## 2045 Employment Forecasts



Mary E. Bell Manager Demographic and Economic Analysis

October 11, 2016

DVRPC Regional Technical Committee



### Background

- Updated population and employment forecasts are needed for the Connections 2045 long-range plan update, scheduled to be adopted in 2017.
- Updated 2020, 2025, 2030, 2035, and 2040 midyear forecasts are needed for many DVRPC projects, including conformity determination and transportation facilities programming.
- Population forecasts through 2045 were adopted by the Board on July 28, 2016.



#### Method

- Updated 2010 and 2013 NETS employment data was acquired in March 2016, and reviewed and revised by DVRPC staff, to eliminate obvious errors and improve spatial accuracy.
- Data was reviewed by the region's county planning staffs and further revisions were made based on local knowledge.
- 2015 employment was estimated based on NETS changes (2010-2013) and US Bureau of Labor Statistics changes (2010-2015).



## 2045 Employment Forecasts

- Studies have shown that there is a direct relationship between the number of workers living in an area and the number of jobs.
- County-level employment forecasts were calculated in five-year increments through 2045, by estimating a future ratio of population to employment in each county and applying it to DVRPC's adopted 2045 population forecasts.



## 2045 Employment Forecasts

- County-level forecasts were disaggregated to the municipal level based on DVRPC's adopted 2040 employment forecasts, adjusted by the differences between the adopted 2015 forecasts and the 2015 NETS employment estimates.
- Military employment was added based on CTPP estimates.
- County planning staffs reviewed the draft forecasts and final revisions were made based on their recommendations.



## Employment, 2015 and 2045

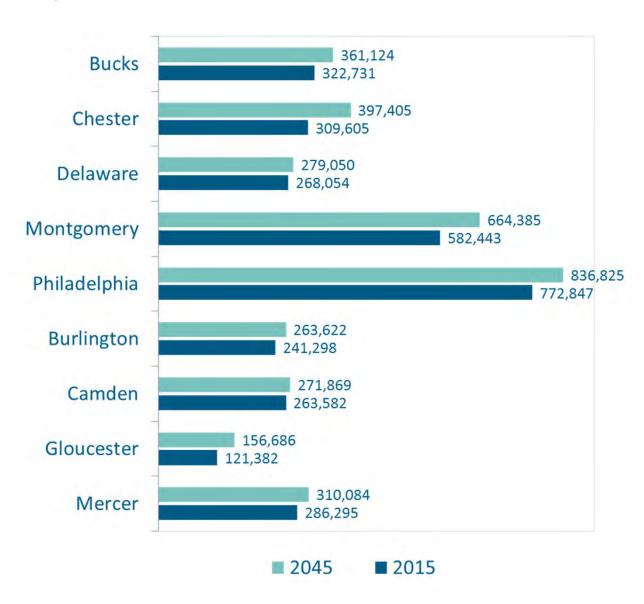


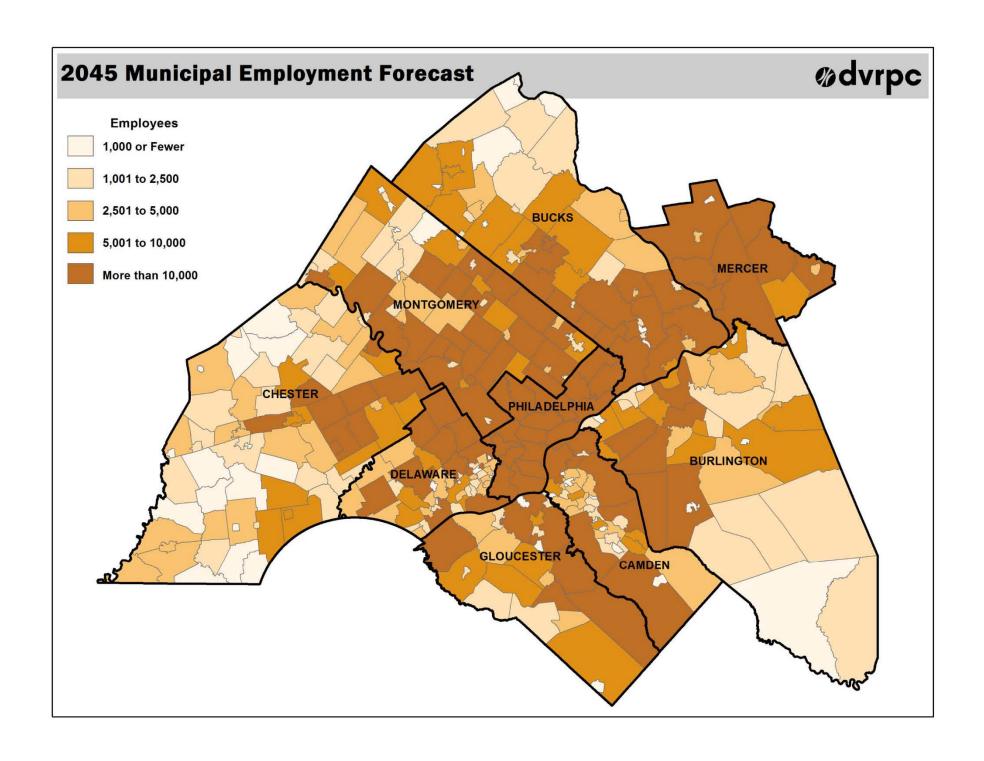
County	2015 Estimate	2045 Forecast	Absolute Change	Percent Change	
Bucks	322,731	361,124	38,393	11.9%	
Chester	309,605	397,405	87,800	28.4%	
Delaware	268,054	279,050	10,996	4.1%	
Montgomery	582,443	664,385	81,942	14.1%	
Philadelphia	772,847	836,825	63,978	8.3%	
5 Pennsylvania counties	2,255,680	2,538,789	283,109	12.5%	
Burlington	241,298	263,622	22,324	9.3%	
Camden	263,582	271,869	8,287	3.1%	
Gloucester	121,382	156,686	35,304	29.1%	
Mercer	286,295	310,084	23,789	8.3%	
4 New Jersey counties	912,557	1,002,261	89,704	9.8%	
9-county Region	3,168,237	3,541,050	372,813	11.8%	

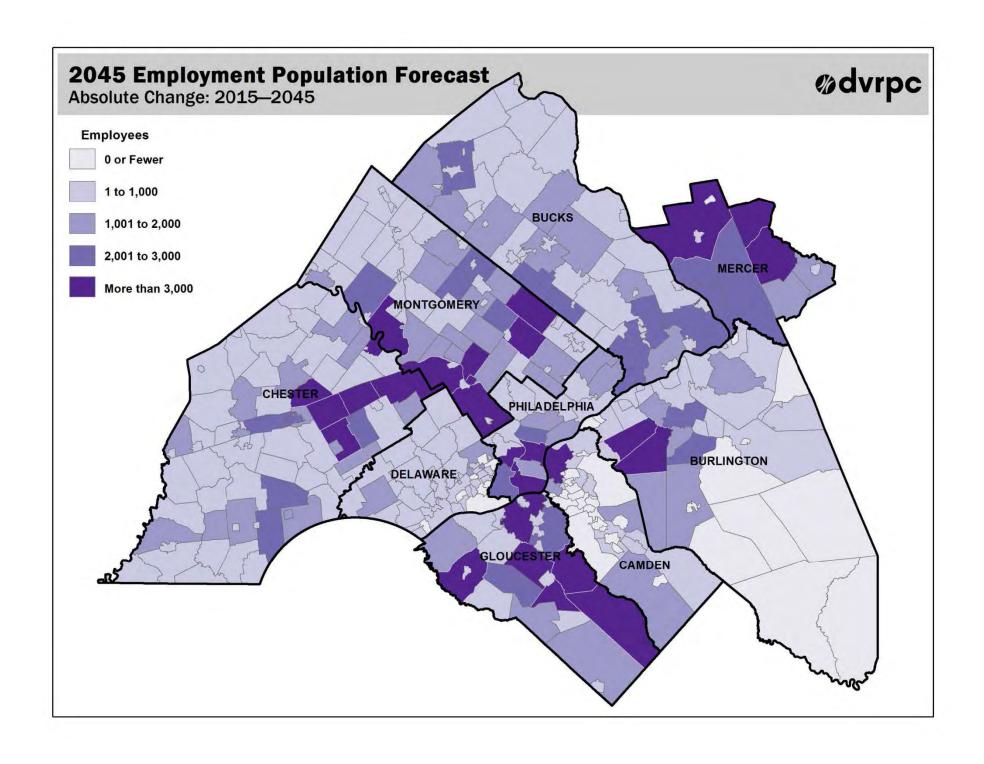
Source: Delaware Valley Regional Planning Commission, October 2016.

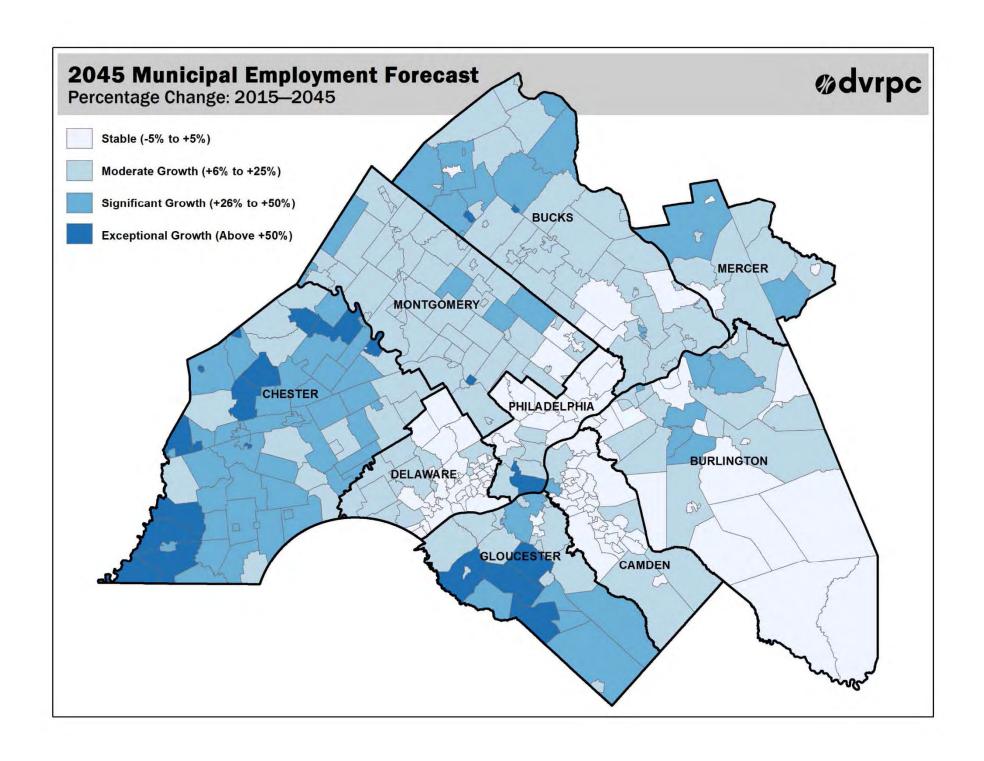
#### Employment, 2015 and 2045

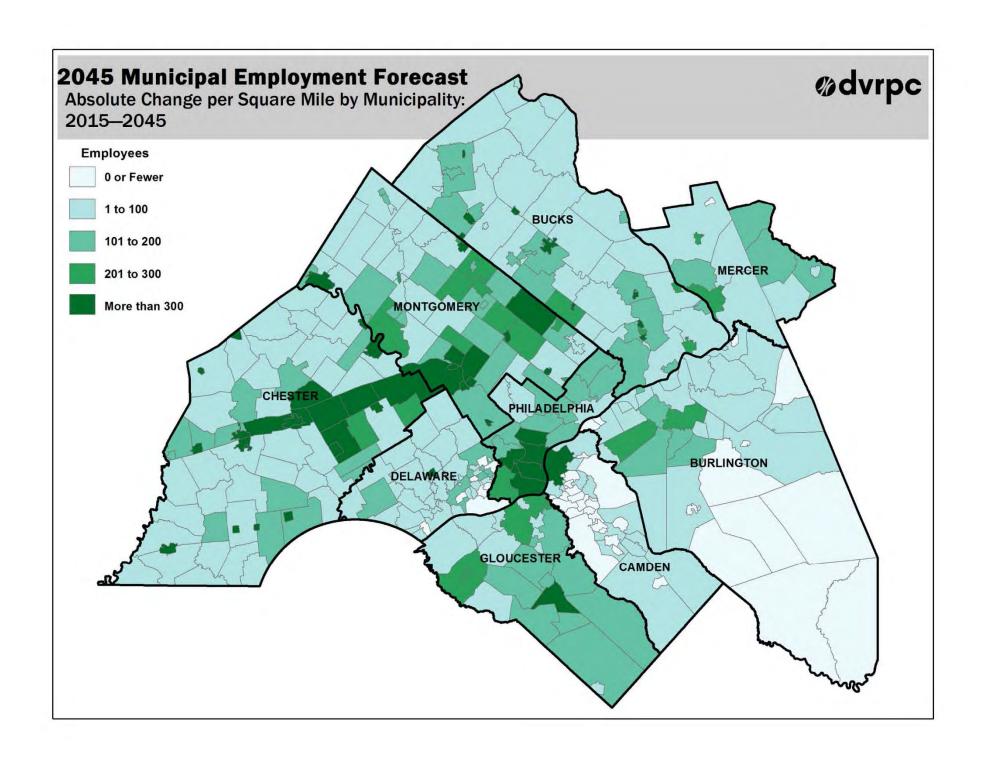












#### **Requested Action**

 That the Regional Technical Committee recommend that the DVRPC Board adopt the 2045 county- and municipal-level employment forecasts in five-year increments, as presented.



