

Welcome

to the

ELKTON ROAD PLANNING STUDY

Maryland State Line To Delaware Avenue

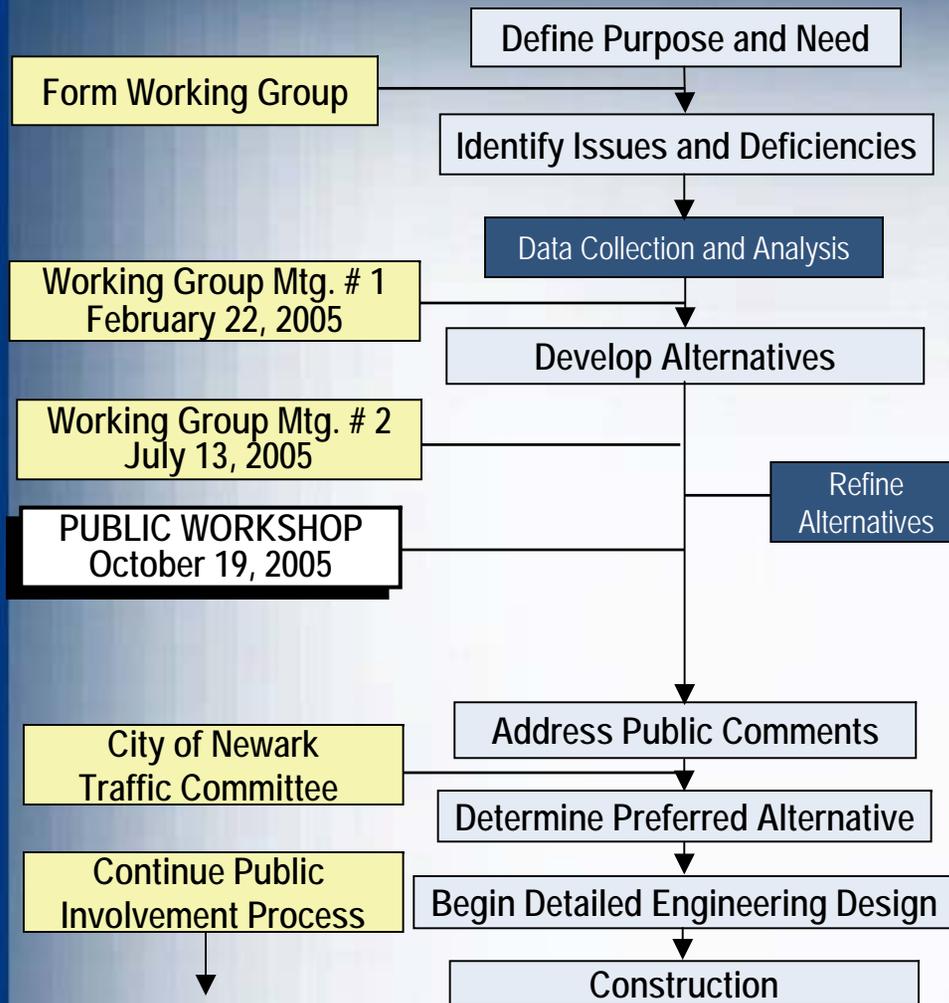
Public Workshop



October 19, 2005



Project Development Process



List of Working Group Members

Roy Lopata - Newark Planning Department
 Gerald Conway - Newark Police Department
 Richard Armitage - University of Delaware
 Eric Schwab - Town Court and Park Place
 Tim Thompson - The Trap Restaurant
 Willett Kempton - Newark Bicycle Committee
 Nancy Rich - Beverley Road
 Jill Bennett-Gaieski - Orchard Road
 Doug Tuttle - Devon
 Christopher J. Heck
 DuPont Stine-Haskell Research Center
 Stephen D. Nash
 DuPont Stine-Haskell Research Center
 Heather Dunigan - WILMAPCO
 Gregory Meece - Newark Charter School
 Marc Cote - DelDOT
 Tom Brooks - DelDOT



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Project Goals

- Pavement Reconstruction
- Capacity and Operational Improvements
- Safety Improvements
- Bicycle and Pedestrian Improvements
- Transit Facilities Improvements



