

An aerial photograph of Middletown Township, Bucks County, Pennsylvania, showing various commercial buildings, parking lots, and green spaces. A semi-transparent gear and sun icon is overlaid in the center of the image. The sky is blue with scattered white clouds.

# Middletown Township

## Multimodal Improvement Plan

MIDDLETOWN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

Public Meeting #3 - 9.28.23

# Agenda

1. Project Status: Review of Scope/Schedule
2. Summary of Public Input
  - *Public Meeting #2 Review*
  - *Opinion Survey*
  - *Online Mapping*
3. Draft Final Improvements Plan
  - *Discussion/ Comment*
4. Advanced Investigation
  - *Woodbourne Corridor*
  - *Business Route 1 Corridor*
5. Cost Estimate
6. Next Steps
7. Discussion





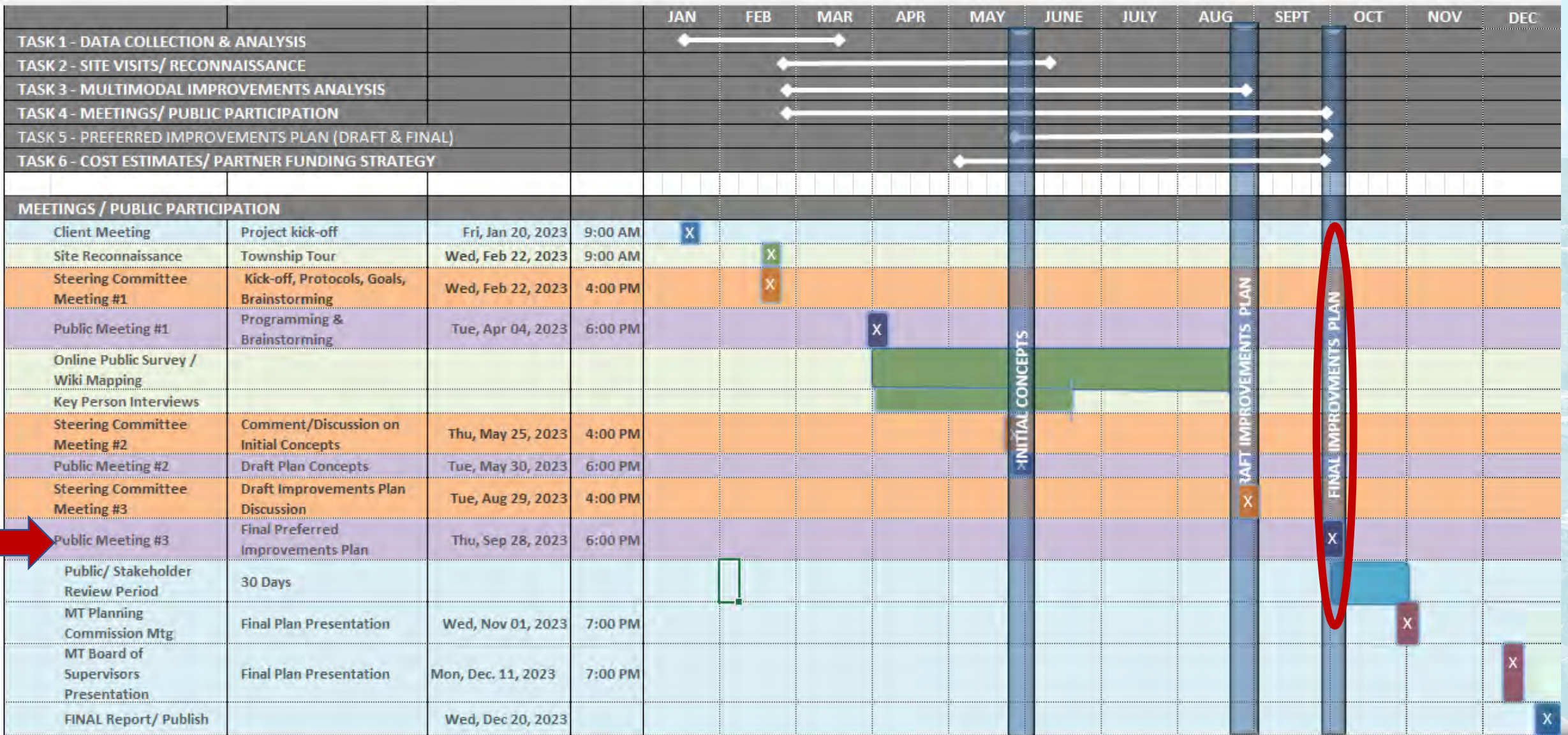
# Project Status: Review of Scope & Schedule

# Project Status

## Scope items

1. **Data Collection**
2. **Site Reconnaissance**
3. **Analysis**
4. **Public Participation/ Stakeholders**
5. **Draft/ Final Improvements Plan & Final Report**
6. **Develop Costs & Funding Strategy**

# Project Schedule



An aerial photograph of a town, likely Middletown Township, showing residential areas, commercial buildings, and parking lots. The image is overlaid with a semi-transparent blue filter. At the top, there is a dark blue horizontal banner containing the title text in yellow.

# Summary of Public input

# Public Meeting #2 - May 30, 2023

## Highlights:

- 13 In-Person Attendees
- 6 Virtual Attendees
- Map Participation

## Discussion Points

- Sidewalks/ Parked Cars/ Jaywalking
- Pedestrian and Driver Education
- Sidewalk Gaps / Obeying Traffic Conventions/ Need for Signage
- Better Signage & Traffic Markings
- Timeline for Implementation of Improvements
- PennDOT RC3 Project / Kingville Road
- Newtown Rail Trail/ George School Connection?
- Brownsville Road Area/ Neshaminy High School
- Old Lincoln Highway/ Hulmeville Road-Pennel Borough



# Public Opinion Survey

Responses Volume

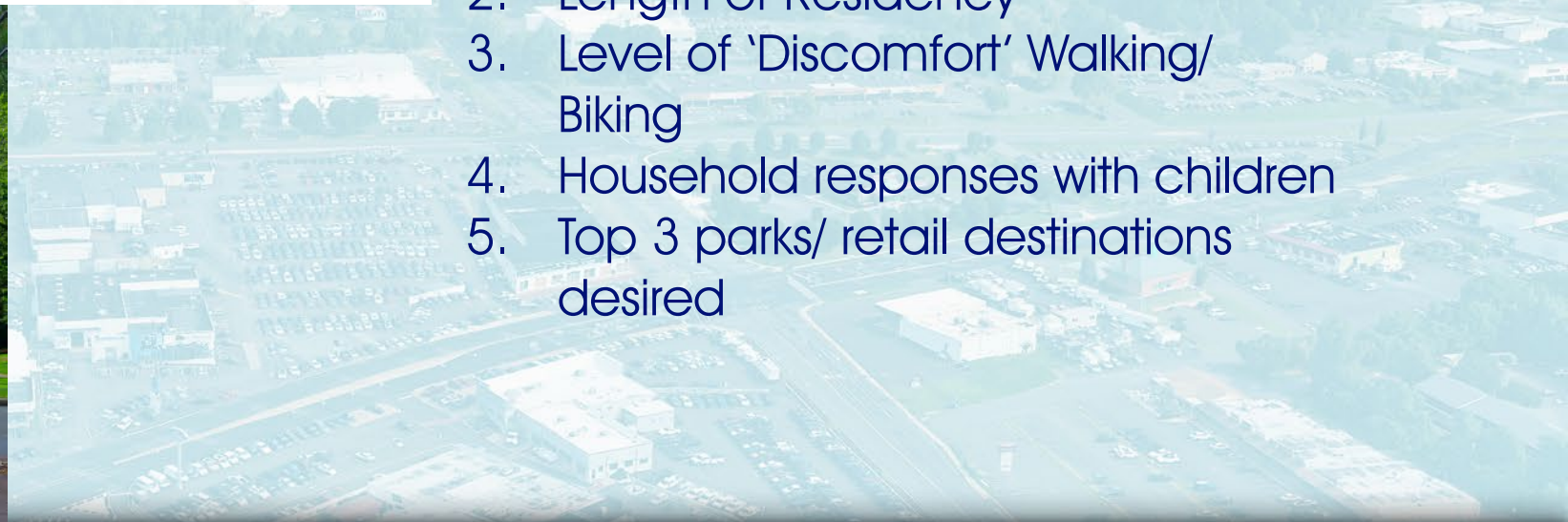


## Interesting Demographic Data from responses:

- 287 Total responses

## Highlights:

1. Age
2. Length of Residency
3. Level of 'Discomfort' Walking/ Biking
4. Household responses with children
5. Top 3 parks/ retail destinations desired





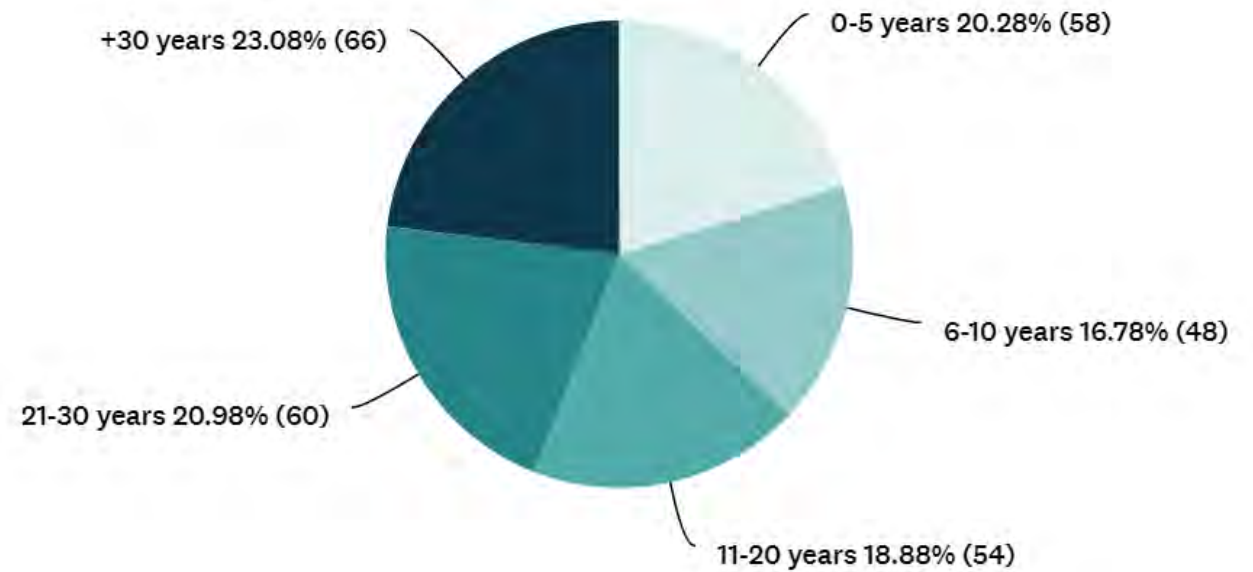
# Public Opinion Survey

## Highlights:

- Age  
12 years-64 years: 78.5%  
65 years+: 21.5%
- Length of Residency
- Level of 'Discomfort' Walking/ Biking  
*Walking: 53.1% Uncomfortable/Very Uncomfortable*  
*Biking: 72.3% Uncomfortable/ Very Uncomfortable*

How many years have you lived at your current address?

