

# Cleveland Avenue Task Force

## 3/6/2017



# Background

- ▶ Cleveland Avenue between New London Road and Capital Trail is one of the most dangerous in Delaware relative to roads with similar traffic volumes and geometrics
- ▶ FHWA requires DelDOT review it's most dangerous roads through the Hazard Elimination Program (HEP)
- ▶ DelDOT asked the Newark Traffic Committee to lead effort to ensure community buy-in regarding comprehensive motor vehicle, pedestrian, and bicycle safety opportunities
- ▶ Traffic Committee formed the Cleveland Avenue Task Force comprised of community stakeholders to review options and provide recommendations
- ▶ Task Force held five public meetings starting in March of 2016 along with one site visit

# Background Continued

- ▶ Task Force identified existing problems along with options for improvements with a goal of improving safety in the corridor for all road users
- ▶ When appropriate, DelDOT provided modeling assistance to determine impact on intersection delay and travel times
- ▶ Task Force voted on a final slate of recommendations at the October 5<sup>th</sup> meeting and forwarded those recommendations to the Traffic Committee for consideration
- ▶ Traffic Committee voted in favor of all recommendations and forwarded to Council
- ▶ Council requested we hold a Public Information Session prior to Council action

# W. Cleveland Avenue (New London Road to N. College Ave.)

(Task Force Recommendation)

Add striping for eastbound and westbound bicycle lanes

AETNA Feedback – No Concerns



# Cleveland Avenue at N. College Avenue



# Cleveland Avenue at N. College Avenue

## Option 1: (Task Force Recommendation)

Exclusive pedestrian phase “scramble” (Pedestrians would only be permitted to cross when all traffic signals are red – similar to Delaware Ave @ S. College Ave)

- ▶ Decreases intersection delay from 90 seconds to 80 seconds
- ▶ No significant change in delay with right turns on red prohibited
- ▶ No change in delay for pedestrians crossing Cleveland Avenue
- ▶ Minor increase in delay for pedestrians crossing North College Avenue

AETNA Feedback – No Concerns, makes sense for pedestrian safety

# Cleveland Avenue at N. College Avenue

## Option 2: (Not Recommended)

Northbound/Southbound N. College Avenue split (sequential) phasing (northbound traffic on N. College Ave and southbound traffic on N. College Ave each has its own green cycle-meaning both directions do not proceed at the same time)

- ▶ Increases intersection delay to 150 seconds from 90 seconds
- ▶ Adding pedestrian scramble to the split phasing increases delay to 215 seconds from 90 seconds

# Cleveland Avenue at N. College Avenue

## Option 3: (Not Recommended)

Southbound N. College Ave left-turn phase; requires No Right Turn on Red for northbound N. College Ave

- ▶ Decreases southbound delay from 50 seconds to 35 seconds (AM)
- ▶ Increases overall intersection delay from 90 seconds to 170 seconds (AM)
- ▶ Decreases southbound delay from 85 seconds to 40 seconds (PM)
- ▶ Increases overall intersection delay from 90 seconds to 130 seconds (PM)



# Cleveland Avenue at N. College Avenue

## Option 4: (Task Force Recommendation)

Constructing northbound N. College Ave right turn lane

- ▶ Decreases intersection delay by 15 seconds
- ▶ Not currently feasible due to ownership issues

AETNA Feedback – No Concerns

# E. Cleveland Ave (N. College Ave – Paper Mill Rd)



# E. Cleveland Ave (N. College Ave – Paper Mill Rd)

## Option 1: (Task Force Recommendation)

Remove residential parking on the south side of the roadway

- ▶ Allows for the installation of eastbound and westbound bicycle lanes
- ▶ Moves the travel portion of the roadway away from the sidewalks/pedestrians
- ▶ Eliminates parking spaces for residents
- ▶ Requires accommodation for existing handicapped parking spaces
- ▶ Allows for pedestrian refuge island at Wilbur Street crosswalk

AETNA Feedback – No Concerns

# E. Cleveland Ave (N. College Ave – Paper Mill Rd)

Option 2: (Task Force Recommendation)

Creation of a refuge island for pedestrians at E. Cleveland Ave/Wilbur St

- ▶ Restricts ability to install bike lanes in this location
- ▶ Does not address conflict with southbound left turning vehicles

AETNA Feedback – Maximize lane width or combined vehicle/bike lane width, minimize island signage, use mountable curbs



# N. Chapel St/Paper Mill Rd/Margaret St



# N. Chapel St/Paper Mill Rd/Margaret St

## Option 1: (Task Force Recommendation)

Convert Margaret St to one-way street northbound and signalize Creek View Road to allow for left turns onto southbound Paper Mill Road

- ▶ Decreases intersection delay from 85 seconds to 65 seconds

AETNA Feedback – No Concerns as long as access from Cleveland Avenue is maintained

# N. Chapel St/Paper Mill Rd/Margaret St

## Option 2: (Not Recommended)

Exclusive pedestrian phase “scramble” (Pedestrians would be permitted to cross when all traffic signals are red – similar to Delaware Ave @ S. College Ave)

