

FRANCIS SCOTT KEY BRIDGE IMPACT ANALYSIS

BMC PRESENTATION

June 2024

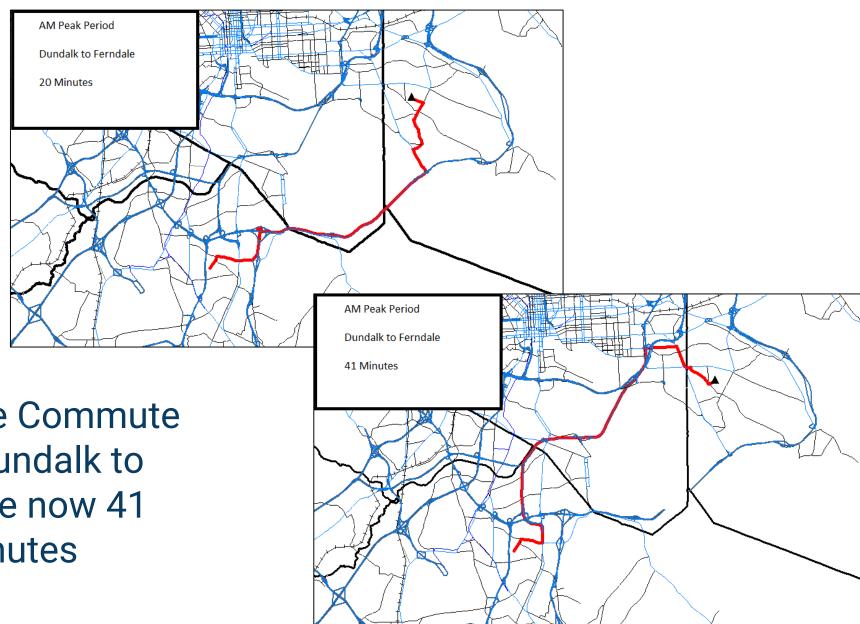


TRAFFIC AND TRANSPORTATION

- FSK Averaged 34,000 crossings per day (4,000 commercial)
 - 39,000 weekday
 - 20,400 weekend
- Harbor Tunnel an Fort McHenry Tunnel average 198,000 crossings combined
 - Harbor Tunnel: 81,000 weekday, 71,300 weekend
 - FMT: 128,300 weekday, 99,600 weekend
- HAZ-MATS must find a new route (+/- 1,200 trucks daily)
- What will be the impact on the region?
- What are the long term solutions?



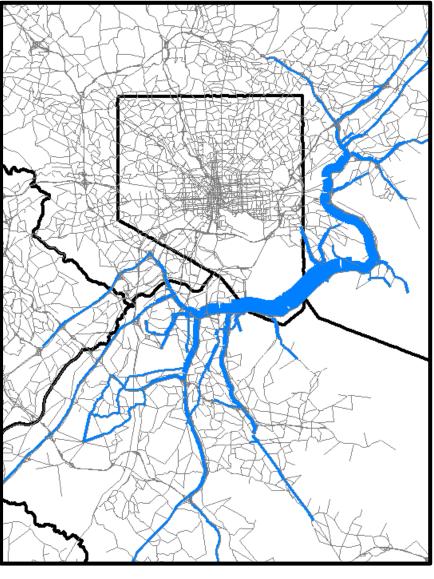
COMMUTER **IMPACT**



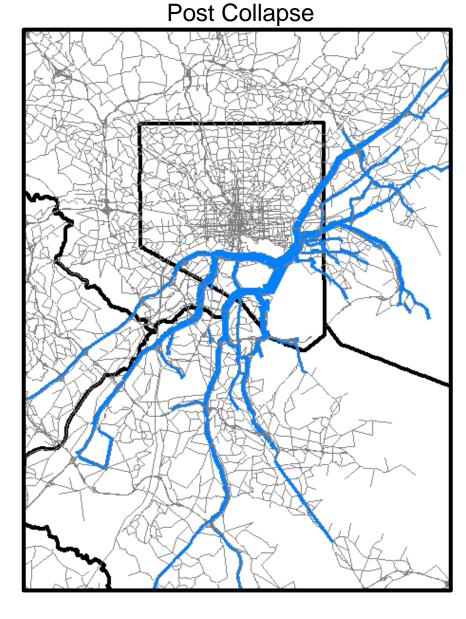
20 Minute Commute from Dundalk to Ferndale now 41 minutes



