

Southbridge Traffic Circulation Study



First Community Meeting
-March 18, 2008-

Who is WILMAPCO?

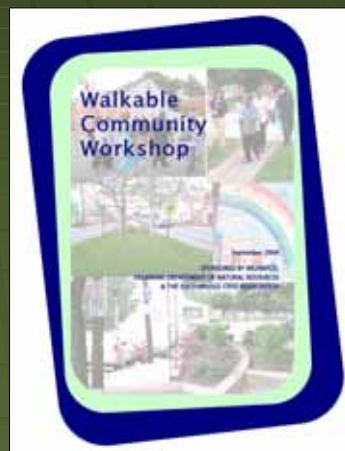
- **Wilmington Area Planning Council**
 - "WILMAPCO"
 - Metropolitan Planning Organization (MPO)
 - New Castle County, DE and Cecil County, MD
- **Programs federal transportation funds**
- **Provides regional transportation coordination**

WILMAPCO's Role in Southbridge

- **Member of the SAMP Core Group**
 - Assisted in the development of the Neighborhood Plan
 - Feedback and refinement of transportation section
 - Coordinating the implementation of transportation recommendations
- **Short-term: Pedestrian Improvements**
 - Walkable Community Report
 - Prioritized projects
- **Long-term: Traffic Flow Improvements**
 - Traffic Circulation Study

Pedestrian Improvements

- **Walkable Community Report**
 - Fall of 2006
 - Community-driven
 - Host of recommendations
 - Asked to prioritize by SAMP Core Group



Pedestrian Improvements

- **Technical Scoring**

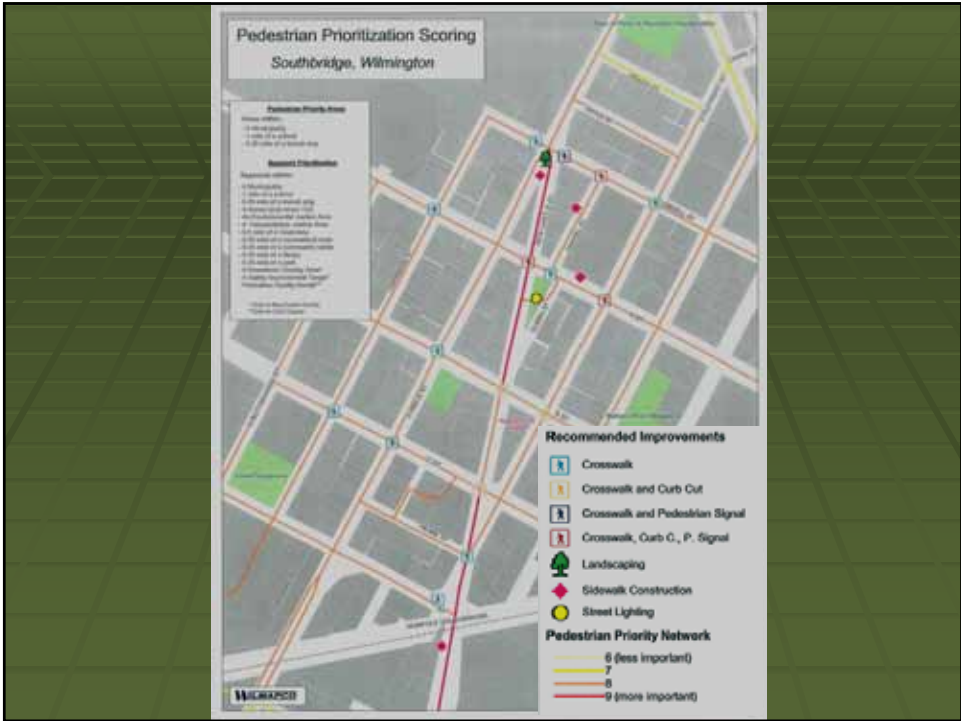
- Projects given a technical score based on:
 - WILMAPCO Regional Pedestrian Prioritization Analysis
 - Proximity to bus stops
 - Proximity to Palmer Elementary School
 - Proximity to Neighborhood House