- ▶ Increases intersection delay from 85 seconds to 245 seconds
- ▶ With one-way Margaret St, increases intersection delay from 85 seconds to 155 seconds

# N. Chapel St/Paper Mill Rd/Margaret St

## Option 3: (Not Recommended)

Exclusive bicycle phase “scramble” (Bicycles but not pedestrians would be permitted to cross when all traffic signals are red – similar to Delaware Ave @ S. College Ave)

- ▶ Increases intersection delay from 85 seconds to 125 seconds
- ▶ With one-way Margaret St, still increases intersection delay from 85 seconds to 100 seconds
- ▶ Would require bike specific signals



# N. Chapel St/Paper Mill Rd/Margaret St

## Option 4: (Not Recommended)

### Single-lane roundabout

- ▶ PM peak-hour volumes for each approach are 50% to 80% over capacity
- ▶ Average delay per vehicle is 420 seconds
- ▶ Likely over capacity beginning at 6:30 AM with congestion through 9:30 PM

## E. Cleveland Ave Paper Mill Road to Capitol Trail



# E. Cleveland Avenue (Paper Mill Rd – Capitol Trail)

(Task Force Recommendation)

“Road Diet” (Making E. Cleveland Ave between Paper Mill Rd and Capitol Trail a two lane roadway with a center shared left turn lane like South Main Street. The turn lanes at Paper Mill Rd/S. Chapel St/Margaret St and at Capitol Trail would remain the same as currently configured.)

- ▶ No significant changes to eastbound/westbound travel times between N. Chapel St/Paper Mill Rd and Capitol Trail
- ▶ Westbound through at Winner Blvd 95<sup>th</sup> percentile queue length increases from 160 feet to 575 feet
- ▶ No significant changes/delays at Paper Mill Rd, Winner Blvd, or Capitol Trail
- ▶ Installation of bicycle lanes and mid-block crosswalks with pedestrian refuge islands possible in narrowed road section

AETNA Feedback – No Concerns

# McKees Lane



# McKees Lane

Option 1: (Task Force Recommendation – If Florida-T is Approved and Lane Diet is Approved)

Install “Hawk” (High-Intensity Activated crossWalk) signal (Essentially a traffic signal that is activated by pedestrians to cross safely)

- ▶ Negative impact to eastbound and westbound traffic queues would be moderate
- ▶ Impacts to Cleveland Avenue traffic would be limited to when pedestrians need to cross so much less frequently than Option 2
- ▶ Moderate/High level of pedestrian safety

AETNA Feedback – If including a refuge island, maximize lane width or combined vehicle/bike lane width, minimize island signage, use mountable curbs

# McKees Lane

## Option 2: (Not Recommended)

Install traditional traffic signal to assist pedestrians in crossing safely.

- ▶ Negative impact to eastbound and westbound traffic queues would be significant
- ▶ Signal could be activated by vehicles and pedestrians making impacts to Cleveland Avenue traffic much more frequent compared to Options 1 and 3
- ▶ Highest level of pedestrian safety

AETNA Feedback – If including a refuge island, maximize lane width or combined vehicle/bike lane width, minimize island signage, use mountable curbs

# McKees Lane

Option 3: (Task Force Recommendation – If Florida-T is Not Approved, Lane Diet is Approved)

Install a crosswalk west of McKees Lane with a central pedestrian refuge island (requires lane diet) with a Rectangular Rapid Flash Beacon (RRFB)

- ▶ Negative impact to eastbound and westbound traffic queues would be moderate
- ▶ Impacts to Cleveland Avenue traffic would be limited to when pedestrians need to cross so much less frequently than Option 2
- ▶ Moderate level of pedestrian safety

AETNA Feedback – If including a refuge island, maximize lane width or combined vehicle/bike lane width, minimize island signage, use mountable curbs

## E. Cleveland Ave/Capitol Tr/Woodlawn Ave





# E. Cleveland Ave/Capitol Trail/Woodlawn Ave

## Option 1: (Task Force Recommendation)

“Florida-T” intersection – Woodlawn Ave would become a right turn in/right turn out only intersection with no traffic signal phase for Woodlawn Ave.

- ▶ DeIDOT will discuss specifics in separate presentation

# E. Cleveland Ave/Capitol Trail/Woodlawn Ave

## Option 2: (Not Recommended)

Change Eastbound E. Cleveland Ave at Capitol Trail to no turn on red

- ▶ Increases eastbound traffic queue by 75 feet
- ▶ Increases eastbound right turn delay from 30 seconds to 35 seconds
- ▶ Improves pedestrian safety in crosswalk versus existing condition but not Florida T option
- ▶ Reduces opportunity for collisions with left turning vehicles exiting from Woodlawn Avenue

# E. Cleveland Ave/Capitol Trail/Woodlawn Ave

## Option 3: (Not Recommended)

Change Southbound Capitol Trail at E. Cleveland Ave to no turn on red

- ▶ Increases southbound queue by 90 feet
- ▶ Increases southbound right-turn delay from 5 seconds to 20 seconds
- ▶ Improves pedestrian safety in crosswalk