

Environmental Justice Analysis

Harrisburg Area Transportation Study
2019-2022 Transportation Improvement Program

Identifying Environmental Justice Areas

Title VI of the Civil Rights Act prohibits discrimination on the basis of race, color, or national origin. The Office of Management and Budget (OMB) issued Policy Directive 15, Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity, in 1997, establishing five minimum categories for data on race. Executive Order 12898 of 1994 and DOT Environmental Justice Order 5610.2(a) of 2012 address persons belonging to any of the following groups:

Minority, meaning a person 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 -- 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, Central America, or South America, and who maintains cultural identification through tribal affiliation or community recognition.

Native Hawaiian or Other Pacific Islander -- a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Low-Income -- a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines.

Sources and Methodology:

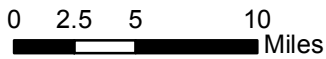
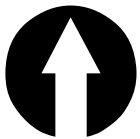
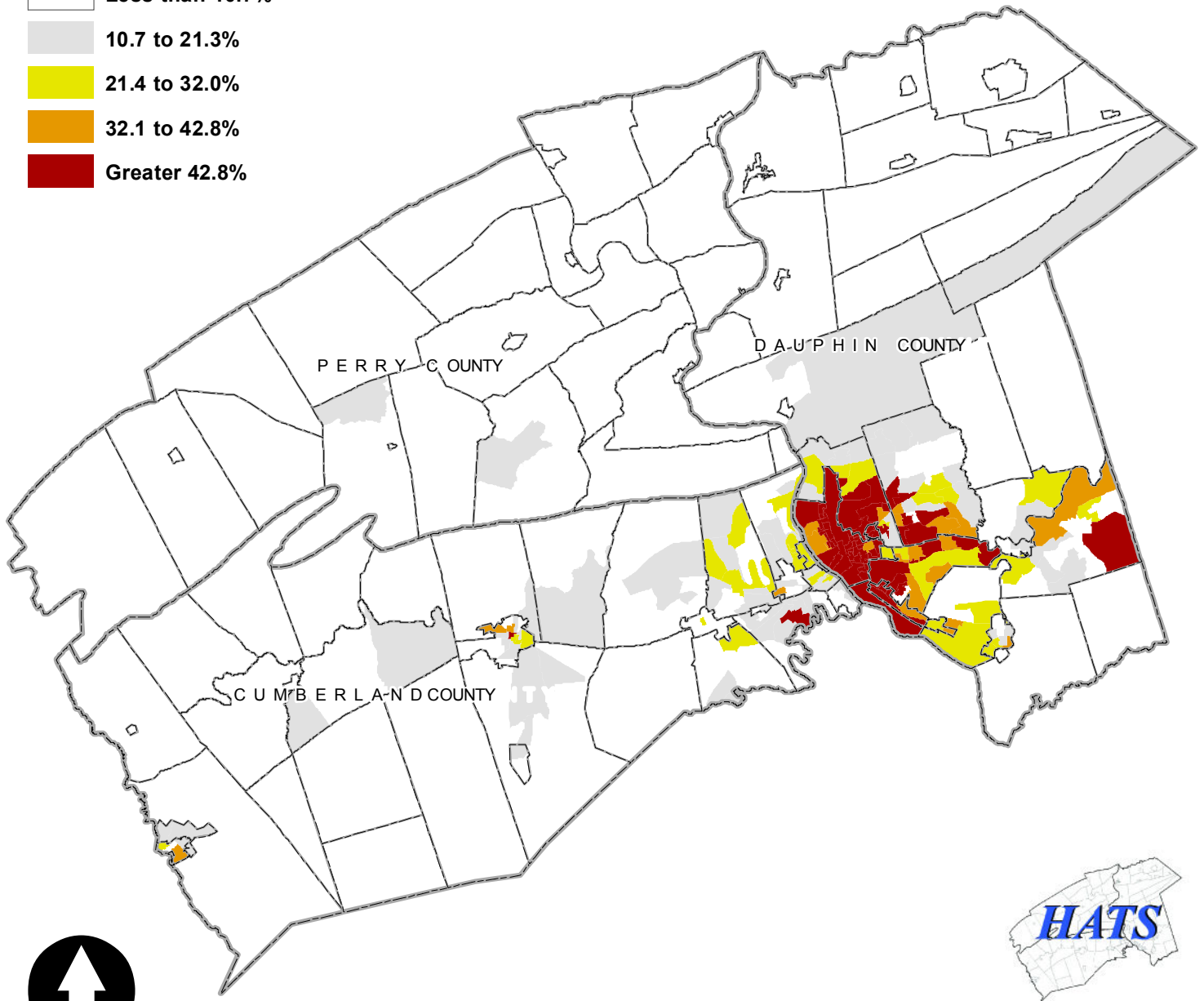
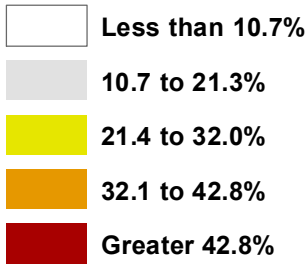
A method was developed to identify and locate Environmental Justice (EJ) communities within the Harrisburg Area Transportation Study (HATS) region. The method identifies census block groups where minority and low-income populations are above the regional average.