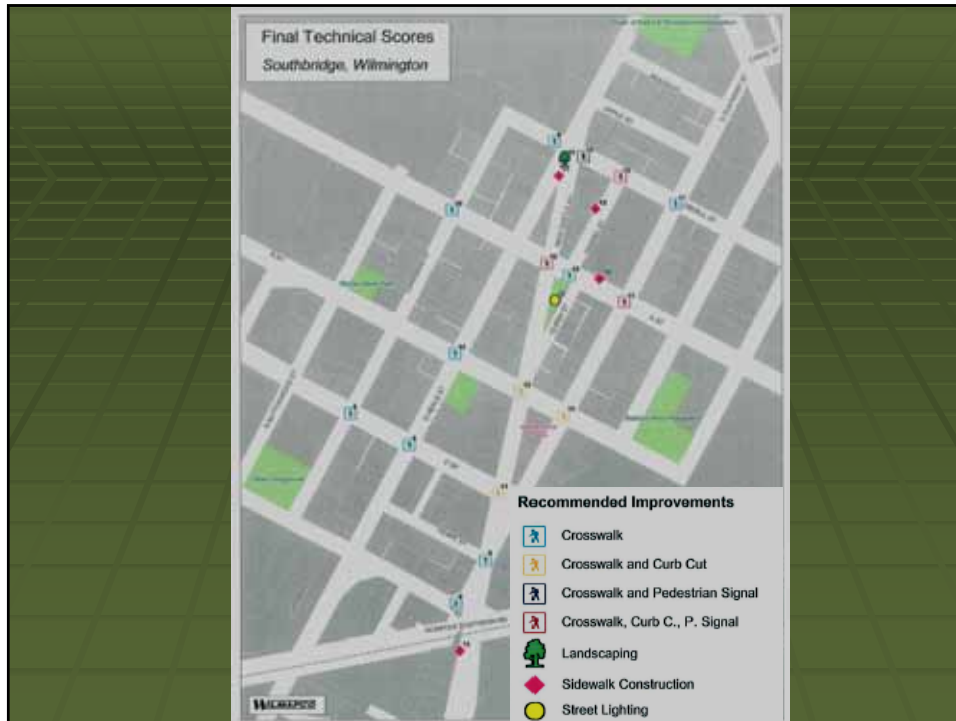
Proposed Pedestrian Improvements
Southbridge, Wilmington

Legend:

- Crosswalk and Curb Cut
- Crosswalk and Pedestrian Signal
- Crosswalk, Curb C., P. Signal
- Landscaping
- Sidewalk Construction
- Street Lighting







Proposed Southbridge Pedestrian Improvements: Technical Scoring 3/29/2008

Proposed Pedestrian Improvements			Scoring				
Recommendation	Location	Rationale	Network	School	House	Bus	Total
1 Crosswalks	A St and Chapel St	Safety Concern	5	3	0	2	13
2 Crosswalks and Curb Cut	NC Ave and B St	Safety Concern, ADA requirements	5	0	2	2	13
3 Replace Sidewalk	Chapel St on Lobdell and A	Gap in Sidewalk	5	3	0	1	12
4 Crosswalks, Curb Cut, Ped. Signal	Chapel St and Lobdell St	Safety Concern	5	3	0	1	12
5 Crosswalks, Curb Cut, Ped. Signal	A St and NC Ave	Safety Concern, ADA requirements	5	1	0	2	12
6 Landscaping	Heald St and NC Ave	To enhance gateway	5	0	0	3	12
7 Street Lighting	Park at NC Ave and A St	Safety Concern	5	1	0	2	12
8 Replace Sidewalk	A St on Chapel and Claymont	Uneven sidewalk; Safety Concern	5	3	0	1	12
9 Replace Sidewalk	NC Ave at NS Rail	Safety Concern	5	0	0	3	12
10 Crosswalks and Pedestrian Signal	NC Ave and Lobdell St	Safety Concern, ADA requirements	5	1	0	2	12
11 Crosswalks and Curb Cut	B St and Claymont St	Safety Concern	5	0	3	1	12
12 Crosswalks, Curb Cut, Ped. Signal	Claymont St and A St	Safety Concern	5	3	0	0	11
13 Add Sidewalk	Island at Heald St and NC Ave	Sidewalk ends	5	0	0	2	11
14 Crosswalks and Curb Cut	C St and NC Ave	Safety Concern, ADA requirements	5	0	0	2	11
15 Crosswalks	Lobdell St and Claymont St	Safety Concern	5	3	0	0	11
16 Crosswalks	B St and Heald St	Safety Concern	5	0	0	2	10
17 Crosswalks	A St and Townsend St	Access to bus stop across Townsend	5	0	0	2	10
18 Crosswalks	S Heald St and Lobdell St	Safety Concern	0	0	0	1	9
19 Crosswalks	NC Ave and Pearl St	Safety Concern	5	0	0	0	9
20 Crosswalks	NC Ave and D St	Safety Concern	5	0	0	1	9
21 Crosswalks	C St and Townsend St	Safety Concern, Park Access	5	0	0	0	8
22 Crosswalks	C St and Heald St	Safety Concern	5	0	0	0	8