Morning
Peak
Rerouting of
Traffic
Flows Inner Loop
of Beltway

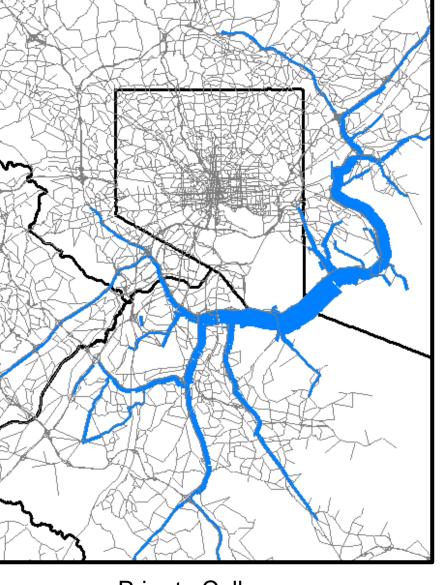


Prior to Collapse

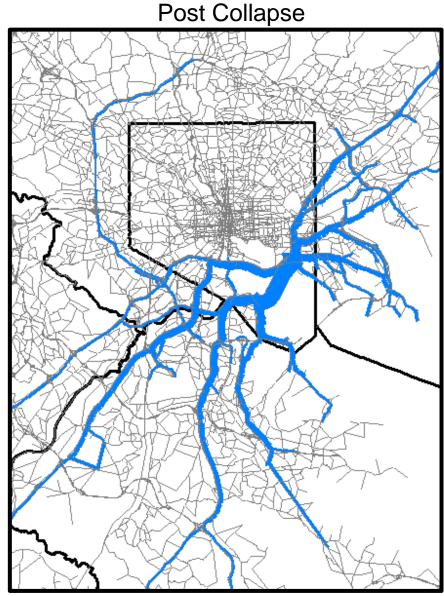




Afternoon
Peak
Rerouting of
Traffic
Flows Outer Loop
of Beltway

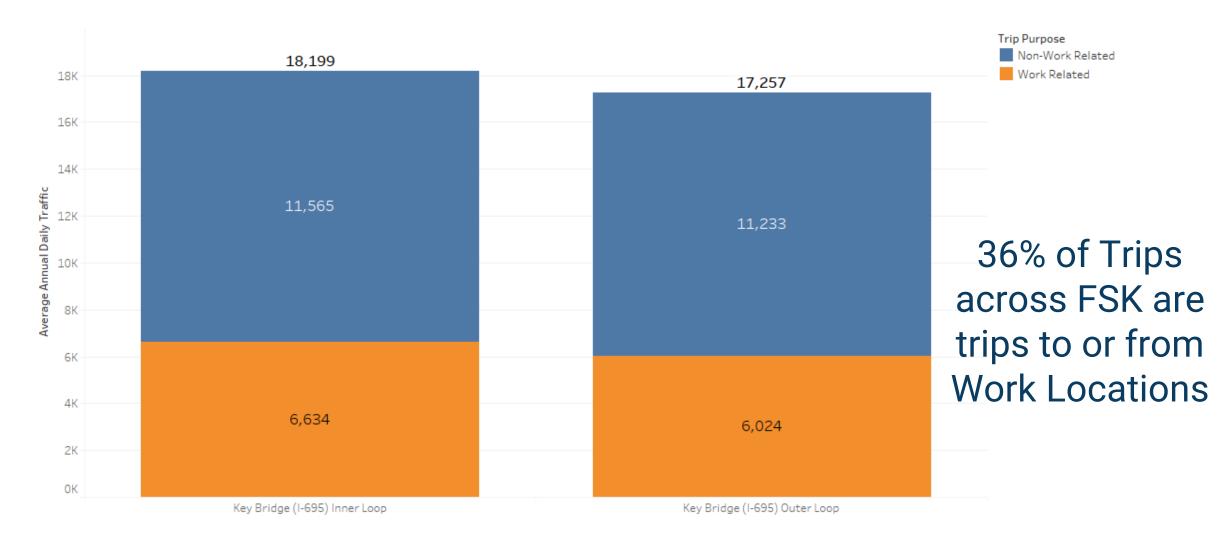


Prior to Collapse



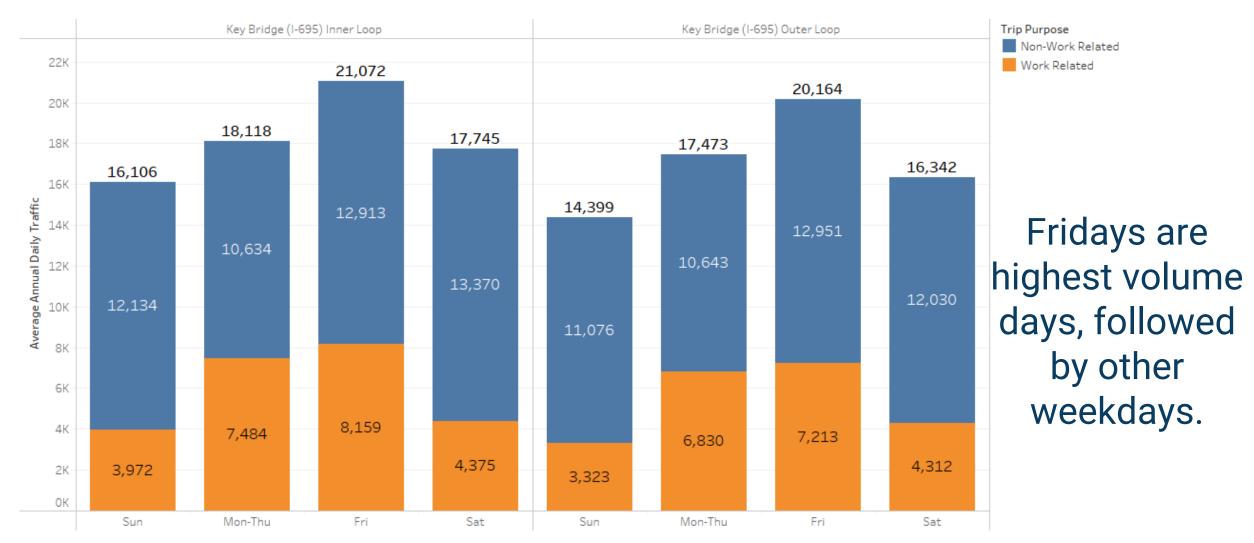


Work versus Non-Work Trips 2022 Daily Trips



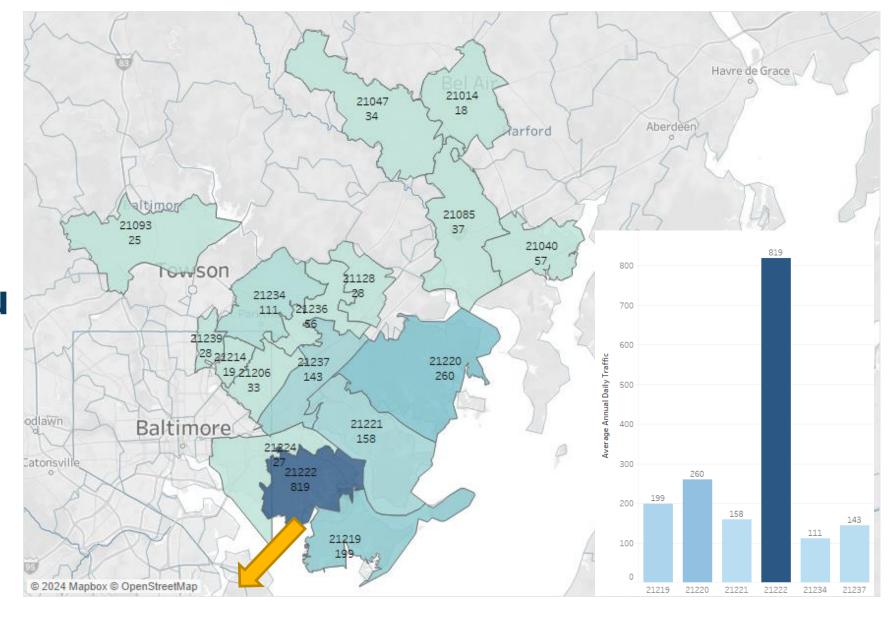


Day of Week Breakdown 2022 Daily Trips



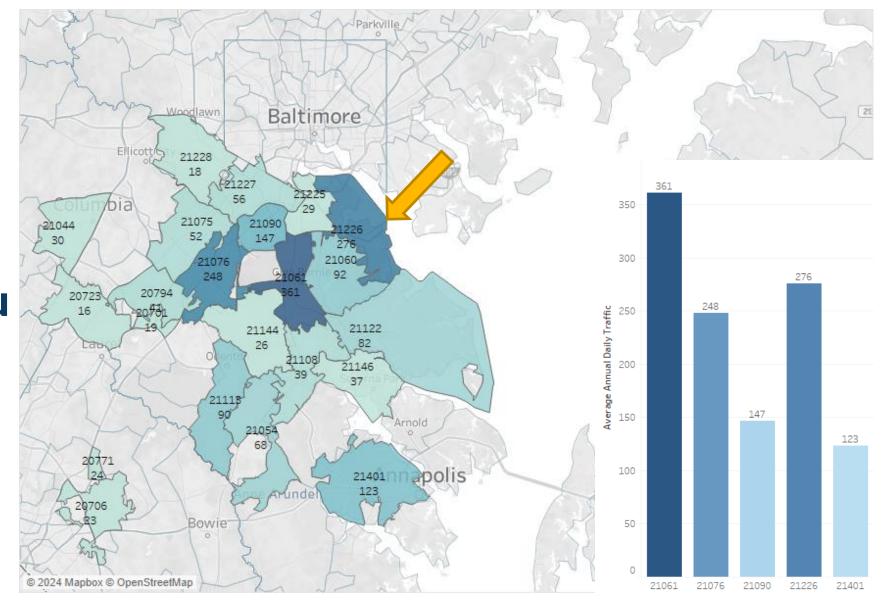


2022 Key Bridge Inner Loop Mon-Thu Home to Work Origins



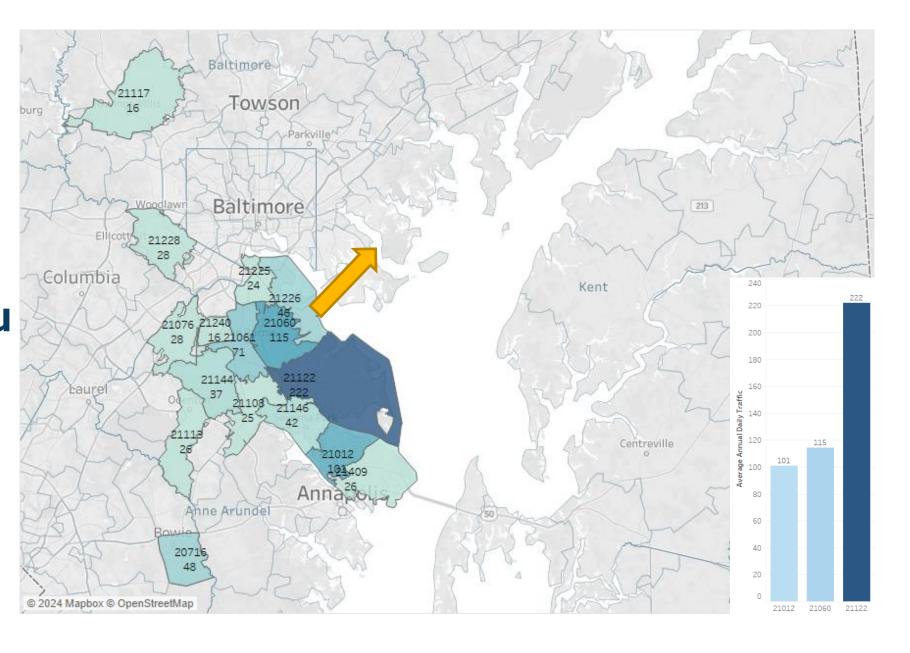


2022 Key Bridge Inner Loop Mon-Thu Home to Work Destinations



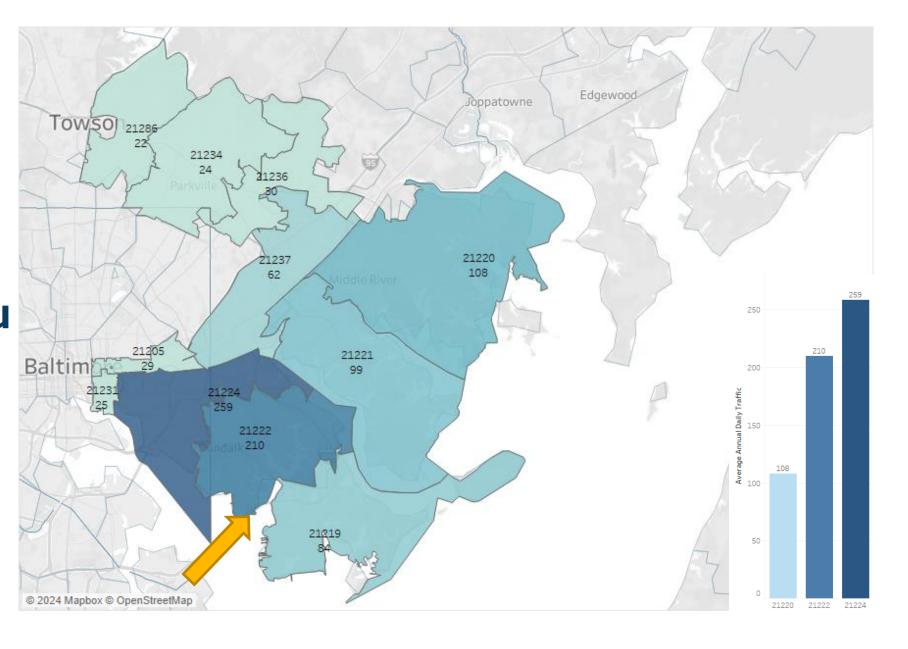


2022 Key Bridge Outer Loop Mon-Thu **Home to Work Origins**





2022 Key Bridge Outer Loop Mon-Thu **Home to Work Destinations**



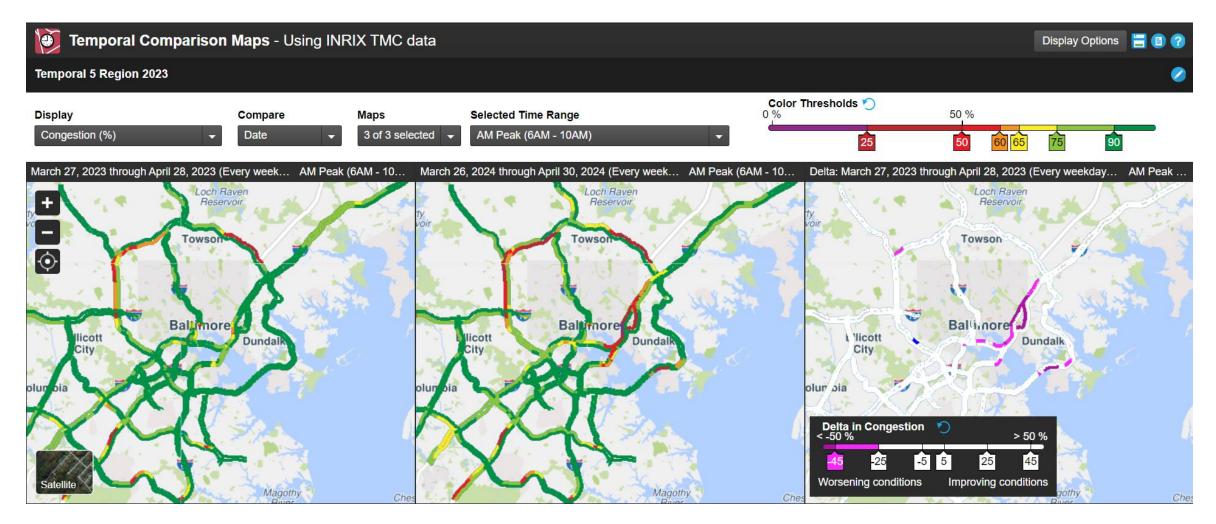


2050 Modeling With and Without FSK (Daily Trips)

2050 InSITE Travel Demand Model With and Without FSK										
Year	Year	I-695 Key Bridge	I-895 Harbor Tunnel	I-95 Fort McHenry Tunnel		Total Harbor Crossings				