Data is gathered at the regional level for each of our 376 Census block groups within the region for minority (any race or ethnicity other than "One race – White") and low-income persons. From there, the total number of persons in each of these groups is divided by the region's total population, as appropriate. This provides a regional average (threshold) for each of the EJ communities. Any census block group that meets or exceeds the regional average is considered to be an EJ-sensitive area. All data is from the Census Bureau's American Community Survey 5 year data estimates from 2012 to 2016.

Census data was downloaded and mapped using GIS. The demographic groups of EJ populations within the HATS regions are shown on the following thematic maps:

MAP 1

Minority Population

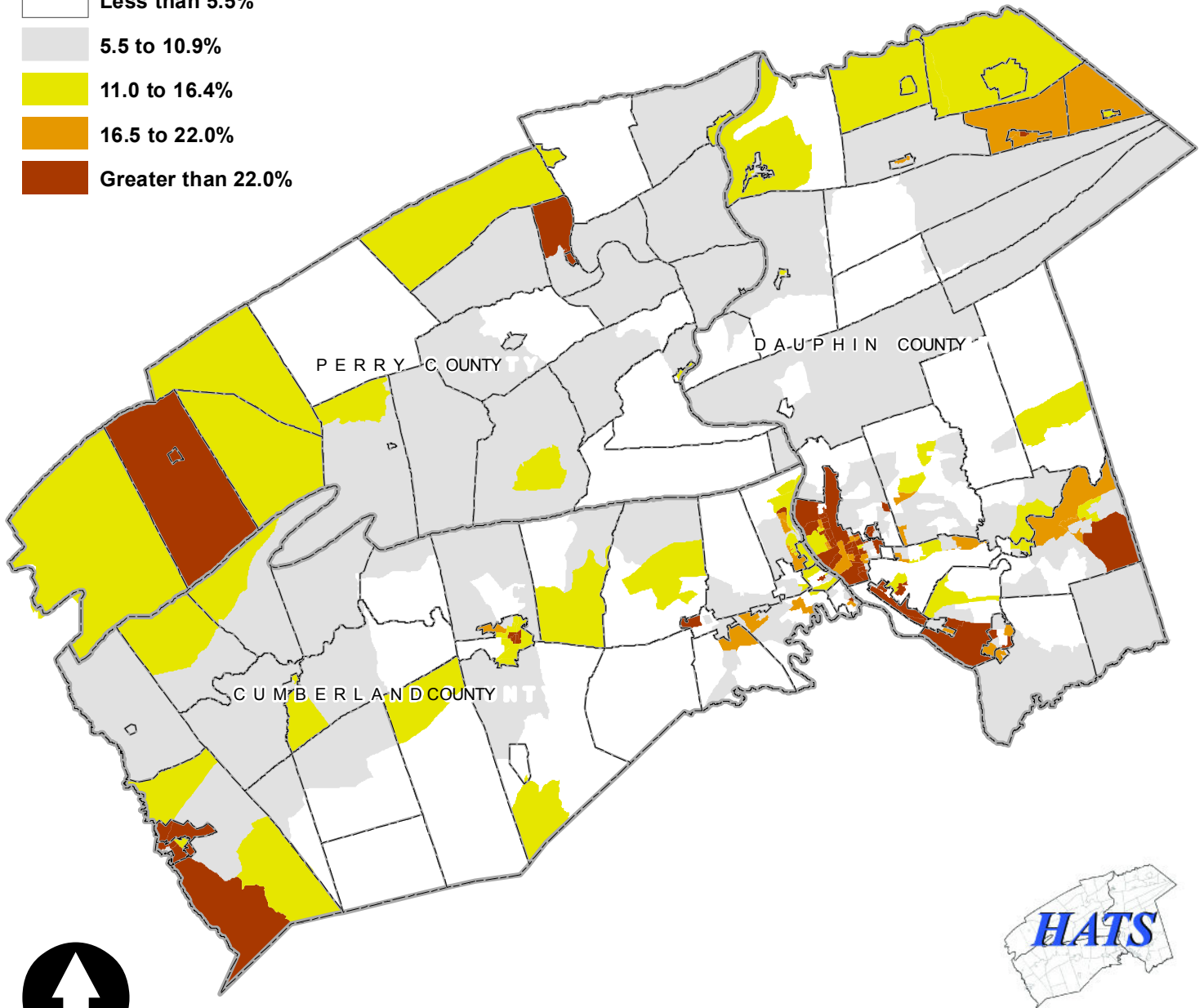
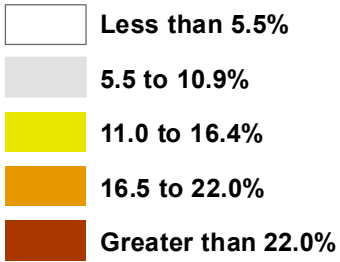


