Appendix: E
Environmental Justice

Environmental Justice

The U.S. Environmental Protection Agency (EPA) defines environmental justice (EJ) as the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Environmental justice plays an important role in transportation planning. Transportation projects have long-lasting physical impacts on communities, and it is important to evaluate fairness and equity as part of the development of transportation policies and funding decisions. No group of people – by race, ethnicity, or socioeconomic status – should bear a disproportionate share of negative impacts as a result of decisions made at the federal, state, regional, or local level.

Measuring Environmental Justice

Incorporating non-discriminatory considerations and practices into the transportation planning and decision-making processes is one of the main focal areas of the efforts WAMPO has undertaken as part of the FFY2025-FFY2028 Transportation Improvement Program (TIP). This appendix outlines and expands on the environmental justice analysis process, which includes the following core elements:

Identification
Gathering data supported by descriptive statistics and mapping to describe and identify EJ populations in the region.

Assessment
Includes reviewing the planned projects in relation to EJ populations. Assessment also includes the implementation of outreach strategies designed to engage traditionally underserved populations.

Evaluation
Evaluating regional benefits and burdens though an overall assessment of the slate of planned transportation projects to determine if there are disproportionate/adverse impacts to the target populations. This also includes discussion on how any findings of disproportionate and/or adverse impacts may be addressed.

For more information on Environmental Justice, visit the following US Department of Transportation webpage: https://www.transportation.gov/transportation-policy/environmental-justice.

ENVIRONMENTAL JUSTICE POPULATION

To identify those included in this discussion as EJ populations, WAMPO considered two federal Executive Orders: Executive Order 12898 discusses Federal Actions to Address Environmental Justice in Minority and Low-Income Populations. Executive Order 13166 addresses Improving Access to Services for Persons with Limited English Proficiency (LEP). For the purposes of this analysis, minority and low-income populations are defined as "EJ populations."

Spatial and demographic data from the U.S. Census Bureau 2018-2022 American Community Survey (ACS) Five-Year Estimates were used to identify environmental justice populations in the WAMPO region. Data were evaluated at the Census tract level (a Census tracts includes one or more Census block groups and has 1,500-8,000 residents).

Race & Ethnicity
Aggregated data showing race and ethnicity were organized into the following five categories (the first four of which are classified as EJ "minority" groups):

1. Asian, which refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent - including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippines, Thailand, and Vietnam.
2. Black or African American, which refers to people having origins in any of the Black racial groups of Africa.
3. Hispanic or Latino, which includes persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
4. Other, which includes:
    a. Native Hawaiian or Other Pacific Islander, which refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
    b. American Indian and Alaska Native, which refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment.
    c. Other Races, and those identified by two or more races.

5. White or Caucasian, which refers to people having origins in any of the original peoples of Europe, the Middle East or North Africa.

THRESHOLDS & LIMITATIONS

Identifying environmental justice populations is useful in understanding the comparative effects of projects throughout all of the affected populations. Thresholds for EJ populations were established in accordance with policy guidance on environmental justice. Population thresholds establish the number or percentage of individuals within a geographic area that must be exceeded to identify an EJ population.

While a convenient and commonly used method to identify EJ populations, the use of thresholds can mask the presence of small pockets of minority populations or low-income populations. WAMPO is mindful that thresholds may exclude some populations from analysis, despite the potential for those populations to be affected by a proposed plan or program. WAMPO also recognizes that EJ determinations are made based on effects, not population size.

Therefore, WAMPO analyzes data based on an "EJ Threshold" as well as on a regional average comparison to help identify concentrations of minority and low-income populations. Census tracts in this analysis considered to be "environmental justice census tracts" are those that meet the following criteria:

1. EJ Threshold: Census tracts with concentrated minority or low-income populations, equal to 50% or more of the tract's total population.
2. Regional Average Threshold: Populations that are less concentrated, but still at least 10 percentage point above the WAMPO regional average percent minority or low-income. These averages are outlined in the following section.

Environmental Justice Analysis

The following sections present the EJ analysis, organized by the three core elements of identification, assessment and evaluation.

Identification

Data supported by descriptive statistics and mapping to describe and identify low income, minority, and LEP populations in the region.

REGIONAL COMMUNITY PROFILE

The EJ analysis process begins with developing an understanding of the EJ populations present in the region. To do this, WAMPO has gathered data on the sizes and locations of low-income, minority, and LEP populations.

Table E1 highlights the distributions of EJ populations in the WAMPO region.

