

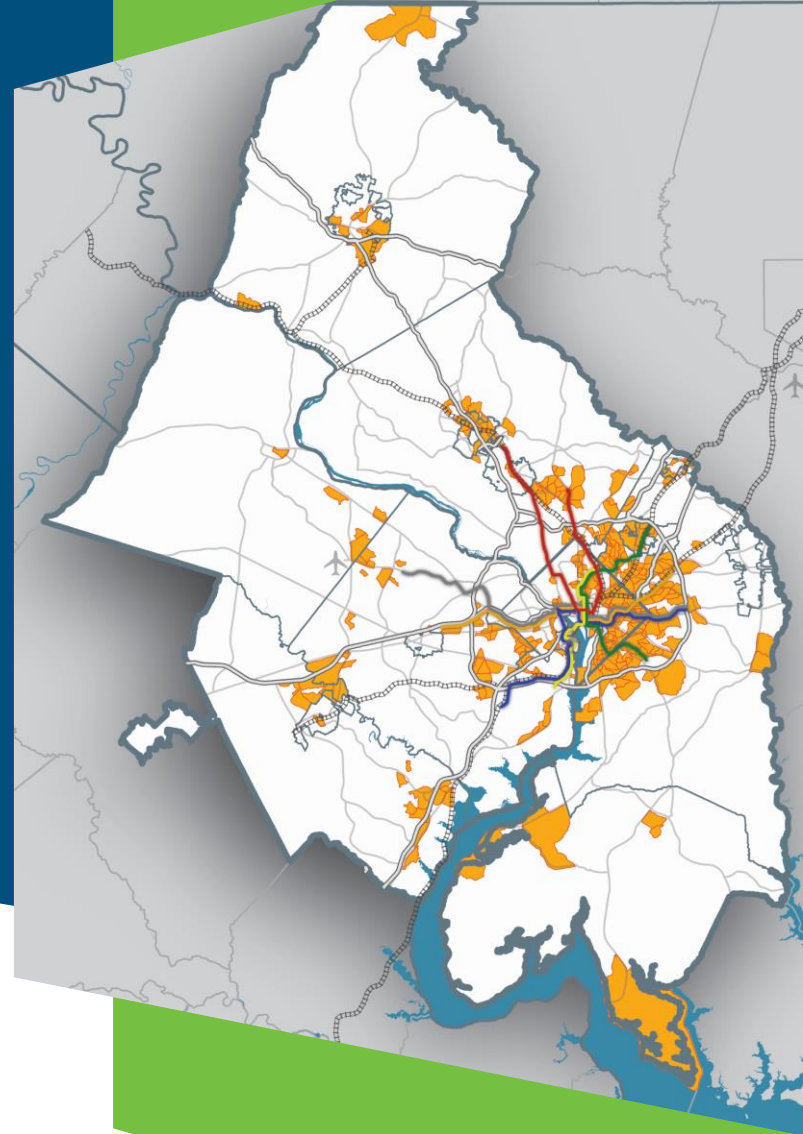
Environmental Justice Analysis

Phase II Results

Sergio Ritacco
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TPB Technical Committee
January 6, 2022

Agenda Item #4



visualize
2045

A long-range
transportation plan
for the National
Capital Region

TPB's Environmental Justice (EJ) Requirements

- **What is the federal requirement?**

Analyze the impact of the 2022 Update to Visualize 2045 to identify and address adverse **disparate impact** on “minority” populations and “low-income” populations

- **What is a disparate impact?**

Defined as an adverse plan impact that is predominately borne or will be suffered by EJ populations and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-EJ population

- **How does this fit with the TPB's policy priorities?**

Advancing equity especially in its commitment to establish equity as a fundamental value and integral part of all its work activities

Environmental Justice and Title VI of the Civil Rights Act

- EJ requirements and Title VI of the Civil Rights Act intersect; however, they are two separate mandates each with its own unique requirements
 1. With Visualize 2045, EJ requirements provide no authority for private parties to initiate a legal challenge (Parties can file a challenge to EJ findings and determinations at the project-level NEPA process)
 2. Private parties can initiate a lawsuit claim under Title VI

How does the TPB comply with its Environmental Justice requirements?

