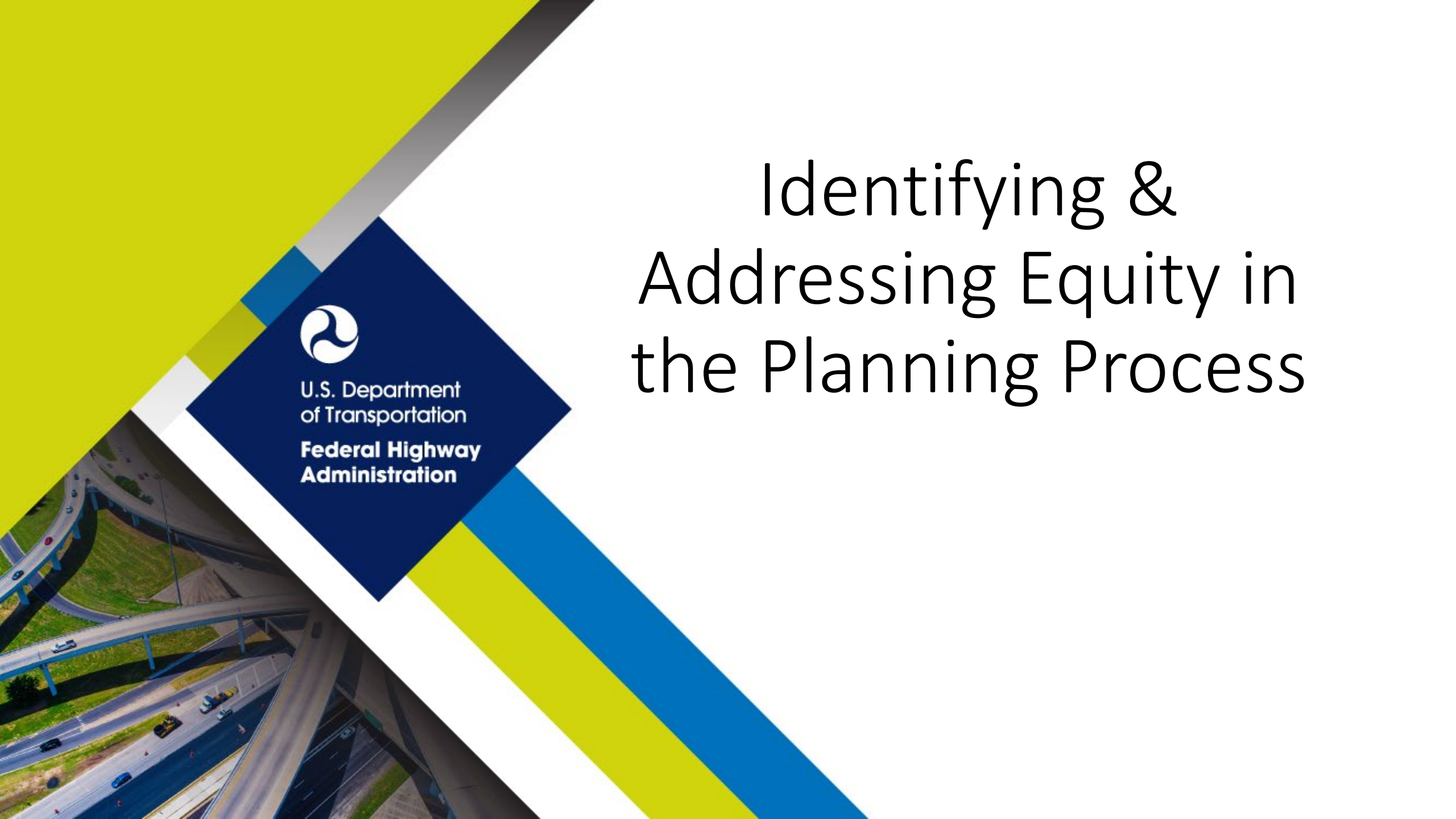


Identifying & Addressing Equity in the Planning Process



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- Adam Palmer, HOCTC



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Purpose and Needs of Title VI

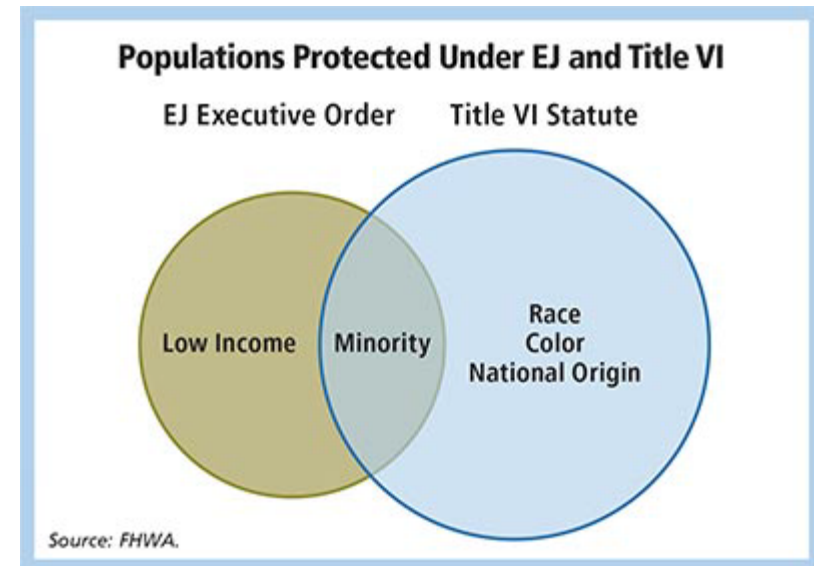
- Why do we care about Title VI?
 - Race, color, national origin, LEP
- Planning for the future requires analyzing the past
- Proactivity is key to ensuring that nondiscriminatory outcomes are achieved
- Equal inputs vs. equitable outcomes
- Public involvement throughout planning process



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Environmental Justice

- Pertains more to NEPA project phase
- Focused on minority and low-income populations
- EJ already performed by many MPOs
 - Outreach based on EJ pops.
- New: Executive Order 14096 ([Fact Sheet](#))





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Applications of T6 for MPOs

- Lack of federal guidance
- Past discrimination can be remedied via equitable planning
- Demographic data for considering multiple priorities
- Most MPOs are doing equity analysis, NY has opportunity to lead with Title VI
- Data analysis
 - More accurate data → more proactive considerations of equity in TIP

TITLE VI

"No person shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Civil Rights Act, 1964

Source: [Brazos Transit District](#)



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Notable Practices

- Historical background
 - Ex. Hillsborough County, FL
- Mapping tools
 - Ex. Miami-Dade County, FL
 - Disaggregating demographic categories (race, income, ethnicity, etc.)
- List of useful public involvement tools and techniques ([Promising Practices for Meaningful Public Involvement in Transportation Decision-Making](#))



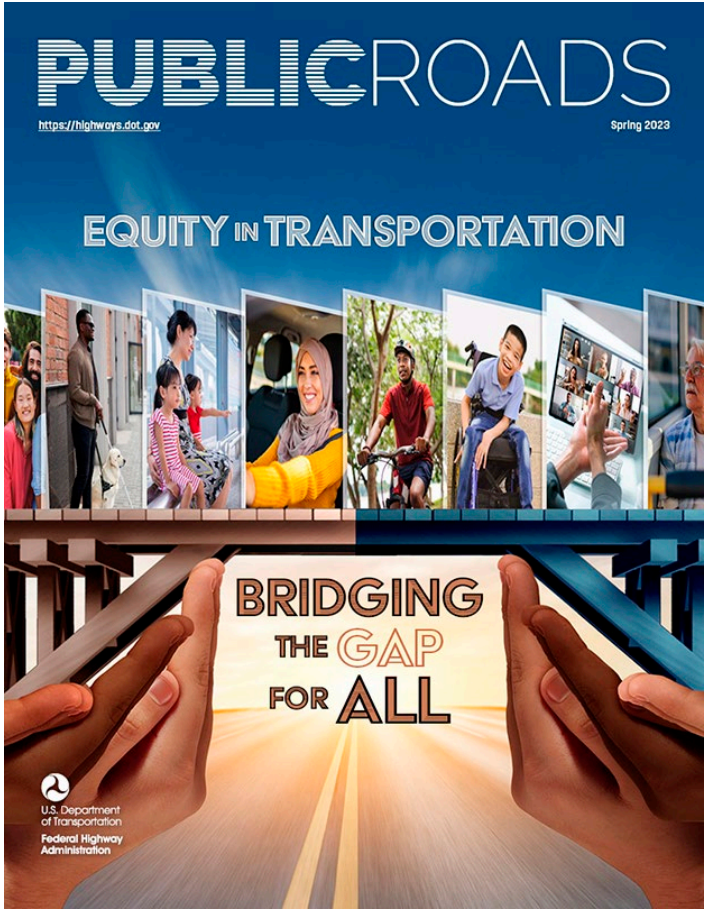
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Why focus on equity?

- Opportunities for funding (discretionary grants, formula funding)
- Reducing likelihood of discriminatory outcomes
- Serving the communities your MPO represents more effectively and equitably



Where do we go from here?



Source: [Public Roads](https://highways.dot.gov)



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Odell (CDTC)



CDTC's Environmental Justice and Title VI Approach

NYSAMPO 2023

Overview

Environmental Justice/Title VI Analysis Report

- January 2023
- Identify Environmental Justice Areas based on regional data
- Provide broader context by analyzing other vulnerable groups in our region

Requirements that shaped our focus

- Title VI
- Executive Order 12898 (Environmental Justice)
- Executive order 13166 (LEP)
- FTA Circular 4702.1b

Overview of Title VI/EJ Analysis Report

Found rates for different vulnerable groups using ACS data and assessed concentrations

- Race, under 18, over 65, having a disability, female, low income, Limited English Proficiency

Assessed how transportation use is affected across these categories

- Saw biggest difference across race and income

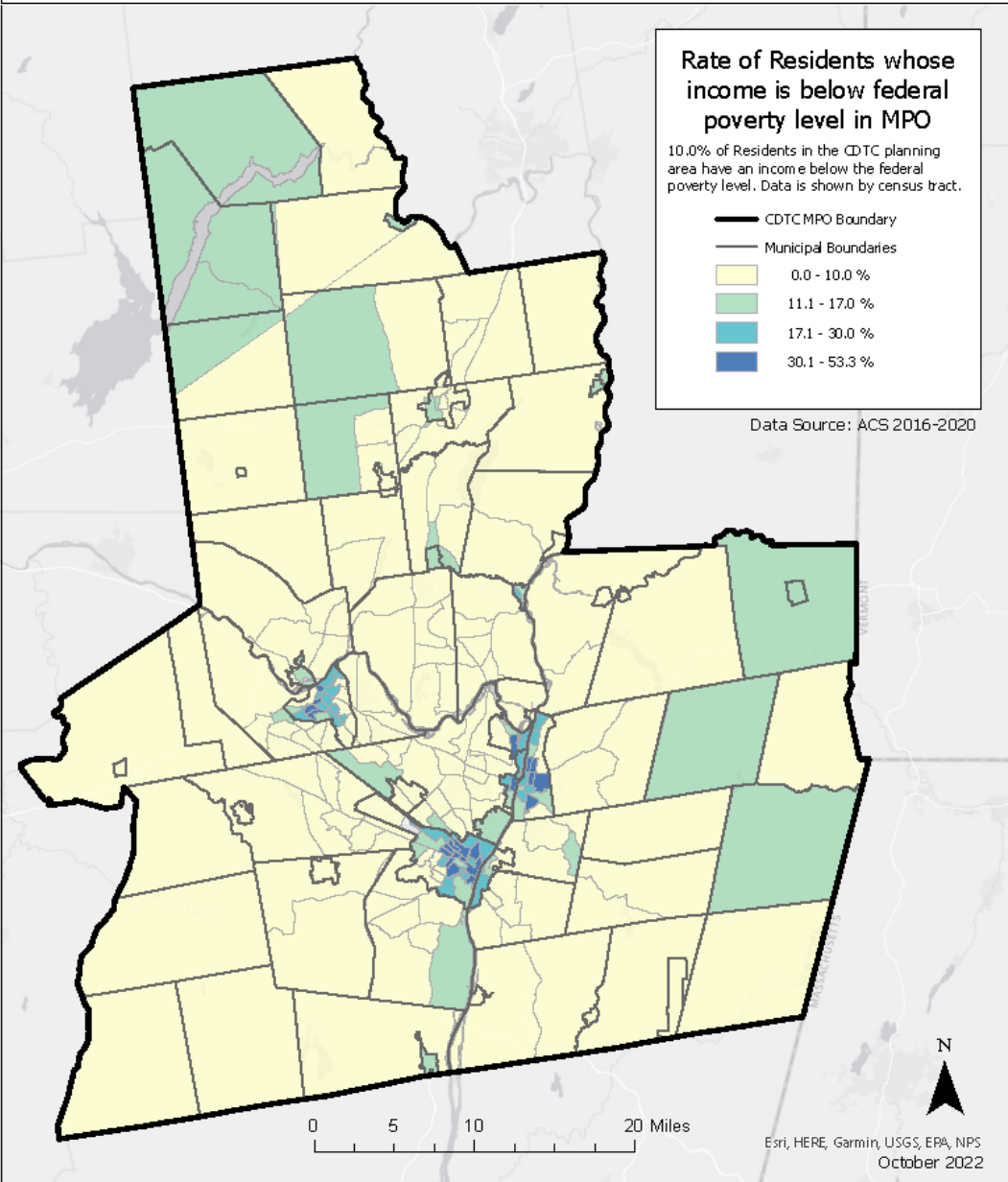
Commute Mode by Income

By Poverty	Drive Alone	Carpool	Transit	Walked	Other	Work at home
Workers 16 years and over for whom poverty status is determined	78%	8%	3%	3%	1%	7%
Below 100% of the poverty level	57%	13%	14%	10%	3%	4%
100 to 149% of the poverty level	63%	14%	9%	8%	1%	6%
At or above 150% of the poverty level	80%	7%	3%	2%	1%	7%