# Thank You! Questions? Comments?



For more information please contact Mary E. Bell mbell@dvrpc.org





# Planning for Autonomous Vehicles

Stephen Buckley
WSP | Parsons Brinckerhoff
Delaware Valley Regional Planning Commission
October 11, 2016





#### When will we see AVs on our roads?

- 0-2 Years
- 2-5 Years
- 5-10 Years
- 10-15 Years
- 15+ Years



#### **NHTSA Levels of Automation**

A Research Framework!

Level 0 No Automation

No steering or braking/ throttle control

e.g. crash warning systems Level 1
FunctionSpecific
Automation

Braking/Throttle or Steering control, but not in combination e.g. automatic braking systems

Level 2
Combined
Function
Automation

- Integration of braking, throttle, and steering control
   Driver
- available at <u>all</u> times to retake control

Level 3 Limited Self-Driving

- Integration of braking, throttle, and steering control
- Driver expected for <u>occasional</u> control
- Driver can cede full monitoring and control authority

Level 4
Full SelfDriving
Automation

- Integration of braking, throttle and steering control
- Driver <u>NOT</u>
   expected for
   control
- Responsibility for safe operation is solely rests with the vehicle

U.S. Department of Transportation ITS Joint Program Office





#### **Purpose**

Elevate the discussion about why and how cities and regions should be **SHAPING** the development of AVs









# The Early Days....















#### Two Paths





Driven by Auto Industry
Incremental Moves in Functionalities
Mostly Privately Owned
Here Today



Shared Mobility Model (MaaS/TaaS/Robo-taxis)

Driven by Tech and TNCs

Jump to Fully Automated

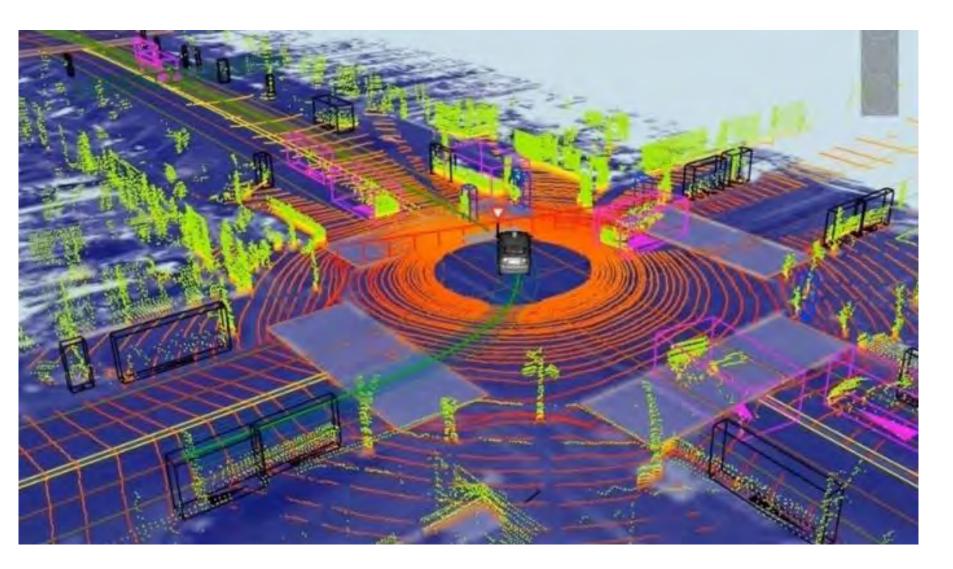
Transportation-as-a-Service

A few (or many, many) years away





## Self-contained "seeing"







#### The Promise of AVs

- Improved road safety
- Economic benefits of less lost productivity
- More equitable access for all
- Increased travel options
- Reduced stress of driving
- Reduced fuel consumption and emissions
- In the future, greater throughput, reducing congestion







## Complexities of AVs

**Communications Systems** 

**Technology** 

**Data** 

Infrastructure

**Ethics** 

**Standards** 

**Managing the Transition** 

Liability

**Planning** 

Impact to Jobs

**Consumer Preference** 

Security

**Enforcement** 

Safety

Regulation

**Human Factors** 

**Privacy** 

**Economics** 

**Business Models** 



## **Complexities of AVs**

#### **Planning**





## **Planning for AVs**

- It's no longer "if", but "when"
- It will likely be very, very disruptive
- Over time, will likely transform mobility as we know it
- Will impact how we design, build and operate not only roads, but likely all aspects of our transportation system



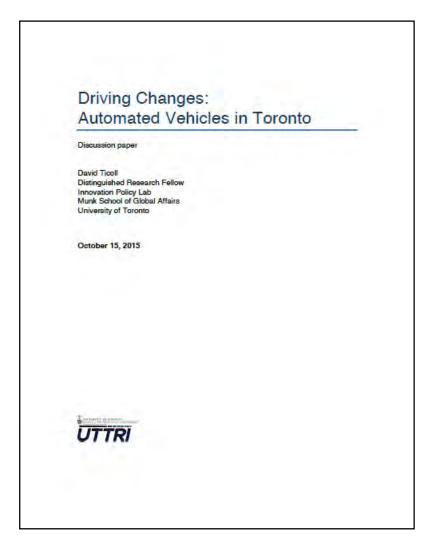
### What Will AVs Mean for Regions?

- Will they increase or decrease trip-making?
- Will they increase or decrease the distance of trip-making?
- What will be their impact to transit?
- Will it be complementary or supplementary?
- Will we see more VMT or less VMT?
- Will we see more congestion or less congestion?
- Will they support or undermine land use polices?
- Will they impact locational choices of residents and employers?
- How will they impact the economy, industries and goods movement?





## **Toronto Experience**



# Driving Changes: Automated Vehicles in Toronto

- David Ticoll, University of Toronto





#### **Three Scenarios**







Ownership Leads

Mixed

Shared Leads



### **Key Unknowns**

Speed of Technological Advancement

Economics

Public Acceptance





#### **Speed of Technological Advancement**

'What we've got will blow people's minds, it blows my mind... it'll come sooner than people think'

 Elon Musk on Tesla fully autonomous car, Electrek, August 4, 2016

Uber starts self-driving car pickups in Pittsburgh

- Tech Crunch September 14, 2016

Google starts deploying its self-driving Chrysler Pacifica minivans: first prototypes spotted

- Electrek, October 9, 2016





## **Speed of Technological Advancement**

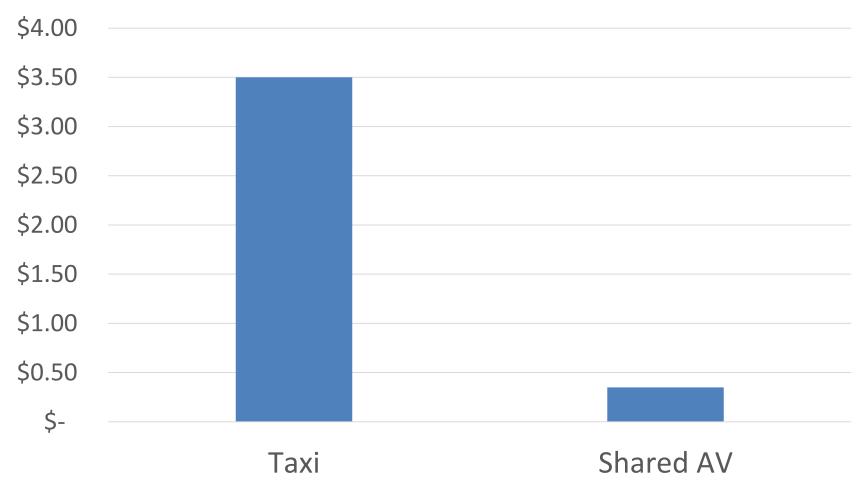
Manufacturer	2016	2017	2018	2019	2020-25	2025-30	2030-35	2035-40	2040+
Audi (III)	2		3		3+	4			
	2				4				
Ford				2	4				
HONDA	2				3				3-4
KIA					3		4		
Mercedes-Benz	2								
NISSAN	2		3		4				
TTESLA	2		4						
VOLVO UBER	2	4					-		

Source: Mashable



#### **Economics**





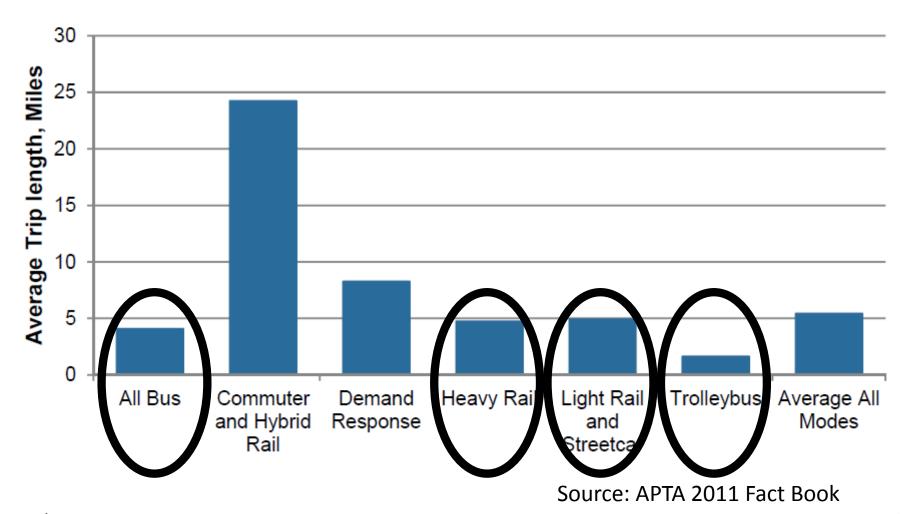
Source: ARK Investment Management





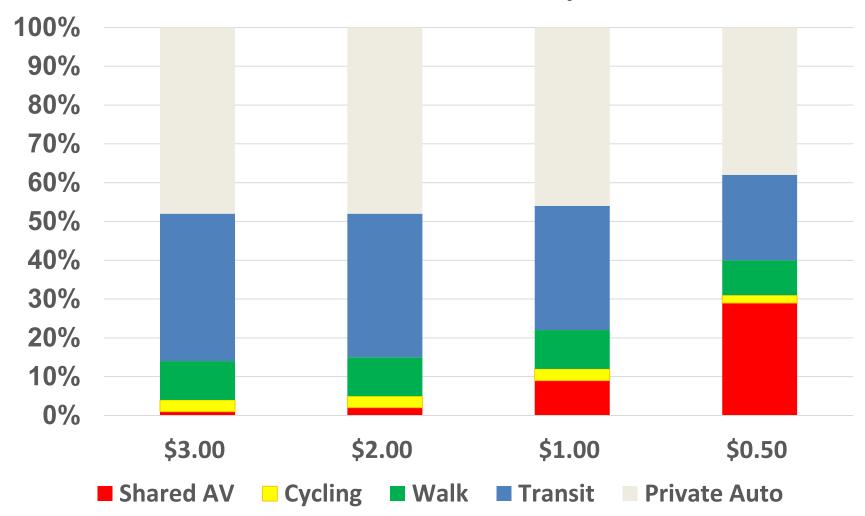
#### **Economics**

Figure 3: Average Unlinked Passenger Trip Length, 2011



#### **Economics**

#### Illustrative Mode Share at Various per Mile Prices



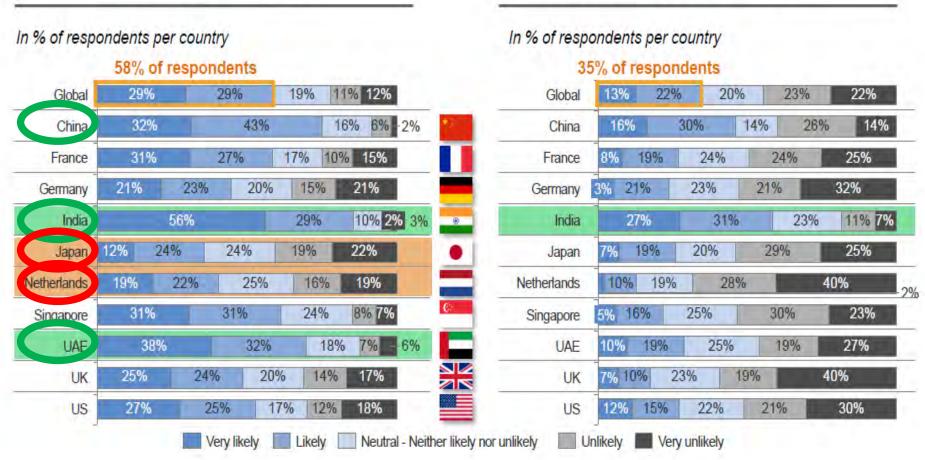




# **Public Acceptance – Trust of AVs**

58% say they would take a ride in a fully self-driving car

... but only 35% of parents would let their children ride alone in one



Source: World Economic Forum/Boston Consulting Group, 2015.