Table E1: Minority and Low-Income Populations

POPULATION CATEGORIES		# OF PEOPLE	PERCENTAGE
Total Population		542,572	100%
RACE/ETHNICTY	Minority	144,286	26.6%
	Black or African American	42,491	7.8%
	American Indian and Alaska Native	4,897	0.9%
	Asian	22,895	4.2%
	Native Hawaiian and Pacific Islander	442	0.1%
	Some other race	23,881	4.4%
	Two or more races	49,681	9.2%
	[Hispanic or Latino]*	*[79,054]*	*[14.1%]*
	White	398,286	73.4%
LOW INCOME	'Persons Below Poverty'	70,903	13.3%

*** Individuals with overlapping Hispanic or Latino ethnicity have been captured in one of the above-listed race categories. Source: ACS 2018-2022 5-Year Estimate (B02001, B03003 and S1701)**

Mapping

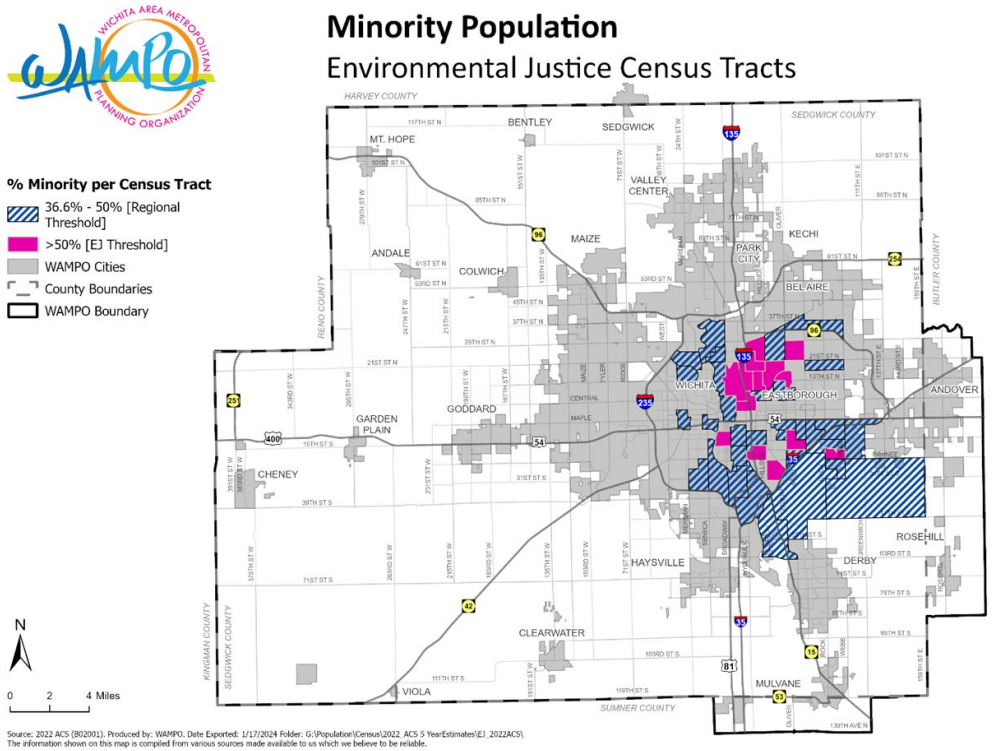
Identifying EJ populations and their locations (Maps E1, E2, E3, and E4) is the first step in conducting the benefits-and-burdens analysis of plans, policies, and programs. Furthermore, demographic and other data collected to identify populations supports other targeted, neighborhood-level studies, as well as the transportation-funding applications and planning efforts of WAMPO regional partners.

Minority Populations

The minority population of the WAMPO region is 26.6% of the total population. An analysis of regional Census tracts has identified the geographic locations where minority populations are most concentrated. Map E1 illustrates the geographic locations of minority populations that are:

1. Greater than 50% of the tract's total population (**EJ Threshold**, solid pink).
2. More than 10 percentage points greater than the regional average of 26.6% (**Regional Average Threshold**, cross-hatched blue). In other words, the Regional Average Threshold tracts are those that are at least 36.6% minority, but less than 50%.