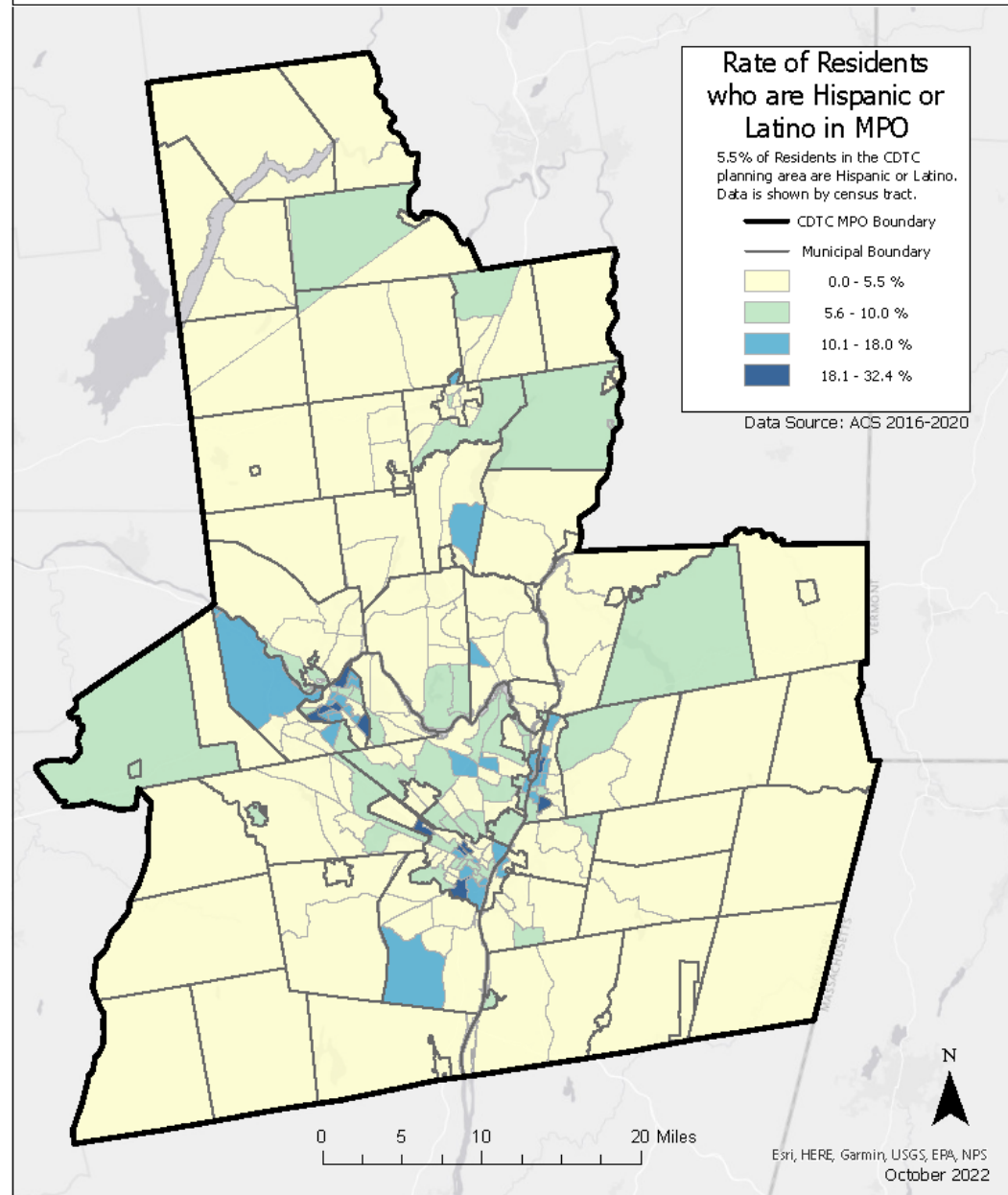
Commute Mode by Race and Ethnicity

By Race/Ethnicity	Drive Alone	Carpool	Transit	Walked	Other	Work at home
Total Workers 16 years and over	77%	8%	3%	3%	1%	7%
Black/African American alone	60%	12%	16%	7%	3%	4%
Hispanic/Latino	63%	12%	9%	8%	2%	6%
American Indian Alaska Native alone	65%	1%	20%	14%	0%	0%
Some other Race	57%	10%	19%	7%	3%	5%
Asian alone	67%	14%	5%	7%	1%	7%
Two+ Races	67%	9%	7%	5%	1%	10%
White alone	80%	7%	2%	3%	1%	7%
White alone not Hispanic/Latino	81%	7%	2%	3%	1%	7%

Residents whose income is below federal poverty level in MPO



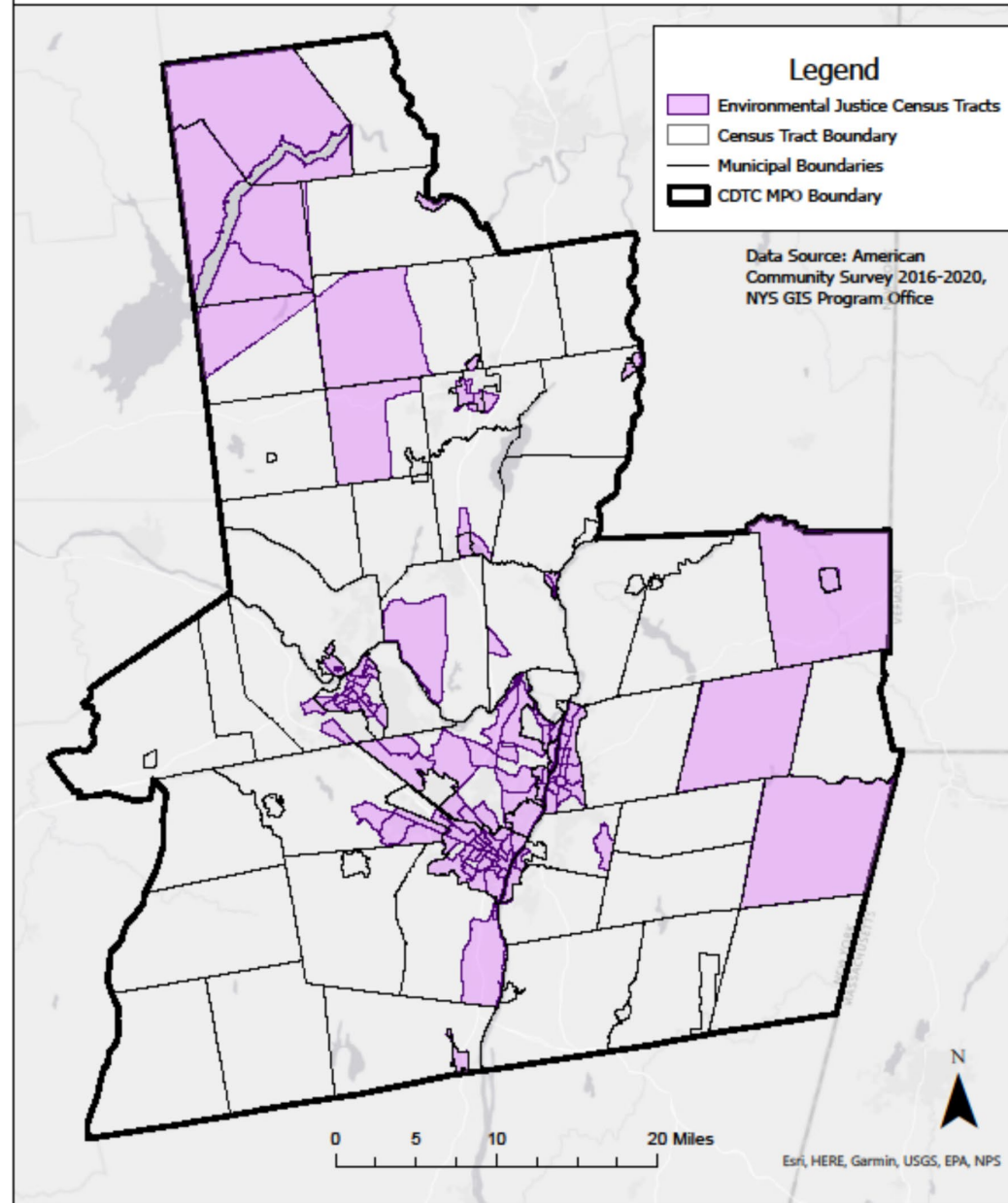
Hispanic or Latino MPO Residents



Creating Environmental Justice layers

- What does EJ mean?
- Found regional rates based on census tracts in our MPO boundary
- The regional rate of households below 100% of the poverty level is 10.0%, and the regional rate of minority populations is 21.8%
 - We then identified tracts with rates greater than or equal to either or both regional rates and combined these tracts into our EJ layer

Environmental Justice Tracts 2023



Other assessments we considered

Considered Composite Scoring

- Difficulty assigning weight to different components
- Wanted focus on Title VI and EJ/executive order

Considered defining low income as those at 200% or 150% poverty

- Wanted more focus on higher need
- Match with CDTA

Challenges

- Different data universes between income and race data can make direct comparisons difficult
- Some municipalities feel excluded when they are not found to be EJ
 - Concentration maps for context
 - Modes analysis illustrates priorities

What are we using our EJ layer for?

Determine public participation locations and approach for planning studies

We also use an LEP map to assess if LEP resources are needed during outreach

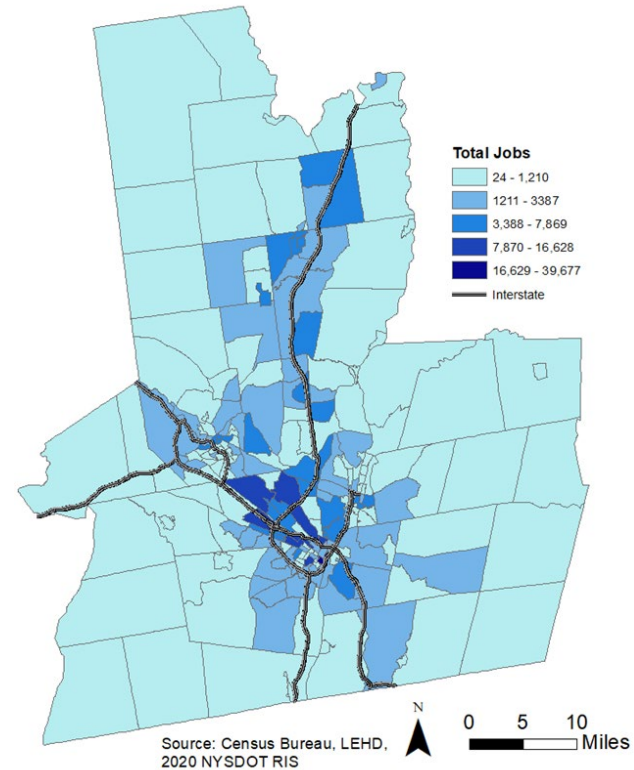
Assess location of positive, neutral, and potentially negative TIP projects in region

Merit evaluation score sheet for TIP projects

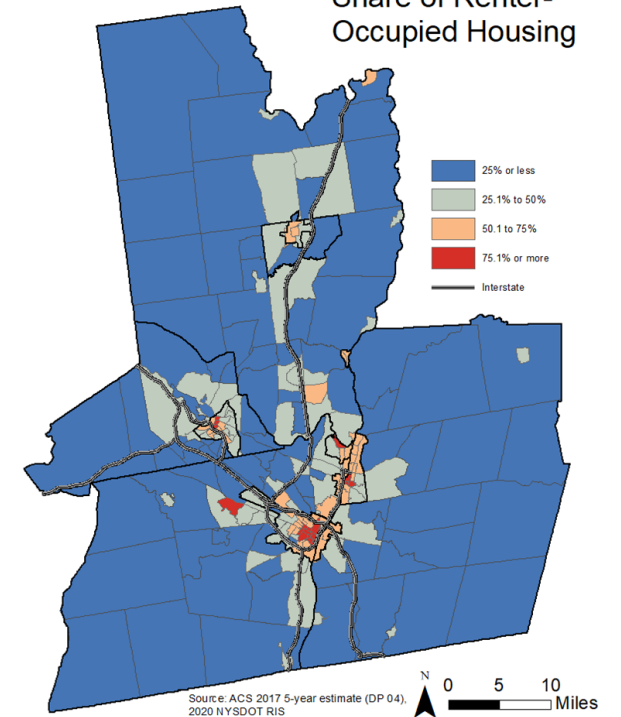
Other Analysis Efforts

- **Jobs Access Report**
 - Assessing the broader regulatory and economic factors that impact individuals' travel, employment, and housing
 - Can workers in our region find affordable housing near where their jobs are?
 - If people can't live near where they work, do the available transportation options create significant burdens on people's money or time?

