

Setting the Stage for Complete Streets

The Carrboro Experience

North Carolina Complete Streets Summit
Charlotte , North Carolina

Town of Carrboro Planning Department

July 23, 2014

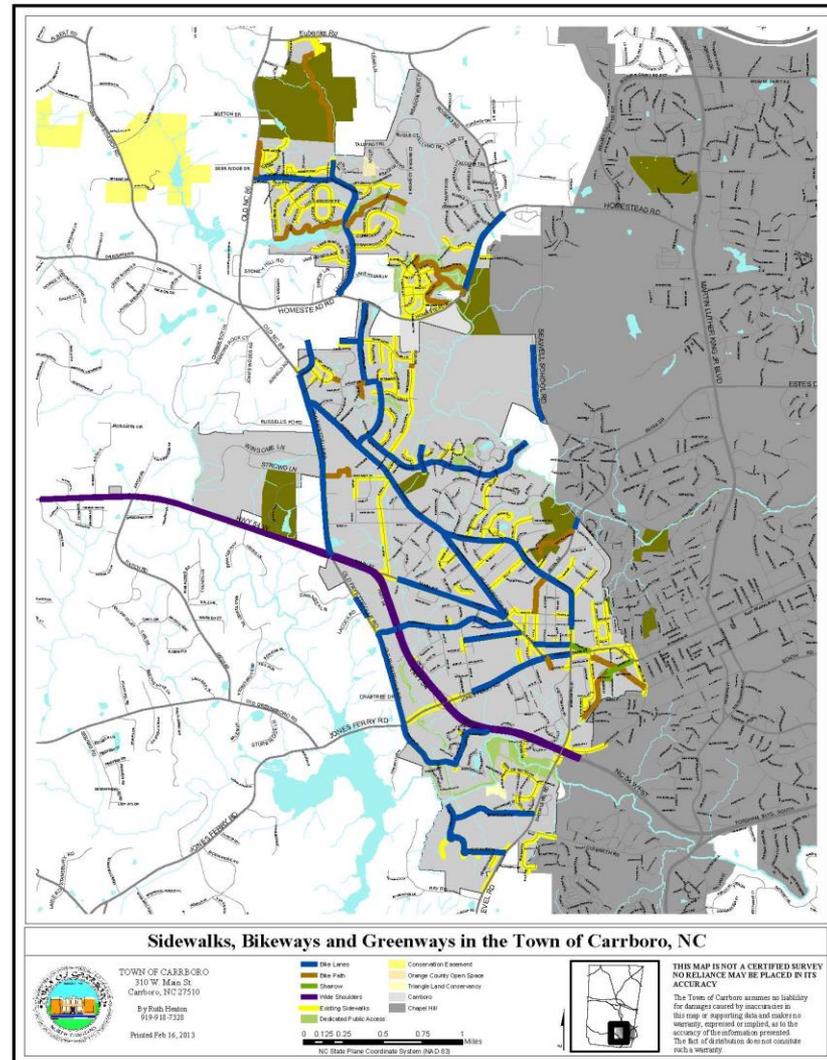
Overview

- ▶ Location and demographics
- ▶ Experience with “complete” streets
- ▶ Collaboration with NCDOT, pre-2009
- ▶ Collaboration with NCDOT, post-2009
- ▶ Takeaways

Where is Carrboro?

Who are we?

- ▶ Just over 20,000 people
- ▶ Just under 10,000 homes
- ▶ 6.5 sq miles
- ▶ ~3,000 persons/sq mile



“Complete Streets” Policy - Historically Speaking (pre-1970)

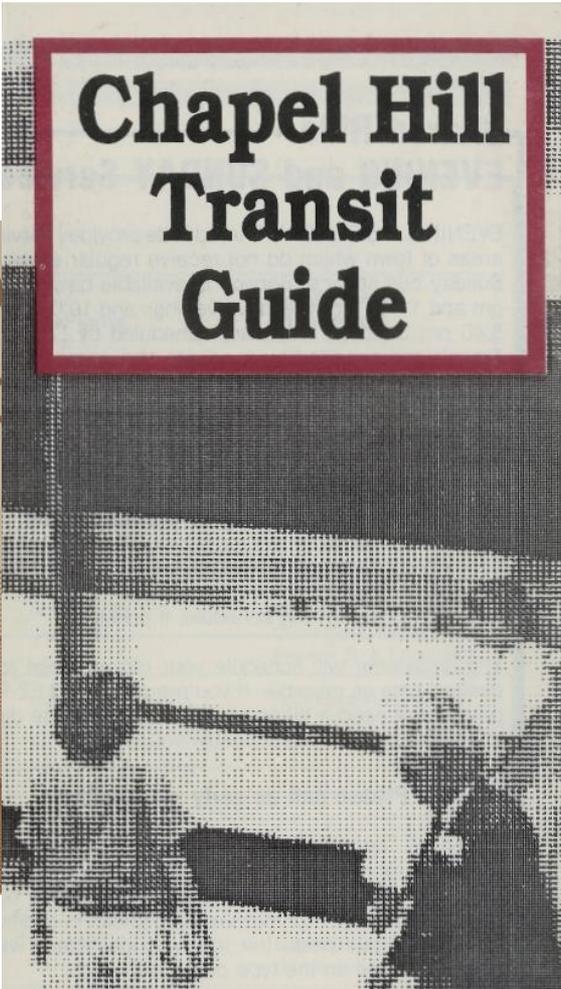


Aerial view of Carrboro, looking north, taken in the late 1940's. From Wootten-Moulton Collection, North Carolina