Map E1: Minority Populations



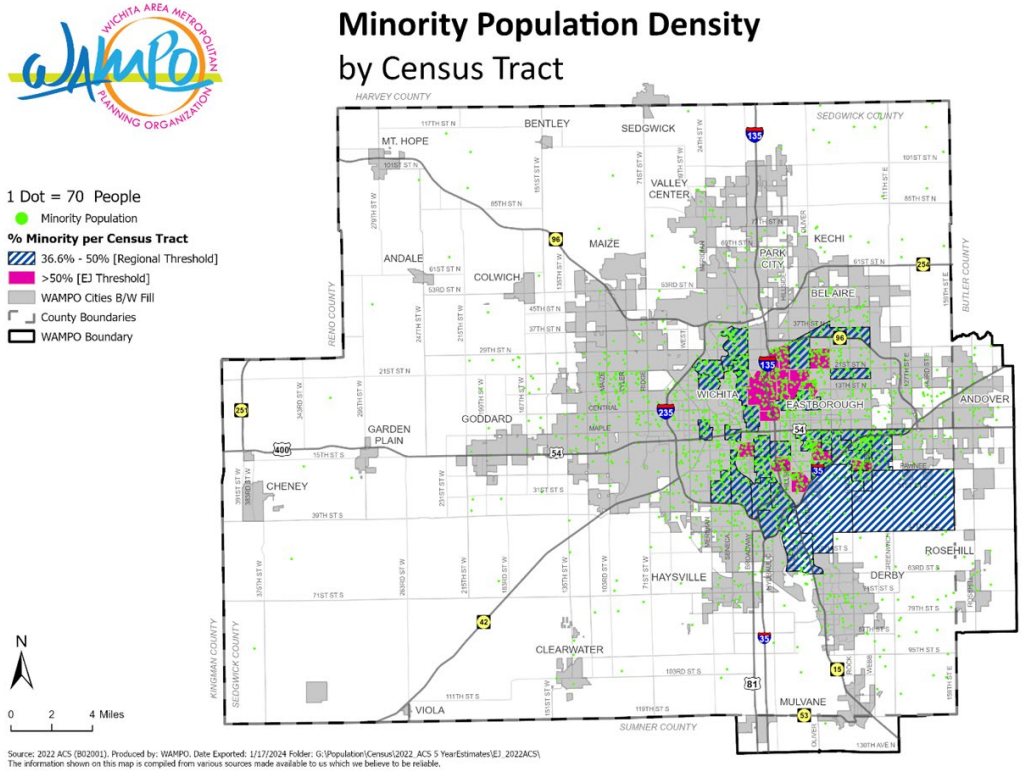
Map E2 highlights the same Census tracts, overlayed with dots illustrating the distribution of the region's minority population in a more granular fashion, where each dot represents 70 people.

Low-Income Populations

Populations reporting low incomes in the WAMPO region make up around 13.3% of the total population. An analysis of regional Census tracts has identified the geographic locations of these low-income populations. Map E3 illustrates the geographic locations of low-income populations that are:

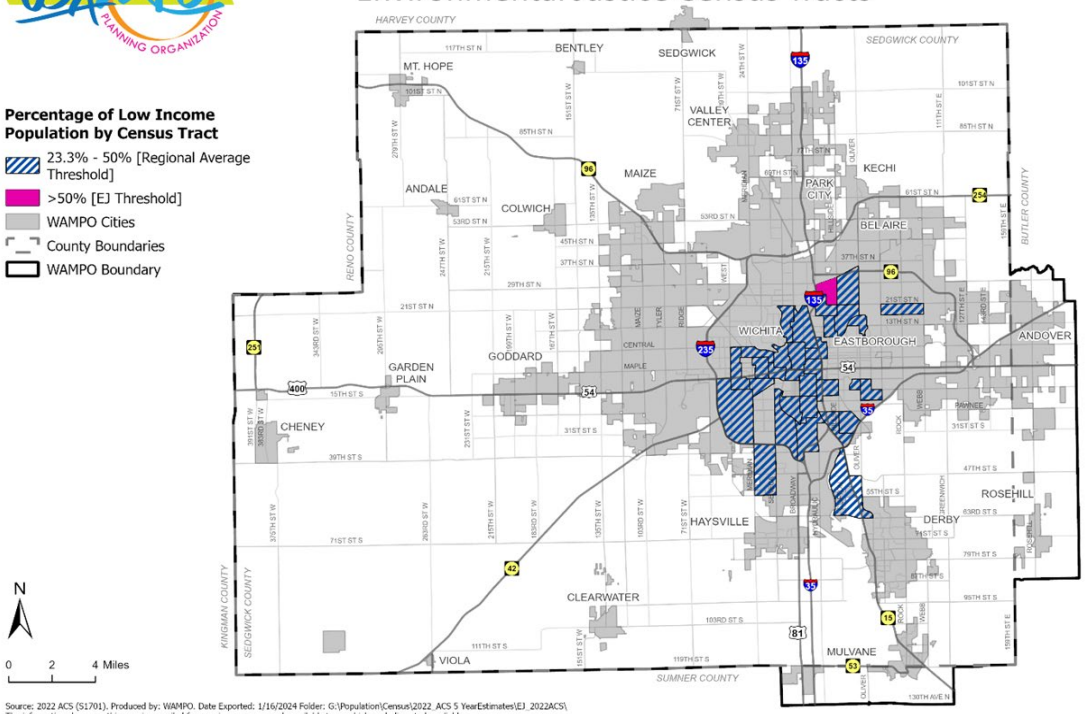
1. Greater than 50% of the tract's total population (**EJ Threshold**, solid pink).
2. More than 10 percentage points greater than the regional average of 13.3% (**Regional Average Threshold**, cross-hatched blue). In other words, the Regional Average Threshold tracts are those with at least 23.3% of the population that is low-income, but less than 50%.

Map E2: Minority Population Density



Source: 2022 ACS (B02001). Produced by: WAMPO. Date Exported: 1/17/2024 Folder: G:\Population\Census\2022_ACS 5 Year\Estimates\EJ_2022ACS\
The information shown on this map is compiled from various sources made available to us which we believe to be reliable.