Answered: 286 Skipped: 1



# Public Opinion Survey

## Highlights:

- Typical Household Occupants (Age Breakdown)
- Top 3 parks/ retail destinations desired

### Parks

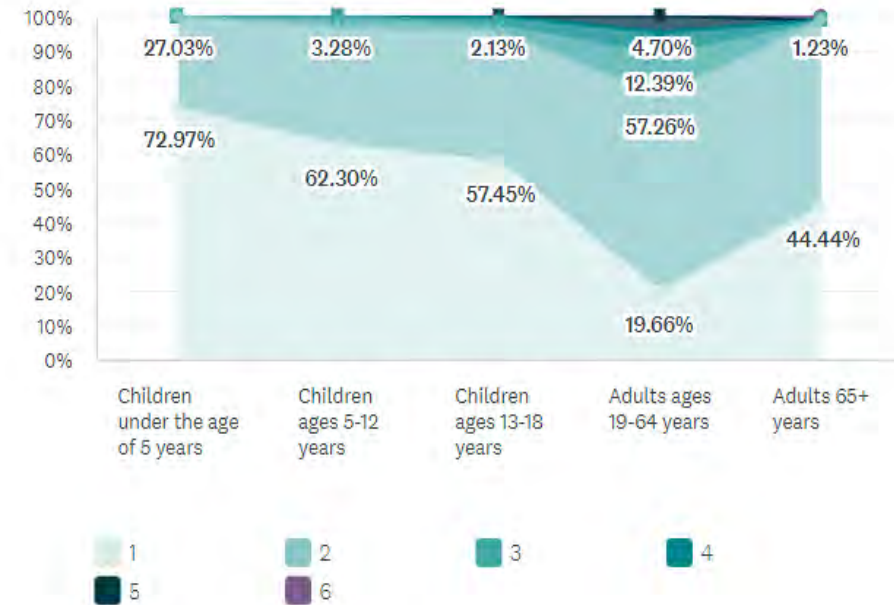
1. Core Creek Park
2. Styer Orchard
3. Middletown Community Park
4. Playwicki Park

### Retail

- Oxford Valley Mall
- Shoppes at Flowers Mill
- Summitt Shopping Ctr; Langhorne Square Shopping Ctr.

What age groups currently live in your household? Please indicate number in each category.

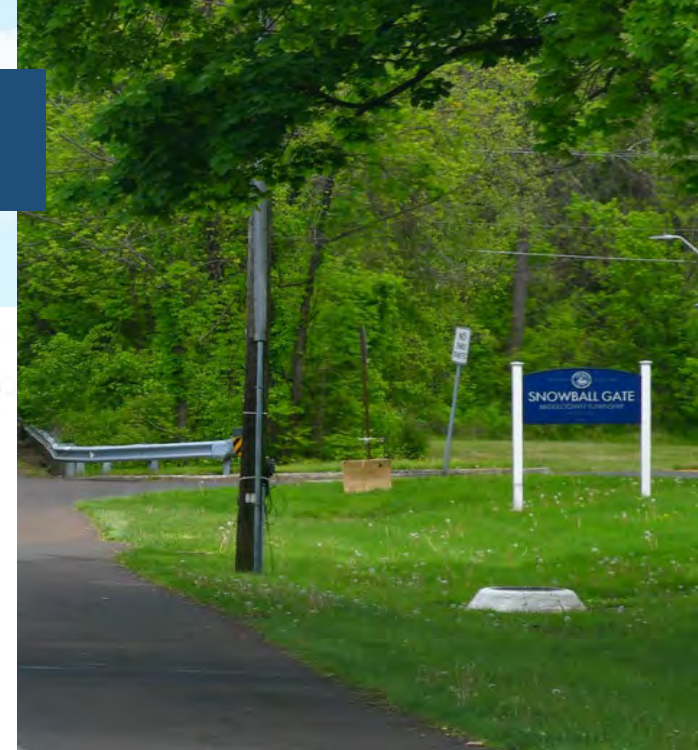
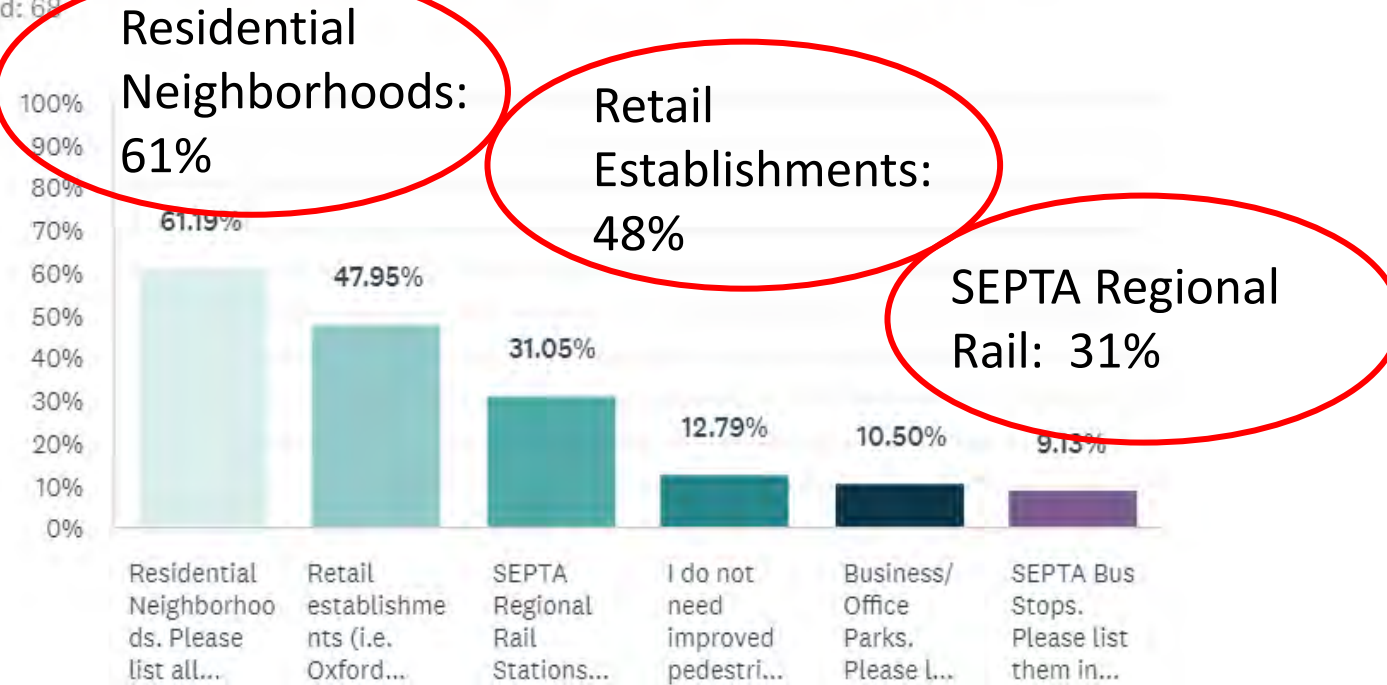
Answered: 277 Skipped: 2



# Public Opinion Survey

To what areas would you like improved pedestrian and/or bicycle access?  
(Please indicate specific locations within 'Other' that apply to you, or use the mapping tool which is linked at the end of this survey)

Answered: 219 Skipped: 69



# Public Opinion Survey

## What locations are people talking about?

### Neighborhoods

- Highland Gate
- Old Mill Woods
- Maple Point
- The 'Gates' (Forsythia, Red Rose)
- Cider Knoll
- Cobalt Ridge, Quincy Hollow

### Roads

- Woodbourne
- Hulmeville Rd
- Trenton Road
- Durham
- Village Road
- Langhorne-Yardley Road (between Bridgetown & Woodbourne)
- Business Route 1 (Old Lincoln Highway)



# Public Opinion Survey

What are other issues of concern shared in this survey...?

Quality/need for SEPTA  
Bus Stops

Completion of Newtown Rail  
Trail; connections to regional  
trails

Concern about vehicle  
speeds

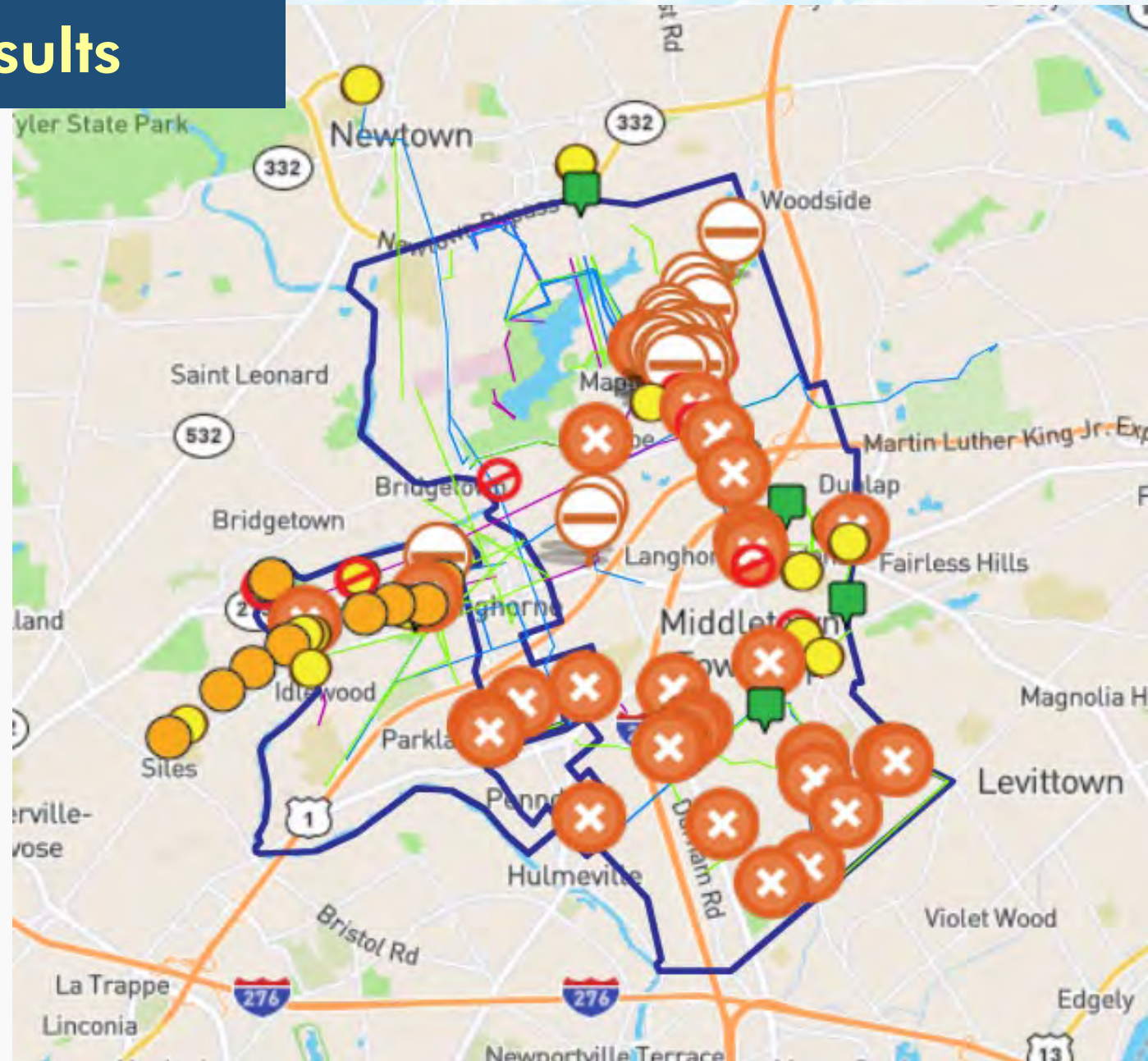
Sidewalks in  
neighborhoods...parked cars!