Phase I

- Establish Equity Emphasis Areas (EEAs) to identify small geographic areas in the region with above-average concentration of “low-income” populations and/or “minority” populations (TPB briefed in July 2022)

Phase II Today!

- Model-based analysis to study the impact of the 2022 Update to Visualize 2045 on 35 measures between now and 2045
 - 27 Accessibility measures
 - 8 Mobility measures
- Determine if Visualize 2045 imposes a disparate impact on EEAs in comparison to Non-EEAs

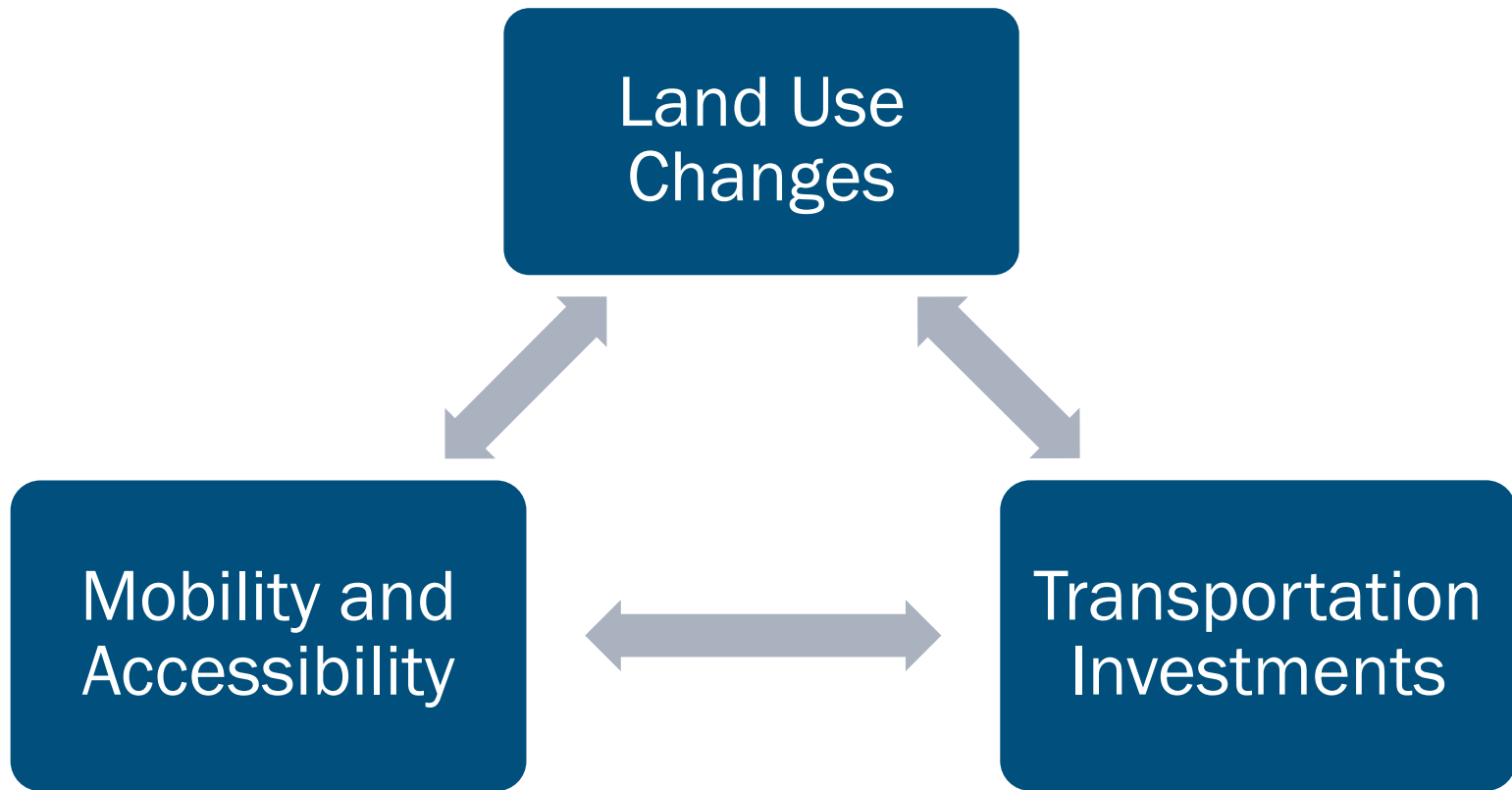
Environmental Justice Determination for 2022 Update to Visualize 2045