Without Bridge	2050	0	117,715	180,147		297,862				
With Bridge	2050	51,034	99,909	153,941		304,884				
	2023 2022	33,693 33,195	79,113 77,033	121,481 118,287		234,287 228,515				
	2021 2020	33,215 32,244	68,861 39,533	119,887 112,510		220,010				
	2019* 2018*	40,365 30,982	47,480 75,488	140,185 125,930		232,400				
	2017	32,343	77,814	124,391		202,400				
	2016 2015	31,242 30,707	77,235 77,248	122,820 115,615						
	2014	29,598	71,315	114,386						
Note: 2019 the Harbor Tunnel was reduced to one lane in each direction for construction.										

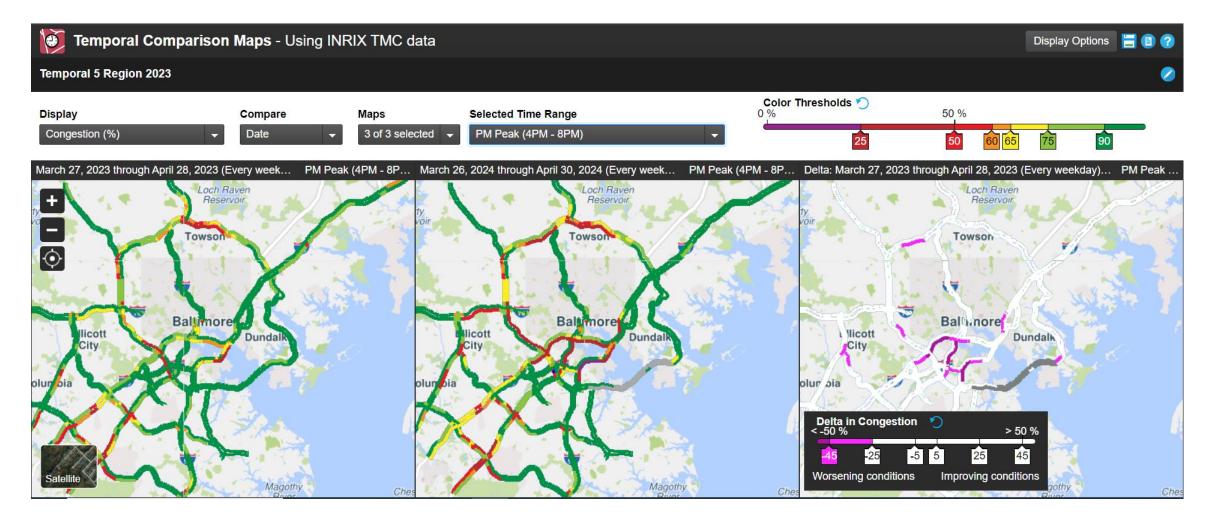


Increased Congestion Segments AM Peak





Increased Congestion Segments PM Peak





Other Roadway Segments Experiencing Congestion

Route	Segments	Peak	Miles	May-23	May-24	May 2023 to 2024
		AM PM	Length in	Avg TT	Avg TT	% Change
KB1	I-895 NB from MD-295 to Harbor Tunnel Toll Plaza	PM (4-7 PM)	4.35	5.04	15.99	217%
KB3	I-95 NB from I-895/Exit 46 to Fort McHenry Tunnel	PM (4-7 PM)	10.00	13.82	29.90	116%
KB6	MD-295 NB from Patapsco Ave to Bayard St	PM (4-7 PM)	1.75	3.50	6.75	93%