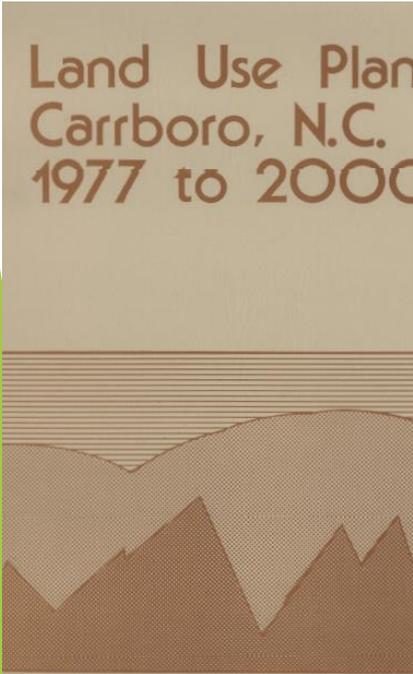


“Complete Streets Policy” - 1970s

- 1978 Jones Ferry Rd. bike lanes
 - \$141,989 (100% Town-funded)
 - Average income \$17,000

The image shows the cover of a transit guide. The top half is a light-colored rectangular box with a dark border containing the title 'Chapel Hill Transit Guide' in a bold, black, sans-serif font. Below this box is a large, high-contrast, black and white halftone image of a person's face, looking slightly to the right. The background of the cover has a fine, grid-like texture.

Chapel Hill Transit Guide

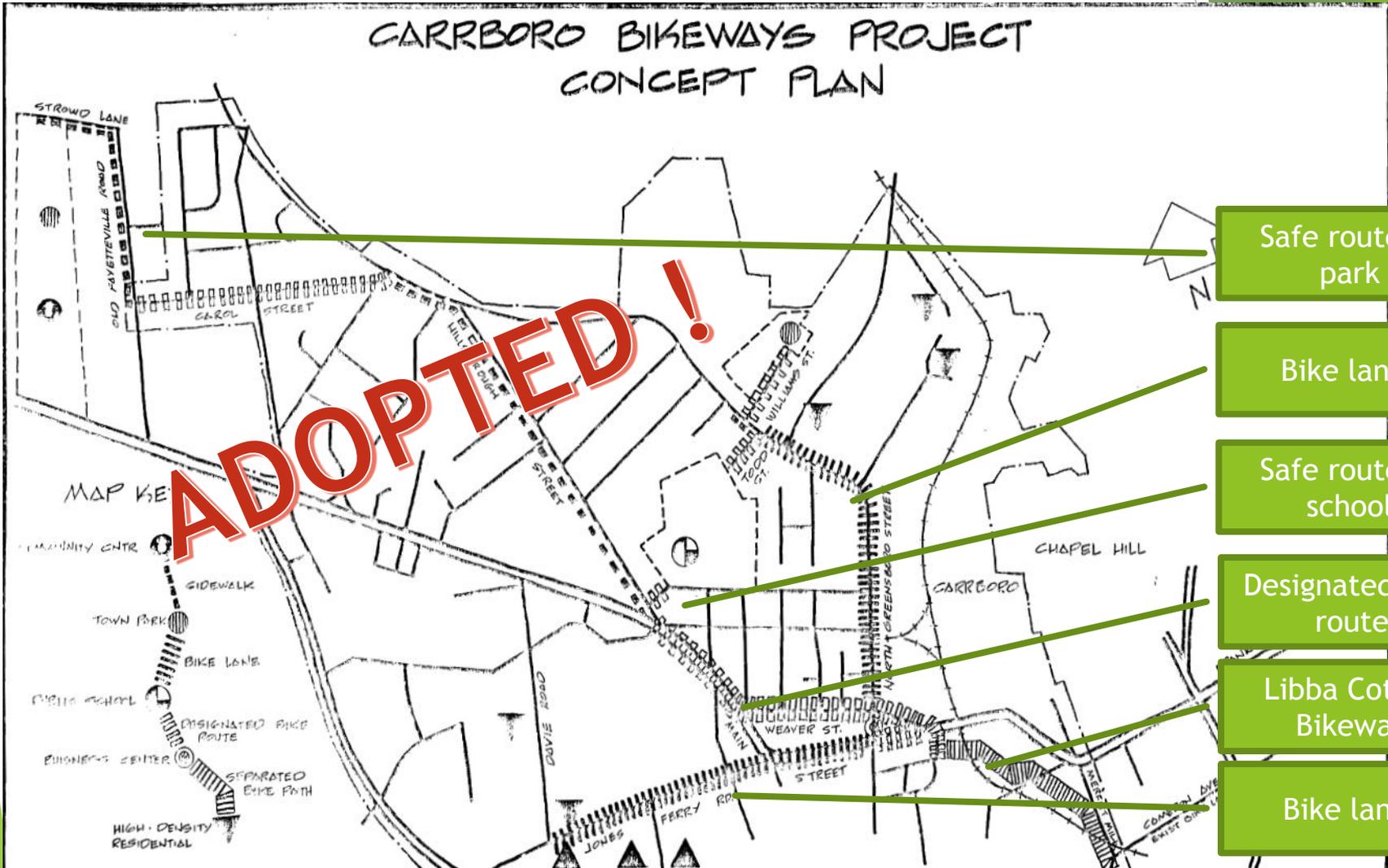
The image shows the cover of a land use plan. The top half is a solid light brown color with the text 'Land Use Plan Carrboro, N.C. 1977 to 2000' in a dark brown, sans-serif font. Below the text is a stylized, abstract landscape graphic consisting of horizontal lines and jagged, mountain-like shapes in shades of brown and tan.

Land Use Plan
Carrboro, N.C.
1977 to 2000



1980

CARRBORO BIKEWAYS PROJECT CONCEPT PLAN



ADOPTED!