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Roadway Characteristics

Area 1 - Maryland State Line to SR 4

- 4 lane divided with 40 to 50 foot grass median
- 10 Foot Wide Shoulder on Both Sides
- Speed Limit – 50 mph
- Current Traffic Volume – 43,000 AADT



Area 2 - SR 4 to West Park Place

- 4 lane divided – 15 feet wide median
- 8~12 foot wide shoulder/bike path on WB Elkton Road
- Speed Limit – 35 ~ 40 mph
- Current Traffic Volume – 24,000 AADT

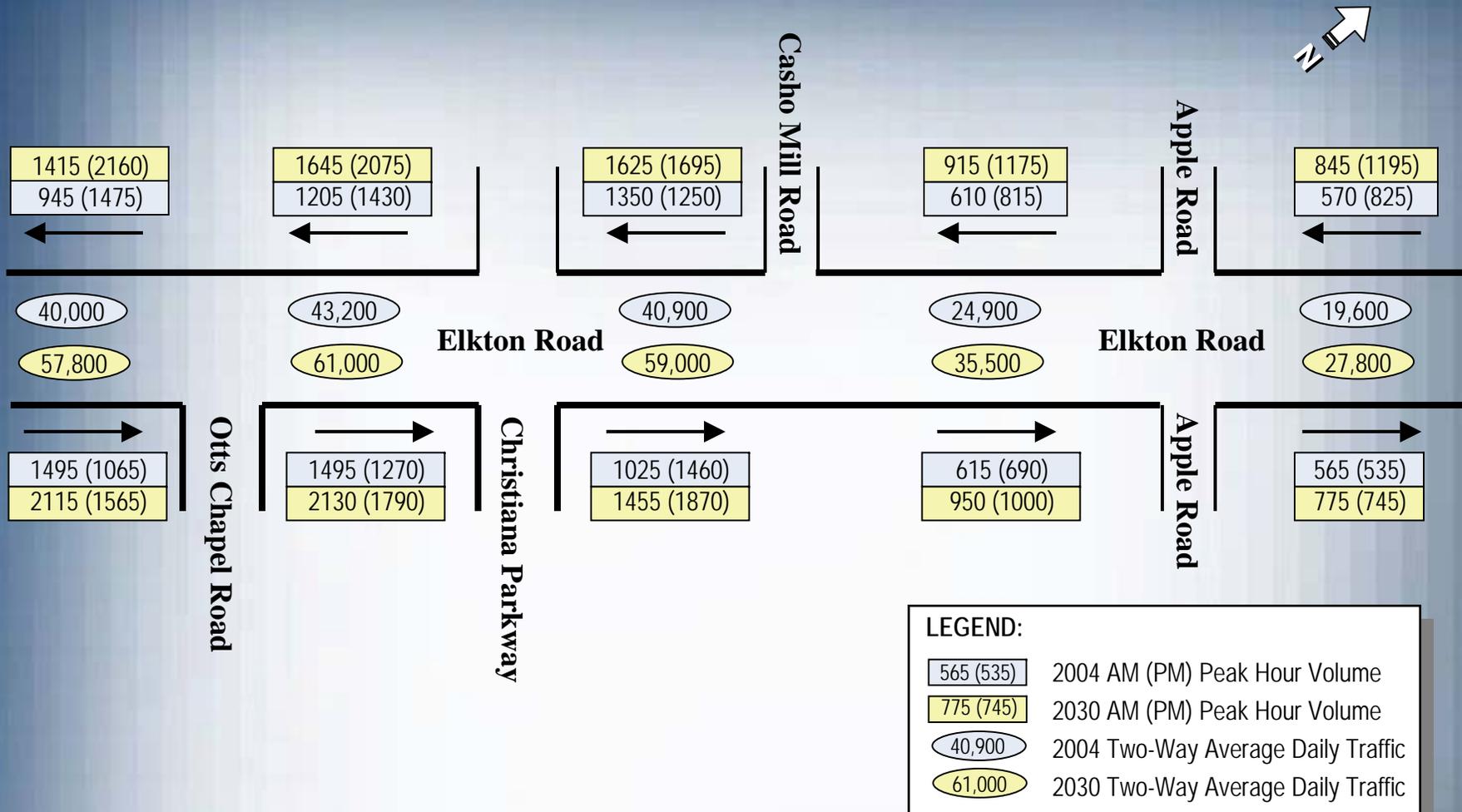


Area 3 – West Park Place to Delaware Avenue

- 4 lane un-divided
- No shoulders
- Speed Limit – 25 ~ 35 mph
- Current Traffic Volume - 19,000 AADT