- **Determination:** The 2022 Update to Visualize 2045 does not have an adverse disparate impact on “low-income” and “minority” populations
 - Twelve measures with marginal or analysis within margin of error,
 - Seventeen measures with similar benefits
 - Six measures with similar burdens
- Analysis does identify notable equity findings for the TPB to consider in it’s long-range metropolitan transportation planning process

Environmental Justice Analysis Summary

- Visualize 2045 complies with the federal EJ requirement for disparate impact on “minority” and “low-income” populations and the impact of its transportation projects are positive
- For auto-based travel, more people and jobs increases congestion and delay impacting EEAs ability to access and travel to where jobs are increasing
- For transit-based travel, accessibility and mobility are improving as the region maximizes the use of the existing system as well as adding more transit projects
- The interrelationship between land use changes and the transportation projects it aims to serve can lead to implicit regional equity challenges
- Assumptions used to conduct this analysis (future location of EEAs and confidence levels of model results) provide important context to results.

Environmental Justice Analysis Results



Environmental Justice Analysis Results

Growth and Land Use Changes

- With more people and jobs, the transportation systems will need to handle current and forecasted demand
- By 2045, the region will add 19 and 22 percent more people and jobs, respectively
- Activity Centers will contain 67% of all jobs and 35% of the population
- More than a ¼ of all people and ½ of all jobs will be close to High-Capacity Transit



