

# Growth, Development and SEPTA

TMA Bucks  
December 6, 2019



# Background & Methodology



**ESI** ECONCONSULT  
SOLUTIONS INC.



# Economic Impacts of SEPTA

- ESI has helped SEPTA quantify economic impacts from its activity and service
  - Operating / Capital Expenditure Impacts
  - Suburban Property Value Impacts
  - City Property Value Impacts
  - City Affordability Impacts
  - Downtown Congestion Impacts
- ESI has leveraged these existing models to estimate the catalytic impacts and ROI of SEPTA's projects of significance

## Economic Impacts from Transit



### AN ECONOMIC ENGINE...

Southeastern PA is the Commonwealth's key economic engine. **THE FIVE COUNTIES** GENERATE **41% OF THE STATE'S ECONOMIC ACTIVITY** WITH **32% OF ITS POPULATION** ON **5% OF ITS LAND**. This degree of economic productivity and density is not possible without transit to efficiently move people throughout the region.



### CREATES JOBS ACROSS PENNSYLVANIA...

Every day, SEPTA's 2,800 trains, trolleys, buses and Paratransit vehicles provide more than one million passenger trips across the region to work, school, appointments, and entertainment. Dedicated state funding ensures that SEPTA can keep the economy moving. SEPTA is now five years into a 20-year capital program to address a multi-billion dollar backlog of infrastructure repair needs and rebuild the system for the future. **THESE INVESTMENTS NOW GENERATE MORE THAN \$3 BILLION IN ANNUAL STATEWIDE ECONOMIC ACTIVITY** and have catalyzed additional growth and development across southeastern PA.



### PRESERVING AFFORDABILITY IN A GROWING CITY

Transit reduces household expenses. In the City of Philadelphia, **THE AVERAGE HOUSEHOLD SAVES \$830 PER YEAR**, a net financial benefit associated with proximity to high-quality transit. These annual household savings add up to **\$481M CITYWIDE**.

#### IMPACT OF HIGH QUALITY TRANSIT

HOUSING	Premium		<b>+\$870</b>	From Transit's Added Value
	Car Ownership		<b>-\$1,670</b>	From Fewer Vehicles
TRANSPORTATION	Car Driving		<b>-\$530</b>	From Less Fuel Usage
	Public Transit		<b>+\$500</b>	From More Transit Use
Average Savings Per Household			<b>\$830</b>	<b>MORE AFFORDABLE</b>



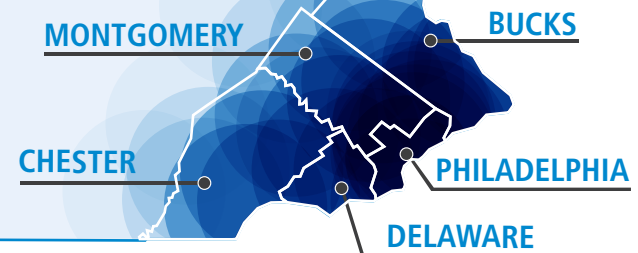
# DRIVES THE ECONOMY

2019 ECONOMIC IMPACT REPORT



Photo By: Bill Monaghan

Southeastern PA is the Commonwealth's key economic engine. **THE FIVE COUNTIES GENERATE 41% OF STATE'S ECONOMIC ACTIVITY WITH 32% OF ITS POPULATION ON 5% OF ITS LAND.** This degree of economic productivity and density is not possible without transit to efficiently move people throughout the region.



## 36% OF STATE TAX REVENUE

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With just **32%** of the state's population, **SOUTHEASTERN PA**  
**GENERATES \$10.8 Billion (36%)**  
**OF THE TOTAL TAX REVENUES** to the state general fund