KB4	I-895 SB from I-95/Exit 62 to Harbor Tunnel Toll Plaza	AM (6-9 AM)	6.87	9.99	18.36	84%
KB5	I-95 SB from I-895 split to Fort McHenry Tunnel	AM (6-9 AM)	8.43	10.16	18.20	79%
KB2	I-895 Spur NB from MD-2/Ritchie Hwy to I-895 Merge	PM (4-7 PM)	2.74	2.95	5.20	76%
KB7	I-695 IL from Park Heights Ave to Greenspring Ave	PM (4-7 PM)	2.19	2.98	4.61	55%
KB13	I-895 SB from I-95/Exit 62 to Harbor Tunnel Toll Plaza	PM (4-7 PM)	6.87	9.02	13.06	45%
KB11	Hanover Street NB (I-895 to Cromwell)	PM (4-7 PM)	1.47	3.17	4.46	41%
KB9	MD-2/Ritchie Hwy NB from MD-710 to MD-171	PM (4-7 PM)	1.69	4.14	5.61	36%
KB10	I-695 OL from Reisterstown Rd to I-795	AM (6-9 AM)	2.16	3.51	4.60	31%
KB14	I-395 SB to I-95 NB (East Pratt to I-95)	PM (4-7 PM)	1.62	3.60	4.62	28%
KB15	MLK Blvd SB from W Baltimore St to I-395	PM (4-7 PM)	0.83	1.99	2.53	27%
KB8	MD-150/Eastern Blvd WB from MD-151/North Pont Blvd to Kane St	AM (6-9 AM)	1.10	2.93	3.67	25%
KB12	US-40/Pulaski Hwy WB from City Line to N Haven St	AM (6-9 AM)	1.97	3.91	4.60	18%
KB16	I-395 SB to I-95 SB (East Pratt to I-95)	PM (4-7 PM)	1.50	3.25	3.69	14%