Safe route to park

Bike lanes

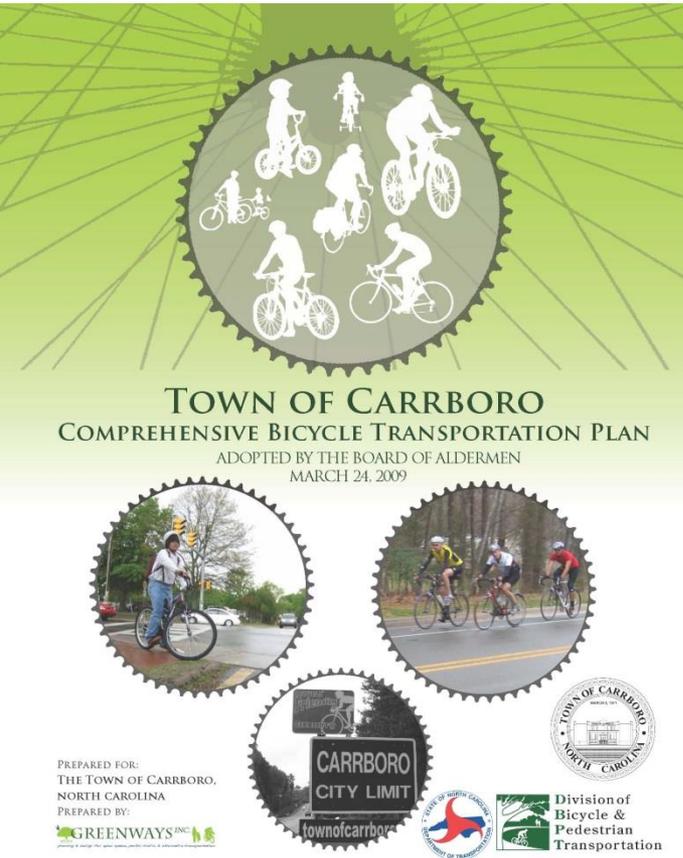
Safe route to school

Designated bike route

Libba Cotten Bikeway

Bike lanes

Complete Streets Policy Today



TOWN OF CARRBORO
COMPREHENSIVE BICYCLE TRANSPORTATION PLAN
ADOPTED BY THE BOARD OF ALDERMEN
MARCH 24, 2009

PREPARED FOR:
THE TOWN OF CARRBORO,
NORTH CAROLINA
PREPARED BY:
GREENWAYS INC.

Division of
Bicycle &
Pedestrian
Transportation

TOWN OF CARRBORO



BICYCLE POLICY
AND
SIDEWALK POLICY

WEST MAIN STREET ROAD DIET AND PAVEMENT MARKING STUDY and OAK-POPLAR NEIGHBORHOOD TRAFFIC CIRCULATION STUDY

Prepared For:
Town of Carrboro

DCHC Durham-Chapel Hill-Carrboro
Metropolitan Planning
Organization

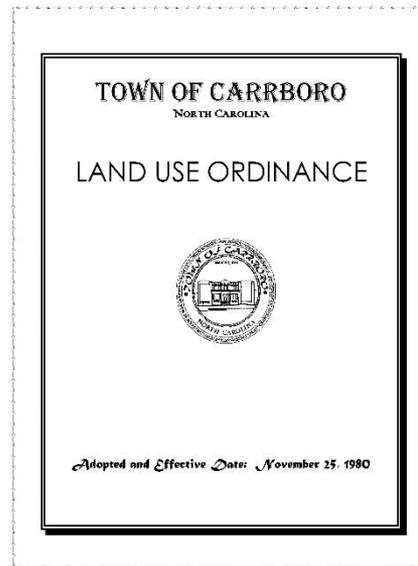
February 2012



AFT

Prepared By:

**MARTIN
ALEXOU
BRYSON**



TOWN OF CARRBORO
NORTH CAROLINA

LAND USE ORDINANCE

Adopted and Effective Date: November 25, 1980



STEPS TO
Strategic Action Plan
CARRBORO, NORTH CAROLINA



Prepared by:
Greene Transportation Solutions
& Greenways Incorporated

Prepared for:
the Town of Carrboro

Collaboration with NCDOT - Pre-2009

N. Greensboro St. (ext.)
(1991)

Hillsborough Rd. (1991)

W. Main St.
(1991)

W. Poplar Ave.
(1989)

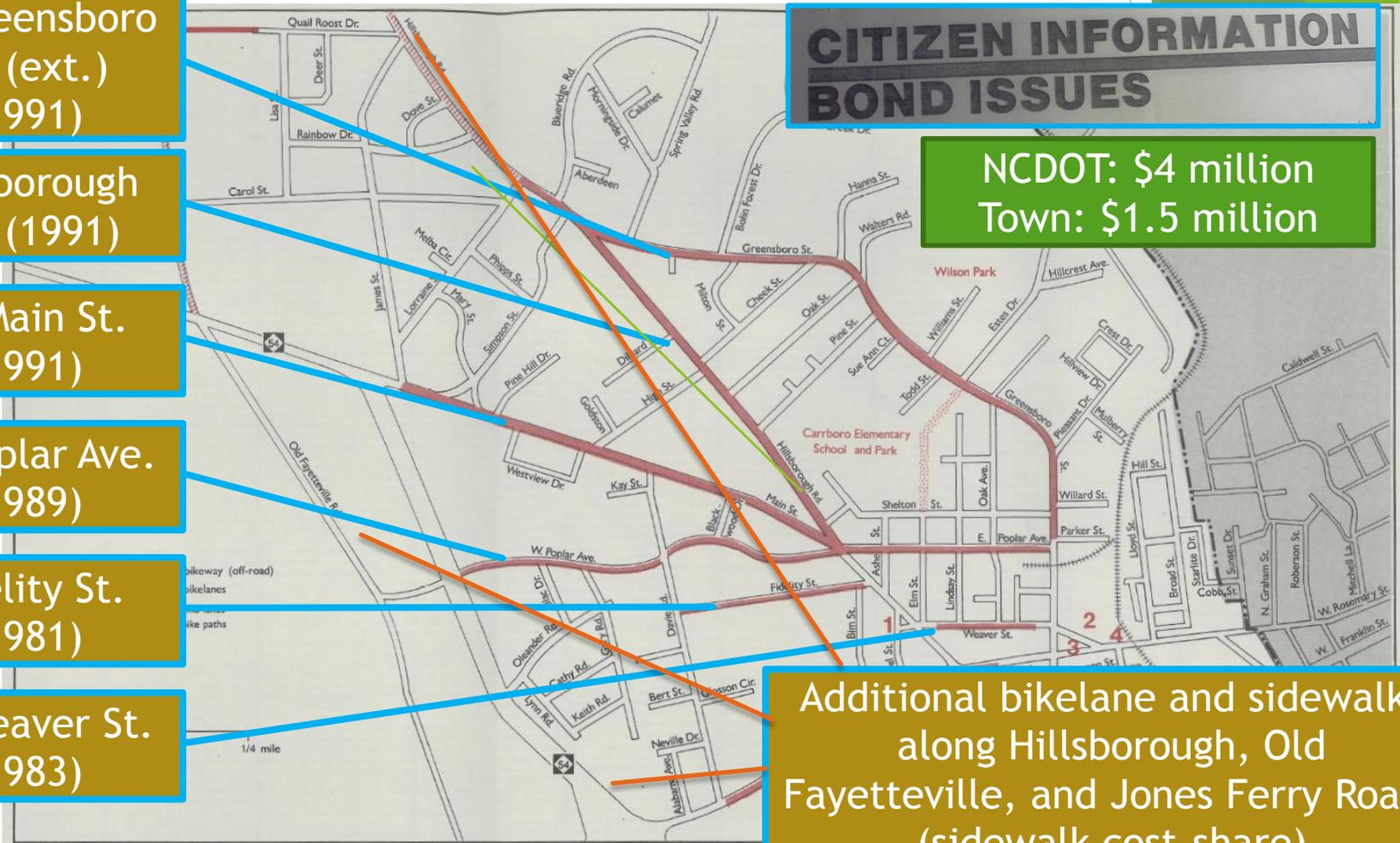
Fidelity St.
(1981)