Maintenance of streets;  
poor condition of  
sidewalks

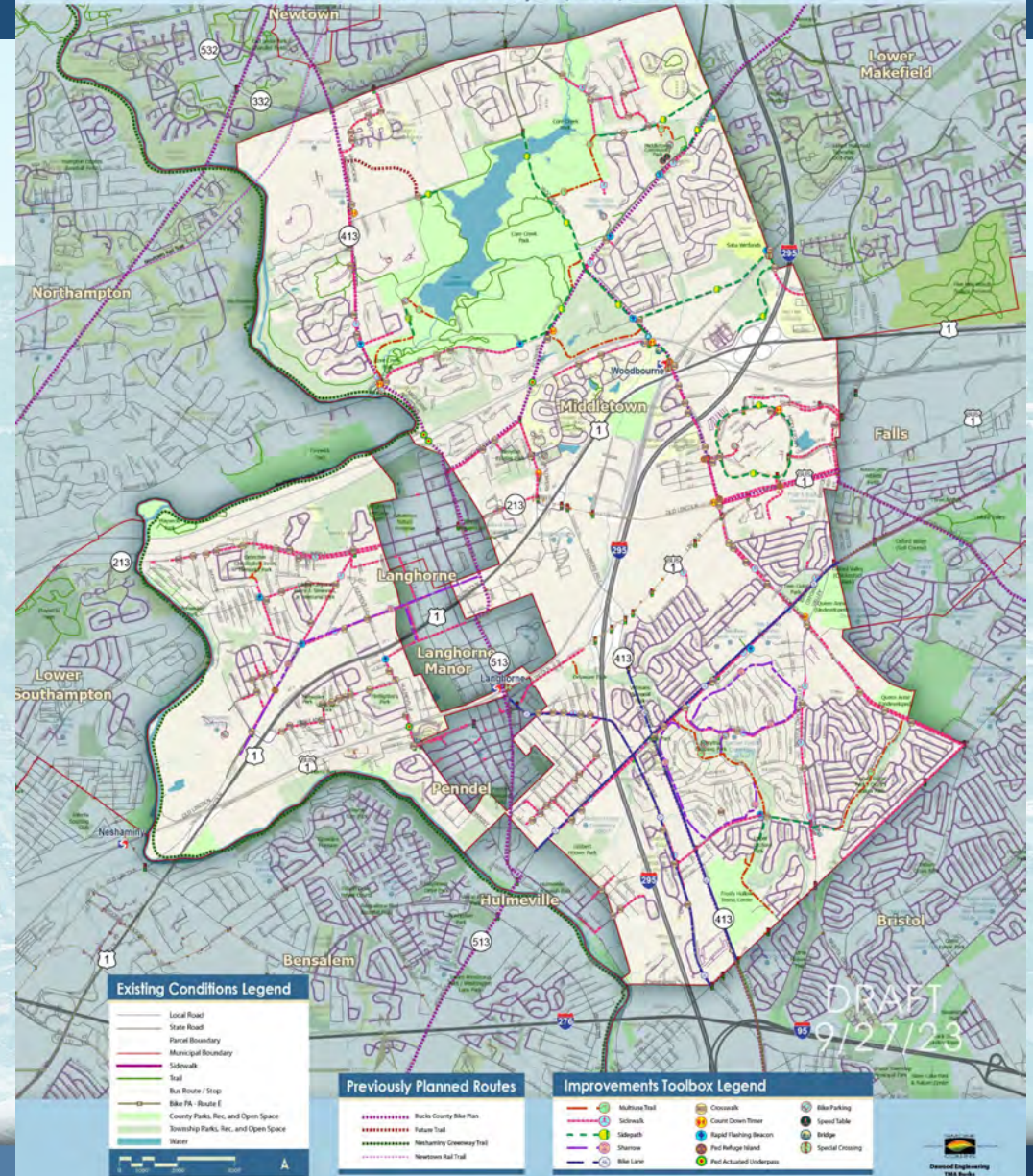
# Wikimap/Online Mapping – Results

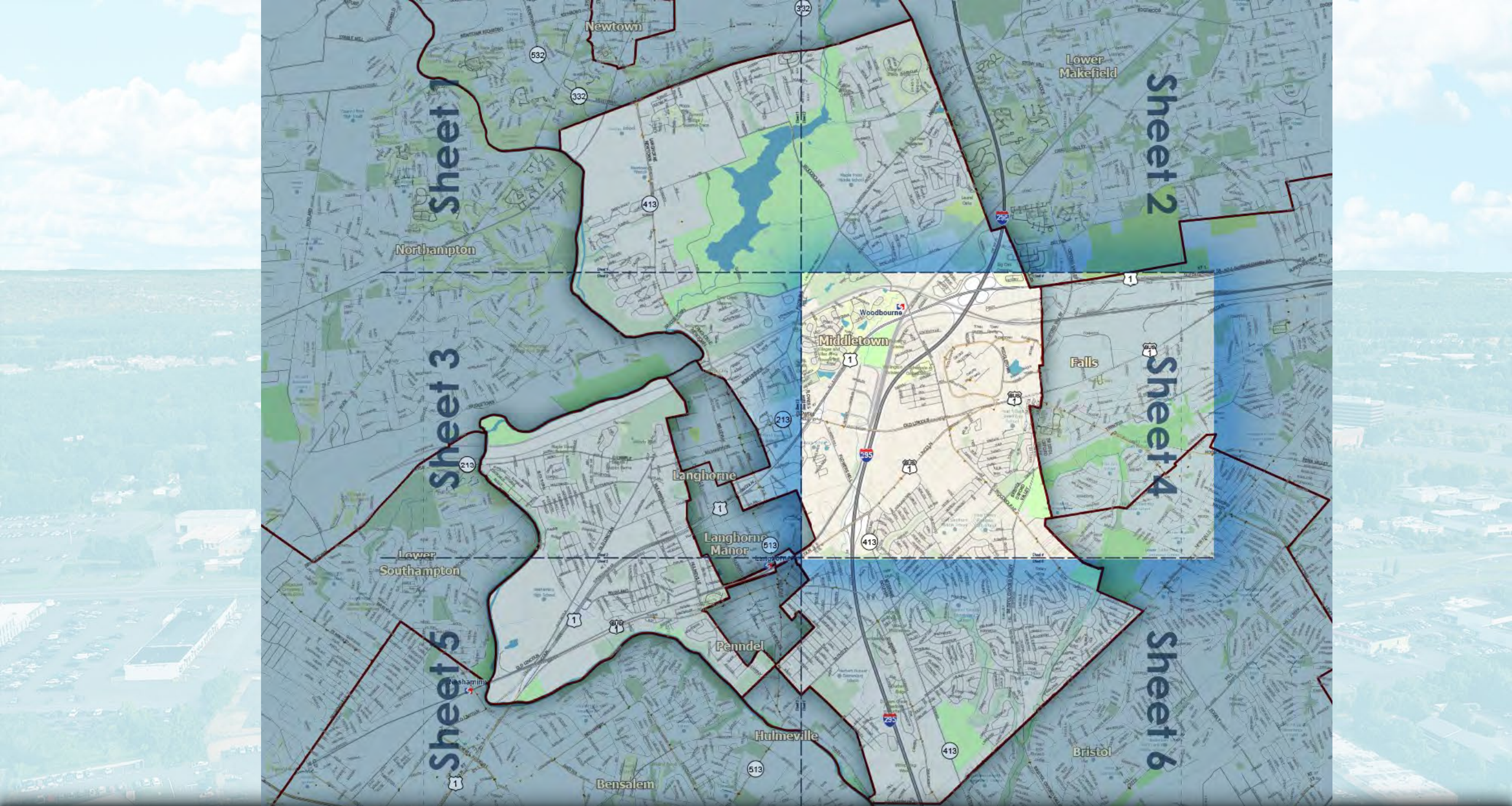
## 223 Results

-  • BARRIERS TO CONNECTIVITY 41 total
-  • DESIRED BIKE ROUTE (26 Total)
-  • DESIRED SIDEWALK (54 Total)
-  • DESIRED TRAIL (20 Total)
-  • CHALLENGING AREAS (33 Total)
-  • CULTURAL/HISTORIC LOCATION (0 Total)
-  • DESIRED DESTINATION (20 Total)
-  • SIDEWALK GAP LOCATION (22 Total)

