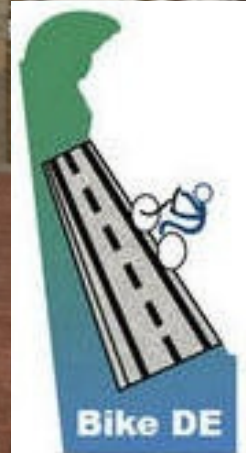




# RESTORING THE DELAWARE AVENUE BIKE LANE: SOUTH CHAPEL STREET TO TYRE AVENUE, NEWARK, DE



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By Trevor Booz in conjunction with Bike Delaware

# Background



- Delaware Avenue is a primary eastbound bike route through Newark, DE
  - ▣ Connects University of Delaware to surrounding areas, including Newark Shopping Center, Library
- Bike lane present along entire length of Delaware Avenue from Elkton Road to Library Ave (SR 72)
  - ▣ Well defined bike lane exists everywhere except between South Chapel Street and Tyre Avenue
  - ▣ Pedestrian refuge island at South Chapel Street (Pork Chop) and entrance to University Courtyard Apartments have led to a discontinuous bike lane



# Problem Areas



# Pedestrian Refuge Island at South Chapel Street (Pork Chop)

- Recently installed “Pork Chop” island consumes a large width of former bike lane
  - Bike lane striping disappears and it is unclear where motorists should position themselves
  - Motorists following natural lane flow through intersection typically pass within a few feet of the pork chop (dry run tested)
  - Motorists must move out to provide safe passing room for cyclists





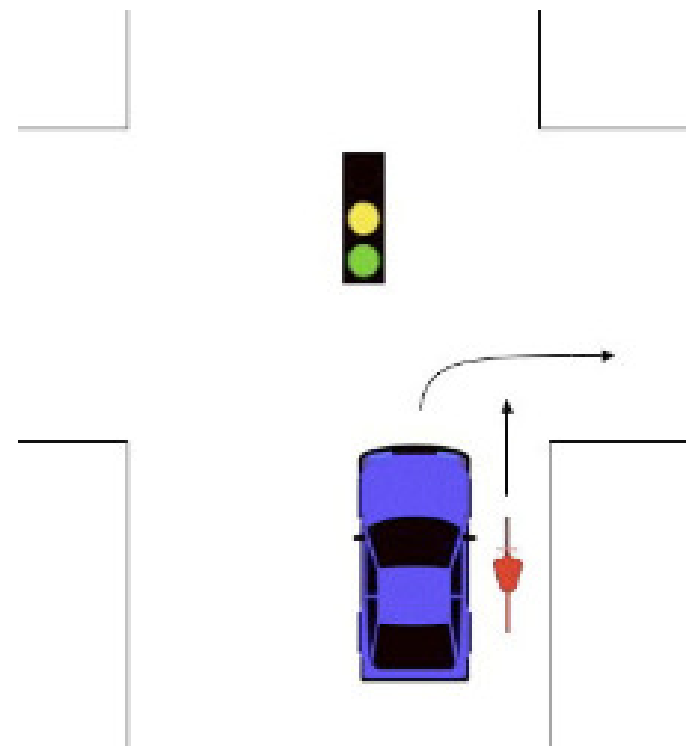
# University Courtyard Entrance

- Bike lane has been interrupted by shoulder striping
  - ▣ White shoulder striping channelizes motorists into the apt complex without acknowledging bike lane
  - ▣ Such channelization encourages motorists to maintain speed as they come around bicyclists
    - Location is a well known danger zone where motorists turn directly in front of the path of a cyclist, aka the “Right Hook”



# University Courtyard Entrance

- Turning motorists overtaking a cyclist can lead to right hook conflicts, commonly leading to bicycle injuries and fatalities
- Channelizing adds to motorists perception that they have the right of way in a turn
- It is not clear why the bike lanes were omitted in favor of higher speed turning, given the 25mph speed limit and the abundance of non-motorized activity



# Proposed Solutions – South Chapel St Pork Chop

- Stripe bike lane next to pork chop island to make motorists aware of a cyclist's presence
- Right hand lane is about 3-4ft wider than left
  - ▣ Extra space can be converted into narrow bike lane with no pork chop alteration
- Continue dashed line through yield area to indicate potential cyclists presence
- If replacing bike lane striping is denied, reduce pork chop encroachment to restore 4' offset from original white shoulder line. This would comply with DeIDOT Design Guidance Memorandum 1-22: Triangular Channelizing Islands of August 1, 2009 (Island was installed approx. 1 year later).

# Proposed Solutions – South Chapel St Pork Chop



Current



Proposed



# Proposed Solutions – University Courtyard Apartments

- Remove curved channelized turning lines
  - ▣ Leave solid shoulder line with broken openings at entrance
  - ▣ Add at least one bike lane symbol before intersection
- Or add dashed striping through turning area to create awareness for cyclists
  - ▣ Minor adding/removal of paint
  - ▣ Add at least one bike lane symbol before intersection

# Proposed Solutions – University Courtyard Apartments



Current



Proposed 1



Proposed 2

# Refresh Bike Lane Symbols at Eastern End

- Bike lane symbols along Delaware Avenue east of South Chapel Street are very sparse/faded
  - ▣ This section continues to have striping refreshed while symbols fade
  - ▣ Refresh existing symbols or perhaps add additional symbols through S-curve and in front of high school to indicate bike lane



Faded bike lane symbol in front of Newark High School