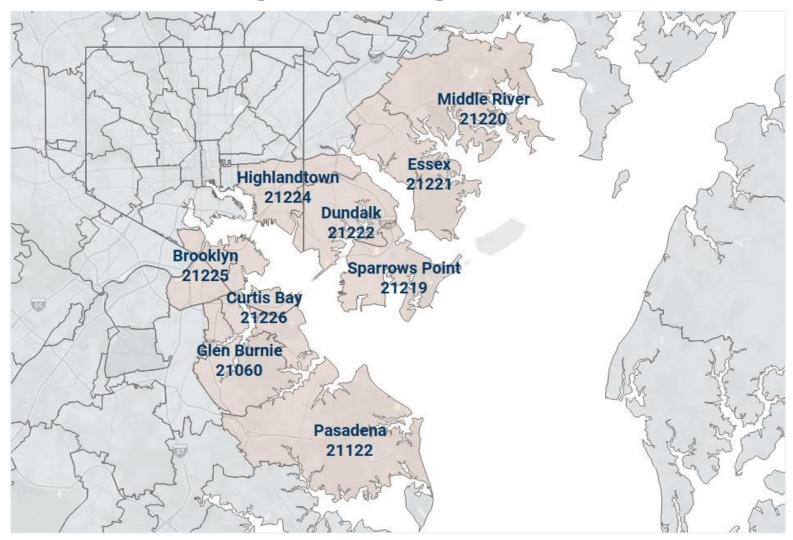


TRAFFIC MONITORING AND UPGRADES

- Weekly Traffic Coordination Meetings
 - MDOT/SHA/MdTA/MTA/Port/Unified Command/FHWA/BCDOT/BCDPWT/AADPW/BMC
- Weekly Traffic Monitoring of Major Diversion Routes
 - FMT, BHT, I-695 West Leg, I-70, I-83
 - All Vehicles and Trucks Comparison Current vs. 2022-2023 Historic
- Week Long Traffic Counts on Other Major Diversion Routes
- Potential Enhancement to FSK Detour Routes
 - Signal Upgrades/Adaptive Traffic Response/CCTV/DMS
- Review of Truck Routes
- Major Event/Construction Coordination

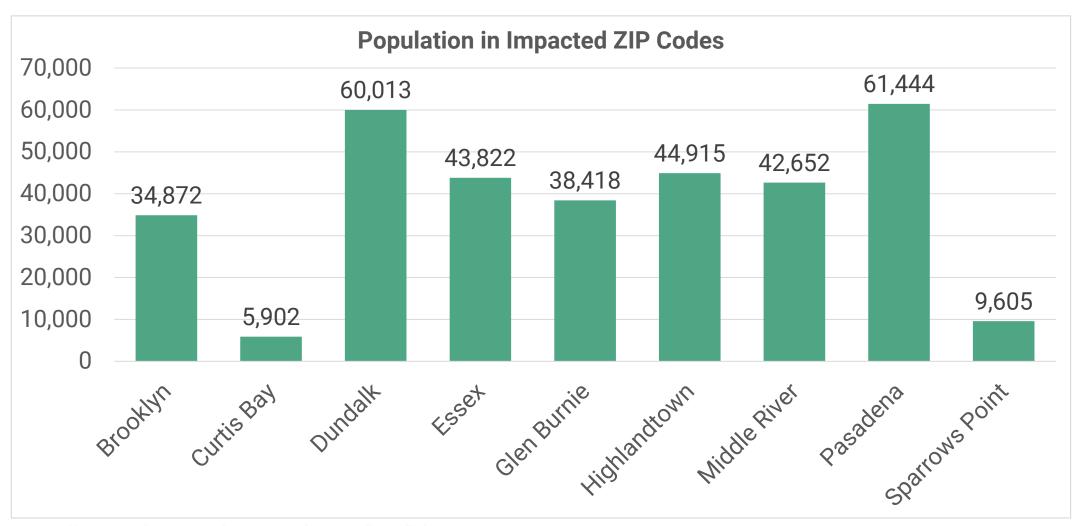


Impacted Zip Codes





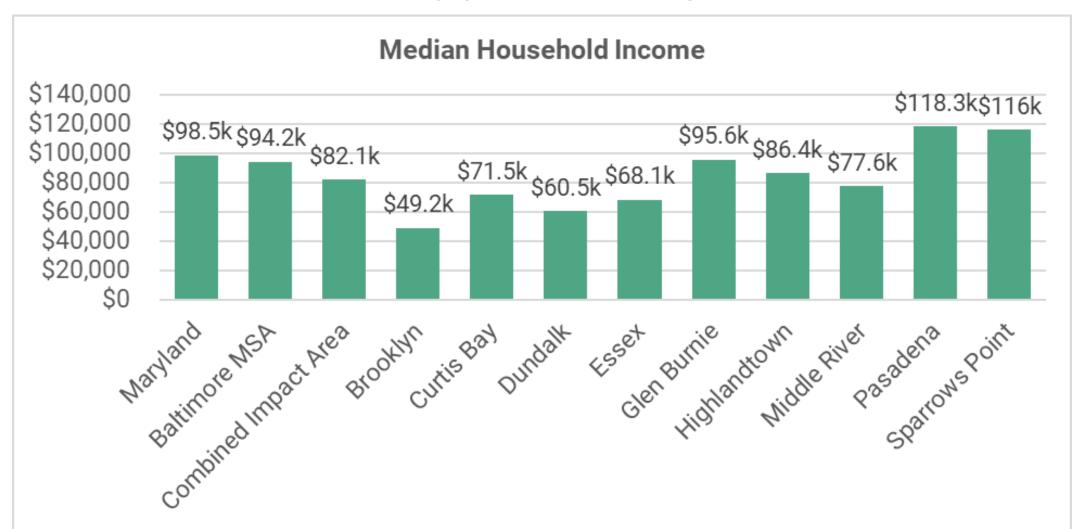
POPULATION



Source: U.S. Census Bureau, American Community Survey 5-year Estimates - 2018-2022.