**32%**  
SALES



**36%**  
INCOME

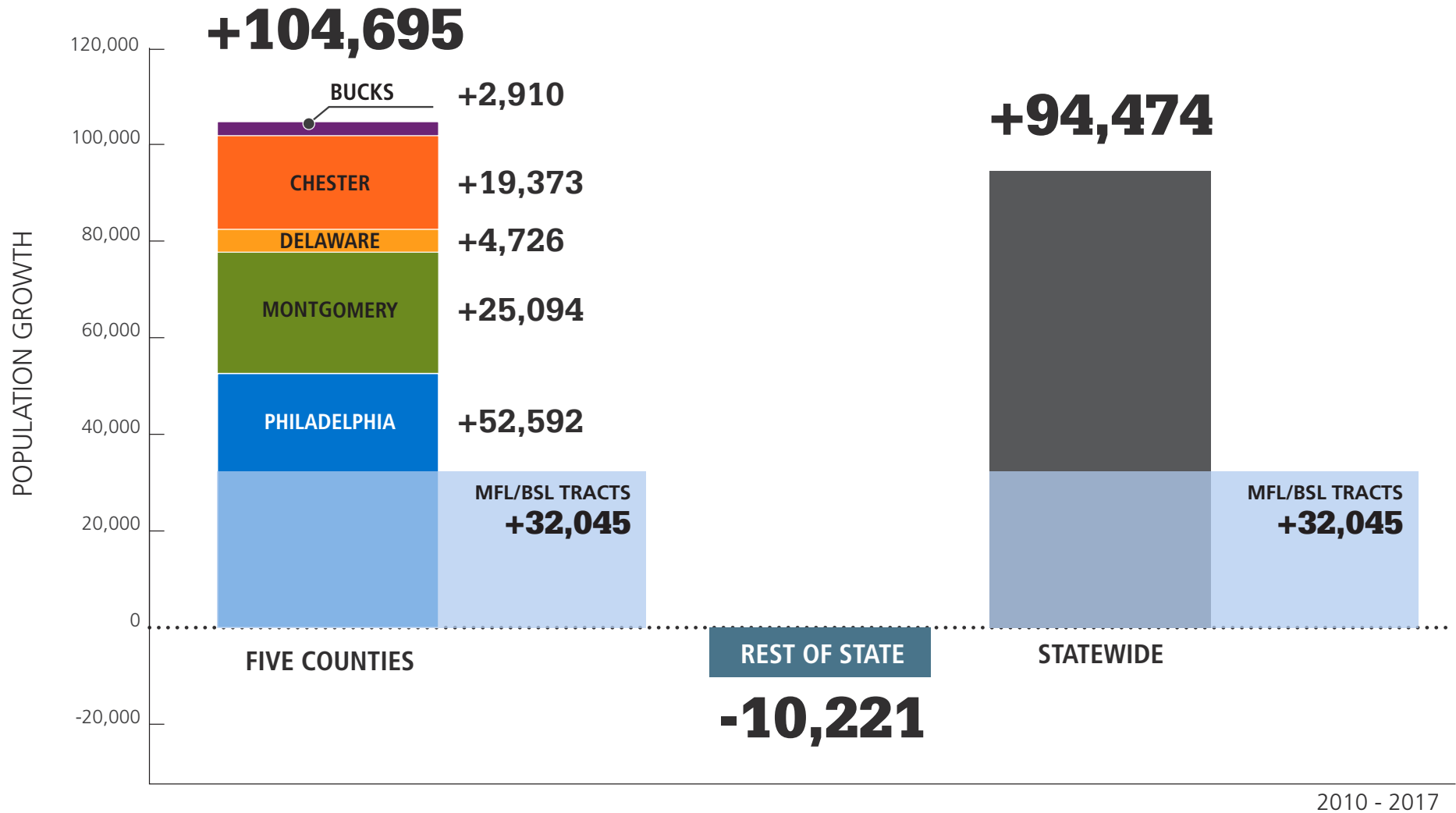


**41%**  
CORPORATION



**42%**  
ESTATE &  
REALTY TRANSFER

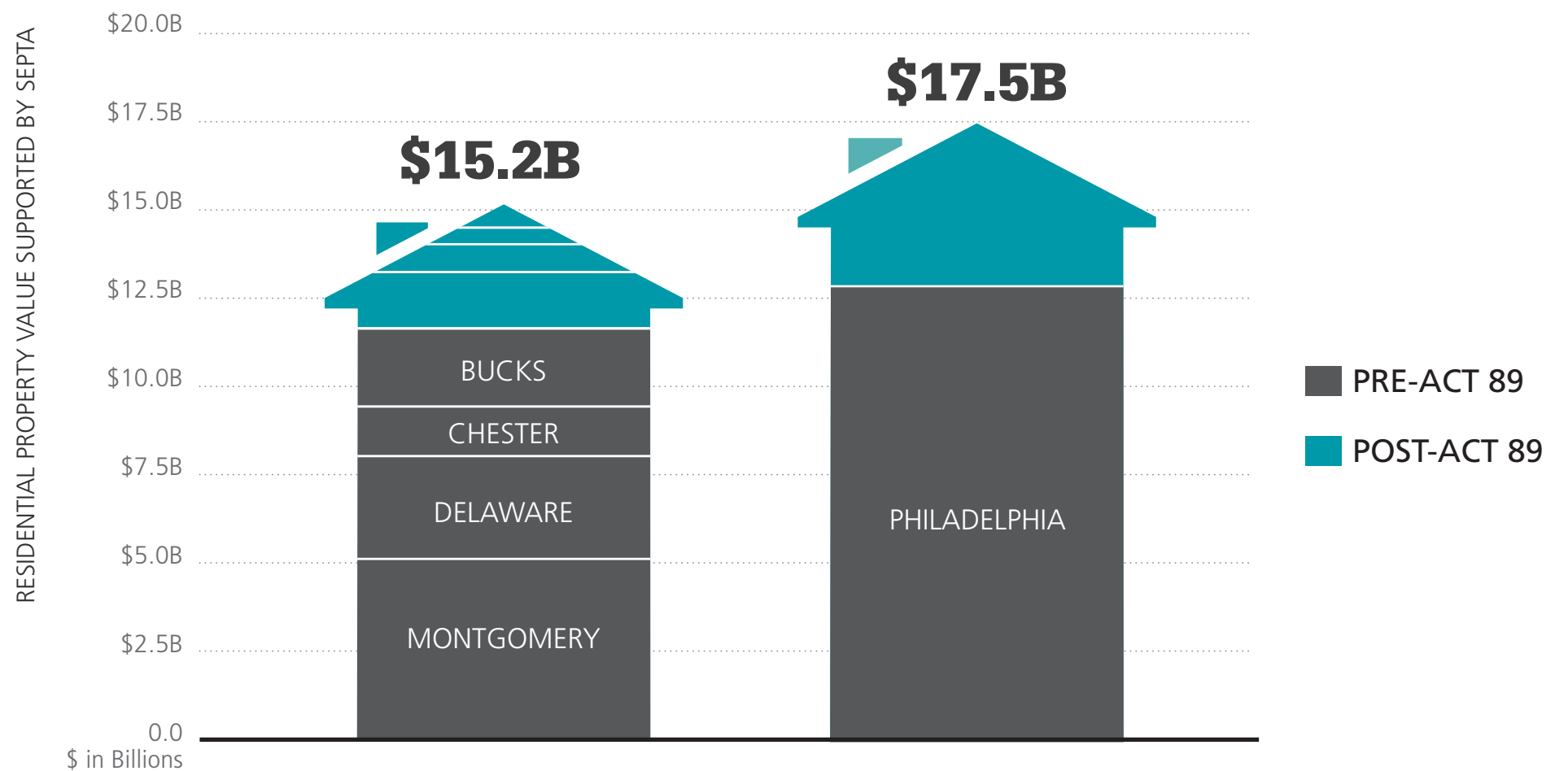
# STATE POPULATION GROWTH





# RESIDENTIAL PROPERTY VALUE INCREASES BASED ON PROXIMITY TO SEPTA TRANSIT

Access to transit increases home values. Statistical models allow economists to isolate this value through the analysis of housing sales. **ACCESS TO SEPTA SERVICE CONTRIBUTES A PREMIUM OF \$33 BILLION IN HOUSING VALUE**, representing **11%** OF TOTAL HOUSING VALUE IN SOUTHEASTERN PA.










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# NOT POSSIBLE WITHOUT TRANSIT - SPACE IS LIMITED

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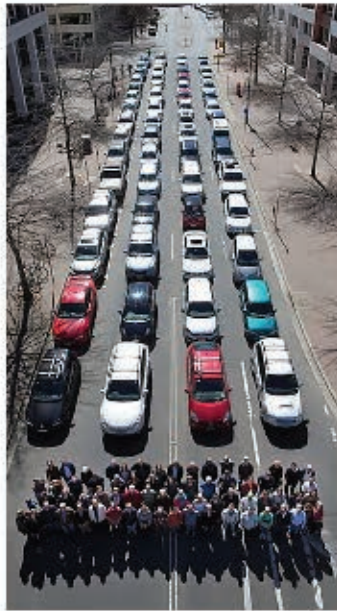
BY BUS