# **Public Acceptance – Shared Use**

In % of respondents per country India UAE China NL UK France Germany Japan Singapore US 

Source: World Economic Forum/Boston Consulting Group, 2015.





# **Key Unknowns**

- Speed of Technological Advancement
- Economics
- Public Acceptance

Without a clear understanding of the future, how do we plan?





# How is this Unfolding?

 Discussions are happening primarily at the federal and state levels

- Economic development considerations have seemed to be a significant driver of the policy discussions
- Because of the potential "winner take all", stakes are high, companies are moving fast....

# Goals of Cities and Regions

- Safety
- Accessibility
- Mobility
- Economic Opportunity
- Quality of Life
- High-Quality Natural and Built Form
- Environmental Sustainability
- Social Inclusion
- Financial Sustainability





# Impacts of Private vs. Mixed vs. Shared

	Private	Mixed	Shared
Collisions	-	-	
Congestion		?	
Vehicular Mobility			
Equitable Mobility	?		
Cost of Private/Semi-private Vehicular Travel	?	•	-
Carpooling	?		
Passenger Kilometers Travelled			
Vehicle Kilometers Travelled		?	
Fixed Route Transit Demand	•	-	•
Active Transportation	•	?	?
Trend of Intensification	•	?	?
Parking Demand	?		
Right-of-way allocated for vehicles	-	•	
Residential Building/Lot Size	?		
Impervious Areas	?	•	-

# Approaches We Could Take

# Actively Discourage

Prohibit or Restrict AVs or TaaS

### **Passive**

Encourage

- Wait and See Outfit signals
  - with transmitters
  - Map curbside regulations
  - Conduct a pilot or demonstration

Tax credits

**Actively** 

- Create AVonly zones
  - Create AVonly facilities





# **Toronto Working Group**

**Transportation Economic Development City Planning Licensing & Standards Police Services Parking Authority Parking Enforcement** Revenue **Employment Services Fleet Budget** City IT **Privacy Commission** 







### **Toronto's Draft Vision Statement**

Toronto needs to harness the potential of AVs to help us create the City that we want.





# **Toronto Transportation Services Work Plan**





# **Toronto Transportation Services Work Plan**

GOAL 2

## PREPARATION

To prepare for the arrival of AVs no matter when and how they are introduced and adopted.

Objectives	2016	2017	2018
2.1 Improve Understanding and Clarity			
2.1.1 Create and maintain a common lexicon of terms and concepts for consistent understanding.			
2.1.2 Identify and understand the broad range of potential implications of AVs.			
2.1.3 Define the interests of Transportation Services in vehicle automation across all sections and districts.			
2.1.4 Undertake public opinion research to assess and establish baseline attitudes toward AVs, expectations of government, and how AVs may influence travel behaviour and modal choice in the Greater Toronto and Hamilton Area.			
2.1.5 Develop detailed scenarios – ranging from no change, to a completely new transportation paradigm – for consistent forecasting and planning pathways; use these scenarios on a scale of possible to probable.			
2.1.5.1 In partnership with the Organization for Economic Cooperation and Development's International Transportation Forum, undertake a modelling exercise to further develop and refine potential scenarios.			
2.2 Prepare a Foundation			
2.2.1 Improve the management and current function of traffic control devices, particularly signage and pavement markings.			
2.2.1.1 Increase asset management and lifecycle analysis of traffic control devices, particularly signage and pavement markings.			
2.2.1.2 Review and consider the need for pavement markings on local streets.			
2.2.1.3 Improve the visibility of traffic control devices under all weather conditions.			
2.2.2 Work with mapping providers to investigate the potential for AV-supportive mapping to be conducted in Toronto, and determine the appropriate role for Transportation Services and the City.			
2.2.3 Begin to engage with technology providers, automobile manufacturers, and transportation network companies to discuss municipal preparations and potential pathways.			

4 | Preparing for Autonomous Vehicles



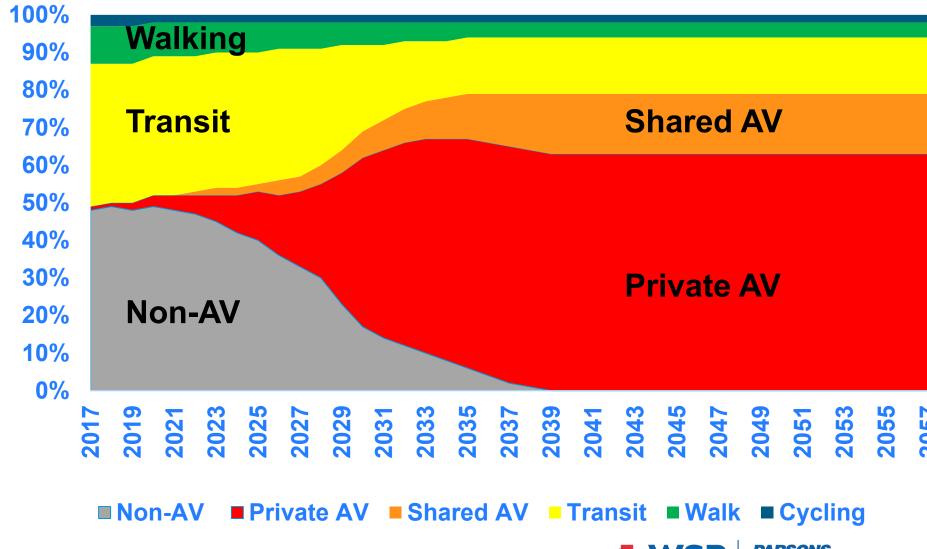


### **Short Term Recommendations**

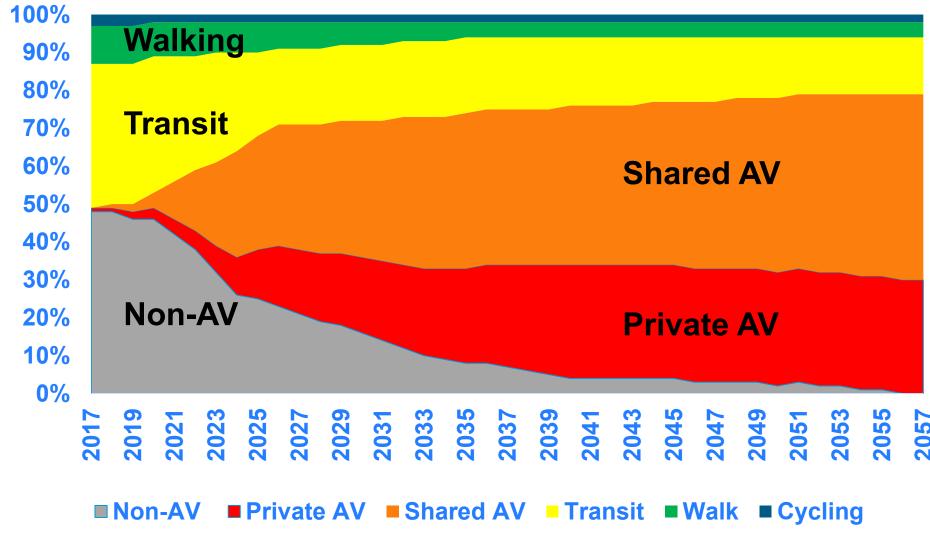
- Increase awareness, and engage with peers, partners and other levels of government
- Develop a work plan
- Develop some basic level of modelling
- Review your regional goals and objectives
- Develop locally-informed scenarios
- Be supportive of innovation, but be sure that they serve public goals and protect the public interest



### Scenarios – Private Leads



### Scenarios – Shared Leads



# **Takeaways**

- This is coming fast guide it or respond to it
- Cities and regions have a chance to shape this, but need to move
- While still many unknowns, we need to start factoring AVs into long-range planning
- Don't let the unknowns and complexities paralyze us



# Acknowledgements

**Ryan Lanyon** 



**David Ticoll** 



**Barrie Kirk** 





Stephen Buckley WSP | Parsons Brinckerhoff

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www.advancingtransport.com



### Resources



http://smartdrivingcar.com/GreenLight-092316

Friday, September 23, 2016

# **EXAMPLE 2** Policy: Accelerating the Next

Revolution In Roadway Safety

September 2016, "Executive Summary...For DOT, the excitement around highly automated vehicles (HAVs) starts with safety. (p5)

...The development of advanced automated vehicle safety technologies, including fully selfdriving cars, may prove to be the greatest personal transportation revolution since the popularization of the personal automobile nearly a century ago. (p5)

...The benefits don't stop with safety. Innovations have the potential to transform personal













# DARBY TRANSPORTATION CENTER ACCESS & DEVELOPMENT OPPORTUNITIES STUDY

**RTC PRESENTATION** 

October 11, 2016



### **STUDY GOAL**

To analyze access issues, development opportunities, and TOD readiness around the Darby Transportation Center.





### **STUDY ADVISORY COMMITTEE**

# DARBY BOROUGH DELAWARE COUNTY DCTMA DVRPC PENNDOT SEPTA





### **TASKS**

- TOD readiness analysis of existing conditions
- Market analysis
- Identification of and recommendations for opportunity sites





### **GEOGRAPHIES USED FOR ANALYSIS**

### 1/4 MILE RADIUS

(5 minute walk from station)

### 1/2 MILE RADIUS

(10 minute walk from station)

### 1 1/2 MILE RADIUS

(market area)





DARBY TRANSPORTATION CENTER ANALYSIS
STEERING COMMITTEE MEETING



### **ANALYSIS**

### **TOD Readiness Factors**

- Walkability
- Travel options
- Density
- Mix of uses
- Housing choice
- Public spaces
- Community engagement

### **Existing Conditions**

- Transportation
- Land use
- Natural resources
- Zoning
- Demographics





### **TRANSPORTATION: WALKABILITY**

- Short, direct walking connections to station (Walk Score is 80)
- Sidewalks mostly in good shape
- Supportive zoning
  - CBD's Special Development Regulations
  - TOD Overlay
- Unique and interesting sense of place
- Steep slopes on some streets
- Difficult street crossings at station
- Few places to sit/rest
- High crime area





### **TRANSPORTATION: TRAVEL OPTIONS**

High transit score

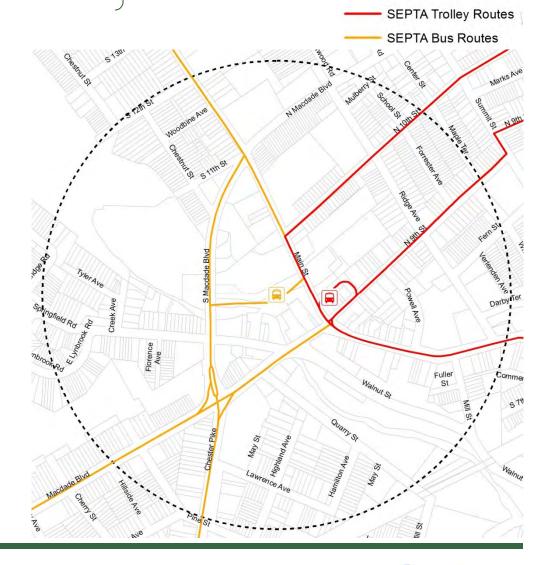
### Bus service

- Routes 113, 114, and 115
- Frequent

### Trolley service

- Routes 11 and 13
- Infrequent

Trolley Modernization Project









### **DENSITY OF LAND USES**

### 1/4 Mile Station Radius

- Gross residential density is only 4.1 units per acre (TOD minimum is 6-8 units)
- Many low-density uses
   (surface parking lots,
   industrial parcels, churches,
   etc.)

Underutilized land provides many opportunities to densify.