Number of Jobs by Census Tract, 2015

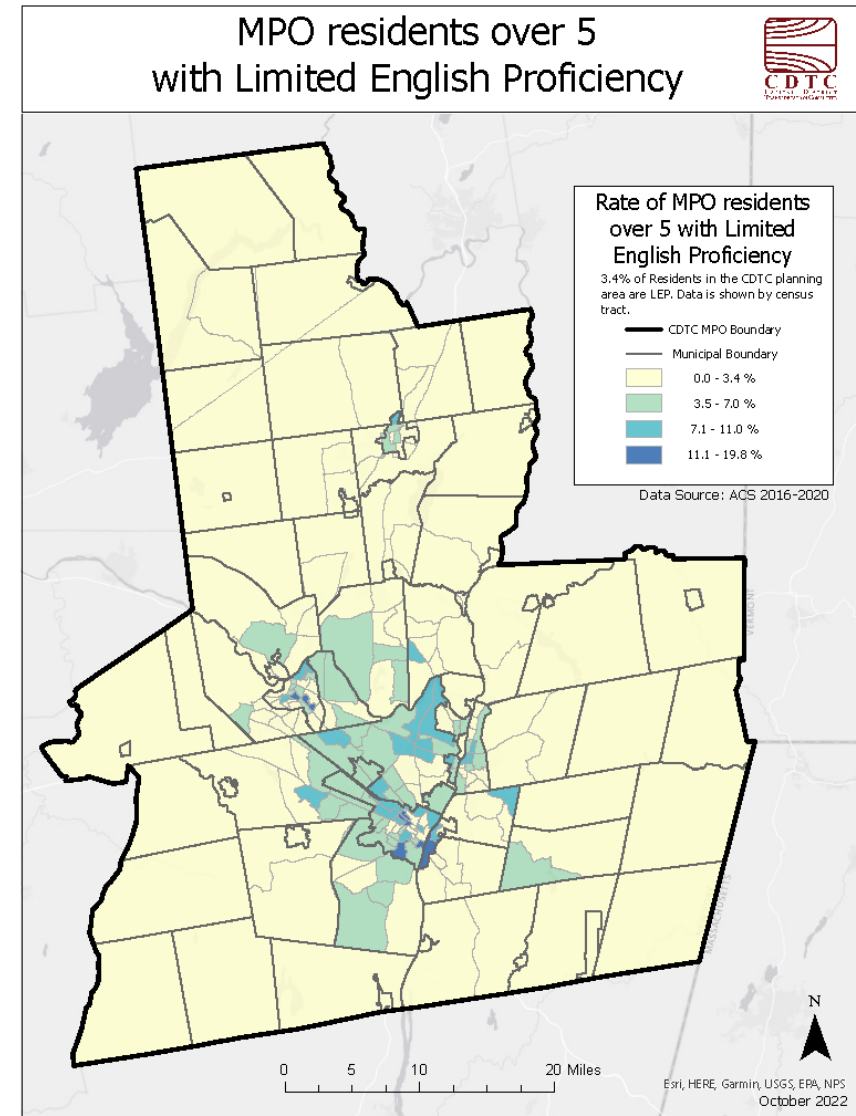


Share of Renter-Occupied Housing



Other Analysis Efforts

- **Limited English Proficiency**
 - Important to have staff conduct analysis beyond which tracts have Limited English Proficiency
 - Which languages are spoken? What resources do we need to effectively communicate with the community?



Possible Next Steps with our EJ Data

Provide data
online in StoryMap

Look at past TIP
projects and
funding in EJ areas

Including in
scoring process for
planning studies

Pavement
conditions in EJ
areas

Sidewalk
conditions in EJ
areas

Thank you!





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Frasier (SMTC)



City of Syracuse Pavement Prioritization Program

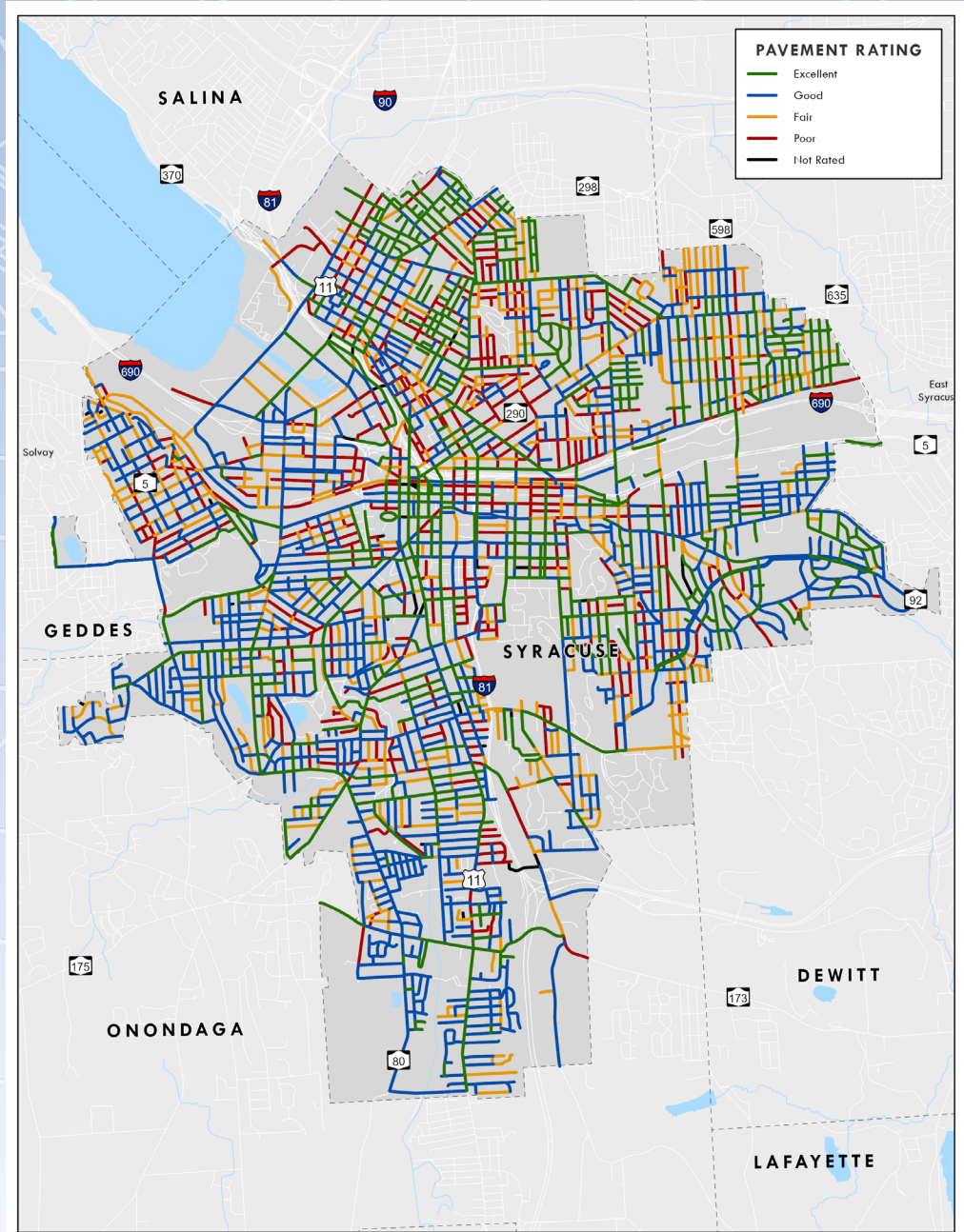
Incorporating Equity in Pavement Reconstruction

Andrew Frasier

Senior Transportation Analyst, SMTC

SMTC collects condition ratings (1-10) on all City-owned roads.

How can the City prioritize maintenance on 400 miles of pavement?



Overview – Three Main Questions

- City asked the SMTC to complete an analysis using pavement data collected in 2022
- Asking the questions:
 - With a limited budget, where is maintenance justified?
 - What data can we use to help improve decision-making?
 - *How can we ensure our planning considers issues of equity?*

Two scores: infrastructure score and equity score

Infrastructure Data

Filters

Criteria



- Roads rated “Excellent”
- Roads rated “Good”
- City of Syracuse
- National Grid
- Save the Rain
- NYSDOT

- Unimproved Streets

Equity Data

- Wanted to include equity during **quantitative** part of data analysis
- Built off model from Oakland, CA
- Seven variables considered
- Uses Decennial Census data (2020) where available and 2017-2021 American Community Survey otherwise

People of Color

Residents Below the Poverty Line

Residents with a Disability

Residents 65 Years and Older

Single Parent Households

Rent-Burdened Households

Residents with Low Educational Attainment

Equity Variable	Source
People of Color	All groups besides Non-Hispanic White Alone
Poverty Status	Table S1701 – Poverty Status in the Last 12 Months
Disability	Table S1810 – Disability Characteristics
Population over 65	Table DP05 – ACS Demographic and Housing Estimates
Single Parent Households	Table B11004 – Family Type by Presence and Age of Related Children Under 18 Years
Rent-Burdened	Table DP04 – Selected Housing Characteristics Category: Gross Rent as a Percentage of Household Income (GRAPI) – Selected over 30%
Low Educational Attainment	Table DP02 – Selected Social Characteristics Category: Total - Bachelor's Degree or Higher

