Appendix C: Socio-Economic Technical Report

for the

I-95 Access Improvements from Caton Avenue to Fort McHenry Tunnel – Environmental Assessment (EA) Baltimore City, Maryland

Prepared for:

Maryland Transportation Authority

dot DEPARTMENT OF TRANSPORTATION BALTIMORE CITY

and

U.S. Department of Transportation Federal Highway Administration

March 2018

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ACRONYMS AND ABBREVIATIONS

ACS	American Community Survey
ARLOC	Annapolis Road Library Operations Center
Baltimore City DOT	Baltimore City Department of Transportation
BCFD	Baltimore City Fire Department
CEQ	Council on Environmental Quality
EA	Environmental Assessment
EJ	Environmental Justice
FHWA	Federal Highway Administration
I-95	Interstate 95
LOD	Limit of Disturbance
MDTA	Maryland Transportation Authority
MTA	Maryland Transit Administration
NB	Northbound
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
PFA	Priority Funding Areas
ROW	Right-of-way
SB	Southbound
SETR	Socio-Economic Technical Report
SLR	Single Lens Reflex
USDOT	US Department of Transportation
WB	Westbound

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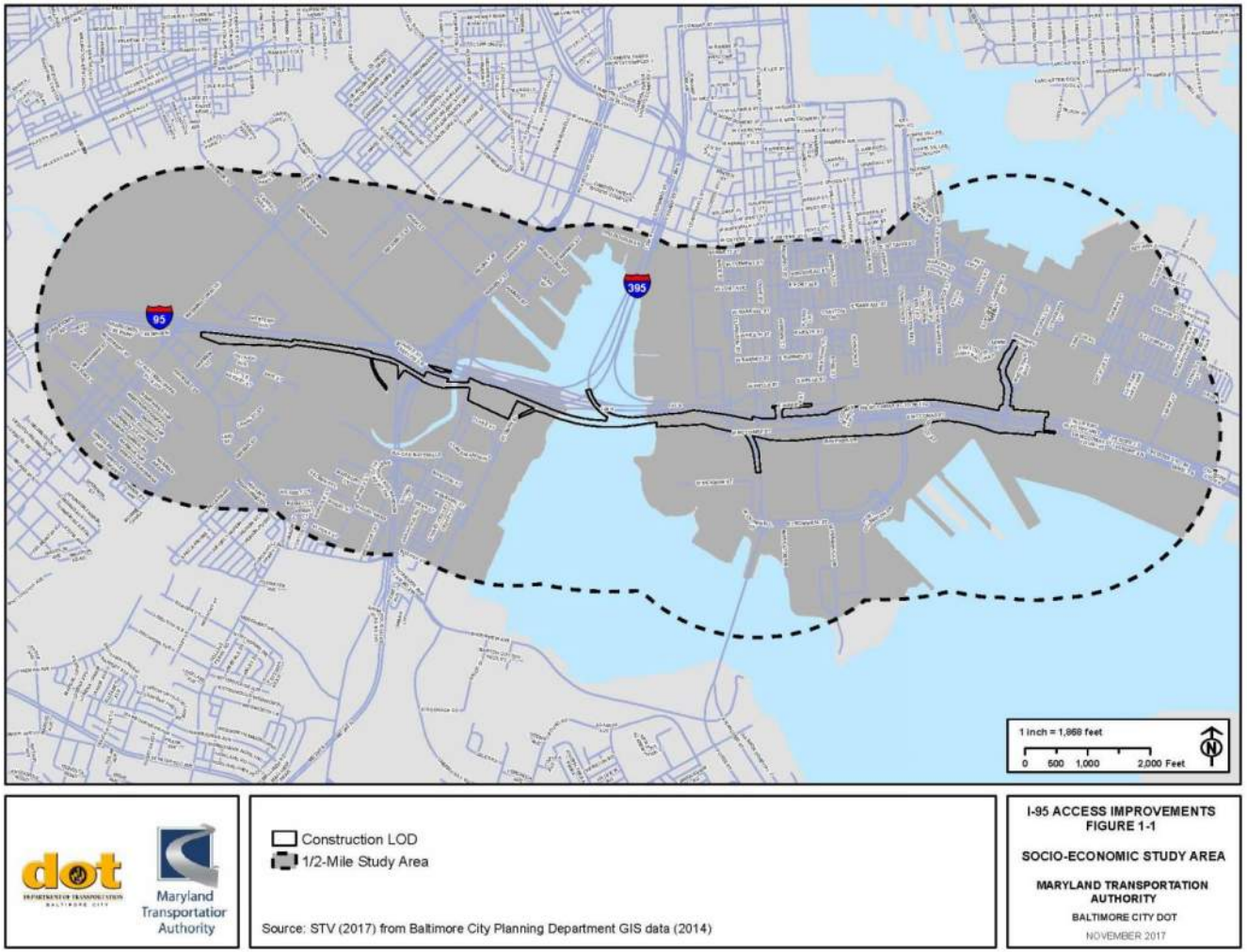
1.0 SOCIO-ECONOMIC TECHNICAL REPORT OVERVIEW

The purpose of this Socio-Economic Technical Report (SETR) is to document the potential socio-economic effects of the I-95 Access Improvements Recommended Preferred Alternative along I-95 and the neighborhoods surrounding Port Covington. This report documents the potential effects of the Recommended Preferred Alternative on the built and human environment, consistent with the National Environmental Policy Act of 1964 (NEPA), and provides the detailed information supporting several sections of the *I-95 Access Improvements from Caton Avenue to Fort McHenry Tunnel Environmental Assessment* (EA). The purpose of this SETR is to present existing conditions and determine whether the proposed project would:

- Change land use patterns;
- Affect community facilities, neighborhood vitality or community cohesion;
- Increase traffic demand or alter travel patterns that could affect local neighborhoods and businesses;
- Require residential or business displacements and right-of-way acquisition;
- Facilitate or disrupt access to community facilities;
- Change the visual landscape;
- Support existing and planned economic development; and
- Result in an adverse disproportionate effect on Environmental Justice populations.

Figure 1-1 below, illustrates the socio-economic study area that was evaluated and reviewed for the Recommended Preferred Alternative .

Figure 1-1: Socio-Economic Study Area



1.1 Alternatives Development Process

The Maryland Transportation Authority (MDTA) and the Baltimore City Department of Transportation (Baltimore City DOT), in coordination with the Federal Highway Administration (FHWA), studied several alternatives for improvements to Interstate 95 (I-95) ramps and other nearby transportation facilities to support ongoing and planned redevelopment of the Port Covington peninsula in south Baltimore. These improvements are collectively known as the I-95 Access Improvements from Caton Avenue to the Fort McHenry Tunnel (I-95 Access Improvements).

The existing road and roadway capacity are not adequate to meet projected traffic demand, and there are limited multi-modal connections around and across I-95 in the vicinity of Port Covington. The purpose of the I-95 Access Improvements Project is to accommodate forecasted increased transportation demand on I-95 and the surrounding transportation network by minimizing effects on mobility and safety, as well as enhancing multi-modal connections to the Port Covington peninsula.

To simplify a complex project, the improvements under consideration were broken down into seven elements as illustrated in Table 1-1.

Table 1-1: Project Elements

Designation	Element	Locations
A	I-95 Northbound Off Ramps	• I-95 NB to Hanover Street SB • I-95 NB to McComas Street
B	I-95 Northbound On Ramps	• Key Highway to I-95 NB
C	I-95 Southbound Off Ramps	• I-95 SB to Key Highway
D	I-95 Southbound On Ramps	• McComas Street WB to I-95 SB • Hanover Street NB to I-95 SB
E	Hanover Street	• Between Wells and McComas Streets
F	McComas Street and Key Highway	• Swann Park to Key Highway • McComas Street to McHenry Row
G	Pedestrian and Bicycle Connections	• Hanover Street • Key Highway • McComas Street • Shared-Use Path

Several options were developed for each element. These were combined into four discrete alternatives for analysis purposes – Alternative 1, the No-Build Alternative, and three Build Alternatives. These four alternatives were analyzed to determine how well they meet the project's stated Purpose and Need and the effects each has on future traffic operations both on I-95 and on surface streets. Key performance measures include travel times, vehicle throughput, queuing, and level of service. Each element's options were also compared against each other to identify the highest performing ones. Based on the key performance measures results, and how well they meet the Purpose and Need, the highest performing options for each element were combined into Alternative 5, the MDTA/Baltimore City Team Recommended Preferred Alternative.

1.1.1 Recommended Preferred Alternative (Alternative 5)

The following describes the Recommended Preferred Alternative, as approved by MDTA and Baltimore City DOT.

Element A: I-95 Northbound Off Ramps

- New Ramps
  - **Spur from Russell Street Ramp** – The existing auxiliary lane between the Caton Avenue On Ramp and the Russell Street Off Ramp will be widened to two lanes. The Russell Street Off Ramp will also be widened to two lanes until it overpasses MD 295, at which point the two lanes will split. One lane will continue along the existing ramp alignment to Russell Street NB. The second will continue east, over the Middle Branch, as a new ramp spur parallel to the existing ramps adjacent to I-95 NB, and merge with the new spur ramp from I-395 SB, connecting to McComas Street at an at-grade intersection on the western side of Port Covington.
  - **Spur from I-395 SB Ramp** – A new ramp spur, splitting off from the existing I-395 SB Ramp to I-95 NB where it overpasses I-95, is proposed. It will run southeast, merge with the new spur ramp from Russell Street, connecting to McComas Street at an at-grade intersection on the western side of Port Covington.
- **I-95 NB to Hanover Street SB Ramp** – The existing ramp will be removed. Vehicles traveling from I-395 SB to MD 2 SB will be accommodated by the new ramp Spur from I-395 SB.
- **I-95 NB to McComas Street Ramp** – The existing ramp will remain in a similar location, but will be realigned to accommodate the new I-95 NB On-Ramp (Element B), modifications to McComas Street (Element F), and the removal of the existing Hanover Street ramp from I-95 NB. The realigned ramp will extend the existing auxiliary lane that terminates at the Hanover Street exit to a two lane exit gore located approximately 1,600 feet from the existing I-395 SB On Ramp gore. The new two-lane exit ramp will run under I-95 NB, braid through the existing piers, and daylight perpendicular to an at-grade signalized intersection with McComas Street near the existing intersection of McComas and Cromwell Streets.

Element B: I-95 Northbound On Ramps

- **Key Highway to I-95 NB Ramp** – No modifications to the existing ramp are proposed.
- **McComas Street to I-95 NB Ramp** – A new ramp is proposed from McComas Street at a location approximately 700 feet east of its intersection with Hanover Street. The new ramp will braid with the realigned I-95 NB to McComas Street Ramp (Element A) and modifications to the realigned one-way section of McComas Street WB (Element F).