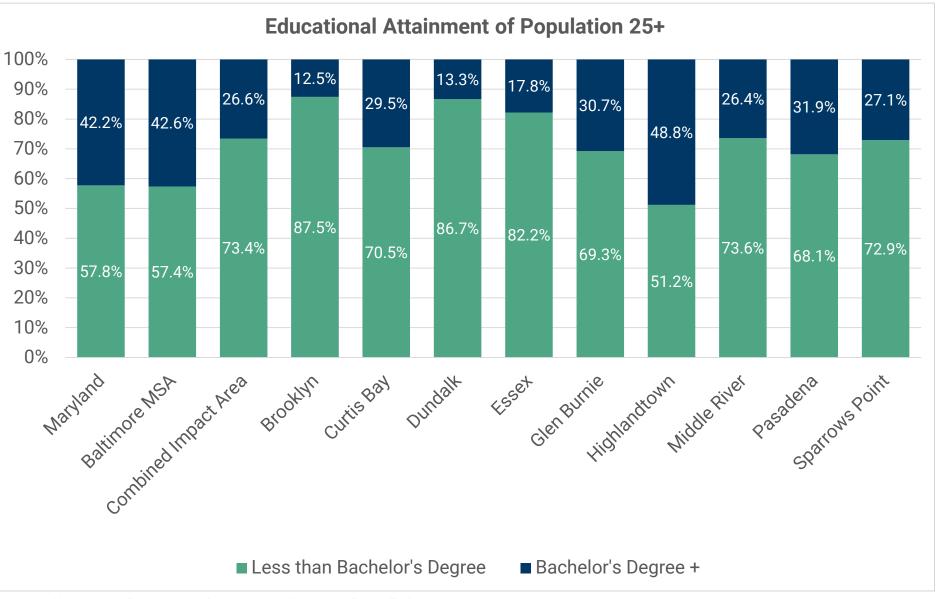
INCOME LEVELS







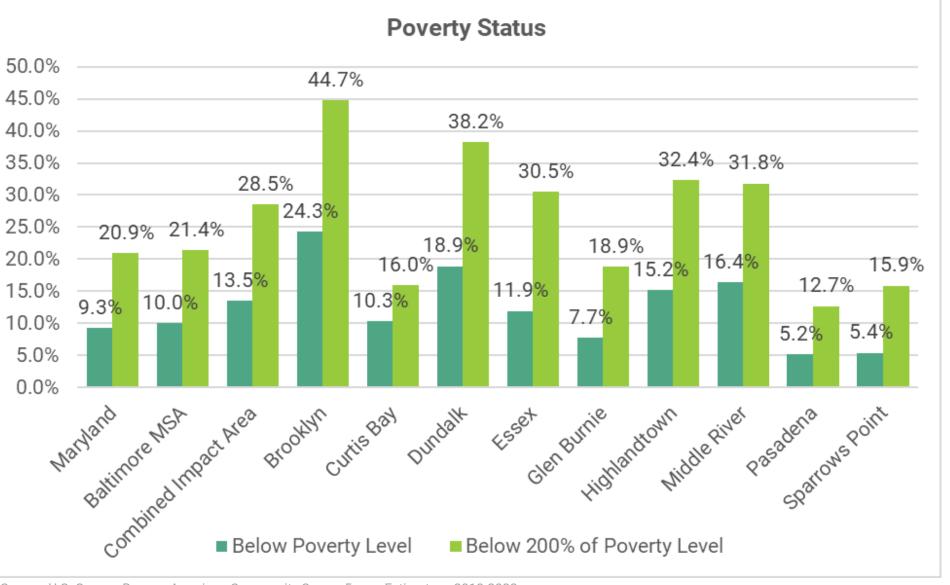
Educational Attainment





Source: U.S. Census Bureau, American Community Survey 5-year Estimates - 2018-2022.

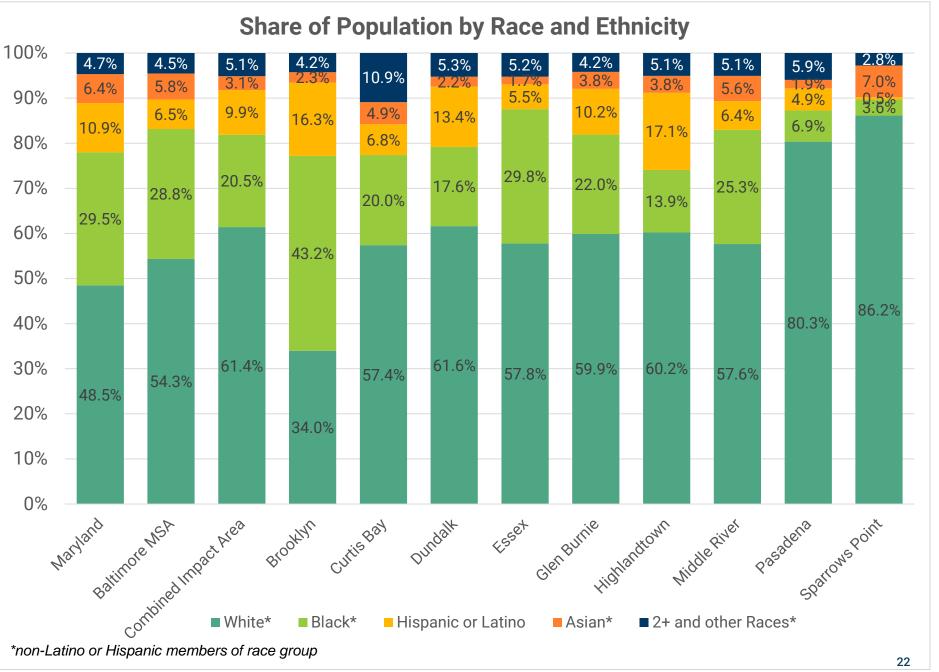
POVERTY STATUS







RACE





Environmental Justice

USDOT Environmental Justice (EJ) Principles

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects on minority and low-income populations
- Ensure the full and fair participation by all potentially affected communities in the transportation decisionmaking process
- Prevent the denial of, reduction in, or significant delay of these protections for minority and low-income populations

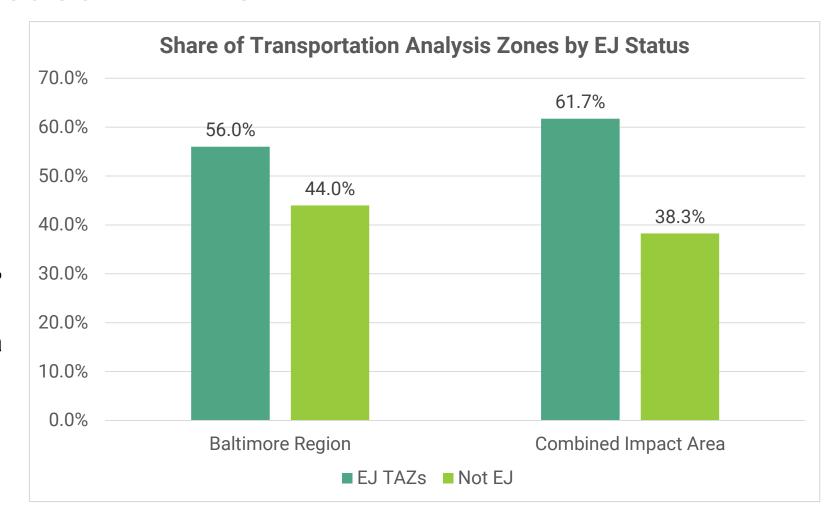
EJ Populations

- Low-income: BRTB defines low-income as population below 200% of poverty line
- Minority:
 - Person of origin in any of the black racial groups of Africa;
 - Person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin;
 - Person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
 - Person having origins in any of the original peoples of North America (American Indian, Alaskan Native) and who maintains cultural identification through tribal affiliation or community recognition; or
 - Person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.