Minority Population (any race or ethnicity other than "One Race - White")
 Data source: 2012-2016 American Community Survey 5-year Estimates
 Data universe: total population

	Total Population	Non-minority Population	Minority Population	Percent Minority Population
Cumberland County	243,838	213,028	30,810	12.64%
Dauphin County	271,962	184,457	87,505	32.18%
Perry County	45,647	43,804	1,843	4.04%
HATS Region	561,447	441,289	120,158	21.40%

MAP 2

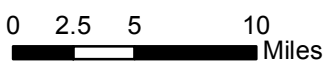
Low-income Population



Income in the past 12 months below poverty level

Data source: 2012-2016 American Community Survey 5-year Estimates

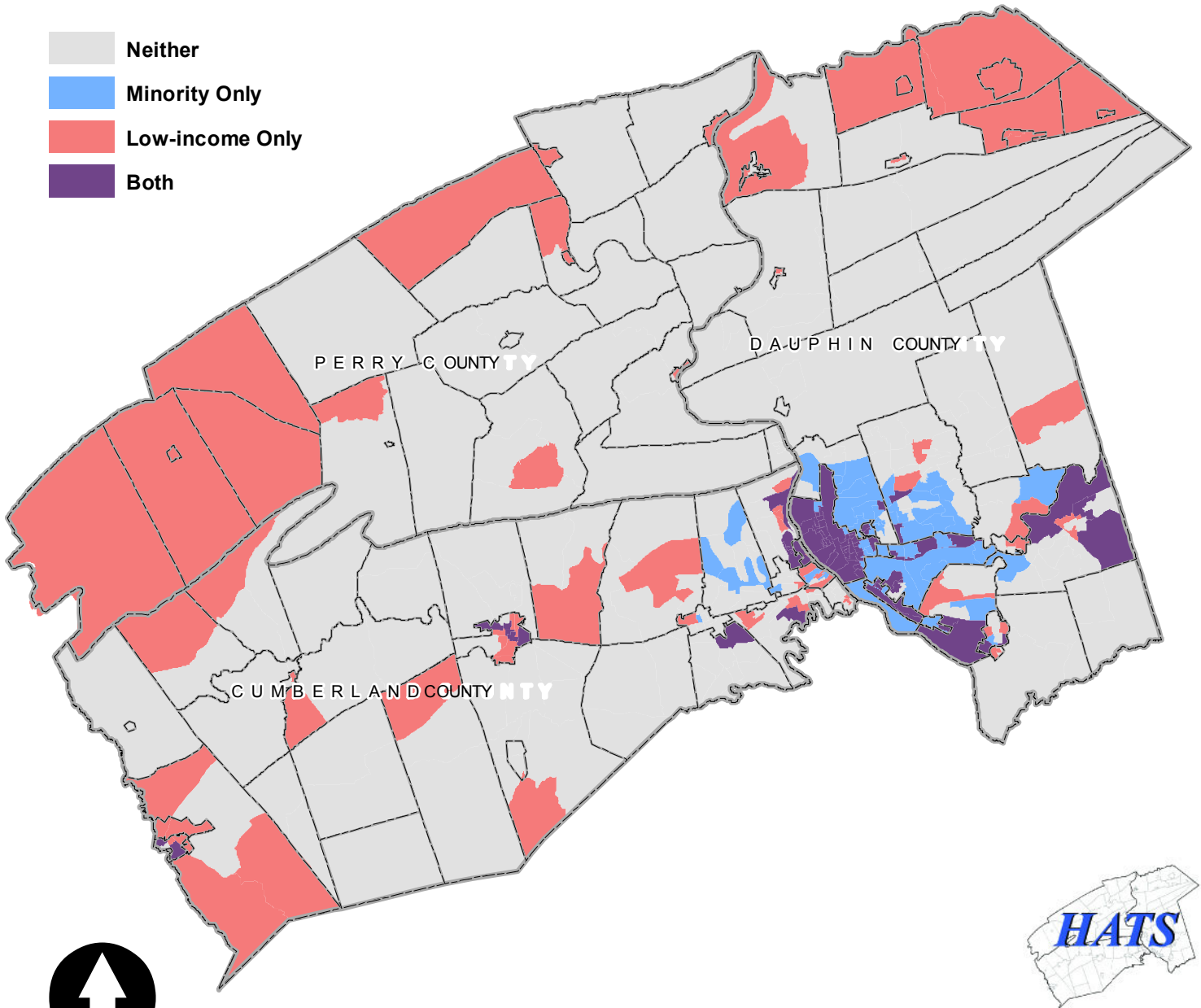
Data universe: all persons for whom poverty status can be determined