W. Weaver St.
(1983)

CITIZEN INFORMATION BOND ISSUES

NCDOT: \$4 million
Town: \$1.5 million

Additional bikelane and sidewalks
along Hillsborough, Old
Fayetteville, and Jones Ferry Roads
(sidewalk cost-share)



Collaboration with NCDOT - Post-2009

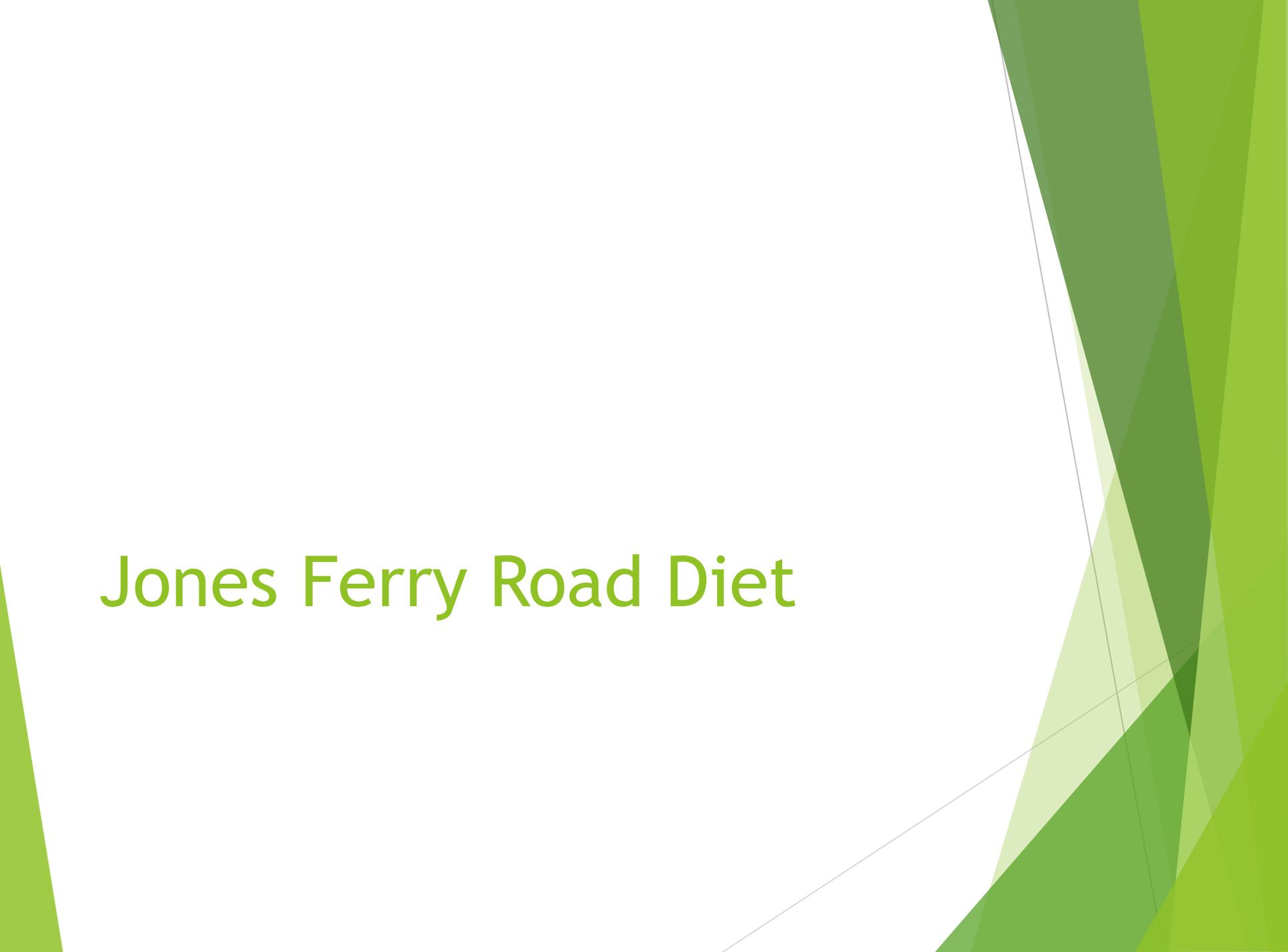
- ▶ Three particularly notable projects
 - ▶ Jones Ferry Road Diet
 - ▶ W. Main Street Road Diet
 - ▶ Smith Level Road

- ▶ I'll focus on the first two



Facing east from NC-54
overpass

Jones Ferry Road Diet

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the page, creating a modern, layered effect. The rest of the page is plain white.