Equity Score Calculation

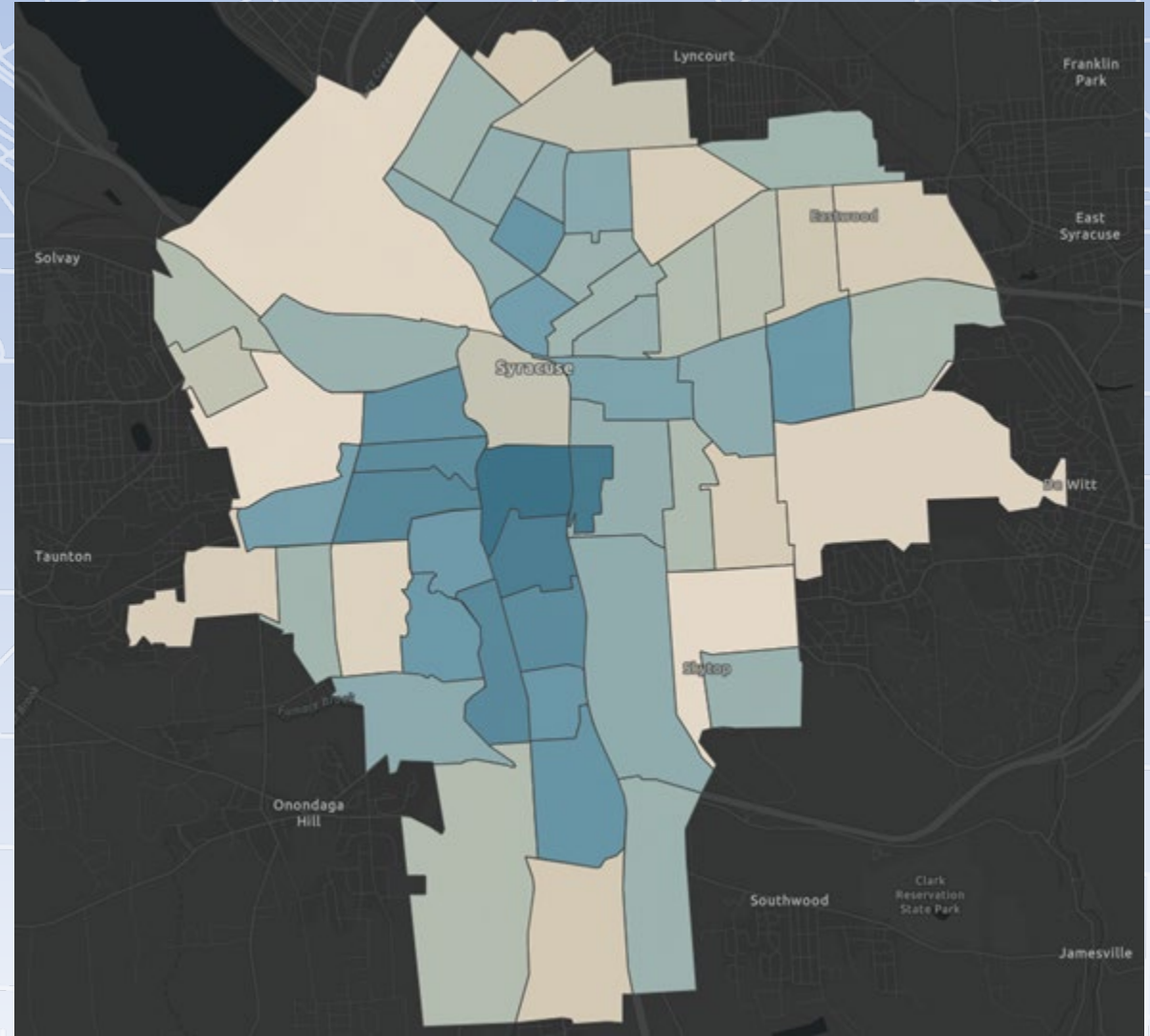
- Data based on tract level
- Score can range from 0 to 1, based on proportion of historically-underserved populations residing in each tract.
- To reach this, we multiply the total percentage of each variable by its determined weight, and then take the sum.

$$E_n = (.25)(POC_n) + (.25)(Poverty_n) +$$
$$(.1)(Disability_n) + (.1)(Age_n) + (.1)(Single_n) +$$
$$(.1)(Rent_n) + (.1)(Edu_n)$$

Equity Scores in Syracuse

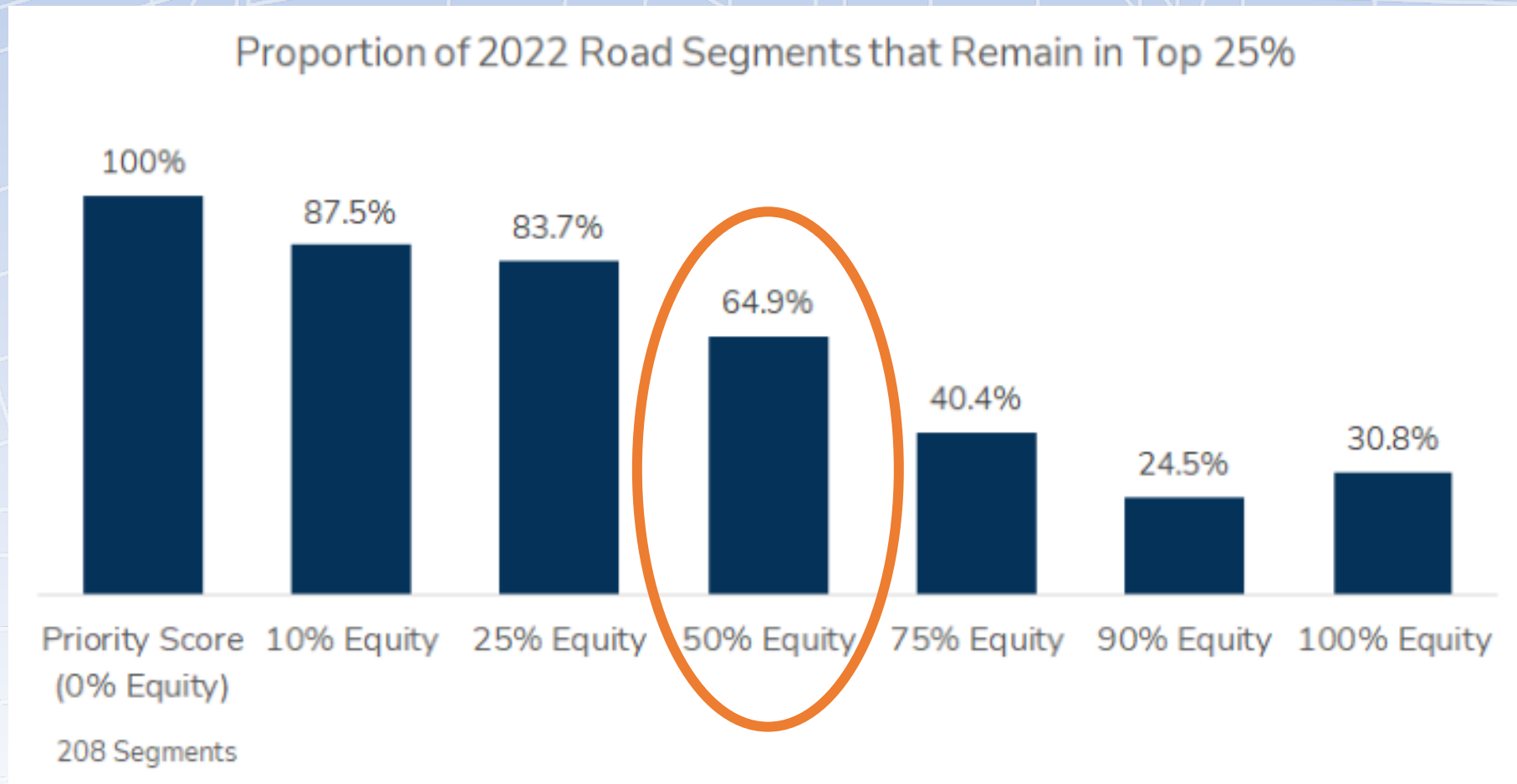
Scores ranged from 0.15 to 0.61, with an average score of 0.39.

Darker colors indicate higher scores, lighter colors indicate lower scores.



Factoring in Equity

- How much should the equity score be incorporated into the final score?



2023 City of Syracuse Pavement Prioritization Model

50% Infrastructure

50% Equity

Pavement Condition

Activity Level

Transit Activity

Emergency Snow Routes

History of Water Main
Breaks

Proximity to Major
Institutions

Average Annual Daily
Traffic

Residents Below the
Poverty Line

People of Color

Residents with a
Disability

Residents 65 Years and
Older

Single Parent Households

Rent-Burdened
Households

Residents with Low
Educational Attainment

Network Scoring

- Calculated on a block level
- Maximum possible score: 100
 - 50 from infrastructure, 50 from equity
- Priority Scores ranged from **14.13 to 66.22**
 - Categorized by percentile (by segments)

Network Scoring

Category	Lower Bound	Upper Bound	Total Mileage in Category
Minimum Score to 25 th Percentile Score	14.13	36.79	24.0
25 th Percentile Score To Median	36.80	43.23	20.5
Median to 75 th Percentile Score	43.24	49.32	21.2
75 th Percentile Score To Maximum Score	49.33	66.22	21.3

Network Scoring

- Blocks with a Priority Score of 49.33 and above would be considered *reasonable and justified candidates for reconstruction*
- There are *not* the only potential candidates – SMTC's methodology is only one of several different options.
- *What about economies of scale?*

Weighted Average Priority Score

- Created to give the City a general idea of the overall priority of a road.
- Calculation:

$$\bar{P} = \frac{\sum p_i l_i}{\sum l_i}$$

- Segments created based on federal-aid eligibility
 - FAE segments: “Syracuse Count Program” segments
 - Non-FAE segments: Road name

Deliverables

- List of blocks which fell above the 75th Percentile Score (49.33)
- All street segments, ordered by Weighted Average Priority Score
- Maps of the City with these metrics included.

APPENDIX A – Individual Street Blocks with scores above 75th Percentile (Value higher than 49.33)

BPID	STREET NAME	FROM	TO	Priority Score	Miles	Feet	2022 Rating	FAE
SYR793	Cortland Ave E	Oxford	Castle	66.22	0.15	7,962	4	Yes
SYR2865	Rose Ave	Oakwood	S. McBride	65.15	0.09	4,865	4	No
SYR1856	Jackson St	McBride	Almond	65.15	0.04	2,341	4	No
SYR2487	New St	S. Salina	Linden	64.14	0.05	2,563	5	No
SYR2447	Montgomery St	Burt	Raynor	63.07	0.19	9,929	4	No
SYR3608	Walton St	Franklin	Fayette	62.67	0.16	8,240	4	No
SYR7782	Kirk Park Dr	Crehange	Elmhurst	62.37	0.08	4,455	4	No

APPENDIX B – Combined Street Segments ordered by Weighted Average Priority Score

Road Name	From	To	Weighted Average Priority Score	Weighted Average Pavement Rating	Miles
Rose Ave	Local Applicable Segment	See Map	65.15	4.00	0.09
Linden St	Local Applicable Segment	See Map	59.96	5.00	0.12
Van Buren St	Local Applicable Segment	See Map	59.94	5.00	0.09
McBride St S	Local Applicable Segment	See Map	59.80	5.00	0.49
Fage Ave	Local Applicable Segment	See Map	59.77	4.00	0.18
Standart St	Local Applicable Segment	See Map	58.90	4.00	0.13

QUESTIONS?

Andrew Frasier
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Ramola (NYMTC)

NYMTC's Equity Analysis Tool

Mukta Ramola, NYMTC Staff/Cambridge Systematics

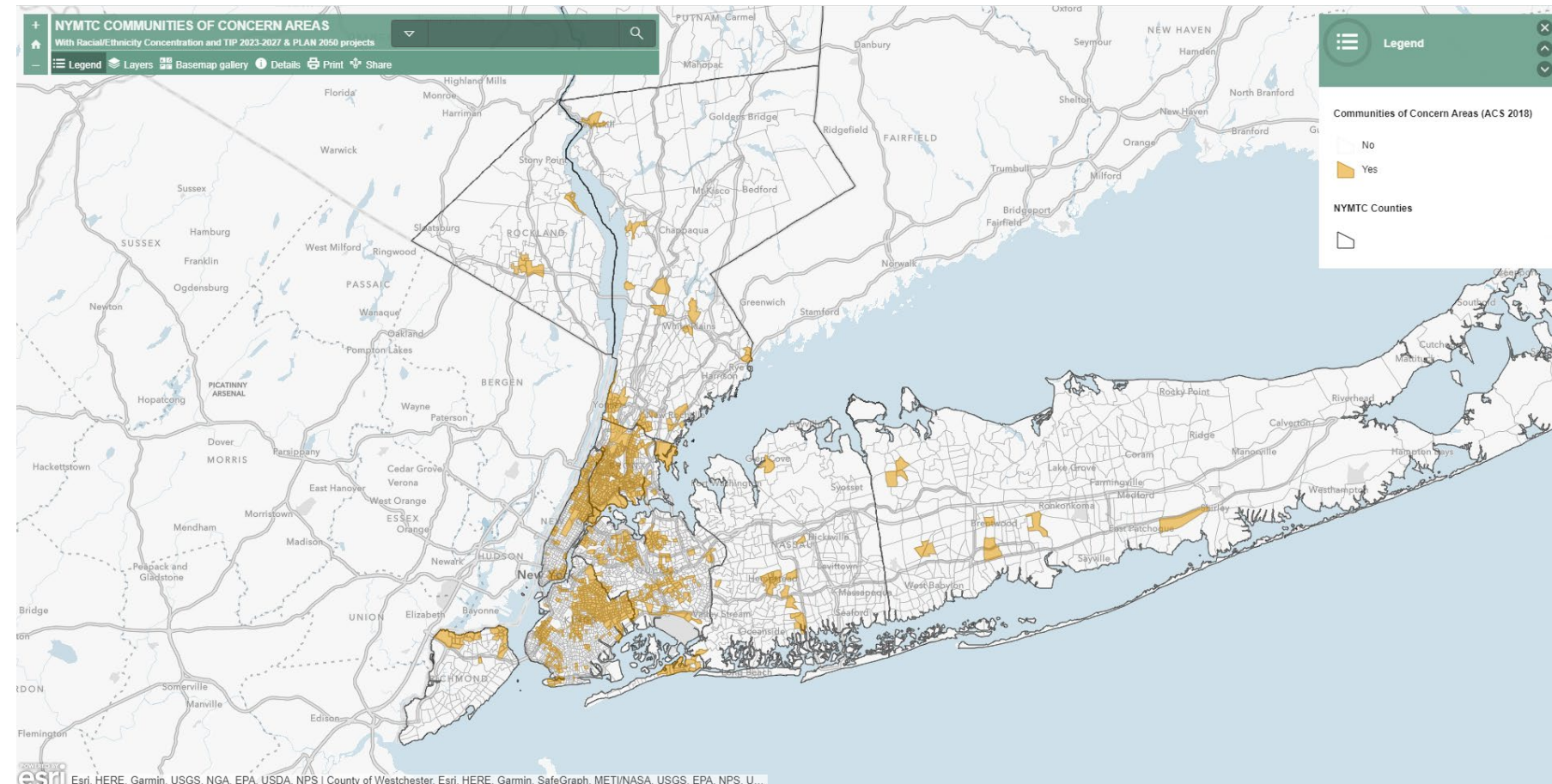
May 8, 2023

For NYSAMPO conference

Presentation Outline

- Communities of Concern definition
- Demographic data used from Census
- How is this data used in the planning process?
- Next steps

Communities of Concern



NYMTC assesses the Title VI-related impacts of the transportation planning process outcomes on **minority populations** and **low-income households**, which are identified as communities of concern.