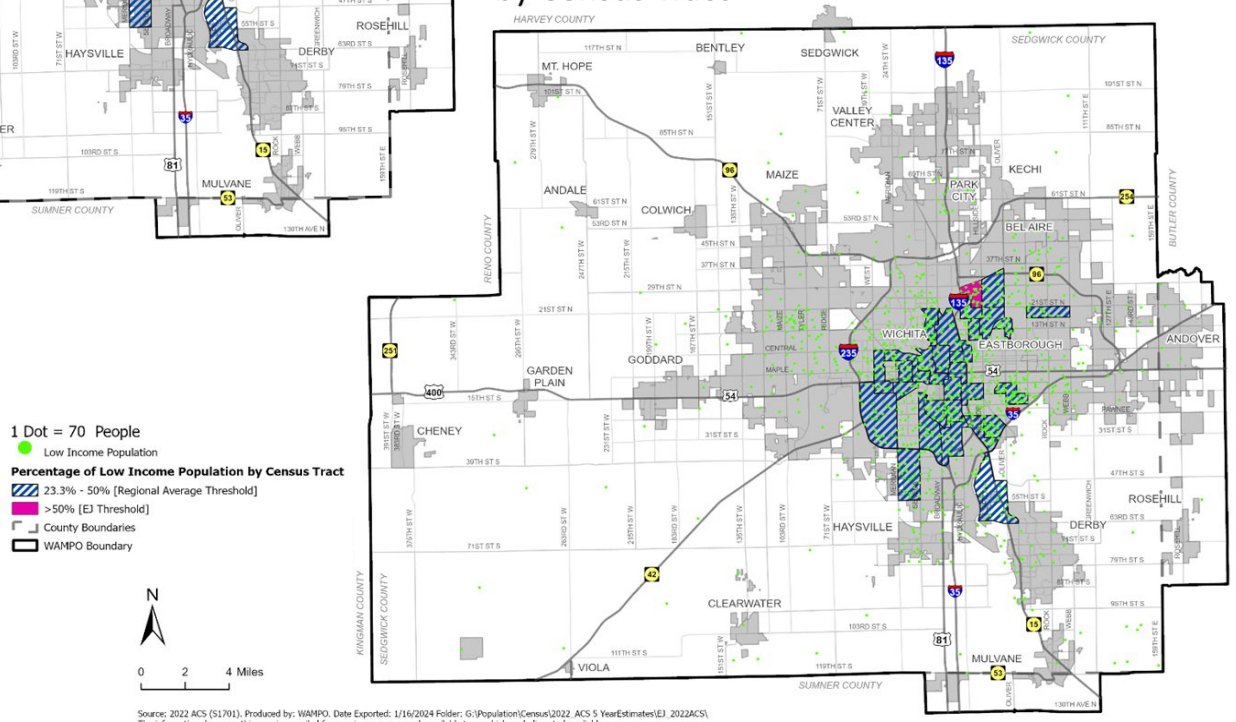
Map E3: Low-Income Population



Source: 2022 ACS (S1701). Produced by: WAMPO. Date Exported: 1/16/2024 Folder: G:\Population\Census\2022_ACS 5 YearEstimates\EJ_2022ACS\
The information shown on this map is compiled from various sources made available to us which we believe to be reliable.

Map E4 highlights the same Census tracts, overlayed with dots illustrating the distribution of the region's low-income population in a more granular fashion, where each dot represents 70 people.

Map E4: Low-Income Population Density



Source: 2022 ACS (S1701). Produced by: WAMPO. Date Exported: 1/16/2024 Folder: G:\Population\Census\2022_ACS 5 YearEstimates\EJ_2022ACS\
The information shown on this map is compiled from various sources made available to us which we believe to be reliable.

Table E2 represents the total population of the census tracts represented in the previous figures. The remainder of this document compares the number of TIP projects in proximity to the populations in EJ Census tracts to the number of TIP projects in proximity to populations that live in Census tracts that do not meet the EJ thresholds.

Table E2: EJ Projections

	EJ Census Tracts	Non-EJ Census Tracts	Total
Population	191,588	350,984	542,572
Percent of Population	35.3%	64.7%	100%

Assessment

This section documents the conditions of the system in relation to the EJ populations, including traditionally underserved population engagement strategies.

EXISTING CONDITIONS & NEEDS

The next step of the EJ analysis process involves a regional assessment that incorporates the EJ Identification findings into the assessment of regional transportation projects.

FFY2025-FFY2028 Transportation Improvement Program (TIP) Projects

Each project in the FFY2025-FFY2028 TIP has one of the following project types:

1. Bridge (e.g., rehabilitation/replacement)
2. Traffic Management (e.g., Intelligent Transportation Systems (ITS) technology)
3. Roadway Reconstruction/Modernization (improvements that do not increase the number of through lanes on the roadway
4. Roadway Expansion (adding through lanes)
5. New Roadway (where there was not one previously)
6. Multiuse Trail/Bicycle Facility (benefiting bicycle riders and/or other nonmotorized travelers to destinations; e.g., multiuse trails, on-street bike lanes; roadway-crossing improvements)
7. Pedestrian Facility (primarily serving pedestrians, as opposed to both pedestrians and bicycle riders; e.g., sidewalks, streetscaping, ADA improvements)
8. Public Transit (may include new or improved facilities, which are mappable, and new or improved vehicles or operations, which are not mappable)