Study Area Traffic Volume



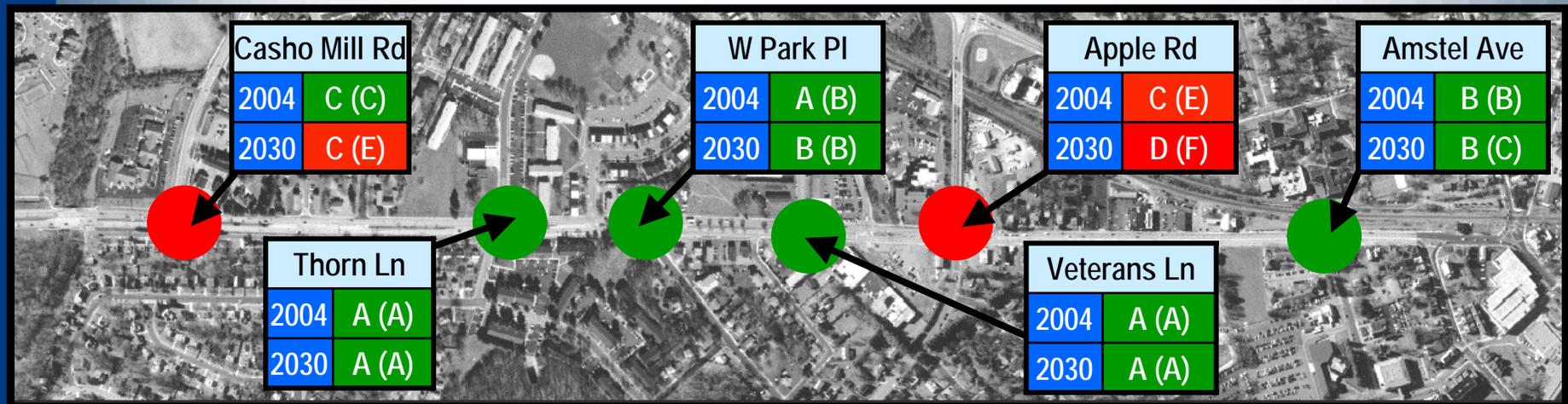
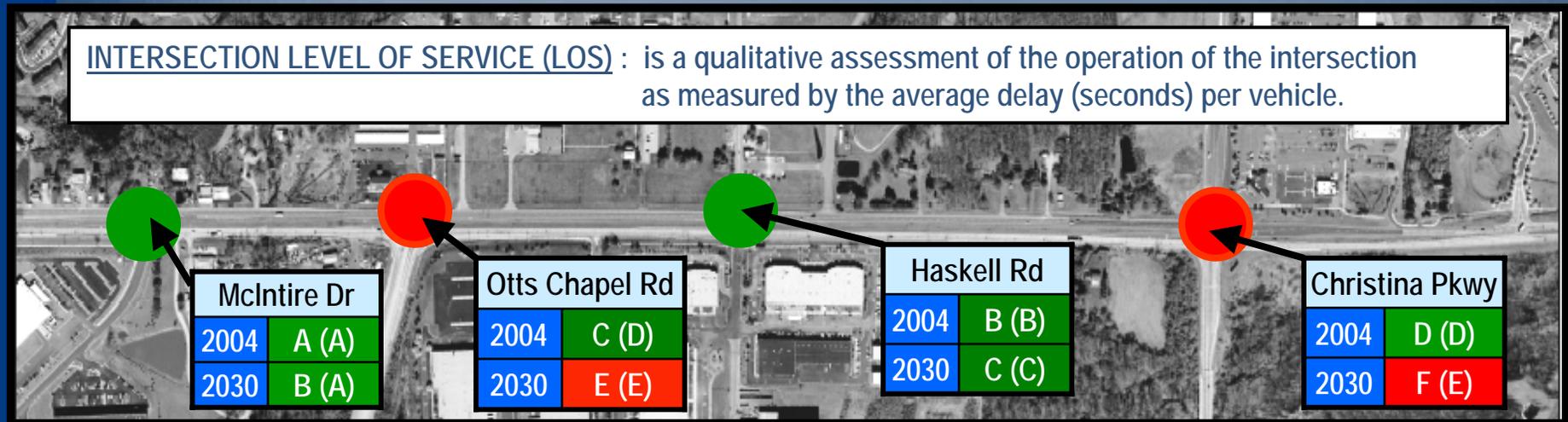
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Summary of Capacity Analysis