Link to the interactive [mapper](#).

Communities of Concern

Minority and low-income households generally experience more limited transportation options. Disruptions in the transportation system and changes in public transit service are more likely to affect these households because of limitations in personal mobility options.

Minority	Low Income
43% of the total population in the NYMTC area is minority population.	11% of Households in NYMTC live at or below the defined poverty level

Data

MINORITY

Refers to a person's racial or ethnic identity. Minority is identified as a person who is:

- Black: a person having origins in any of the black racial groups of Africa;
- Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
- American Indian and Alaskan Native: a person having origins in any of the original people of North America, South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition; or
- Native Hawaiian and Other Pacific Islander: people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

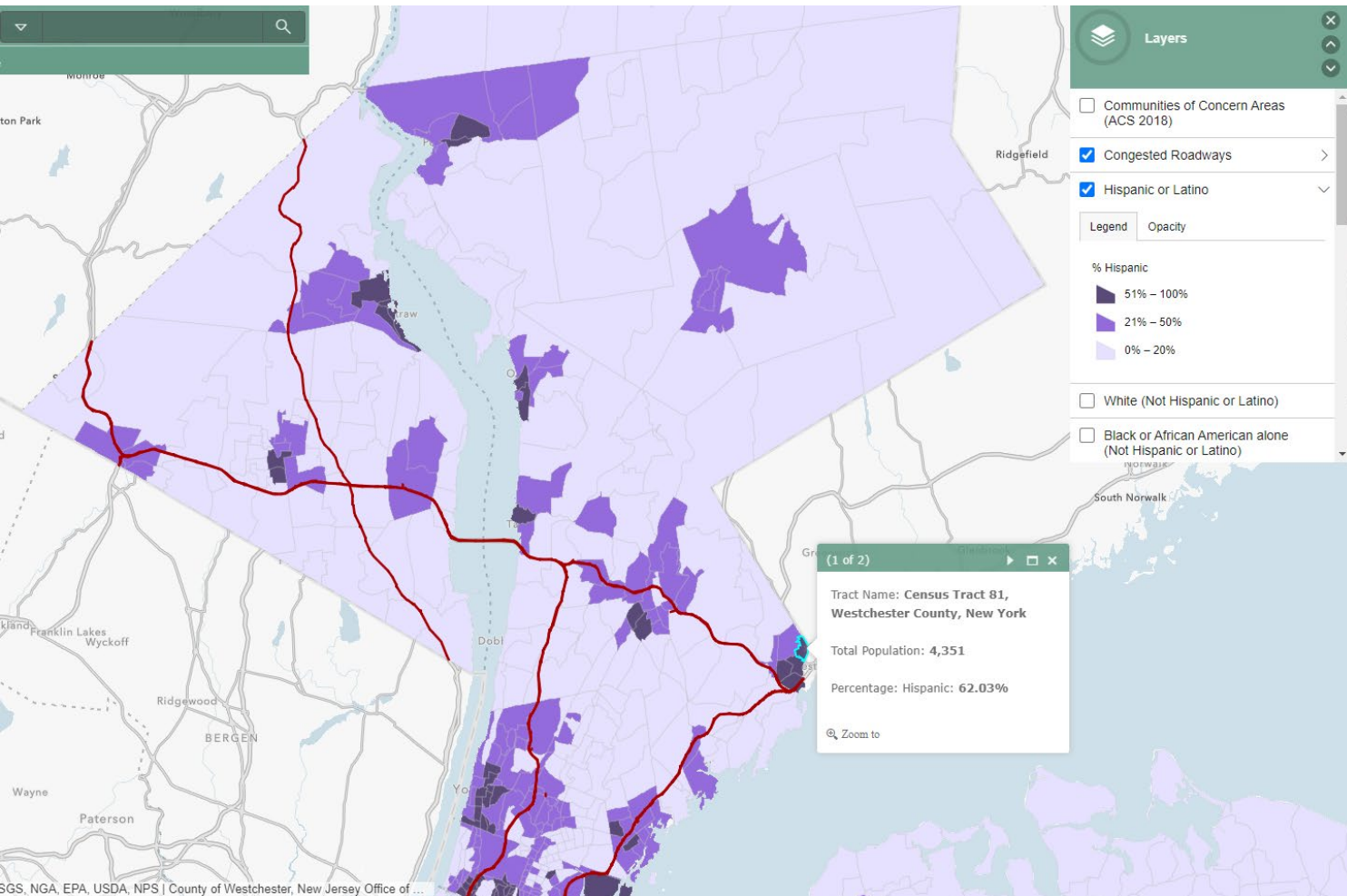
LOW-INCOME

Low-income refers to a person whose median household income is at or below the Department of Health and Human Services poverty thresholds. The Department of Health and Human Services poverty thresholds are provided each year by the Census Bureau. The thresholds are used mainly for statistical purposes (e.g., preparing estimates of the number of Americans in poverty each year).

Thresholds

- Communities of concern in NYMTC's planning area are defined as census tracts that meet both thresholds related to minority status and income:
 - Minority population, as defined in the 2010 U.S. Census, makes up more than 57 percent (the NYMTC planning area average) of the tract population; and
 - More than 14 percent (the NYMTC planning area average) of the total population live in households at or below the poverty level as defined in the 2010 U.S. Census.

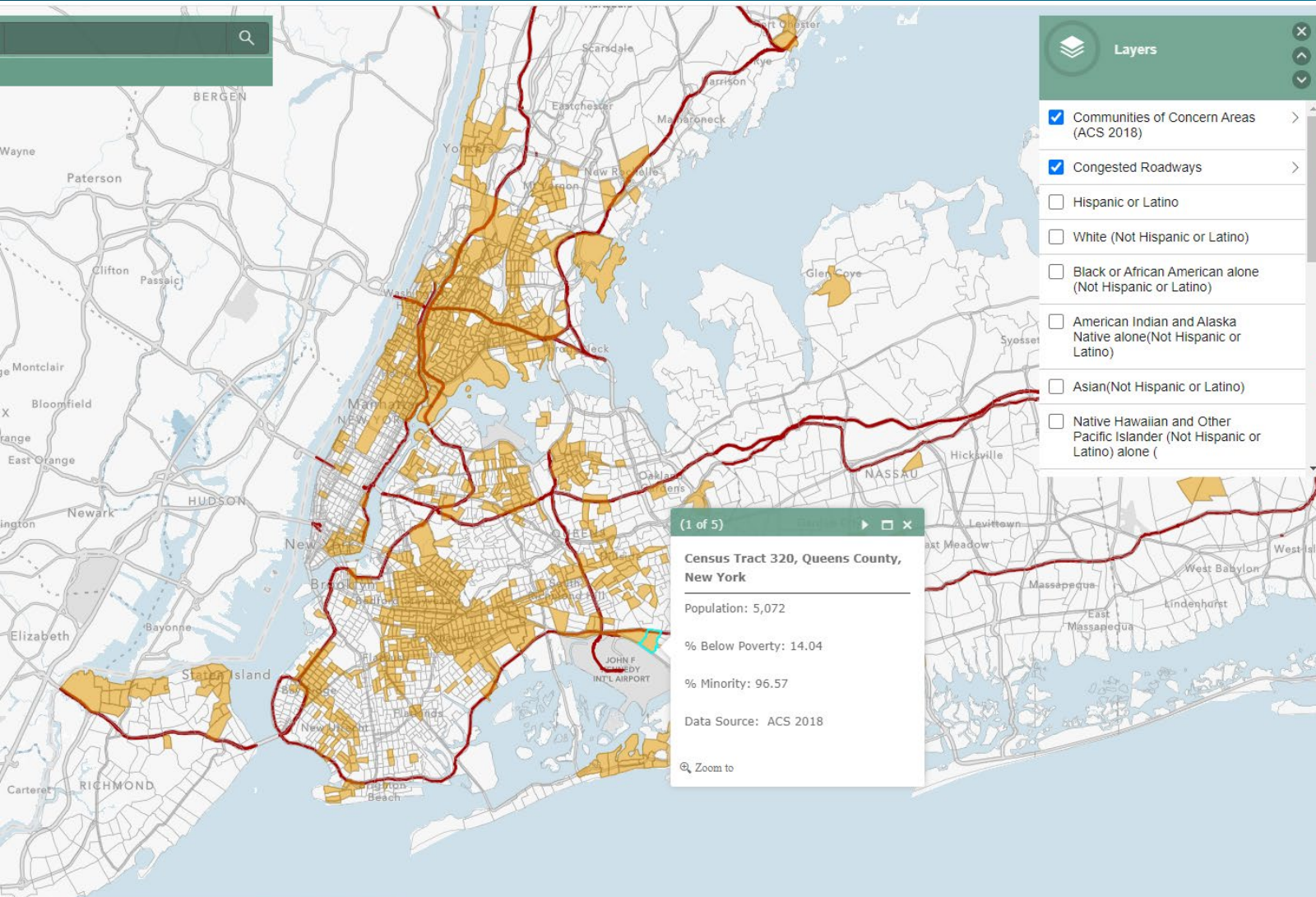
Population distribution by race and ethnicity



Race/Ethnicity	Group Population in the NYMTC Region	% of Population in the NYMTC Region
Hispanic or Latino	3,269,854	25.79%
White (not Hispanic or Latino)	5,358,807	42.26%
Black or African American alone (not Hispanic or Latino)	2,282,510	18.00%
American Indian and Alaska Native alone (Not Hispanic or Latino)	20,617	0.16%
Asian alone (Not Hispanic or Latino)	1,427,211	11.26%
Native Hawaiian and Other Pacific Islander alone	3,515	0.03%
Some other race alone (Not Hispanic or Latino)	90,571	0.71%
Two or more races (Not Hispanic or Latino)	226,664	1.79%
Total	12,679,749	100%

Source: 2014 – 2018 American Community Survey (ACS)

Congested Roadways and Communities of concern



Congested Roadways shows Roadways where volume-to-capacity (VC) ratio is greater than 0.8 along the extent of a corridor.