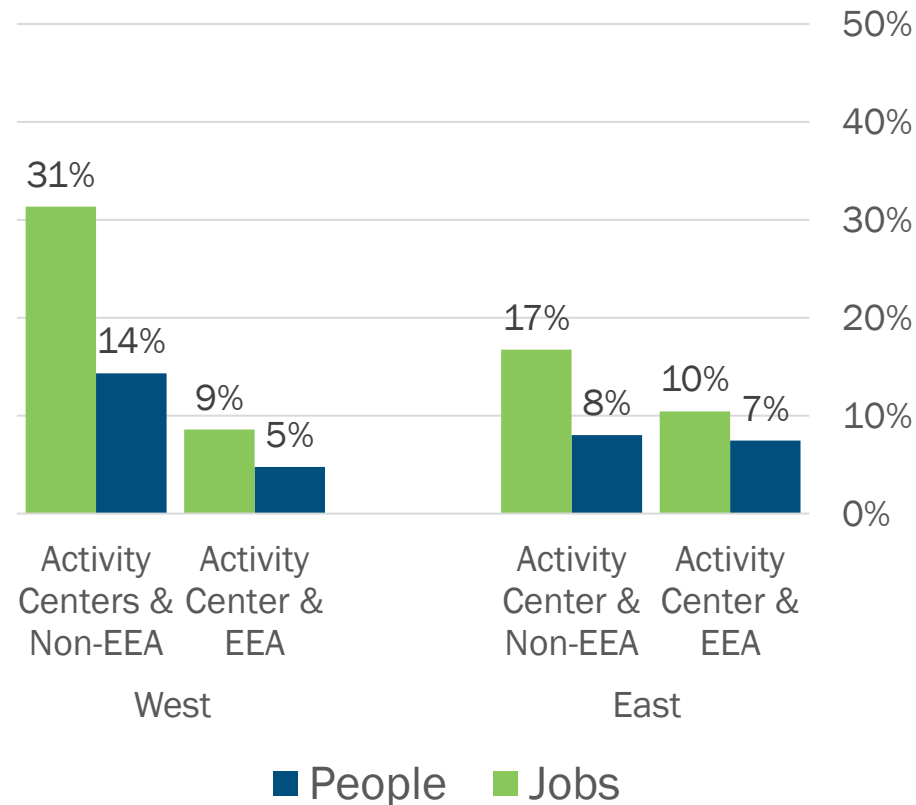
VDOT

Environmental Justice Analysis Results

Land-Use Changes

- In 2045, more of the jobs will be in the western portion of the region, further away from our larger EEA clusters
- Also, the share of regional jobs in Activity Centers are more likely to be in the western side of the region and in non-EEAs rather than the eastern side or in EEAs

Share of Region's People and Jobs located within geography (2045)



Environmental Justice Analysis Results

Transportation Investments