Element C: I-95 Southbound Off Ramp

- **I-95 SB to Key Highway Ramp** – No modifications to the existing ramp are proposed.
- **I-95 SB to McComas Street WB Ramp** – A new ramp, with a gore located approximately 400 feet west of the Key Highway overpass is proposed. It will provide access to the one-way section of McComas Street WB located directly beneath I-95 SB. The new ramp will braid with the realigned McComas Street WB to I-95 SB Ramp (Element D). The improvements will require the relocation of two CSX storage tracks.

Element D: I-95 Southbound On Ramps

- **McComas Street WB to I-95 SB** – The existing ramp will continue to provide access from the one-way section of McComas Street WB to I-95 SB, but will be realigned to minimize construction cost and duration. It will braid with the new ramp from I-95 SB to McComas Street WB (Element C).
- **Hanover Street NB to I-95 SB** – No modifications to the existing ramp are proposed.

Element E: Hanover Street

- **From Wells Street to McComas Street** – No modifications to this section of Hanover Street are proposed.

Element F: McComas Street and Key Highway

- **McComas Street west of Key Highway** – The existing two-way section of McComas Street and the one-way section of McComas Street EB will be converted to a two-way boulevard from the western side of the Port Covington peninsula to Key Highway. The boulevard will accommodate vehicular and multi-modal connections between South Baltimore, I-95, and the Port Covington development. The median will be designed to accommodate a future light rail spur from Westport anticipated to terminate prior to the existing intersection of McComas and Cromwell Streets. The existing one-way section of McComas Street WB beneath I-95 SB will remain in its current location, but be modified to accommodate the addition of an exclusive right-turn lane at the approach to the Key Highway intersection, the addition of the I-95 SB to McComas Street WB ramp (Element C), and the tie-in to the proposed two-way McComas Street boulevard.
- **Key Highway** – The existing roadway will be widened from a 4-lane section (2 NB & 2 SB) to a 5-lane section (3 NB & 2 SB) between the McHenry Row and McComas Street intersections Additionally, a 450' long southbound right-turn lane will be added at the McComas Street intersection. The CSX bridge over Key Highway, just north of the McComas Street intersection, will be reconstructed to accommodate the new width of Key Highway.

Element G: Pedestrians and Bicycles

- **Hanover Street** – The existing sidewalks on Hanover Street will remain unchanged on the bridge over the CSX tracks. South of the bridge over the CSX tracks, a new sidewalk is proposed along the west side of Hanover Street, running south to the McComas Street intersection.
- **Key Highway** – An 11-foot wide shared-use path will be provided on the east side of Key Highway between the intersections of McHenry Row and McComas Street.
- **McComas Street** – Sidewalks will be installed along both sides of the new McComas Street boulevard. Likewise, a shared-use path will be installed along the north side of McComas Street between the Cromwell Street and Key Highway intersections.
- **New Shared-Use Bridge/Path** – A new shared-use path, linking South Baltimore to Port Covington will be constructed. The path will run parallel to the south side of Winder Street, ramping up from the Light Street intersection. A stair case will connect to the path from the Charles Street intersection. At the Charles Street intersection, the ramp will turn

south, bridge over the CSX tracks and under I-95, then turn east to connect to the shared-use path proposed along the north side of McComas Street.

1.2 Summary of Effects

Table 1-2: Summary of Direct Potential Effects

Impact Types	No-Build Alternative	Recommended Preferred Alternative
Properties Impacted (number)		
Residential	0	0
Business/Commercial	0	11
Parkland	0	0
Place of Worship/School	0	0
Historical/Archeological	0	0
TOTAL	**0**	**11**
Right-of-Way Area Required (acres)		
Residential	0.0	0.0
Business/Commercial	0.0	13.2
Parkland	0.0	0.0
Place of Worship/School	0.0	0.0
Historical/Archeological	0.0	0.0
TOTAL	**0.0**	**13.2**
Community Facilities and Services	None	None
Police, Fire, and Emergency Services	None	None
Places of Worship	None	None
Schools	None	None
Parks and Recreational Facilities	None	Temporary[1]
Transportation Services	None	None
Displacements (number)		
Residential	0	0
Business/Commercial	0	3
TOTAL	**0**	**3**
Visual Impacts		
Swann Park[1]	None	Temporary
Middle Branch Park	None	Minor
Federal Hill, Riverside, and Locust Point Area Parks	None	None
Riverside Park	None	None
Latrobe Park	None	None
Fort Avenue Bridge over CSX Tracks	None	None
Fort McHenry National Monument	None	None
TOTAL	**None**	

[1] The relocation of Swann Park further to the south is part of the City's approved Port Covington Master Plan.

2.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

2.1 Land Use

This section provides an overview of area Port Covington Master Plan recommendations, existing land uses, future land uses, proposed full build out of the Master Plan, and Smart Growth initiatives. The discussion of probable consequences focuses on the Recommended Preferred Alternative's potential effects on land use by comparing it to the No Build conditions, and evaluates the consistency of the Recommended Preferred Alternative with area master plans and the Smart Growth Act of 1997.

2.1.1 Regulatory Context and Methodology

Baltimore City's comprehensive planning and zoning processes establish land use designations; the City's GIS data (2014) were relied on for information describing existing land uses in the study area. The project is located entirely within Baltimore City and is within the South and Southwest Planning Districts, as identified by the City's Department of Planning. The 1997 Smart Growth Act is summarized; followed by two recent master plans that are most applicable to the Recommended Preferred Alternative and the study area:

- **Smart Growth Act (1997):** Concepts of "smart growth" were enacted into law in 1997 and build upon the Economic Growth, Resource Protection, and Planning Act of 1992 (Chapter 759, Acts of 1997; Chapter 437, Acts of 1992). Through Smart Growth, Maryland is committed to limiting sprawl development by revitalizing older neighborhoods and redirecting growth to already developed areas, thereby saving the State's farmland, open spaces, and natural resources. State funds target projects in Priority Funding Areas (PFA), those locations approved for growth and redevelopment. The entire project is located in a designated PFA, and therefore is consistent with the Smart Growth Act of 1997. The Recommended Preferred Alternative would also support Smart Growth initiatives by improving access to higher density redevelopment.
- **South Baltimore Gateway Master Plan[2] (2015):** The Plan offers a 20-year vision for the South Baltimore Gateway Area, which includes the communities, business areas, and open spaces ringing the Middle Branch of the Patapsco River and provides detailed set of recommendations for short-, medium-, and long-term actions. One of the goals of the South Baltimore Gateway Master Plan is to foster economic growth in more than a dozen neighborhoods in South Baltimore, including Port Covington.
- **Port Covington Master Plan[3] (2016):** Proposes to redevelop approximately 260 acres of underutilized industrial land into a mixed-use community on the Port Covington peninsula. The Baltimore City Planning Commission approved the Port Covington Master Plan in June 2016. Land use approvals were granted by the Baltimore City Council in December 2016, and the redevelopment of Port Covington is underway.

[2] http://www.southbaltimoregatewaymasterplan.com/

[3] http://planning.baltimorecity.gov/sites/default/files/PORT%20COVINGTON%20MASTER%20PLAN%20061616%20v11%206.22.16.pdf

Other neighborhood plans that have been prepared by the City's Department of Planning for portions of the SETR study area include:

- Carroll Camden Urban Renewal (2012)
- Middle Branch Transportation Plan (2011)
- Middle Branch Master Plan (2007)
- Cherry Hill Master Plan (2008)
- Westport Mount Winans Lakeland Master Plan (2005)
- Sharp-Leadenhall Master Plan (2004)
- Locust Point Comprehensive Plan (2004)

These plans recommend strategies for economic development and to support revitalization, encourage redevelopment of underutilized industrial properties, increase mobility for residents.

2.1.2 Existing and Future Conditions

Baltimore City's comprehensive planning and zoning processes established land use designations; and GIS data (2014) were relied upon for information describing existing land uses in the SETR's land use study area. According to the City's 2014 GIS data, existing land uses in the study area include industrial, residential, transportation and parking, natural areas/parks/recreation, institutional (educational facilities, places of worship), commercial areas (retail, office space), barren land, and cemetery uses.

A summary of the land use within the study area is provided in Table 2-1 and the study area boundaries are illustrated in Figure 2-1 and described below:

- West Pratt Street (between South Carey Street and Martin Luther King, Jr. Boulevard), to the north;
- MD 295, southeast of Annapolis Road (MD 648), to the south;
- Fort McHenry on the Locust Point Peninsula, to the east; and
- South Caton Avenue (between the City Line near West Patapsco Avenue and Maiden's Choice Run, approximately 800 feet north of Wilkens Avenue, to the west.

The primary land use within the SETR study area is industrial (41.0%). Most industrial uses are immediately adjacent to I-95 and the Middle Branch waterfront. Residential, transportation and parking uses make up 16.8% and 15.8%, respectively. Together, these three land uses account for 73.7% of the total study area. The remaining land uses include natural areas/parks/recreation (9.5%), institutional (6.8%), commercial (5.5%), and undeveloped land (4.4%).

Table 2-1: Summary of Existing Land Use/Land Cover within SETR Study Area

Land Use/Land Cover Category	SETR Study Area	
	Acres	Percent of Total
Industrial	822.8	41.0%
Residential	337.4	16.8%
Transportation and Parking	317.6	15.8%
Natural Areas/Parks/Recreation	191.5	9.5%
Institutional Facility	137.0	6.8%
Commercial (Retail & Office)	109.9	5.5%
Underdeveloped	89.1	4.4%
Total	**2,005.40**	**100.0%**