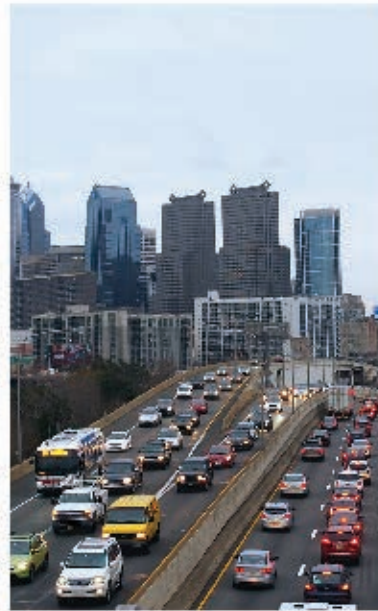
BY CAR



BY  
DRIVERLESS CAR



SCHUYLKILL  
EXPRESSWAY



CENTER CITY



SOURCE: JARRETT WALKER + ASSOCIATES

## ACT 89

### Capital Impact

**+70%**  
IMPACT

**\$775M**  
POST-ACT 89



**5,420**  
JOBS



**\$302M**  
EARNINGS

NOTE: CAPITAL IMPACT NUMBERS REPRESENT FY2015 - FY2017 (IN \$2017) AVERAGE ANNUAL



## ACT 89

### Capital Impact

**+71%**  
IMPACT

FIVE COUNTIES

**\$725M**  
POST-ACT 89



**5,130**  
JOBS



**\$287M**  
EARNINGS

NOTE: CAPITAL IMPACT NUMBERS REPRESENT FY2015 - FY2017 (IN \$2017) AVERAGE ANNUAL

## ACT 89

### Capital Impact



**\$82M**  
POST-ACT 89



**560**  
JOBS



**\$31M**  
EARNINGS



NOTE: CAPITAL IMPACT NUMBERS REPRESENT FY2015 - FY2017 (IN \$2017) AVERAGE ANNUAL





**SEPTA**

Economic Impact

PENNSYLVANIA

AVERAGE ANNUAL

**\$3.05B**

POST-ACT 89

**23,370**

JOBS

**\$1.72B**

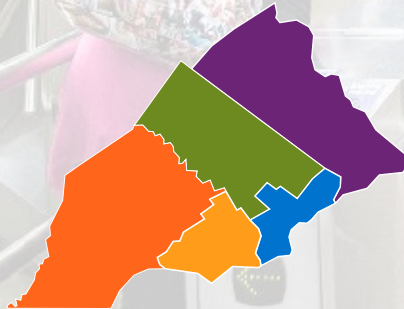
EARNINGS

NOTE: ECONOMIC IMPACT NUMBERS REPRESENT FY2015 - FY2017 (IN \$2017) AVERAGE ANNUAL



**SEPTA**

Economic Impact



5-COUNTY

AVERAGE ANNUAL

**\$2.93B**

POST-ACT 89

**22,590**

JOBS

**\$1.67B**

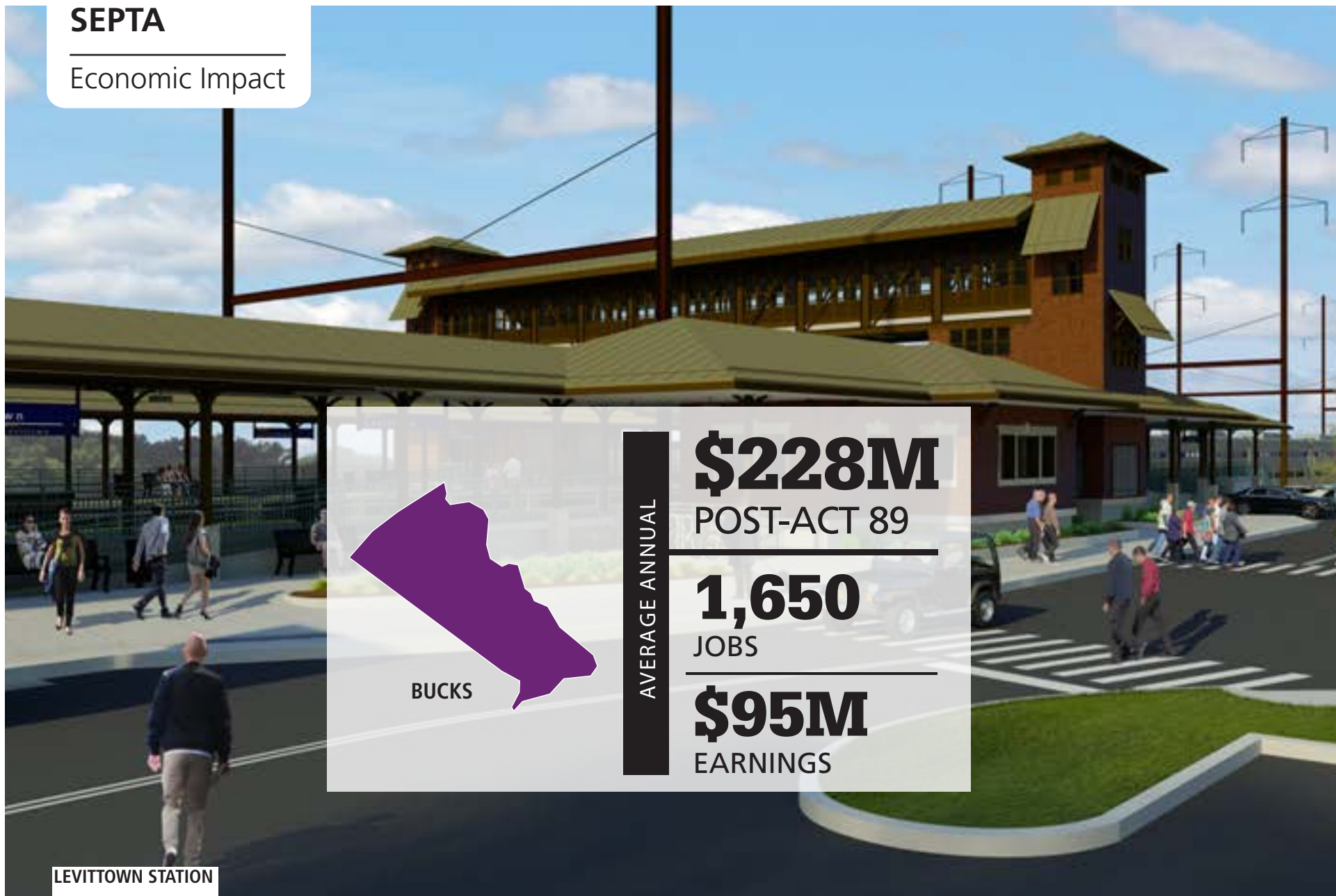
EARNINGS

NOTE: ECONOMIC IMPACT NUMBERS REPRESENT FY2015 - FY2017 (IN \$2017) AVERAGE ANNUAL



**SEPTA**

Economic Impact



LEVITTOWN STATION

NOTE: ECONOMIC IMPACT NUMBERS REPRESENT FY2015 - FY2017 (IN \$2017) AVERAGE ANNUAL

# Projects of Significance - Overview

## Capacity Increases

Grow the volume of riders to  
key employment nodes



## Service Quality Improvements

Benefit riders and housing values



Improved Service



Improved Destinations

## Transportation Impacts by Project

	Capacity Change	Service Quality Change
MFL Capacity		
Increased number of cars	X	
Regional Rail Capacity		
Increased frequency	X	X
Increased speed		X
Increased capacity per car	X	
Trolley Modernization		
Increased speed	X	X
Increased capacity per car	X	
KOP Extension		
New destination served		X
Increased frequency	X	X
Increased capacity per car	X	

# Flow of Economic and Fiscal Impacts

## Transportation Improvements

Capacity  
Speed/Frequency  
Destinations



## Localized Development Value

Downtown/ UCity  
King of Prussia  
Along Transit Lines



## Regional Attractiveness

Business Attraction  
Property Value



## Increased Tax Revenue

Pennsylvania  
Philadelphia  
Suburban



## Enhanced Economic Activity

Employment and Earnings  
Business Sales and Profits  
Property Value



# Development Impact

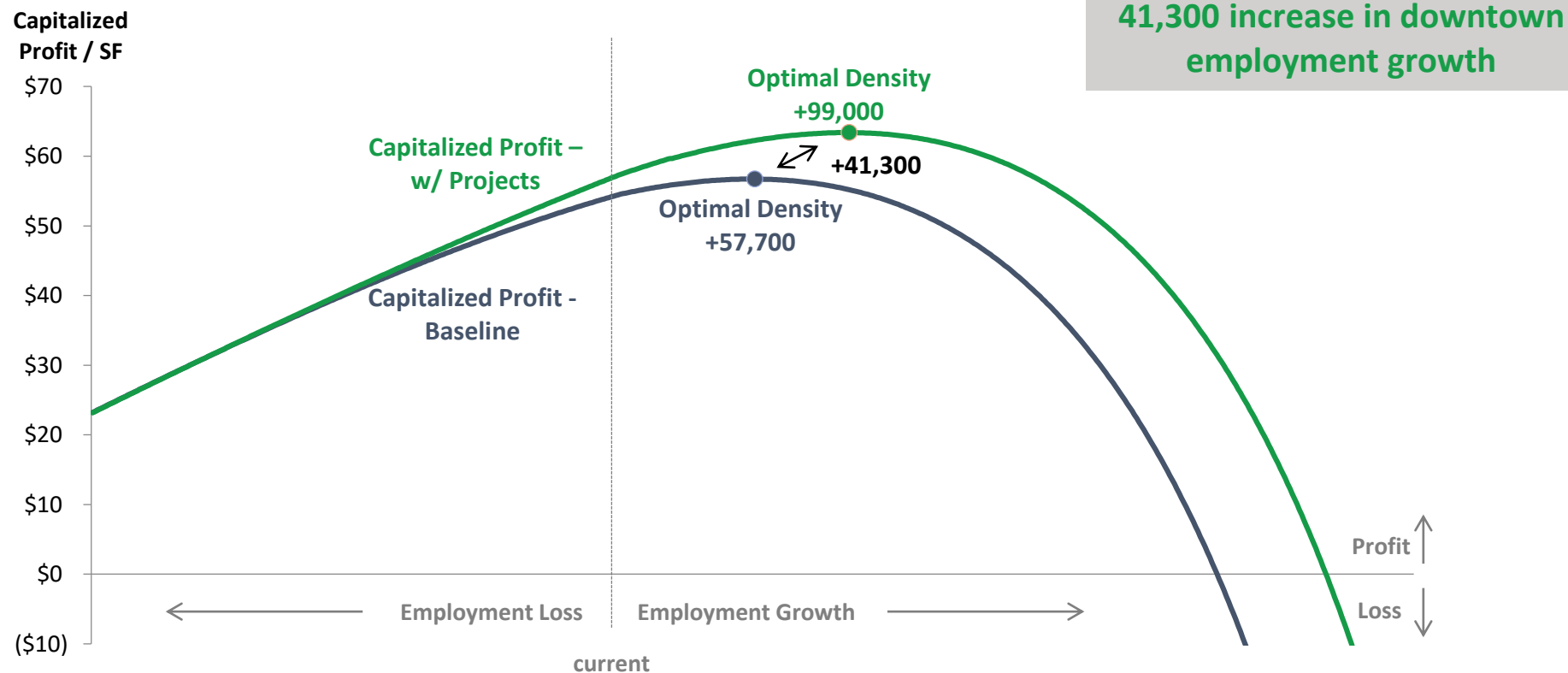


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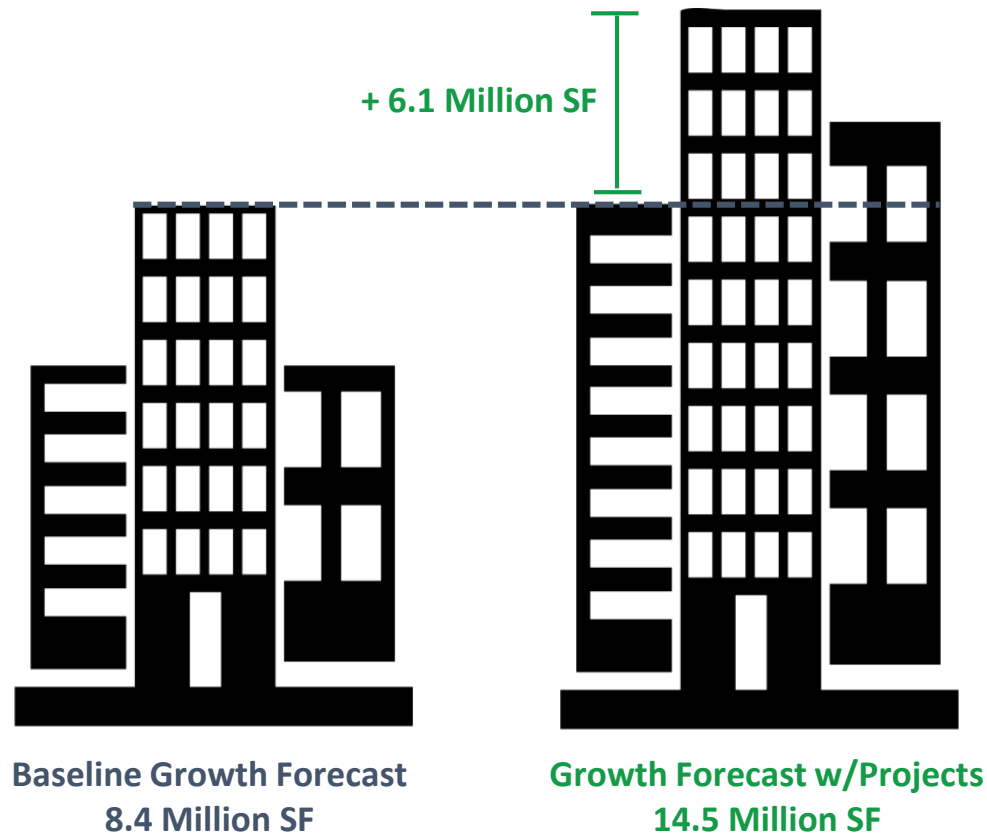