- In Visualize 2045, only 19% of expenditures are available for system expansion and enhancement, providing a 5% and 27% increase in roadway and high-capacity transit miles, respectively

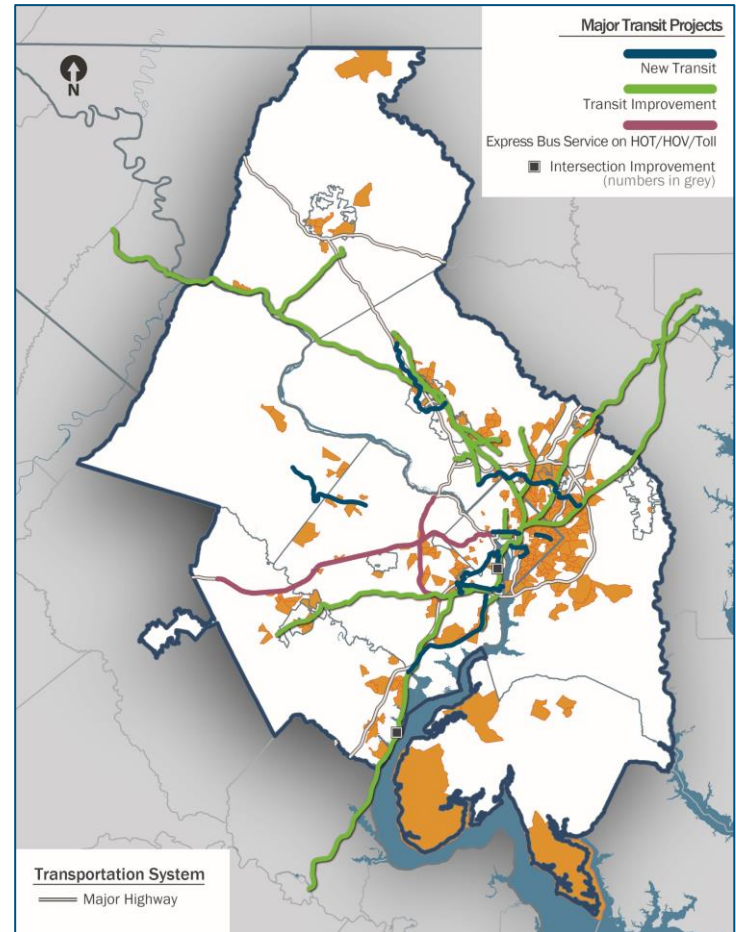
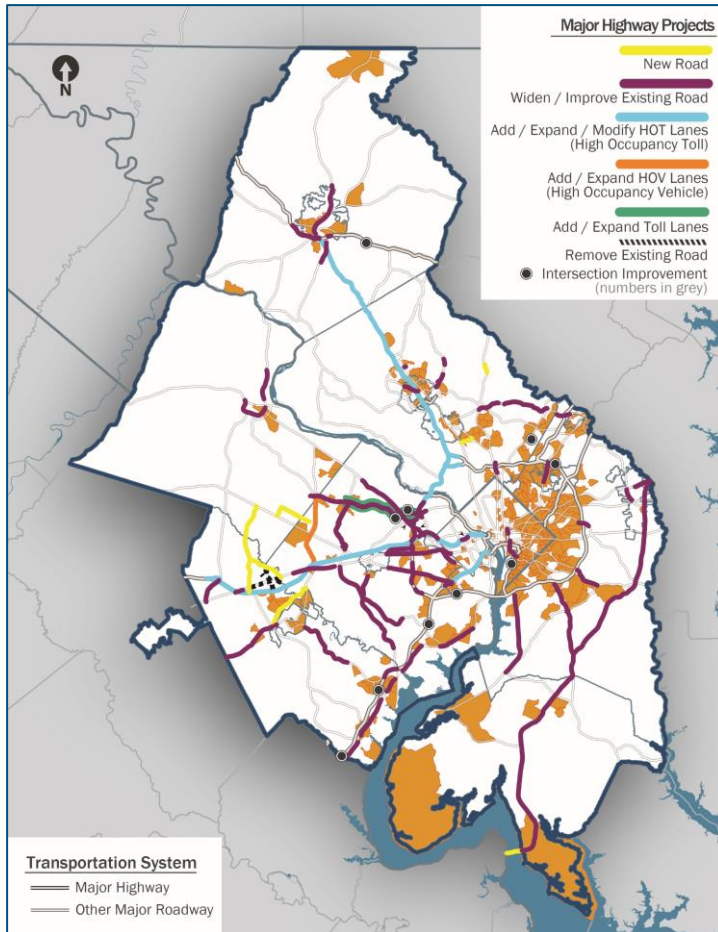
	System	Existing (2023)	Added by Visualize 2045 update	Total 2045
Roadway (Lane Miles)	Freeways/Expressways	3,802	682	4,484
	Arterials	13,479	211	13,690
	Total	17,281	893	18,174
Tolled Lanes (Lane Miles)*	Total	532	221	753
High-Capacity Transit (Miles)	Metrorail	129	0	129
	Light Rail/Streetcar	18	5	23
	Bus Rapid Transit	19	87	106
	Commuter/Regional Rail	173	**	173
	Total	339	92	431