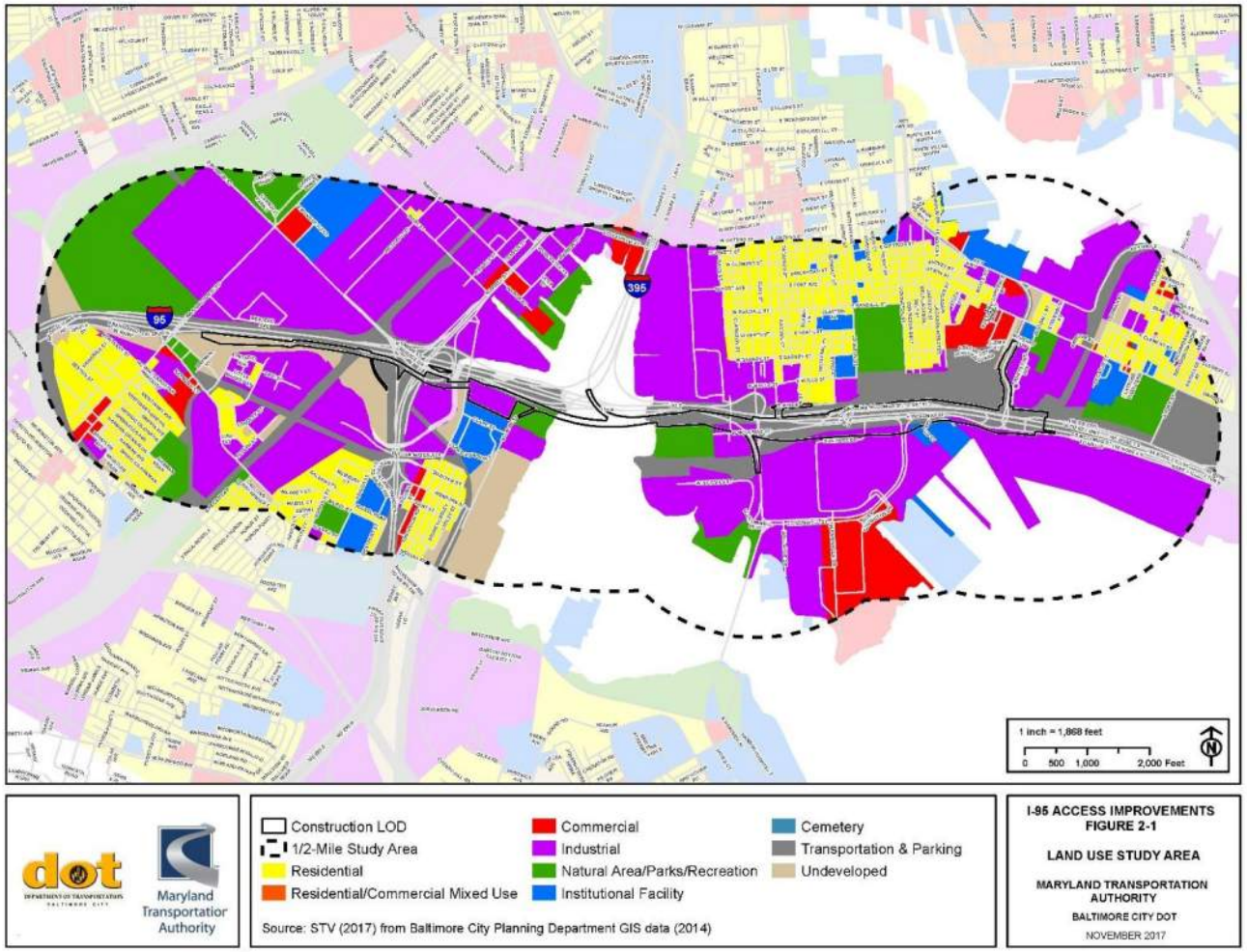
Source: Baltimore City Land Use Updated April 2014

The Port Covington Master Plan, an independent development project that is currently underway/anticipated to be completed by 2040, proposes to redevelop approximately 260 acres of under-utilized industrial brownfields. As currently planned, the revitalization of the Port Covington site will increase population density on the peninsula, which will generate demand for infrastructure improvements. The Port Covington proposed redevelopment includes the following:

- Relocation of the Under Armour World headquarters (roughly 3 million square feet and 11,000 employees anticipated by 2040);
- Approximately 1.5 million square feet of office space (in addition to the Under Armour World headquarters);
- Approximately 500,000 square feet of industrial/light manufacturing space;
- Approximately 1.5 million square feet of destination, attraction, entertainment and specialty retail establishments;
- Over 7,500 residential units, including rental and for-sale properties at various price-points;
- 200+ hotel rooms; and
- Civic and cultural uses including 40+ acres of public parks and other civic and cultural uses.

The public infrastructure currently in and around the peninsula cannot efficiently support the significant economic growth expected from the new development.

Figure 2-1: Existing Land Use Study Area



Source: STV (2017) from Baltimore City Planning Department GIS data (2014)

2.1.3 Probable Consequences

The Port Covington Master Plan and other adjacent community master plans will dictate future development in the study area. The No Build Alternative may slow the pace of this development due to inadequate infrastructure. Consequently, the goals of the current plans would not be realized under the No Build scenario as the existing infrastructure is not adequate to handle the anticipated increase in transportation demand once the new development is fully built. Also, the No Build Alternative would not provide the transportation network connectivity to support this type of growth, thereby allowing increased strain on the already congested transportation network.

The Recommended Preferred Alternative is proposed to accommodate forecasted increased transportation demand on I-95 and the surrounding transportation network by minimizing effects on mobility and safety, as well as enhancing multi-modal connections to the Port Covington peninsula, as outlined in the project's Purpose and Need. Addressing the constrained connections, mitigating the forecasted congestion issues, accommodating the projected increased traffic volumes, and providing local and regional access to new job opportunities and amenities, is consistent with the goals of the local area master plans. Connections between Port Covington and other parts of Baltimore, particularly the surrounding neighborhoods of South Baltimore and Riverside, are constrained by the elevated portion of I-95.

The implementation of the Recommended Preferred Alternative would result in a combined total of 13.2 acres of right-of-way acquisitions, all from industrial use properties. The areas being acquired would be converted from their existing industrial use to a transportation use. Partial acquisitions account for 7.0 acres, while the total acquisition of the industrial property at 1915 Annapolis Road is an additional 6.2 acres. This acquisition would displace three industrial tenants: the Howard Uniform Company, Systems Furniture Installation, and the Annapolis Road Library Operations Center (ARLOC). The partial acquisitions would not constitute notable changes in land use, as the overall use of the respective properties would not be affected by the acquisition. The full acquisition and displacement, though representing a change in land use for an entire property, would not in itself, represent a substantial change to the overall land use pattern in the study area; moreover, the change in land use would be limited to that property and therefore not be expected to affect the uses of neighboring properties.

In addition, the Carroll Camden Urban Renewal, Locust Point Comprehensive Plan, Middle Branch Master Plan and Transportation Plan, and Westport Mount Winans Lakeland Master Plan recommend improving access to Baltimore's waterfront. The Middle Branch Transportation Plan proposes traditional traffic and roadway improvements, as well as solutions that will make the Middle Branch neighborhoods more pedestrian-, bicycle-, and transit-friendly.

Conformity with Master Plans and Planned Development

The Recommended Preferred Alternative supports planned development and redevelopment in the SETR study area and is consistent with the master plans' recommendations for land use and redevelopment. The entire project is located in a designated PFA, and therefore is consistent with the Smart Growth Act of 1997. The Recommended Preferred Alternative would also support Smart Growth initiatives by improving access to higher density redevelopment.

By addressing the constrained connections to these communities, mitigating the forecasted congestion issues, and accommodating the projected increased traffic volumes, the Recommended Preferred Alternative is consistent with the goals of the South Baltimore Gateway Master Plan. The public infrastructure currently in and around the peninsula cannot efficiently support the significant economic growth expected from the new development.

2.2 Socio-Economic, Neighborhoods, Community Facilities, and Environmental Justice

This section summarizes the existing demographics, neighborhoods, community facilities and services surrounding the study area and discusses any impacts to those resources that may occur. A discussion of the likelihood that the Recommended Preferred Alternative would have a disproportionate adverse effect on Environmental Justice Populations is also included.

2.2.1 Regulatory Context and Methodology

Title VI of the Civil Rights Act of 1964 states that "*no person in the US shall, on the ground of race, color, national origin, sex, age or disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance"*. Title VI, however does address disproportionate or adverse effects nor specific impacts to low-income populations. To cover the full spectrum potential effects on low-income and minority populations Executive Order 12898 – *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* was signed in 1994. Executive Order 12898 requires all Federal agencies to "develop an agency-wide environmental justice strategy and identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." The United States Department of Transportation (USDOT) and the Federal Highway Administration (FHWA) policies on environmental justice are included in USDOT Order 5610.2(a), *Final DOT Environmental Justice Order* (USDOT 2012) and in FHWA Order 6640.23A *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (FHWA 2012). FHWA's Title VI program is outlined in 23 CRF 200.

The strategies developed under Executive Order 12898 and the USDOT and FHWA policies on environmental justice are intended to ensure that there is no discrimination based on race, color, or national origin; that communities are provided the opportunity to provide input on the planning and design of a project, as well as potential effects and mitigation measures; and that any disproportionately high and adverse effects on minority or low-income populations are appropriately addressed.

A. Definitions of "Minority" and "Low-Income" for conducting Environmental Justice Analysis

Executive Order 12898 does not define the terms "minority" or "low-income", but the terms have been defined in the USDOT and FHWA orders on environmental justice. The USDOT and FHWA orders provide the following definitions, which have been used in this analysis:

- Minority Individual – The US Census Bureau classifies a minority individual as belonging to one of the following groups: American Indian or Alaskan native, Asian American, Native Hawaiian or Other Pacific Islander, Black (nor of Hispanic Origin), and Hispanic or Latino.
- Minority Populations – Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed FHWA program, policy or activity.
- Low-Income Individual – A person whose household income is at or below the US Department of Health and Human Services poverty guidelines.
- Low-Income Population – Any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affect be a proposed USDOT program, policy, or activity.

B. Identifying Minority, and Low-Income, Populations in the Project Study Area

As a tool for evaluating the proportionately of impacts and benefits, this analysis identifies "EJ areas" and "non-EJ areas" within the project study area. An "EJ area" was defined to include any Census Block Group in which the minority or low-income population meets either of the following thresholds:

- the minority or low-income population in the Census Block Group exceeds 50%, or
- the percentage of a minority or low-income population in the affected area is "meaningfully greater" than the percentage of minority population in the general population.

Typically "meaningfully greater" is defined to mean a Census Block Group in which the percentage of minority or low-income residents was at least 10 percentage points more than the corresponding percentage in the surrounding jurisdiction (Baltimore City) within the project study area. In this case Baltimore City's overall composition of minority populations is 72%, as such all areas 50% or greater were identified as EJ areas under the minority threshold criteria.

The use of thresholds for identifying EJ areas was based on the Council of Environmental Quality (CEQ) guidance document, *Environmental Justice Guidance under the National Environmental Policy Act* (NEPA) (CEQ 1997). This EJ analysis for the Environmental Assessments (EA) follows the same methodology.

C. Additional Socioeconomic Factors

Executive Order 13166 *Improving Access to Services for Persons with Limited English Proficiency* requires Federal agencies to examine the services they provide, identify any need for services to those with limited English proficiency (LEP), and develop and implement a system to provide those services so LEP persons can have meaningful access to them. A person who does not speak English as their primary language and who has a limited ability to read, speak, write or understand English may be limited English proficient (LEP). While Executive Order 12898 defines the specific

populations that should be included in the environmental justice analysis LEP data was reviewed for the purposes of cross-identification of block groups in which LEP persons and EJ persons were one and the same and to inform tools to support outreach for the overall public involvement program presented in Chapter 5 of the *I-95 Access Improvements from Caton Avenue to Fort McHenry EA*.

D. Data Sources

- Minority Populations: The US Census 2010 Block Group level data provided the basis for establishing the location of minority populations in the project study area.
- Low-Income Populations: Income data was obtained from the American Community Survey (ACS) 2015 5-year estimate at the Census Block Group level.
- Limited English Proficiency Populations: LEP data was obtained from the American Community Survey (ACS) 2015 5-year at the Census Block Group level.
- Other data sources that were used to confirm the location of minority and low-income populations included information and data from the National Center for Educational Statistics (NCES), government assisted housing programs, field visits, and community meetings within the project study area.