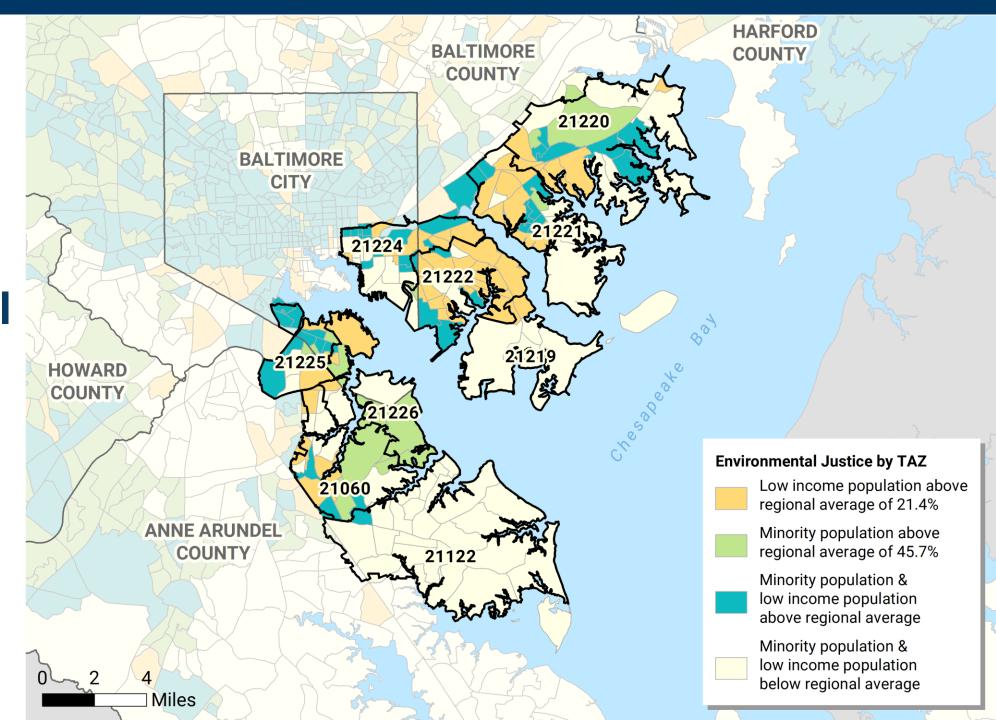
Environmental Justice in TAZs

- A Transportation Analysis
 Zone is defined as an EJ
 area if its share of low income OR minority
 population is greater than
 the Baltimore region
 average:
 - Low-income share > 21.4%
 - Minority share > 45.7%
- The Combined Impact Area has a higher share of EJ TAZs (61.7%) than the Baltimore Region (56%)





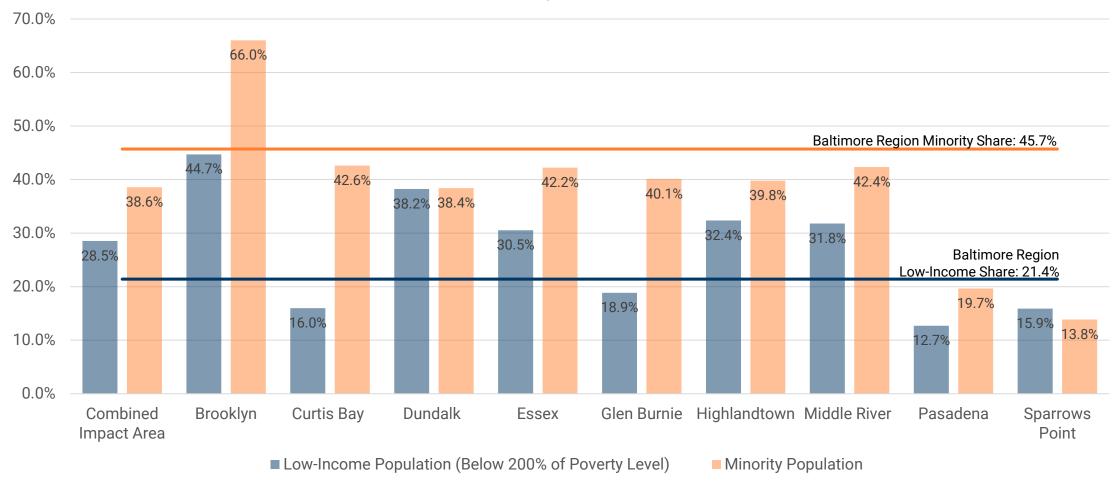
Environmental Justice TAZs





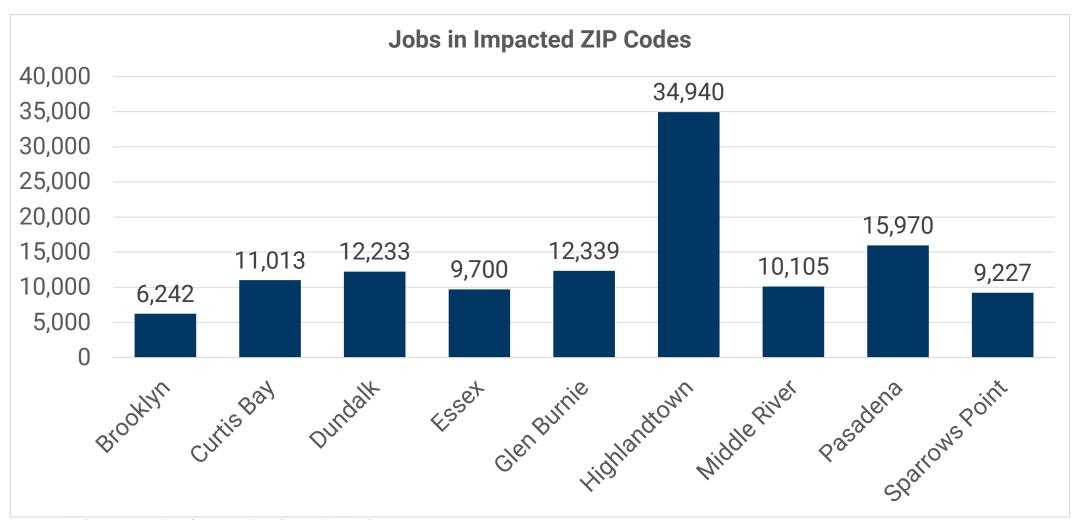
Environmental Justice in Impacted ZIP Codes