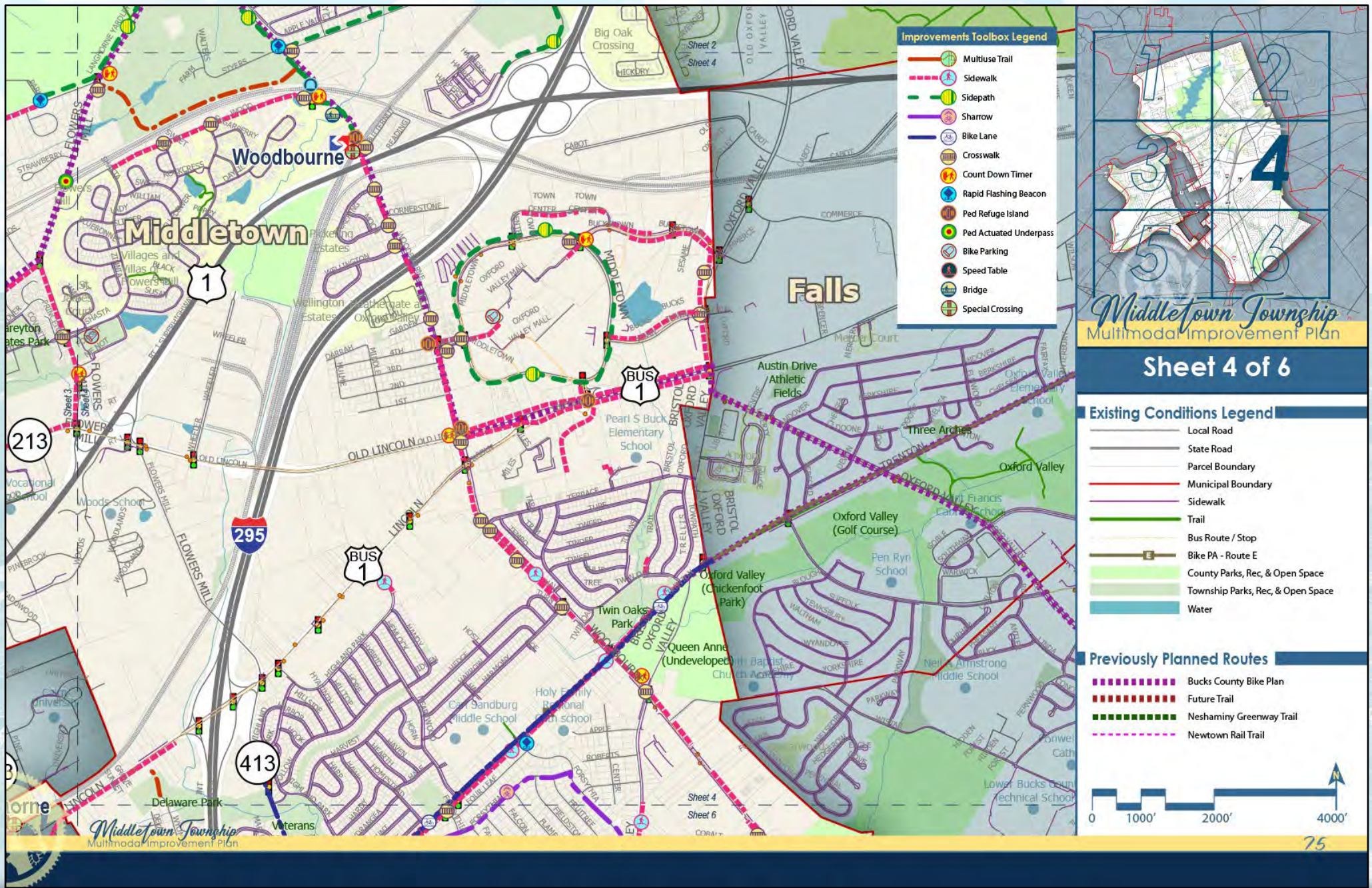


# DRAFT Improvements Plan











# Advanced Investigation

**Woodbourne Rd Corridor**  
**Business Route 1 Corridor**

# Advanced Investigation: Goals

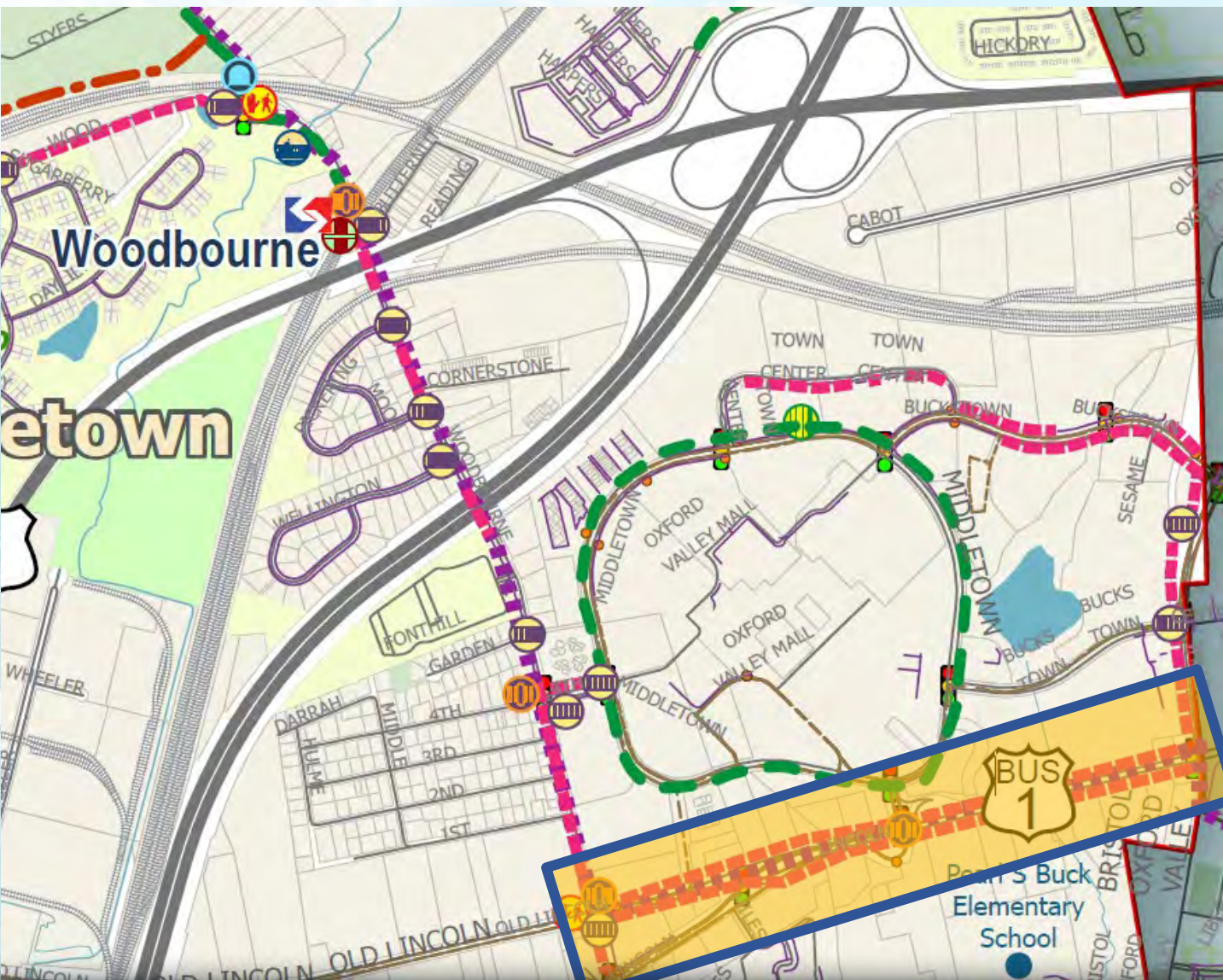


## Woodbourne Corridor

*Limits: Wood Lane/ Woodbourne Lane Tunnel to Business Route 1*

- Data Gathering
- Preliminary Horizontal Alignment of Improvement Elements
- Assessment of ROW and Affected Parcels
- Identification of utility and drainage issues
- Feasibility of New Tunnel at Woodbourne Underpass
- Design & Constructability Next Steps
- Readiness for future grant applications

# Advanced Investigation: Goals



## Business Route 1

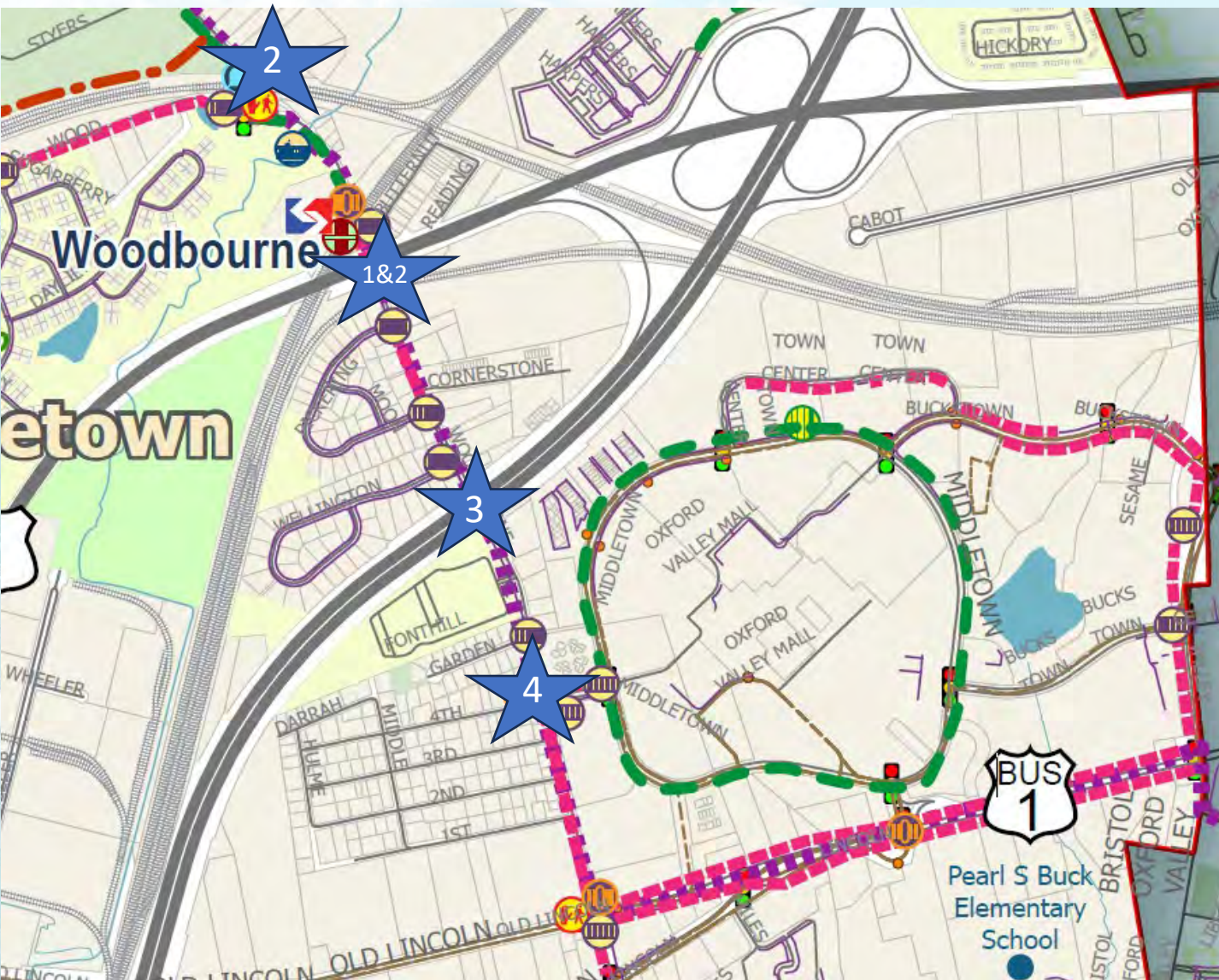
*Limits: Woodbourne Lane to Falls Twp*

- Data Gathering
- Preliminary Horizontal Alignment of Improvement Elements
- Recommendations on Preferred North-South Crossings
- Recommendations on a Phasing of corridor improvements
- Relationship to Bristol-Oxford Valley Road improvements at Twp boundary
- Design & Constructability Next Steps
- Readiness for future grant applications

# Woodbourne Station Area



# Woodbourne Corridor



## Four Critical Points

1. Assessment of Ped Access at Route 1
2. Pedestrian Tunnels: Route 1 & Wood/Woodbourne
3. Sidewalk addition on Interstate Route 295 overpass
4. Crossing pedestrians from the western to eastern side of Woodbourne at the traffic-controlled intersection of Woodbourne Road and 4<sup>th</sup> Street.

# Critical Point : Assess Ped Access at Wood Ln/ Woodbourne



Option 1: Add separate pedestrian tunnel at Wood Lane/Woodbourne Road, looking NB



Option 2: Widen vehicle tunnel to include pedestrian facility at Wood Lane/Woodbourne Rd

# Critical Point : Assess Ped Access at Route 1



2' wide shoulder

5' wide shoulder

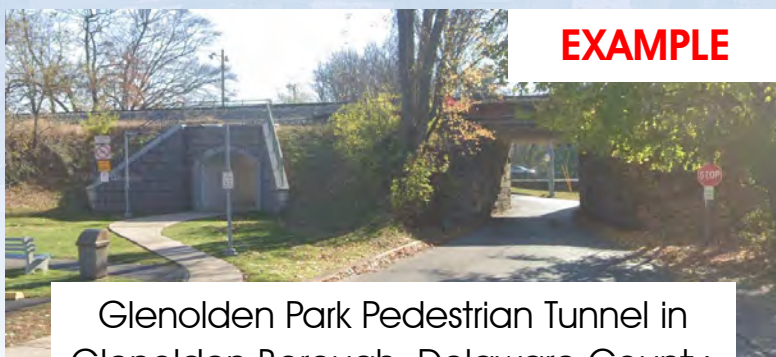
Current condition: Woodbourne Road at Route 1 overpass, looking NB



Option 1

Option 1: Propose pedestrian tunnel parallel to Woodbourne Road

Option 2: Propose reduced width (<4') pedestrian lane in shoulder of Woodbourne Road



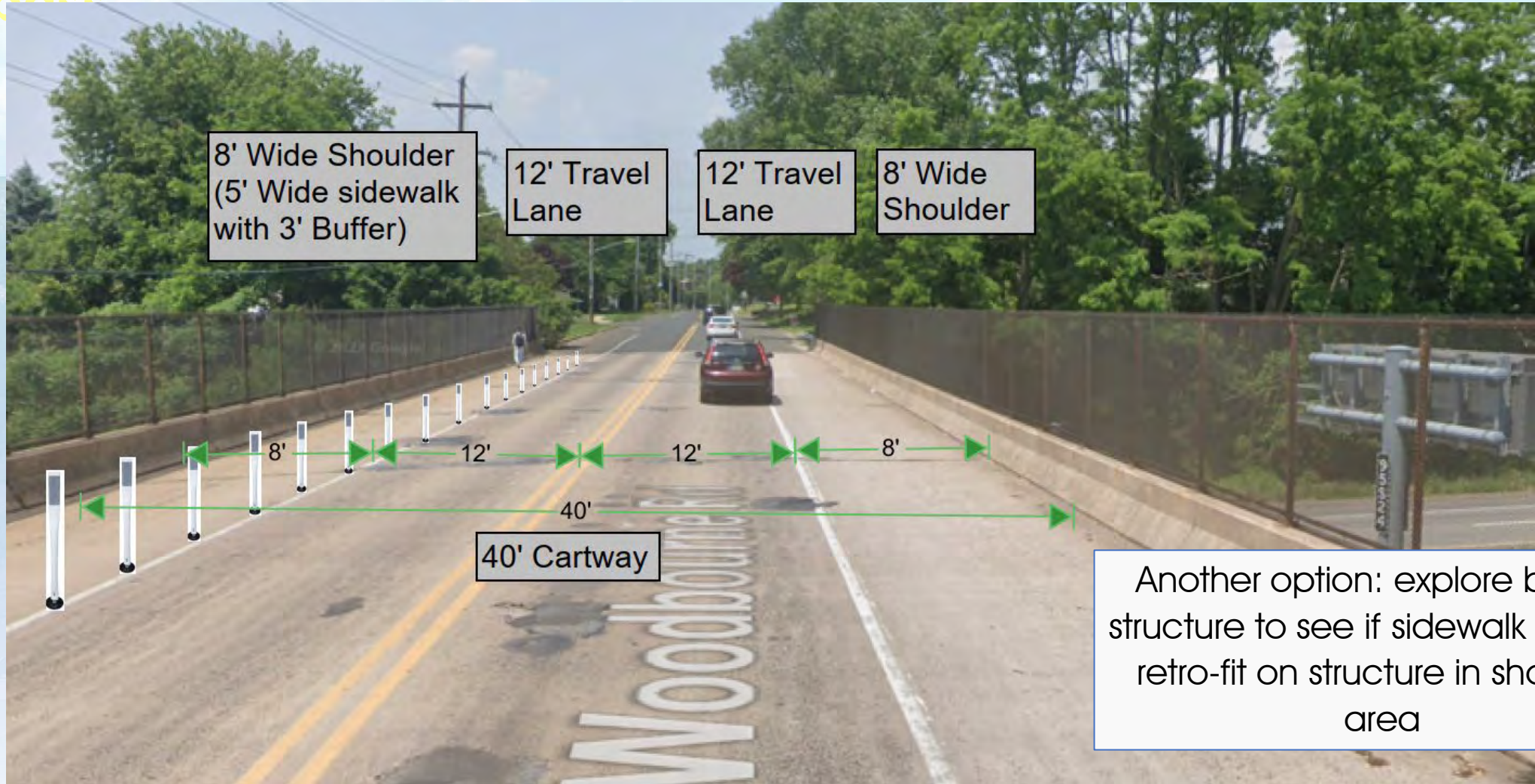
**EXAMPLE**

Glenolden Park Pedestrian Tunnel in Glenolden Borough, Delaware County, PA



# Critical Point 3 : : Sidewalk on I-295

## Overpass



I-295 Overpass with proposed sidewalk along western side of Woodbourne Road

# Critical Point 4 : : Pedestrian crossing at 4<sup>th</sup> Street



Woodbourne Road and 4<sup>th</sup> Street Intersection  
Pedestrian Crossing Aerial View