### **HOUSING DENSITY**

	1/4 MILE RADIUS	1/2 MILE RADIUS	1 ½ MILE RADIUS
Household Units	659	3,749	25,016
Household Density (Units/Acre)	4.1	11. <i>7</i>	26.1





### **MIX OF LAND USES**

### Some are transit supportive

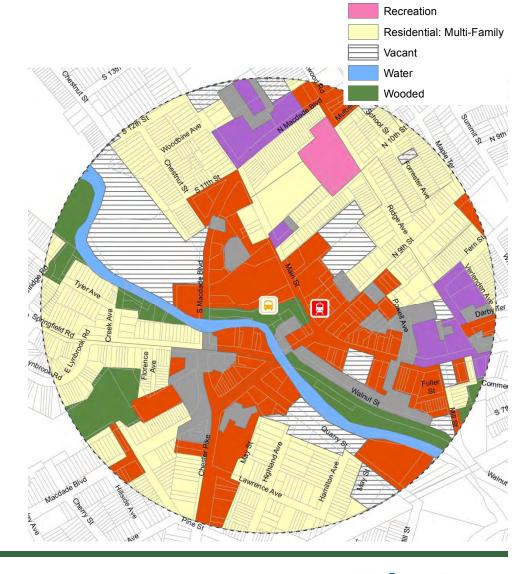
- Main Street shopping area
- Residential neighborhoods

### Most are not transit supportive

- Working industrial sites
- Institutional uses
- Strip-style shopping (Macdade Blvd. & Chester Pike)
- Limited retail and food options

### Too much tax-exempt land

- Municipal
- Churches





DARBY TRANSPORTATION CENTER ANALYSIS
STEERING COMMITTEE MEETING



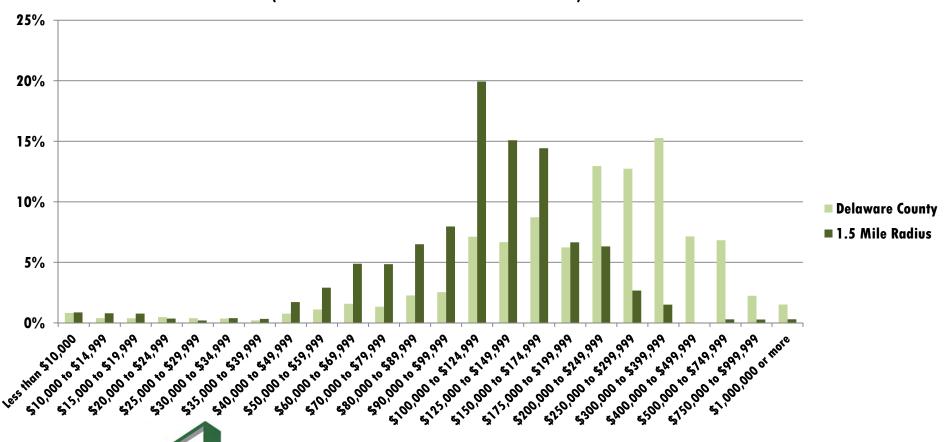
Commercial

Community Services

Parking: Commercial

### **LAND USE: HOUSING**

### HOUSING AFFORDABILITY (OWNER-OCCUPIED HOME VALUES)







### **PUBLIC SPACES**

Great proximity to nature, but little access

Very few public open spaces

No public restrooms

Sites available for creation of high quality public spaces







# **DEMOGRAPHICS: HOUSEHOLDS AND INCOME**

	1/4 MILE RADIUS	1/2 MILE RADIUS	1 ½ MILE RADIUS	DELAWARE COUNTY
2015 Population	1,88 <i>7</i>	11,566	68,369	562,652
Percent Change 2010-2015	2.6%	3.1%	1.2%	0.7%
Average Household Size	2.84	2.97	2.69	2.57
Median Age	29.5	30.8	34.5	39.3
Household Units	659	3,749	25,016	210,397
Owner-Occupied	268	1,894	14,612	143,367
Renter-Occupied	391	1,855	10,404	<i>67,</i> 030
Median Household Income	\$26,304	\$37,644	\$42,103	\$65 <b>,</b> 947
Average Household Income	\$35,143	\$47,083	\$54,768	\$92,628
Per Capita Income	\$11,860	\$1 <i>5,</i> 761	\$20,116	\$34,888



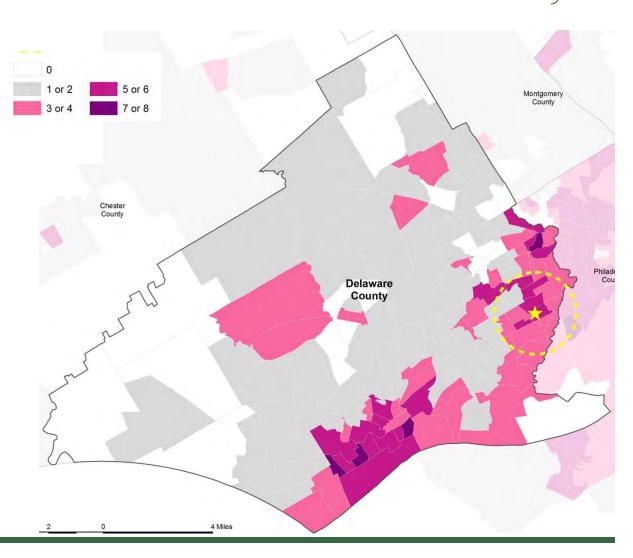


### **DEMOGRAPHICS: INDICATORS OF POTENTIAL DISADVANTAGE (IPD)**

### **Delaware County**

- 59% of census tracts have 2 or fewer IPD
- 5.8% have 5 or more IPD

In the 1.5 mile station area radius, nearly all tracts have 3 or more IPD





DARBY TRANSPORTATION CENTER ANALYSIS
STEERING COMMITTEE MEETING



### **TOD READINESS ELEMENT: COMMUNITY ENGAGEMENT**

There is no active outreach to the community regarding future development in the area.





### **TOD READINESS OF EXISTING CONDITIONS**





MIX OF USES X

TRAVEL OPTIONS <



HOUSING CHOICE







### TRANSPORTATION RECOMMENDATIONS

- Provide additional passenger amenities at the DTC.
- Repair gaps in the sidewalk network.
- Develop a trolley stop consolidation strategy.
- Renovate the trolley loop in preparation for Trolley Modernization.
- Construct modern trolley platforms in a way that does not preclude reestablishing Route 13 service via the "chicken track."
- Implement the recommendations of DVRPC's Darby Borough Grade Crossing Study.





#### **ZONING RECOMMENDATIONS**

### Changes to the following districts:

- TOD Overlay District and Central Business District (CBD)
- Residential Districts (R-2, R-3, and R-4)
- Modify the Business/Institutional District (BI)





# **MARKET ANALYSYS**

# HOUSING BUSINESS CLIMATE RETAIL OFFICE INDUSTRIAL





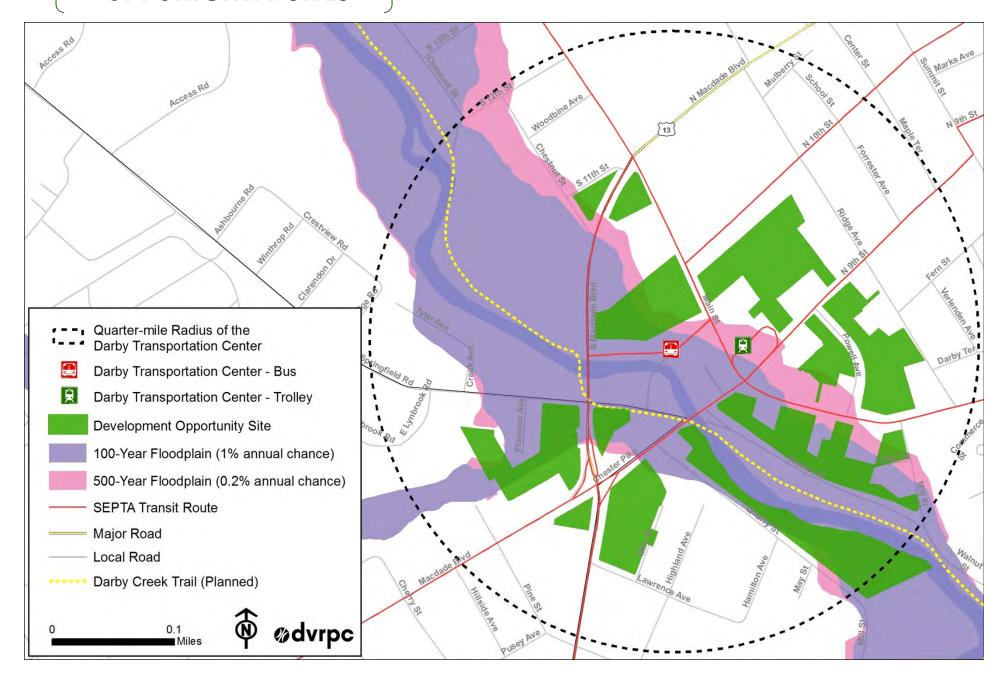
#### **MARKET RECOMMENDATIONS**

- Increase residential density.
- Add commercial development that is supportive of the existing community.
- Appoint a Borough representative as the Main Street Business District Liaison.
- Add Class B and C office space on upper floors of existing buildings where possible.
- Create public spaces on underutilized land that is both within a quarter mile of the DTC and in the floodplain of the Darby Creek.
- Utilize public spaces as opportunities to connect with nature.





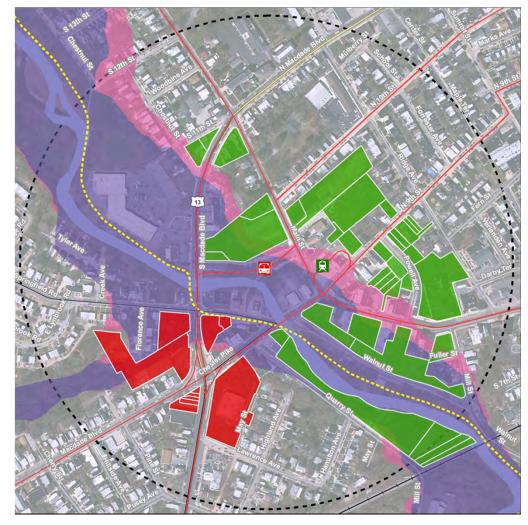
#### **OPPORTUNITY SITES**



# S MACDADE & CHESTER PIKE SITE



- Add transit amenities (bus shelters, safer pedestrian crossings).
- Add mixed-use buildings to complete the street frontage (gateway area).
- Improve ingress/egress areas of parking lots and add streetscaping to define the pedestrian space.
- Incorporate stormwater infrastructure into floodplain parking lots.
- Consider eliminating slip ramps.







### 25 & 100 S MACDADE BLVD SITE



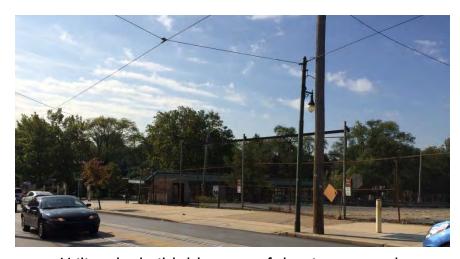
- Increase residential density (owner of Sneaker Outlet constructing four apartments on the site).
- Ensure that new development improves pedestrian connections across the intersection and mitigates traffic volume and turning movements of vehicles.
- Encourage the owner of Pickett's Auto Service to beautify the corner lot, adding streetscaping and pedestrian amenities, such as plantings, benches, or bollards.



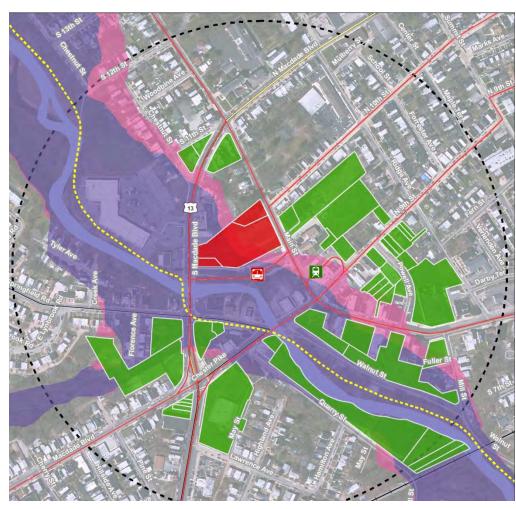




# FORMER BUS PARKING SITE



- Utilize the buildable area of the site to complete the street frontage along Main Street with a mixed-use building. Locating multiple uses here would be helpful in generating activity adjacent to the station.
- Utilize the portion of the site in the floodplain for parking.







# 925 MAIN ST & 9TH ST LOTS SITE



- Infill residential development on the 9th Street lots and the unused portion of the adjacent Tracey Mechanical/Apache light industrial site.
- Encourage Tracey Mechanical/Apache to improve its frontage along Main Street so that it contributes to a pleasant pedestrian experience.
- Address the current shared parking situation in which a church uses the Tracey Mechanical/ Apache parking lot on Sundays, causing traffic and parking problems in the area.





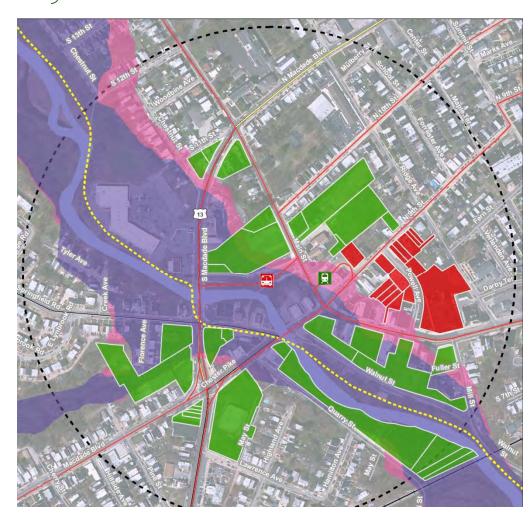


# **POWELL AVE PARKING LOTS SITE**



- Add residential density and new Class B and C office space through new construction and adaptive reuse of old buildings.
- Negotiate shared parking in the floodplain.
- Mitigate hazardous pedestrian conditions caused by the width of Main Street and the back-in angle parking near the Post Office.
- Consider relocating the public works garage because of the critical location of this site next to the DTC.

WELCOME TO DARBY BOROUGH







#### **MAIN ST CORRIDOR SITE**



- Use for public space and outdoor recreation opportunities.
- Add stormwater infrastructure (nearly the entire site is in the floodplain).
- Encourage the owners of 842 Main Street to move forward with building a hot dog stand which could be a particularly good fit for this corridor if it includes outdoor seating on the portion of the site in the floodplain.