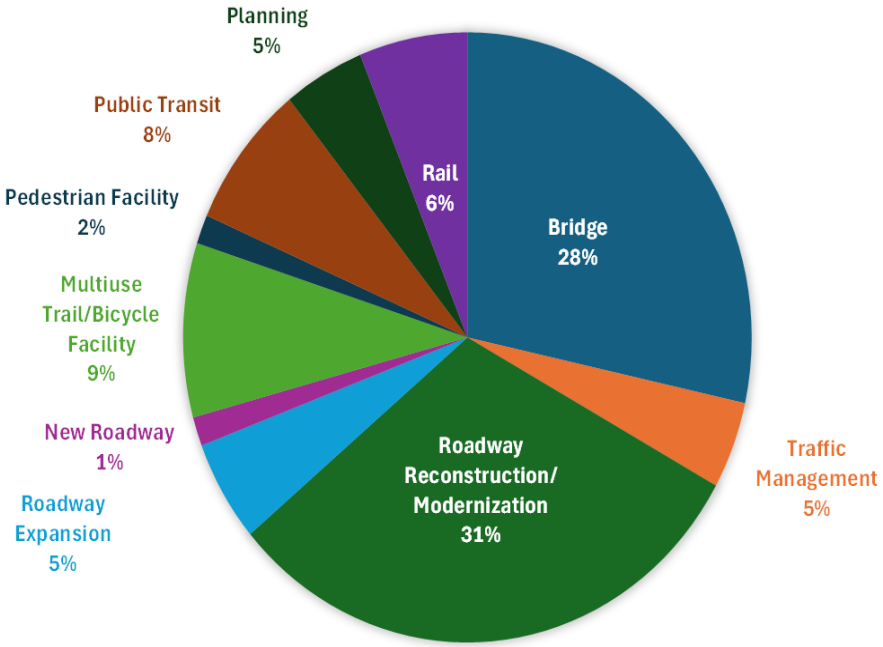
9. Planning (projects to study transportation issues and/or plan future infrastructure or service improvements; usually not mappable unless they pertain to a specific corridor)
10. Rail (e.g., track expansions, the rehabilitation of rail facilities, improvements to railroad/highway crossings)

Table E3 and Figure E1, below, show a frequency distribution of WAMPO FFY2025-FFY2028 TIP projects by project type. This includes projects programmed in years prior to 2025 that have been kept in the TIP because they are not yet complete.

Table E3: Project Distributiin by Type

Project Type	# of Projects	Percent of Total
Bridge	37	28.5%
Traffic Management	6	4.6%
Roadway Reconstruction/Modernization	40	30.8%
Roadway Expansion	7	5.4%
New Roadway	2	1.5%
Multiuse Trail/Bicycle Facility	12	9.2%
Pedestrian Facility	2	1.5%
Public Transit	10	7.7%
Planning	6	4.6%
Rail	8	6.2%
Total	**130**	**100.0%**

Figure E1: Projects by Type



PROJECT DISTRIBUTION

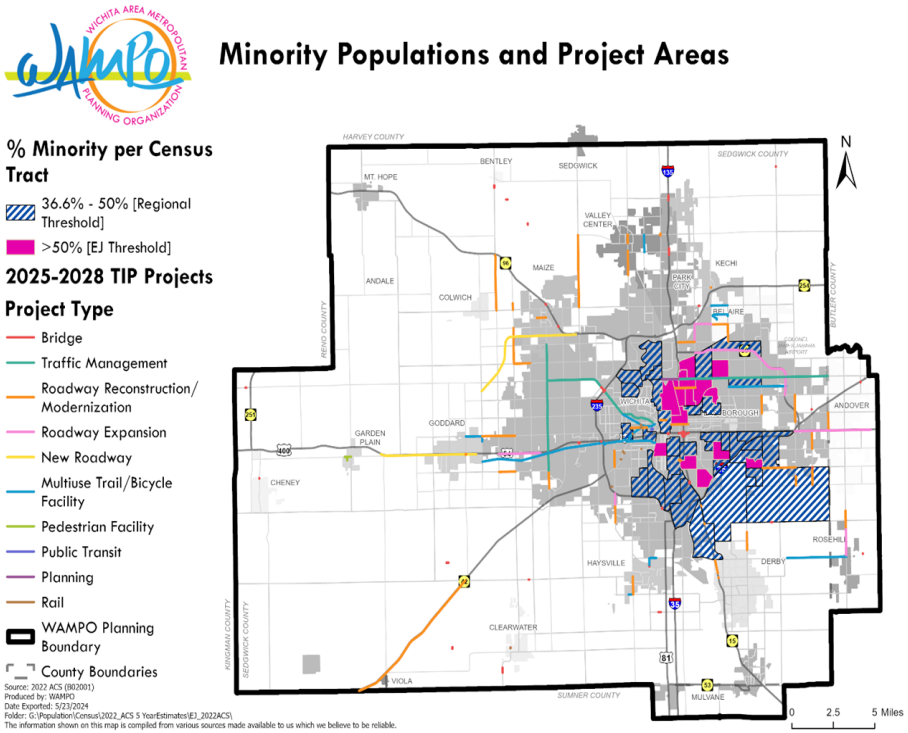
Maps E5 and E6 show the relative locations of the regional EJ populations and those of the above-referenced projects that have mappable, specific locations in the WAMPO region.

