

**CLIMATE
SMART
COMMUNITIES
SCENARIOS PROJECT**

www.oregonmetro.gov/climatescenarios

Climate Smart Communities Scenarios Project

First Look at Results



November 22, 2013



Metro | *Making a great place*

Region's response to state target

- Working together with city, county, state, business and community leaders
- Researching how land use and transportation strategies can advance public and private investments that
 - support local visions and plans
 - create jobs and healthy communities
 - meet state targets for reducing carbon emissions



Where we've been & where we are headed

PHASES 1 & 2

Understand Choices
2011-2012

Shape Choices
Jan.-Oct. 2013

PHASE 3

Shape Preferred
Nov. 2013-May 2014

Adopt Preferred
Sept.-Dec. 2014



WE ARE HERE

First Look at Results

TODAY

- Launch Phase 3
- Report emissions, travel, air quality, housing and job outcomes

DECEMBER

- Review costs relative to health, social equity and fiscal outcomes
- Identify policy areas for further discussion and input in 2014

JANUARY

- Recommend policy areas for further discussion and input in 2014



What the future might look like in 2035

Scenario

A

RECENT TRENDS

This scenario shows the results of implementing adopted plans to the extent possible with existing revenue.

Scenario

B

ADOPTED PLANS

This scenario shows the results of successfully implementing adopted land use and transportation plans and achieving the current RTP, which relies on increased revenue.

Scenario

C

NEW PLANS & POLICIES

This scenario shows the results of pursuing new policies, more investment and new revenue sources to more fully achieve adopted and emerging plans.

Scenarios approved for testing by Metro advisory committees and the Metro Council in May and June 2013

Outcomes to help inform community choices discussion in 2014



GHG emissions



Economy



Access & mobility



Public health



Air quality



Cost



Jobs and housing



Social equity

Evaluation criteria approved by Metro advisory committees and the Metro Council in May and June 2013