Geospatial Assessment of the Plan

Means of Transportation to work

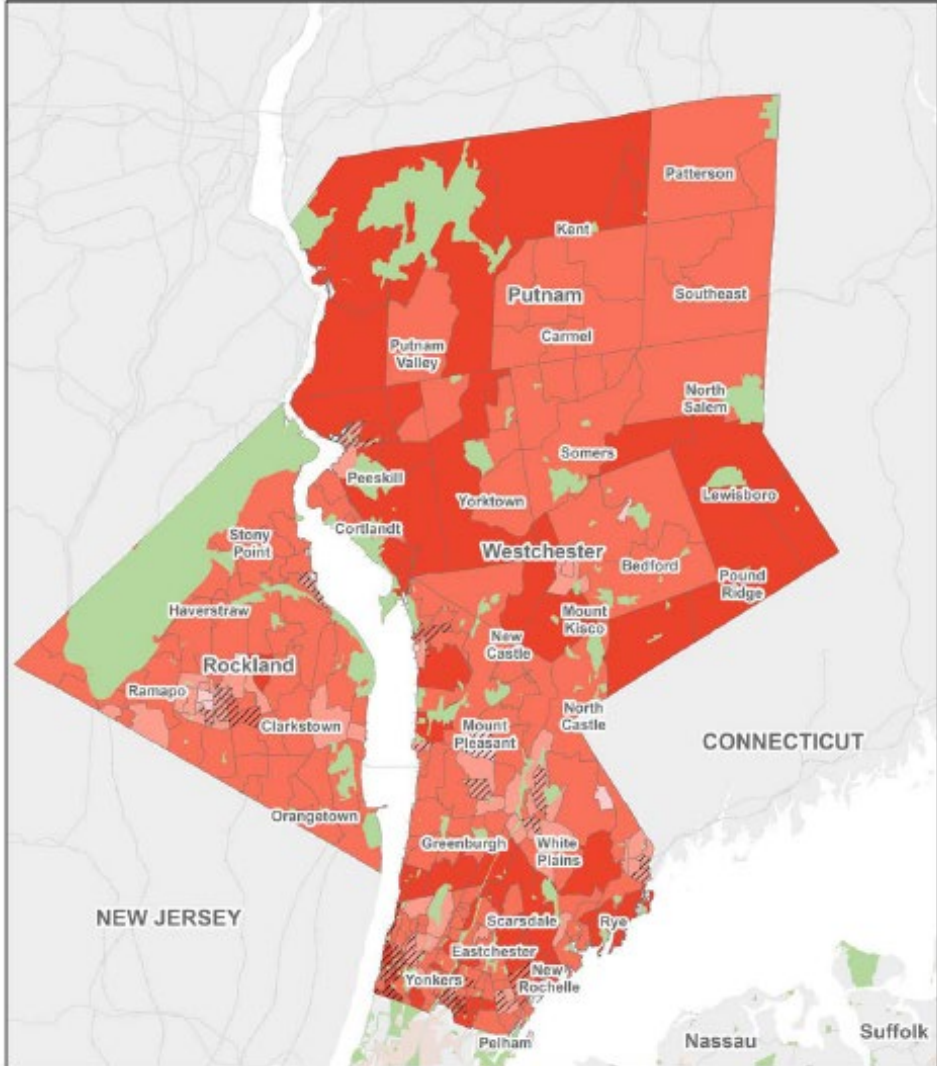
- Those who live in a COC are typically less likely to own a vehicle or own fewer vehicles, have longer commutes, and have higher transportation cost burdens compared to residents of other areas.
- In COC's 60% of workers use public transportation to commute to work.

County	Total # of Workers over the age of 16	Car, Truck, Vans and Carpool %	Public Transit (Excluding Taxi) %	Bicycle %	Walked %	Taxi, Motorcycle or other means %	Work at Home %
New York City	1,633,487	26%	64%	1%	9%	1%	3%
Long Island	68,879	88%	15%	1%	4%	1%	3%
Lower Hudson Valley	100,152	72%	26%	0%	9%	3%	3%
NYMTC Region	1,802,518	30%	60%	1%	9%	1%	3%

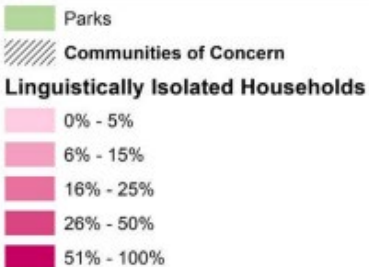
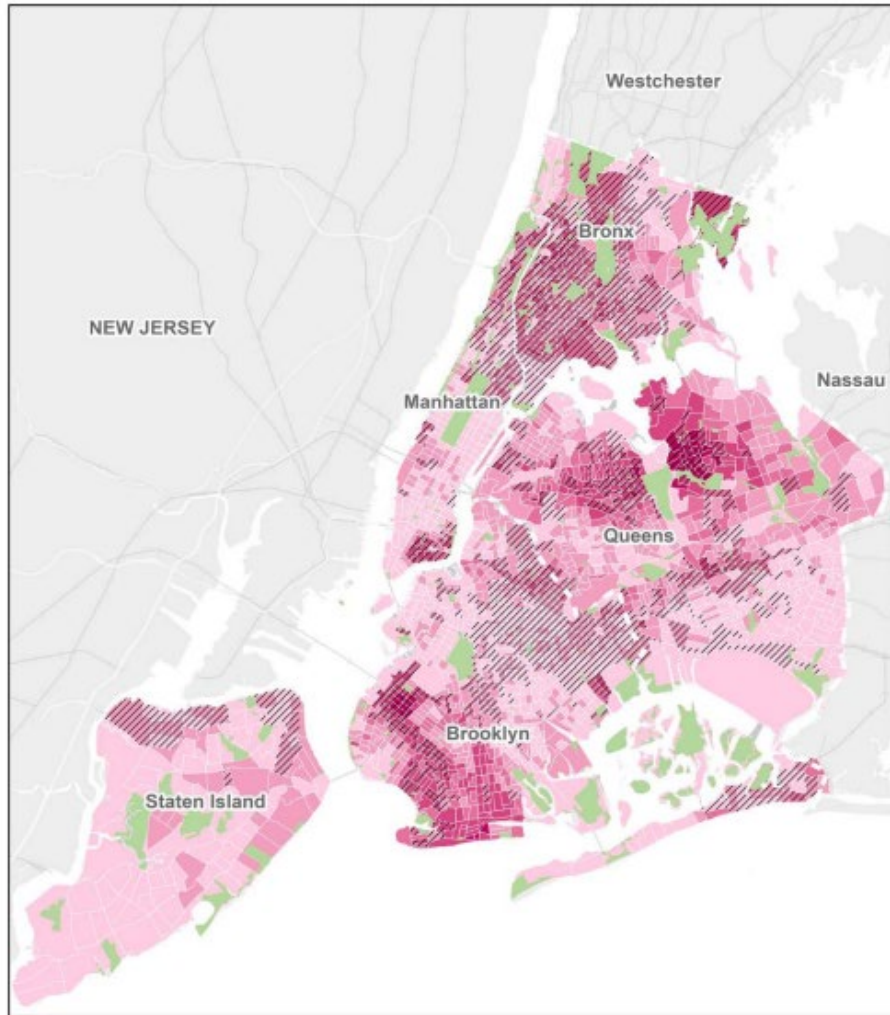
Travel time to work

- In the NYMTC planning area, 37 % of COC had a commute of more than one hour
- 27% of commuters in COC had commutes less than 30 minutes.

County	Total # of Workers	< 15 Min.	15-29 Min.	30-44 Min.	45-59 Min.	>59 Min.
		%	%	%	%	%
New York City	1,578,880	8%	17%	28%	18%	37%
Long Island	66,884	21%	36%	23%	6%	19%
Lower Hudson Valley	97,196	21%	30%	23%	8%	43%
NYMTC Region	1,742,960	9%	18%	27%	17%	37%



Linguistically isolated households



- There is a high geographic correlation between linguistic isolation and COC.
- Within COC in the NYMTC planning area, 19 % are considered linguistically isolated in contrast to 7 % of total households considered linguistically isolated in the remainder of the NYMTC planning area.

Geospatial Assessment of the Planning Process Outcomes

Assessing Planning Process Outcomes

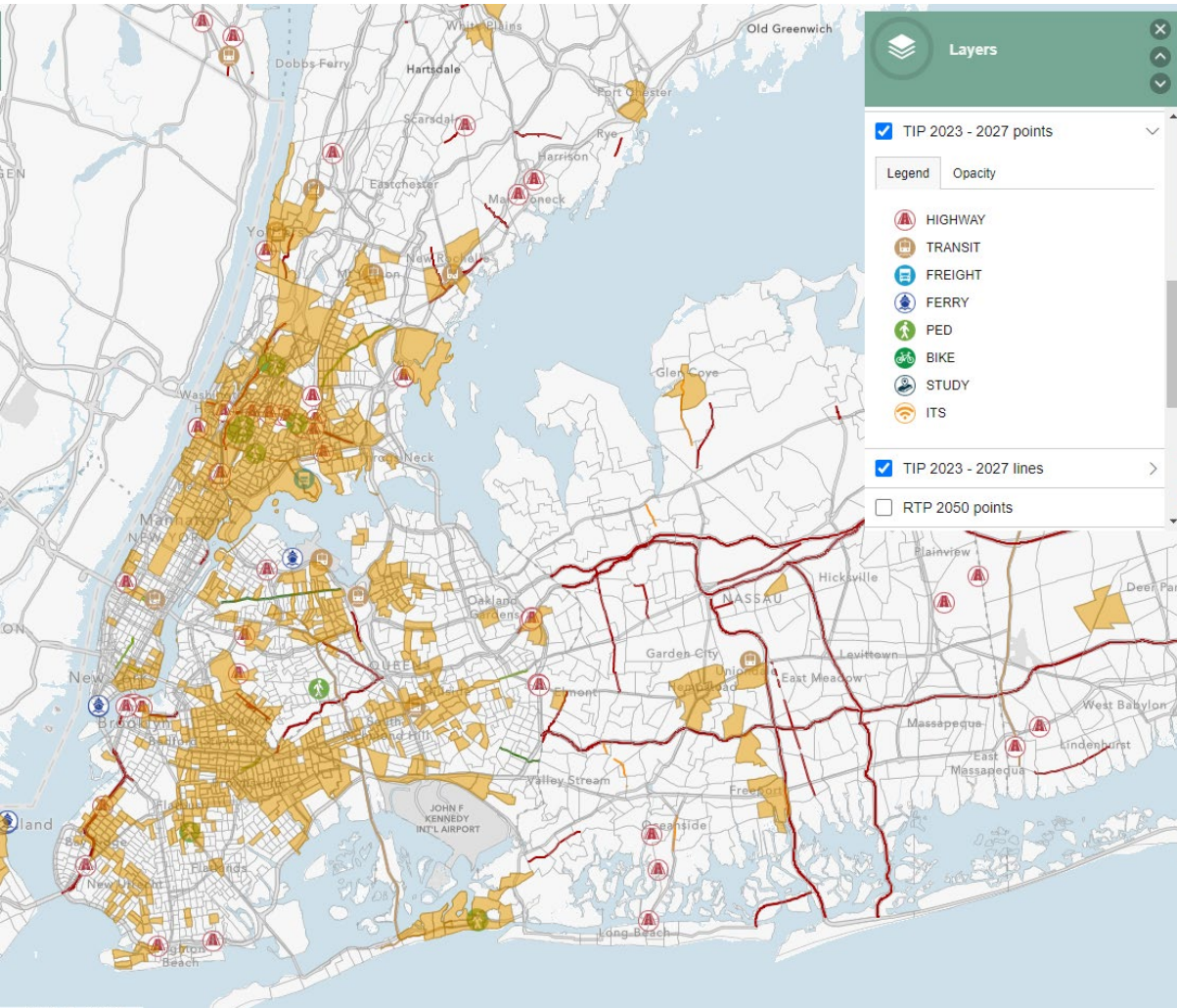


Table 8 - Assessment of Programmed Funding and Projects

		Project Locations			Totals
		Communities of Concern	All Other Communities	Both Categories	
Population	No.	4,215,456	8,464,293	n/a	12,679,749
	%	33%	67%	n/a	100%
Programmed Funding for Projects	\$ in millions	\$4,682	\$4,975	\$27,253	\$36,910
	% of total programmed funds	13%	13%	74%	100%
Programmed Funding per 100,000 Residents (in millions and including funding in both categories)		\$758	\$381	n/a	n/a
Census Tracts	No.	962	2,112	n/a	3,074
	% of total tracts	31%	69%	n/a	100%
Census Tracts Containing Programmed Projects	No.	532	692	n/a	1,224
	% of tracts in category	55%	33%	n/a	40%

Source 2- 2014-2018 ACS and FFYs 2023-27 TIP

Next steps

- Add a query widget to have the ability to run analysis within the tool.
- Include other demographics in the calculation of community of concern.
- Improve the methodologies used for assessing the impacts of the metropolitan transportation planning process on underrepresented and disadvantaged groups in the NYMTC planning area.



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Palmer (HOCTC)

Equity Conscious Tools and Strategies

Adam Palmer, Senior Planner

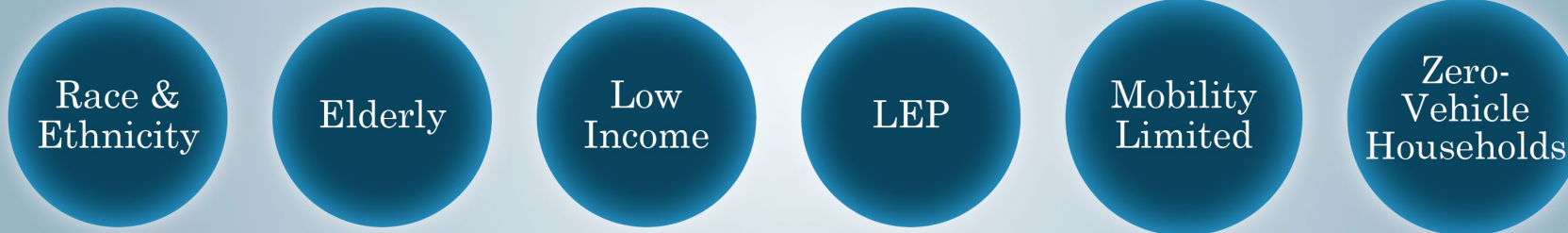


Background

The HOCTC Environmental Justice (EJ) Analysis was developed throughout 2020 and 2021.