# Optimal Density Level

## Optimal Density for Downtown Philadelphia



# Office Market Development



**Absent additional transit capacity, key development sites like Schuylkill Yards and uCity Square will fall short of their potential – or crowd out other growth in the office market**



**Schuylkill Yards**  
**Phase 1 - 4.8 M SF**  
Office, Lab & Innovation  
(6.9 M SF total)



**uCity Square**  
**1.7 M SF**  
Office, Lab & Innovation  
(4.0 M SF total)



# King of Prussia Development



**5.3 million**  
SF of net new development



**8,000**  
net new jobs



**\$636 million**  
additional annual earnings



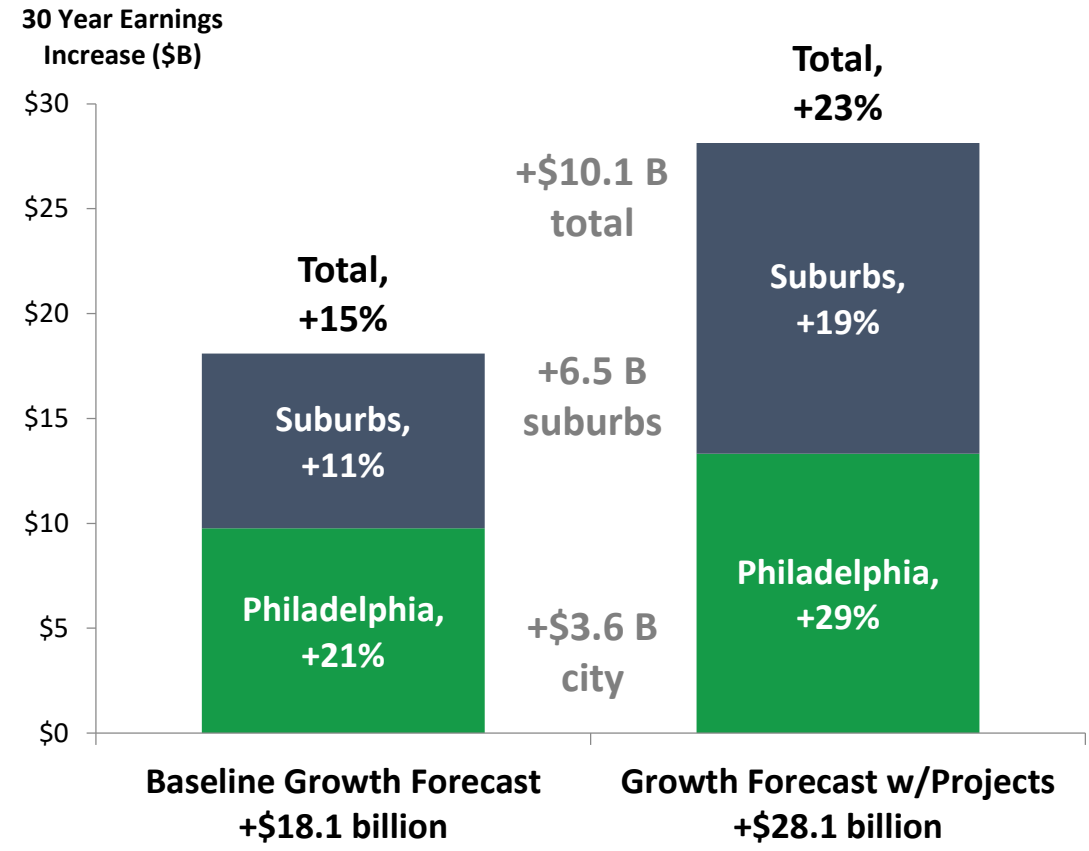
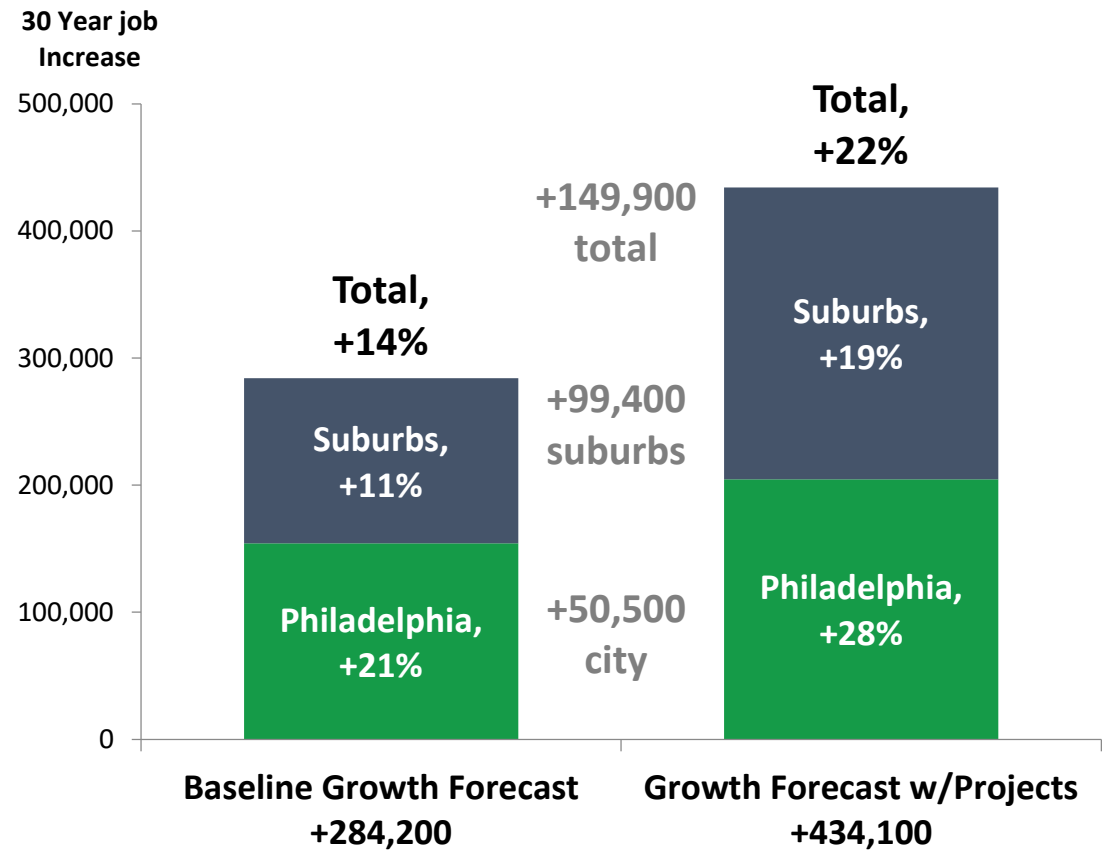