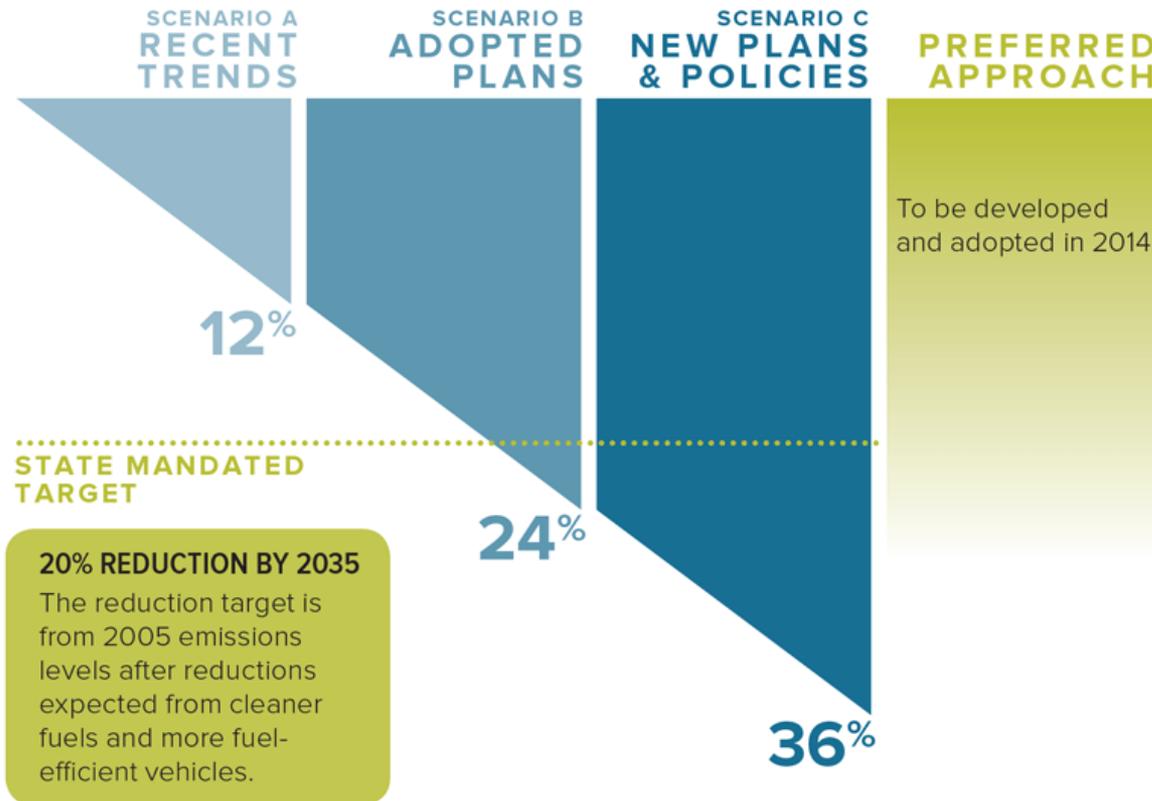


WHAT WE LEARNED

Adopted plans can meet the target

REDUCED GREENHOUSE GAS EMISSIONS

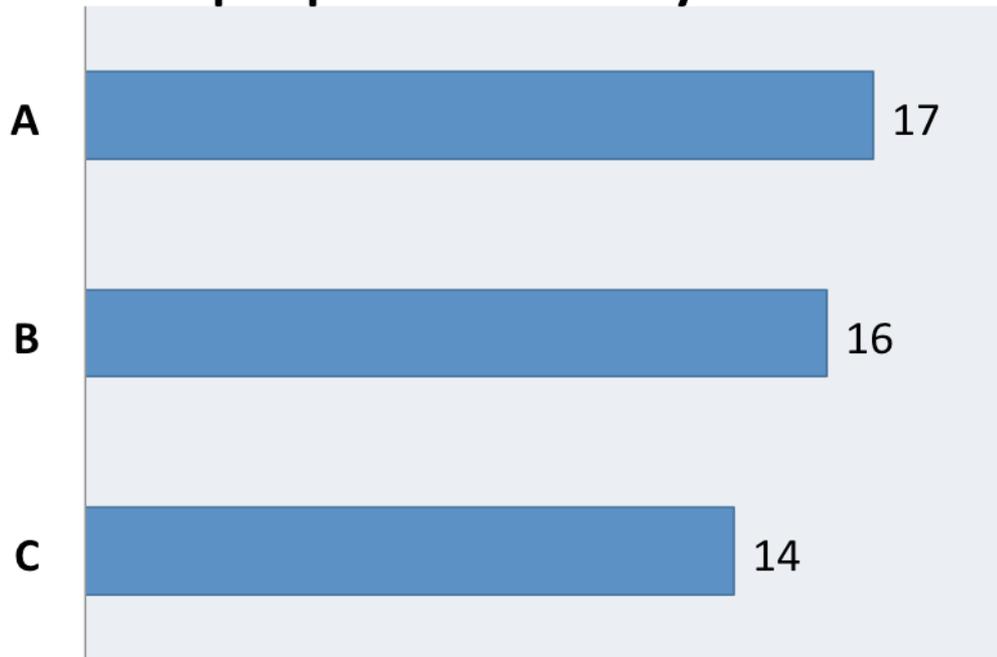
PERCENT BELOW 2005 LEVELS



Source: GreenSTEP

Individuals continue to drive less

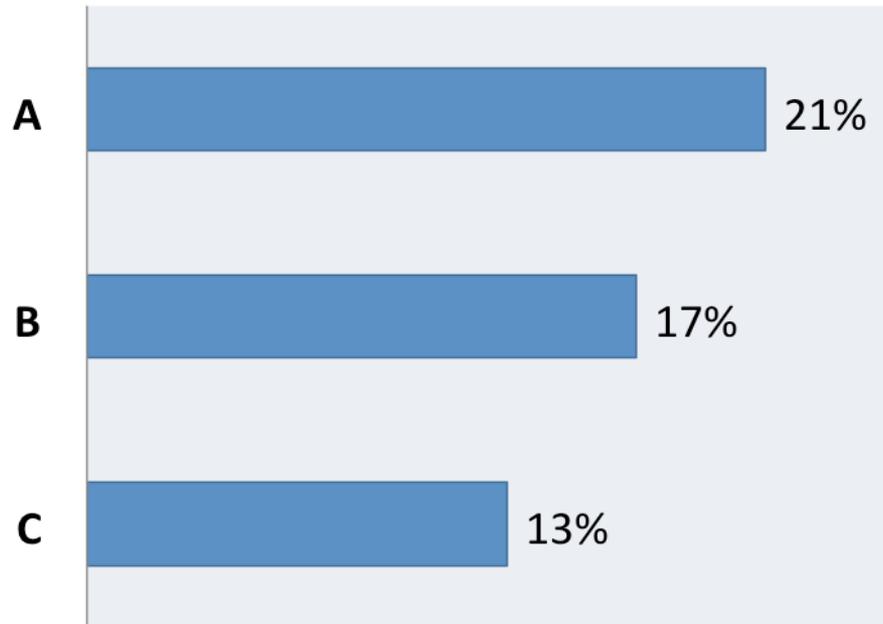
Vehicle miles traveled
per person each day



Source: GreenSTEP

Investment helps address congestion

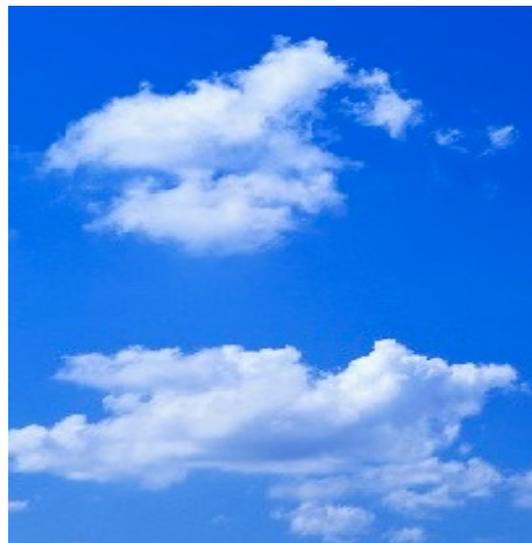
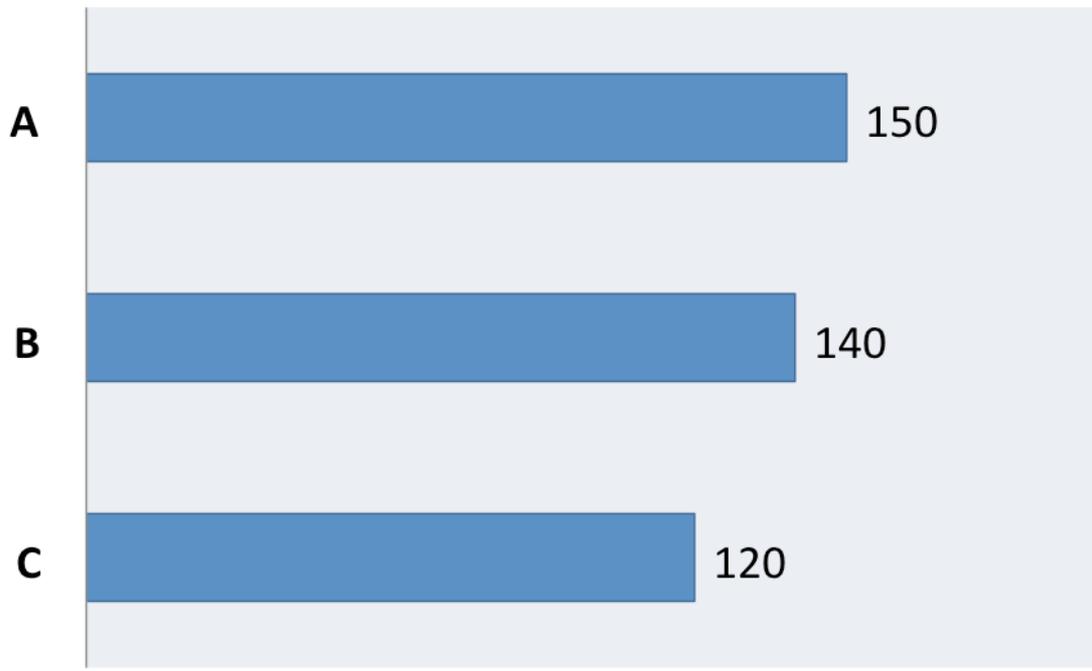
Share of light vehicle travel time spent in traffic