# Critical Point 4: Sidewalk along Woodbourne Road



Image 1: Woodbourne Road approaching 4<sup>th</sup> Street intersection, looking northbound

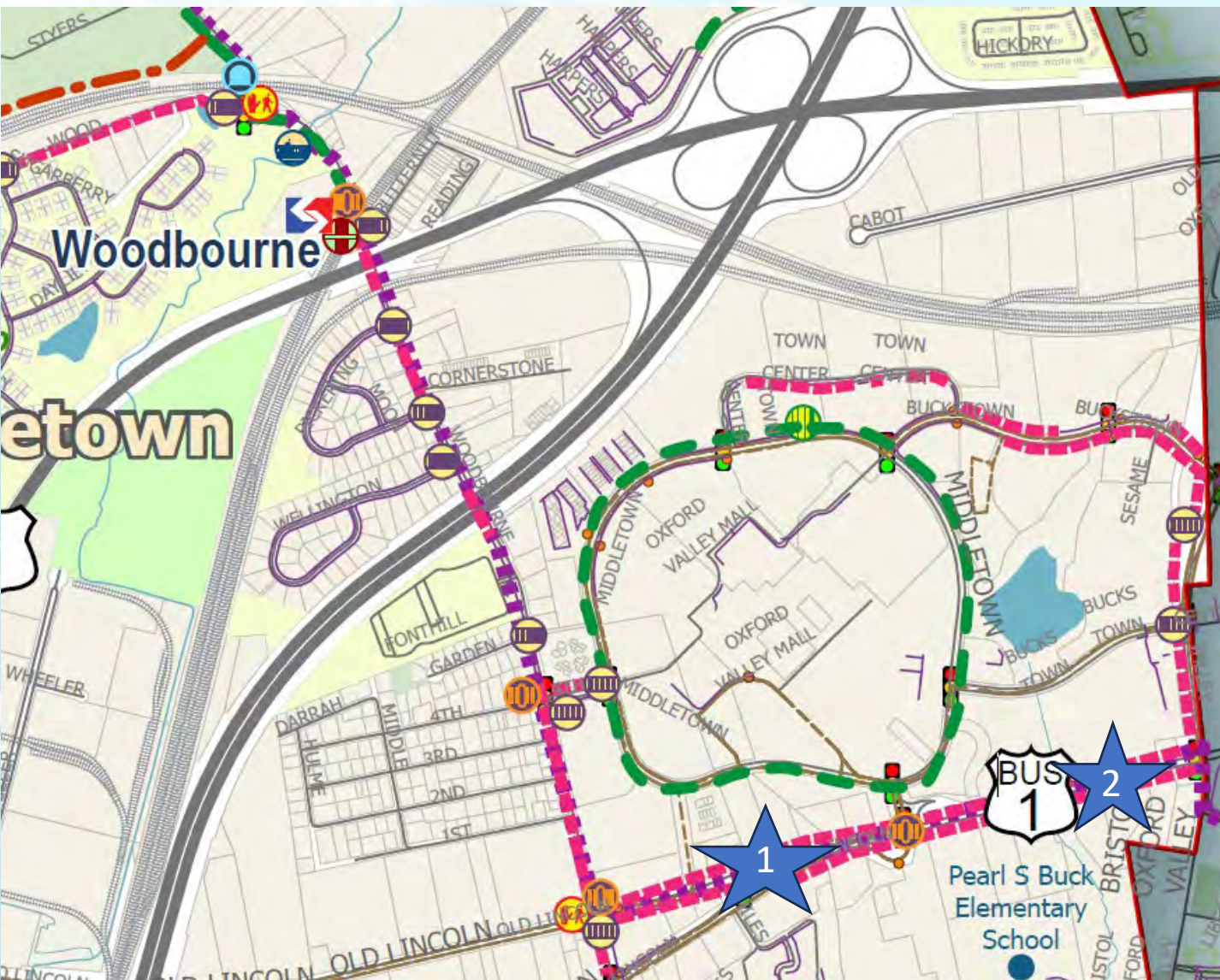


Image 2: Woodbourne Road approaching 4<sup>th</sup> Street intersection, looking southbound

# Business Route 1 Corridor



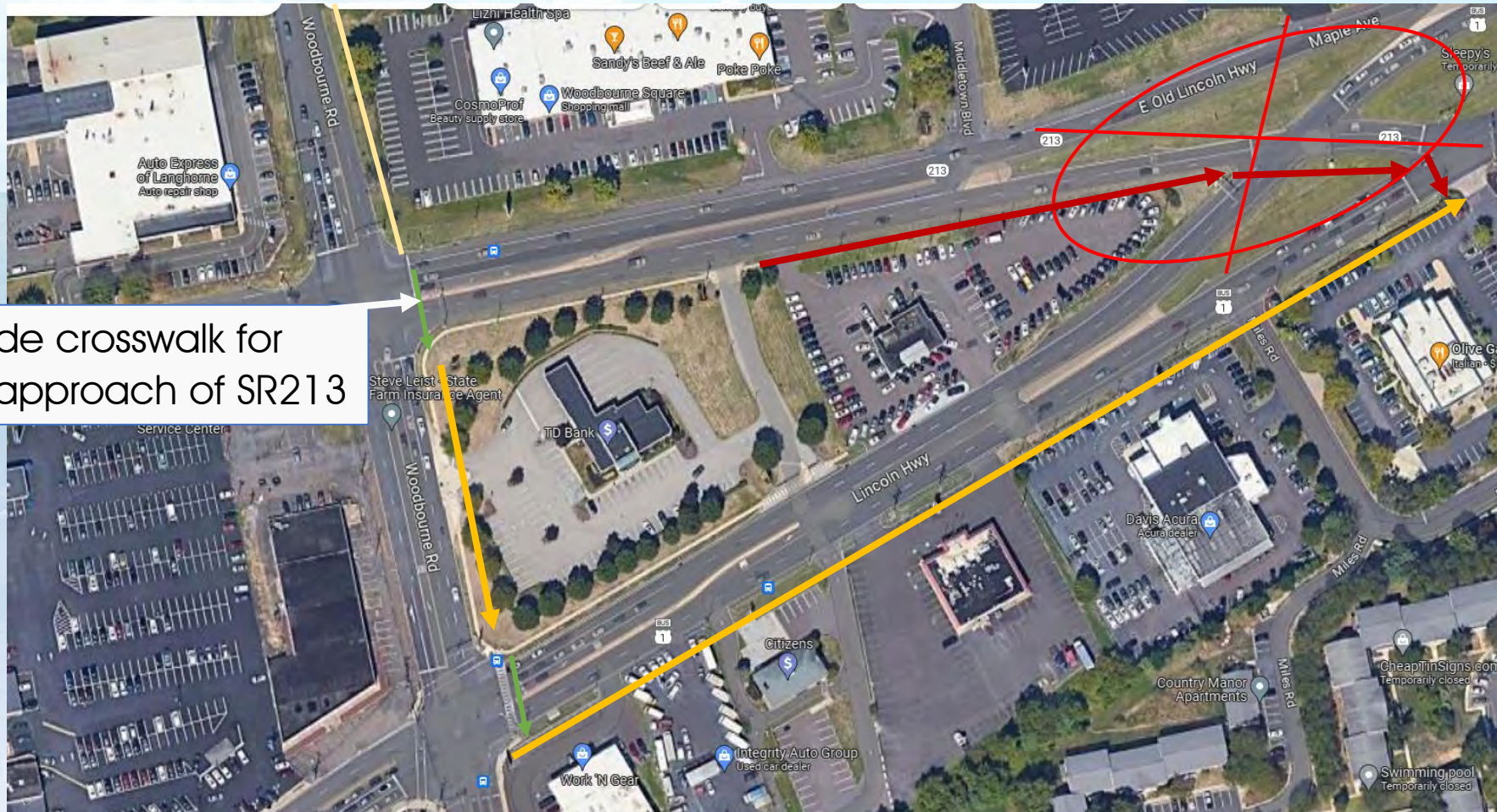
# Business Route 1 Corridor



## Two Critical Points

1. Avoid E Old Lincoln Hwy/Bus. Route 1 Crossovers – pedestrian accessibility using parallel route
2. Drainage structure on Business Route 1 – pedestrian bridge over stream and steep sidewalk grades over drainage structure

# Critical Point 1: Avoid E Old Lincoln Hwy/Bus. Route 1 Crossovers



The option was explored to provide sidewalk parallel to crossover, but safety is a concern

Provide crosswalk for eastern approach of SR213

Bird's Eye Aerial of 3 intersections: Woodbourne Rd & E Old Lincoln Hwy/Maple Ave,

Woodbourne Rd & Business Route 1, and E Old Lincoln Hwy/Maple Ave and Business Route 1 crossover

# Critical Point : Drainage Structure on Business Route 1

The option was explored to provide pedestrian accessibility on shoulder to avoid around drainage structure but concern of vehicles using this space for access (accel lane) onto Lincoln Hwy

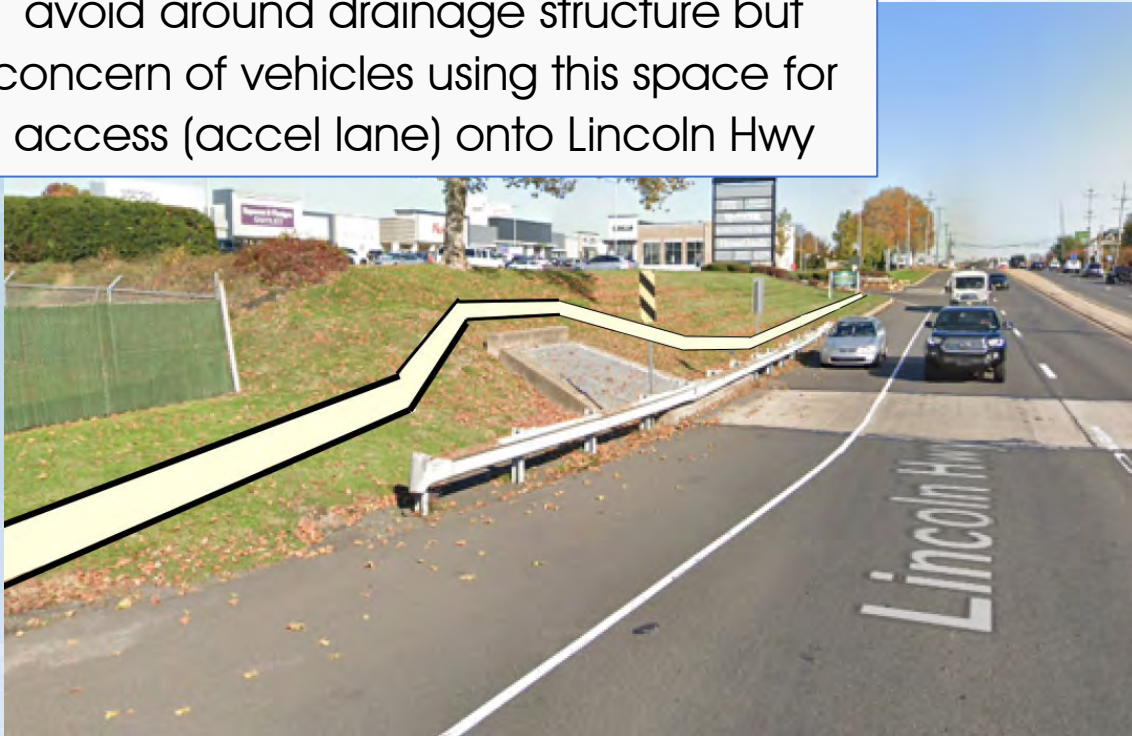


Image 1: Business Route 1 WB looking towards drainage structure and challenging topography

The option was explored to provide pedestrian accessibility on shoulder to avoid new ped bridge but concern of vehicles using this space for access (accel lane) onto Lincoln Hwy



Image 2: Business Route 1 EB looking towards potential pedestrian bridge location to span waterway and green space

An aerial photograph of a suburban town, showing residential houses, commercial buildings, and parking lots. The image has a light blue tint. A dark blue horizontal banner is overlaid across the middle of the image, containing the text 'Cost Estimate' in yellow.