INTERSECTION LEVEL OF SERVICE (LOS) : is a qualitative assessment of the operation of the intersection as measured by the average delay (seconds) per vehicle.



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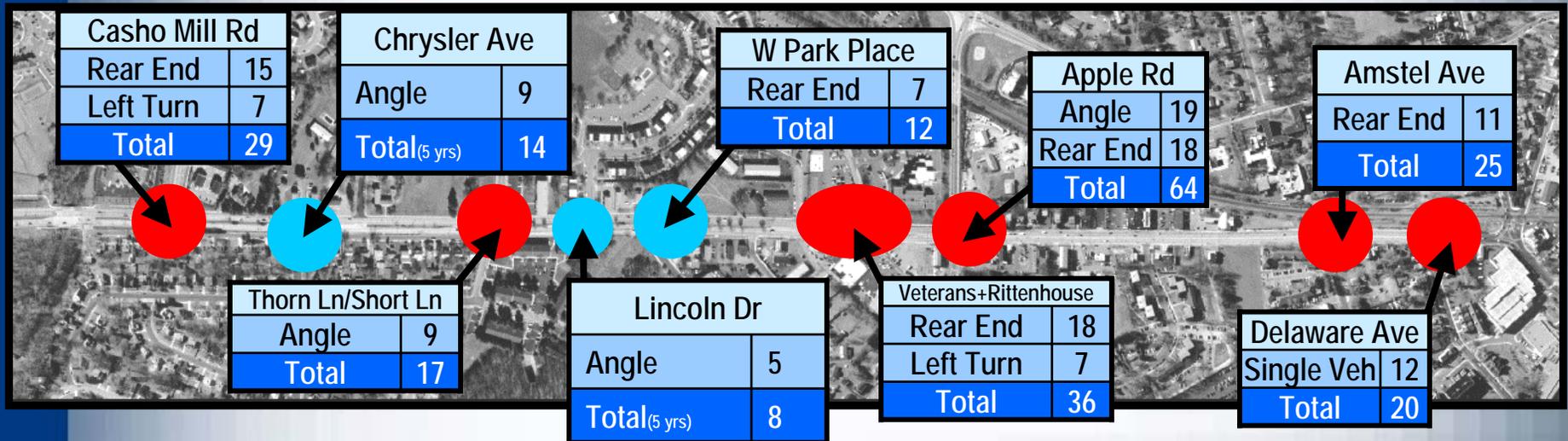
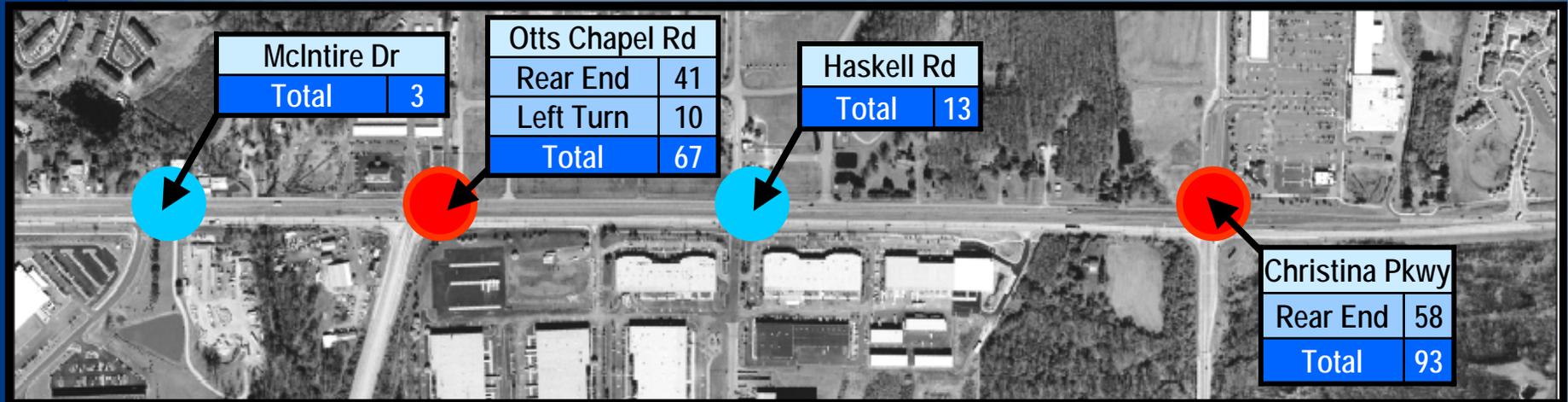
LOS Table for Signalized Intersections