Source: GreenSTEP

Investment helps maintain air quality

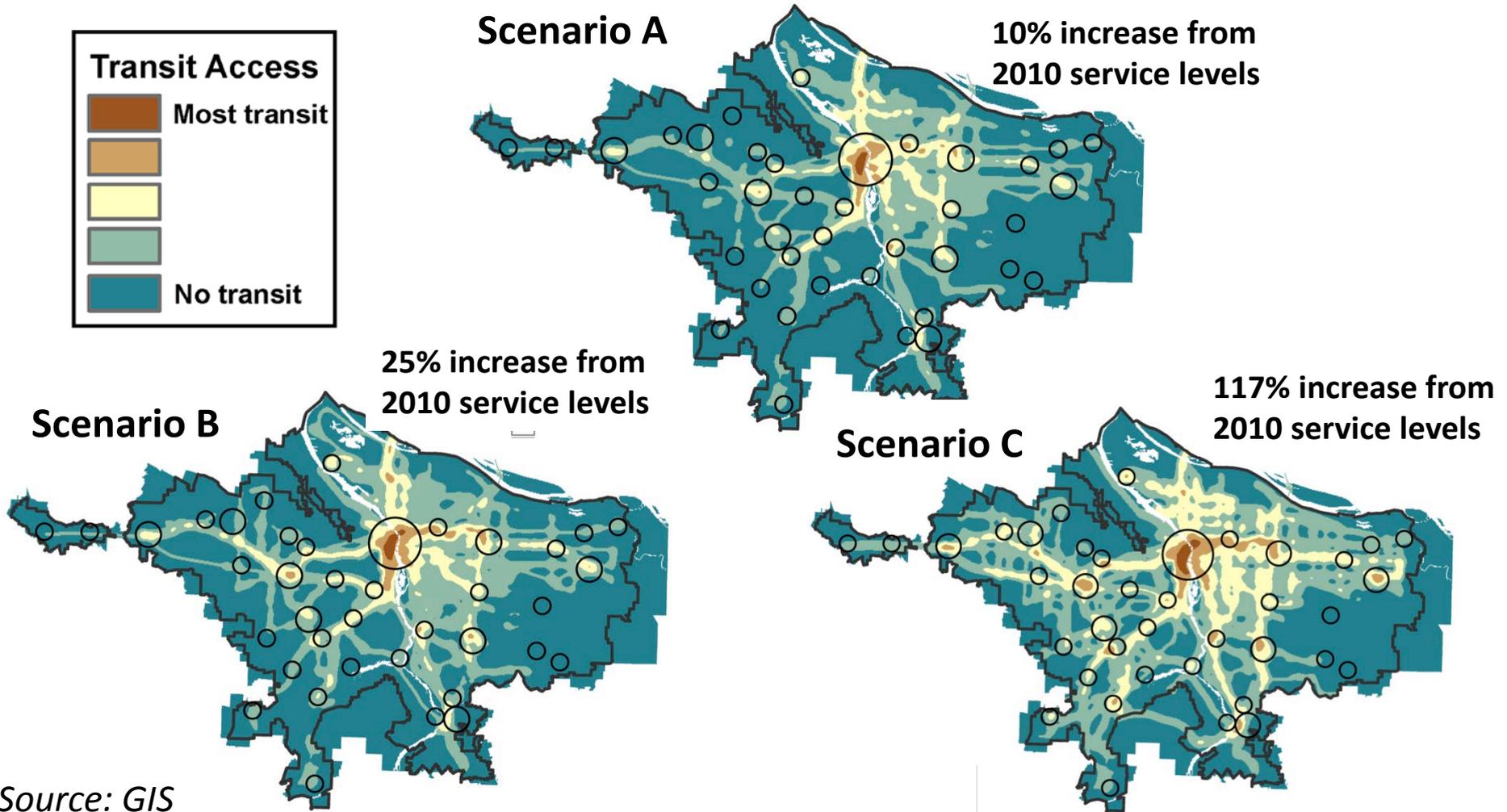
Air pollutants
(metric tons per day)



Analysis includes PM_{2.5}, hydrocarbons and nitrogen oxides.

Source: GreenSTEP

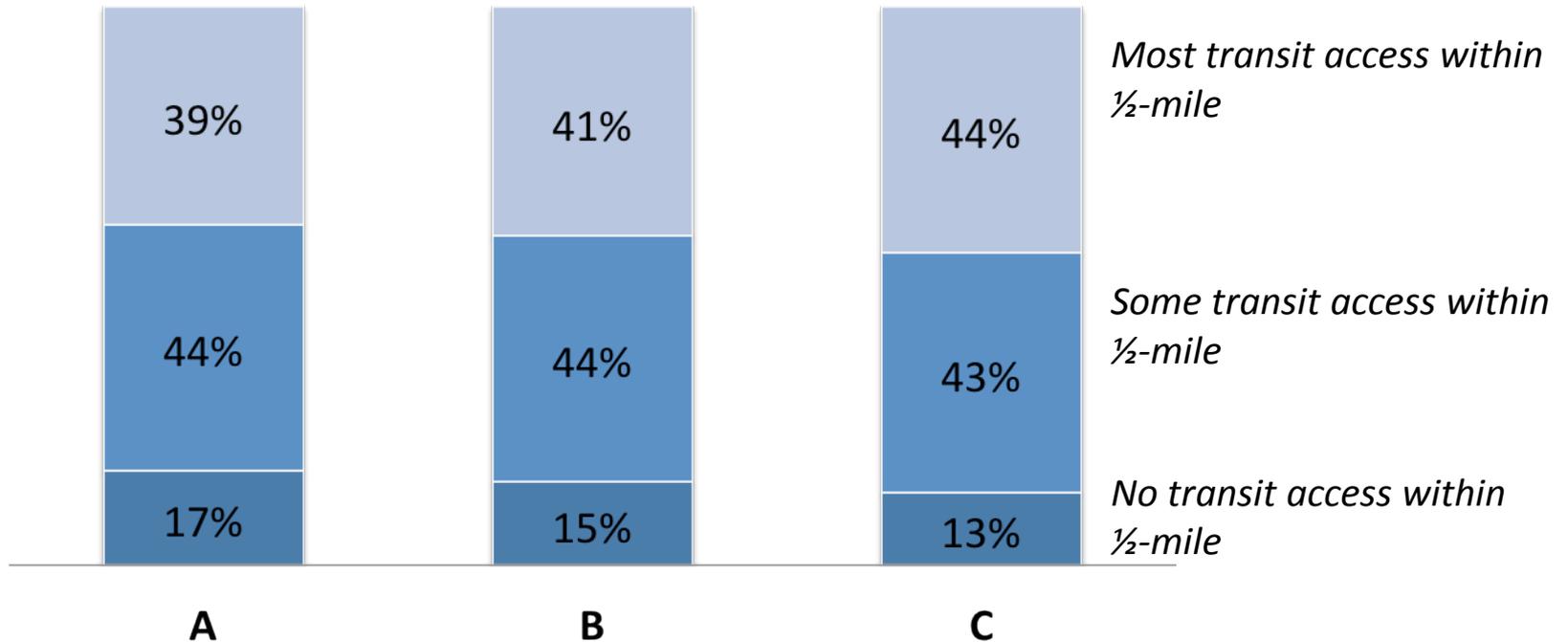
Investment improves transit access



Peak service (fixed-route)

Most people live near transit...