Facing west from NC-54
overpass



Facing east from underneath NC-54
overpass



J SMITH LEVEL

SPEED LIMIT 35

Background on the corridor

- ▶ Traffic speed
 - ▶ 85th-percentile speed: 40 MPH (2005 est.)
 - ▶ Posted speed: 35 MPH
- ▶ Average daily traffic: 8,500-11,000
- ▶ ROW width: generally 60-80 ft.
- ▶ Pavement width varies
 - ▶ @ Davie Rd.: ~60 ft.
- ▶ 4-6 lanes, transitions from 2 lanes heading out of downtown

Pedestrian and bicyclist volumes

- ▶ Pedestrian volumes (12 hr. - along JF Rd. east of Davie)
 - ▶ 2003: 474*
 - ▶ 2005: 361*
 - ▶ **2013: 213**
- ▶ Bicyclist volumes (12 hr. - along JF Rd. east of Davie)
 - ▶ 2003: 43*
 - ▶ 2005: 23*
 - ▶ **2013: 79**

(Sources: Mobility Report Card, UNC DCRP, Geoff Green and Kristen Langford class papers; * = numbers adjusted to account for different data collection methodologies)

Safety issues

- ▶ Reported crash history
- ▶ Lane additions
- ▶ 85th percentile speed around 40 mph
- ▶ Pedestrian crossing volumes due to origins, destinations on both sides of road
- ▶ Location of pedestrian crossings
- ▶ Time of pedestrian crossings
- ▶ Lack of sidewalk on north side of road
- ▶ Crest of hill → vertical sight distance deficiency
- ▶ Truck movements

Crash history: Jones Ferry-Davie



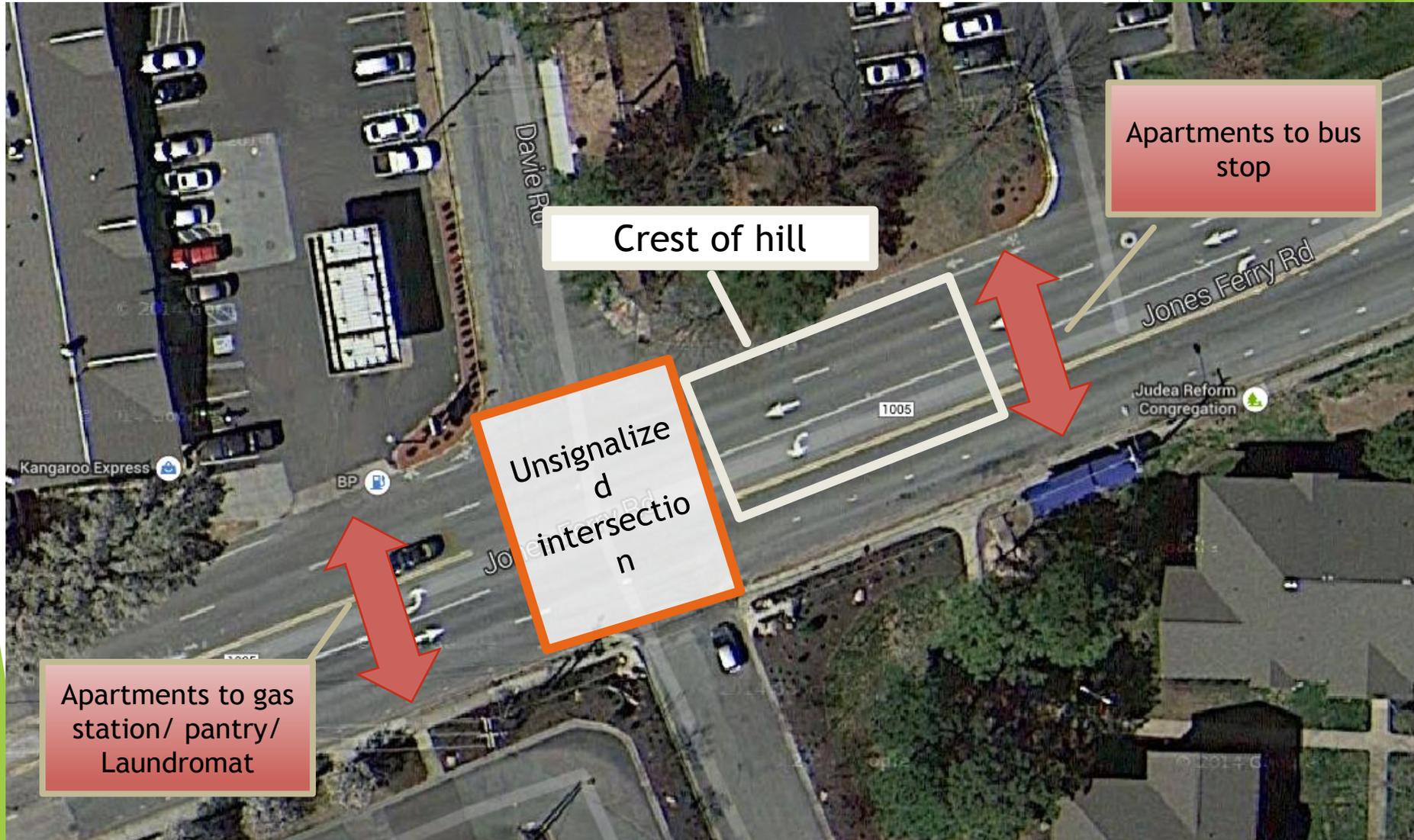
20 reported crashes over five year period, Nov 2006 - Oct 2011

Chapel Hill Transit bus stop at Collins Crossing apartments

- ▶ Highest ridership stop in Carrboro
- ▶ J route, one of highest-ridership stops in system
- ▶ Avg. daily boardings + alightings, fall '13: 686
- ▶ Pedestrians crossing street to/from stop



Pedestrians crossing the road



Trucks leaving gas station / pantry property

Awkwardly-placed
dumpster pad
adjacent to ROW.
From dumpster,
truck backs straight
into roadway,
on other side of hill
crest.