Pedestrian Improvements

- **Community Input**

- Let us know what you think
- Rank the projects during the break or after the meeting!

- **Next Steps**

- List of prioritized pedestrian projects
- Look for ways to implement



Traffic Improvements

- **Ideas from the Neighborhood Plan**

- Streetscape and traffic calming: Heald St., NC Ave. and A St.
- Bypass from NC Ave. to Christina Ave.
- Two-way traffic on Heald St. and NC Ave.
- Transit and pedestrian improvements



Traffic Improvements

- **Circulation Study Necessary**

- Measure the feasibility of some Plan recommendations
- Detailed analysis of traffic flow in Southbridge
- Firm recommendations for flow improvements



Traffic Improvements

- **Study Background**

- Funded by WILMAPCO and DNREC
- WILMAPCO is the managing agency
- Partnering with SAMP Core Group
- Rummel, Klepper & Kahl (RK&K) will conduct the study



Southbridge Circulation Study

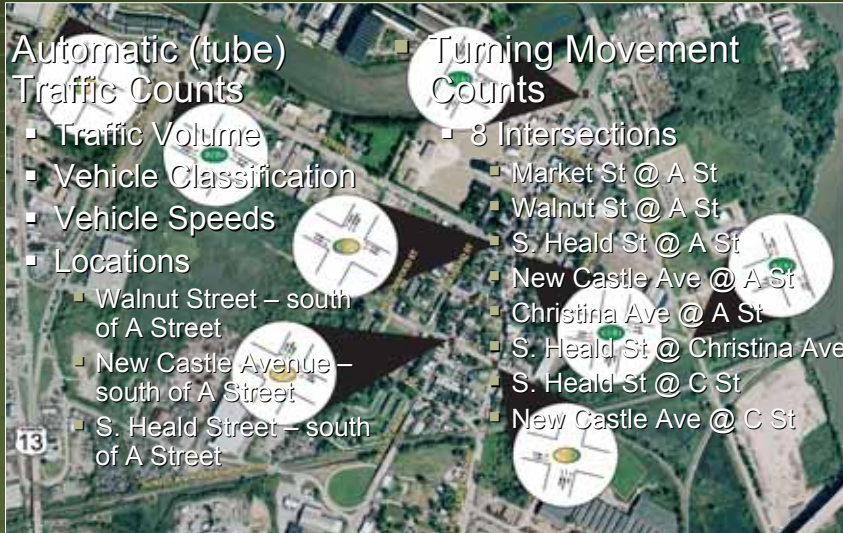
- Purpose of study
 - Evaluate transportation system within community
 - Transit
 - Bicycle/Pedestrian
 - Auto/Truck
 - Propose improvements necessary to accommodate growth and to improve quality of life