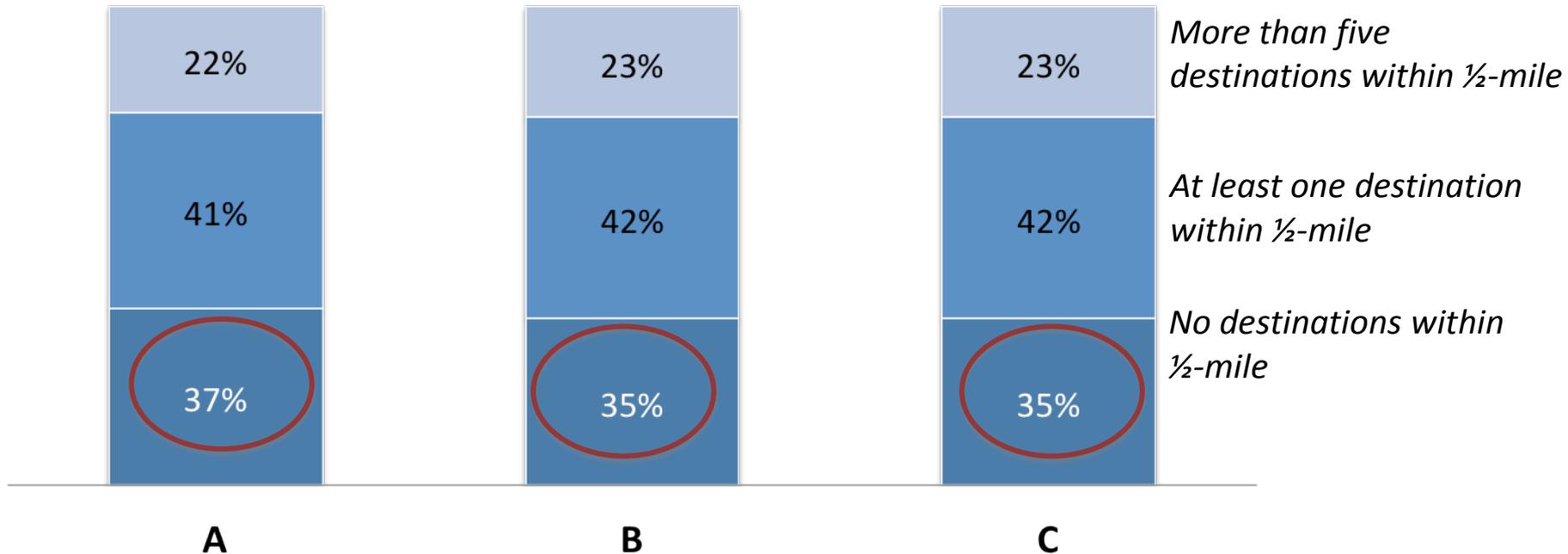
Share of total households near transit service in 2035



Source: MetroScope and GIS

...and schools, services and shopping

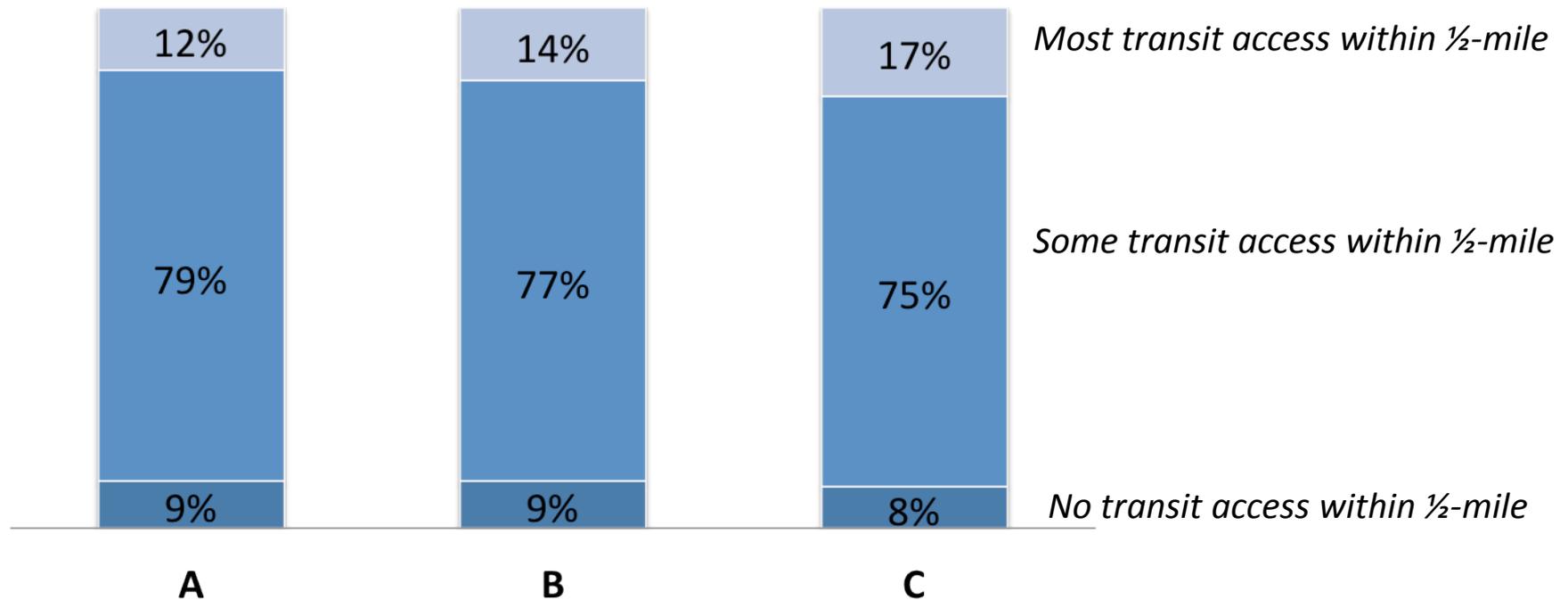
Share of total households near schools, services and shopping in 2035