Carrboro Bike Plan

- ▶ Listed as “important corridor” with high priority among public participants
- ▶ Recommends bike lanes on Jones Ferry Rd. from Davie Rd. west to Old Fayetteville Rd.
 - ▶ Consideration of colored bike lanes through the NC-54 bypass intersection



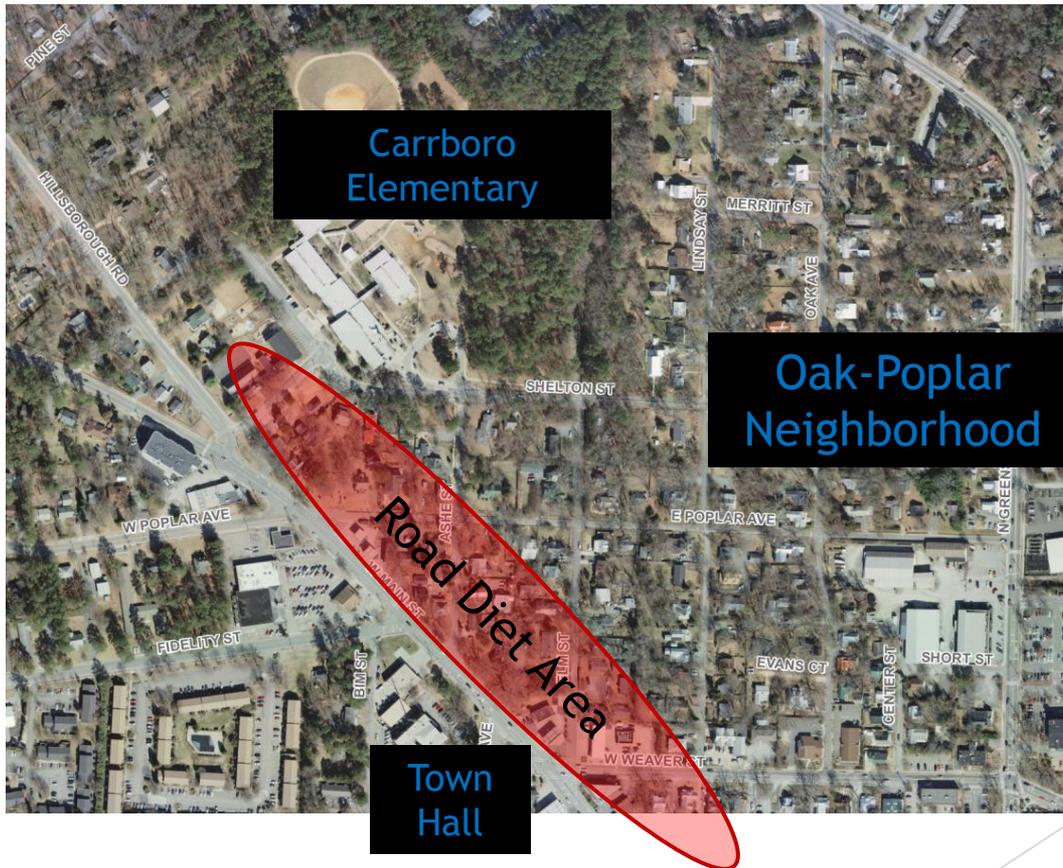
What have we been doing to address these conditions?

- ▶ Between 2000 and 2008, at least five requests for analyses and improvements, and subsequent follow-up.
- ▶ In 2009, met NCDOT staff on-site and Complete Streets provided framework for discussing changes to roadway.
- ▶ In 2012, NCDOT staff indicated that evaluation revealed the site as a likely candidate for SPOT safety funds.
- ▶ Further evaluation and discussion ensued.
- ▶ Public hearing - improvements were positively received.
- ▶ Construction plans in preparation.
- ▶ Construction may begin Fall 2014.

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the page, creating a modern, layered effect. The text is positioned on the left side of the page, set against a plain white background.

West Main Street Road Diet

Study Area



Comprehensive Bike Plan (2009)

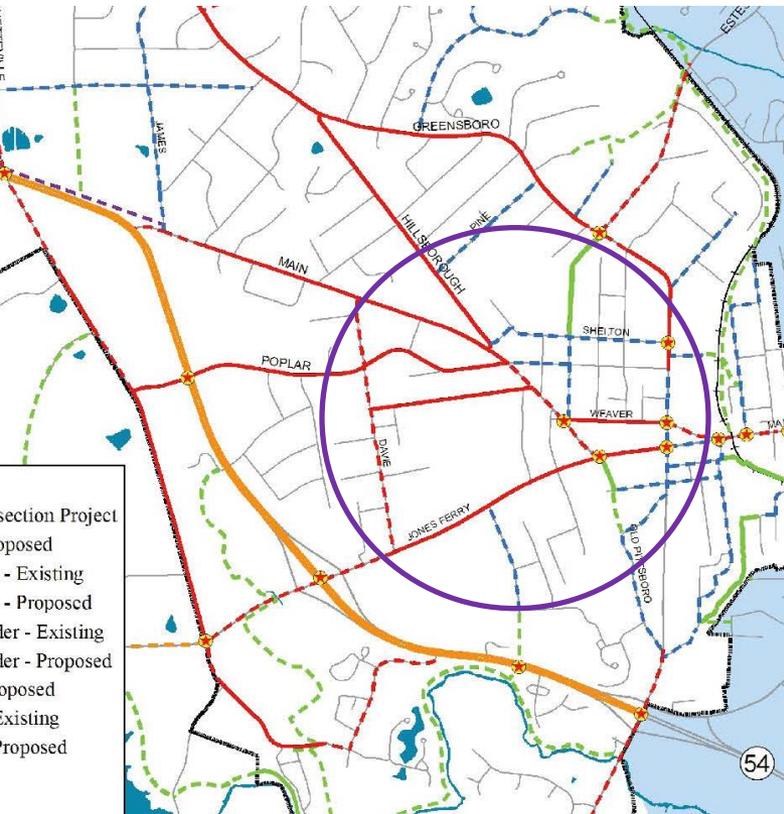


Fig. 3-22. W. Main St.'s proposed facilities include a road diet and bicycle lanes on both sides.
 West Main Street: from Jones Ferry Rd. to Hillsborough Rd.