	Total Population for whom poverty status is determined	Non-Low-income Population	Low-income Population	Percent Low-income Population
Cumberland County	230,275	210,447	19,828	8.61%
Dauphin County	267,468	231,518	35,950	13.44%
Perry County	44,963	41,042	3,921	8.72%
HATS Region	542,706	483,007	59,699	11.00%

MAP 3

EJ Community Summary



Data source: 2012-2016 American Community Survey 5-year Estimates
 Data universe: total population (Minority Population) and all persons for whom poverty status can be determined (Low-income Population)

	Minority Communities	Low-Income Communities	Both Minority and Low-income Communities	Neither Minority or Low-income Communities	Total
Cumberland County	8	35	14	94	151
Dauphin County	45	22	60	63	190
Perry County	0	11	0	24	35
HATS Region	53	68	74	181	376

Benefits and burdens

The benefits that the regional transportation program can bring are access, mobility, safety and environmental quality. The burdens of the program can be a reduction in any of those areas to a community. Many transportation projects require a trade-off between those aspects of the transportation system and the distribution of the benefits and burdens. For example, a project that will decrease congestion in one community may result in a decrease in the environmental quality of another as additional vehicles begin utilizing the improved route. Increased safety may require a trade off in access or mobility, and increased access may bring mobility concerns. Benefits and burdens analysis in respect to environmental justice is done to ensure that the benefits of transportation investment are being shared equally and that the burdens created by new projects are not being borne by one part of the public over another.

For the HATS 2019-2022 TIP the vast majority of projects will not require significant right-of-way acquisition, require the displacement of people, or cause burdens on the mobility, access, or environmental health of any community, EJ or otherwise. This is because the vast majority of the HATS Highway TIP is proposed to be programmed to maintain or enhance the existing transportation system.

The only exceptions to this are the projects associated with I-83 on the Interstate TIP (MPMS 92931, 70024, 97282) which is seeking to widen I-83 between I-81 and the South Bridge while also improving the Eisenhower Interchange. Each project is at a different stage of development, but each has the potential to require right-of-way acquisition and the displacement of people.

The I-83 East Shore Section 1 project is furthest along in development and has the most known impacts. The proposed property acquisition consists of twenty homes immediately adjacent to the existing ROW, a segment of road that is both a regionally and nationally significant route that exhibits high levels of congestion. Notably the 2016 PA On Track Plan, the state freight plan for Pennsylvania, indicates this portion of I-83 to be one of the top 100 truck bottlenecks in the state. Additionally, while this project will require displacement, it is also proposing to improve the operations of the interchange with US 22 which would improve the mobility of both the impacted block group and other nearby EJ communities. It should be noted, that the project passes through six EJ communities, with only one experiencing a burden beyond those burdens associated with the proximity to the interstate. Overall the project will have widespread benefits for both the region and the state. Please refer to the graphic below for a geographic context.