Utilized staff with professional backgrounds in transportation planning, human services, GIS, and graphic design.

Analysis Covered Traditional EJ Variables



Analysis Also Reviewed Additional Related Variables

Aggregate Needs

Adverse Health Outcomes

Renter-Occupied Households

Data and Methodology

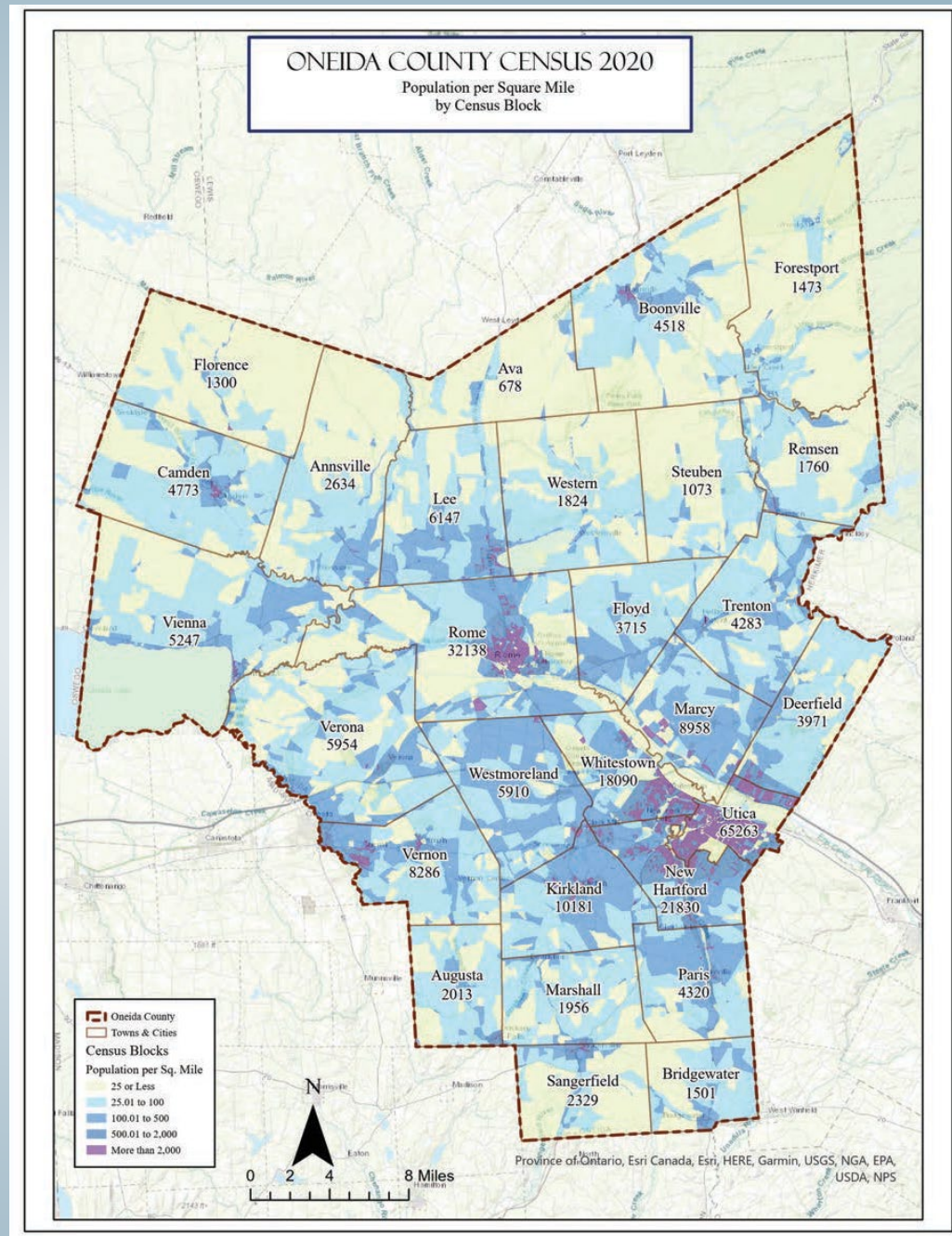
DATA

- ◇ U.S. Census Bureau 5-Year American Communities Survey (ACS)
- ◇ Local Feedback Survey
- ◇ CDC: Local Data for Better Health
- ◇ Existing HOCTC Plans

METHODOLOGY

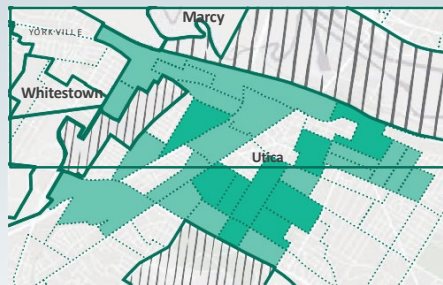
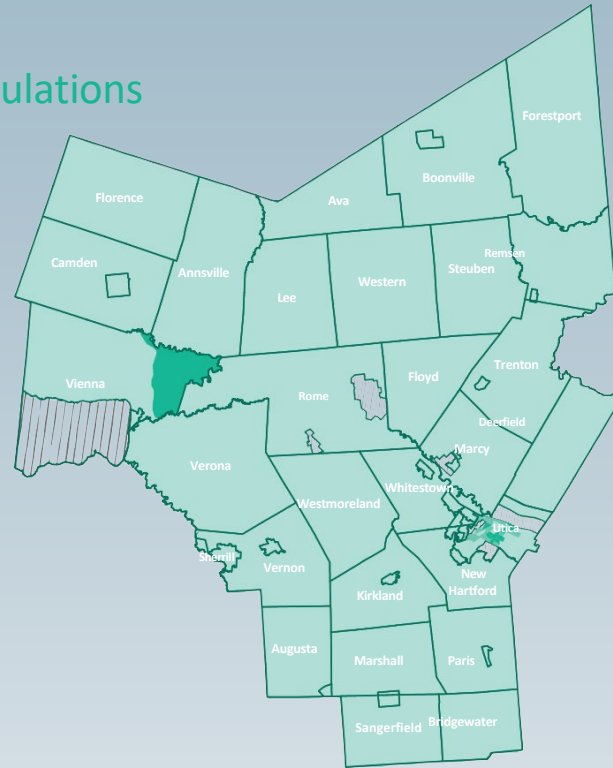
- ◇ One-Sided Significance Testing & Graphic Depiction
- ◇ Trend Analysis
- ◇ Aggregate Needs Analysis

County Overview



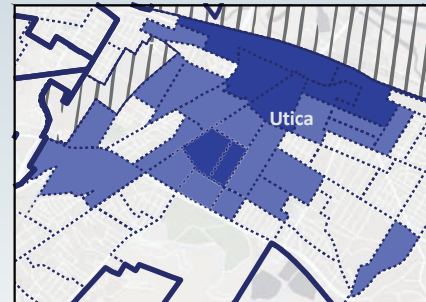
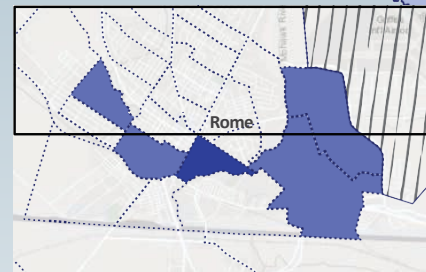
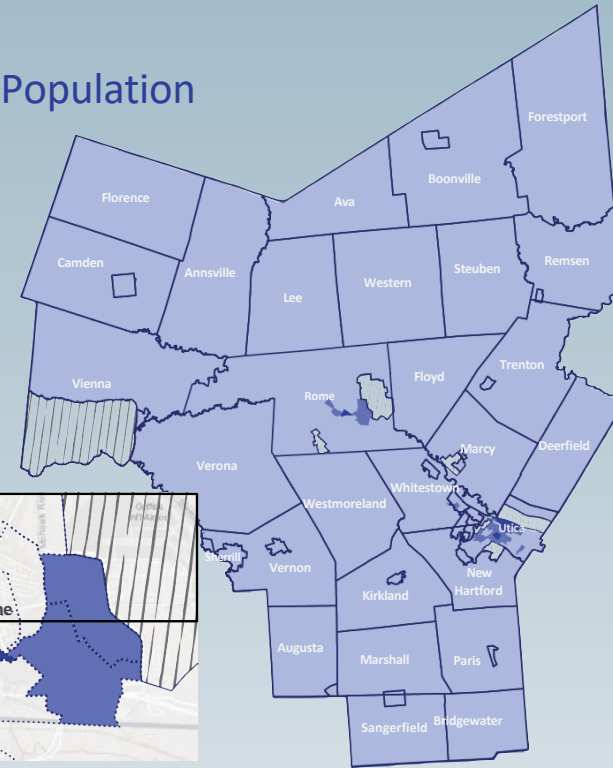
Impact of High Population Areas

Minority Populations



- Very High Concentration
- High Concentration
- Zero Population/State Prison
- Block Groups
- Municipal Boundaries