2.2.2 Existing and Future Conditions

2.2.2.1 Population and Demographics

Population and housing data were gathered from the most recent available sources including the 2010 US Census, 2015 American Community Survey (ACS) 5-Year Forecast. For demographic purposes, the SETR study area is defined as 2010 US Census Block Groups that are adjacent to the project limits of disturbance (LOD) within a half-mile buffer area shown on Figure 2-6. It is important to note that there are no existing residents who reside within the LOD, where construction would occur.

The 2015 US Census American Community Survey data, indicated that the total population of the SETR study area was 21,799 individuals. Of these, 4,181 individuals (19.2%) were identified as Black or African American; 15,154 individuals (69.5%) identified as White, and the remaining 2,464 (11.3%) as either American Indian, Alaskan Native, Asian, Pacific Islander, Hispanic, Other, or Two or more races. Table 2-2 shows the population breakdown, by race, within the SETR study area.

Table 2-2: Census Population by Race

Category	Maryland	Baltimore City	Project Study Area
Total Population	5,773,552	622,454	21,799
White Alone [1]	3,157,958 *(54.7%)*	174,785 *(28.0%)*	15,154 *(69.5%)*
Black Alone [1]	1,674,229 *(29.0%)*	387,565 *(62.3%)*	4,181 *(19.2%)*
Asian Alone [1]	316,694 *(5.5%)*	15,979 *(2.5%)*	833 *(3.8%)*

Category	Maryland	Baltimore City	Project Study Area
Other Alone [1,2]	28,199 *(0.5%)*	3,552 *(0.6%)*	36 *(0.2%)*
2 or more races Alone [1]	125,840 *(2.2%)*	12,081 *(1.9%)*	361 *(1.7%)*
Total Hispanic [3]	470,632 *(8.2%)*	28,492 *(4.57%)*	1,234 *(5.6%)*
Total Minority	**2,615,594 *(45.3%)***	**447,699 *(72.0%)***	**6,645 (*30.5%*)**
Low-Income Persons [4,5]	**476,732 *(8.3%)***	**125,697 *(21.0%)***	**3,038 *(14.0%)***

[1]These categories do not include Hispanic or Latino individuals
[2]Other includes American Indian/Alaskan Native, Native Hawaiian and Other Pacific Islander and some other race alone
[3]Hispanic can be any race
[4]Poverty status is determined for all people except institutionalized people. People in military group quarters, people in college dormitories, and unrelated individuals under 15 years old (American Fact Finder, http://factfinder.census.gov)
[5]Due to the unavailability of Poverty data from the 2010 US Census, current poverty status data has been derived from the 2015 American Community Survey (ACS), 5-Year Estimate. Please note that ACS data has a margin of error and does not cover 100 percent of the geographies used for this report.

Source: US Census 2010, 2015 American Community Survey-5-Year Estimate

Review of LEP data revealed that the study area contains a 1.26% LEP population, _which is lower than the Citywide average of 2.15%. The State of Maryland LEP population is 3.06%. The predominate LEP language within the study area is Spanish.

Table 2-3 provides the estimated census population increase in the SETR Study Area, compared to the population increase in Baltimore City and the State of Maryland. The population increase within Baltimore City is projected to increase 6.1% from 2010-2040. Projections at the sub-city, Census Tract or Block Group level are not available for the SETR study area. To project the SETR study area population in 2040 the population growth forecast for Baltimore City was applied.

Table 2-3: Census Population Increase

Geographic Area/Neighborhood	2010 Population	2040 Population	Percentage Increase between 2010-2040	Percentage of Population Over Age 65	Percentage of Population Under Age 18
Maryland	5,773,552	6,889,700	19.3%	13.8%	22.6%
Baltimore City	620,961	659,100	6.1%	12.3%	21.1%
SETR Study Area	22,048	23,402	6.1%	9.4%	14.7%

Source: US Census 2010, 2015 American Community Survey 5-Year Estimate

Table 2-4 provides a comparison of the income and poverty levels within Baltimore City and the SETR Study Area. Poverty levels are determined from the income levels for different sized households below which a household is defined as living with minimum level of resources to meet basic needs (food, clothing, shelter, utilities). The median household income for the SETR Study

Area is $78,089. An estimated 14% of people in the SETR Study Area are considered to be below the poverty level compared to 21% in Baltimore City.

Table 2-4: Income and Poverty Levels

Category	*Baltimore City*	*SETR Study Area*
Median Household Income	$42,241	$67,865
Per Capita Income	$25,707	$46,848
Persons Below Poverty Level – TOTAL	125,697	3,038
Percentage of Persons Below Poverty Level	21 %	14%

Source: US American Census Data 2014, and 2015 ACS 5-Year Estimates

Table 2-5 provides information on the housing value and home ownership rate of housing units within the SETR Study Area and Baltimore City. There are 11,391 existing housing units within the SETR Study Area. In 2015, approximately 84.7% of the housing units in the SETR Study Area were occupied, 15.3% were vacant. Of the occupied units, 63.0% were owner occupied, while 37.0% were rented.

Table 2-5: Housing Value / Home Ownership Rate

Geographic Area/Neighborhood	Housing Units	Occupied Housing Units	Owner Occupied Housing Units (%)	Average People / Occupied Housing Units
Baltimore City	296,727	242,268	47.1%	2.6
SETR Study Area	11,391	9,648	63.0%	2.3

Source: US American Census Data 2010, and 2015 5-Year Estimates

According to the 2015 US Census American Community Survey approximately 1,218 households out of the 9,648 households referenced in Table 2-5 do not have access to a vehicle.

2.2.2.2 Neighborhoods

Neighborhood data was gathered by reviewing information from Baltimore Neighborhood Indicators Alliance, Baltimore City DOT plans, and field surveys. The housing profile throughout the project study area varies in age and condition and consist primarily of rowhomes, single-family homes, apartments, and condominiums.

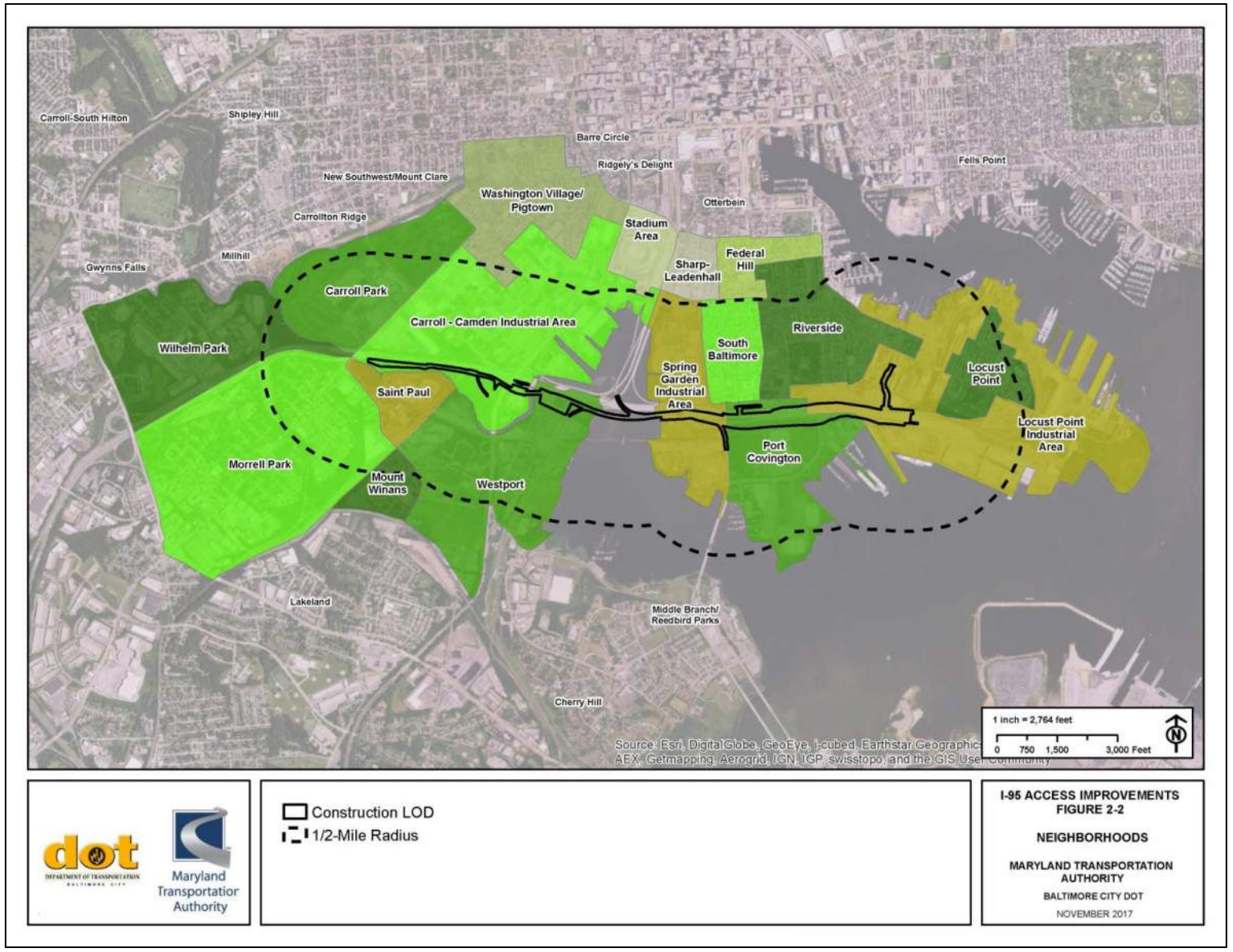
Figure 2-2 shows the neighborhoods in and adjacent to the SETR study area. Neighborhood data was gathered by reviewing information from Baltimore Neighborhood Indicators Alliance, BCDOT plans, and field surveys[4,5]. The neighborhoods within the SETR study area are primarily residential and contain various community facilities. There are also three industrial/commercial areas which include: Locust Point Industrial Area, Spring Garden Industrial Area, and Port Covington that either have no, or very few, residential units. These areas mainly consist of a cruise line terminal,

[4] Live Baltimore https://livebaltimore.com/neighborhoods/

[5] Baltimore Neighborhood Indicators Alliance http://bniajfi.org/

railways, warehouses, and merchandise piers. Additional neighborhoods located in the SETR Study Area include: Carroll Park, Carroll-Camden Industrial Area, Locust Point, Morrell Park, Riverside, Saint Paul, South Baltimore, Westport/Mount Winans, and Wilhelm Park. Some of the neighborhoods were combined when providing statistical information and a brief description of the specific area. Neighborhood demographic profiles where available and community facilities are described in further detail below.

Figure 2-2: Project Study Area Neighborhoods



Carroll Park
The Carroll Park neighborhood includes athletic fields, a playground, skateboard park and a golf course. Carroll Park and the Mount Clare Museum House, the oldest colonial structure in Baltimore City and a National Historic Landmark are located in the neighborhood. Housing stock in Carroll Park primarily consists of rowhomes, duplexes and apartments.