# **QUARRY ST CORRIDOR SITE**



- Extend the core of public space created on the Main Street Corridor Site and connect it with the Darby Creek Trail, a high-priority trail in the Delaware County Open Space Plan.
- Adaptively re-use the former industrial building as a community center, recreation space, or event venue (this site is now scheduled to be converted to open space and the future of the building is unclear).







# **THANK YOU!**

Emily Costello, AICP
Senior Planner, Office of Smart Growth
Delaware Valley Regional Planning Commission
215-238-2865 or ecostello@dvrpc.org





# DEMOGRAPHICS: ESRI TAPESTRY SEGMENTATION - 1/4 MILE RADIUS



64.3%

Hardscrabble Road neighborhoods are in urbanized areas within central cities, with older housing, located chiefly in the Midwest and South. This slightly smaller market is primarily a family market, married couples (with and without children) and single parents. Younger, highly diverse (with higher proportions of black, multiracial, and Hispanic populations), and less educated, they work mainly in service, manufacturing, and retail trade industries. Unemployment is high (almost twice the US rate), and median household income is half the US median. Almost 1 in 3 households have income below the poverty level. Approximately 60% of householders are renters, living primarily in single-family homes, with a higher proportion of dwellings in 2–4 unit buildings. This market is struggling to get by.





# DEMOGRAPHICS: ESRI TAPESTRY SEGMENTATION - 1/2 MILE RADIUS



# LifeMode Group: Midtown Singles City Commons

Households: 1,082,000

Average Household Size: 2.66

Median Age: 27.6

Median Household Income: \$17,000



LifeMode Group: Midtown Singles

## City Strivers

Households: 933.000

Average Household Size: 2.75

Median Age: 34.4

Median Household Income: \$41,000

#### 27.5%

This segment is one of Tapestry's youngest and largest markets, primarily comprised of single-parent and single-person households living within large, metro cities. While more than a third have a college degree or spent some time in college, nearly a third have not finished high school, which has a profound effect on their economic circumstance. However, that has not dampened their aspiration to strive for the best for themselves and their children.

#### 13.5%

These high density city neighborhoods are characterized by a relatively young foreign-born population who have embraced the American lifestyle, yet retained their cultural integrity. To support their lifestyle, City Strivers residents commute long distances to find work in the service or retail industry. Their hard-earned wages and salary income goes toward relatively high rents in older multiunit buildings, but they've chosen these neighborhoods to maintain ties to their culture. Single parents are often the recipients of Supplemental Security Income and public assistance, but their close-knit community provides the invaluable support needed while they work.



DARBY TRANSPORTATION CENTER ANALYSIS
STEERING COMMITTEE MEETING



# DEMOGRAPHICS: ESRI TAPESTRY SEGMENTATION - 1 1/2 MILE RADIUS



LifeMode Group: Hometown

#### **Family Foundations**

Households: 1,282,000

Average Household Size: 2.70

Median Age: 38.8

Median Household Income: \$40,000



LifeMode Group: Midtown Singles

#### City Commons

Households: 1,082,000

Average Household Size: 2.66

Median Age: 27.6

Median Household Income: \$17,000

#### 22.8%

Family and faith are the cornerstones of life in these communities. Older children, still living at home, working toward financial independence, are common within these households. Neighborhoods are stable: little household growth has occurred for more than a decade. Many residents work in the health care industry or public administration across all levels of government. Style is important to these consumers, who spend on clothing for themselves and their children, as well as on smartphones.

#### 13.5%

This segment is one of Tapestry's youngest and largest markets, primarily comprised of single-parent and single-person households living within large, metro cities. While more than a third have a college degree or spent some time in college, nearly a third have not finished high school, which has a profound effect on their economic circumstance. However, that has not dampened their aspiration to strive for the best for themselves and their children.

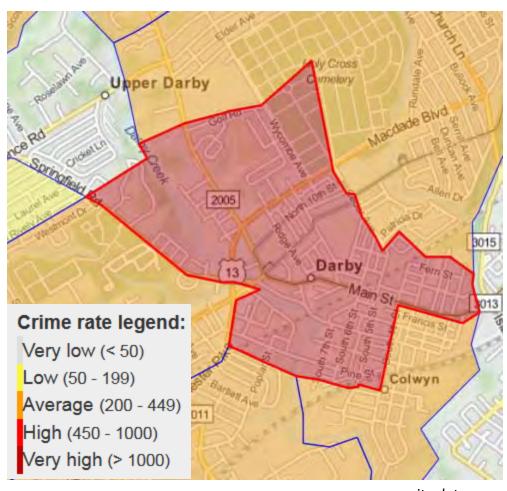


**dvrpc**February 5, 2016

#### **WALKABILITY CHALLENGE & OPPORTUNITY: HIGH CRIME RATE**

In 2013, the crime rate in Darby was very high - 1,798.2 overall compared to a national average of 291.7.

**CPTED** (Crime Prevention Through Environmental Design) principles also happen to promote walkability and improve the public realm environment.



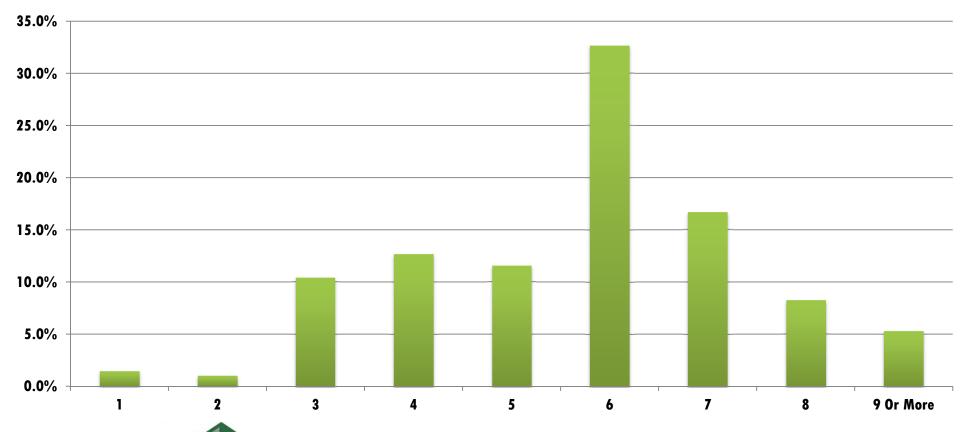
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#### **LAND USE: HOUSING**

#### HOUSING UNITS BY NUMBER OF ROOMS

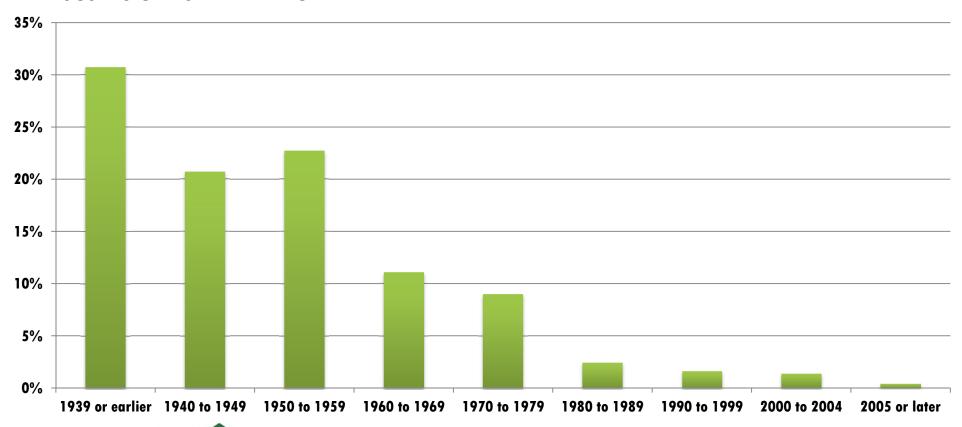






#### LAND USE: HOUSING

#### **HOUSING UNITS BY YEAR BUILT**







#### HOUSING

- Owner-occupied housing is 58% of total.
- Housing vacancy rate is 17.4% (high) and represents 12.2% of all vacancies in county.
- Average median home value is \$121,071 (\$233,400 in county overall).
- Average median gross rent paid for housing is \$942.46.
- Households are not significantly housing-burdened the proportion of household income spent on housing is 31.2%—of which 23.9% goes towards shelter—on the low end of "burdened."





#### HOUSING

- 179 houses were sold.
- The average median sales price was \$42,050 much lower than the median sales price in Delaware County of \$195,625.
- Homes received a slightly lower percentage of their asking price (87.5%) when compared to Delaware County (92.2%).
- On average, homes also spent more time on the market (109 days) than in Delaware County as a whole (91 days).





#### **BUSINESS CLIMATE**

#### **OTHER SERVICES**

- Largest sector
- Overrepresented

#### **RETAIL SERVICES**

- 2<sup>nd</sup> largest sector
- Proportionate to market

# TRANSPORTATION & WAREHOUSING - most

overrepresented

PROFESSIONAL,
SCIENTIFIC, & TECH
SERVICES - most
underrepresented

Mining
Construction
Manufacturing
Wholesale Trade
RETAIL TRADE
Transportation & Warehousing
Information
Finance & Insurance
Real Estate, Rental & Leasing
Professional, Scientific & Tech Services
Management of Companies & Enterprises
Administrative & Support & Waste Management &
Remediation Services
Educational Services
Health Care & Social Assistance
Arts, Entertainment & Recreation
Accommodation & Food Services
OTHER SERVICES (except Public Administration)
Public Administration
Unclassified Establishments

1/4 MII	LE RADIUS 1/2 MILE RADIUS		LE RADIUS	1 ½ MILE RADIUS		
#	%	#	%	#	%	LQ
0	0.0%	0	0.0%	- 1	0.1%	0.8
15	8.6%	24	6.8%	185	9.8%	1.0
4	2.3%	8	2.3%	60	3.2%	
6	3.4%	12	3.4%	95	5.0%	1.3
28	16.0%	54	15.3%	262	13.9%	1.0
3	1.7%	4	1.1%	53	2.8%	1.5
5	2.9%	6	1.7%	29	1.5%	0.9
15	8.6%	26	7.4%	96	5.1%	0.7
5	2.9%	12	3.4%	83	4.4%	0.9
12	6.9%	20	5.7%	101	5.4%	0.6
0	0.0%	0	0.0%	- 1	0.1%	0.5
5	2.9%	11	3.1%	84	4.5%	0.9
4	2.3%	11	3.1%	48	2.6%	0.9
19	10.9%	54	15.3%	182	9.7%	1.1
2	1.1%	3	0.9%	25	1.3%	0.8
10	5.7%	21	6.0%	122	6.5%	1.0
30	17.1%	65	18.5%	342	18.2%	1.4
4	2.3%	8	2.3%	45	2.4%	0.9
8	4.6%	13	3.7%	68	3.6%	1.2



DARBY TRANSPORTATION CENTER ANALYSIS
STEERING COMMITTEE MEETING



#### **BUSINESS CLIMATE**

# OTHER SERVICES - 17.1% of all businesses in 1/4 mile station radius

- Repair and Maintenance (auto services, electronic and industrial equipment, garden equipment, furniture repair)
- Personal and Laundry Services (salons, funeral homes, laundry, pet care, parking lots)
- Religious, Grant-Making, Civic, and Professional and Similar Organizations
- Private Households (ones that employ household staff)

# **NOT TRANSIT SUPPORTIVE**

- Do not enhance pedestrian experience
- Do not provide day and night activities
- Do not generate street level activity





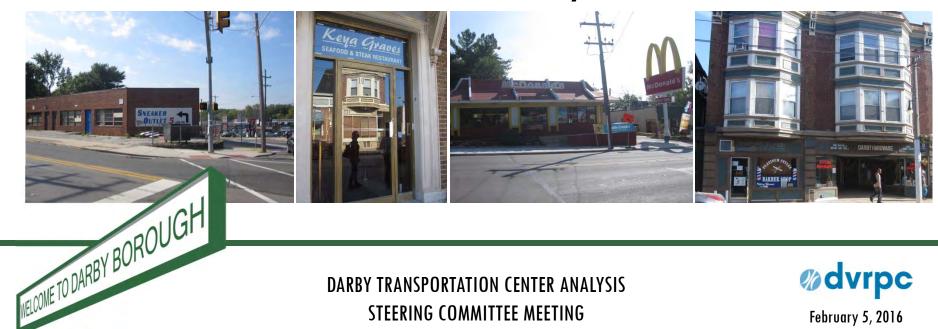


#### **BUSINESS CLIMATE**

# RETAIL SERVICES - 16% of all businesses in 1/4 mile station radius

- Retailers sell merchandise in small quantities to the general public
- Includes a wide-range of retailers, from auto malls to Main Street-style retail
- Store (fixed point-of-sale locations, located and designed to attract walk-in customers)
- Non-Store (infomercials, online sales, etc.; not usually designed for walk-in customers)

# SOME ARE TRANSIT SUPPORTIVE, SOME ARE NOT...







# **CHARACTERISTICS OF TRANSIT SUPPORTIVE RETAIL**

Have high population ratio compared to size of space occupied.

Provide visual interest and street front continuity that enhance the pedestrian experience.

Contain an appropriate mix of uses.

- Provide day and night activities
- Consistent foot traffic
- High levels of street level activity
- Aligned with the behaviors and patterns of transit riders

Do not depend on large areas of parking.