Tables E4 and E5 summarize the numbers of mappable projects, by type, that are or are not in EJ Census tracts for minority or low-income populations. Projects that are not generally identifiable by location (i.e., not mappable) are not included in this analysis.

Minority Populations

As in Map E1, above, Map E5 shows Census tracts that meet the minority EJ Threshold (greater than 50% of the population) and those that meet the Regional Average Threshold (greater than 36.6%). Onto those Census tracts, Map E5 overlays the locations of the mappable TIP projects.

Map E5: Minority Populations and Project Areas



As shown in Table E4, 20.6% of all mappable projects are in areas where more than 36.6% of the population identifies as part of a minority group.

Table E4: Project Distributiin in Minority Areas

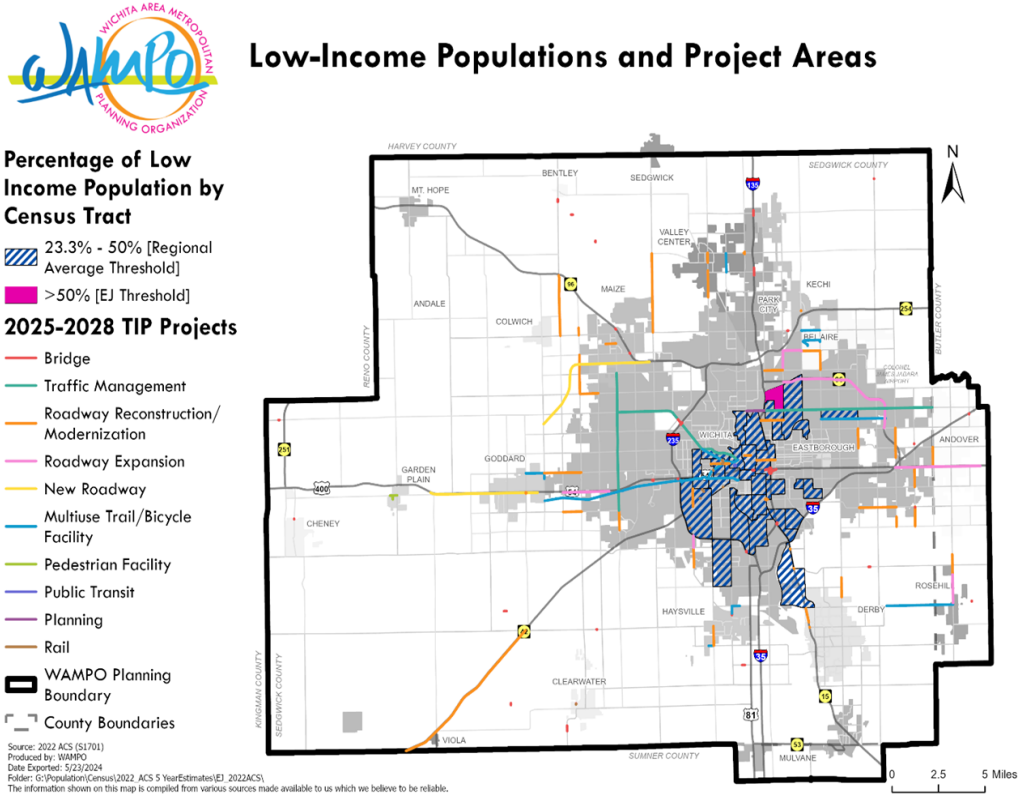
Project Type	Mappable Projects	% of Mappable Projects	Mappable Projects in Minority Areas	% of Mappable Projects in Minority Areas
Bridge	34	31.8%	4	11.8%
Traffic Management	3	2.8%	1	33.3%
Roadway Reconstruction/Modernization	39	36.4%	11	28.2%
Roadway Expansion	7	6.5%	1	14.3%
New Roadway	2	1.9%	0	0.0%
Multiuse Trail/Bicycle Facility	11	10.3%	3	27.3%
Pedestrian Facility	1	0.9%	0	0.0%
Public Transit	2	1.9%	0	0.0%
Planning	1	0.9%	1	100.0%
Rail	7	6.5%	1	14.3%
Total*	**107**	**100%**	**22**	**20.6%**

*Unmappable projects are not included in the total.

Low-Income Populations

As in Map E2, above, Map E6 shows Census tracts that meet the low-income EJ Threshold (greater than 50% of the population) and those that meet the Regional Average Threshold (greater than 23.3%). Onto those Census tracts, Map E6 overlays the locations of the mappable TIP projects.

