared bicycle lane markings (Sharrows)
- New streetscape with sidewalks of appropriate width.
- Narrower inside travel lane with wider outside lane.
- On-street parking
- Driveway consolidation and access management

Discussion

A consistent section with four travel lanes and a center median is proposed between Ellsworth Avenue to just west of Sperry Avenue, which maintains a 100-foot existing right-of-way. Exhibits 3- 14 and 3-15 show typical cross sections at mid-block and intersection locations respectively.

14- foot sidewalks are recommended on both sides of Whalley Avenue, which would provide an eight to ten foot clear area for pedestrian movements and four to six feet of space for tree wells, street furniture, street lights and other utility hardware.

A unifying urban design plan should be developed for the entire area, which would select and define the appearance and placement of landscaping, street furniture, pavers and related streetscape features. Bus stops should also be upgraded through this process, consolidating stops so that they occur every 1000 to 1200 feet. New shelters could be integrated into the streetscape design and should be provided for outbound riders as well as inbound.

Providing more convenient, safer ways to cross Whalley Avenue is paramount in this section, as elsewhere in the corridor. Curb extensions would be provided at each crosswalk, decreasing the distance across Whalley Avenue by about 10 feet compared to today. Curb extensions would improve the visibility for pedestrians and motorists and would have

Exhibit 3-14: Proposed Whalley Ave cross-section midblock

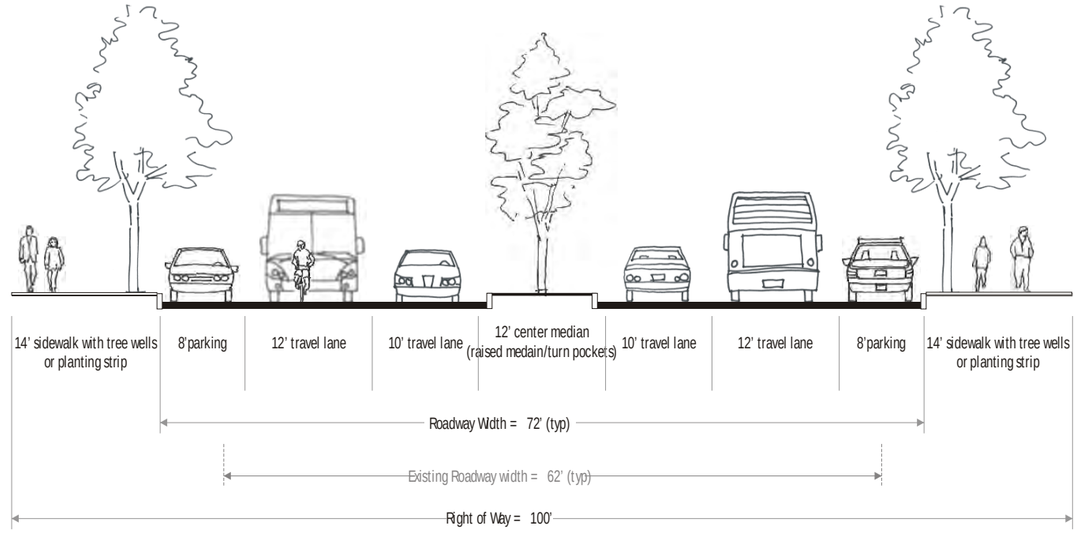
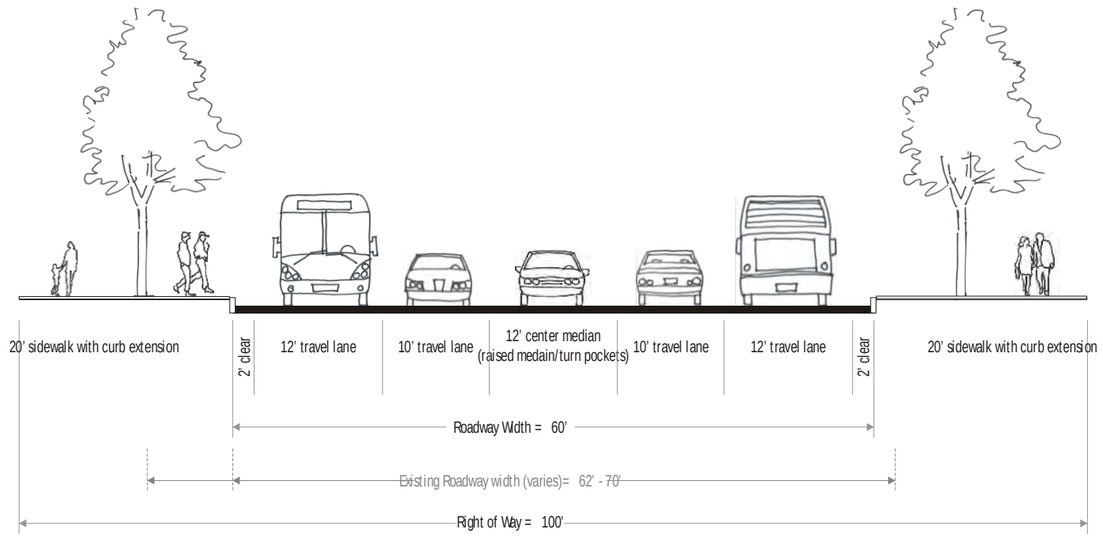


Exhibit 3-15: Proposed Whalley Ave cross-section at Intersection with curb extensions



a traffic calming effect by narrowing the roadway at intersections. The additional space afforded by curb extensions would allow for ADA access ramp to current standards, street plantings and other street furniture.

Center median islands with pedestrian refuges are central to improving pedestrian crossings at unsignalized intersections. These are recommended at Carmel Street (As shown in Exhibit 3-16), west of Hudson Street, County Street and two mid-block locations between Orchard Street and Sperry Street (Exhibit 3-17). These locations were selected to provide regular crossing opportunities and to coincide with intersection and driveway locations.

On-street parking is delineated by pavement markings and further defined by curb extensions at major intersections. Striping on-street parking not only serves to help drivers identify on-street parking locations, but also as a means of taming traffic speeds by visually establishing the width of the adjacent travel lane. Maintaining on-street parking was deemed essential by the study team in order to provide access to existing businesses on the corridor as well as enable redevelopment efforts that seek to establish commercial uses that front the street.

The proposed center median would consolidate the location of left turns, improving safety for all roadway users. The plan illustrated in Exhibits 3-16 and 3-17 includes left turn pockets at major intersections. Some midblock turns could be allowed as well, and the exact number and location of left turns would need to be further refined through the design process.

To allow automobiles to reverse direction, U-turns from left turn pockets can be accommodated by not providing a curb extension on the intersection corner that receives the U-turning traffic and/or prohibiting on-street parking in the turning path. Examples of this are shown westbound at Norton Street (Exhibit 3-16) and Hudson Street, and eastbound at Norton Street (Exhibit 3-17). Connecting and parallel streets provides some opportunities to reserve direction as well – notably using Elm Street or Dickerman Street – though parallel routes are not easily accessible throughout the corridor due to discontinuities in the street grid.

Efforts to reduce the number of driveways are recommended. This can be accomplished both through zoning mechanisms that guide future development as well as programs to encourage consolidation of existing driveways and shared parking.

Sharrows are recommended for this segment to alert drivers to expect bicycles in the travel lane and position cyclists away from parked cars. Further development of bicycle facilities on parallel routes, including the Edgewood Avenue and Chapel Street corridors is also recommended to accommodate cyclists who are less comfortable riding in traffic or prefer routes with that do not experience as much traffic as Whalley Avenue. Bicycle access on intersecting cross streets should be investigated further to determine which routes are best suited to provide access to or across the corridor.