Source: MetroScope and GIS

Most low-income families have access to peak transit service

Share of total low-income households living near transit service in 2035

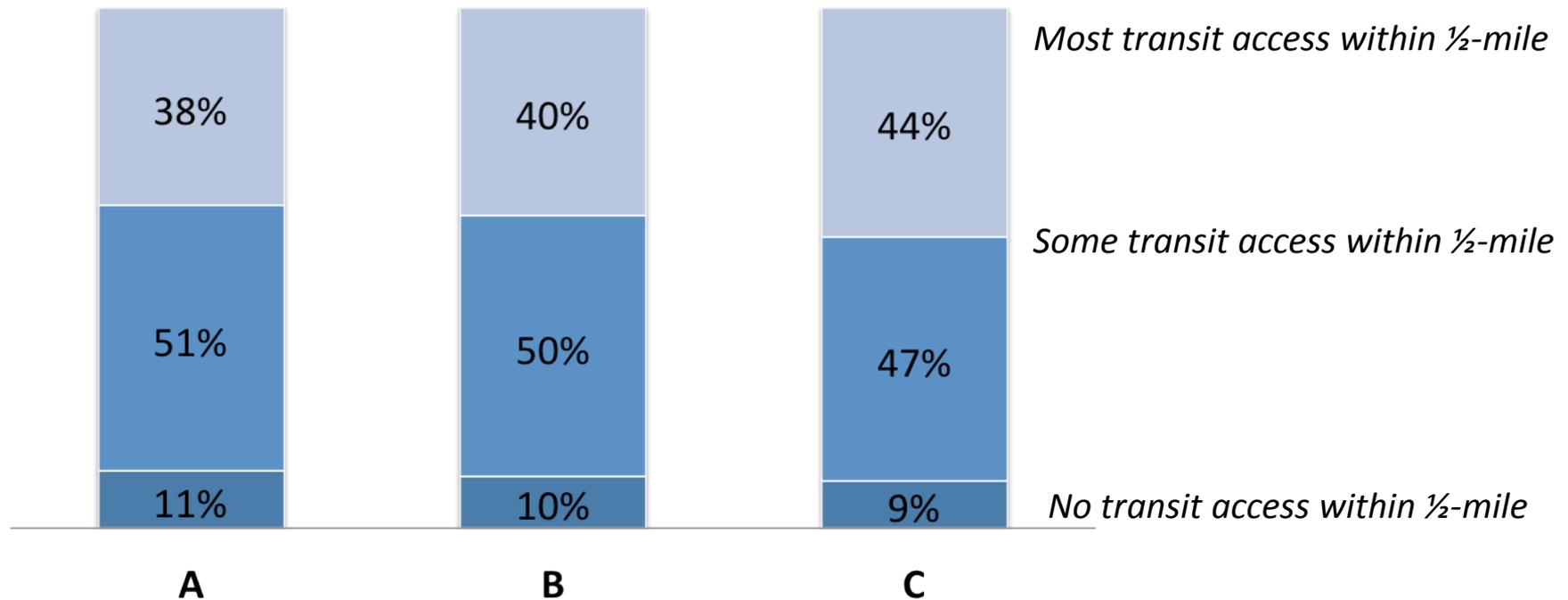


Source: MetroScope and GIS

Peak service (fixed-route)

Most low-income families have access to off-peak transit service

Share of total low-income households living near transit service in 2035

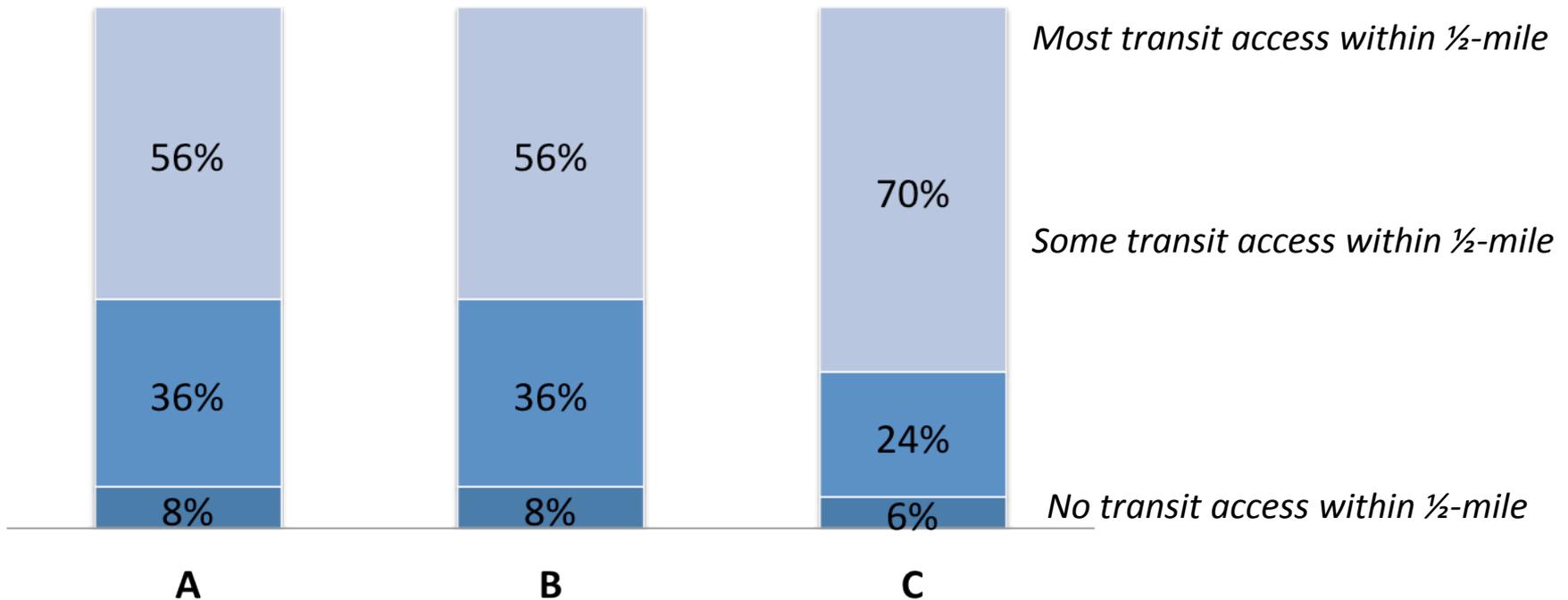


Source: MetroScope and GIS

Off-peak service (fixed-route)