Map E6: Low-Income Populations and Project Areas



As shown in Table E5, 26.2% of all mappable projects are in areas where more than 23.3% of the population is low-income.

Table E5: Project Distributiin in Low-Income Areas

Project Type	Mappable Projects	% of Mappable Projects	Mappable Projects in Low-Income Areas	% of Mappable Projects in Low-Income Areas
Bridge	34	31.8%	6	17.6%
Traffic Management	3	2.8%	2	66.7%
Roadway Reconstruction/Modernization	39	36.4%	7	17.9%
Roadway Expansion	7	6.5%	1	14.3%
New Roadway	2	1.9%	0	0.0%
Multiuse Trail/Bicycle Facility	11	10.3%	3	27.3%
Pedestrian Facility	1	0.9%	0	0.0%
Public Transit	2	1.9%	2	100.0%
Planning	1	0.9%	1	100.0%
Rail	7	6.5%	6	85.7%
Total*	**107**	**100%**	**28**	**26.2%**

*** Unmappable projects are not included in the total.**

Engagement Strategies

WAMPO has used the information gathered from mapping to inform the engagement strategies for the FFY2025-FFY2028 Transportation Improvement Program (TIP) update. With a focused strategy designed to "go to them," the WAMPO staff, TPB, and committees took a proactive approach to recognizing the potential barriers to involvement, which include language barriers. Table E6, below, highlights outreach approaches by population characteristic:

Table E6: Traditionally Underserved Outreach Procedures

Outreach Approach	Minority	Low-Income	Disabled	Older Adults	Zero-Car Household
Targeted Ads & Notices	X	X		X	
Language Outreach Strategies	X				
Transit-Accessible Meetings		X	X		X
Convenient Meeting Times & Locales		X		X	X
Partnerships	X	X	X	X	X
Coordination	X	X	X	X	

Evaluation

This section documents the assumptions related to regional benefits and burdens of specific project types, then presents an assessment of anticipated disproportionate and/or adverse impacts associated with the slated *FFY2025-FFY2028 TIP projects.*

BENEFITS & BURDENS

There are benefits and burdens from any transportation project and while some may be project-specific, there are assumptions that can be made about those benefits and burdens that come from certain project types. Those assumptions are outlined here.

ROADWAY EXPANSION PROJECTS AND NEW ROADWAY PROJECTS

It can be anticipated that with the construction of a new road facility or the addition of new through lanes, there is a potential for increased air and noise pollution, physical barriers to community connectivity, and safety issues that accompany construction. Impacts to community cohesion are of particular concern in EJ communities. The major benefit of these projects is serving through traffic, but not necessarily local access.

ROADWAY RECONSTRUCTION/MODERNIZATION PROJECTS AND BRIDGE PROJECTS

Modernization projects often include features such as turn lanes, deceleration lanes, intersection improvements, and/or enhancements specifically aimed at improving safety, all of which provide benefits to local travelers without imposing significant burdens. Projects like these are likely to provide benefits in terms of accessibility and safety.

The potential negative impacts of roadway reconstruction projects and bridge projects will likely be temporary, as they primarily relate to construction (e.g., possible delays and temporary increases in air pollution while construction is occurring). The benefits of these projects will be the improved usability and comfort of the transportation facilities.

TRAFFIC MANAGEMENT PROJECTS

Aside from temporary impacts during construction, traffic management projects are unlikely to have adverse effects. They tend to increase safety and decrease traffic congestion and air pollution, both for local travelers and for through traffic.

MULTIUSE TRAIL/BICYCLE FACILITY PROJECTS AND PEDESTRIAN FACILITY PROJECTS

There are few potential negative impacts, with the exception of right-of-way needs, that would accompany bicycle and pedestrian projects. Projects like bicycle/pedestrian trails and travel lanes provide the benefit of choice in transportation modes. This can be especially important for EJ populations, which tend to have a lower rate of car ownership and are in greater need of economical choices for getting to school, work, etc.

PUBLIC TRANSIT PROJECTS

Most public transit projects, as discussed earlier, are not easily identifiable on a map, since they involve funding vehicle purchases and operations. Transit projects would not be expected to adversely impact EJ areas in the region and would provide the benefit of increasing transportation-mode choices for EJ populations, which tend to have lower rates of car ownership and greater need for economical alternative modes.

PLANNING PROJECTS

Planning projects are generally not mappable and do not directly result in burdens or benefits for specific communities, though they may guide the development of future projects that do have such effects.

RAIL PROJECTS

Impacts related to rail projects are similar to those associated with roadway expansion and widening projects. Potential for air and noise pollution, reduced community connectivity, and safety issues are all present with the construction of new rail facilities. However, improvements to railroad/highway crossings may benefit both local travelers and through traffic.

BENEFITS & BURDENS FOR MINORITY POPULATIONS

As shown in Table E4, 20.6% of the mappable projects listed in the TIP are located within or adjacent to Census tracts that meet minority population thresholds. The remaining 79.4% of the mappable projects fall within non-minority Census tracts. This percentage of mappable projects in minority Census tracts is overall relatively consistent with the regional minority population of 26.6%.