Other Considerations

- The proposed configuration would require replacement of existing street trees on both sides of Whalley Avenue between Ellsworth Ave and Sperry Ave. New street tress should be appropriately scaled and spaced to improve visibility of businesses from the street.
- Introduction of low-level street lamps should be part of an updated urban design for this segment to improve lighting for pedestrians.
- The proposed configuration would require relocation of utilities along Whalley Avenue. Consideration could be given to relocating utilities underground as part of the improvement program.
- Businesses along this segment of Whalley Avenue have expressed concern over how the center median could affect access to their properties. The location of left turns and U-turn routes should be further developed with ongoing participation of businesses during the design process.
- In-lane transit stops could be implemented to improve bus operations and reduce on-street parking impacts by expanding curb extensions to include the bus stop or shelter.
- Turn pockets will not have raised apron protection, but will only be striped. Reduction the width of sidewalks by one to two feet on each side of the roadway could provide enough additional space to provide a raised barrier between turn pockets and opposing traffic.
- Provision of bicycle lanes or cycle tracks would require more space than is available in given the proposed roadway features. Ten to twelve feet (recommended due to proximity to on-street parking and high traffic volumes) would need to be reallocated from other uses in the proposed cross section – such as sidewalks or on-street parking – to accommodate bicycles lanes. Establishing cycle tracks, rather than bicycle lanes, would require additional spaces and present unique design challenges in the Whalley Avenue environment due to frequent driveway connections. Given these space constraints and the roadway characteristics, installation of Shared Lane Markings (Sharrows) and the application of traffic calming and access management measures described.
- Reducing the number of travel lanes to further slow traffic and provide addition space for other uses (sometimes referred to as a "Road Diet") was investigated but deemed inappropriate for the following reasons:
  - High traffic volumes at the Sherman Avenue and Orchard Street would require additional lanes to operate effectively.
  - Frequent on-street parking maneuvers would block all traffic.
  - Bus travel times and travel time reliability would be adversely affected.

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PB 100 YEARS

CITY OF NEW HAVEN
WHALLEY AVENUE
CORRIDOR STUDY

EXHIBIT 3-16
E Grasso Blvd - Winthrop Ave (Seg E1 and E2)

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PB 100 YEARS

CITY OF NEW HAVEN
WHALLEY AVENUE
CORRIDOR STUDY

EXHIBIT 3-17
Sherman Ave - Sperry St (Segment E2)

Sperry Ave – Howe St (E3)

The segment east of Sperry Street has a narrower right of way and fewer driveways than locations to the west. Therefore, the proposed recommendations maintain the existing four-lane cross section and focus on improving streetscape and pedestrian accommodations (Exhibit 3-18).

Curb extension at Sperry Street, Dwight Street and Howe Street would narrow the roadway and shorten crossing distances for pedestrians. A new crosswalk on the west side of Howe Street would improve pedestrian access across Whalley and to the Broadway corridor, though access from Whalley Avenue to the north side of the Broadway corridor is beyond this study's project area and is not addressed. Study of this area with the specific intention of strengthening pedestrian connections between Yale University, the Broadway corridor and Whalley Avenue is recommended.

As with elsewhere in the corridor, striped parking is recommend. Sidewalks and streetscape are generally in poor condition on this segment and merit replacement and upgrading.

Curb extension at Sperry Street, Dwight Street and Howe Street would narrow the roadway and shorten crossing distances for pedestrians. A new crosswalk on the west side of Howe Street would improve pedestrian access across Whalley and to the Broadway corridor, though access from Whalley Avenue to the north side of the Broadway corridor is beyond this study's project area and is not addressed. Study of this area with the specific intention of strengthening pedestrian connections between Yale University, the Broadway corridor and Whalley Avenue is recommended.

As with elsewhere in the corridor, striped parking is recommend. Sidewalks and streetscape are generally in poor condition on this segment and merit replacement and upgrading.

Recommendations

- Curb extensions at crosswalks
- Shared bicycle lane markings (Sharrows)
- Maintain on-street parking and stripe parking lanes
- New streetscape with sidewalks on all legs of intersections.

Exhibit 3-18: Concept Sketch – Whalley Avenue, Sperry Street to Howe Street

MOVING FORWARD

The Whalley Avenue Corridor Study is a comprehensive look at transportation and contextual conditions along the corridor, culminating in a coordinated conceptual plan of improvements. Some of the recommended actions require relatively little further development, are low cost, and could potentially be implemented in the near-term. Others would require further planning, public outreach, and design efforts prior to construction. These longer-term projects are typically higher-cost as well, and their implementation dependent on securing funding. Exhibit 3-19 organizes the study recommendations into distinct improvement elements and summarizes the further project development needs and potential costs associated with each.

Project development stages for the recommended study elements are:

Near-term: Recommended elements that do not require significant additional planning or design and could potentially be implemented quickly.

Mid-term: Require some design work prior to construction, but are largely well defined and low to moderate in cost.

Long-term: Still conceptual in nature and would need to undergo additional evaluation and design to advance and finalize the concept. They elements are likely to evolve as they advance through the design process and would entail further community outreach to arrive at final, designed solutions.

All study recommendations affecting the roadway within the West and Central segments would also require CTDOT approval prior to implementation.

Because the study recommendations are based on conceptual plans, and not engineered designs, estimated cost ranges should be considered approximate and appropriate for planning purposes only.

Exhibit 3-19: Implementation Aspects of Study Recommendations

	Segment	Elements	Project Development Stage			Estimated (2010) Costs [1]			
			Near-term	Mid-term	Long-term	Under $50k	$50k to $250k	$250k to $1M	Over $1M
West	Emerson St – Harrison St	• Painted edge line and Sharrows • Curb extensions	●	●		●			
	Harrison St – Blake St	• Landscaped center median on Whalley Ave with westbound turn pocket to Blake St with crosswalks at Phillip St/Blake St • Sharrows • Adjust traffic signal timing at Phillip St/Blake St	● ●	●		● ●	●		
	Blake St – Fountain St	• Maintain on-street parking and stripe parking lanes • Sharrows • Improve streetscape and rebuild sidewalks (Phillip St – W Rock Ave), including curb extensions and bike racks.	● ●		●	● ●		●	
	Fountain St – West Rock Ave	• Whalley Avenue reconfiguration: ▪ Realignment, pedestrian and signalization at Fountain St. ▪ Reconfigure lanes on Whalley Avenue. ▪ Improve streetscape and rebuild sidewalks. • Emphasize westbound stop line at West Rock intersection.	●		● ●	●		● ●	
	West Rock Ave – Fitch St	• Whalley Ave reconfiguration with five-lane cross-section • Create turn lane on Fitch Street.			● ●		●	●	
Central	Fitch St – West Park Ave	• Whalley Ave reconfiguration with four-lane cross section and landscaped center median • Shared-use path (West Rock Ave – West Park Ave).		● ●			●	●	
	West Park St – Ella Grasso Blvd	• Median islands with pedestrian refuges and curb extensions at crosswalks • Shared bicycle lane markings (Sharrows) • Minor reconfiguration of Ella Grasso Blvd intersection with bicycle lanes and bike boxes.	●	● ●		●	●		
East	Ella Grasso Blvd – Ellsworth Ave & Ellsworth Ave – Sperry Ave	• Whalley Avenue reconfiguration with landscaped median island, new streetscape and sidewalks, and turn pockets at intersections. • Shared bicycle lane markings (Sharrows)	●		●		●		●
	Sperry Ave – Howe St	• New streetscape and sidewalks with curb extensions at crosswalks • Shared bicycle lane markings (Sharrows)	●	●		●		●	

[1] Costs are order of magnitude approximations based on conceptual plans. Actual project costs will vary depending on aspects of the final design and detailed information generated during the design process.