INTERSECTION LEVEL OF SERVICE (LOS) : is a qualitative assessment of the operation of the intersection as measured by the average delay (seconds) per vehicle.

Control Delay	
<u>LOS</u>	<u>per vehicle (sec)</u>
A	≤ 10
B	>10 - 20
C	>20 - 35
D	>35 - 55
E	>55 - 80
F	>80



Summary of Safety Analysis



Total Number of Crashes from May, 2001 through April, 2004



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Summary of Safety Analysis

- Reviewed 438 crash reports over 3 year period
- Crash Rate is higher than statewide average
- Most crashes (47%) are rear end type
- 30% were left turn and angle
- No fatalities during this time period

(However, before the reported crash period, there were 2 fatalities at Amstel Avenue and 1 fatality at Otts Chapel Road. All three were pedestrian/bicycle related.)



Pedestrian and Bicycle Needs

Maryland State Line to SR 4

- No continuous sidewalks
- Shoulders used for bicycle traffic
- Ramps are not ADA compliant

SR 4 to West Park Place

- 4-10 foot discontinuous bike lane on eastbound side
- 8-12 foot continuous bike lane on westbound side
- Sidewalk everywhere except south of Elkton Road from SR 4 to Gravenor Lane
- Ramps are not ADA compliant

West Park Place to Delaware Avenue

- No eastbound bike lane east of Murray Road
- 8 foot bike lane on westbound side from Apple Road to West Park Place
- Continuous sidewalks on both sides
- Utility poles within sidewalk
- Multiple entrances hinder usage
- High pedestrian and bicycle activities
- Ramps are not ADA compliant



Transit Needs

Public Transit Route

- DART Route 6, 16, 33,39, 65
- Unicity Bus System Route N-1 and N-3
- University of Delaware Bus System: several routes



Bus Stop facilities

- Most of the bus stops have no bus pad or shelter
- Need for additional bus shelters



Area 1 - Maryland State Line to SR4

Alternative 1

Description

- Mainline - four lane section
- Off road bicycle/pedestrian path
- Double WB left turn lane at Otts Chapel Road
- Crosswalks and pedestrian signals
- On road bike lane

Pros

- No change in existing footprint of Elkton Road
- Improved bicycle/pedestrian mobility and Safety

Cons

- Unsatisfactory Level of Service (LOS) at SR 4 intersection
- Long queue on EB Elkton Road at Haskell Road (AM Peak)
- Long queue on NB Otts Chapel Road

Cost: \$30.3 million

Alternative 2

Description

- Mainline - six lane section from Otts Chapel Road to east of SR 4
- Off road bicycle/pedestrian path
- Double WB left turn lane at Otts Chapel Rd.
- Crosswalks and pedestrian signals
- On road bike lane
- Free flow right turn @ NB Otts Chapel

Pros

- Satisfactory Level of Service (LOS) at all intersections
- Reduction in EB Elkton Road queue length at Otts Chapel Road, Haskell Road and SR 4 intersection

Cons

- Greater right of way impact than other Alternatives

Preferred Alternative of Working Group

Cost: \$35.5 million

Alternative 3

Description

- Mainline - six lane section at SR 4 Intersection
- Crosswalks and pedestrian signals
- On road bike lane
- Off road bicycle/pedestrian path
- Double WB left turn lane at Otts Chapel Road