Most jobs are located near transit

Share of total jobs near transit service in 2035

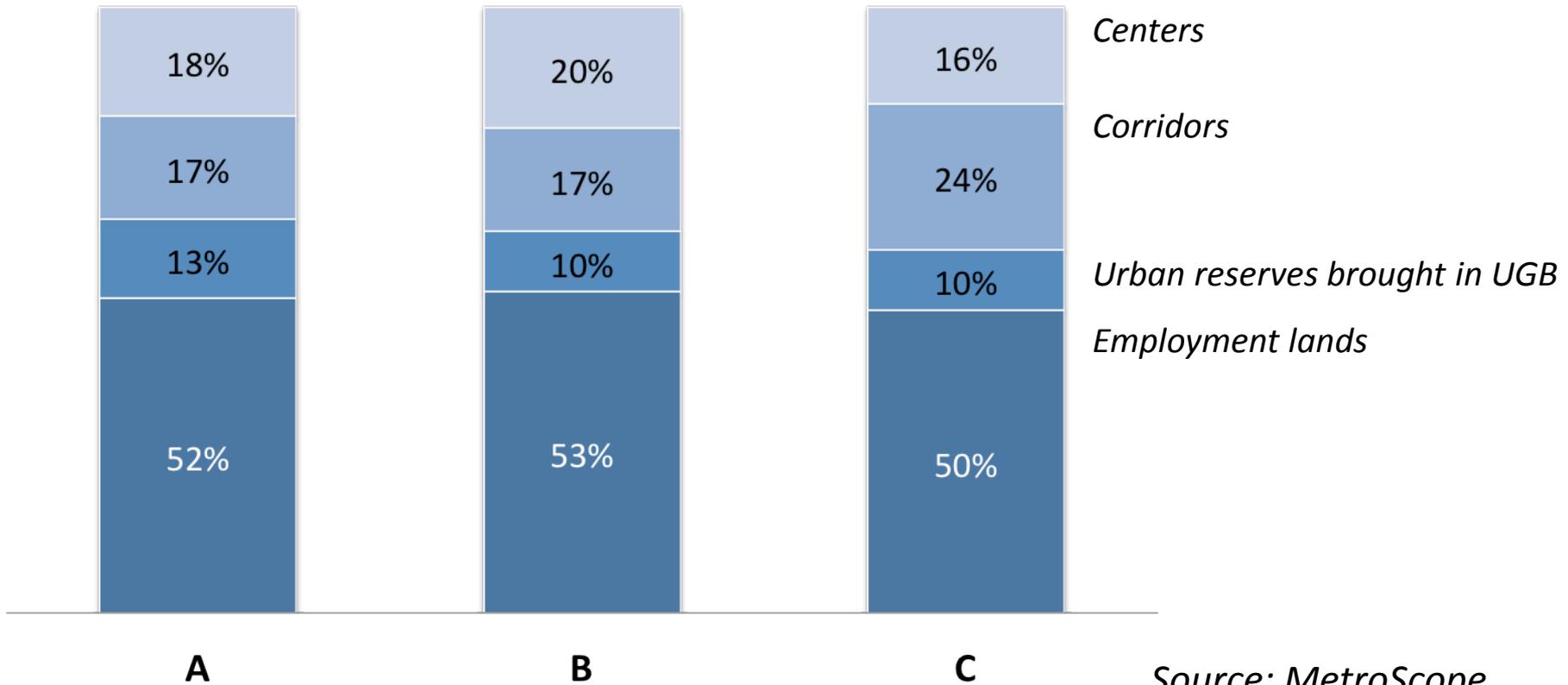


Source: MetroScope and GIS

Peak service (fixed-route)

Jobs respond to access and mobility

Share of new jobs in Metro urban growth boundary
in 2035



Source: MetroScope

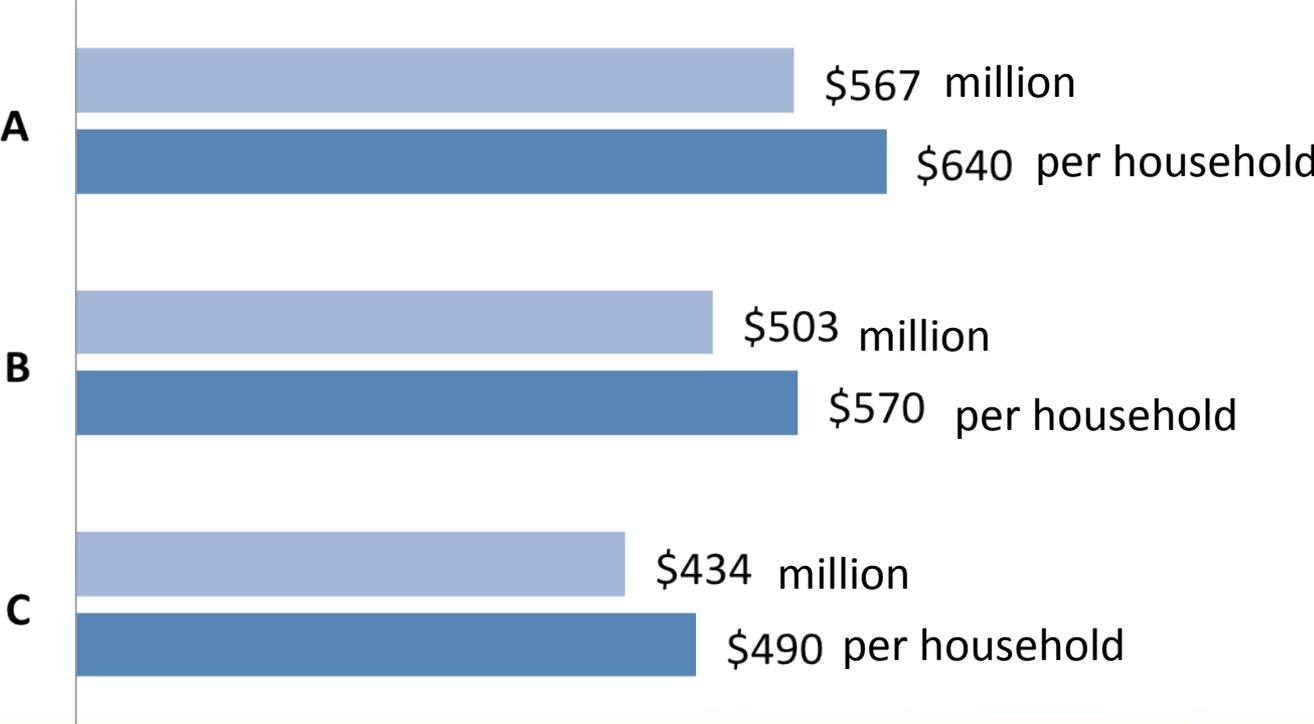
What is a social cost?