APPENDIX A: PUBLIC OUTREACH SUMMARY

PUBLIC MEETING #1

Whalley Avenue Corridor Study
Public Workshop #1

Thursday, April 8, 2010
Beecher School, New Haven, CT

DRAFT MEETING SUMMARY

Attendees (Signed-in):

- Greg Dildine, Alderman, Ward 25
- Judy Hopkins, Neighbor
- Lesley Roy, Lesley Roy Home Coutoure
- Matt Sawyer, SCSU Grad Program
- Seth Poole, Chair WEB Management Team
- Chris Heitmann, Westville Village Renaissance Alliance
- Dale Bruckhart
- Richard Yao, City OED
- Robbie Lelma, Neighbor
- Matthew Brokeman
- Bob Caplain, Whalley Edgewood Beaver Hill Management Team
- Erika Linnander
- Lisa Sussuein
- Bonnie Bayuk, Bay Quilts
- Sam Andon, St. Luke's Development Corporation
- William Ricko
- Chris Zollo
- Ethan Hutchings, TT+P Department
- Mina Minelli, SCSU
- John Cox, New Haven Department of Public Works
- Jessica Feinleib, Neighbor
- Sheila Masterson, WASSD
- John Vuoso, WASSD
- Kathleen Bradley, Blockwatch 303
- Thea Boxbaum, Arlow
- Gabriel DA Silua, WVRA Frame Shop
- Study and Consultant Team
- Stephen Dudley, SCRCOG
- Kathleen Krolak, EDC
- Marcy Miller, FHI
- Mary Manning, FHI
- Jay Koolis, PB
- Bob Talbot, PB
- Stephen Rolle, PB

Welcome/Introductions

Steve Dudley, of South Central Regional Council of Governments (SCRCOG), welcomed everyone. He thanked everyone for coming and stated that SCRCOG was funding this study to identify issues and opportunities in the Whalley Avenue corridor from Broadway to Emerson Street. Kathleen Krolack, of the Economic Development Corporation of New Haven, then introduced herself and the consultant team working on the study.

Steve Rolle, of Parsons Brinkerhoff, discussed the format of this workshop and explained that the intent of the meeting was both to share existing conditions information with the public and engage them in identifying issues and opportunities within the study corridor. He described the study process, stating that the team is nearing the end of the data collection phase of the project. The final product will be a plan for the corridor and the study team will come back out to the community in the beginning of June with draft recommended alternatives for transportation improvements in the corridor. In addition, Steve encouraged everyone to fill out a short questionnaire that was located by the sign in sheets.

Finally, Steve Dudley noted that the information presented on the boards today, as well as the final report, would be available on SCRCOG's website at www.scrcog.org.

There was a question about the Connecticut Department of Transportation's (CT DOT) track record for including community input in their decision making process and how soon would any improvements be funding. Steve stated that CT DOT, like many agencies, is under a funding crunch. CT DOT and SCRCOG keep track of planning studies and once they are complete, the project essentially "gets in line" and has to compete with other projects across the state for funding. Steve Rolle added that the study intends to identify not only longer-term actions, but some strategies that could potentially be implemented in the near term at modest cost.

Existing Conditions

Displays showing existing conditions on Whalley Avenue are included in Attachment #1.

Small Group Discussions

Attendees then separated into three smaller groups to discuss the area of the corridor that was of most concern to them: West segment (Emerson St to Fitch St); Central segment (Fitch St to Ella Grasso Blvd); and East segment (Ella Grasso Blvd to Howe St).

A summary of the issues and opportunities of each of the areas is listed below.

East Segment

Issues:

APPENDIX A: PUBLIC OUTREACH SUMMARY

Traffic/Roadway

- Bottleneck at Howe St/Goffe Street/Dixwell/Broadway intersection with Whalley Avenue
- Back up from left turns at signals – mostly those without left turn arrows or storage bays
- Traffic progression is important – sometimes it seems vehicles are forced to stop at every traffic light. However need to be careful – if we make progression too good it will speed up traffic.
- Speeding from Ella Grasso Blvd to State Street is a problem in the AM peak.
- U-turns are a problem – should be enforced
- Congestion is the worst during football games
- Need more accommodation for variable uses.
- Traffic volumes downtown have been diverted to South Frontage. Want the traffic back.
- Need public parking facility closer to church
- Zoning regulations – Minores-huge lot-empty as most people walk – is there a may to reduce the parking or have it available for shared use.

Econ Development/Land Use/Parking/Access

- Boost Economic Development potential
- Concern about Shaws- empty now but it is important slice of real estate
- See more quality businesses come to the area
- Goeff Street/Dixwell Avenue/Whalley Avenue has low density, "brownfields" buildings. Not maximize for use – especially the uses behind Whalley Avenue.
- Need on-street parking for local streets, location where they park all day is in front of the juvenile center
- Majority of businesses don't have on-site parking. Have to use and survive with on-street,
- Whalley Avenue used to be car dealership row.
- Can't park on Whalley Avenue when church on Elm Street is in session.
- St. Brendan School-currently a partial vacant lot, looking for a way to re-use a building
- Zoning regulations- happy too with what is there
- Dozo-no on site parking, they told the business but they opened and they failed, some businesses cannot survive because of lack of on-site parking

Pedestrians/Streetscape

- Old sidewalks from 1920s and 1930s – many in poor condition
- Crossing in front of Shaws is illegal but people do it. It is difficult. No crosswalks at Winthrop Avenue.
- Not conducive for walking. Poor illumination. Along the whole corridor.
- Perception is that area is not safe. Hard to convince people that it is.
- Winthrop Avenue sidewalk is a plaza (In front of Whalley Pizza), people hang there and policing is an issue.
- Pedestrian access to/from Grey Sr. Housing Building, path to Whalley Avenue from Dickerman.
- Fences in front of Rite-Aid, Staples makes people think it is dangerous. Green space would be better.
- Difficulty maintaining sidewalks by the businesses.

Bicycles

- Whitney Avenue bike path zig-zag – goes on Whitney Avenue – then off to parallel streets – this may be a good approach for biking on Whalley Avenue. Need to think how to best accommodate it here on Whalley Avenue or encourage it on better parallel streets.

Transit

- None identified.

Other

- Corridor users are a mix of local and commuters. Tie the recommendations to the users. People not from the area tend not to stop because feels dangerous.
- Taxes are too much for businesses and residents
- Enforcement of traffic regulations. What are police department intentions for Whalley Avenue? You should reach out to them – invite them to our meeting.

<u>Opportunities:</u>

Traffic/Roadway

- New Haven doing an improvement project at Winthrop Avenue
- Signals need left turn signals and bay.
- No left turn during at busy hours could be a solution to limiting traffic back ups
- Turn Whalley Avenue / Goffe Street into a traffic circle
- Coordinating traffic lights though this is tricky. If you do it too well, speeds might increase. Need to find a happy medium.
- Create a boulevard down the center of Whalley Avenue
- Add traffic circles

Econ Development/Land Use/Parking/Access

- Yale properties working to bring another grocery store to the area
- Bring in new business - those we don't already have
- Re-development potential - Sperry to Broadway and Webster to Dixwell are prime real estate
- Reclaim surface parking lots.
- Shared parking, rent parking – off-site to accommodate the need for more off-site parking
- Need to read Yale's Strategic Plan and link it to Whalley Avenue.

Pedestrians/Streetscape

- Decrease the width of the road to make crossing at Winthrop Avenue safer.
- Better lighting for pedestrians.
- A general "greenscaping" project, plus wider sidewalks and more trees, can attract people to local business.
- Security at Winthrop Avenue sidewalk. Need foot patrol police.
- Plastic planters – although not good in winter – tend to crack
- Enhanced crosswalks, use Duratherme or street print XT. Bricks don't work according to DPW.
- Areas for sidewalk replacement include: 1) Howe to Sperry on north side, 2) Carmel to Norton on north side, and 3) Orchard to Sherman on south side.

- Recommend hard streetscapes by the businesses – stuff that is easy to maintain

Bicycles

- Bicycles – make better or suggest another route, perhaps on Elm Street or Goffe Street.

Transit

- Put light rail or trolley down the middle. Public transportation needs to be part of the solution. Route 10- did you take the results of that study into account?

Central Segment

Issues:

Traffic/Roadway

- Wide open freeway almost
- High speeds
- West Park left is dangerous
- Ella Grasso approach. No lane use on approaches. Intersection is weird

Econ Development/Land Use/Parking/Access

- None identified.