* Tolled lanes are a subset of freeways/expressways

** An approximate additional 16 miles of rail are included in the plan, not presented in the table as they are not reflected in the model outputs.

Environmental Justice Analysis Results

Transportation Investments



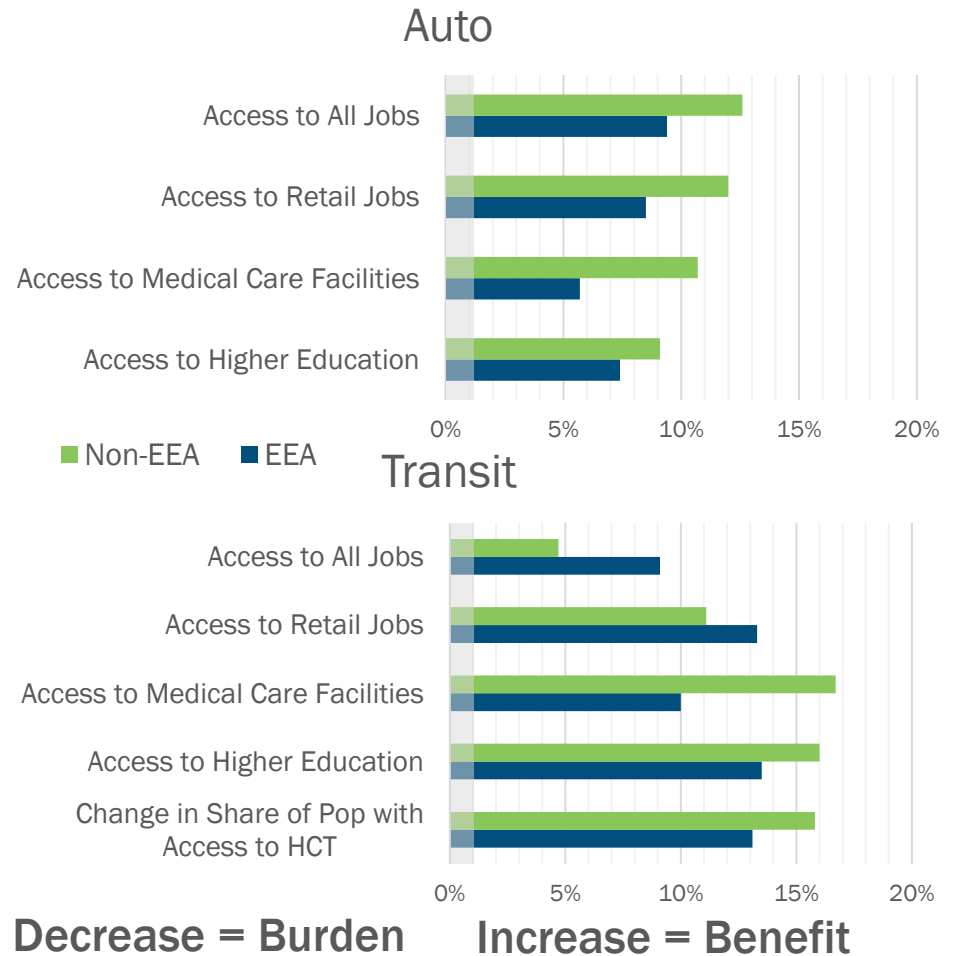
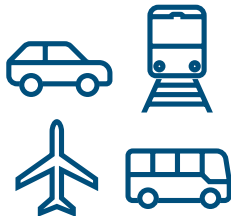