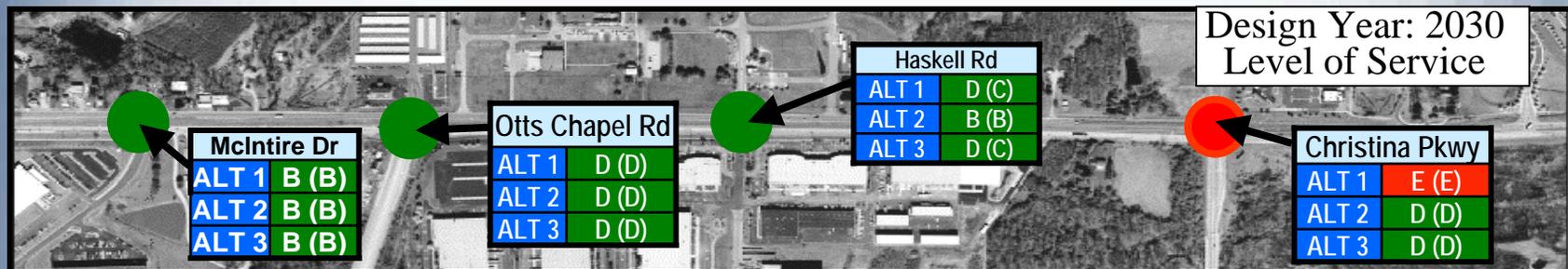
Pros

- Satisfactory Level of Service (LOS) at all intersections
- Minimum impact on median and right of way encroachment

Cons

- Long queues on NB Otts Chapel Road
- Long queue on EB Elkton Road at Haskell Road (AM Peak)

Cost: \$32.3 million



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Area 2 - SR4 to West Park Place

Alternative 1

Description

- Mainline - four lane section
- Add SB left turn at Casho Mill Road
- Close median at Chrysler Ave./ Lincoln Drive

Pros

- Increase mobility and access into town by adding left turn at Casho Mill Road

Cons

- Unsatisfactory Level of Service (LOS) at Casho Mill Road
- Does not reduce rear end and angle crashes at Casho Mill Road
- Long queue on WB Elkton Road at Casho Mill Road

Cost: \$16.8 million

Alternative 2

Description

- Mainline - four lane section
- Change phasing of signal at Casho Mill Road

Pros

- Reduce angle crashes at Casho Mill Road
- Improves capacity over existing condition

Cons

- Vehicles on Casho Mill Road SB right Turn will need to yield to pedestrians

Preferred Alternative of Working Group

Cost: \$16.8 million

Alternative 3

Description

- Same as Alternative 2
- Double EB left turn lane at Casho Mill Road

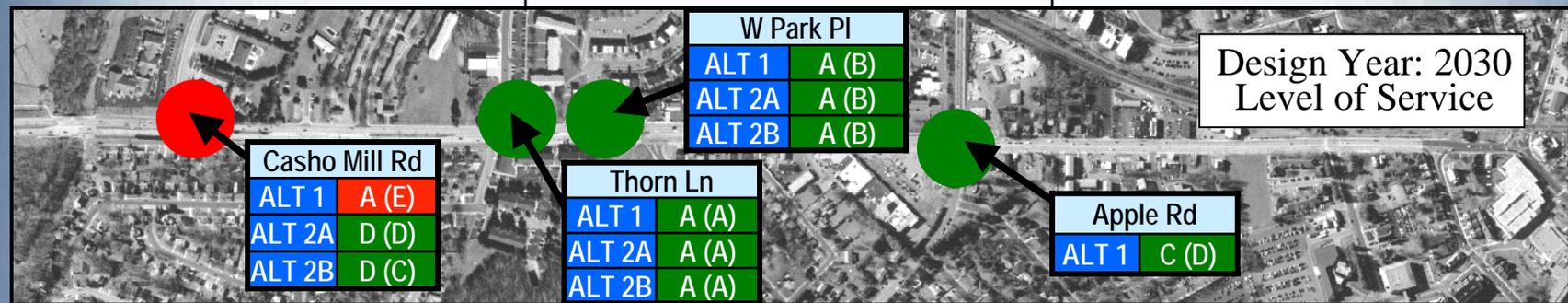
Pros

- Reduce the length of the EB left turn lane at Casho Mill Road
- Reduce angle crashes at Casho Mill Road

Cons

- Right of way and utility impacts at Casho Mill Road / Elkton road
- Short weaving distance on NB Casho Mill Road
- Shift of EB lanes into buffer along Gravenor Road will impact landscape screen
- Longer queue on NB Casho Mill Road at railroad crossing underpass

Cost: \$17.2 million



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Area 3 – W. Park Place to Delaware Ave.