Importance

- + Very high priority among public participants
- + Important connection between Downtown area, Farmers Market, and residential areas
- + Critical gap between existing bicycle facilities

Recommended Solution

Stripe bicycle lanes along this stretch of Main St. with the implementation of a road diet, converting existing four lanes to two travel lanes, a central turn lane, and striped bicycle lanes on both sides of the roadway.

Construction projects considered to be innovative; will require state and federal approval for permission to experiment with these types of treatments



COMPREHENSIVE BICYCLE TRANSPORTATION PLAN



Intersection Improvements:

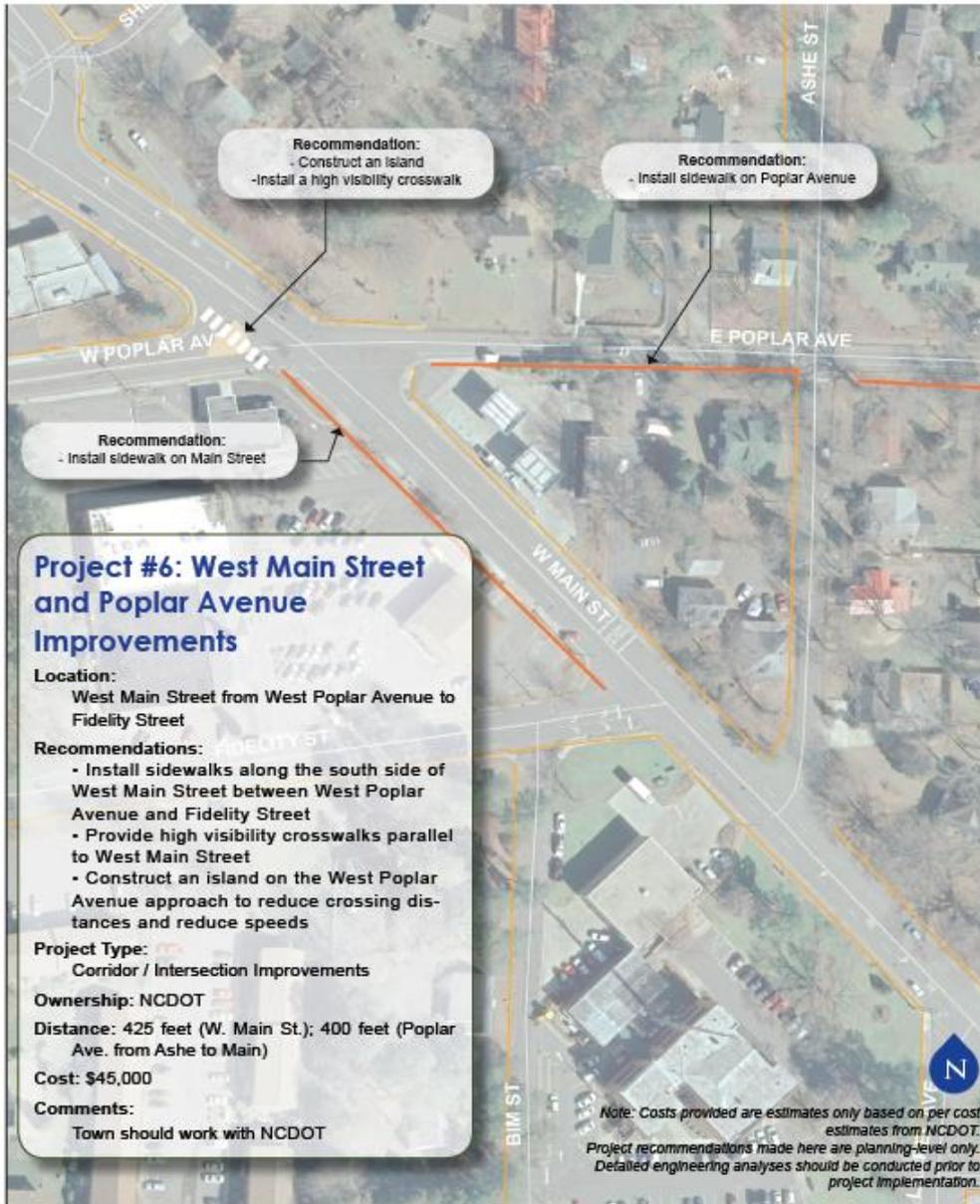
- + Main St. and Jones Ferry Rd.
 - Widen entrance to PTA bike path and paint directional arrows for turn lane (see photo rendering below)
 - Stripe and paint bicycle boxes* on Jones Ferry Rd.
 - Stripe and paint bicycle boxes* on Main St.
 - Paint colored bicycle lanes* connecting PTA bike path to future bicycle lanes on W. Main St.