Environmental Justice Analysis Results

Projects Impact, Accessibility

Project Impact Only

Benefits across all Auto and Transit measures

Improved accessibility to jobs, medical care facilities, and post-secondary education



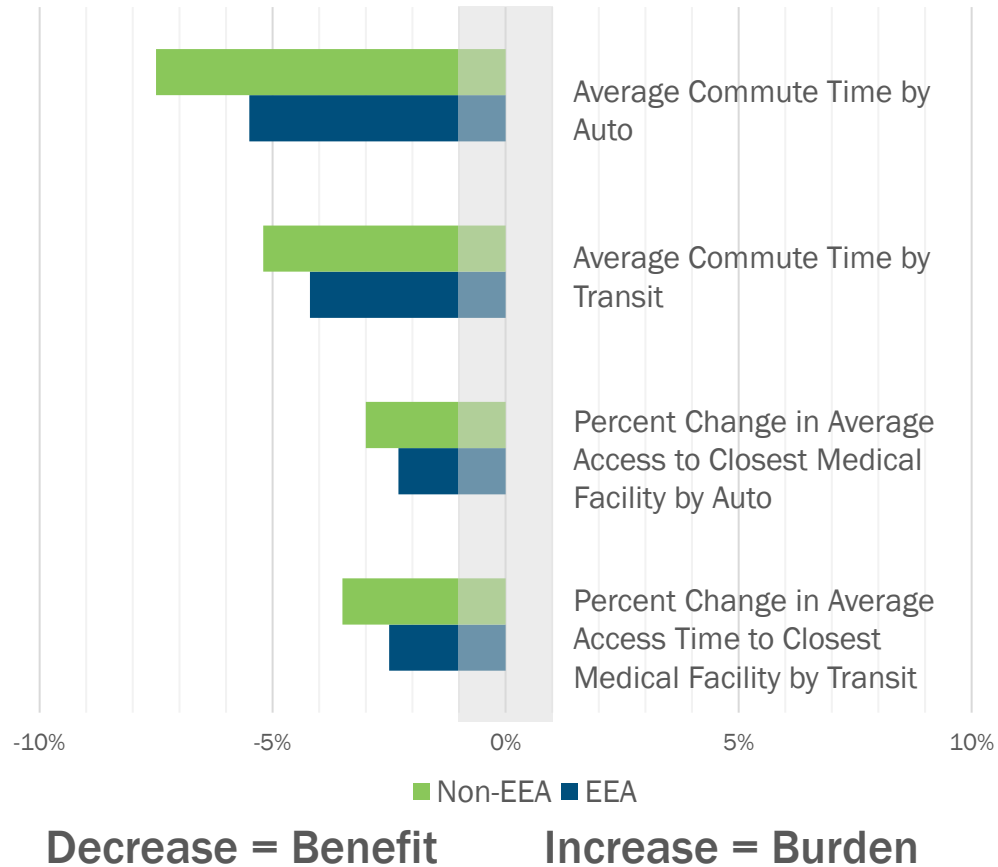
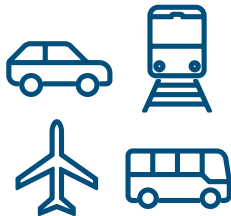
Environmental Justice Analysis Results