Alternative 1

Description

- Mainline – three lane section with center turn lane from Apple Road to Amstel Ave.
- Reduce access points/prohibit WB left turn at Rittenhouse Road intersection
- SB and WB right turn lanes added to Apple Road/Elkton Road intersection

Pros

- Easy access to businesses
- Continuous 5' – 8' wide bike lane
- Wide median for pedestrian refuge provided at Amstel Road
- Travel speeds will be reduced
- Able to convert to 4-lane roadway in future if capacity needed

Cons

- Reduced capacity of Elkton Road between Apple Road and Amstel Avenue
- Long queue on westbound Elkton Road approaching Amstel Avenue intersection

Preferred Alternative of Working Group

Cost: \$13.0 million

Alternative 2

Description

- Mainline – two lane section with median and left turn lane from Apple Rd. to Amstel Ave.
- Reduce access points / prohibit WB left turn at Rittenhouse Road cross over
- SB and WB right turn lanes added to Apple Road /Elkton Road intersection

Pros

- Continuous 5' - 8' bike lane
- Wide median for pedestrian refuge provided at Amstel Road
- Increase aesthetics by planting trees/shrubs on median islands
- Travel speeds will be reduced

Cons

- Reduce capacity of Elkton Road between Apple Road and Amstel Ave.
- Limited access to businesses – cannot U-turn between Apple Road and Amstel Ave.
- Long queue on WB Elkton Road approaching Amstel Ave. intersection

Cost: \$12.8 million

Alternative 3

Description

- Mainline-four lane undivided (same as existing) eliminating 4' flush median between Apple Road and Amstel Ave.
- Provide 5' bike lane
- Reduce access points/prohibit WB left turn at Rittenhouse Road cross over
- SB and WB right turn lanes added to Apple Road/Elkton Road intersection

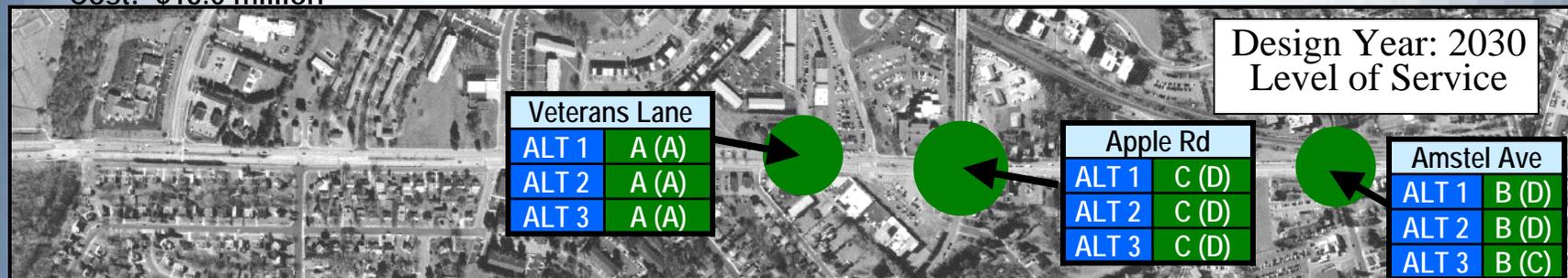
Pros

- Maintain existing roadway capacity of Elkton Road
- Continuous 5' wide bike lane
- Reduction in WB Elkton Road queue at Amstel Ave. intersection
- Minimum property impact

Cons

- Limited traffic calming/pedestrian safety improvement at Amstel Rd.
- Increased potential of speeding
- Left turn access to businesses occurs from thru lanes

Cost: \$12.9 million



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