# Cost Estimate



# Funding Improvements

How will we **pay** for these improvements.....?

*Option:* Township Capital Improvements Budget

*Option:* Grant Funding from County, State and Federal Governments

- Requires a 'match' of Township funds
- Cost of administering the grant

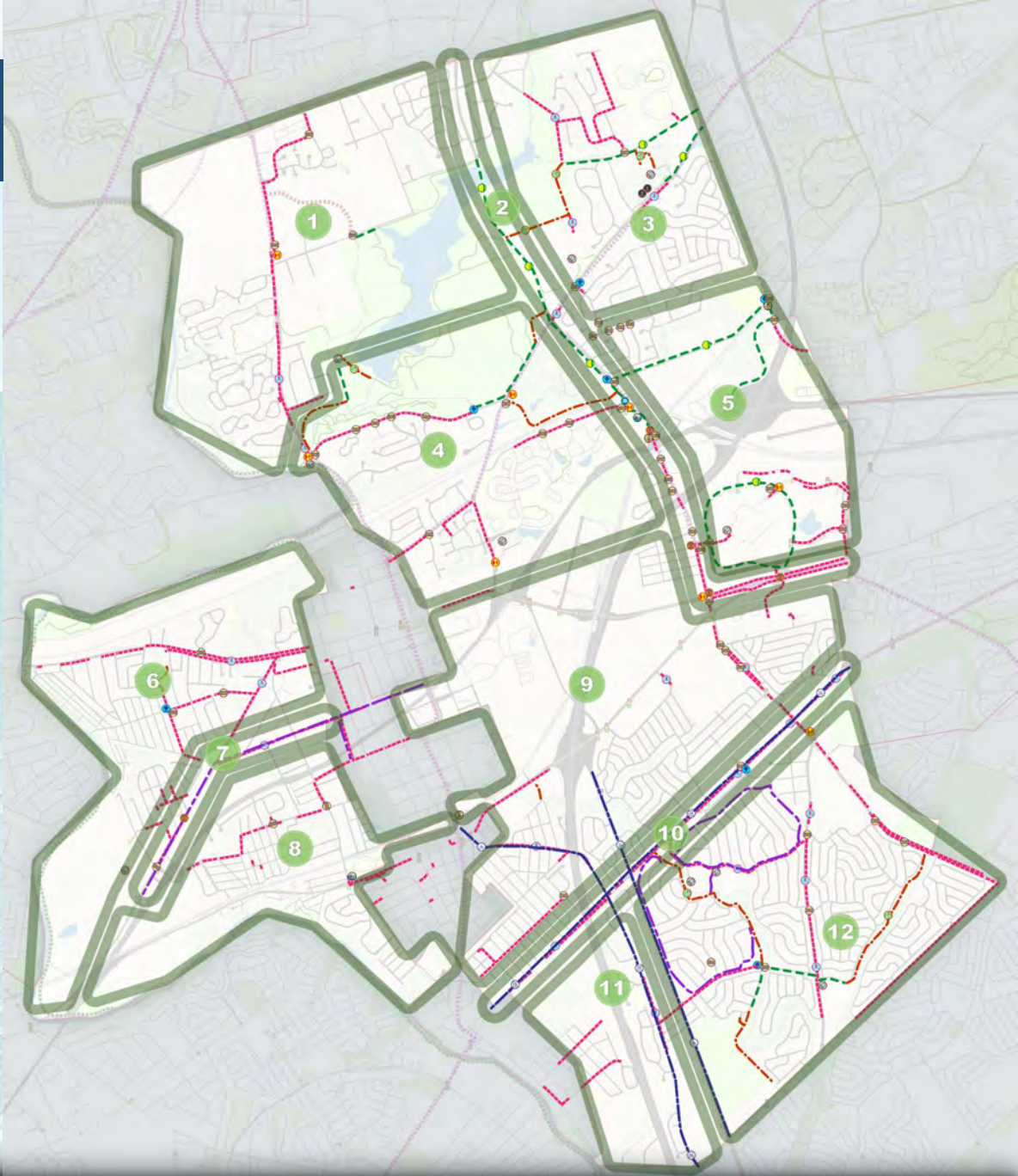
*Option:* Costs Assumed in Re-Development

- Official Map
- Traffic Impact Fees

# Cost Estimate - Methodology

## Costing Areas

- 1-12 areas used to organize cost of improvements
- Organized by road name and



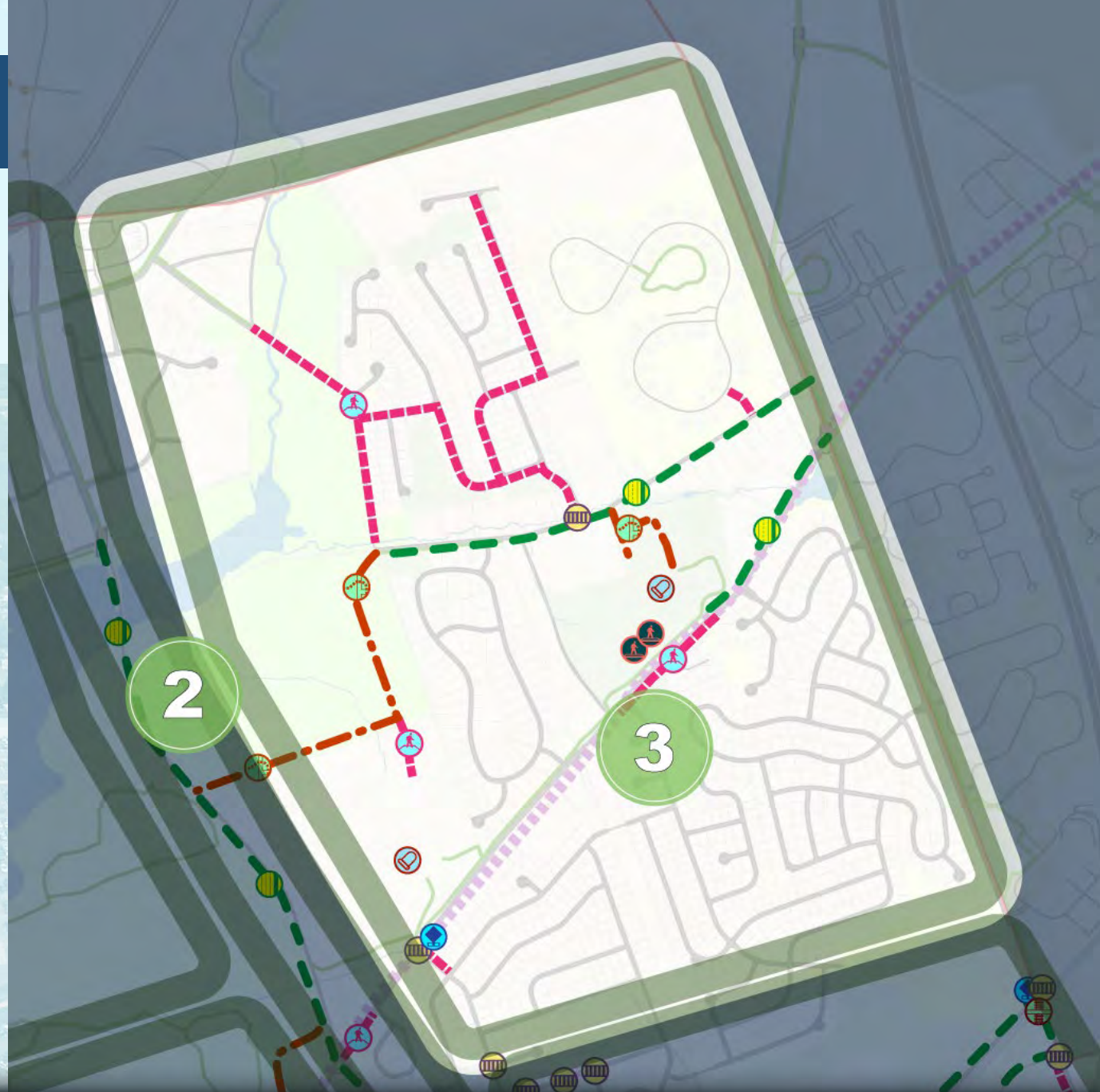
Item Description	Location	Distance	Unit Cost	Quantity	Cost
<b>Sidewalks (5')</b>		LF	\$ 127.44	SY	\$674,039.51
Silver Lake Road	West side of Road	2500	\$ 127.44	1,389	\$177,006.17
Barnsbury Road	South Side of Road	2200	\$ 127.44	1,222	\$155,765.43

Item Description	Location	Distance	Unit Cost	Quantity	Cost
<b>Crosswalks</b>		N/A	1300	EA	\$3,900.00
Intersection of Summit Trace Road and Oakridge Drive	South Side of Road		\$ 1,300.00	1	\$1,300.00
Intersection of 413 and Pennswood Village entrance	Crossing 413		\$ 1,300.00	1	\$1,300.00