Pedestrians/Streetscape

- None identified.

Bicycles

- Highs speeds make it unsafe for biking
- Bike lane on Ella Grasso ends at Whalley Avenue

Transit

- Bus stops are too often, not sure where to stand at stops

Opportunities:

Traffic/Roadway

- Possible center median
- Three lanes with center left turn and one lane in each direction

Econ Development/Land Use/Parking/Access

- Driveway consolidation
- Back-In angled parking with bike lane to allow for sightlines

Pedestrians/Streetscape

- Signage with neighborhood logo

Bicycles

- European Model with sidewalk, bike lane, cobblestone, onstreet parallel parking and traveling lane in each direction
- Bike signals
- Driver education for sharing road with bikes

Transit

- Fewer and better bus stops, place stops near crosswalks. Solar bus stops, button to turn on the lights
- Trolley
- Bump outs for bus stops

West Segment

Issues:

Traffic/Roadway

- Fountain Street free flow right onto Whalley Avenue
- Cars jockey for position when two lanes become one. Lanes are not striped and signs are not clear to let drivers know what is expected

Econ Development/Land Use/Parking/Access

- Parking lanes are not striped. Unclear where it begins and ends.
- People not from the area have problems identifying what lane to be in as well as where to park

Pedestrians/Streetscape

- Whalley Avenue / Fountain Street crosswalk not used
- Crosswalks are unsafe. Pedestrians are not visible when crossing the road.
- Litter is a problem

Bicycles

- None identified.

Transit

- None identified.

Other

- There is no enforcement of traffic and parking violations

Opportunities:

Traffic/Roadway

- Stripe lanes and parking on the roadway
- Possible direction change on Tour/West Rock
- Striped median, and then eventually a raised median on Whalley Avenue. Plantings in the median eventually.
- Take down tow zone parking
- Possibility that ped signal at Fountain/Whalley Avenue may be reinstated

Econ Development/Land Use/Parking/Access

- Curbside parking wherever possible.

Pedestrians/Streetscape

- More visible, raised, textured crosswalks.
- Bulb outs at crosswalks
- Traffic calming near crosswalks

- Gateway in front of the park. Perhaps greenway bridge can serve as gateway. Similar to Wooster Street.
- Hanging planters
- Install and maintain trash cans

Bicycles

- Sharrows in Whalley?

Transit

- Cross City service

WRITTEN COMMENTS TO DISCUSSION QUESTIONS

1. In your opinion, is speeding a problem on Whalley Avenue? If so, when and where?

- Yes, downtown Westville to Orchard
- Yes
- Yes, many places, especially the wide parts
- Yes, where number of lanes change, Whalley / Fitch.
- No
- A big problem. Also running red lights. Turning on "no turn on reds".
- All along Whalley
- Yes, between Boulevard and Fitch
- Yes, definitely between Fitch St and West Park Avenue
- Running red lights is a bigger problem than speeding
- Yes, off-peak hours between Fitch and Boulevard and between Sherman and Dwight.
- Yes, between Fitch and Osborne, especially heading toward downtown
- Yes, end to end.
- Yes, Whalley and Fountain

2. What are your concerns for walkability in the neighborhoods served by Whalley Avenue? Please identify specific problems and locations.

<u>Difficulty safely and conveniently crossing Whalley Avenue (yes / no).</u>

- Yes
- No
- Yes, Is it possible to have pedestrian controlled?
- Yes, Too few cross walks and not well marked.
- Probably not
- No, walk lights not long enough in areas where street is wide.
- No, except at Edgewood Park and at West Rock Ave
- No, only dangerous for jay walkers.
- Yes
- Difficult – yes, Howe Street, Dickerman, Boulevard, Fitch
- You have to make certain people have stopped before stepping off the curb – there is a tendency to treat red as the new yellow.
- No- not for me, but crosswalk signals are too short.
- No

<u>Condition/urban design of the street (yes/no).</u>

- Yes
- Street needs context sensitive design
- Lights at every cross street-I'm thinking.
- Yes, more bump outs.
- Yes
- Crosswalks need painting
- Yes
- Yes
- Yes- general beautification needed along all of Whalley
- Yes
- Retail outlets are unappealing to me.

<u>Other pedestrian issues:</u>

- More trees
- West Park to Broadway. The lights would not stop traffic unless a pedestrian pushed the button. You have to walk too far to find a pedestrian crossing with a light, so I and many others don't go that far, we just walk across traffic.
- Flow of walking
- No room for bicycles
- Tough to get across such a wide thoroughfare
- Whalley needs to be more attractive, lighting, greenscaping
- Put in crosswalks with the flexible bollard.

3. Is traffic congestion a problem on Whalley Avenue? If so, describe the problem(s) and their locations.

- The main issue is accidents and turning vehicles blocking traffic.
- Not really
- Yes, number of lane changes
- West Rock and Whalley – blocking of Whalley by cars on Whalley making it hard to get out of West Rock onto Whalley.
- In the center of Westville
- Poor left turn control on streets without 6 foot turn arrows cause backups during rush hour periods. (no left turn allowed during rush hours.)
- Yes, but it begins at the Westville Village fork headed toward the Merritt
- Where do I begin?

- Not so much
- Yes, the entire length.
- At Whalley and Blvd.
- Yes

4. In your opinion, should Whalley Avenue be emphasized as a primary bicycle route, or are other parallel corridors better suited? If other corridors, which?

- All roads should be good for bicycles. Whalley Avenue would be a great place for European-style separated bike paths ("cycle trails").
- Bicycle usage should be on parallel streets
- Parallel to Fountain
- Bicycle route if bike lanes could be made safer
- Yes, primary bike route
- Parallel better, given the volume on Whalley-Edgewood, Elm, Goffe are all good.
- Whalley should be bicycle friendly, but so should Edgewood Avenue and Elm Street
- Edgewood Ave
- Parallel corridors are better suited. Edgewood, Elm, Goffe
- It's wide enough to create as dedicated bike, so yes.
- No, other streets would be better options.

5. *What changes to Whalley Avenue would enhance conditions for bicyclists?*

- You could slim the road down to one through lane in each direction to make space for bike paths.
- Bikes do not belong on Whalley
- Absolutely yes
- Slowing traffic
- Bike lane, slower speed
- A light should be added to the West Park Avenue / Whalley intersection
- Fixing sunken manholes, more regular sweeping
- Create a dedicated bike lane with a separated barrier between the bike lanes and sidewalk.
- A bicycle corridor on Goffe or Elm St would be more appropriate than Whalley.

6. Do you believe that there is sufficient on-street parking on Whalley Avenue (yes / no)? Off-street (lots) parking (yes / no)? Where?

- Traffic almost feels too fast to us on-street parking. Bump outs might help.
- No and no
- Better to have off street or have bump outs for on street.
- Public parking lot at Whalley and Blake. Private parking lot behind buildings in Westville Village.
- Yes, Not enough off street parking
- No
- Yes, and Yes, where there is retail, there is usually a parking lot on Whalley.
- Yes
- More on-street, less off-street. Off-street tends to discourage pedestrian use and is generally unsightly.
- Yes
- No, additional off-street parking would be attractive to businesses.

7. Do you think changes to parking regulations should be considered (time limits / paid parking / neighborhood permits)?

- Not sure, meters might help in congested parking areas.
- Not so much of an issue
- Paid parking with attendant to make sure parking mostly goes to shoppers not persons working in village.
- No
- No, a problem that has been identified ???
- Yes, wherever there are retail places, there should be meters and permits for residents as well.
- Parking less important than calming the traffic.
- No
- No

8. What are important issues concerning transit service in the corridor? Please explain as appropriate and identify specific problems and locations.

<u>More frequent bus service is needed (yes / no).</u>

- Yes
- Yes
- There must be better bus service and more (later) hours of service to Westville.
- Yes
- No
- Yes
- No

<u>Service linking to areas other than downtown (e.g. – cross town) is needed (yes / no). Where?</u>

- Yes, Boulevard definitely
- No
- Bus needs to go down Ella Grasso Blvd and connect with Whalley Avenue
- Yes
- Yes
- Yes
- No
- Yes
- Better bus to Yale-New Haven Hospital from cross town with no change at the green.