#### **CATEGORIES OF RETAIL BUSINESSES**

#### **NEIGHBORHOOD GOODS & SERVICES (NG&S)**

- Convenience stores, drugstores, florists, bakeries, delis, dry cleaners, tailors, hair salons, nail salons, and similar
- Draw customers predominantly from a quarter-mile radius

#### **FOOD & BEVERAGE (F&B)**

- Sit-down restaurants, take-out establishments, cafes, bars, coffee shops, sandwich shops, ice cream, shops, and similar
- Draw primary customers from a half-mile radius

#### GENERAL APPAREL, FURNITURE, OTHER (GAFO)

- Stores selling clothing, furniture, jewelry, books, gifts, pet supplies, home décor, sporting goods and other items
- Draw primary customers from a mile or more away





# TRANSIT SUPPORTIVE RETAIL BUSINESS CATEGORIES

**NEIGHBORHOOD GOODS & SERVICES (NG&S)** 

GENERALLY
TRANSIT
SUPPORTIVE!

**FOOD & BEVERAGE (F&B)** 

NG&S and F&B businesses cater to the convenience goods and service needs of residents, employees, and transit stop users.





# MARKET ANALYSIS: RETAIL LEAKAGE/SURPLUS

					Retail Gap	Leakage/Surplus Factor
		Industry Summary	Demand	Supply	(Annual Unmet Demand)	(Retail Opportunity)
	1⁄4 Mile Radius	Total Retail Trade	\$11,610,801	\$28,989,810	-\$17,379,009	-42.8
		Total Food & Drink	\$1,185,218	\$4,276,477	-\$3,091,259	-56.6
	½ Mile Radius	Total Retail Trade	\$86,016,639	\$77,703,270	\$8,313,369	5.1
		Total Food & Drink	\$9,098,456	\$6,362,598	\$2,735,858	17.7
	1 ½ Mile	Total Retail Trade	\$663,971,467	\$340,931,141	\$323,040,326	32.1
	Radius	Total Food & Drink	\$70,058,300	\$40,392,560	\$29,665,740	26.9





# MARKET ANALYSIS: RETAIL INVESTMENT OPPORTUNITIES

	.5 Mile Radius					
Industry Group			Retail Gap	Leakage/Surplus Factor		
	Demand Supply	(Annual Unmet Demand)	(Retail Opportunity)			
Beer, Wine & Liquor Stores	\$1,492,909	\$447,097	\$1,045,812	53.9		
General Merchandise Stores	\$14,808,114	\$6,936,226	\$7,871,888	36.2		
Florists	\$166,854	\$137,887	\$28,967	9.5		
Food Services & Drinking Places	\$9,098,456	\$6,362,598	\$2,735,858	17.7		
Full-Service Restaurants	\$4,822,450	\$2,568,495	\$2,253,955	30.5		
Limited-Service Eating Places	\$3,616,419	\$3,308,759	\$307,660	4.4		
Special Food Services	\$190,173	\$0	\$190,173	100.0		





# MARKET ANALYSIS: OFFICE

	1 ½ MILE RADIUS		DELAWARE COUNTY			
OFFICE SPACE	Square Feet	Percent of Total Office Space	Vacancy Rate	Square Feet	Percent of Total Office Space	Vacancy Rate
CLASS A	-			7,354,519	32.8%	17.1%
CLASS B	85,181	31.4%	0.0%	9,555,645	42.7%	12.9%
CLASS C	185,800	68.6%	2.8%	5,478,909	24.5%	17.0%





# **MARKET ANALYSIS: INDUSTRIAL**

# 4,296,072 sf in the 1 ½ mile radius – A LOT – with supportive infrastructure

# Industrial Buildings Including Those with Warehouse and/or Distribution and/or Service Space

- 3,019,350 sf total
- 6.2% vacant

# Flex Buildings with Light Distribution and/or Light Manufacturing and/or Showroom Space

- 843,525 sf total
- 12.7% vacant

#### **Manufacturing Buildings**

- 412,212 sf total
- 13.4% vacant

#### **Showroom Buildings**

- 20,985 sf total
- Fully leased





CHARACTERIST	ICS OF SUCCESSFUL RETAIL DISTRICTS	HOW DOES DARBY COMPARE?
Managed	Management can be as small and informal as a group of retailers getting together, or as large and complex as a business improvement district. Most important is that there be a single point of contact, creating clarity and efficiency.	No management.





#### CHARACTERISTICS OF SUCCESSFUL RETAIL DISTRICTS

#### **HOW DOES DARBY COMPARE?**

Retail Appropriate

Generally, high ceiling heights and clearly identifiable storefronts with large windows are preferred. Retail should not be interrupted by non-retail uses, such as banks, residences, and professional offices, and should have a vacancy rate of less than 20 percent.

Main Street contains suitable retail spaces. Non-retail uses are scattered throughout. The vacancy rate is much less than 20%.





#### **CHARACTERISTICS OF SUCCESSFUL RETAIL DISTRICTS**

#### **HOW DOES DARBY COMPARE?**

Pedestrian-Friendly

Elements that contribute to a pedestrianfriendly environment are: clean and safe streets, appropriate sidewalk widths (eight feet or more), street furniture, appropriate lighting, active uses above the ground floor, and low levels of crime. The street network is very walkable and sidewalks are generally in good repair with appropriate widths. Street furniture is lacking, but there is some pedestrian-scaled lighting. Above the ground level, uses tend to be residential or office. Crime in the area is high and should be reduced.





#### **CHARACTERISTICS OF SUCCESSFUL RETAIL DISTRICTS**

#### **HOW DOES DARBY COMPARE?**

Parking Options

Parking must be well-planned, well-lit, signed, and convenient to use. The most convenient parking should be the most expensive, and pricing should allow that about 15 percent of the spaces are free at any time.

There is too much surface parking; most is underutilized. The most convenient parking is free and although there are some signs indicating one-hour parking on the busiest retail blocks, it is unclear if there is any enforcement.





CHARACTERIST	ICS OF SUCCESSFUL RETAIL DISTRICTS	HOW DOES DARBY COMPARE?
Unified	Urban form and branding are key to creating a unified retail district. There should not be significant gaps between the buildings or non-retail uses on the street. Where there are non-retail uses, they should contribute to the retail environment, with awnings and window displays.	No uniform approach to form or branding.





# Transit Accessible Proximity to a transit stop provides retailers with additional access to customers, as customers can run errands on their way to and from work. The retail area is easily accessible via multiple trolley and bus lines.





## MARKET ANALYSIS: MAIN STREET RETAIL DISTRICT HEALTH

CHARACTERISTICS OF SUCCESSFUL RETAIL DISTRICTS		HOW DOES DARBY COMPARE?
Programmed	Events can be fundraisers or simply special events designed to bring the community together, organized by local governments, business improvement districts, or community groups. Examples could include parades, book fairs, craft fairs, or festivals.	ş



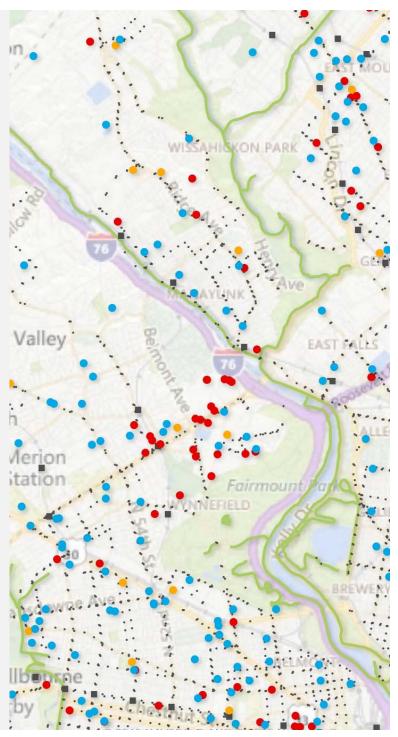




**Coordinated Plan Update for the DVRPC Region** 

DVRPC Regional Technical Committee October 11, 2016





### **PURPOSE**

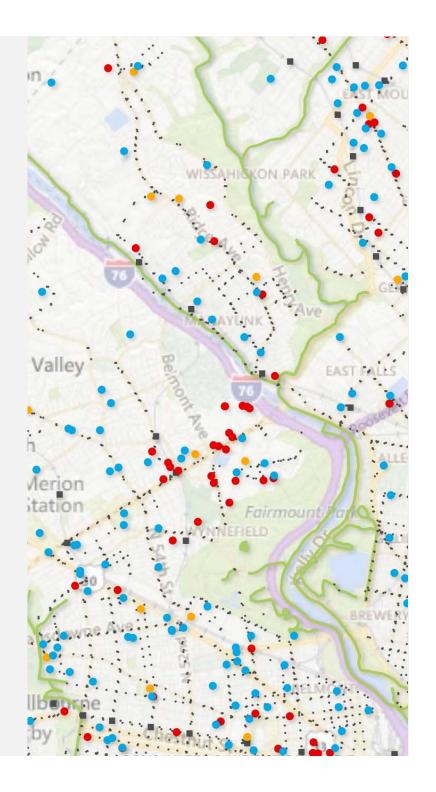
To encourage strategies that will provide more dignified access to opportunity and essential services by our region's most vulnerable populations.

### **Vulnerable populations:**

• Elderly (65+), HHs in poverty, disabled

### **Essential services:**

 Places of employment, grocery stores, schools, medical care facilities, recreation/open space, senior centers, and centers for the developmentally disabled



### **PROJECT OUTREACH**

### 1. BRAINSTORMING:

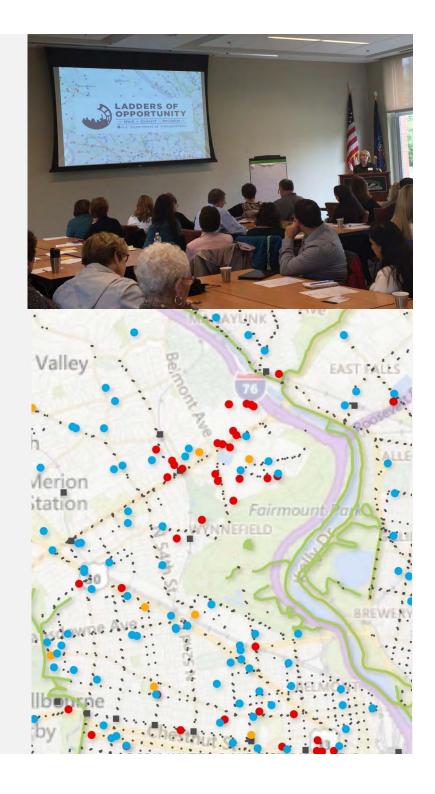
Web survey, PPTF workshop (Fall 2015) – Gather initial ideas on priorities and themes.

#### 2. DEVELOPING:

Stakeholder interviews (~50), advisory committee workshop (Winter 2016) – Gather detailed input on issues, opportunities, and priorities.

### 3. GROUND TRUTHING:

Road shows around the region (7) – Review draft priorities with core stakeholders, including representatives of elderly, disabled, and passenger constituencies.



### **GAPS AND BRIDGES**

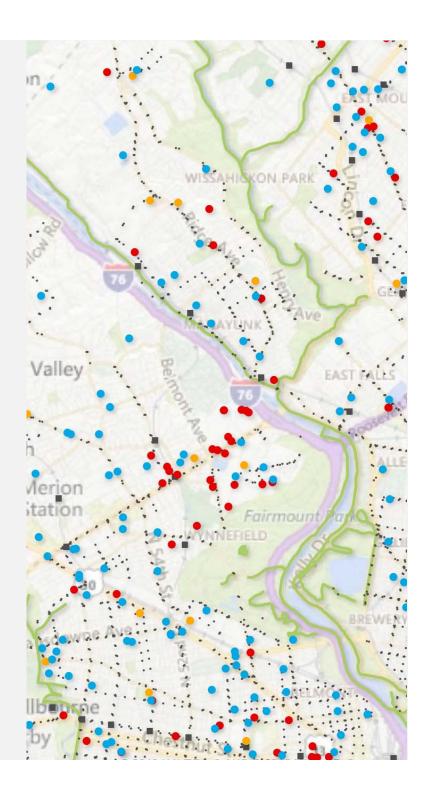
The Coordinated Plan identifies a menu of priority issues and strategies that can be cited by those seeking funding for traditional CHSTP programs, and from other sources.

### Gaps:

Factors that constrain transportation access to opportunity by vulnerable populations.

### **Bridges:**

Strategies that would improve regional mobility for those most in need.



### **GAPS:**

### Infrastructure

- Not all transit service is ADA accessible.
- Vehicle accessibility is hindered by inaccessible access paths.
- Some transportation infrastructure (such as overpasses, rail lines, and wide roadways) can create barriers within neighborhoods.
- Transfers between modes and services are not always accessible, affordable, or intuitive.

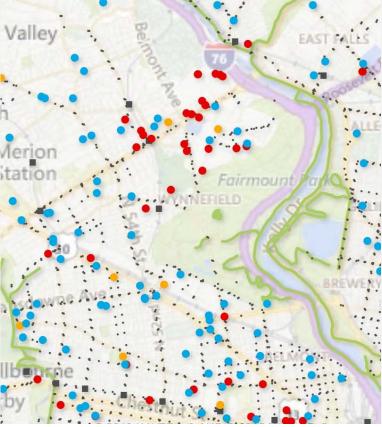


### **GAPS:**

### **Service and Funding**

- Existing services are not always coordinated, flexible, or convenient.
- Shared services for riders with different needs are inhibited by rules and licensing that depend on funding sources.
- Difficulty meeting overall service demand within the current funding landscape.
- Paratransit funding is scarce, inflexible, and siloed, making it difficult to find and match funding.