# Cost Estimate – Sample Area

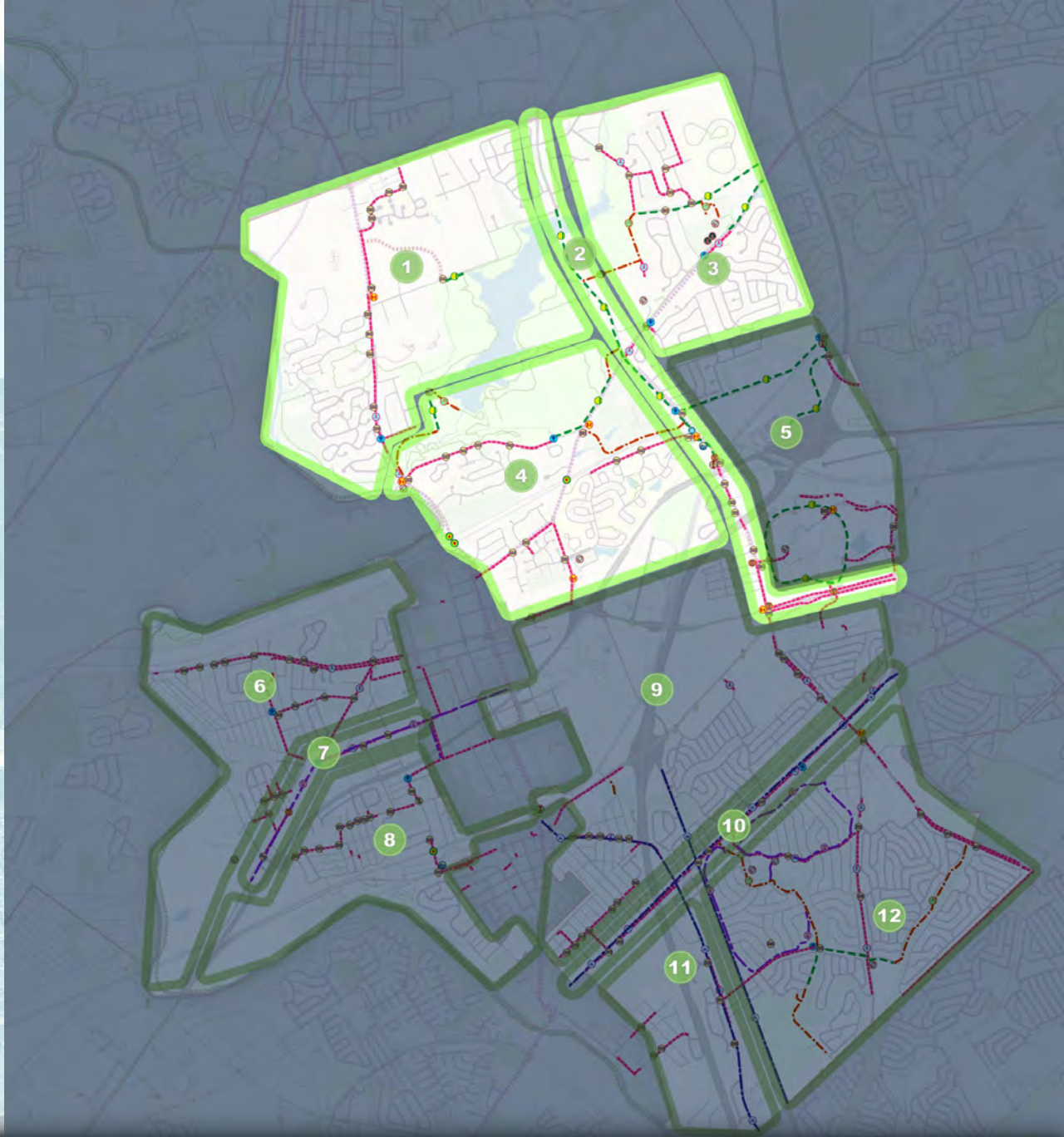
## Costing Areas Example – Area 3

- **Overall cost – \$1,840,700**
  - Sidewalks – \$763,600
  - Side Path - \$600,000
  - Multi-Modal Trail - \$410,000
  - Rapid Flashing Beacons – \$30,000
  - Speed Tables - \$20,000
  - Crosswalks - \$9,100
  - Bike Racks - \$8,000



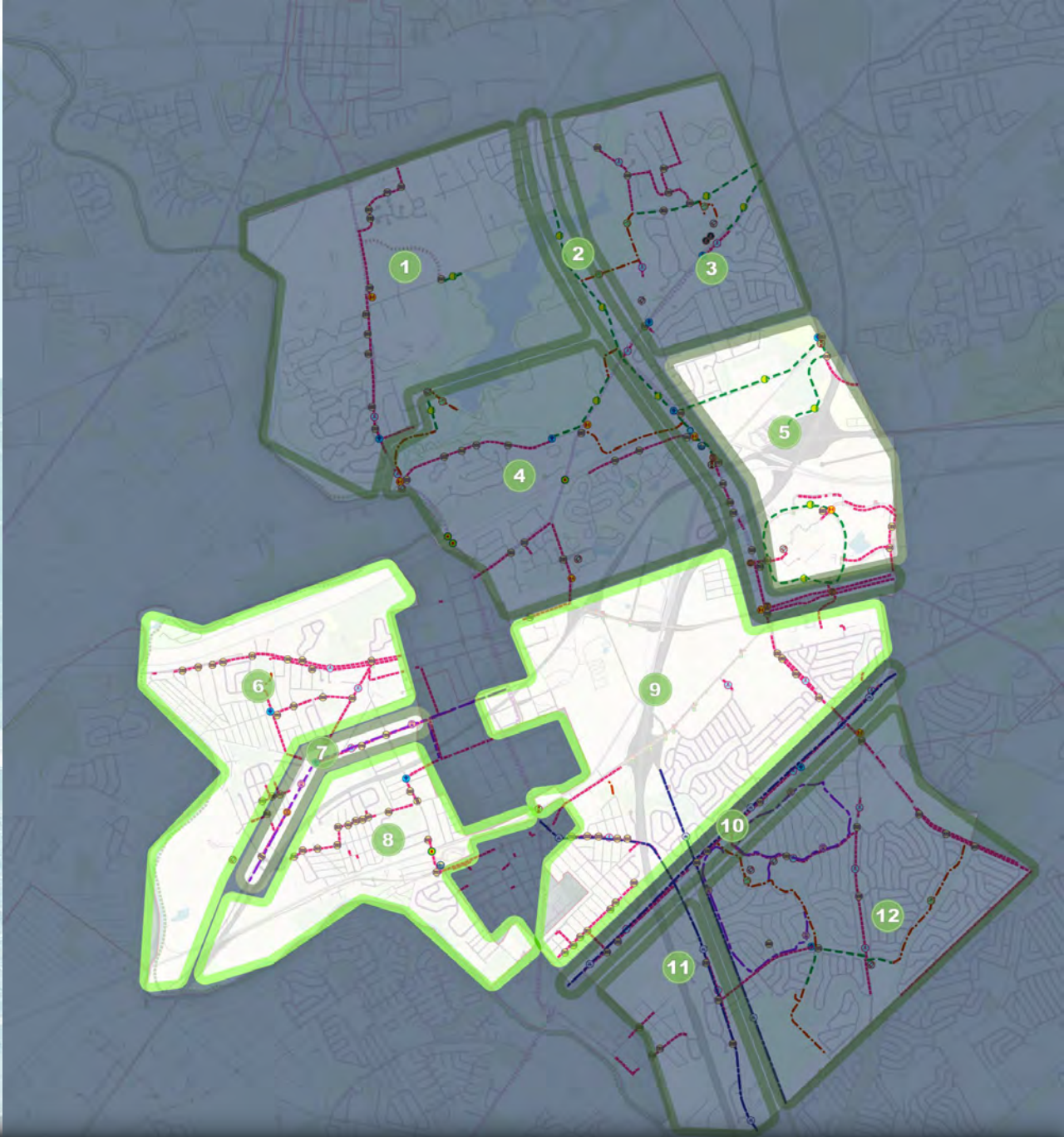
# Cost Estimate – Areas 1 to 4

<b>Area 1</b>	<b>\$</b>	<b>1,088,486</b>
Total Proposed Site Improvements	\$	824,486
Mobilization, E&S, Stormwater Allowances	\$	57,800
Construction Contingency (10%)	\$	82,500
Design & Engineering (15%)	\$	123,700
<b>Area 2</b>	<b>\$</b>	<b>3,156,169</b>
Total Proposed Site Improvements	\$	2,390,769
Mobilization, E&S, Stormwater Allowances	\$	167,600
Construction Contingency (10%)	\$	239,100
Design & Engineering (15%)	\$	358,700
<b>Area 3</b>	<b>\$</b>	<b>2,430,105</b>
Total Proposed Site Improvements	\$	1,840,705
Mobilization, E&S, Stormwater Allowances	\$	129,100
Construction Contingency (10%)	\$	184,100
Design & Engineering (15%)	\$	276,200
<b>Area 4</b>	<b>\$</b>	<b>3,246,550</b>
Total Proposed Site Improvements	\$	2,459,350
Mobilization, E&S, Stormwater Allowances	\$	172,200
Construction Contingency (10%)	\$	246,000
Design & Engineering (15%)	\$	369,000



# Cost Estimate – Areas 5 to 8

<b>Area 5</b>	<b>\$</b>	<b>2,997,098</b>
Total Proposed Site Improvements	\$	2,270,198
Mobilization, E&S, Stormwater Allowances	\$	159,200
Construction Contingency (10%)	\$	227,100
Design & Engineering (15%)	\$	340,600
<b>Area 6</b>	<b>\$</b>	<b>3,268,844</b>
Total Proposed Site Improvements	\$	2,476,144
Mobilization, E&S, Stormwater Allowances	\$	173,500
Construction Contingency (10%)	\$	247,700
Design & Engineering (15%)	\$	371,500
<b>Area 7</b>	<b>\$</b>	<b>586,483</b>
Total Proposed Site Improvements	\$	444,083
Mobilization, E&S, Stormwater Allowances	\$	31,200
Construction Contingency (10%)	\$	44,500
Design & Engineering (15%)	\$	66,700
<b>Area 8</b>	<b>\$</b>	<b>1,291,004</b>
Total Proposed Site Improvements	\$	977,904
Mobilization, E&S, Stormwater Allowances	\$	68,600
Construction Contingency (10%)	\$	97,800
Design & Engineering (15%)	\$	146,700



# Cost Estimate – Areas 9 to 12

<b>Area 9</b>	<b>\$</b>	<b>1,944,833</b>
Total Proposed Site Improvements	\$	1,473,233
Mobilization, E&S, Stormwater Allowances	\$	103,200
Construction Contingency (10%)	\$	147,400
Design & Engineering (15%)	\$	221,000
<b>Area 10</b>	<b>\$</b>	<b>834,656</b>
Total Proposed Site Improvements	\$	632,056
Mobilization, E&S, Stormwater Allowances	\$	44,400
Construction Contingency (10%)	\$	63,300
Design & Engineering (15%)	\$	94,900
<b>Area 11</b>	<b>\$</b>	<b>505,672</b>
Total Proposed Site Improvements	\$	382,972
Mobilization, E&S, Stormwater Allowances	\$	26,900
Construction Contingency (10%)	\$	38,300
Design & Engineering (15%)	\$	57,500
<b>Area 12</b>	<b>\$</b>	<b>6,298,141</b>
Total Proposed Site Improvements	\$	4,771,041
Mobilization, E&S, Stormwater Allowances	\$	334,200
Construction Contingency (10%)	\$	477,200
Design & Engineering (15%)	\$	715,700



# Cost Estimate – Summary

<b>Area 1</b>	<b>\$ 1,088,486</b>
Total Proposed Site Improvements	\$ 824,486
Mobilization, E&S, Stormwater Allowances	\$ 57,800
Construction Contingency (10%)	\$ 82,500
Design & Engineering (15%)	\$ 123,700
<b>Area 2</b>	<b>\$ 1,376,400</b>
Total Proposed Site Improvements	\$ 1,042,700
Mobilization, E&S, Stormwater Allowances	\$ 73,100
Construction Contingency (10%)	\$ 104,300
Design & Engineering (15%)	\$ 156,500