<u>Better/more comfortable stops and shelters are needed (yes / no)</u>

- Yes, I think we could have fewer, better bus stops
- Yes
- Yes
- Yes
- Yes
- Yes

Other transit issues:

- It would be nice to see how CT Transit could market itself for trips to Stop & Shop in Amity.
- Pedestrian crossings
- Put in electric buses, trolleys, down the middle of Whalley

9. Other issues or ideas for addressing transportation concerns within the corridor?

- Focus on making it like a European Boulevard. More trees, fewer lanes.
- Aesthetic consideration-Whalley Avenue oak trees are very attractive and soften the avenue. It is barren in front of cemetery across from Edgewood Park. Shade trees are needed on curb strip on cemetery side.
- The bottleneck confluence of Goffe, Whalley, Dixwell. Not conducive to pedestrians.
- I would license small shuttle buses to run up and down Whalley all day, like the Sharif's in Israel or dollar cabs in Brooklyn.

Information regarding the respondents

Do you live on or near Whalley Avenue?

- No
- Yes
- Yes
- Barnett St
- No
- Yes
- Near
- Yes
- Yes, nearby
- Yes
- Yes
- Yes
- Yes
- Yes

Do you own a business on Whalley Avenue?

- No
- No
- No
- No, Fountain
- Yes
- No
- No
- No
- No
- Within 500 feet
- No
- No
- No
- Yes

Do you work or go to school on or near Whalley Avenue?

- No
- Yes
- No
- No
- No
- No
- Fairly close
- Yes
- Yes
- Yes
- No
- No

Do you shop on Whalley Avenue?

- Used to at Shaws
- Yes
- Yes
- Yes
- No
- Yes
- Used to at Shaws
- Yes

- Yes
- Yes
- Yes
- No
- Yes
- Yes

Do you ride the bus on Whalley Avenue? Regularly or occasionally?

- Occasionally
- No
- Occasionally
- No
- No
- No
- No
- No
- Hardly ever
- No
- Regularly
- No
- No
- No

Are you a bicycle rider? Recreational or avid cyclist?

- It's my main way to get around, I don't have a car.
- No
- No
- No
- Recreationally
- Yes, recreational
- Yes, recreational
- No
- Yes, all of the above
- Occasionally, I don't ride on Whalley, it is too dangerous.
- Recreational
- Yes, to work if it is sunny or I don't have to wear a suit.
- Yes
- Recreational

EMAIL COMMENTS

Poorly coordinated traffic signals, lack of either dedicated left turn lanes and / or left turn arrows, significant number of curb cuts

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Holiday Inn area and the Popeye's driveway are hazardous; perhaps it could become one way. The driveway for the check cashing store across from Shaw's is hazardous. There is pedestrian traffic in the middle of the block at the former Shaw's location. There should be a left turn arrow at Orchard or the next intersection.

My comment is really a plea for a public transportation-centered approach to redevelopment. Too many people focus on Whalley solely in terms of how to speed up auto traffic. But as I am sure you are more aware than I, expansion of car lanes worldwide has simply led to explosions in private car use. By contrast, a focus on fast, efficient public transportation creates more efficient movement through the city, at less cost to the city and the environment, and expanded benefits in safety, health, and walkability.

As a Westville resident who owns rental properties in East Rock and consults at several departments at Yale, I travel up and down Whalley Avenue regularly, often multiple times in a day. Given my environmental (and exercise) commitments, I mostly commute by bicycle, which gives me ample opportunity to study traffic patterns. I regularly see impatient auto commuters nearly mowing down pedestrians, cutting off busses, and seemingly aiming at bikers like myself, all while further snarling the traffic they want to escape.

What if we focused Whalley instead on busses and bikes, vastly speeding busses in and out of downtown? I am thinking here of something akin to the "speedybus" system of Curitiba, Brazil, as discussed by Bill McKibben in his book "Hope, Human and Wild," and summarized in this blog: http://www.yesmagazine.org/issues/cities-of-exuberance/curitiba-story-of-a-city

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I picture the Whalley corridor with zero on-street parking. This would leave room for super-fast dedicated bus lanes, safe bike lanes, and more narrow interior lanes for those who insisted on cars - a set-up that would make it far easier for far more of us to leave cars at home, and get where we were going faster and more safely. Such a set-up would dramatically increase walkability, which in turn should improve neighborhood safety.

APPENDIX A: PUBLIC OUTREACH SUMMARY

Whalley Avenue Corridor Study
Public Workshop #2

Monday, June 28, 2010
Village Café Marrakesh, New Haven, CT

DRAFT MEETING SUMMARY

ATTENDEES (SIGNED IN):

–
- Eric Epstein
- Cherice Dykes, DTC Ward 24
- Gar Waterman
- Susmitha Attota – New Haven City Planning
- Kathy Fargles – WASSD
- Patricia Dillon – CT General Assembly
- Aaron Good
- John Cavaliere – Lyric Hall Antiques
- Nan Bartow – Web Management Team
- Clay Williams – City of New Haven
- Jerry Martin – New Haven Green Party
- Jenifer Blemings – The Connection Inc / WASSD
- Peter Dodger – Edge of the Woods
- Lawrence Jeune – Start Community Bank
- Pamela R. Lopez – Elm Street Residents Group
- Maggie Barkim
- Carl Amento – South Central Regional Council of Governments
- Mark Abraham – Dixwell Management Team
- Fred Puiia – WEB
- Pat Minore – Minore's Meats
- Jim Travers – City of New Haven
- Doug Hausladen – Downtown – Wester
- Mark Abraham – New Haven Safe Streets
- Lynn Smith – Start Community Bank
- Szb Hakfive
- Marcus Paca – Ward 24 Alderman
- Francine Cyslan – WAR / WEB
- Chris Heitmann, Westville Village Renaissance Alliance
- Bob Caplain, Whalley Edgewood Beaver Hill Management Team
- Erika Linnander
- Lisa Sussuein
- Sheila Masterson, WASSD
- Gabriel DaSilva, WVRA Frame Shop
- Mike Piscitelli – New Haven TT & P
- Karyn Gilvarg – New Haven Planning
- Steve Rolle – Parsons Brinkerhoff
- Marcy Miller – Fitzgerald and Halliday, Inc.

PRESENTATION AND DISCUSSION:

Steve Rolle of Parsons Brinkerhoff welcomed everyone to the public meeting. He introduced staff from the South Central Regional Council of Governments, Economic Development Corporation of New Haven, staff and elected officials from New Haven, and the project team. Steve described the study process and schedule as well as the overall limits of the Whalley Avenue Corridor Study, which are from Broadway to Emerson Street.

Steve described the three Whalley Avenue Corridor segments (west, central, and east) and stated that the study team would present the draft recommendations for different portions of each segment. Chris Heitmann, of the Westville Village Renaissance Alliance, would present the draft recommendations for the west segment, Steve would present the draft recommendations for the central segment, and Sheila Masterson, of Whalley Avenue Special Services District (WASSD), would present the draft recommendations for the east segment.

Chris first presented the recommendations for the west segment, the portion of the corridor from Emerson Street to West Rock Avenue. Chris noted that at the first meeting, the public stated that they wanted to see a gateway into the village as well as improved pedestrian and bicycle access. Some of the items recommended for this portion of the corridor include a landscaped center median, a left turn lane on Whalley Avenue onto Blake Street, additional crosswalks on Whalley Avenue at Phillip and Blake Streets, marked on-street parking, and an improved pedestrian route between the Village and Edgewood Park.

There was a question about parking, and whether the team considered angled parking? Steve answered that the available street width would not permit angled parking. In addition, angled parking is generally less safe for bicyclists because drivers pulling out cannot see bicyclists well. Another person questioned whether the team considered free parking lots, as many Connecticut suburbs do have free lots. Steve answered that no, the team did not look into this as businesses generally do not support removing on-street parking in the corridor.