Southbridge Circulation Study

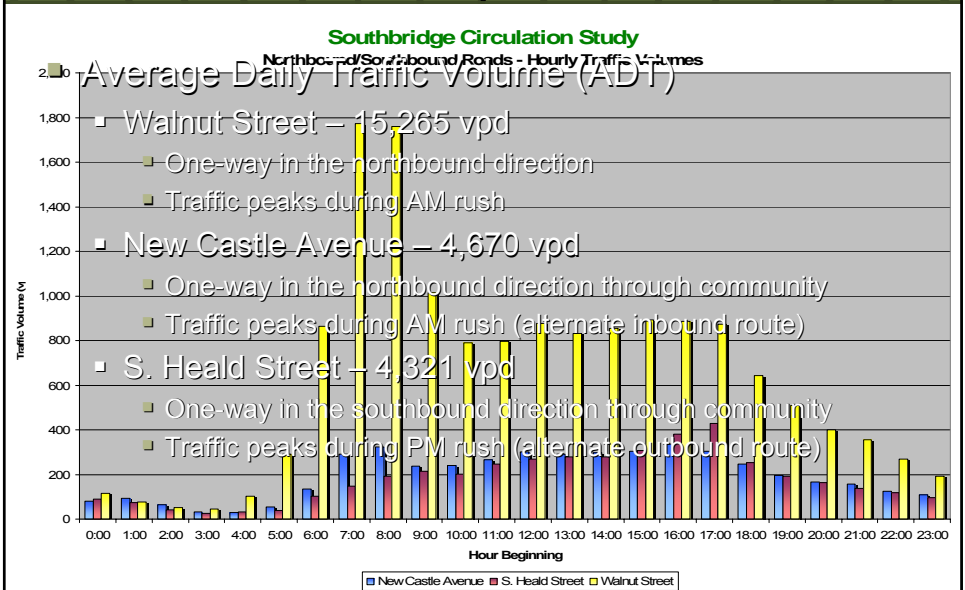
- Components of Circulation Study
 - Review of existing transportation conditions
 - Traffic counts and traffic observations
 - Pedestrian infrastructure inventory
 - Transit infrastructure inventory
 - Bicycle infrastructure inventory
 - Perform traffic analysis at key intersections
 - Propose improvements:
 - Community recommendations
 - Analysis results

Traffic Operations

- Automatic (tube) Traffic Counts
 - Traffic Volume
 - Vehicle Classification
 - Vehicle Speeds
 - Locations
 - Walnut Street – south of A Street
 - New Castle Avenue – south of A Street
 - S. Heald Street – south of A Street
 - Turning Movement Counts
 - 8 Intersections
 - Market St @ A St
 - Walnut St @ A St
 - S. Heald St @ A St
 - New Castle Ave @ A St
 - Christina Ave @ A St
 - S. Heald St @ Christina Ave
 - S. Heald St @ C St
 - New Castle Ave @ C St



Traffic Operations



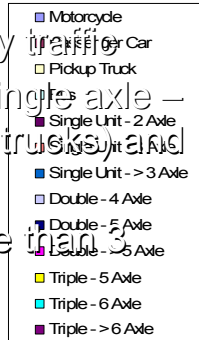
Traffic Operations

Truck Traffic

■ New Castle Avenue

Southbridge Circulation Study
Vehicle Classification - New Castle Avenue

- Trucks make up 6% of the total daily traffic
- Majority of truck traffic consists of single axle – 2 unit trucks (dump trucks, delivery trucks) and buses
- Less than 1% of vehicles have more than 3 axles



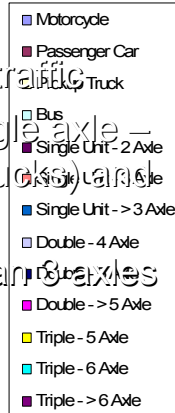
Traffic Operations

Truck Traffic

■ South Heald Street

Southbridge Circulation Study
Vehicle Classification - South Heald Street

- Trucks make up 7% of the total daily traffic
- Majority of truck traffic consists of single axle – 2 unit trucks (dump trucks, delivery trucks) and buses
- Approx. 1% of vehicles have more than 3 axles