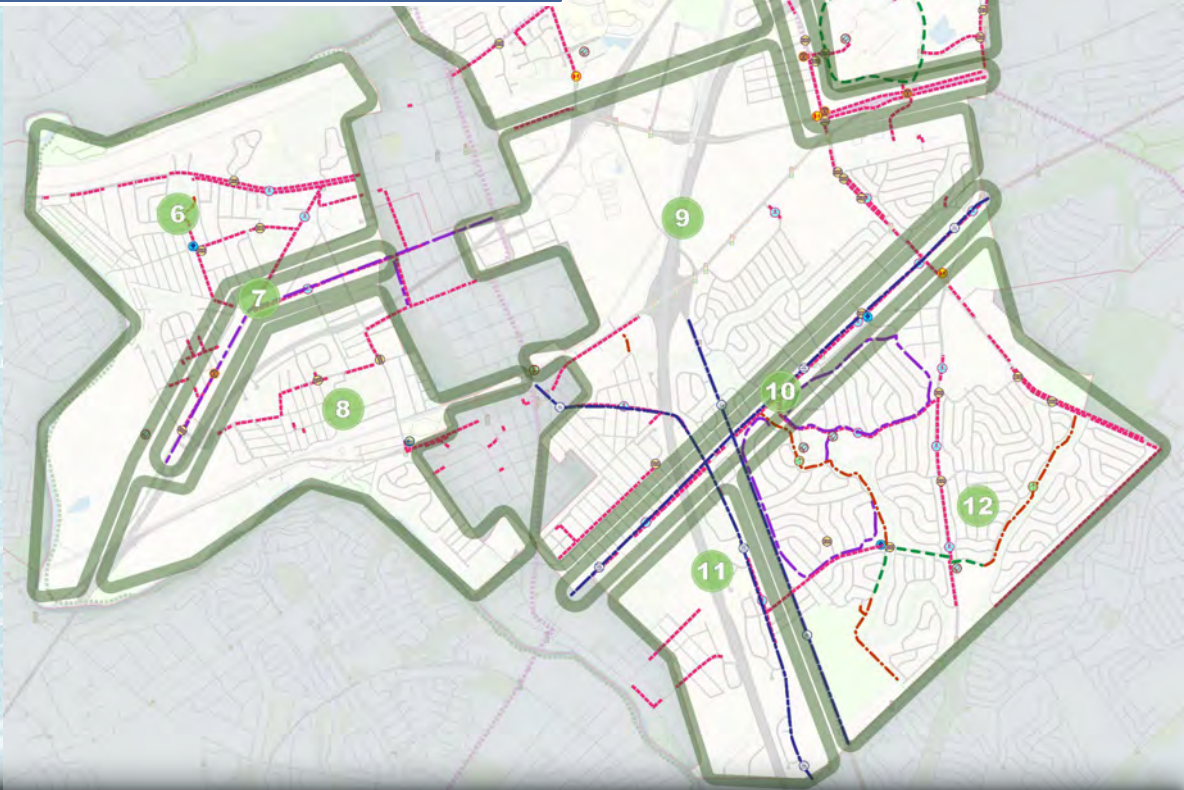


**TOTAL PLAN IMPROVEMENT COSTS**

**\$**

**27,648,041**

<b>Area 5</b>	<b>\$ 2,997,098</b>
Total Proposed Site Improvements	\$ 2,270,198
Mobilization, E&S, Stormwater Allowances	\$ 159,200
Construction Contingency (10%)	\$ 227,100
Design & Engineering (15%)	\$ 340,600
<b>Area 6</b>	<b>\$ 3,268,844</b>
Total Proposed Site Improvements	\$ 2,476,144
Mobilization, E&S, Stormwater Allowances	\$ 173,500
Construction Contingency (10%)	\$ 247,700
Design & Engineering (15%)	\$ 371,500
<b>Area 7</b>	<b>\$ 586,483</b>
Total Proposed Site Improvements	\$ 444,083
Mobilization, E&S, Stormwater Allowances	\$ 31,200
Construction Contingency (10%)	\$ 44,500
Design & Engineering (15%)	\$ 66,700
<b>Area 8</b>	<b>\$ 1,291,004</b>
Total Proposed Site Improvements	\$ 977,904
Mobilization, E&S, Stormwater Allowances	\$ 68,600
Construction Contingency (10%)	\$ 97,800
Design & Engineering (15%)	\$ 146,700
<b>Area 9</b>	<b>\$ 1,944,833</b>
Total Proposed Site Improvements	\$ 1,473,233
Mobilization, E&S, Stormwater Allowances	\$ 103,200
Construction Contingency (10%)	\$ 147,400
Design & Engineering (15%)	\$ 221,000
<b>Area 10</b>	<b>\$ 834,656</b>
Total Proposed Site Improvements	\$ 632,056
Mobilization, E&S, Stormwater Allowances	\$ 44,400
Construction Contingency (10%)	\$ 63,300
Design & Engineering (15%)	\$ 94,900
<b>Area 11</b>	<b>\$ 805,672</b>
Total Proposed Site Improvements	\$ 382,972
Mobilization, E&S, Stormwater Allowances	\$ 26,900
Construction Contingency (10%)	\$ 38,300
Design & Engineering (15%)	\$ 57,500
<b>Area 12</b>	<b>\$ 6,298,141</b>
Total Proposed Site Improvements	\$ 4,771,041
Mobilization, E&S, Stormwater Allowances	\$ 334,200
Construction Contingency (10%)	\$ 477,200
Design & Engineering (15%)	\$ 715,700



# Next Steps



# Next Steps



1. Completion of FINAL Draft Plan, Cost Estimate & Final Report. Post to MT website.
2. Transmission of Plan/Report to Stakeholders
3. 30-day Public Comment
4. Presentation to MT PC-Nov. 1<sup>st</sup>
5. Presentation to MT Board of Supervisors-Dec. 11<sup>th</sup>
6. Final publication.

# Draft Report Pages

## Middletown Township Multimodal Improvement Plan

MIDDLETOWN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA



### Demographics

#### Population/Age/Race

Population Trends and Forecasts: 2016 – 2045

Middletown Township has a population of 46,040 as of the 2020 census, a 1.37% increase from the 2016 population of 45,407. This represents roughly 7% of Bucks County. DVRPC municipal population forecasts indicate that Middletown Township population is expected to increase ~6% by 2045 from 46,040 in 2020 to 49,000 in 2045. This estimate is lower than the 7.67% population increase by 2045 expected in Bucks County.

#### Population by Age: 2011 vs. 2021

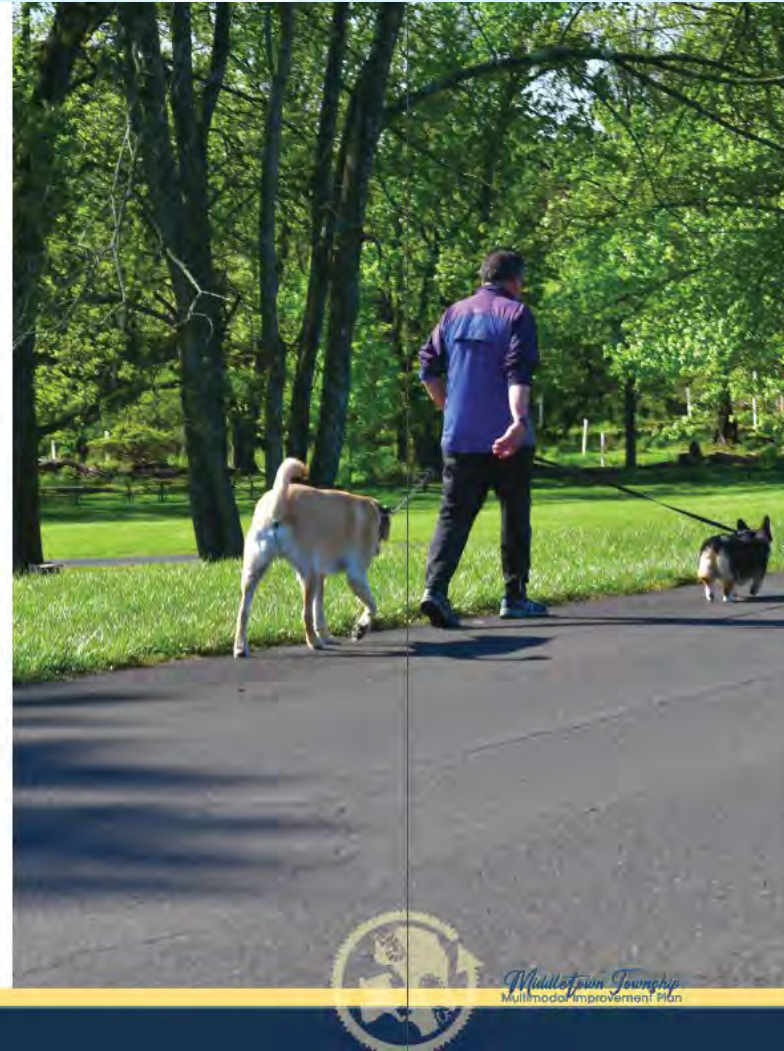
The top 3 largest gains of population from 2011 to 2021 are the following age cohorts:

- 65 to 69 years (+1.9%), 55 to 59 years (+1.7%), and Under 5 years / 85+ years (both +1.4%)
- The top 3 largest decreases from 2011 to 2021 are the following age cohorts:
- 50 to 54 years (-3.4%), 45 to 49 years (-2.2%), and 15 to 19 years (-1.6%)
- Other increases and decreases > 1% include:
- 5 to 9 years (-1%), 10 to 14 years (-1.3%)
- 60 to 64 years (+1.2%), 70 to 74 years (+1.3%)

#### Population by Race: 2011 vs. 2021

82.2% of Middletown Township's racial and ethnic identity is made up of white residents. This is proportionate to Bucks County, which is 80.7% white. The racial composition of Middletown Township has experienced some changes from 2010 to 2020. The most dramatic of these changes is a 6.07% decrease in White residents, while the share of Black/African American residents rose 1.08%, Asian residents rose 1.03%, and Hispanic/Latino residents rose 1.72%. Also notable is a 2.07% rise in residents identifying as two or more races.

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### Commuting/ Vehicle Ownership

#### Method of Commute (2021)

As is the case in most municipalities, the vast majority of the Middletown workforce commutes via car/truck/van, with 79.4% driving alone and 6.9% carpooling; 2.2% use public transportation and 10% work from home. These statistics are similar to Bucks County commuting trends, where 77.3% drive alone, 6.8% carpool, 2.5% use public transportation, and 12.2% work from home.

#### Travel Time to Work (2021)

It takes the bulk (52.6%) of Middletown commuters between 10 and 34 minutes to get to work. 18.3% commute between 10 and 19 minutes, 22.7% between 20 to 29 minutes, and 11.8% between 30 to 34 minutes. The mean travel time to work is 29 minutes. These trends are mirrored by Bucks County commuters, where 57.6% of commuters fall in the 10 to 34 minute range, with a mean travel time of 30 minutes.

#### Vehicles Available by Household

Only 1.3% of the 23,902 workers aged 16+ in households do not have access to any vehicle. 11.1% have 1 vehicle, 40.4% have 2 vehicles, and a staggering 47.2% have access to 3 or more vehicles. These trends hold when compared to Bucks County as a whole; 1.7% have none, 14% have 1, 43.1% have 2, and 41.2% have 3 or more.

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# Draft Report Pages

**Committee Meeting – 2 May 16, 2023**

Discussed items that are being carried forward to the next meeting. The committee will be reviewing the draft report and providing input on the items that are being carried forward. The committee will also be reviewing the draft report and providing input on the items that are being carried forward.

**Public Meeting 2 – May 30, 2023**

Public Meeting 2 will be held on May 30, 2023, at 7:00 PM. The meeting will be held at the Middlebrook Township Municipal Building, 1000 Middlebrook Road, Middlebrook, NJ. The meeting will be held at the Middlebrook Township Municipal Building, 1000 Middlebrook Road, Middlebrook, NJ.

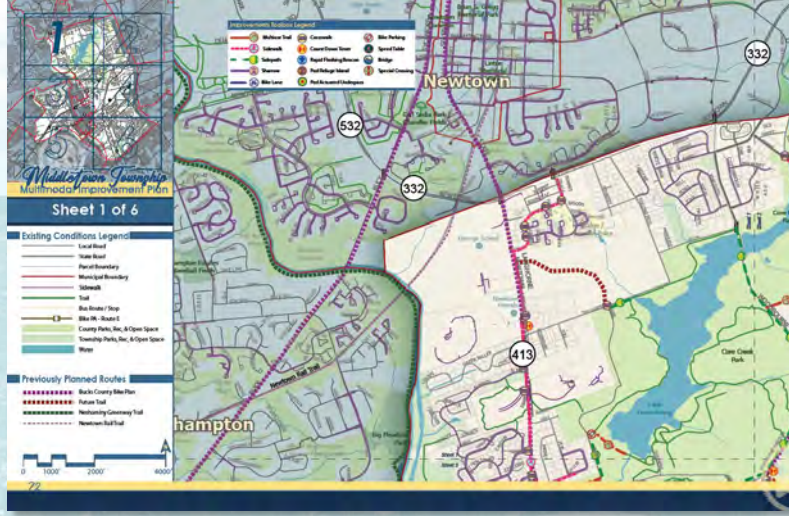


**Committee Meeting – 3 August 29, 2023**

The committee will be reviewing the draft report and providing input on the items that are being carried forward. The committee will also be reviewing the draft report and providing input on the items that are being carried forward.

**Public Meeting – 3 September 28, 2023**

Public Meeting 3 will be held on September 28, 2023, at 7:00 PM. The meeting will be held at the Middlebrook Township Municipal Building, 1000 Middlebrook Road, Middlebrook, NJ. The meeting will be held at the Middlebrook Township Municipal Building, 1000 Middlebrook Road, Middlebrook, NJ.



### Existing Conditions

#### Roadways

US Route 1  
 Interstate 295

#### Public Transportation

### Analysis

#### Sidewalk Inventory

Inventory of existing sidewalks in the township. The map shows various sidewalk conditions and locations throughout the township.



### Master Planning Process

### Regional Context

# Thank you



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