Projects Impact, Mobility

Project Impact Only

Benefits across all Auto and Transit measures

Help provide shorter travel times to commutes and nearest medical care



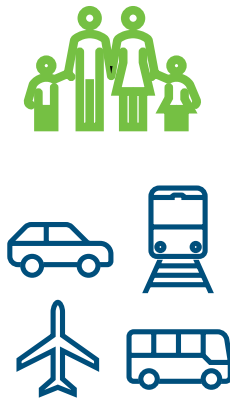
Environmental Justice Analysis Results

Visualize 2045 Impact, Accessibility

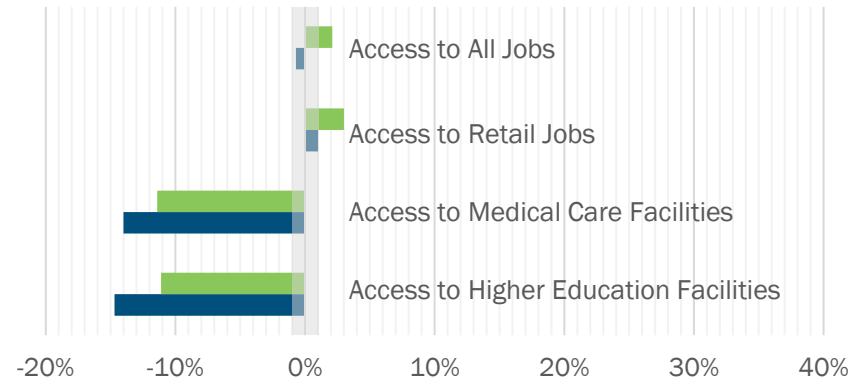
Visualize 2045 Impact

Congestion and delay negatively impact auto-based measures

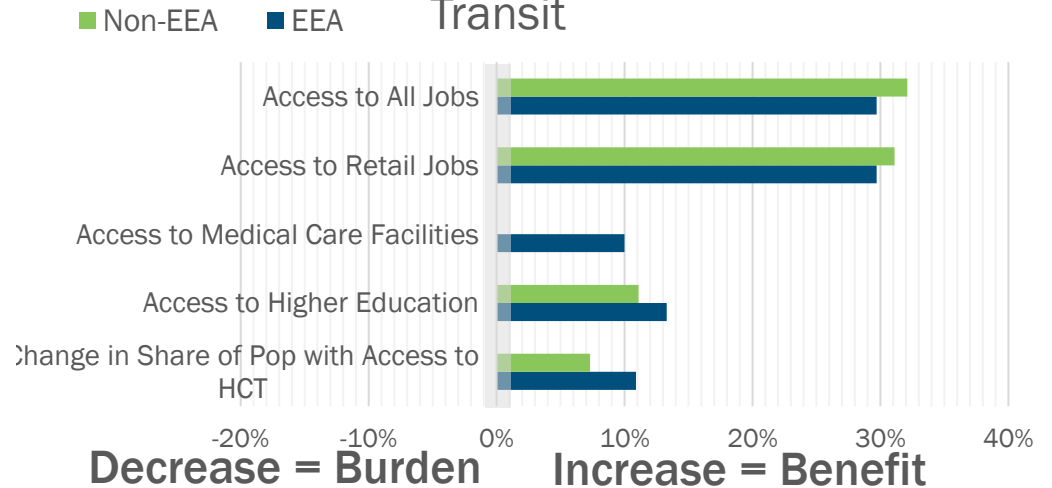
EEAs and Non-EEAs track similarly though EEAs often benefit slightly less and burden slightly more



Auto



Transit



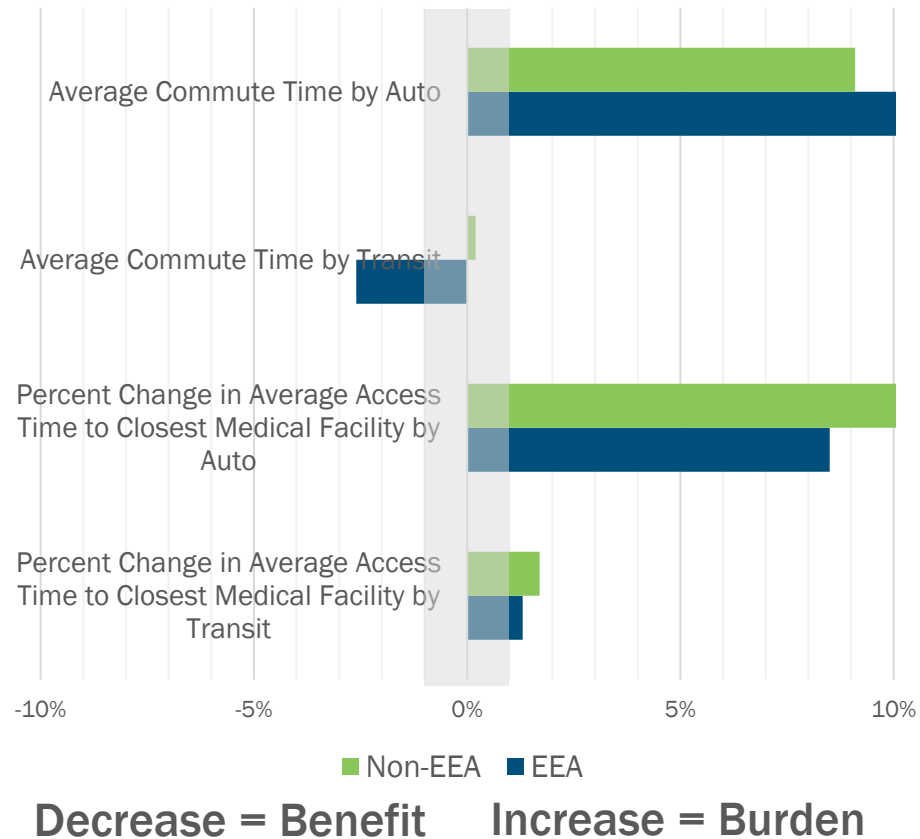
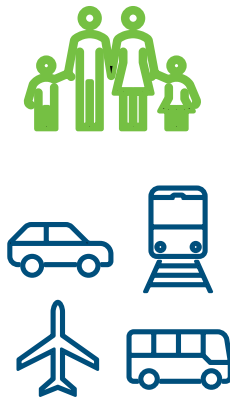
Environmental Justice Analysis Results

Visualize 2045 Impact, Mobility

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