There was a comment that Central Avenue should be turned into a pedestrian-only boulevard once you can turn left onto Whalley Avenue from Fountain Street. There were concerns about timing of the traffic signals and a voiced desire that this would improve with implementation of many of the recommendations. Steve noted that the traffic analysis with the recommended improvements shows the level of service of the signals at C and D, which is acceptable on urban arterials.

There was a question whether the study team looked into reversing the direction of the West Rock Avenue / Tour Avenue loop. Steve said that the team did look into this and it did not provide any traffic benefit to Whalley Avenue. It simply moved the congestion down Whalley Avenue a few hundred feet.

There were concerns that westbound cars rarely stop at the West Rock signal and that the stop bar is too far ahead of the signal. Steve suggested making the signal more prominent and moving the stop bar. There was a question if the median could be continued past Philip Street. Steve stated that the cross section width would not permit this.

Steve next presented the recommendations for the central segment, the portion of the corridor from West Rock Avenue to Ella Grasso Boulevard. Some of the items recommended for this portion of the corridor include a landscaped center median, a left turn lane on Whalley Avenue onto Fitch Street, curb extensions at signalized intersections, extended bike lanes and bike boxes on Ella Grasso Boulevard, and a new mixed use path along Edgewood Park.

There was a question about high crash instances. Steve noted that there are a large number of crashes on the corridor, predominantly sideswipes and left-turning collisions. Some of the areas have been noted by the Connecticut Department of Transportation.

There was a request for parking along Edgewood Park on the side of the street alongside the park. In addition, someone questioned who was going to retrain the drivers? Steve noted that there would have to be a citywide public education campaign. There was a question how far this study extends south of Whalley Avenue. Steve noted that it really does not extend beyond the intersections themselves. Steve suggested that the Route 10 Study may provide more information on areas surrounding the Whalley Avenue Corridor.

There was a question about the southbound free right-turn movement on Ella Grasso Boulevard. Steve noted that these drawings do not show the island, but there is space to keep an island if the city preferred to.

Sheila next presented the recommendations for the east segment, the portion from Ella Grasso Boulevard to Broadway. Some of the items recommended for this portion of the corridor include a landscaped center median, curb extensions at intersections, consolidating bus stops, and new streetscapes. Sheila noted that the WASSD proposed many of these items in their 2002 study.

There was a comment that the landscaped median should be planted with drought-resistant vegetation. Someone questioned who would pay for the improvements. Steve noted that he did not know at this stage and would be something to be determined as individual projects moved forward.

There were concerns from business owners that the center median would limit vehicular access to their shops and stores. Steve noted that gaps in the medians that permit U-turns would be build in, and one could even be located at prominent store driveway entrances. Steve noted that while U-turns may not be ideal for some drivers, the median provides considerable safety for pedestrians and vehicular traffic. Karyn Gilvarg, from the New Haven Planning Department, stated that it is possible that businesses are losing customers because of the current conditions. For example, some may not be able to access the lot at all and are forced to park on the other side of the street, and walk across Whalley Avenue. It was also noted that many of the businesses are destinations and drivers will make U-turns to get to them.

There were questions related to pedestrian crossings parallel to Whalley Avenue. Steve noted that some streets, such as Norton Street, do have curb extensions and crosswalk improvements. No cross streets, however, have center medians proposed.

There were concerns that there were limited accommodations for bicyclists. Some attendees voiced support for cycle tracks between the on-street parking and the sidewalk on this section of Whalley Avenue. Steve noted that to incorporate cycle tracks or bike lanes, the center median or on-street parking (on one side) would have to be eliminated from the design, or sidewalk width greatly reduced. Steve also indicated that cycle tracks would be difficult to implement safely on this segment because of the number of driveways and access points in the corridor. Karyn noted that there are cyclists who choose not ride on Whalley Avenue because of these conditions. Steve suggested that the bike lanes on alternative parallel route, such as Edgewood Avenue, while making Whalley as safe as possible for those bikes that choose to ride with traffic may be the best approach

WRITTEN COMMENTS SUBMITTED AT MEETING:

- If / when planted central medians are installed, great care must be taken in choice of plans that are as drought-tolerant as possible. Trickle hoses from attractive, small, permanent rain barrels might be incorporated in the plan so that there could be some minimal cost irrigation in each of the bigger medians. Someone will have to be responsible for on-going landscaping issues. $$$ I will give up more sidewalk if you could help bring bicycles! And I'd choose a central bike lane instead of a planted median. There is a great big unused parking lot behind the police substation.
- 1) Close Central Avenue between Dunkin' Donuts and Delaney's when new Fountain intersection allows left turns onto Whalley. Equals nice public space in village center and elimination of Whalley Avenue / Central Avenue traffic light. 2) Turn Phillip Street into a one-way the other way and eliminate the light at Philip Street / Whalley Avenue.
- I'd like to see parking along Whalley Avenue between West Rock and West Park in front of and on the same side of the street as the park. It seems on-street parking could slow down traffic going up and down that hill.
- Please address the dangerous intersection at Whalley and West Rock Avenues by installing a TRUE CROSSWALK from the entrance to Edgewood Park to the Northeast corner. In particular, we need 1) correct striping on all sides, and 2) pedestrian signals on all four corners.

COMMENTS SUBMITTED BY EMAIL (PRIOR TO RELEASE OF DRAFT STUDY REPORT)

I was wondering if you will be incorporating the cycle track facilities, recommended an documented by numerous local residents, into your concept plan for Whalley, arguably the most important road in our entire city. Many of the comments made by the presenters last night were simply not accurate and designed as scare tactics to pit different constituents against each other. One presenter gave a "technical brushoff" when the issue arose, ignoring a question and instead explaining he had just traveled to Dublin where cycle tracks eliminated all on street parking. I have just been to 20 other cities, which have cycling rates between 1000% and 2700% times higher than Dublin, where this is not the case. Fortunately, when your presenter made his somewhat irrelevant comment, numerous citizens spoke out to explain how equal access to the roads, including cyclists of all ages who use Whalley, is critical for economic development an environmental health.

Furthermore, if you believe there is not ample support for a cycle track, I would be happy to show you otherwise. We have ample documentation and our city recently passed a complete streets law, requiring equal accommodation, by a vote of 30-0. You may want to also consider that the stretch is already a de facto cycle track, with dozens of local citizens biking on the road's sidewalks at any given time. Your process has seemed to ignore these citizens, who (like the majority of our city's population) are under the age of 30, lower income than Westville, and do not own cars or drive to work every day.

Planning for a cycle track is more expensive given the amount of physical infrastructure required, such as special paving techniques, but it would be far more costly to add one later after the road is reconstructed.

Additionally, one presenter explained there was not enough space for pedestrian medians on cross streets. The fact is that medians already exist on some of these streets, eg near the block with the Armory. Are you familiar with this neighborhood? Instead of ruling them out entirely, will you be explaining this in your plan and detailing where more could be added (which, in fact, would be every street)?

I have lived in this area for more than a decade and attended many of your workshops. I have noticed and previously brought to public attention the pattern of your firm ignoring (eg failing to record) the most frequent public comments at such workshops and also failing to conduct outreach beyond those who attend these events, so hope this is something you have corrected.

Please let me know the extent to which your firm will be including a recommendation for a complete street at this point (assuming no additional comments), and if you would like us to send additional documentation.

If you design a facility that is really a benefit to the community and involves them in its design, it will be built much sooner. Best regards, (M. Abraham, Dixwell Management Team)

Please consider installing traffic calming measures and bicycle tracks on Whalley Avenue as part of its upcoming overhaul.