Share of Low-Income and Minority Populations in Impacted ZIP Codes





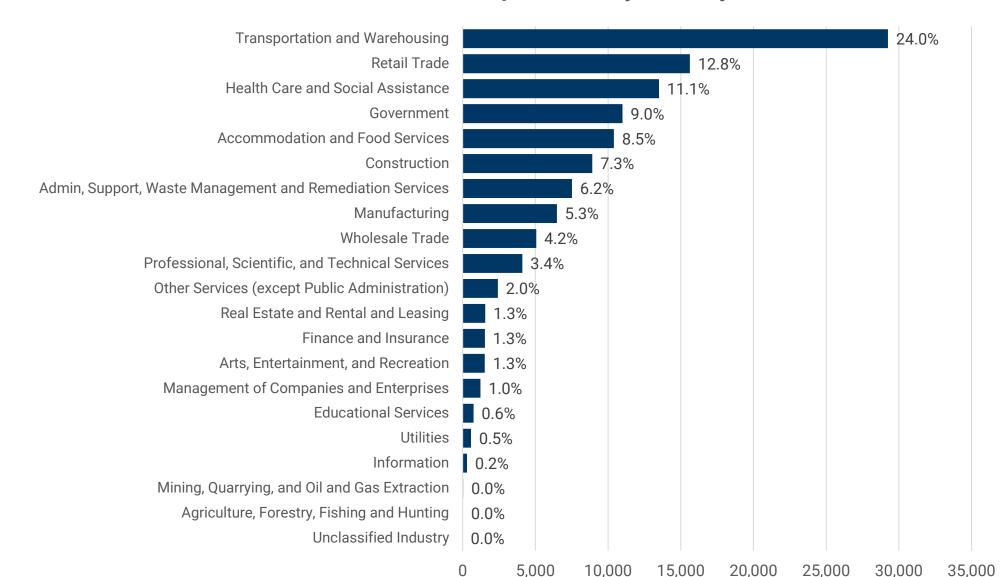
JOBS



Source: Lightcast 2023 data (2024.1 release) – QCEW Employees.



Jobs in Combined Impact Area by Industry

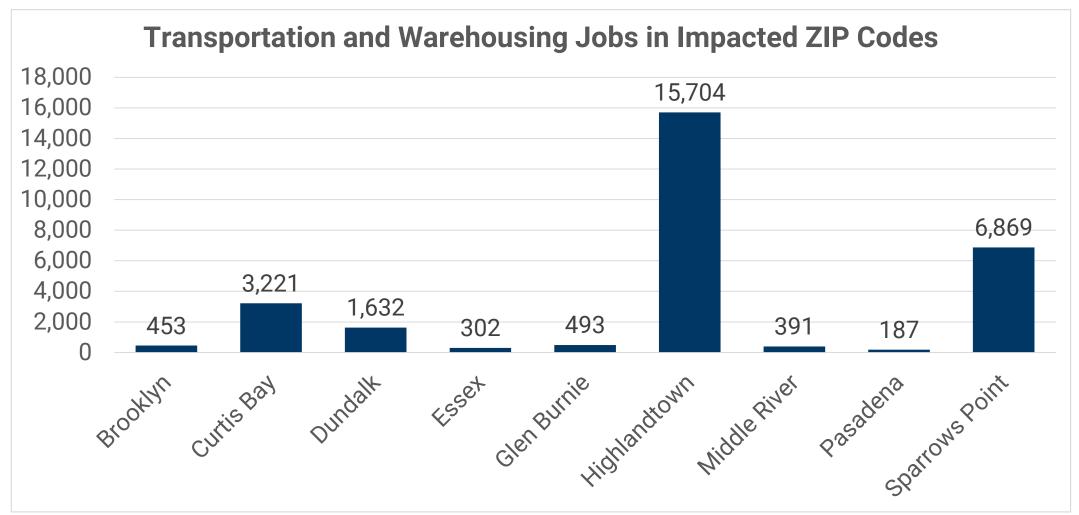




JOBS BY

INDUSTRY

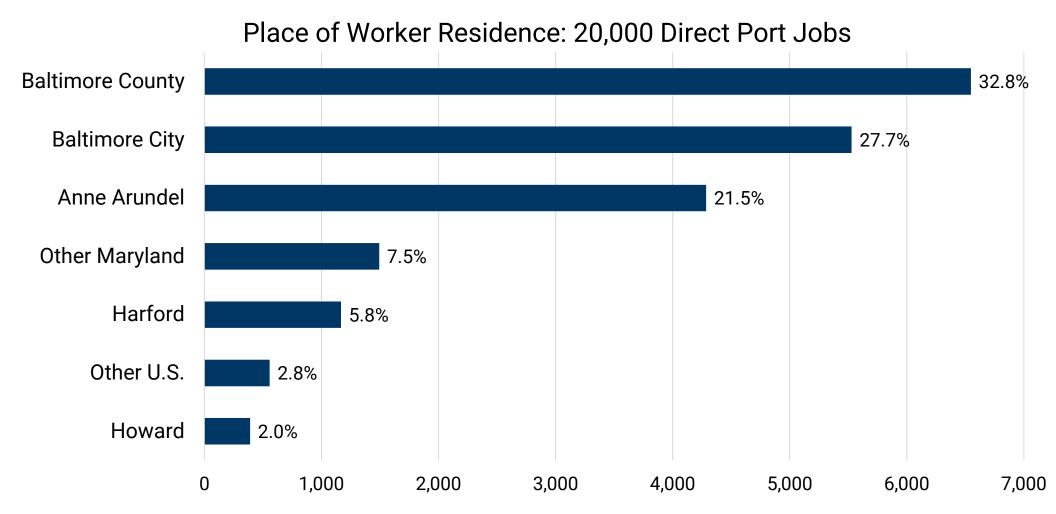
TRANSPORTATION AND WAREHOUSING JOBS







Distribution of Direct Port Jobs by Place of Residence



Source: The 2023 Economic Impact of the Port of Baltimore in Maryland (Prepared by Martin Associates for the Maryland Port Administration).



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