- Social costs are costs paid for by society as a result of public health and environmental impacts.
- In this analysis, social costs have been monetized and are calculated based on vehicle miles driven and fuel consumed.
- The reported social cost includes the costs of air pollution on public health and the environment, costs of environmental pollution from vehicle fluids, and costs of severe storms, flooding and drought expected from climate change due to greenhouse gas emissions.
- The methodology does not account for other social costs, such as the costs of congestion, crashes, habitat loss from infrastructure construction or water quality degradation from stormwater run-off.

The methodology used was developed by Cambridge Systematics for the Oregon Department of Transportation. It is included in Technical Appendix 6 of the Statewide Transportation Strategy at: http://www.oregon.gov/ODOT/TD/OSTI/docs/STS/STS_TechAppendices.pdf

Reduced emissions provides economic and social benefits to the region

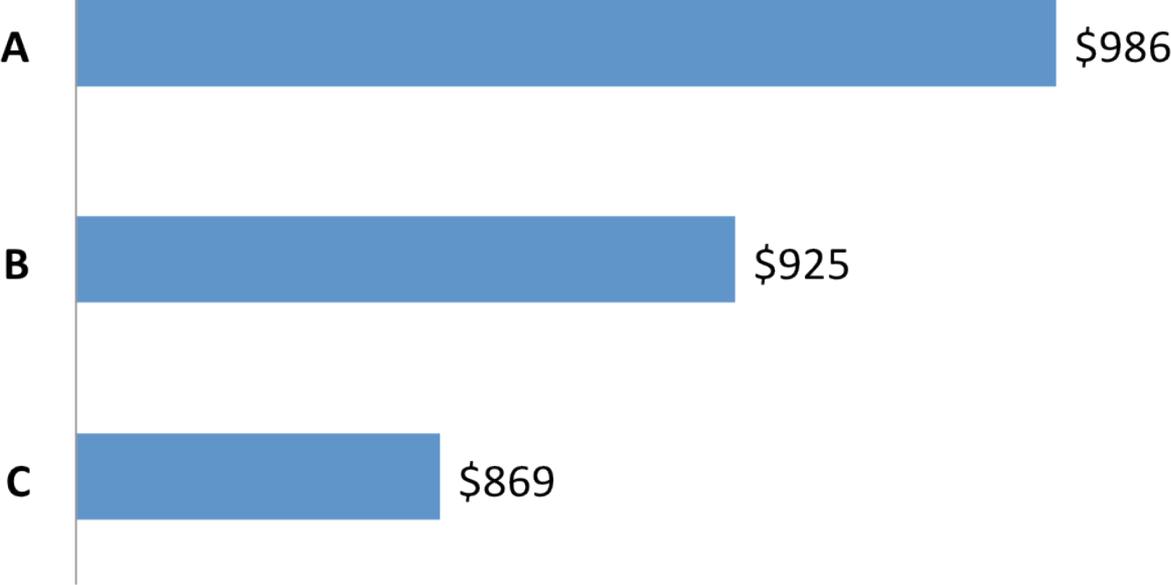
Annual social cost of transportation
(2005\$)



Source: GreenSTEP

Investment helps ease the economic impact of congestion

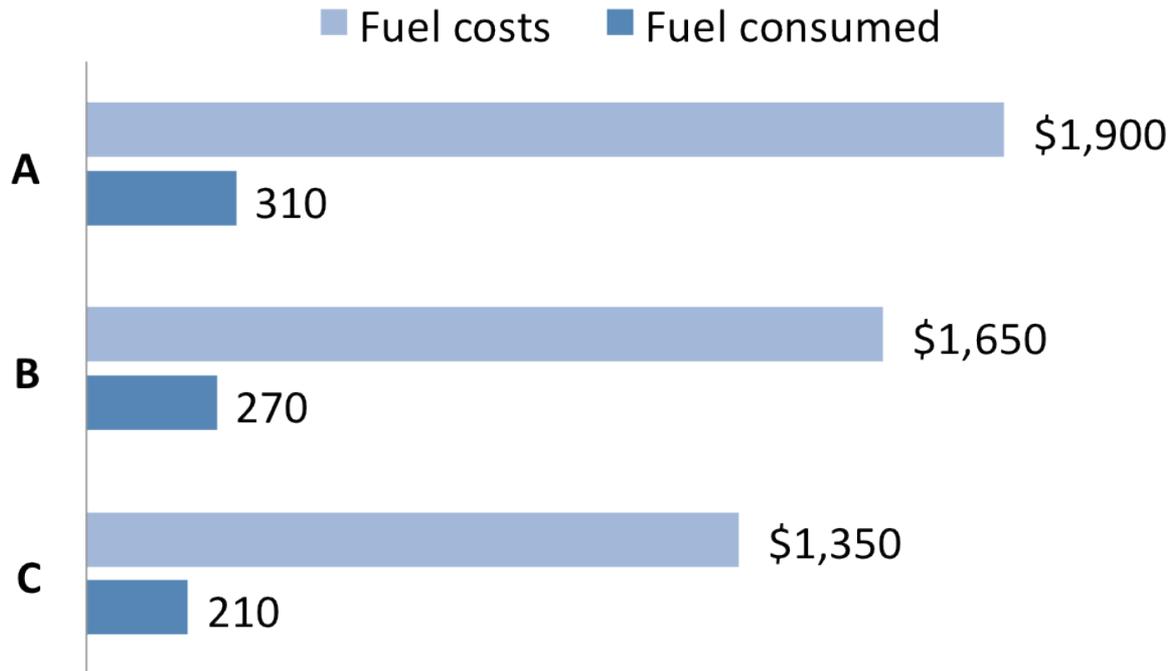
Annual freight truck travel costs due to delay
(in millions of 2005\$)



Source: GreenSTEP

Less driving and more fuel-efficient vehicles help save families money

Annual household fuel costs and consumption
(in 2005\$ and gallons)



Source: GreenSTEP

Scenario B capital costs

DRAFT

Type of investment	Cost (2014\$)
Freeway interchanges, widening and bottleneck fixes	\$3.9 billion
Roads and bridges	\$4.3 billion
<i>Street reconstruction</i>	\$1 billion
<i>Streetscape retrofits</i>	\$71 million
<i>Arterial traffic management, signal timing and other ITS projects</i>	\$68 million
<i>New street connections</i>	\$1.4 billion
<i>Street widening</i>	\$1.8 billion
Sidewalks, bike facilities and trails	\$948 million
Freight rail and intermodal facility access	\$623 million
Regional programs (e.g., RTO, TSMO, TOD)	\$196 million
Public transit capital	\$3.4 billion
<i>New high capacity transit (LRT/BRT) and streetcar connections</i>	
<i>Bus and light-rail vehicle purchases</i>	
<i>Expanded operating and maintenance facilities to support system expansion</i>	
<i>Efficiency, safety, and speed improvements to bus service</i>	
<i>Access improves and upgrades to stops, stations, transit and park/bike-and-ride lots</i>	
TOTAL (2014\$)	\$13.6 billion