# Regional Employment and Earnings Growth

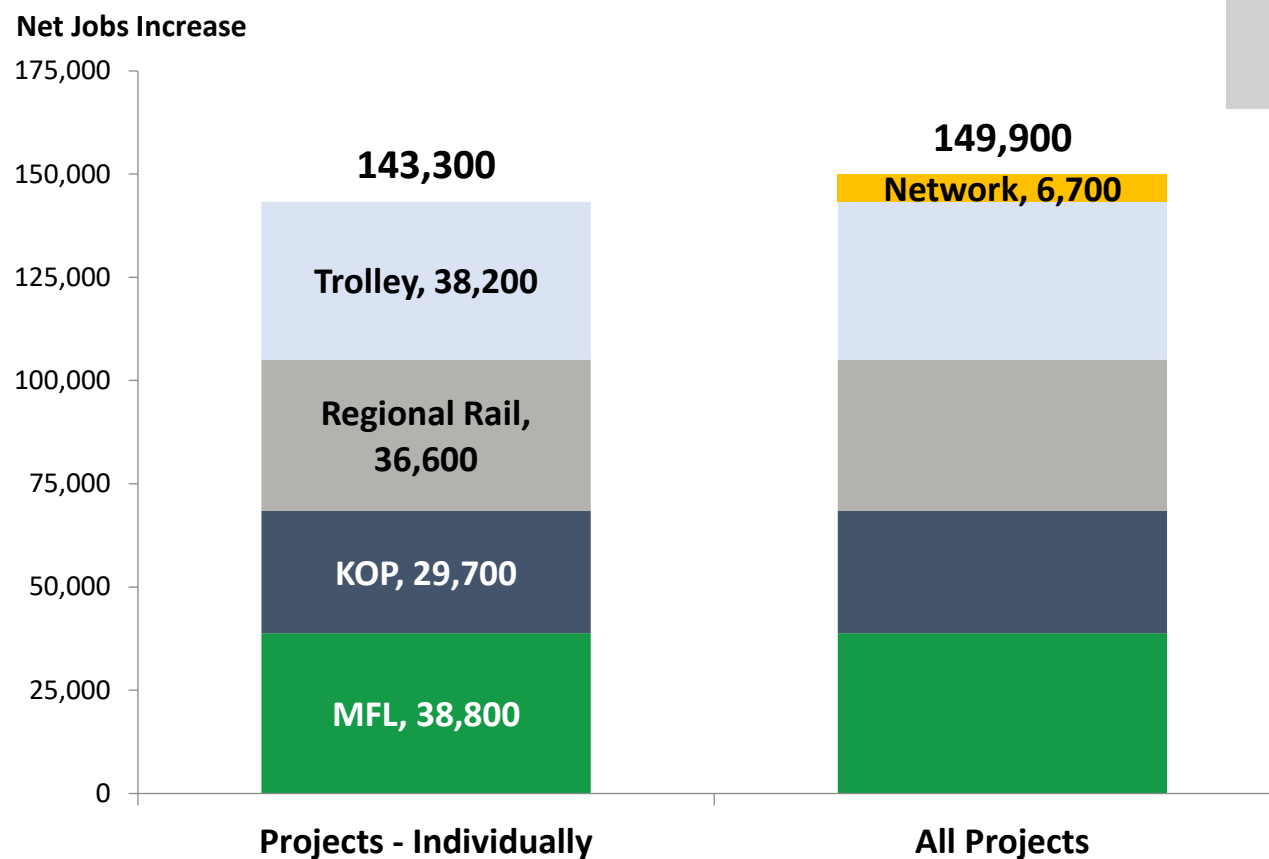
## Regional Employment Growth

Projects accelerate the rate of growth more than 1.5x

## Regional Earnings Growth



# Project Effects on Regional Employment Growth



Network effects emerge from undertaking the package of projects collectively

# Employment and Development Impact



**11.4 million**

SF of additional commercial development in downtown / KOP



**149,900**

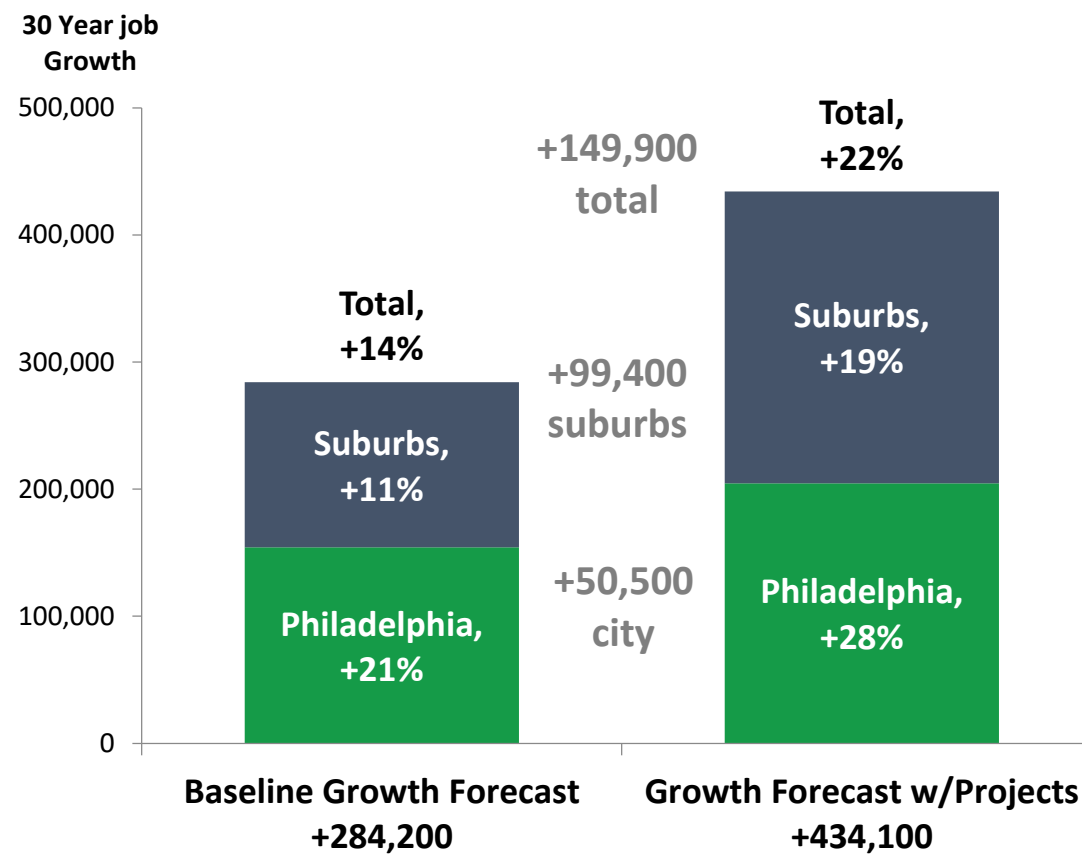
additional jobs across the region



**\$10.1 billion**

additional annual earnings across the region

## Regional Employment Growth



# Property Value Impact

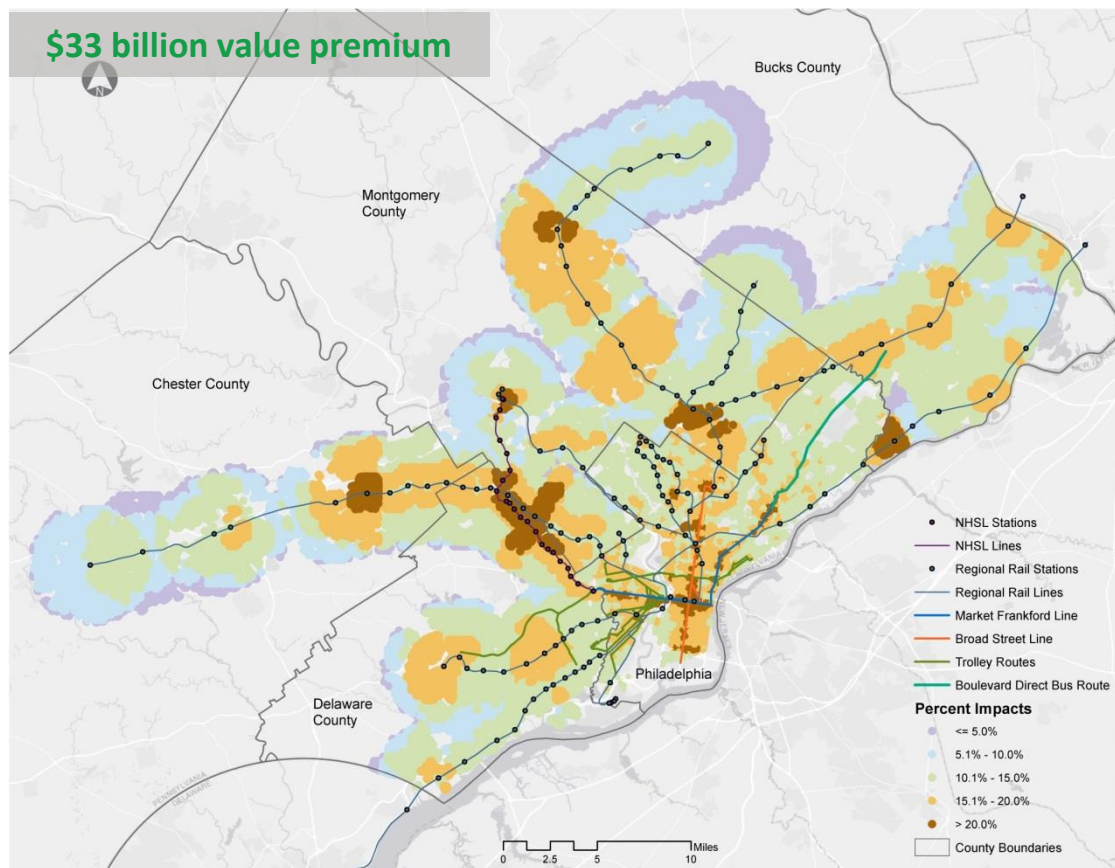


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# Property Value Approach – Service Quality Impacts

## Property Value Premium from Existing SEPTA Service



Transit Improvements grow the amenity value



### Service Quality

Speed  
Frequency  
Rider Experience



### Destination Quality

New Destination (KOP)  
Enhanced Downtown Employment

Growth in regional employment hubs increases regional property values – including for housing that is not in proximity to SEPTA service

## Regional Property Value

- ESI estimates premiums for single family housing located within three miles of Regional Rail stations throughout the suburban counties to yield a comprehensive regional estimate.
- The aggregate housing premium in the suburban counties is estimated at more than \$15 billion, representing 7% of all housing value across Bucks, Chester, Delaware and Montgomery Counties. In aggregate, **SEPTA service generates \$33 billion in housing value across the southeast region, representing 11% of total regional housing value.**
- The map on the following page illustrates the estimated percentage premium by location.
- These estimates are limited to the value of access to service, and do not reflect the potential additional value loss due to the reduced economic competitiveness of the region absent transit service.