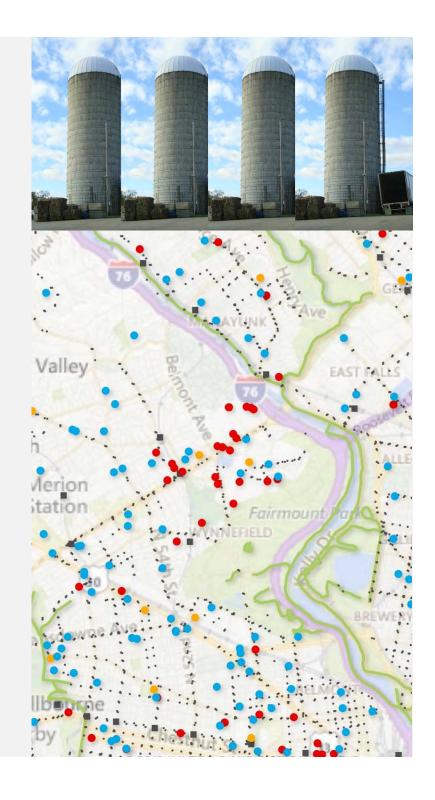




### **GAPS:**

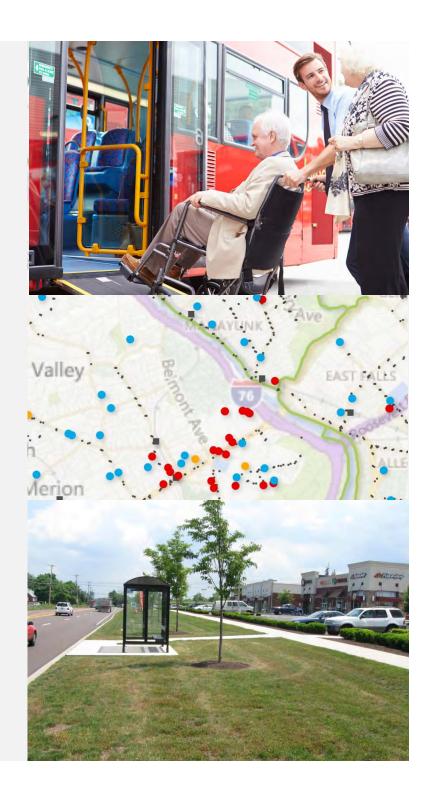
### **Data and Coordination**

- Human service transportation providers lack detailed data on users' needs and destinations (private data, hard to reach users, HIPAA restrictions, etc.)
- Information about travel options is not always clear or accessible in shared platforms like Google Maps.
- There is a lack of coordination between transit service needs and development projects.



### **Create Accessible Infrastructure**

- Ensure that transit vehicles, stop locations, and connecting pathways are accessible, and prioritize improvements where they are not.
- Prioritize accessibility improvements where they will be most beneficial for connecting vulnerable users with essential services.
- Incentivize the purchase of more accessible taxis and shared vehicles.
- Support connective sidewalk networks, public restrooms, and places to sit or rest in all communities—especially those with concentrations of vulnerable populations.



### Improve transportation service

- Support the deployment of new technology to enhance passenger service and information coordination, such as convenient online schedule and real-time information.
- Strengthen partnerships between health care systems and transportation providers, recognizing that different types of health appointments may require flexible or especially reliable transportation and scheduling options.
- Support transit route changes that provide new ways for vulnerable populations to access essential services. For example, Greater Mercer TMA's Z-Line/NJT partnership.



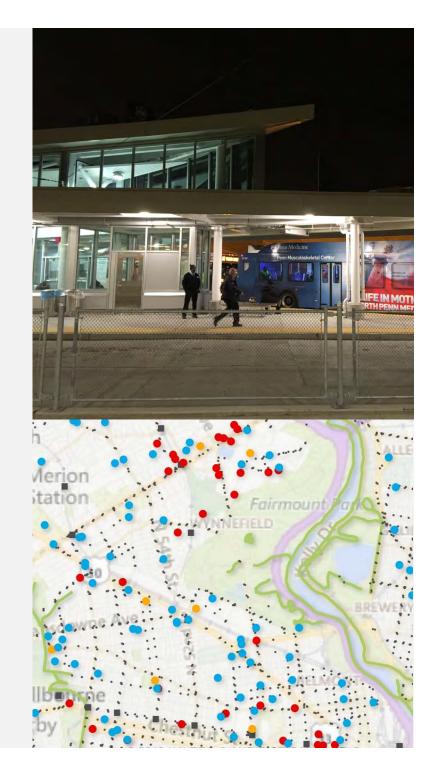


## **Provide Infrastructure that Feels Safe for Vulnerable Users**

 Encourage efforts to improve perceived personal safety, such as lighting, staffed facilities, and others, including Crime Prevention Through Environmental Design (CPTED) strategies.

### Improve outreach and communication

- Expand and refine methods for educating people on how to access and use public transit.
- Train case workers and job coaches to provide travel training to clients.

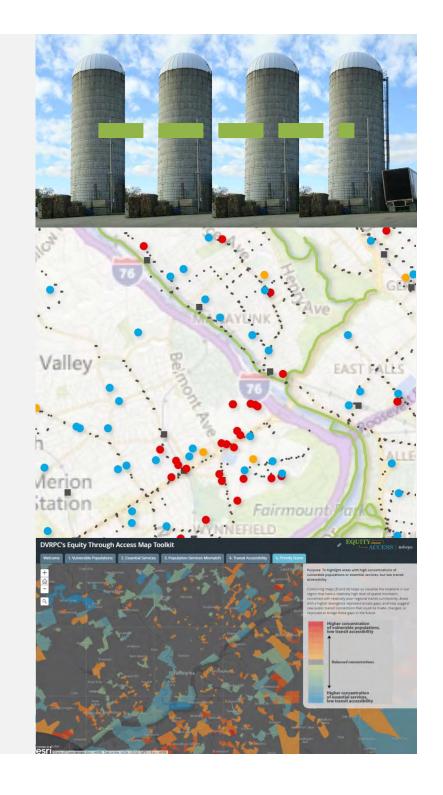


# Encourage creative, flexible use of existing funding sources and identify new funding partners

 Encourage creativity in the mixing of funding sources to break down funding silos (such as those separated by trip purpose) and increase transit options for vulnerable populations.

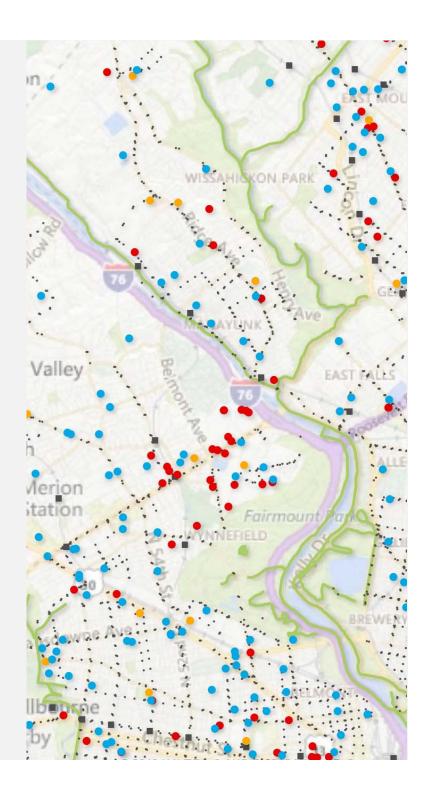
### **Create data resources**

- Develop and share more planning and mapping tools to help with project development, such as the ETA map toolkit.
- Build technical capacity for small transit providers to better share information through trainings and information exchanges, such as the General Transit Feed Specification (GFTS) builder.



## Summary: Overall, the plan encourages...

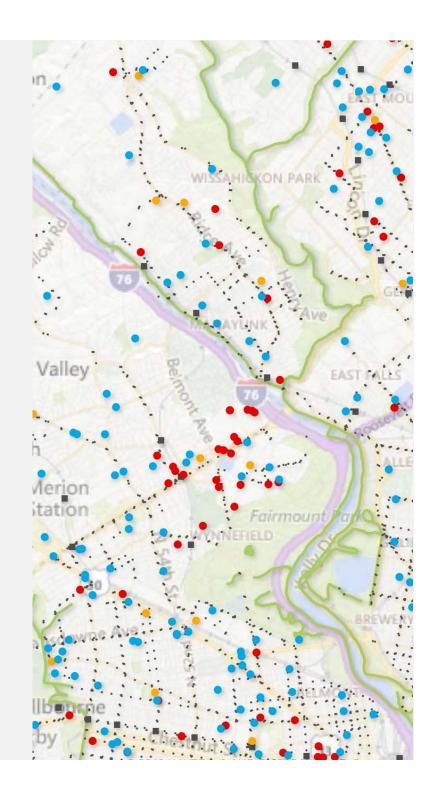
- Adoption of new technologies for service delivery, coordination, and passenger information.
- More thinking about the role of infrastructure in enabling or hindering access.
- Better coordination in every respect: trip type, development connectivity, data sharing, and more.

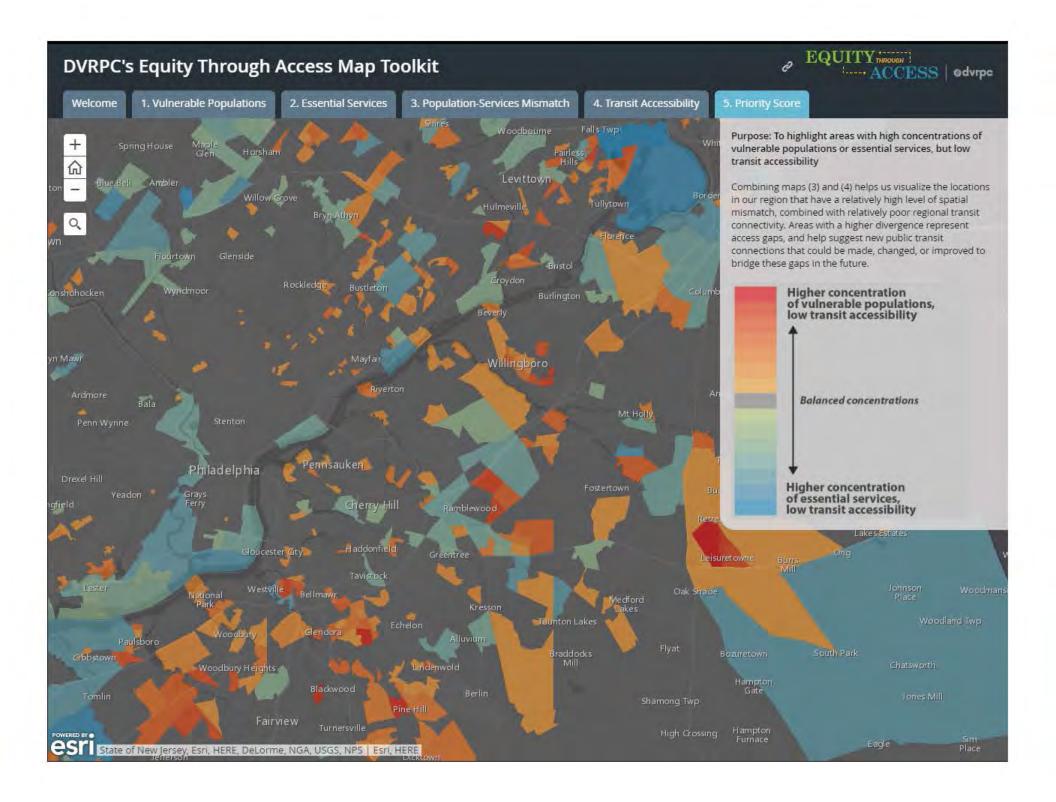


### **OTHER PROJECT COMPONENTS**

- ETA map toolkit available for use by regional and local partners, and data available for download
- Coming soon: several case studies to illustrate good practice and breadth of plan-supportive project types
  - a. Haddon Ave, Camden City
  - b. Z-Line Shuttle, Mercer County
  - c. Gloucester County UWR plan
  - d. Lower Bucks County access gaps
- 3. All available on our program web site, which we will continue to update:

www.dvrpc.org/eta





### **A FEW ACTION STEPS**

## 1. Human service transportation coordination project

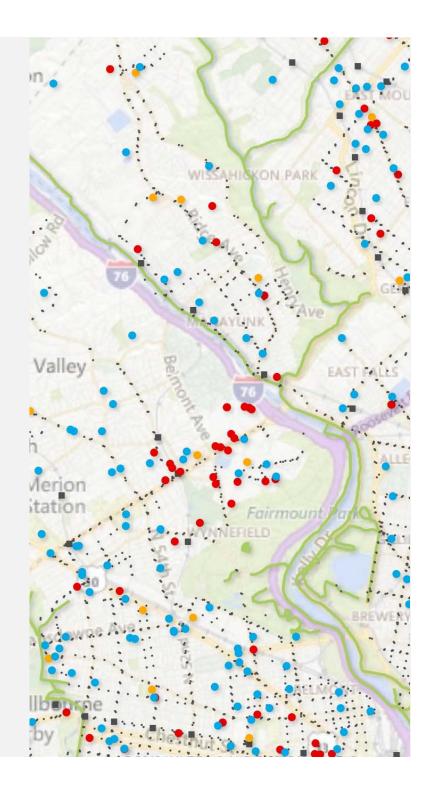
Coordination between service providers in/near to Mercer County to improve client access to desired destinations while preserving or improving operating efficiencies.