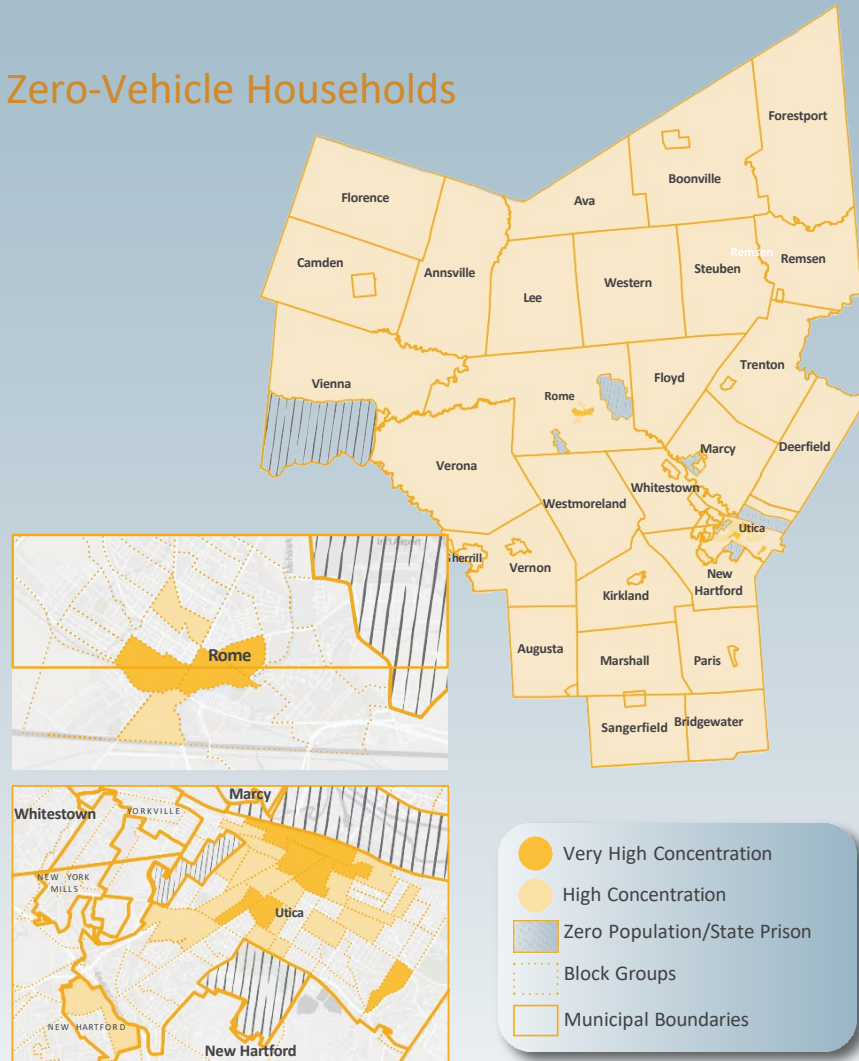
Low-Income Population



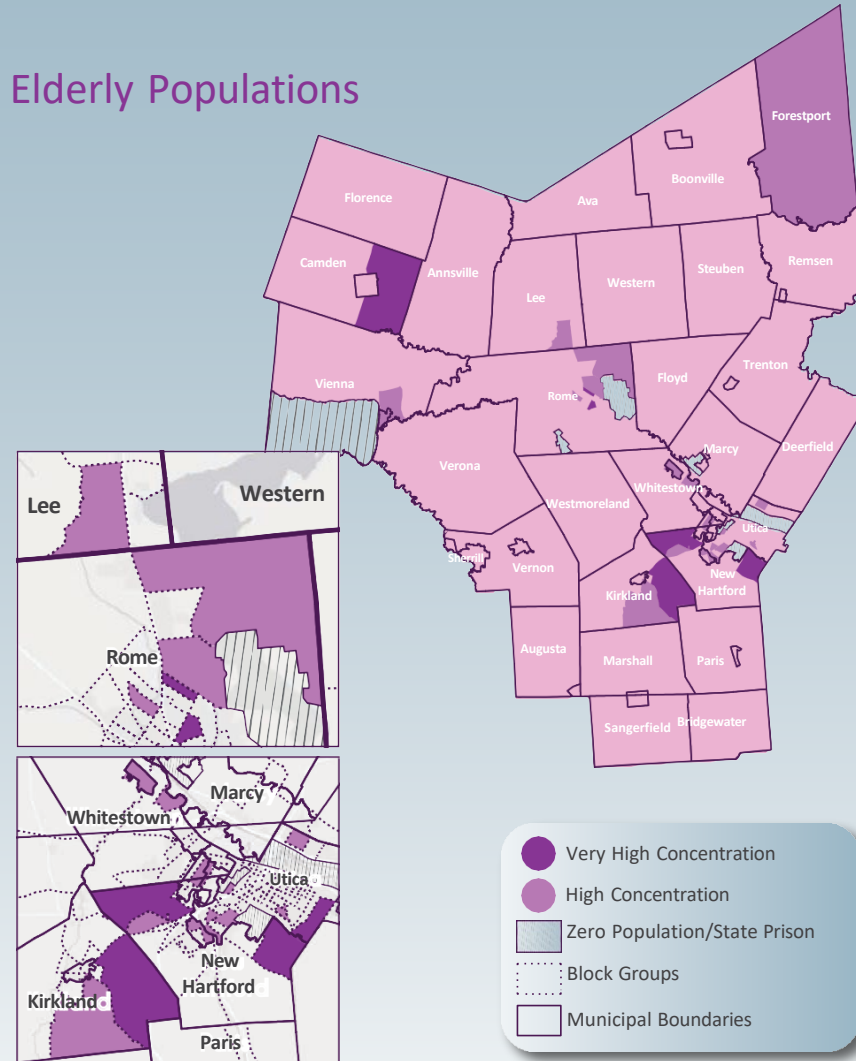
- Very High Concentration
- High Concentration
- Zero Population/State Prison
- Block Groups
- Municipal Boundaries

Impact of High Population Areas

Zero-Vehicle Households

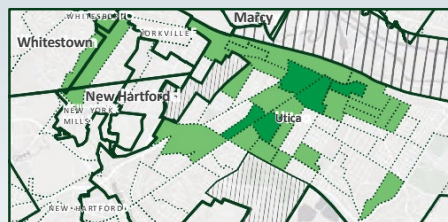
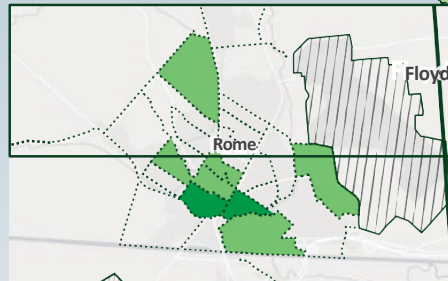
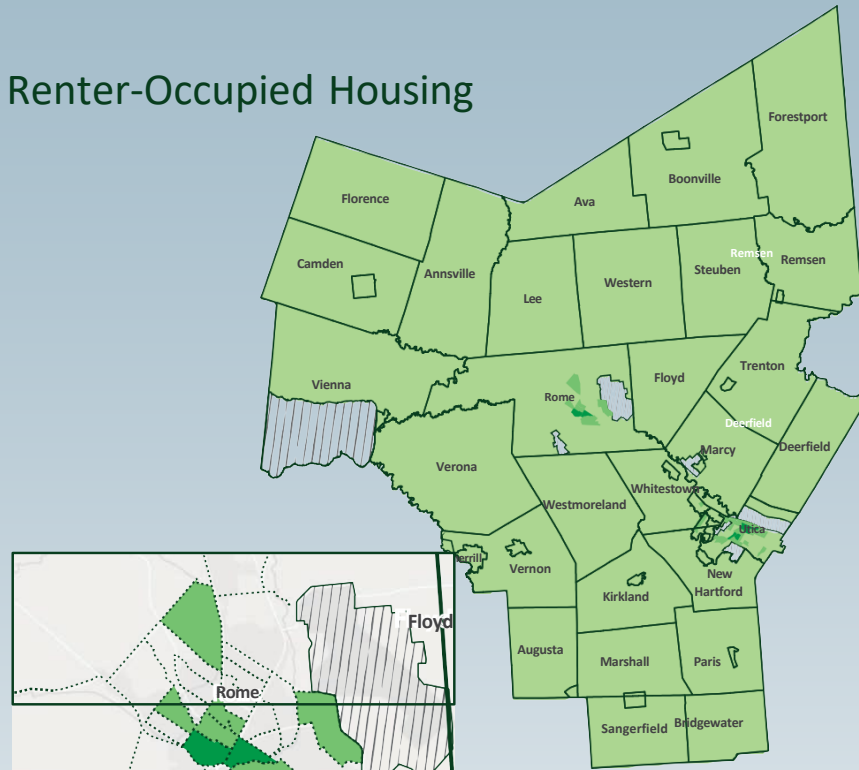


Elderly Populations



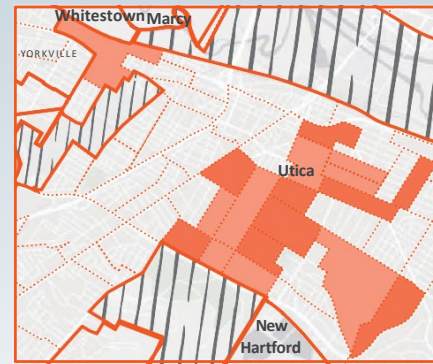
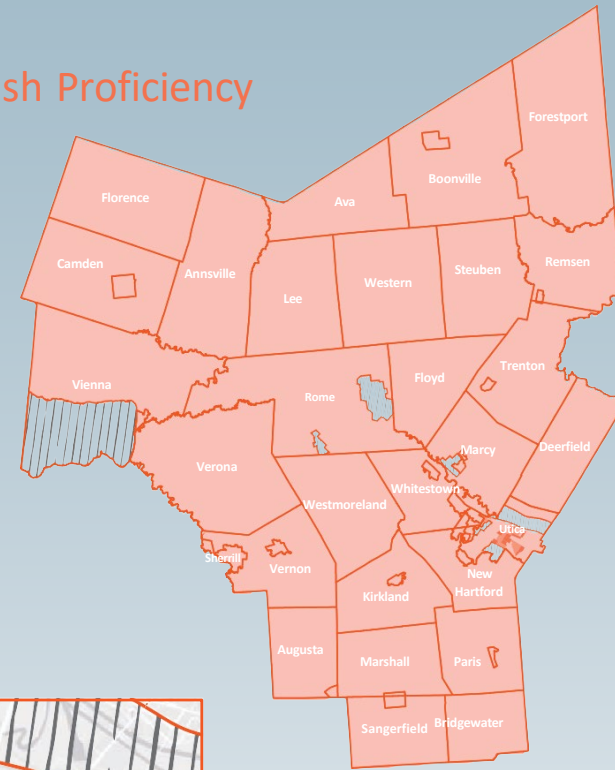
Impact of High Population Areas

Renter-Occupied Housing



- Very High Concentration
- High Concentration
- Zero Population/State Prison
- Block Groups
- Municipal Boundaries

Limited English Proficiency Populations

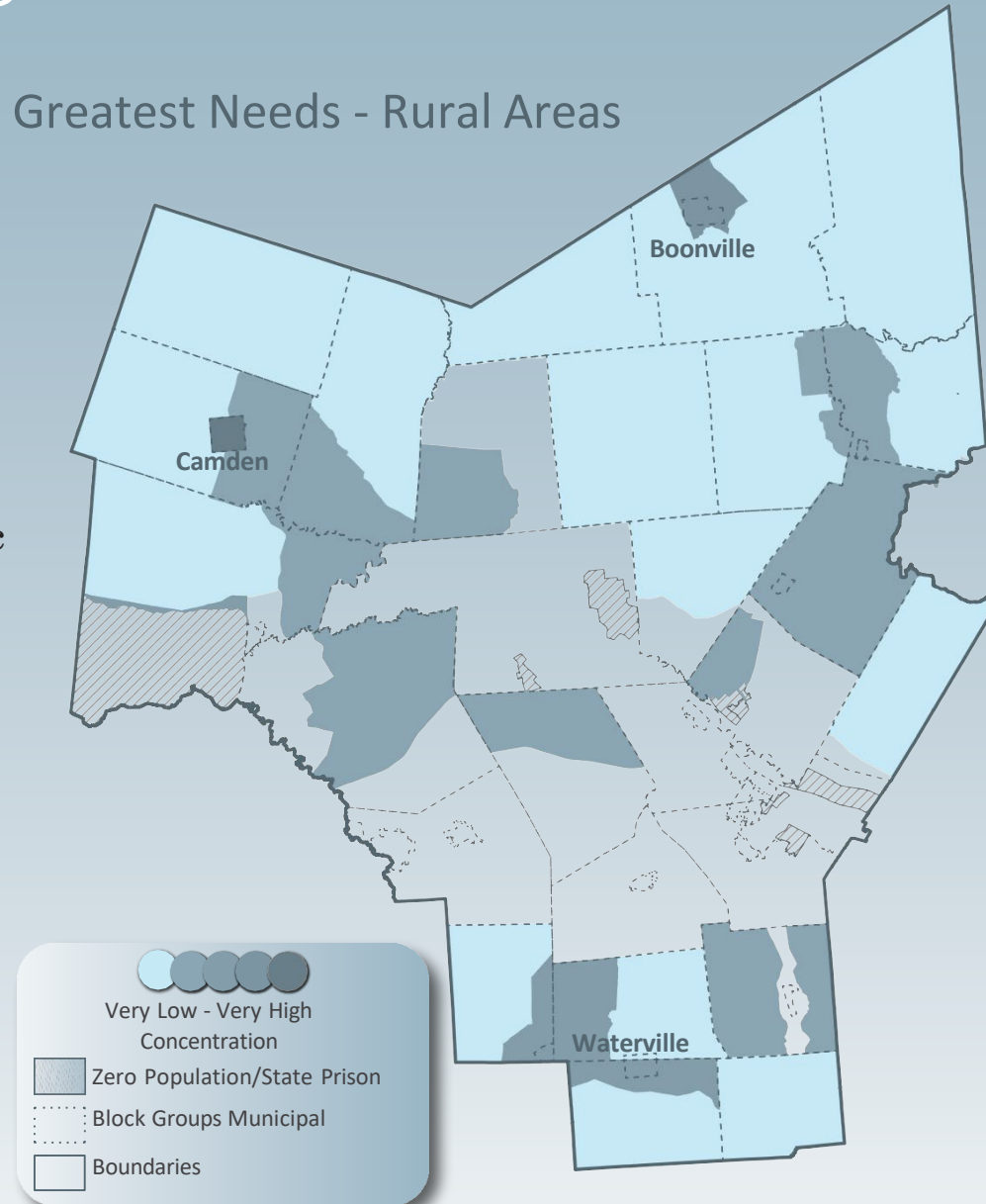


- Very High Concentration
- High Concentration
- Zero Population/State Prison
- Block Groups
- Municipal Boundaries

Highlighting Rural Needs

Greatest Needs - Rural Areas

- ◆ An aggregate needs analysis was applied using these rural geographic boundaries to highlight additional areas of need
- ◆ 100% rural census tracts were highlighted in a separate analysis



Barriers to Data Analysis

- ◆ Analyses periodically limited to census tract level
- ◆ Aggregated analysis required thorough knowledge of county's demographics and awareness of facilities that may contribute to skewed data

Lessons Learned

- ◆ Organized datasets are key to a successful analysis
- ◆ Involving staff with non-traditional transportation planning backgrounds will bring unique ideas and perspectives
- ◆ Aggregated analyses can be replicated utilizing both transportation and non-transportation related variables



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