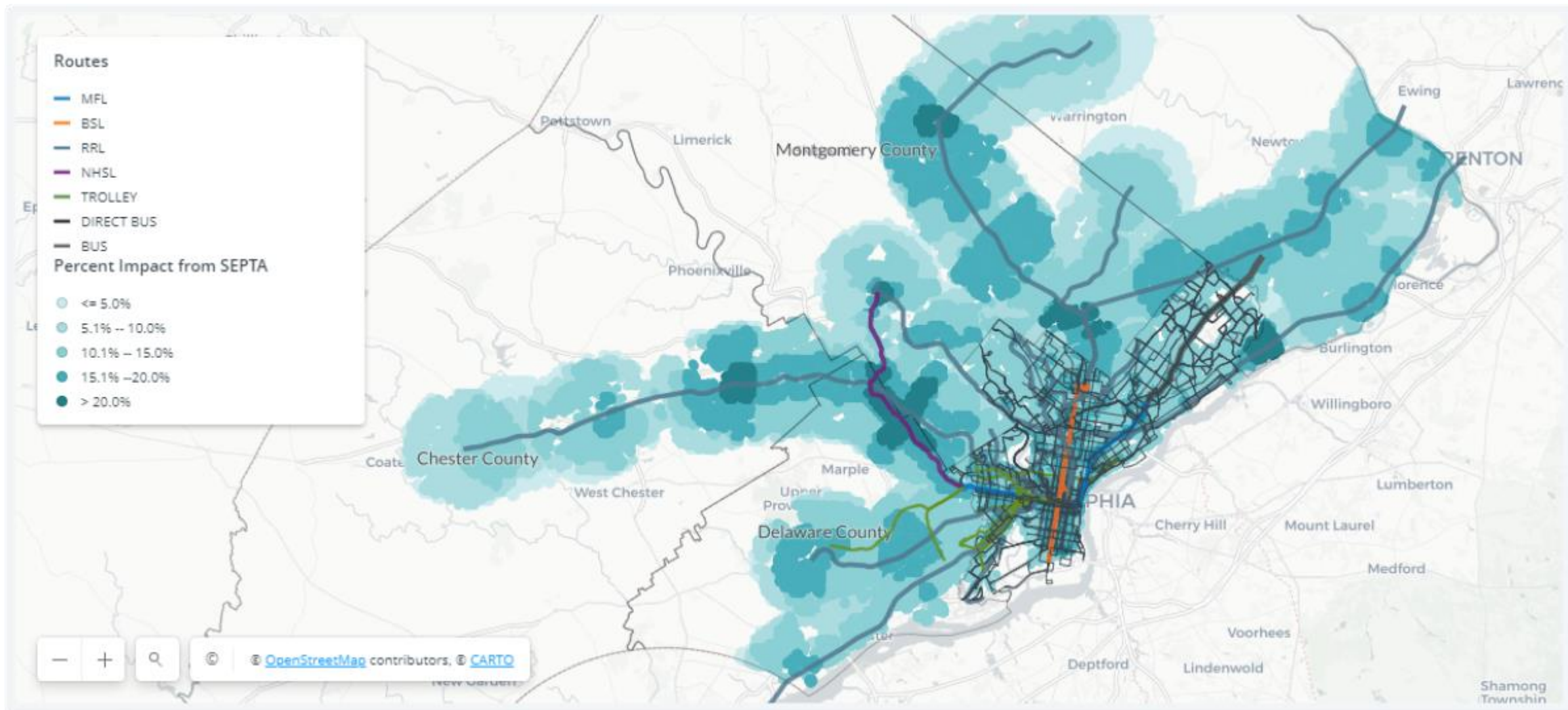
### SEPTA service accounts for \$33 billion in residential housing value across the five-county southeast region

County	Total Premium	Share of Housing Value	Premium per HH
Bucks	\$2.9 B	7%	\$12,500
Chester	\$1.9 B	4%	\$10,300
Delaware	\$3.7 B	11%	\$18,300
Montgomery	\$6.6 B	8%	\$21,400
Philadelphia*	\$17.5 B	17%	\$30,100
Region	\$32.7 B	11%	\$21,600

\*Philadelphia estimates include both single family and multifamily housing, while suburban county estimates include single family only