Traffic Operations

Truck Traffic

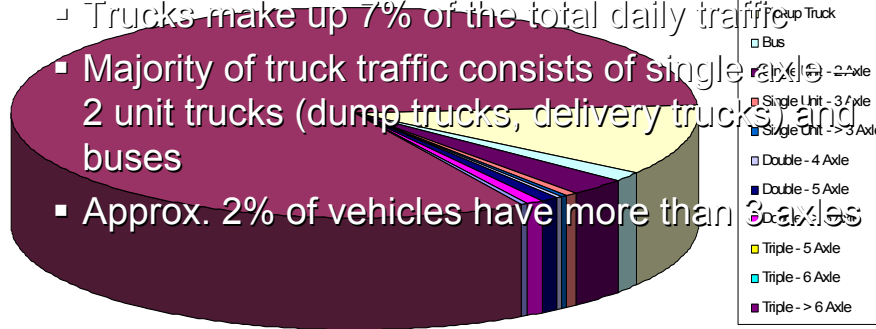
Southbridge Circulation Study
Vehicle Classification - Walnut Street

■ Walnut Street

▫ Trucks make up 7% of the total daily traffic

▫ Majority of truck traffic consists of single axle 2 unit trucks (dump trucks, delivery trucks) and buses

▫ Approx. 2% of vehicles have more than 3 axles



Traffic Operations

Intersection Operations

■ Performed counts at 8 intersections

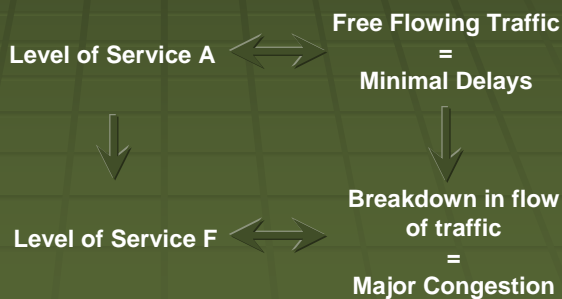
- 6 signalized
- 2 unsignalized

■ Developed SYNCHRO traffic model of study area

■ Performed capacity analysis for each intersection to determine level of service

Traffic Operations

- What is Level of Service (LOS)?
 - Qualitative measure of traffic flow represented by letter grades A through F



Traffic Operations

- Level of Service and delay
 - Delay – additional travel time caused by stopping
 - LOS and delay ranges

LOS Criteria for Signalized Intersections	
LOS	Delay per Vehicle (seconds/vehicle)
A	≤ 10
B	> 10 – 20
C	> 20 – 35
D	> 35 – 55
E	> 55 – 80
F	> 80

LOS Criteria for Unsignalized Intersections	
LOS	Delay per Vehicle (seconds/vehicle)
A	≤ 10
B	> 10 – 15
C	> 15 – 25
D	> 25 – 35
E	> 35 – 50
F	> 50

Source: TRB Highway Capacity Manual, Year 2000 edition

Traffic Operations

- Existing Levels of Service ~ AM Peak
 - 6 of 8 intersections operate at LOS C or better
 - Delays could be reduced through changes in signal timings

Existing Level of Service AM Peak Hour			
Intersection	Type of Control	Level of Service	Delay (sec/veh)
Market Street @ A Street	Stop Sign	C	18.6
Walnut Street @ A Street	Traffic Signal	B	12.7
S. Heald Street @ A Street	Traffic Signal	C	22.3
New Castle Avenue @ A Street	Traffic Signal	C	28.2
Christina Avenue @ A Street	Stop Sign	A	9.9
S. Heald Street @ Christina Avenue	Traffic Signal	A	7.9
S. Heald Street @ C Street	Traffic Signal	D	36.1
New Castle Avenue @ C Street	Traffic Signal	D	36.1

Traffic Operations

- Existing Levels of Service ~ PM Peak
 - 5 of 8 intersections operate at LOS C or better
 - Longer delays on outbound routes due to more people bypassing downtown area during PM rush
 - Delays could be reduced through changes in signal timings