Carroll-Camden Industrial Area
The Carroll-Camden Industrial Area neighborhood is located northwest of the Port Covington peninsula. It primarily features warehouses, businesses and live/work spaces in addition to lofts, apartments and condominiums.

Locust Point/Locust Point Industrial Area/Port Covington
The Locust Point neighborhood is located at the end of a peninsula and is surrounded by the Locus Point Industrial Area neighborhood. Housing stock includes high tech home/office units, luxury urban high rises, apartment buildings and rowhomes. Latrobe Park is located in the neighborhood and includes a dog park, playground, basketball courts, tennis courts, baseball/soccer field, and a recreation center. The Locust Point/Locust Point Industrial Area/Port Covington is 87.7% White, 2.4% Black, 3.4% Asian, 5.0% Hispanic, 1.3% two or more races, 0.1% all other races (Hawaiian/Pacific Islander, Alaskan/Native American Other Race). Seventy-one percent of the housing units are owner-occupied. Approximately four percent (4.3%) of the family households live below the Federal poverty guidelines. Approximately five percent (5.1%) of the workers use public transportation to commute to work. Approximately eight percent (8.4%) of households have no vehicle. Currently the Port Covington neighborhood consists of seven rowhomes that function as extended business space and residential units.

Morrell Park
The Morrell Park neighborhood is divided by Washington Boulevard, a main transportation route. Housing consists mostly of attached rowhomes, duplexes and detached homes. The average household size is 2.3 persons, with a median household income of $35,687. Morrell Park is 70.7% White, 18.1% Black, 2.1% Asian, 6.6% Hispanic, 2.3% two or more races, 0.1% all other races (Hawaiian/Pacific Islander, Alaskan/Native American Other Race). Sixty-eight percent of the housing units are owner-occupied. Approximately twelve percent (12.5%) of the family households live below the Federal poverty guidelines. Approximately ten percent (10.9%) of the workers use public transportation to commute to work. The percentage of households with no vehicle available is approximately 26.6%.

Riverside
The Riverside neighborhood is located between Federal Hill and Locust Point. Leone Riverside Park is located in the Riverside neighborhood and includes baseball fields, basketball courts, a playground, public pool, and a pavilion space. The housing stock is primarily comprised of rowhomes and small single family lots.

Saint Paul
The Saint Paul neighborhood is the smallest neighborhood in the SETR study area. The housing stock is primarily comprised of rowhomes, single-family homes and apartments.

South Baltimore
The South Baltimore neighborhood is located just south of Federal Hill and beside Riverside. The housing stock is primarily rowhomes, apartments and condominiums. Community facilities include a public library on Light Street, Heath Street Park, a recreation center, and a public pool at Riverside Park.

Spring Garden Industrial
The Spring Garden Industrial Area is entirely industrial with the exception of one newly built complex of high-end rowhomes located in the neighborhood's northeast corner. Swann Park is located in this neighborhood and features ball fields and open parkland.

Westport/Mount Winans
The Mount Winans/Westport neighborhoods are located off Interstate 95/295, and overlook the Middle Branch Patapsco River waterfront. Housing consists mostly of rowhomes and apartments. The average household size is 2.9 persons, with a median household income of $40,479. Mount Winans/Westport is 21.4% White, 69.8% Black, 2.2% Asian, 5.6% Hispanic, 0.9% two or more races, 0.1% all other races (Hawaiian/Pacific Islander, Alaskan/Native American Other Race). Forty-nine percent of the housing units are owner-occupied. 23.7% of the family households lives below the Federal poverty guidelines. 19.8% of the workers use public transportation to commute to work. The percentage of households with no vehicle available is approximately 29.1%.

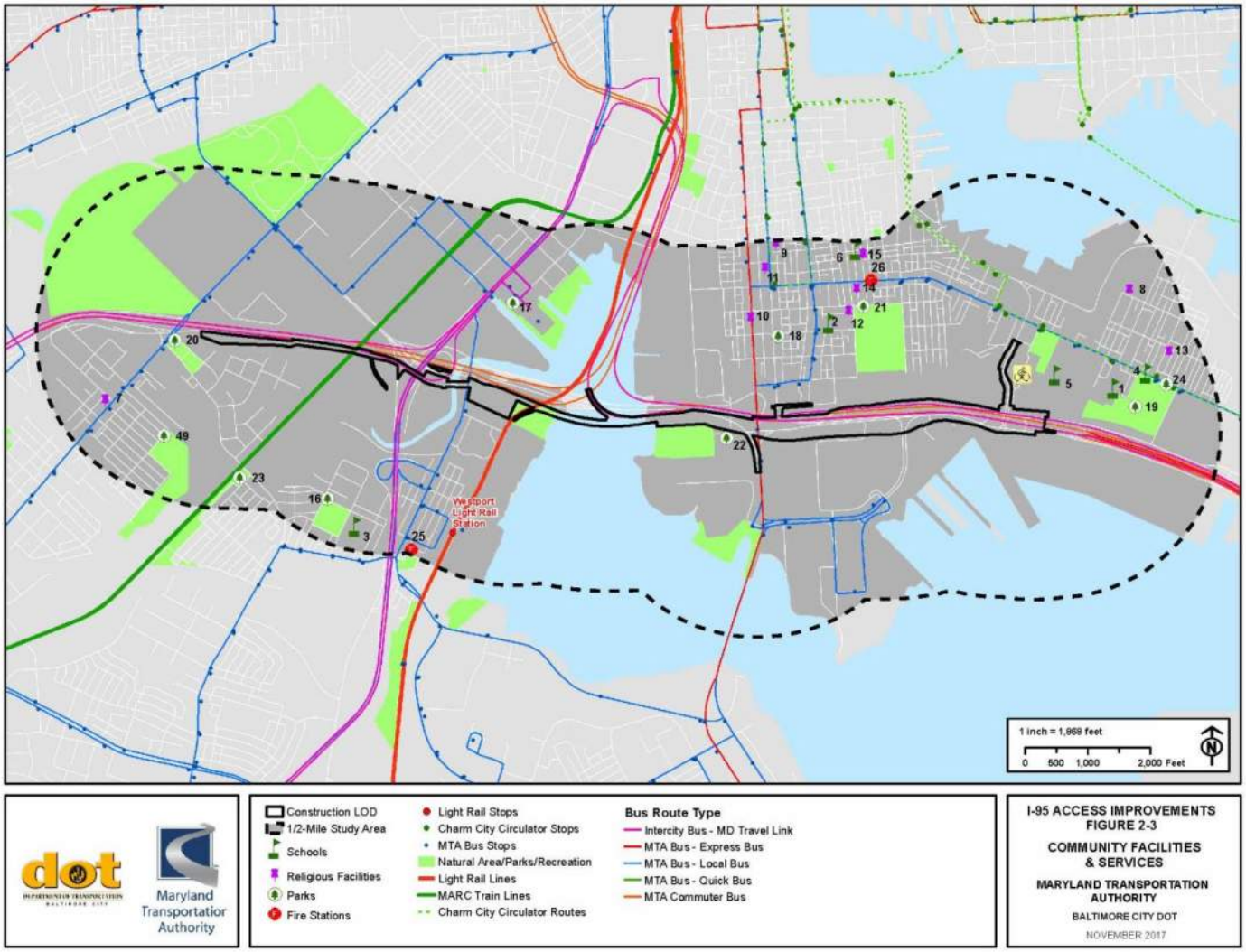
Wilhelm Park
Wilhelm Park consists primarily of business parks, except for a few rowhomes and single-family homes in the northeast section. Seton Keough High School (one of the city's all-girls Catholic high schools) is also located within the neighborhood in addition to Babe Ruth Park Field at the former Cardinal Gibbons school complex.

2.2.2.3 Community Facilities

Community facilities located in the study area consist of police, fire, and emergency services, education facilities, health care facilities, places of worship, post offices, parks and recreation areas and transportation services. Two libraries and one post office are also located within the study area. There are no hospitals or long-term care/assisted living facilities located with the study area. However, MedStar Harbor Hospital is located approximately one mile south in the Cherry Hill neighborhood.

The locations of community facilities in the SETR study area were identified and are presented, by type, in this section, and can be viewed in Figure 2-3.

Figure 2-3: Community Facilities within the Study Area



A. Police, Fire, and Emergency Medical Services

The SETR study area is served by the Baltimore City Police Department. The Baltimore City Police Department is divided up into nine patrol districts. The project area falls within the Southern District, which extends south from the Inner Harbor along the water front to Hawkins Point, west to the Lakeland Community, north to Baltimore Street and Payson Street and east back to the Harbor. The district borders Anne Arundel County and Baltimore County, as well as the Southwest, Western and Central Districts. The Southern District Station is located on Cherry Hill Road. Fire and Emergency Medical Services are provided to the SETR Study Area by the Baltimore City Fire Department. Fire Stations are listed in Table 2-6.

Table 2-6: Fire Stations

Name	Neighborhood	Address
BCFD 26 Riverside/Locust Point	Locust Point	1001 E Fort Avenue
BCFD 58 Westport	Westport	2524 Annapolis Road

There are no hospitals or long term care/assisted living facilities within the SETR study area. However, MedStar Harbor Hospital is located to the south of the SETR study area in the Middle Branch/Reedbird Parks neighborhood, adjacent to Cherry Hill neighborhood.

B. Places of Worship and Schools

Several community facilities are located in within the SETR study area. These facilities include places of worship and schools. Tables 2-7 and 2-8 list these facilities by type, neighborhood, and street address.

Table 2-7: Places of Worship

Name	Neighborhood	Address
Evangelical Bible Church	Morrell Park	2444 Washington Boulevard
Christ United Church Of Christ	Locust Point	1308 Beason Street
Church Of Advent Church Of Federal Hill	South Baltimore	1301 S Charles Street
Inner Harbor Church Of God	South Baltimore	1632 S Hanover Street
Grace United Church of Christ	South Baltimore	1404 S Charles Street
Riverside Baptist Church	Riverside	1602 Johnson Street
Church of Redemption	Locust Point	1401 Towson Street
Salem Evangelical Lutheran Church	Riverside	1530 Battery Avenue
St. Mary Star of the Sea	Riverside	1400 Riverside Avenue

Table 2-8: Schools

School Name	Neighborhood	Address
Francis Scott Key Elementary/Middle	Locust Point	1425 E Fort Avenue

School Name	Neighborhood	Address
Thomas Johnson Elementary/Middle	Riverside	100 E Heath Street
Westport Academy Elementary/Middle	Westport	2401 Nevada Street
Baltimore Montessori School	Locust Point	1530 E Fort Avenue
Kiddie Academy of Locust Point	Locust Point	1215 E Fort Avenue
St. Ignatius Loyola Academy	Riverside	300 Gittings Street

C. Parks and Recreational Facilities

Parkland and recreational properties located within 500 feet of the Recommended Preferred Alternative include Maisel Street Park, Gwynns Fall Trail, and Swann Park. Each is described in further detail below.