# SEPTA Property Value Map





# Residential Value Increase from Projects

## Philadelphia

**\$2.9 billion**  
existing housing value growth  
(3.0% property value premium)

**\$3.7 billion**  
in new property value

**\$6.7 billion**  
increase in city housing value



**\$18.8 billion**  
total housing value growth

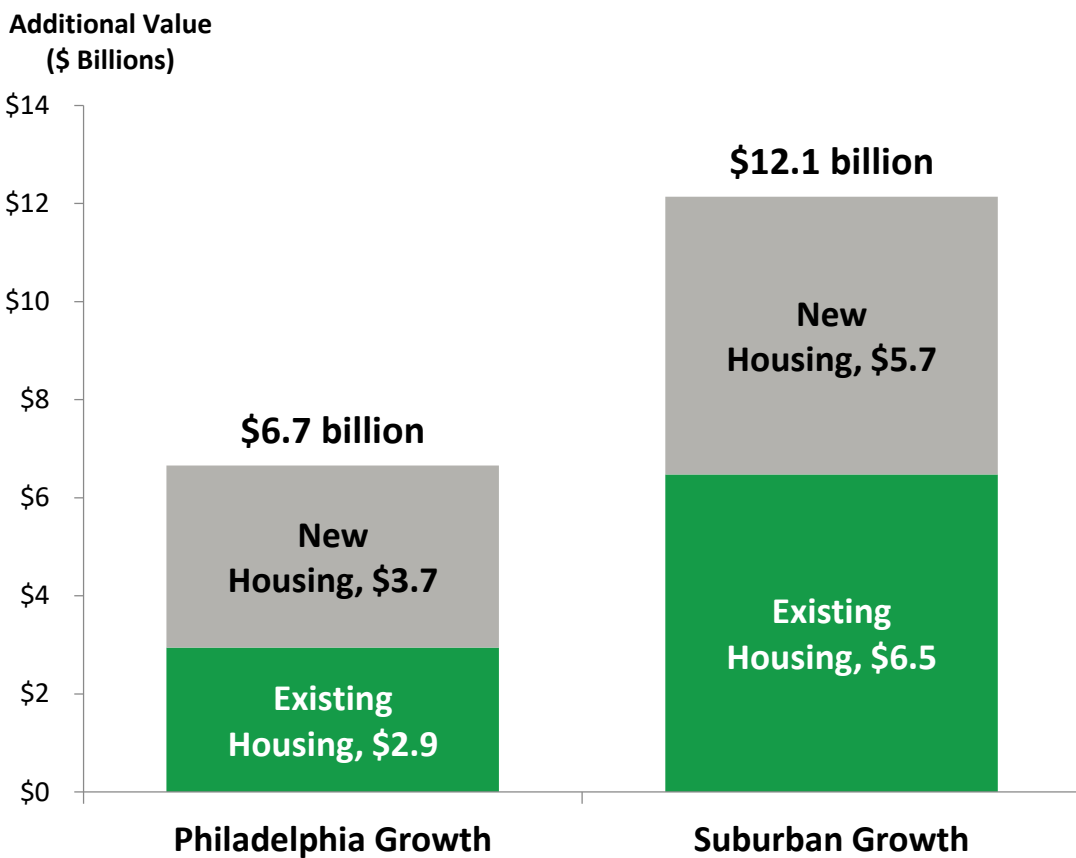
## Suburbs

**\$6.5 billion**  
existing housing value growth  
(3.2% property value premium)

**\$5.7 billion**  
in new property value

**\$12.1 billion**  
increase in suburban housing value

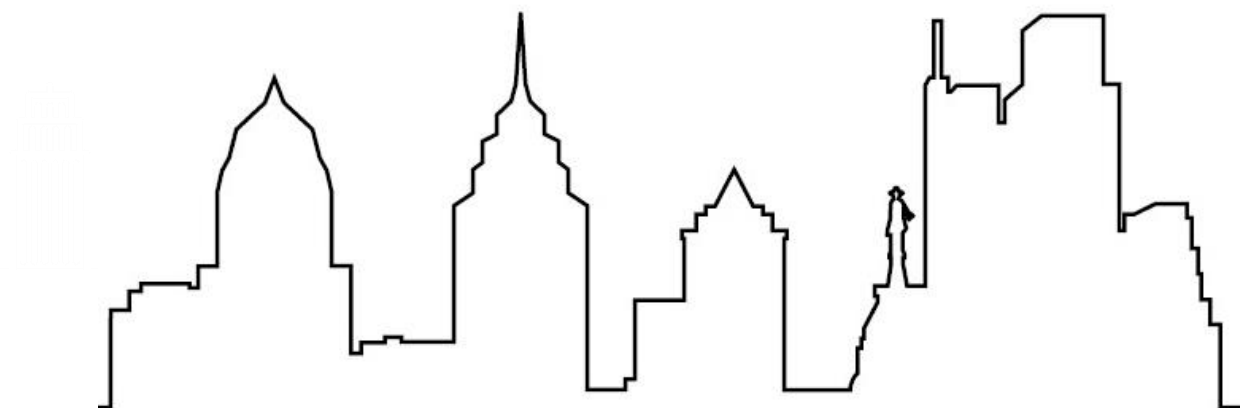
## Regional Residential Property Value Increase



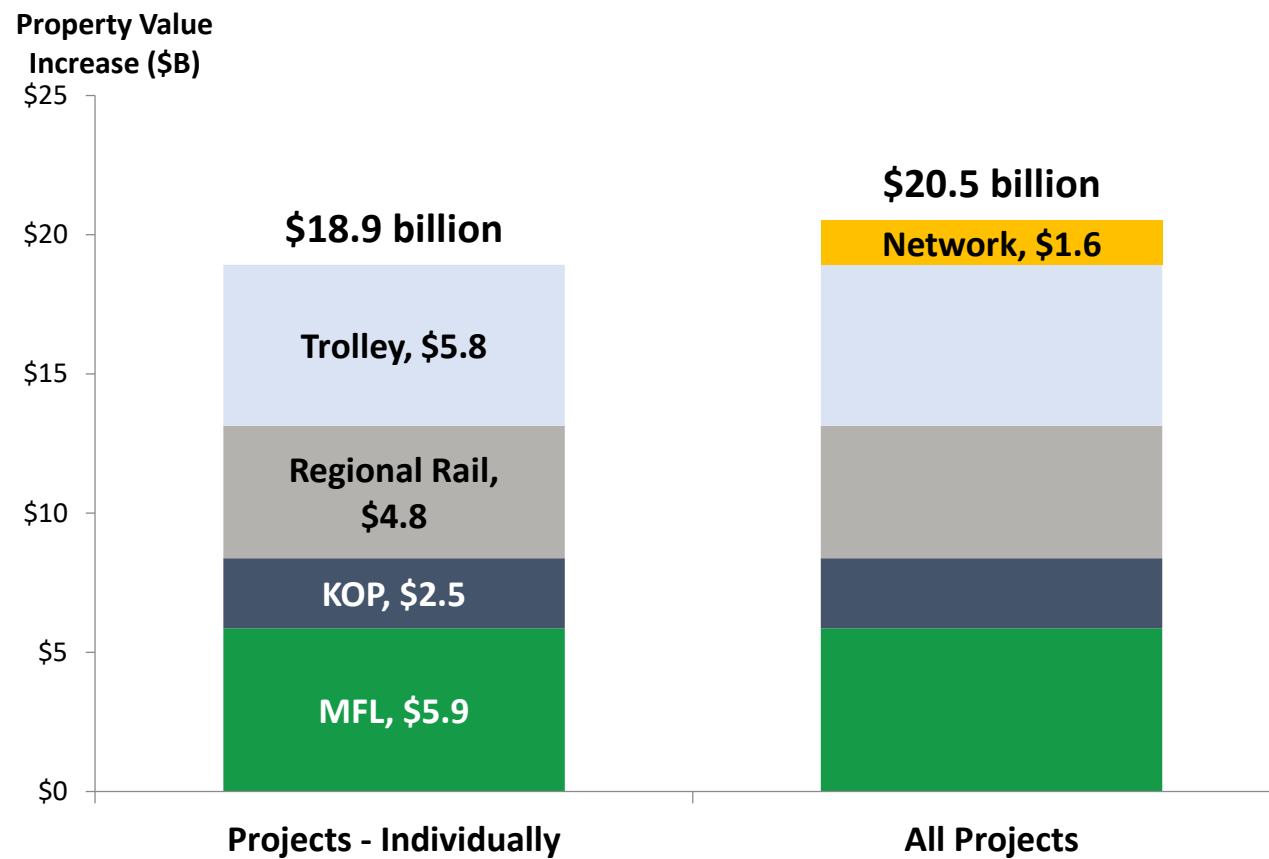
additional taxable downtown commercial value

## \$260 million

**\$1.72 billion**



## Regional Property Value Premium by Project



# Property Value Premium



**\$9.4 billion**

existing housing value growth



**\$9.4 billion**

new housing value



**\$1.7 billion**

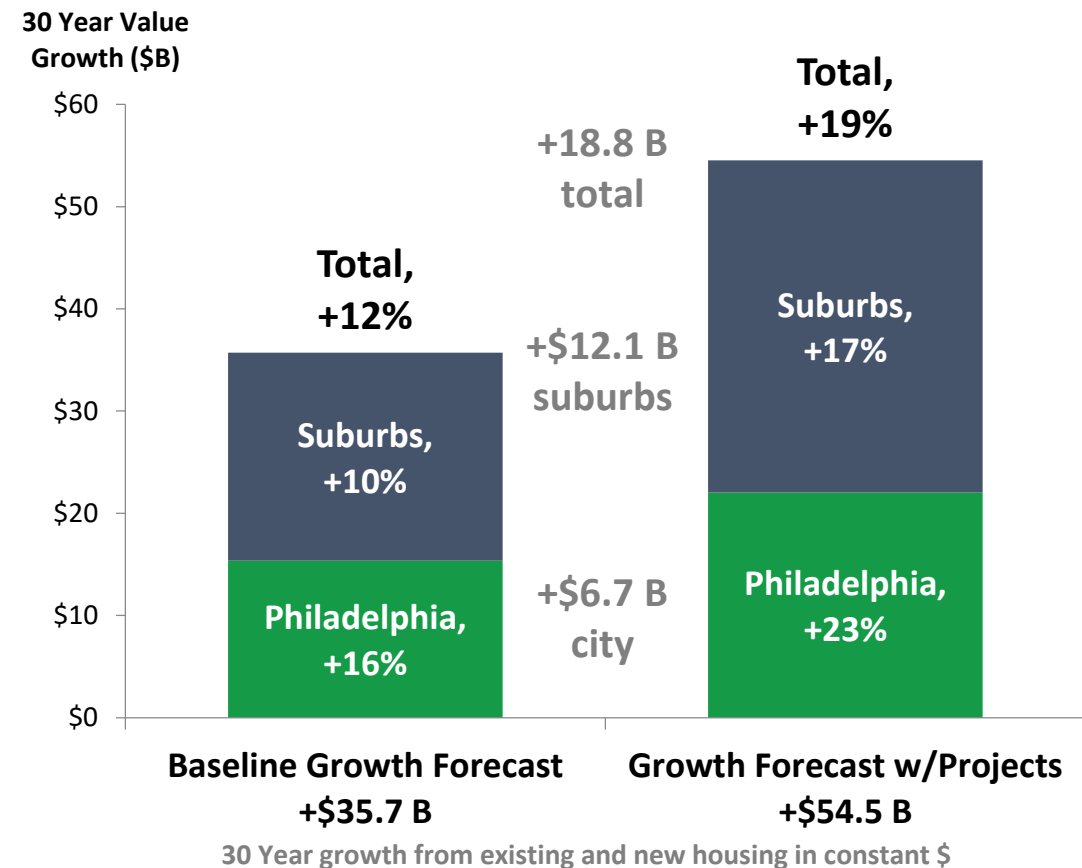
additional commercial property  
value in downtown / KOP