Existing Level of Service PM Peak Hour			
Intersection	Type of Control	Level of Service	Delay (sec/veh)
Market Street @ A Street	Stop Sign	D	29.9
Walnut Street @ A Street	Traffic Signal	B	12.2
S. Heald Street @ A Street	Traffic Signal	D	44.3
New Castle Avenue @ A Street	Traffic Signal	B	18.1
Christina Avenue @ A Street	Stop Sign	A	6.3
S. Heald Street @ Christina Avenue	Traffic Signal	A	7.9
S. Heald Street @ C Street	Traffic Signal	D	41.1
New Castle Avenue @ C Street	Traffic Signal	C	28.8

Pedestrian Issues

- Gaps in sidewalk infrastructure
- Lack of pedestrian signals at some intersections
- Missing crosswalks at some intersections
- ADA compliant curb ramps



Pedestrian Issues

- Improvements suggested by community
 - Install pedestrian signals where needed
 - Upgrade existing ADA curb ramps
 - Install new or upgrade existing crosswalk markings
 - Provide pedestrian level street lighting
 - Install new sidewalk where needed



Pedestrian Issues

- RK&K to suggest additional improvements
 - Pedestrian access to Riverfront (community recommendation)
 - Sidewalks on Buttonwood Street
 - Add crosswalks to locations not identified by community

Bicycle Issues

- Bicycle Route 2 runs through study area via New Castle Avenue and A Street
 - No bike route signage
 - No bike route pavement markings or separate bike lanes
- Recreational Bike Route runs through study area via S. Heald Street, A Street and Walnut Street
 - No bike route signage
 - No bike route pavement markings or separate lanes
- Potential rail-to-trail west of community



Bicycle Issues

- No improvements suggested by community to date
- RK&K to suggest additional improvements
 - Install bike route signage as needed
 - Evaluate feasibility of striping bike lanes adjacent to roadways
 - On-street parking may be an issue
 - Possible integration of bike travel into pedestrian Riverfront access
 - Potential connection to proposed rail-to-trail west of community

Transit Issues

- Three bus routes travel through Southbridge
 - Dart Route 8 (Christina Avenue)
 - Dart Route 15 (New Castle Avenue/S. Heald Street)
 - Dart Route 17 (New Castle Avenue / A Street / S. Heald Street)
- Only one existing stop has a shelter
 - New Castle Avenue @ C Street



Transit Issues

- Improvements suggested by community
 - Transfer point at S. Heald Street and A Street
 - New bus stop at S. Heald Street and Peach Street
 - Bus shelters
 - A Street @ Buttonwood Street
 - S. Heald Street @ Peach Street

Transit Issues

- RK&K to suggest additional improvements
 - Work with DART to determine where additional shelters may be warranted
 - Improved bus route signage
 - Integrate transit and pedestrian modes of transportation

Transportation Issues

- Major purpose of RK&K's study is to address traffic/circulation issues and recommendations by community
- Evaluate future traffic growth using traffic model
- Evaluate recommendations proposed by community
- Determine other recommendations necessary to improve safety and efficiency of traffic flow.



Transportation Issues

- Improvements suggested by community
 - Bypass from New Castle Ave / D Street intersection to Christina Avenue
 - Two-way traffic on Heald Street and New Castle Avenue
 - Street grid for Southbridge extension site
 - Traffic calming

Transportation Issues

- RK&K to suggest additional improvements
 - Signing and pavement marking upgrades (safety)
 - Traffic signal timing improvements (capacity)
 - Integration of motor vehicle traffic with other modes of transportation

Next Steps

- Listen to community
 - What other improvements are needed?
- Hold second public meeting
 - Discuss analysis of transportation recommendations
 - Discuss other suggested improvements
- Hold third public meeting
 - Present final recommendations
 - Develop path forward for implementation

Question 1

Does DART's bus service take you where you would like to go? And, if not, where would you like to see service added? Would you like Southbridge to be the site of a transit hub? Are there any other issues with transit you would like to bring up?

(10 minutes)

Question 2

Do you feel comfortable walking around your neighborhood? Are the sidewalks, crosswalks in good shape, do you feel safe? Does anyone bike and, if not, why don't you?

(5 minutes)

Question 3

What are your top three issues with traffic circulation? For example, do certain signals take too long to change?

(15 minutes)

More Information

www.wilmapco.org/Southbridge

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