Maisel Street Park is located south of I-95, between Gwynns Falls and the existing railroad tracks, and adjacent to the intersection of US 1/Washington Boulevard and Hollins Ferry Road. The park consists of an open area of 5.7 acres with some tree cover and no park amenities. No plans for capital improvements or other changes to this park are planned, therefore, the conditions of the park in the future would resemble existing conditions.

The Gwynns Falls Trail currently spans 22 continuous miles, offering a hiking and biking venue with access to a scenic, historic greenway stream valley (Baltimore City, 2017; Gwynns Falls Trail, 2017). From the Inner Harbor, the trail extends west to the edge of Baltimore City and south along the Middle Branch to the Patapsco River. Approximately 200 feet of the existing Gwynns Falls Trail along Annapolis Road crosses below the I-95 overpass, of which approximately 150 feet are within the Recommended Preferred Alternative's LOD.

Swann Park is located at the western terminus of McComas Street, east of the Middle Branch, and south of I-95. Baltimore City Department of Recreation and Parks owns and operates the park. The park encompasses approximately 11 acres and contains ball fields, walking paths, and an equipment shed. The northern section of Swann Park is located within the Recommended Preferred Alternative's LOD.

According to the 2016 Port Covington Master Plan, Swann Park would be moved south of its current location in 2027; then, the existing location would be removed. Relocated Swann Park, or a newly named park, would be approximately 26 acres and would include sports fields, recreational facilities, and shorefront greenspace.

Twenty-two parks and recreation facilities are located in the neighborhoods within and near to the SETR study area. These are listed in Table 2-9. Figure 2-4 shows public recreation facilities and parks.

Figure 2-4: Parkland and Recreational Facilities within the Study Area

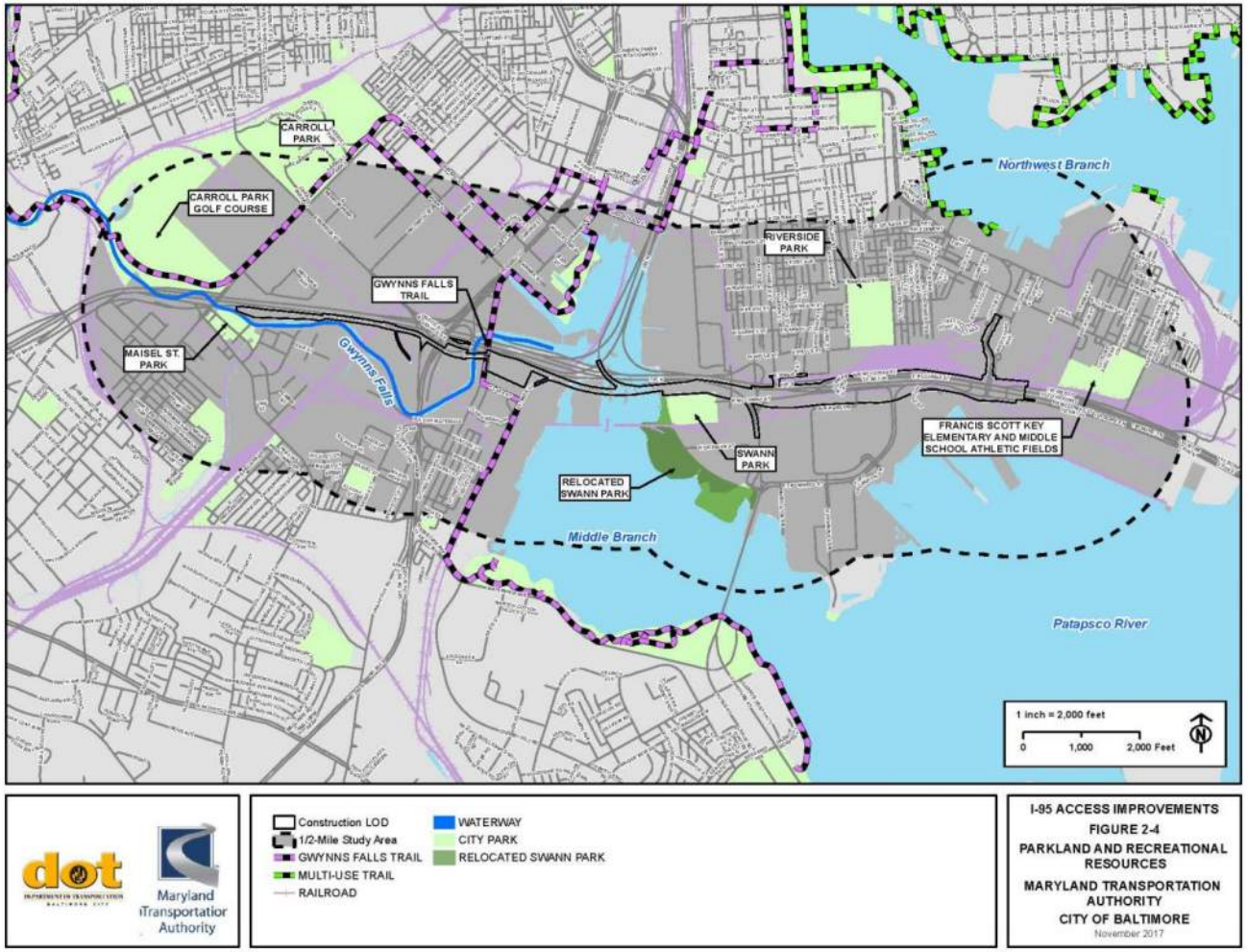


Table 2-9: Parks and Recreation Facilities

Facility Name	Neighborhood	Address
Florence Cummings Park	Westport	2501 Maisel Street
Gwynns Falls Trail South	Westport	2100 Haines Street
Heath Street Park	South Baltimore	1701 Charles Street
Latrobe Park	Locust Point	1529 Fort Avenue
Maisel Street Park	Saint Paul	1900 Maisel Street
Riverside Park	Riverside	301 Randall Street
Swann Park	South Baltimore	201 Mccomas Street
Hollins Ferry and B&O Park	Mount Winans	2300 Hollins Ferry Road
Locust Point Recreation Center	Locust Point	1627 E Fort Avenue

D. Transportation Services

There are existing multi-modal connections in and around I-95 where improvements are proposed near the Port Covington peninsula. Transportation access to the peninsula is primarily accessible via north-south connections at Hanover Street and Key Highway and east-west access is provided at McComas Street. Multi-modal linkages in addition to traditional car and truck routes are available and include transit, bicycle and pedestrian modes.

Transit

Public Transportation within the SETR study area includes the MARC Train (Camden line), Maryland Transit Administration (MTA) Light Rail, MTA Commuter Bus, MTA LocalLink Bus, MTA Express BusLink, Charm City Circulator, and the Baltimore Water Taxi. Further detail on the existing conditions of these modes of transportation are provided below.

MARC

The Camden Line of the MARC Train system runs through the SETR study area and connects Baltimore to Washington D.C. with terminus points at Camden and Union Stations, respectively[6]. The Camden Line of the MARC Train System runs only on weekdays. Though the train travels through the SETR study area, there are no stations within the project study area's boundary, with the Camden Station located to the immediate north and St. Denis Station located south of the SETR study area.

MTA Light Rail

The MTA operates light rail service within Baltimore City, connecting Hunt Valley to BWI Marshall Airport and Hunt Valley/Timonium to Cromwell Station/Glen Burnie[9]. These lines run parallel through the majority of the City, including the SETR study area. There are three Light Rail Stations within the SETR study area: Cherry Hill, Westport, and Hamburg Street. The Cherry Hill and Westport Stations are located south of the study area, while the Hamburg Street Station is north of the SETR study area near M&T Bank Stadium.

[6] https://mta.maryland.gov/

MTA Bus

The MTA Commuter Bus, MTA LocalLink Bus, and MTA Express BusLink all provide service within the SETR study area. These three bus systems account for 51 different bus lines and 179 bus stops within the SETR study area[9]. During the summer of 2017, Baltimore began its BaltimoreLink service. The BaltimoreLink provides a route connecting Curtis Bay to Johns Hopkins University and Morgan State University straight through the project vicinity via the Silver Line. The Silver Line has three stops within the project's vicinity at Port Covington, Federal Hill, and Otterbein.

Charm City Circulator

The Charm City Circulator's Purple and Banner Lines have stops within the project's vicinity. The Purple Line terminates in Federal Hill and the Banner Line terminates at Fort McHenry. Neither line crosses I-95 onto the Port Covington peninsula.

Water Taxi

There are two water taxi services in Baltimore, that operate in portions of the SETR study area. The Baltimore Water Taxi[7] includes five different lines that run seasonally May 1st through September 5th, seven days a week, with the exception of the Fort McHenry Landing which is open from April 1st through September 30th. A year-round Harbor Connector service, provided by the Charm City Circulator, operates three different lines.

Three landings are located within the SETR study area; Landing 9: Anthem House, Landing 10: Locust Point, and Landing 17: Fort McHenry National Monument. The Anthem House Landing is accessed by the Yellow Line connecting with Federal Hill and Locust Point, and the Fort McHenry Landing is accessed through the Purple Line from Fell's Point. The Locust Point Landing operates seasonally with stops from the Yellow Line, but also year-round as part of the Harbor Connector Grey Line to Maritime Park and the Orange Line to Canton.

E. Bike and Pedestrian

Bike trails within the SETR study area link Middle Branch Park and Carroll Park to Federal Hill Park and the Inner Harbor on the Port Covington/Locust Point Peninsula. Sidewalks exist along some sections of Hanover Street, McComas Street, and Key Highway within the SETR study area. However, there are currently no continuous pedestrian or bicycle facilities connecting the Port Covington peninsula to the neighborhoods located north of it because of the barriers created by the elevated I-95 freeway and the existing CSX rail facilities located just north of the I-95 viaduct.

According to the Baltimore City Bike Master Plan (2015) there are numerous bicycle routes in the area. The plan identifies existing and proposed bike network facilities based on four facility types:

- Main Routes (Bike Lanes, Buffered Bike Lanes, and Cycletracks);
- Minor Routes (Sharrows, Shared Bus/Bike Lane, Signed Routes, and Contraflows);
- Neighborhood Routes (Bike Boulevards, and Bike Cut-Thru's); and
- Trails (Off-Road Trails and Sidepaths).

Portions of the Gwynns Falls Trail are located near Middle Branch Park to the south and west, outside of the project area. Within the area there is only one Main Route on Fort Avenue, with

[7] http://www.baltimorewatertaxi.com/stops-schedules-routes

the remaining Minor Routes connecting the Inner Harbor to Fort McHenry. The majority of routes are unsigned where bicyclist share the city streets with motorists.

Although no designated bike routes exist on the Port Covington peninsula currently, the Baltimore City *Bike Master Plan*[8] and the Port Covington redevelopment have planned connection routes to Port Covington and trails through much of the peninsula. In addition as part of the Recommended Preferred Alternative, a new pedestrian and bicycle path will be provided, located under I-95, connecting Port Covington at McComas Street to South Baltimore at Light Street. Additional shared use paths and sidewalks will be provided along McComas Street and Key Highway, to further improve multimodal connections to Port Covington.