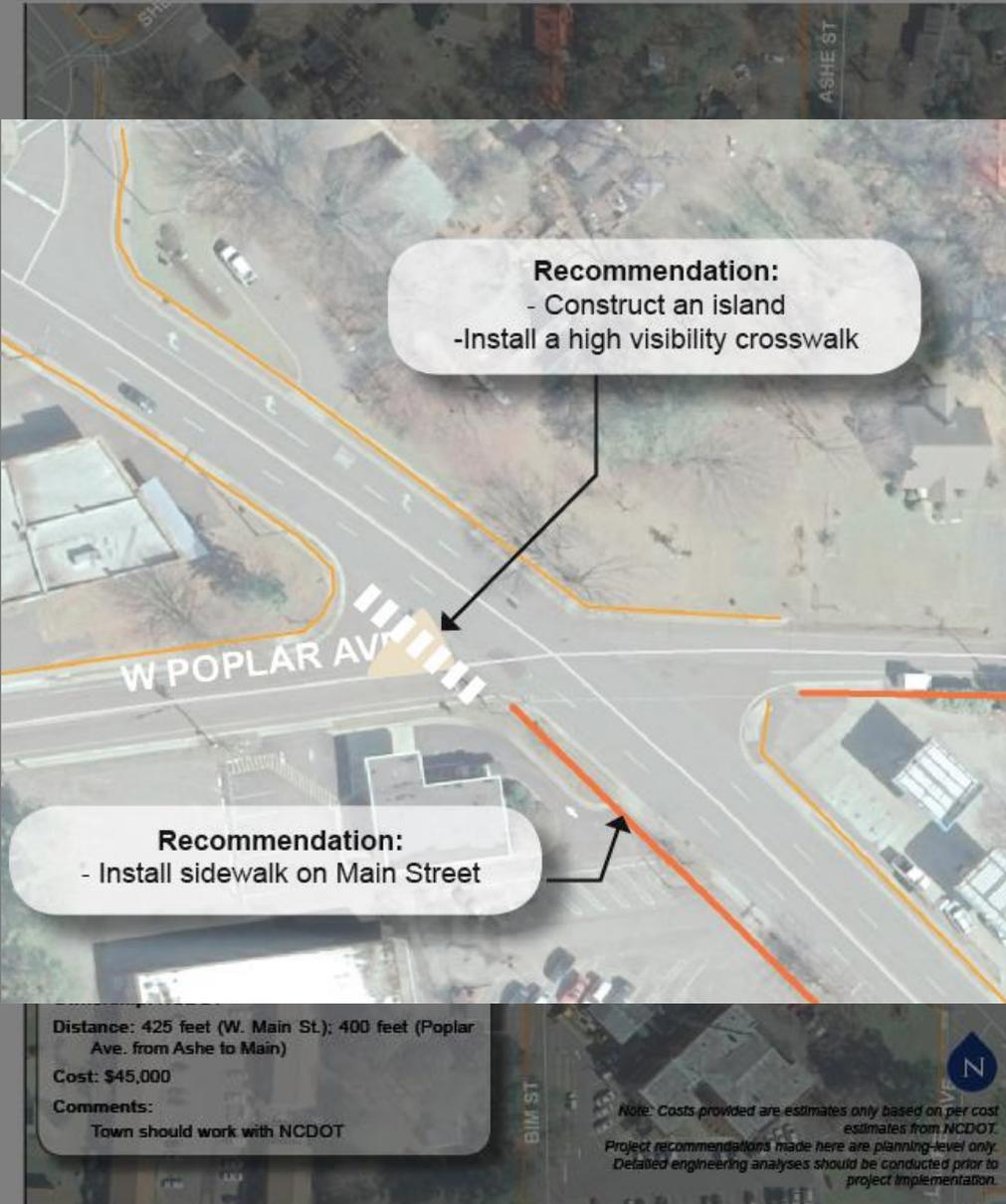
Level of Service Analysis



Safe Routes to School Action Plan



Safe Routes to School Action Plan



Level of Service

West Main Street Intersection	Traffic Control	Existing (2011)		Road Diet (2011)	
		AM	PM	AM	PM
Hillsborough Road	Unsignalized	(WB-B)	(WB-B)	(WB-B)	(WB-B)
Poplar Avenue	Unsignalized	(EB-B)	(EB-B)	(EB-B)	(EB-B)
Fidelity Street	Unsignalized	(EB-B)	(EB-B)	(EB-B)	(EB-B)
Ashe Street	Unsignalized	(SB-A)	(WB-A)	(WB-A)	(WB-B)
Weaver Street	Signalized	B (SB-B)	B (NB-B)	B (SB-B)	B (NB-B)
Elm Street	Unsignalized	(SB-A)	(SB-B)	(SB-A)	(SB-B)
Weaver Street/Elm Street Roundabout	Roundabout	-	-	A (SB-A)	A (SB-A)

Legend: X (X-X) = overall intersection LOS for signalized intersection (worst approach – worst approach LOS)
 X = Worst LOS for uncontrolled approach at unsignalized intersection

WEST MAIN STREET ROAD DIET AND PAVEMENT MARKING STUDY and OAK-POPLAR NEIGHBORHOOD TRAFFIC CIRCULATION STUDY

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February 2012



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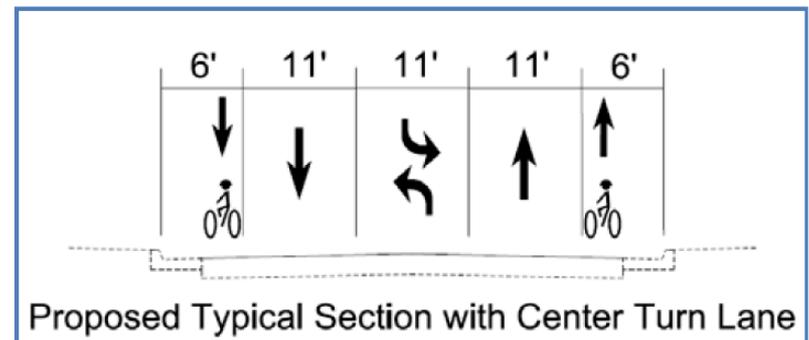
W. Main St. Road Diet

Main St. road diet

- ▶ 4-to-3 with bike lanes
- ▶ State-maintained
- ▶ TAB/Board of Aldermen endorsed
- ▶ Traffic study and pavement marking plan
- ▶ Durham road diets as model
- ▶ Scheduled and coordinated with resurfacing schedule
- ▶ Completed in late summer 2013



Figure 9: Proposed West Main Street Typical Section











Takeaways

- ▶ Some projects can take decades, some only a few years
- ▶ Persistence and communication are critical strategies for advancing projects
 - ▶ With NCDOT
 - ▶ With colleagues (Durham's lead/example)
- ▶ Community support/inspiration is valuable
- ▶ Efforts are extremely demanding in terms of time (staff resources), skill and patience
- ▶ Rewards are clear and measurable.
- ▶ Thank yous are always in order. Thanks Vicky, Vance, Chris, Chuck, and many others!



Thanks for listening!

Good luck with your projects.

Trish McGuire (pmcguire@townofcarrboro.org)