**\$20.5 billion**

total property value growth

## Residential Property Value Growth



# Return on Investment



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# Tax Revenue Growth

## Annual Tax Revenue Increase from Projects

Tax Type (\$Millions)	Total	Pennsylvania	Philadelphia	Suburbs
Income / Sales / Business	\$633	\$441	\$161	\$31
Property	\$349		\$108	\$241
Real Estate Transfer	\$21	\$8	\$8	\$5
<b>Total</b>	<b>\$1.002 billion</b>	<b>\$449 million</b>	<b>\$277 million</b>	<b>\$277 million</b>

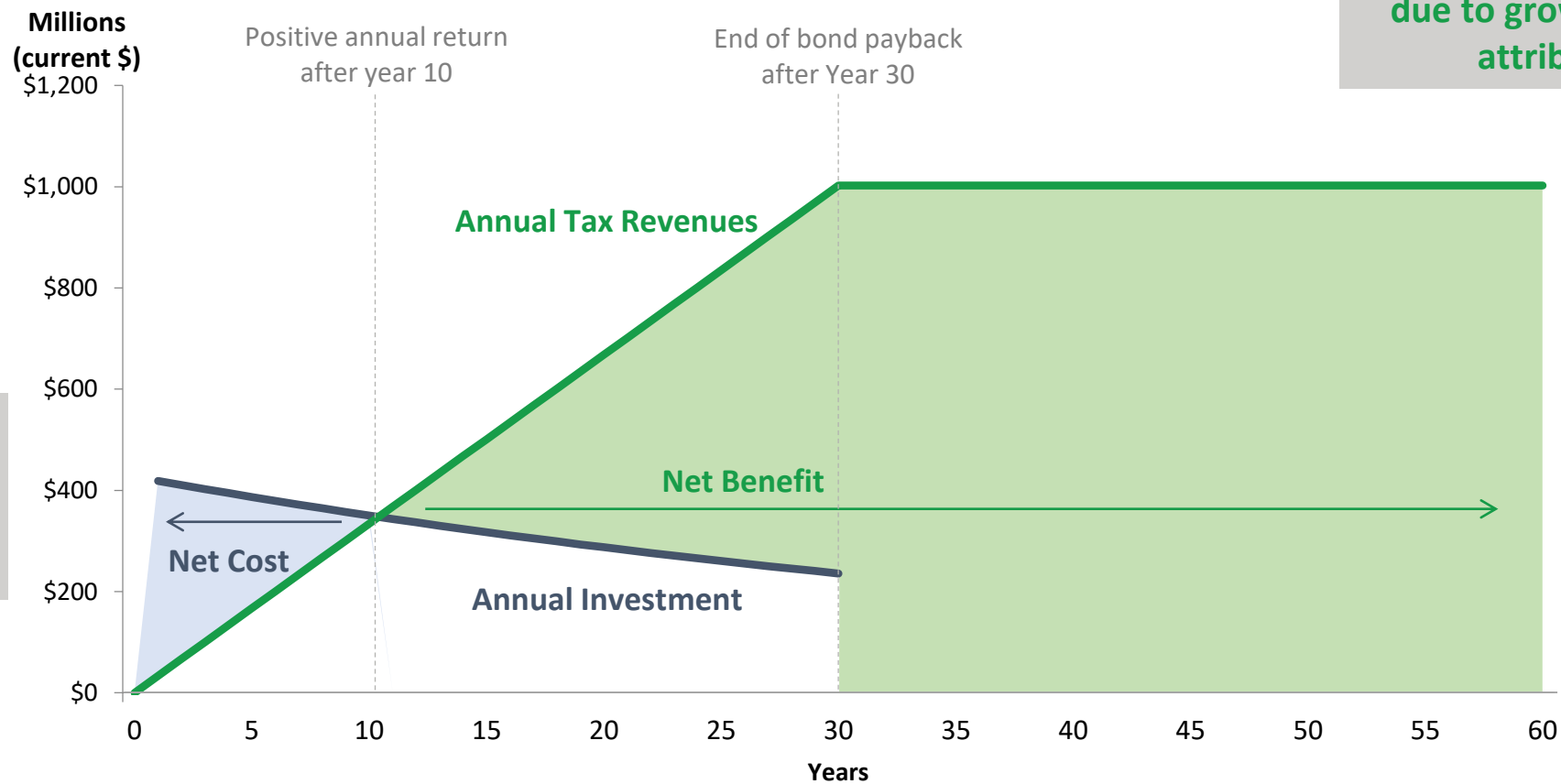


**\$1 billion**

increased annual tax revenue for  
state and local government

# Return on Investment

## Annual Investment and Return



Annual returns increase over time due to growth in taxable activity attributable to the projects

The fixed payment investment declines in real value over time with inflation



# Return on Investment



**\$17.1 billion**

Net Present Value of expected  
increase in tax revenue



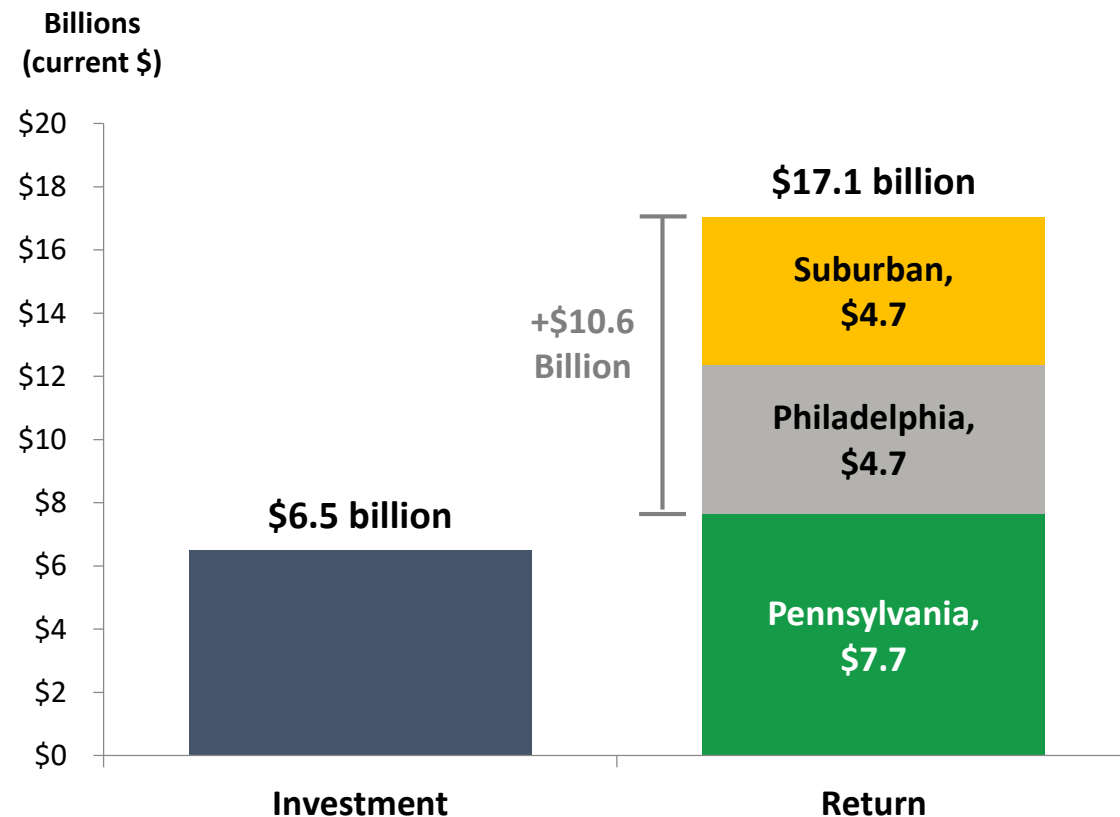
**2.6x**

Return on Investment

**12.3%**

Annual Return

## Net Present Value of Investment and Return



Net Present Value of expected costs and tax revenues over 60 years at a 5% discount rate

## Key Takeaways

- **The projects of significance yield a strong return on investment**
  - The 12.3% annual return exceeds private sector investment benchmarks (such as stock market returns)
  - Returns are ongoing rather than one-time, changing the development economics and growth path of the region
- **The package of projects is greater than the sum of its parts**
  - The return of the projects collectively is nearly \$1 B higher than the sum of the projects individually
  - The projects are varied in their contributions, with some (MFL / Trolley) contributing more to downtown development activity and others (Regional Rail / KOP) more to suburban property value
- **The valuation framework is very conservative**
  - Returns are evaluated compared to a baseline of continued existing service, and exceed the project cost of \$6.5B
  - In practice, a significant portion of the project investment is required to maintaining existing service over the long-term
  - The project ROI would be significantly higher if considering only the incremental cost of capacity enhancement / service improvement elements of the projects (above and beyond fleet replacement)