2.2.2.4 Economic

This section provides a description of the existing and forecasted regional and local employment characteristics, and tax base. The effects discussion focuses on the No-Build and Recommended Preferred Alternatives' economic effects on property, regional business activities, local businesses and employment, and tax base.

A. Regional Employment Characteristics

Baltimore City's employment levels steadily regressed from the 1970s through the first decade of the new millennium; however, the number of jobs in the City increased by 5.1% between 2010 and 2015 (an average of 0.85% per year) and is expected to increase an additional 8.8% between 2015 and 2040 (an average of 0.35% per year). Comparatively, the number of jobs in Maryland increased by 6.2% from 2010 to 2015 (an average of 1% per year) and is expected to increase an additional 17.3% by 2040 (an average of 0.7% per year). Table 2-10 provides further detail on the number of jobs and their growth trends for both the City and State.

Table 2-10: Regional Employment and Growth

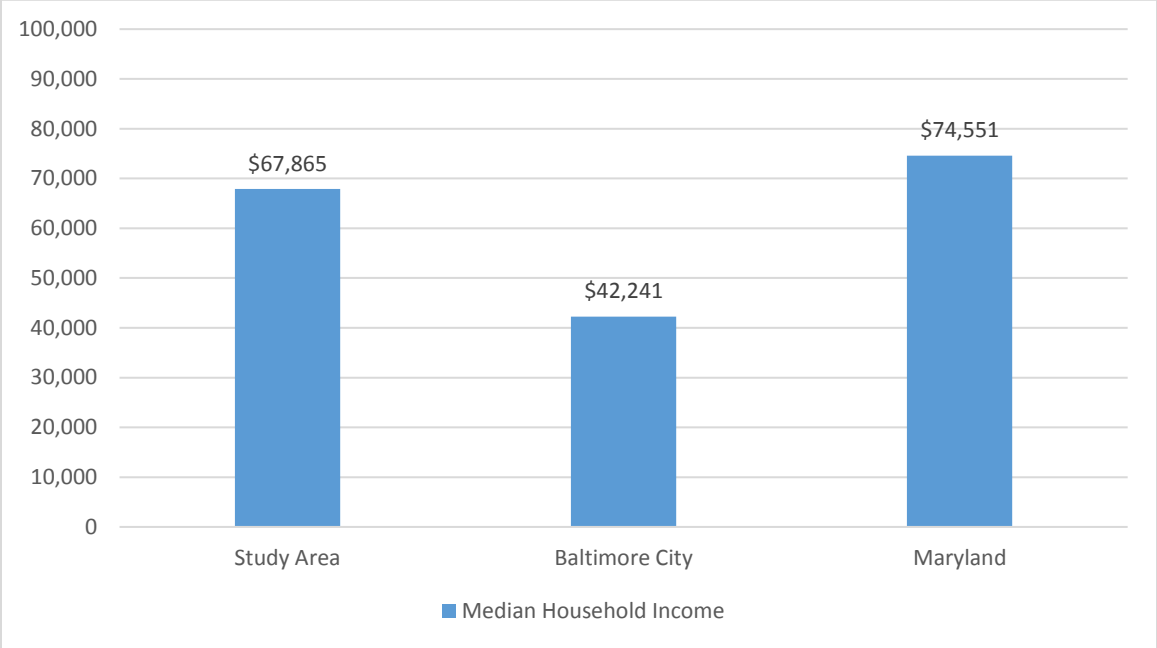
Area	Year (number of jobs)				Percentage Change		
	2000	2010	2015	2040	2000-2010	2010-2015	2015-2040
Baltimore City	446,406	381,313	400,600	435,700	↓ 14.6%	↑ 5.1%	↑ 8.8%
Maryland	3,065,202	3,344,652	3,552,000	4,167,000	↑ 9.1%	↑ 6.2%	↑ 17.3%

Source: Projections from 2015 to 2040 prepared by the Maryland Department of Planning, January 2015

The median household income for Baltimore City was $42,241 in 2015. The median household income was nearly 61% higher ($67,865) within the SETR study area and nearly 76% higher ($74,551) in Maryland, as shown on Figure 2-5.

[8] https://transportation.baltimorecity.gov/bicycle-plan

Figure 2-5: Median Household Income (2015)



Source: US Census Bureau , 2011-2015 American Community Survey 5-Year Estimates

The City's economy is dominated by private sector employment (79.3% of the total), followed by state government (10.4%), local government (7.3%), and federal government employment (3.0% of the total). Within the private sector industries, 29.9% of the total is accounted for in the education and health services industry, followed by professional and business services (12.7% of the total), trade, transportation and utility (12.3%), and leisure and hospitality (8.9%). The remaining 15.4% of the total is distributed between financial activities (4.8%), manufacturing (3.2%), construction (3.1%), other services (3.1%), and information (1.2% of the total).[9] Similarly, the state's economy is also dominated by the private sector industry employment at 81.3% of the total, followed by local government (9.4%), federal government (5.6%), and state government (3.8% of the total), as shown in Table 2-11.

Table 2-11: Employment by Industry

Employment Type	Baltimore City (percentage)	Maryland (percentage)
Federal government	3.0%	5.6%
State government	10.4%	3.8%
Local government	7.3%	9.4%
Private sector	79.3%	81.3%
Construction	3.1%	0.2%
Manufacturing	3.2%	5.9%
Trade, transportation, and utilities	12.3%	4.0%
Information	1.2%	17.7%
Financial activities	4.8%	1.5%

[9] Maryland Department of Labor, Licensing and Regulation, Office of Workforce Information and Performance, 2015

Employment Type	Baltimore City (percentage)	Maryland (percentage)
Professional and business services	12.7%	5.4%
Education and health services	29.9%	16.6%
Leisure and hospitality	8.9%	16.1%
Other services	3.1%	10.3%
Total	100.0%	100.0%

Source: Maryland Department of Labor, Licensing and Regulation, Office of Workforce Information and Performance, 2016

Of the top 21 major employers in Baltimore City, 14 are in the education and health services industry. The remaining seven account for a variety of services, including Under Armour, headquartered on the Port Covington peninsula. The top six employers in the City are in the education and health services industry. They are as follows:

- Johns Hopkins University (25,800 employees)
- Johns Hopkins Hospital and Health System (18,500 employees)
- University of Maryland Medical System (11,450 employees)
- University System of Maryland (9,010 employees)
- MedStar Health (6,175 employees),
- LifeBridge Health (5,315 employees)

B. Local Employment Characteristics

Employment within the SETR study area is primarily comprised of industrial services, manufacturing and distribution centers, and office space. Under Armour is the only employer within the SETR study area with over 1,000 workers (1,855 employees). Some employers located within in the SETR study area to the south of I-95, where most of the proposed improvements would take place, include:

- Under Armour
- NGK-Locke, Inc.
- Baltimore Sun Company Inc.
- City Garage/The Foundery
- Tidewater Yacht Service Center, Inc.
- C Steinweg of Baltimore
- CSX Corporation
- Howard Uniform Company
- Systems Furniture Installation Company
- Annapolis Road Library Operations Center

C. Tax Base

Property taxes and income taxes are the City's major sources of income with property taxes accounting for 49% of total revenue, and income taxes providing 19%, according to the FY 2018 Baltimore City Preliminary Budget Plan[10]. The real and personal property tax rates are proposed to be maintained at $2.248 and $5.62 per $100 of assessed value respectively.

[10] City of Baltimore (2017). Fiscal 2018 Preliminary Budget Plan.

2.2.2.5 Environmental Justice Populations

A. Existing Conditions

The study area considered for the EJ analysis includes all or parts of 23 Census Block Groups (all within Baltimore City). The total population in the study area is 21,799 persons, with 6,645 of these persons (30.5%) identifying themselves as minorities and 3,038 persons (14.0%) meeting the definition of low-income. Environmental Justice Populations within the SETR study area are shown on Figure 2-6.

The Census data revealed that the study area contained a percentage of minority persons (30.5%) which is lower than the Citywide average of 72%. The State of Maryland minority population is 45.3%.

The Census Block Groups contained a percentage of low-income persons (14%) that is lower that the Citywide average (21%).

Of the 23 census block groups in the study area, four Census Block Groups contain minority populations of 50% or more (210100.1, 210200.1, 250301.1, 250301.2) and no Census Block Groups contain low-income populations of 50% or more. Figure 2-6 and Table 2-12 below present the Census Block Groups that meet or exceed the EJ thresholds. Five out of 23 Census Block Groups (21.7%) were identified as minority and /or low-income areas using the 50% threshold or the “meaningfully greater” threshold criteria for presence of a low-income population. These locations were considered EJ areas for the purposes of the EJ impact analysis presented in this report.