Figure 1: EJ tracts in proximity to the I-83 East Shore Section 1 Project – *Darker blues constitute a higher concentration of EJ- populations. The block group impacted by the relocations is highlighted in yellow.*

The I-83 East Shore Section 3 and Eisenhower Interchange projects also have the potential to require property acquisition within identified EJ communities, with both passing through five EJ communities. Because the projects are in the early stages of development, exact impacts are not known at this time but will be addressed throughout the project development process when identified. However, both projects are, similar to the I-83 East Shore Section 1 project, along an identified priority freight route and high congestion corridor.

Beyond the I-83 projects, the remaining projects are proposing to maintain the existing system or to enhance its access, mobility, and/or safety. As such, this analysis considers them to be benefits and will continue by looking at their distribution in the region.

Types of projects and distribution

The draft 2019-2022 Highway & Bridge and Interstate TIPs total \$432,989,553 (excluding line-items) and include identified roadway and bridge projects, Bike/Ped projects, intermodal projects, line items, and interstate projects. Transit projects totaling \$68,458,128 are also proposed and are dedicated to maintaining the existing transit and paratransit service for the Harrisburg Region. HATS also has a line item which flexes a portion of the federal CMAQ funds allocation to CAT to assist in providing quality transit service. Any increases in transit funding will allow for additional bus routing and stops, thus expanding the availability of alternative transportation within the EJ communities and increasing mobility to access employment opportunities and health services.

There are 85 bridge projects programmed for preservation, rehabilitation, or replacement work totaling \$126,437,888. The distribution of bridge projects is such that 57% of the funding intersects EJ census block groups. The per capita spending on bridge projects that impact at least one EJ community is \$263.68, which exceeds the per capita spending of all bridge projects, \$225.20. The HATS region still has many bridges with structurally deficient ratings, and statewide there is a priority on bringing bridges up to standard. Since posted or closed bridges can cause serious burdens on the economy and mobility of communities, it is important that the funding for bridge repair and replacement is distributed equitably.

There are 20 roadway/highway improvement projects programmed for the TIP totaling 105,231,768. The distribution of these projects is such that 96% of the funding is within at least one EJ community. The per capita spending on roadway projects located within at least one EJ community is \$370.36, which nearly doubles the per capita spending on the roadway projects as a whole.

There are four intermodal projects representing less than 1% of the total projects programmed for the TIP. Two of these projects, the CAT BRT Signal Preemption and the Shermansdale Park-n-Ride, is within an EJ census block group. The other two intermodal projects represents two park and rides along major commuting routes. The intermodal spending within at least one EJ community represents 69% of the total intermodal spending, and the per capita spending on projects within at least one EJ community is \$6.04, exceeding the per capita spending for all intermodal projects of \$4.27.

There are six bike/ped projects programmed representing 3% of the total funding on the TIP. Each of these projects are located within census block groups that are sensitive to at least one of the identified EJ factors. This is particularly relevant since bike/ped projects offer residents a transportation option that does not require a car, thus improving the accessibility and mobility of the local population. Three of these projects represent improvements to the CAT bridge in Harrisburg, one is programmed to extend the Capital Area Greenbelt to Fort Hunter Park, while the remainder will address pedestrian improvements within the Borough of Carlisle and the City of Harrisburg.

The interstate maintenance program includes four projects representing \$186,961,000, or 47% of non-transit TIP funding. All four projects intersect at least on EJ community. These projects provide capacity improvements, reduce congestion and delays, and improve safety to the system, and reduce the environmental impact of traffic on the interstate. Other than the relocation of homes associated with the I-83 East Shore Section 1 project previously discussed, there should be no burden placed on EJ communities.