Public officials underestimate the benefit of bicycle and pedestrian amenities and traffic calming on neighborhood livability, public health, economic vitality, and safety, particularly for vulnerable residents like children and the elderly. When you talk to officials, you hear about the necessity of moving lots of cars quickly. When you talk to people like myself who actually live near Whalley Ave., you hear a completely different story. You don't hear people asking for more vehicle lanes and more car-friendly traffic signal timing. You hear them asking for measures that slow traffic down. You hear them asking for safe on-street bicycle lanes, preferably insulated from traffic by a row of parked cars. You hear them asking for safe intersections where children and the elderly can cross without fear.

New Haven is one of the most pedestrian cities in New England. Tens of thousands of residents live from day to day with little or no use of a car, myself included. You don't even need to *project* future bicycle use to justify inclusion of bike lanes; New Haven already boasts thousands of cyclists across all of its neighborhoods. Present levels of bicycle use more than justify the implementation of "Complete Streets" that include bike tracks. Future bicycling growth is just icing on the cake.

Traffic planning is intimately tied to neighborhood livability, property values, and economic vitality in delicate urban ecosystems such as New Haven. Traffic planning that subjugates all other concerns to the hegemony of the automobile makes neighborhoods less attractive places to shop, live, and play, hurting the city's economic competitiveness. The feature that all of New Haven's most vibrant retail districts share is their relatively narrow streets and pedestrian-friendliness. Just think of Downtown Chapel St. and Crown St., Wooster Street in the Wooster Square neighborhood, or lower Orange Street in the East Rock neighborhood.

Increasing the speed of automobiles greatly augments the rate of pedestrian and cyclist death in accidents while having a very limited effect on the road's actual traffic volume capacity. Cars racing from light to light do not move through the neighborhood than cars maintaining a more consistent, neighborhood-friendly speed of 20-25 mph.

I emphasize in closing the benefit your firm would reap from designing a truly Complete Street on Whalley Avenue. Imagine creating an innovative portfolio piece with an intricate combination of traffic calming measures, bicycle lanes, and street trees. Such a project will become a jewel in your firm's crown, and an incredible tool with which to attract more work as cities across the country become more attuned to the importance of Complete Streets. By contrast, there is nothing worth showcasing in yet another status quo high-speed, car-dominated, noisy boulevard that eviscerates its neighborhood and becomes a social liability, a threat to property values, public health, and safety, rather than an asset. Thank you for your consideration of this letter. Sincerely, (J. Stockmann)

Since it seems that there are competing ideas for limited space on the eastern portion of the Whalley project, I thought I would throw out some ideas that might save some space so that all interests can be met.

Business want parking on both sides

Pedestrians want sidewalks and medians

Cyclists want a protected cycle lane

Alternative 1:

Narrow all travel lanes to 10 feet, move the cycle track onto the road between the parked cars and the curb—creating a protected bike lane. The narrow travel lanes will slow traffic enough to mitigate the danger of the most dangerous turning movement for cyclists (cars turning right into businesses). If the space savings from the narrowed lanes and the narrower bike lane (relative to a cycle track) is still not enough space, then the medians could be narrowed a bit.

Alternative 2:

Beginning at Broadway, create a three-lane road, with one lane of travel in each direction and a center turning lane that is punctuated with medians for pedestrian refuges. This would allow for broad medians, a cycle track, parking on both sides and probably a broader green belt too. This could probably be done without narrowing the travel lanes, but 12 feet is still too wide for this kind of road.

Alternative 3:

Use alternating reverse-angle parking, effectively creating parking chicanes. This would create an aesthetically pleasing and very friendly pedestrian environment so that customers would feel safe parking on the opposite side of the business that want to patronize, which might be necessary since the reverse angle parking could not be accommodated on both sides.

Alternative 2/3 hybrid:

Create a three-lane road using reverse angle parking on both sides. This would significantly increase parking, decrease the speed of cars, and create a protected bike path between the parked cars and the curb that would not be subject to dooring from the passenger door of vehicles. Perhaps space would even allow for a cycle track. Thank you for your consideration, (E. Sturgis-Pascale)

Please consider installing traffic calming measures and bicycle tracks on Whalley Avenue as part of its upcoming overhaul.

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APPENDIX A: PUBLIC OUTREACH SUMMARY

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Increasing the speed of automobiles greatly augments the rate of pedestrian and cyclist death in accidents while having a very limited effect on the road's actual traffic volume capacity. Cars racing from light to light do not move through the neighborhood faster than cars maintaining a more consistent, neighborhood-friendly speed of 20-25 mph.

At present there is no safe route for cyclists and pedestrians from Westville to downtown. Edgewood Avenue becomes too narrow through the Dwight neighborhood and the one-way streets (Elm and Edgewood, George and Crown) encourage traffic to speed, which makes cycling more dangerous. The wide sidewalks of Whalley are currently the safest route for a cyclist and for a pedestrian, although using the sidewalk is not legal for us cyclists.

I emphasize in closing the benefit your firm would reap from designing a truly Complete Street on Whalley Avenue. Imagine creating an innovative portfolio piece with an intricate combination of traffic calming measures, bicycle lanes, and street trees. Such a project will become a jewel in your firm's crown, and an incredible tool with which to attract more work as cities across the country become more attuned to the importance of Complete Streets. By contrast, there is nothing worth showcasing in yet another status quo high-speed, car-dominated, noisy boulevard that eviscerates its neighborhood and becomes a social liability, a threat to property values, public health, and safety, rather than an asset.

Thank you for your consideration of this letter. Sincerely, (C. Hitchcock)

Thank you for hosting the meetings on the Whalley Avenue Corridor Plan. Here are some suggestions that incorporate some of my personal comments as well as those of a citizens committee that I began over 5 years ago called WAR (Whalley Avenue Revitalization). We formed this group because we felt the city and planners were not paying enough attention to developing Whalley Avenue both aestheically and economically. Every other part of the city had plans going on but Whalley has been very slow in its development. I am sure there are many reasons for this but we hope now that ideas, plans, and of course money will be poured into this long but interesting street.

Here are my suggestions and hopes:

Make the parking lot near the corner of Blake & Whalley FREE PARKING. Where there is free municipal parking (a limit of 90 minutes is fine), business always increases for area stores.

CLOSE the short block on Central Ave. between Whalley and Fountain totally to traffic. Pave it over, knock down the decrepit Dunkins Donut building and build something that has an orientation facing Delaney's at that site. This area would again become pedestrian friendly and make crossing Whalley Ave. over to Lena's, Kehler-Liddell, much easier.

A TRAFFIC LIGHT is needed at the corner of West Park Avenue and Whalley even though you tells us that you did a study on the need for it, we have seen too many near accidents, hunking horns and brakes screaching to believe that it is not important. Please look again into this and talk to people at those corners and all of us who drive through (F. Caplan)

I live in Westville and work at Yale-New Haven Hospital. In the good weather I bike to work--I bike, in part, because it's one less car on the road, one less car seeking parking near the hospital. Any accommodations to improve the safety of biking--for pedestrians, bikers and cars-would be much appreciated. (M. Rosenthal)

I did want to raise again the issue of safety at the Boulevard and Chapel. In fact many people - mostly women - are telling me that they fear for kids crossing to the park at several points. It was close to off topic at the meeting so I didn't push it, but it is important and seems to fall through the cracks every year. There have been requests to my office for crosswalks at Boulevard/ Chapel, and also at Edgewood / Ellsworth. (Adult) Pedestrian safety and kids' safety are similar but the remedies are not always the same. Depending on the age, some children can hear a horn but cannot determine the direction from which the horn is coming, and also children develop at different rates. (Rep. Patricia Dillon)

COMMENTS SUBMITTED IN RESPONSE TO DRAFT REPORT

I appreciate the efforts that have been made to improve bicycle and pedestrian infrastructure in the Whalley Avenue Corridor Study, but I think more can be done in this area. Most of this street looks and feels like a suburban strip mall, not a vibrant urban community -- and the SCRCOG plan does little to address this problem. The lanes are still too wide, there are still too many curb cuts, and there is still too much surface parking. Making this area truly attractive and walkable will help promote much-needed development in an economically depressed area. It will also promote social cohesion among the diverse populations inhabiting the neighborhoods along Whalley. Unfortunately half-measures like those in the SCRCOG study are insubstantial and will do little to accomplish these goals. (A. Goode)

Why not a bike lane on Ellsworth Ave to connect SCSU to goffe, edgwood and chapel. That will keep it off Route 8. (D. Kos)

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13. I would like to comment on your firm's plans for Whalley Ave., New Haven, CT from Emerson St to downtown.