## 2. Transportation Gaps to Healthy Amenities Study in Camden City

Working with "Get Healthy Camden,"
DVRPC will identify transportation service
and infrastructure gaps between
neighborhoods and essential services.

### 3. FTA MOD sandbox grant proposal

Project would allow smaller mobility providers to opt in to SEPTA's new passenger information system.





















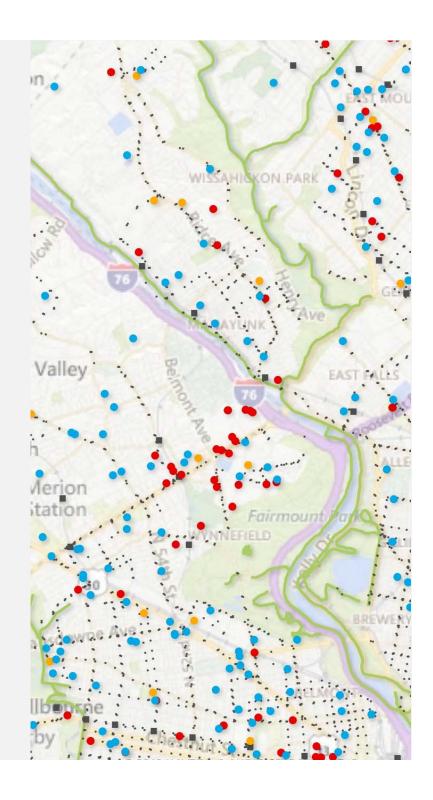






### **PROPOSED ACTION**

That the RTC recommend the DVRPC Board accept the Equity Through Access project's Gaps and Bridges as the updated Coordinated Human Services Transportation Plan for the DVRPC region.

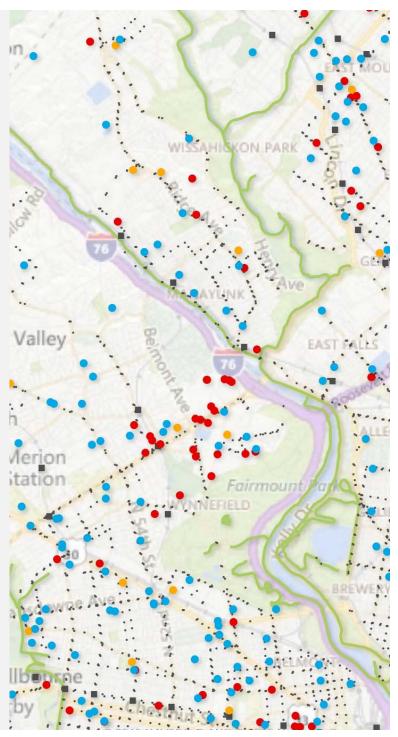


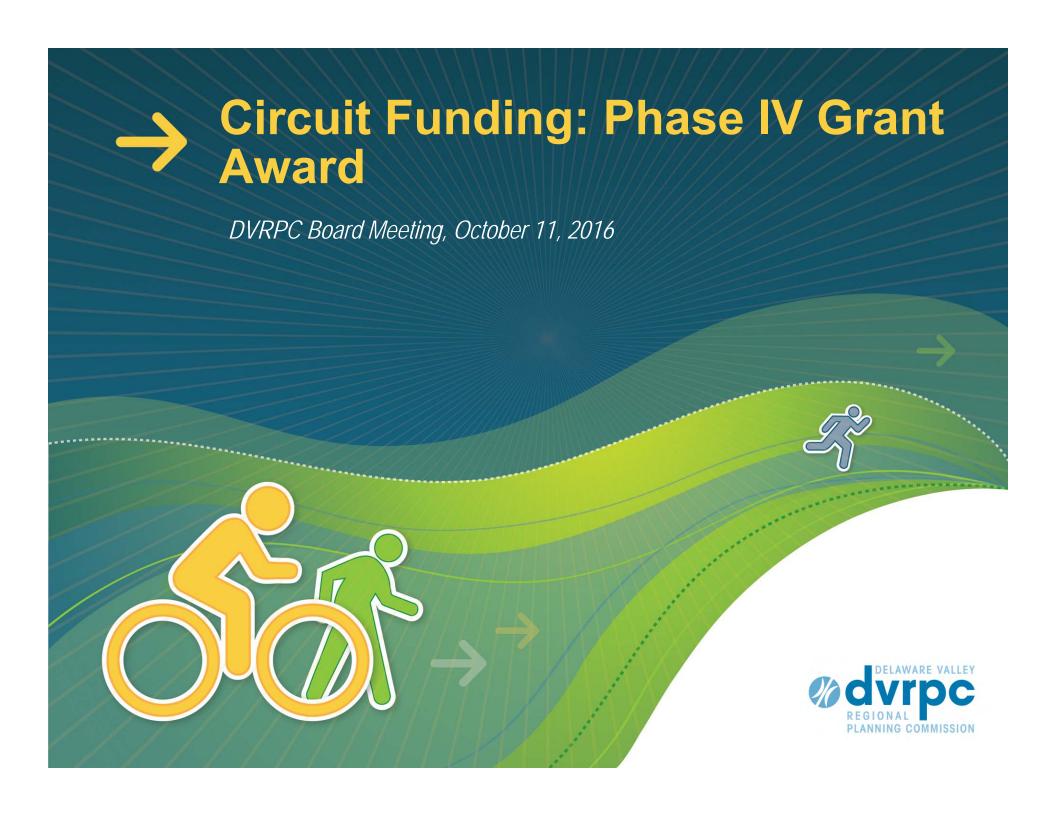


**Coordinated Plan Update for the DVRPC Region** 

DVRPC Regional Technical Committee October 11, 2016







## **Proposed Action**

Recommend Board approval for the following Regional Trails Program Grant:

 \$14,640 for surveying and permitting for the Crozer Park segment of the Chester Creek Trail

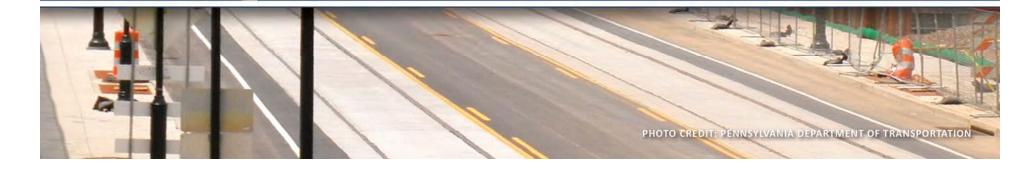




October 2016

## **TIP Actions**

**Transportation Improvement Program**New Jersey TIP (FY2016-2019)
Pennsylvania TIP (FY2017-2020)



# Planning and Research, Federal-Aid Statewide | Cost Increase and Scope Change

- Amend the NJ TIP by increasing FY17 Planning Study phase by \$27.5 Million STP and expand scope to include Concept Development.
- Statewide Concept Development Activities Include:
  - 12 three-year term agreements capped at \$2 Million each
    - Various bridge, pavement, and safety projects
    - CD studies approved via NJDOT CPSC and CPC
  - \$3.5 Million already identified candidates for other MPOs.
  - Traditionally State funded and included in a different program at \$5 M/year



## TIP Action | Proposed – NJ Amend the NJ TIP for the Following Project:

## Planning and Research, Federal-Aid, Statewide

Amend the NJ TIP by increasing FY17 Planning Study phase by \$27.5 Million STP and expand scope to include Concept Development.



# 15<sup>th</sup> Street Bridge over the Callowhill Cut City of Philadelphia | Add New Project

- Amend the PA TIP by adding new ACT 13 bridge for PE (\$350,000) and FD (\$150,000) in FY17 and CON (\$2,500,000) in FY19.
- Posted at 3 tons and 29.0 sufficiency rating
  - Structurally Deficient
- Steel Repairs, painting, bearing and substructure repairs, replace bridge deck and joints

@dvrpc

PA17-01: 15th Street Bridge over Callowhill Cut w Wallace Green St Brandywine St Mt Vernon St Clay St Spring Garden St Buttonwood St Brandyv Community College of Philadelphia Nectarine St Hamilton St Buttonwood St Philadelphia Franklin town to Noble St Hamilton St Iton St Callowhill St Wood St Vine St Carlton St US-30 E 676 Pearl St Wood Vine St Expy Summer St Vine St Expy 676 Vine Hospital Summer St Spring St Montgomery Arch St Philadelphia Arch St JFK Plaza dy Blvd Z Septa-Suburbar Station PA17-01 Cherr Delaware JEK BIVE Dilworth Park Camden Gloucester Philad Basemap: ESRI 500 1,000 Feet



## TIP Action | Proposed – PA Amend the PA TIP for the Following Project:

## 15th Street Bridge over the Callowhill Cut

- Amend the PA TIP by adding new ACT 13 bridge for PE (\$350,000) and FD (\$150,000) in FY17 and CON (\$2,500,000) in FY19.
- ► These are additional funds to the region

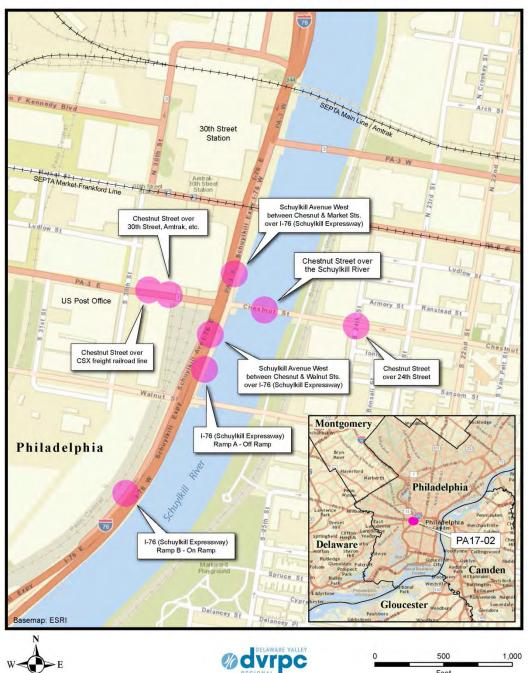


# Chestnut St Bridges, Ramps, (8) at 30<sup>th</sup> St City of Philadelphia | Program Increase

- Amend the PA TIP by increasing CON by \$13,776,000 (\$11,020,000 NHPP/\$2,756,000 State 185) in FY17
- CON estimate remains at \$70 M
- ROW clearance issues prevented obligation under FY2015 TIP
- FY2017 TIP only approved for \$56.2 M
  - Not anticipated to carry over full \$70 M during TIP update

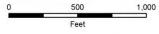


PA17-02: Chestnut Street Bridges and Ramps at 30th Street











## TIP Action | Proposed – PA Amend the PA TIP for the Following Project:

Chestnut St Bridges, Ramps, (8) at 30th St

Amend the PA TIP by increasing CON by \$13,776,000 (\$11,020,000 NHPP/\$2,756,000 State 185) in FY17



# Funds Obligated Under FY2015 TIP Various Counties | Program Decrease

- Amend the PA TIP by decreasing programmed amount by \$36,638,000, due to funds being obligated under the previous FY2015 TIP, for:
  - US 422, Expressway Bridge over Schuylkill River (SRB) by \$24,500,000
- ► PA 452, Market St Bride over Amtrak/ SEPTA Wilmington Newark Rail Line by \$15,138,000



# Funds Obligated Under FY2015 TIP Various Counties | Program Decrease

- ▶ US 422, (New) Expressway Bridge Over Schuylkill River (SRB)
  - Reduce by \$24,500,000
    - Reduce FY17 by \$11,000,000 (\$5,000,000 NHPP/\$5,500,000 STU)
    - Reduce FY18 by \$8,000,000 NHPP
    - Reduce FY19 by \$5,500,000 NHPP
- PA 452, Market St Bridge over Amtrak/ SEPTA Wilmington Newark Rail Line Reduce by \$15,138,000
  - Reduce FY17 by \$581,000 State 581
  - Reduce FY18 by \$4,745,000 (\$3,764,000 NHPP/\$981,000 State 581)
  - Reduce FY19 by \$4,906,000 (\$3,925,000 NHPP/\$981,000 State 581)
  - Reduce FY20 by \$4,906,000 (\$3,925,000 NHPP/\$981,000 State 581)

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## TIP Action | Proposed – PA Amend the PA TIP for the Following Projects:

US 422, (New) Expressway Bridge Over Schuylkill River (SRB) and PA 452, Market St Bridge over Amtrak/ SEPTA Wilmington Newark Rail Line

- Decrease programmed amount by \$36,638,000, due to funds being obligated under the previous FY2015 TIP for:
  - US 422, Expressway Bridge over Schuylkill River (SRB) by \$24,500,000
- PA 452, Market St Bride over Amtrak/ SEPTA Wilmington Newark Rail Line by \$15,138,000

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