Project Mode	All Projects		Projects with Any EJ Impact			Projects with No EJ Impact		
	Total Cost	Per Capita Cost	Total Cost	Percentage of Cost	Per Capita Cost	Total Cost	Percentage of Cost	Per Capita Cost
Bike/Ped	\$11,958,897	\$21.30	\$11,958,897	100%	\$43.80	\$0	0%	\$0.00
Bridge	\$126,437,888	\$225.20	\$71,988,918	57%	\$263.68	\$54,448,970	43%	\$188.78
Intermodal	\$2,400,000	\$4.27	\$1,650,000	69%	\$6.04	\$750,000	31%	\$2.60
Interstate	\$186,961,000	\$333.00	\$186,961,000	100%	\$684.80	\$0	0%	\$0.00
Roadway	\$105,231,768	\$187.43	\$101,115,001	96%	\$370.36	\$4,116,767	4%	\$14.27
Total**	\$432,989,553	\$771.20	\$373,673,816	86%	\$1,368.69	\$59,315,737	14%	\$205.65

Figure 1. Cost Distribution

Conclusion

Given that 86% of the total TIP funding is located within at least one EJ community, and the per capita spending on projects located in at least on EJ community (\$1,368.69) is nearly double the per capita spending on the total TIP projects, there is no apparent bias in the distribution of projects or funding and the TIP does not disproportionately impact the environmental justice populations.

Summary Tables

Bridge Projects

MPMS ID	County	Project Name	Project Cost	Minority Communities	Low-income Communities	Both Minority and Low-income Communities	Neither Minority or Low-income Communities
87369	Cumberland	Ritner Highway Bridge 1-A	\$1,300,000	0	0	0	1
87413	Cumberland	Creek Road Bridge-C	\$1,200,000	0	0	0	1
87425	Cumberland	Mill Race Bridge	\$175,000	0	0	0	1
99708	Cumberland	Carlisle Pike over T Sprg	\$1,725,000	0	0	0	2
74051	Cumberland	Walnut Bottom Road Bridge-A	\$1,334,000	0	0	0	1
99684	Cumberland	York Rd over Yellow Breec	\$200,000	0	0	0	1
87659	Cumberland	Pine Road Bridge # 3	\$150,000	0	0	0	1
78648	Cumberland	Locust Creek Bridge	\$1,000,000	0	0	0	1
103317	Cumberland	Kunkle Bridge	\$2,000,000	0	0	0	3
102271	Cumberland	Hempt Road Bridge	\$1,475,000	0	0	0	1
99722	Cumberland	Holly Pike over Letort Sp	\$200,000	0	0	0	1
90741	Cumberland	Big Spring Creek Bridge	\$120,000	0	0	0	1
100080	Cumberland	Spring Run Road Bridge	\$175,000	0	0	0	1
87419	Cumberland	Enola Road over Bloser Cr	\$150,000	0	0	0	1
99688	Cumberland	Good Hope Rd over Conodog	\$30,000	1	0	0	2
18486	Cumberland	Orrs Bridge T-618	\$4,375,000	1	0	0	0
18433	Cumberland	Wolf Bridge T-508	\$3,063,000	0	1	0	0
78655	Cumberland	Trib 3 Square Hollow Run	\$675,000	0	1	0	0
90734	Cumberland	Roxbury Road Bridge 2	\$150,000	0	1	0	0
99678	Cumberland	US-11 NB over Conodoguine	\$350,000	1	1	1	0
99674	Cumberland	HBG Pike SB over Bypass	\$1,350,000	1	1	1	0
19131	Dauphin	Potato Valley Rd Bridge	\$1,350,000	0	0	0	1
106563	Dauphin	West Cross Rd Bridge	\$100,000	0	0	0	1
99917	Dauphin	Fairville Ave over I-81	\$2,725,000	0	0	0	1
73893	Dauphin	Blue Ridge Ave Brg	\$650,000	0	0	0	2
80973	Dauphin	Vine St Bridge #2 PM	\$2,875,000	0	0	0	1
18998	Dauphin	Red Top Road Bridge	\$1,125,000	0	0	0	1
90846	Dauphin	Tourist Park Road Bridge	\$500,000	0	0	0	1
90771	Dauphin	South River Road Bridge	\$200,000	0	0	0	1
92841	Dauphin	Jonestown Road Bridge	\$1,011,560	0	0	0	1
93178	Dauphin	Clarks Ferry Bridge PM	\$15,615,410	0	0	0	1
100074	Dauphin	Honeymoon Trail Rd over T	\$650,000	0	1	0	0
87456	Dauphin	Canal Street Bridge-A	\$1,120,000	0	1	0	0
90773	Dauphin	PA 225 Bridge-A	\$900,000	0	1	0	0
90772	Dauphin	Market Street Bridge-A	\$2,575,000	0	2	0	0
87454	Dauphin	Cameron St ovr Asylum Run	\$150,000	1	1	1	0
74521	Dauphin	Maclay Street Bridge	\$26,116,580	1	1	1	0
80696	Dauphin	I-81 River Relief Bridge	\$8,687,200	1	1	1	0
109713	Dauphin	I-81 River Relief Bridge 2	\$6,500,000	1	1	1	0
93177	Dauphin	Market St Bridge East	\$2,550,000	1	1	1	0
93176	Dauphin	Market St Bridge West	\$1,750,000	1	2	1	0