Scenario C capital costs

DRAFT

Type of investment	Cost (2014\$)
Freeway interchanges, widening and bottleneck fixes	\$4.5 billion
Roads and bridges	\$6.9 billion
<i>Street reconstruction</i>	\$1.5 billion
<i>Streetscape retrofits</i>	\$142 million
<i>Arterial traffic management, signal timing and other ITS projects</i>	\$290 million
<i>New street connections</i>	\$2 billion
<i>Street widening</i>	\$2.9 billion
Sidewalks, bike facilities and trails	TBD
Freight rail and intermodal facility access	\$700 million
Regional programs (e.g., RTO, TSMO, TOD)	TBD
Public transit capital	TBD
<i>New high capacity transit (LRT/BRT) and streetcar connections</i>	
<i>Bus and light-rail vehicle purchases</i>	
<i>Expanded operating and maintenance facilities to support system expansion</i>	
<i>Efficiency, safety, and speed improvements to bus service</i>	
<i>Access improves and upgrades to stops, stations, transit and park/bike-and-ride lots</i>	
TOTAL (2014\$)	TBD



EARLY TAKEAWAYS

1

Past planning and investments to implement the 2040 Growth Concept vision make the target attainable

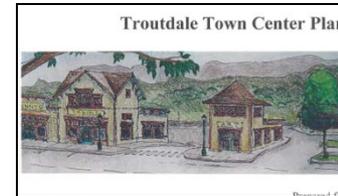
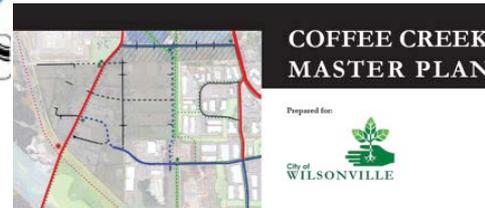
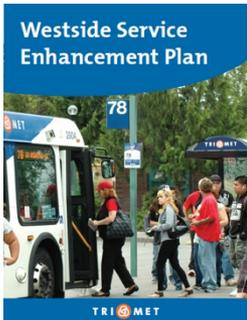
2040 Growth Concept adopted in 1995

2

More work is needed to realize local and regional visions



Beaverton Civic Plan
growing together



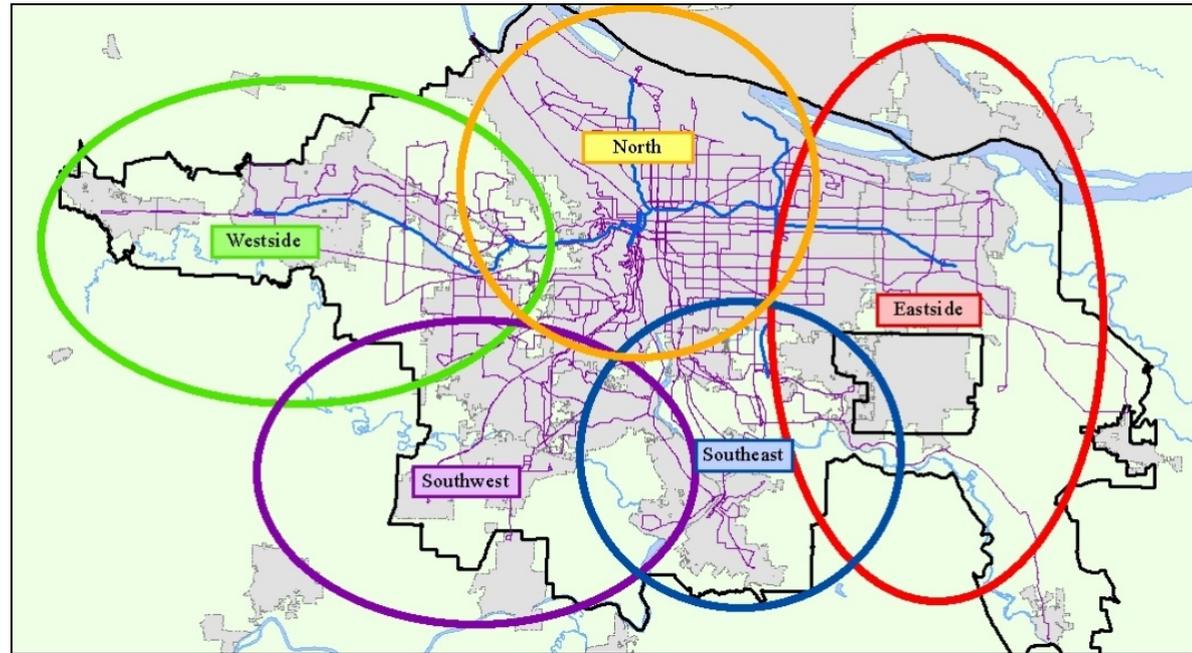
3

Investing in communities is essential to success



4

Growing transit across the region is essential to success



Transit growth will be guided by locally-developed TriMet Service Enhancement Plans, the TriMet Board's Strategic Financial Plan and South Metro Area Regional Transit (SMART) plans

5

Investments and actions that reduce GHG emissions provide community benefits



Photo credit: Urban Advantage and SACOG

Moving forward to 2014

TODAY

- Launch Phase 3
- Report emissions, travel, air quality, housing and job outcomes

DECEMBER

- Review costs relative to health, social equity and fiscal outcomes
- Identify policy areas for further discussion and input in 2014

JANUARY

- Recommend policy areas for further discussion and input in 2014

CLIMATE
SMART
COMMUNITIES
SCENARIOS PROJECT

Challenges

- Fiscal
- Civic
- Regulatory

2014: Shaping a preferred approach

JAN. TO MAY 2014

Discuss choices and tradeoffs to shape a draft preferred approach

MAY 2014

Council direction to staff on the draft preferred approach

JUNE TO AUGUST 2014

First look at the preferred approach; staff completes final evaluation and prepares adoption package

SEPT. TO DEC. 2014

Public comment period and Council considers final adoption of preferred approach



DISCUSSION