One roadway expansion project is within an identified minority area. That expansion project is not expected to have additional impacts on community cohesion, as the roadway being expanded is already a limited-access freeway.

Roughly 28.2% of roadway reconstruction/modernization projects and 11.8% of bridge projects fall within or are adjacent to minority census tracts. Together, roadway reconstruction/modernization projects and bridge projects constitute 68.2% of mappable projects in the WAMPO TIP. These projects are not expected to disproportionately impact minority areas. There may be significant benefits in terms of accessibility and safety from these projects, especially the modernization projects (many of the roadway reconstruction and bridge projects may have negligible effects).

One traffic management project is in a minority area. Traffic management projects generally do not produce disproportionate adverse impacts for the community and may generate safety, congestion, and air quality benefits.

There are three multiuse trail/bicycle facility projects in identified minority areas. These projects are not expected to have a disproportionate negative impact on minority populations and have the potential to benefit populations that may utilize multiple modes of transportation more often to reach their destinations.

One planning project will study a specific corridor in a minority area, looking at the question of how to reconnect a community that is currently divided by railroad tracks.

One rail project is located within a minority area. This project is just to upgrade a road/railway crossing device, so it is not anticipated to have significant adverse impacts on the community.

BENEFITS & BURDENS FOR LOW-INCOME POPULATIONS

As shown in Table E5, 26.2% of the mappable projects listed in the TIP are located within or adjacent to Census tracts that meet low-income population thresholds. The remaining 73.8% of the mappable projects fall within non-low-income Census tracts. This percentage of mappable projects in low-income Census tracts is overall relatively consistent with the regional low-income population of 13.3%.

One roadway expansion project is within an identified low-income area. That expansion project is not expected to have additional impacts on community cohesion, as the roadway being expanded is already a limited-access freeway.

Roughly 17.9% of roadway reconstruction/modernization projects and 17.6% of bridge projects fall within or are adjacent to low-income census tracts. Together, roadway reconstruction/modernization projects and bridge projects constitute 68.2% of mappable projects in the WAMPO TIP. These projects are not expected to disproportionately impact low-income areas. There may be significant benefits in terms of accessibility and safety from these projects, especially the modernization projects (many of the roadway reconstruction and bridge projects may have negligible effects).

One traffic management project is in a low-income area. Traffic management projects generally do not produce disproportionate adverse impacts for the community and may generate safety, congestion, and air quality benefits.

There are three multiuse trail/bicycle facility projects in identified low-income areas. These projects are not expected to have a disproportionate negative impact on low-income populations and have the potential to benefit populations that may utilize multiple modes of transportation more often to reach their destinations.

One planning project will study a specific corridor in a low-income area, looking at the question of how to reconnect a community that is currently divided by railroad tracks.

Six rail projects are located within low-income areas. Five of these are just to upgrade road/railway crossing devices, so they are not anticipated to have significant adverse impacts on the community. The remaining rail project in a low-income area is to rehabilitate an existing railway, rather than an expansion (which would have greater adverse impacts).

The Delano Transit Center/Multimodal Facility is being built in a low-income area, which will benefit from increased travel options.

ADDRESSING DISPROPORTIONATE & ADVERSE EFFECTS

This analysis indicates that the fiscally constrained transportation investments included in this TIP do not disproportionately burden or deny benefits to EJ communities. As discussed above, roughly 20.6% of mappable projects fall within minority EJ areas in the WAMPO region, while the other 79.4% are planned in non-low-income-EJ areas, and roughly 26.2% of mappable projects fall within low-income EJ areas in the WAMPO region, while the other 73.8% are planned in non-low-income-EJ areas.

It is important to WAMPO to continue emphasizing geographic equity in its federal-aid transportation programming processes. This is especially important when considering multimodal projects like bicycle/pedestrian and transit projects.

In the event that there are disproportionate and adverse impacts identified, WAMPO will work with its member jurisdictions, planning partners (Kansas Department of Transportation and Wichita Transit) and the USDOT to identify and document strategies to avoid, mitigate, or minimize the impacts. This may include modifying or selecting additional projects that can be programmed prior to the adoption of the WAMPO Transportation Improvement Program (TIP) or Metropolitan Transportation Plan (MTP) through line items and amendments. Individual project sponsors will consider potential project-level environmental-justice impacts for federally funded transportation projects in conjunction with the National Environmental Policy Act (NEPA) process.

ENVIRONMENTAL JUSTICE INTEGRATION

Environmental-justice considerations are integrated into all of WAMPO's planning processes, not just the TIP update. This includes the Metropolitan Transportation Plan (MTP), Public Participation Plan (PPP), and the Unified Planning Work Program (UPWP). WAMPO has integrated EJ considerations into the development of the TIP in a number of ways. The TIP implements the long-range Metropolitan Transportation Plan, *REIMAGINED* MOVE 2040, the development of which included focused attention on burdens and benefits to EJ populations; all projects in the TIP must be consistent with the MTP.