Bridge Projects (cont.)

MPMS ID	County	Project Name	Project Cost	Minority Communities	Low-income Communities	Both Minority and Low-income Communities	Neither Minority or Low-income Communities
100238	Perry	Wm Penn Hw y over Amity 1	\$150,000	0	0	0	1
101108	Perry	PA 850 over Trib Shermans	\$550,000	0	0	0	1
63084	Perry	Big Buffalo Creek Bridge	\$150,000	0	0	0	1
100250	Perry	Susq Trail over Sherman C	\$250,000	0	0	0	2
87463	Perry	Juniata Parkw ay Bridge-A	\$685,000	0	0	0	1
89276	Perry	US 22 Bridges over PA 34	\$4,300,000	0	0	0	1
90710	Perry	Carlisle Street Bridge	\$100,000	0	0	0	1
100173	Perry	US 22 over Perry Valley R	\$700,000	0	0	0	1
79039	Perry	Weavers Mill Rd Bridge	\$2,200,000	0	0	0	1
100181	Perry	William Penn Hw y ov Fy Rd	\$150,000	0	0	0	1
91397	Perry	Cold Storage Road Bridge	\$150,000	0	0	0	2
100186	Perry	Wm Penn Hw y over Ramps	\$150,000	0	0	0	1
101093	Perry	Spring Road over Little J	\$150,000	0	0	0	1
99983	Perry	Montour Creek Bridge	\$150,000	0	0	0	1
100372	Perry	Market Street over US 22	\$1,150,000	0	0	0	1
20576	Perry	Juniata Parkw ay Bridge	\$150,000	0	0	0	1
90715	Perry	Creek Road Bridge-A	\$673,000	0	0	0	1
100304	Perry	Waggoners Gap Rd over Bak	\$750,000	0	0	0	1
73959	Perry	Marsh Run Rd Bridge-A	\$710,000	0	0	0	1
100218	Perry	Wm Penn Hw y over Owl Holw	\$150,000	0	0	0	1
100441	Perry	Hidden Valley Rd over Shm	\$1,050,000	0	0	0	1
20546	Perry	Dix Hill Br T-422	\$710,000	0	0	0	1
100223	Perry	Wm Penn Hw y over Owl Holw	\$150,000	0	0	0	1
79072	Perry	Paradise Road Bridge	\$300,000	0	0	0	2
20503	Perry	Linton Hill Road Bridge	\$440,000	0	0	0	1
100231	Perry	Wm Penn Hw y over M Grov 2	\$150,000	0	0	0	1
100466	Perry	Little Buffalo Rd ov L 1	\$725,000	0	0	0	2
100230	Perry	Wm Penn Hw y over M Grov 1	\$150,000	0	0	0	1
100400	Perry	Fow lers Hollow Rd over Sz	\$550,000	0	1	0	0
100425	Perry	Airport Road over Bixler	\$325,000	0	1	0	0
87490	Perry	Pisgah State Road BR #2	\$325,000	0	1	0	0
20577	Perry	Oak Hall Road Bridge	\$1,150,000	0	1	0	0
106558	Perry	Center Rd Bridge T-403	\$175,000	0	1	0	0
100210	Perry	Wm Penn Hw y over Sunbury	\$150,000	0	1	0	0
90706	Perry	Raccoon Valley Rd Bridge2	\$100,000	0	1	0	0
100381	Perry	Center Square Road over S	\$575,000	0	1	0	0
100391	Perry	Horse Valley Rd over Ho 1	\$275,000	0	1	0	0
100195	Perry	Wm Penn Hw y over Sunbury	\$150,000	0	1	0	0
20494	Perry	T-339 Laurel Run Br No.3	\$890,000	0	1	0	0
100394	Perry	Horse Valley Rd over Ho 2	\$225,000	0	1	0	0
100449	Perry	Buckw heat Val Rd over Bck	\$375,000	0	1	0	0
87464	Perry	Mountain View Road Bridge-A	\$582,138	0	1	0	1
20578	Perry	Center Road Bridge	\$150,000	0	1	0	0
100167	Perry	Raccoon Val Rd over Juni	\$5,000,000	0	2	0	0