On the whole I am very pleased by the plans. I am a 25+ year resident of the Edgewood area living several blocks from the intersection of Whalley and Ellsworth.

An observation - the plans at the western part near Emerson St. seems more fully formed than those east of W. Park Ave.

One of the pleasures of Whalley Ave. from W. Park to downtown have been the mature, stately pin oaks lining the sidewalks. They soften the hard edges of the city, dampen the sounds, cool pedestrians and parked cars, and help calm the mood. I hope that as the new plans are carried out, that as many of these trees as possible can be saved, or at least replanted and well cared for.

On the subject of trees, one of the unpleasant things about Whalley Ave. has been the lack of that tree canopy on the north side of the street between Jewell and Osborn Streets. It always seemed glarey and inhospitable and hard. I hope that plans include extending the pin oaks as the side walk plantings.

On a different note - how do your plans fit in with the ongoing redesign of Whalley Ave. from Barnett St to Amity? And how do your plans fit in with the Whalley Ave. overlay currently being partially implemented in the area between Pendleton and Sherman Ave.?

Who will maintain the plantings on the raised median islands.? In a traffic calming redesign on Woodward Ave., the planted traffic circles exist and slow down traffic, but the plants on the circles are not well maintained.

Perhaps I didn't read your plans correctly, but the pedestrian crossings at Ella Grasso Blvd. are not consistent - the narrative, drawing and superimposed diagram on the aerial photo. In addition, there is a left turn indicated to turn into McDonalds opposite the Detention Center for traffic traveling west. The turn is too far west for traffic to go into the McDonald's parking lot. I hope you find these comments helpful.

Sincerely,

(S. FitzGerald))

Letter from Elm City Cycling

Carl Amento
Executive Director
South Central Regional Council of Governments
127 Washington Avenue, 4th Floor West
North Haven, CT 06473

Re: Whalley Avenue Corridor Study

July 29, 2010

Dear Mr. Amento:

Thank you for giving the public, including members of Elm City Cycling, Inc., the opportunity to submit public comments regarding the Whalley Avenue Corridor Study. Founded nearly 10 years ago, Elm City Cycling (ECC) works on behalf of cyclists and pedestrians in the New Haven area by sponsoring public events and bike rides, educational initiatives and advocacy at all levels of government.

Though the Whalley Avenue Corridor between Westville and Downtown New Haven is, by any standard measure, one of the most crucial transportation corridors in the New Haven Region, it has long been classified as dangerous and unsightly. According to historians who have studied the area in depth, beginning as early as the 1910s, this section of Whalley Avenue began to attract a preponderance of automobile repair businesses and quickly became known as the city's primary drag for motor vehicles. Though some still hold the perception that the road is unfriendly to pedestrians and cyclists, Whalley Avenue actually sees some of the highest pedestrian and bicycle traffic levels of any street in the entire State. Though not mentioned in detail in your study, it is worth noting upfront that a large proportion of bicyclists in the area are young children, and choose to cycle on the sidewalks due to high traffic volumes and speeds.

Like many other neighborhood-based advocacy groups in New Haven, we believe that Whalley Avenue must be shaped into an asset for its surrounding neighborhoods. New Haven's new Complete Streets Manual offers recommendations for how to create streets that balance the needs of road users of all ages and abilities while promoting economic development and public health. In particular, the Complete Streets Order's guidelines, approved by the New Haven Board of Aldermen by a vote of 30–to-0 in October 2008, call for calming traffic, requiring pedestrian and bicycle access on all streets, and prioritizing the mobility of young children and the elderly, too often ignored in urban transportation planning, above other considerations.

As we understand it from having attended the public workshops on this plan, and from reading the document posted on your website, the current draft recommendations suggest major improvements to Whalley. In many respects, these would make the street more livable and bring traffic speeds down from what we currently see on a regular basis. We support the overall direction of the plan, and applaud SCRCOG and its consultants, and the City of New Haven, for the significant amount of work that went into producing it. Certain elements, such as the cycle track on the first few blocks leading out of Westville, and the proposal to install sharrows for experienced bike riders who feel comfortable riding in high traffic volumes, are commendable and demonstrate thinking that is ahead of the curve.

However, in other respects, we believe that the current recommendations fall far short of our city's shared goals. It is flatly unacceptable for the City and ConnDOT to build an "incomplete" street on Whalley Avenue or any section of it. Whalley Avenue is already a major transportation route for all modes, and as such, it must be designed very specifically from the outset to accommodate cyclists of all ages and abilities. Though often left out of the Census or traffic count methodologies typically used by transportation planners, cyclists and pedestrians comprise a major proportion of road users and trips in this area – for example, in the Dwight Management Team's survey of Shaw's users, which collected nearly 3,000 responses, more than half of survey respondents indicated that they walked or bicycled to the supermarket. Recommendations that these road users use distant alternate routes like Edgewood Avenue and Goffe Street, away from their core of local businesses, community centers and employment sites, are simply not workable solutions.

A cycle track has been proposed as one solution for the Whalley Corridor. Though significantly more expensive than painting a few bikes lane or sharrows, or excluding cyclists altogether, cycle tracks are far more comfortable to ride on for road users of all abilities, and therefore are used on many similar streets around the world. Conflicts between pedestrians, cyclists and drivers can be a risk, but can be reduced or eliminated through careful study and traffic calming designs that prioritize the safety of road users over the need for drivers to be able to speed on the street. It is possible to safely separate cyclists and pedestrians, even where sidewalk space is very limited, and continue to include on-street parking.

We recognize that building a complete street on this corridor presents numerous challenges and applaud you for efforts you have made. We understand that creating one would require dealing with extensive curb cuts,

pedestrian medians, traffic signals and other considerations that would be more costly, both in terms of design time as well as construction costs. However, the long term, extensively demonstrated benefits of a complete street in terms of promoting public health, social equity, economic development and reductions in vehicle miles traveled make them more than worth the upfront investment of resources. Though your report outlines why consultants believe a cycle track to be "difficult" to implement, we reiterate our point above that the street is already used as a de facto cycle track and that safety considerations must outweigh competing priorities.

Though members of Elm City Cycling have not been particularly well-engaged in the study at this point (for example, representatives from SCRCOG and the city have not attended our monthly public meetings or, as far as we know, held dialogues with cyclists living in the areas most impacted by the study), we look forward to working with SCRCOG and the City to ensure that its recommendations fully reflect our community's policy guidelines and clear demands for a truly complete street.

Best regards,

- Mark Abraham, New Haven, CT, ECC Board of Directors
- Mark Aronson, New Haven, CT, ECC Member
- Moses Boone, New Haven, CT, ECC Member
- Kevin Ewing, New Haven, CT, President, West River Neighborhood Services Corporation
- Matthew Feiner, New Haven, CT, ECC Board of Directors
- Doug Hausladen, New Haven, CT, Chairman, Downtown-Wooster Square Community Management Team
- William Kurtz, West Haven, CT, ECC Board of Directors
- Ben Martin, Wallingford, CT, ECC Member
- Liana Martingano, New Haven, CT, ECC Member
- William O'Grady, New Haven, CT, ECC Member
- Rob Rocke, New Haven, CT, ECC Board of Directors
- Mark Scott, New Haven, CT, ECC Member
- Jason Stockmann, New Haven, CT, ECC Board of Directors, Member, Connecticut Bicycle and Pedestrian Advisory Board
- David Streever, New Haven, CT, ECC Board of Directors
- Chris Treat, West Haven, CT, ECC Member
- Melinda Tuhus, Hamden, CT, ECC Board of Directors