Intermodal Projects

MPMS ID	County	Project Name	Project Cost	Minority Communities	Low-income Communities	Both Minority and Low-income Communities	Neither Minority or Low-income Communities
106548	Dauphin	Upper Daupin Park-n- Ride	\$200,000	0	0	0	1
106549	Dauphin	CAT BRT Signal Preemption	\$900,000	1	1	1	0
100007	Perry	Millerstown Park-n-Ride	\$550,000	0	0	0	1
100011	Perry	Shermansdale Park-n-Ride	\$750,000	0	1	0	0

Bike/Pedestrian Projects

MPMS ID	County	Project Name	Project Cost	Minority Communities	Low-income Communities	Both Minority and Low-income Communities	Neither Minority or Low-income Communities
102756	Cumberland	W Shore Connection Bridge	\$1,400,000	0	2	0	0
107834	Cumberland	Fairgrounds Trail	\$5,380,000	1	2	1	0
102757	Dauphin	Greenbelt 39 to Ft Hunter	\$1,493,000	2	1	1	1
102785	Dauphin	E Shore Connection Bridge	\$1,230,361	2	2	2	0
102733	Dauphin	CAT Intermodal Bridge	\$1,455,536	2	3	2	0
107985	Dauphin	Riverwalk Slabs and Sidew	\$1,000,000	5	5	5	0

Interstate Projects

MPMS ID	County	Project Name	Project Cost	Minority Communities	Low-income Communities	Both Minority and Low-income Communities	Neither Minority or Low-income Communities
91015	Cumberland	I-81 Carlisle West	\$15,450,000	0	3	0	4
70024	Dauphin	I-83 East Shore Section 1	\$78,511,000	6	2	2	0
92931	Dauphin	Eisenhower Interchange	\$72,000,000	7	2	2	0
97828	Dauphin	I-83 East Shore Section 3	\$21,000,000	5	4	4	0

Roadway Projects

MPMS ID	County	Project Name	Project Cost	Minority Communities	Low-income Communities	Both Minority and Low-income Communities	Neither Minority or Low-income Communities
102741	Cumberland	Rossmoyne Roundabout	750000	0	0	0	1
101966	Cumberland	Gettysburg Rd Realignment	1903000	0	1	0	0
102755	Cumberland	Creekview Rd Interchange	4138868	1	0	0	1
101266	Cumberland	King St AND Ritner Hw y Re	5106142	1	4	1	2
111000	Cumberland/Da	Camp Hill - Capital Implementation	300000	4	4	3	6
88316	Dauphin	US 22/322 PM	100000	0	0	0	4
47521	Dauphin	Nyes/Dvnshre Hts Safety	2666767	0	0	0	2
84548	Dauphin	PA-283/I-76 Interchange	2585377	0	1	0	1
92945	Dauphin	US 322 AND Chambers Hill	12350000	2	0	0	0
105864	Dauphin	I-81/I-83 Noise Walls	11810244	2	0	0	3
19016	Dauphin	PA 283 Reconstruction 3	42738338	1	1	0	2
96198	Dauphin	US 322 Ramp Ext	5344232	1	1	0	2
96752	Dauphin	Hershey Drive Resurface	2050000	1	1	1	0
110486	Dauphin	Herr Street Improvements	800000	2	1	1	0
97254	Dauphin	River Relief Route	4150000	2	1	1	2
103138	Dauphin	Ann Street Resurfce	555000	2	2	2	0
107022	Dauphin	SR 230/Front Street Resur	2965800	5	4	4	0
102378	Dauphin	Derry Street Safety Imprv	2750000	11	6	6	0
106551	Perry	Meck's Corner Intersectio	600000	0	0	0	2
85655	Perry	PA 34 AND PA 850 Intersec	1568000	0	1	0	0