Figure 2-6: EJ and Non-EJ areas within the Study Area

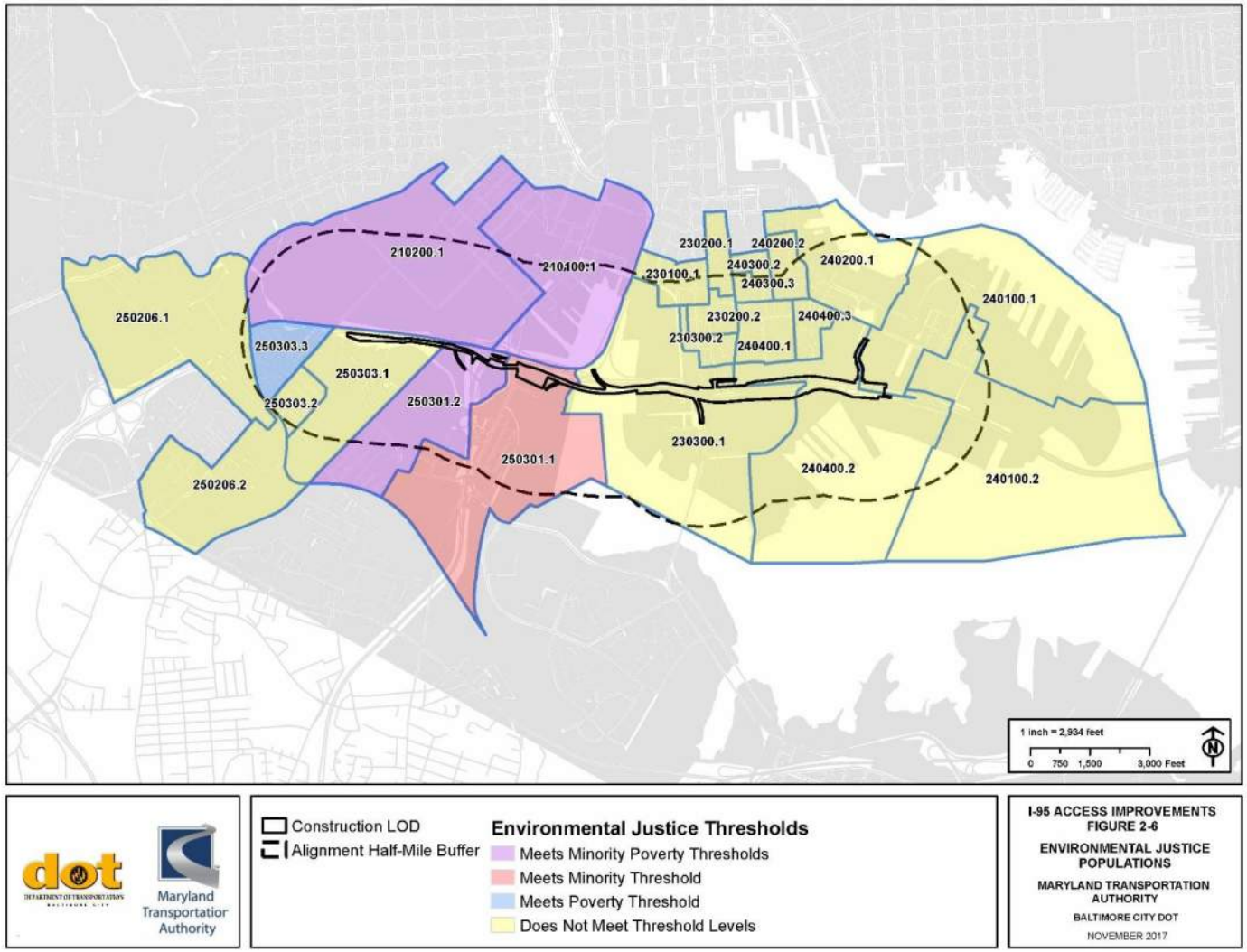


Table 2-12: Project Study Area Census Block Groups that Meet Environmental Justice Category Definitions

Census Block Group	Total	White	% White	Black/ African American	% Black/ African American	Asian	% Asian	Other	% Other	Two or More Races	% Two or More Races	Hispanic	% Hispanic	Total Minority	% Total Minority	EJ Category Minority	Total Low-income %	EJ Category Low Income
210100.1	941	280	29.7%	608	64.6%	9	0.95%	0	0%	5	0.53%	39	4.14%	661	70%	**YES**	32.94%	**YES**
210200.1	841	353	41.9%	428	50.8%	0	0%	0	0%	9	1.07%	51	6.06%	488	58%	**YES**	35.08%	**YES**
230100.1	909	694	76.3%	45	4.95%	90	9.9%	0	0%	37	4.07%	43	4.73%	215	24%	NO	8.58%	NO
230200.1	972	688	70.7%	143	14.7%	35	3.6%	0	0%	17	1.7%	89	9.15%	284	29%	NO	2.78%	NO
230200.2	1,169	1,025	87.6%	4	0.34%	26	2.2%	0	0%	40	3.42%	74	6.33%	144	12%	NO	11.3%	NO
230300.1	141	109	77.3%	7	4.96%	25	17.73%	0	0%	0	0%	0	0%	32	23%	NO	6.38%	NO
230300.2	981	894	91.1%	36	3.66%	5	0.50%	0	0%	4	0.4%	42	4.28%	87	9%	NO	10.66%	NO
240100.1	2,133	1,907	89.4%	56	2.62%	45	2.1%	8	0.37%	18	0.84%	99	4.64%	226	11%	NO	4.97%	NO
240100.2	912	868	95.17%	0	0%	8	0.87%	0	0%	7	0.76%	29	3.17%	44	5%	NO	5.92%	NO
240200.1	2,171	1,772	81.6%	90	4.14%	147	6.77%	0	0%	77	3.54%	85	3.91%	399	18%	NO	3.87%	NO
240200.2	825	753	91.27%	33	4.0%	13	1.57%	0	0%	16	1.93%	10	1.21%	72	9%	NO	1.7%	NO
240300.2	602	454	75.4%	41	6.81%	54	8.97%	24	3.98%	0	0%	29	4.81%	148	25%	NO	24.09%	NO
240300.3	582	502	86.25%	10	1.7%	59	10.1%	0	0%	10	1.71%	1	0.17%	80	14%	NO	2.41%	NO
240400.1	1,081	927	85.75%	40	3.7%	31	2.86%	0	0%	8	0.74%	75	6.93%	154	14%	NO	6.01%	NO
240400.2	468	343	73.29%	0	0%	32	6.83%	0	0%	0	0%	93	19.8%	125	27%	NO	11.11%	NO
240400.3	1,381	1,179	85.37%	34	2.46%	92	6.66%	0	0%	58	4.19%	18	1.3%	202	15%	NO	1.38%	NO
250206.1	332	258	77.7%	53	15.9%	0	0%	0	0%	0	0%	21	6.32%	74	22%	NO	19.28%	NO
250206.2	788	690	87.56%	15	1.9%	25	3.17%	0	0%	13	1.64%	45	5.71%	98	12%	NO	11.42%	NO
250301.1	695	149	21.4%	519	74.67%	0	0%	0	0%	3	0.43%	24	3.45%	546	79%	**YES**	11.65%	NO
250301.2	1,749	11	0.62%	1,599	91.4%	0	0%	4	0.2%	0	0%	135	7.71%	1738	99%	**YES**	39.68%	**YES**
250303.1	580	464	80%	83	14.3%	19	3.27%	0	0%	0	0%	14	2.41%	116	20%	NO	25.53%	NO
250303.2	871	465	53.38%	43	4.93%	113	12.97%	0	0%	39	4.4%	211	24.22%	406	47%	NO	29.51%	NO
250303.3	675	369	54.6%	294	43.5%	5	0.74%	0	0%	0	0%	7	1.03%	306	45%	NO	31.85%	**YES**

2.2.3 Probable Consequences

2.2.3.1 Neighborhoods and Community Facilities

Potential effects to community and neighborhood cohesion are assessed by determining the likelihood of disruption in the interaction among people and groups within a community, the use of community facilities and residential stability resulting from the construction and operation of a project. These impacts may occur because of a physical barrier, substantial change in land use, displacements, or other attendant project effects. No residential acquisitions are associated with the No Build or Recommended Preferred Alternative. The No Build and Recommended Preferred Alternative would not impede interactions between residents or neighborhood cohesiveness.

Transit dependent populations within the study area would maintain access to transit routes throughout the study area. However, delays in emergency response services could be impacted by traffic congestion under the No Build Alternative. Delays in service are not anticipated under the Recommended Preferred Alternative due to the implementation of improved signalization, enhanced ramp configurations and moderate improvement in LOS. In general, the introduction of the project would not affect the interactions among residents and their community facilities and services. Temporary impacts to local bus service during the construction of the project may impact transit dependent populations. Potential temporary impacts may include minimal delays due to roadway speed reductions, detours and the shifting or consolidation of bus stop locations.

Potential effects to community facilities and services are assessed by determining if there are property impacts or changes to access or parking that would affect them. No long-term effects to operation and function of community facilities and services are anticipated. The No Build Alternative and Recommended Preferred Alternative are not anticipated to result in any permanent impacts to transit, bike and pedestrian, and/or water taxi routes/facilities within the study area.

The Recommended Preferred Alternative would pass through the northern portion of the current location of Swann Park. If Swann Park remains open and in use, construction of the realignment of McComas Street and the ramp spur from I-395 Southbound to McComas Street would require approximately 3.7 acres. An adverse impact would occur, as the park would be unusable both during and following the construction of the Recommended Preferred Alternative. The Recommended Preferred Alternative would result in permanent piers in the northern end of existing Swann Park. A portion of the park would also be converted to transportation land use for the realignment of McComas Street. If Swann Park is not relocated prior to the construction of the Recommended Preferred Alternative, there would be a significant, adverse impact to the existing Swann Park. However, the significant impact to the existing Swann Park would conclude once the Relocated Swann Park is operational. If Relocated Swann Park would not be in public use prior to the construction of the Recommended Preferred Alternative, MDTA would work with Baltimore City to relocate any sporting and recreational events. More detailed discussion regarding effects to Parks is located in Chapter 4, Section 4(f) analysis.

Temporary effects to the use of the Gwynns Falls Trail during construction would be avoided to the greatest extent practicable, or otherwise would be temporary and intermittent if they were to occur; therefore, these effects would not be significant. Following construction, the Recommended Preferred Alternative would resemble the current conditions of the I-95 structure

near the Gwynns Falls Trail, and it would not alter the Gwynns Falls Trail or otherwise affect its use. Therefore, the Recommended Preferred Alternative would not have a permanent impact to the Gwynns Falls Trail segment. Potential temporary construction impacts along the Gwynns Falls Trail would be managed with an approved Traffic Control Plan. MDTA and the Baltimore City Department of Recreation and Parks would continue to coordinate with the Sagamore Development Company regarding the development schedule for Relocated Swann Park. As no short- or long-term impacts are anticipated for the Maisel Street Park, no mitigation would be needed for this property.

The Recommended Preferred Alternative includes the construction of a new pedestrian and bicycle path to connect Port Covington to south Baltimore neighborhoods under I-95. This new path is not considered under the No Build Alternative. This addition is considered a benefit to community. Construction of the Recommended Preferred Alternative could temporarily affect bicycle and pedestrian facilities and activities, and may include temporary sidewalk and trail route detours. Overhead protection measures or detours would be employed, if necessary, to guard from overhead construction or temporary trail closures. Proper signage would be installed to address safety.

2.2.3.2 Economic Effects

The following section addresses the potential economic effects resulting from the No Build and Recommended Preferred Alternatives.

A. Regional Business Activities

The No-Build Alternative would not mitigate the future increases in traffic and therefore could result in increased commute times on I-95 or the local roadway system. The resulting decrease in mobility would not support the regional economic growth anticipated with the expected population and employment growth and planned development.

Transportation benefits associated with the Recommended Preferred Alternative include reduced travel time and more efficient mobility within the region. Businesses would benefit from the improved transportation system's ability to accommodate projected increases in traffic.

No negative, long-term regional economic impacts are expected as a result of the proposed improvements. The Recommended Preferred Alternative would not alter access to any large regional employers or employment centers. MDTA and Baltimore City DOT anticipate that mobility improvements gained from the Recommended Preferred Alternative would support the region's planned economic activities.

B. Local Businesses and Employment

The No-Build Alternative would not require any business displacements within the SETR study area and would not result in any access changes to existing businesses. However, increased levels of traffic congestion associated with the build out of the Port Covington redevelopment would decrease mobility throughout the SETR study area, and may eventually have a negative impact on those existing businesses. The No-Build Alternative would not mitigate the increased traffic.

The displacement of the three businesses, Howard Uniform Company, Systems Furniture Instillation Company, and ARLOC, would reduce current employment in the study area, by approximately 38 employees. The Recommended Preferred Alternative would also include partial

property acquisition from commercial and industrial properties, but the function of those properties is not expected to be altered. The Port Covington Master Plan includes 1.5 million square feet of destination, attraction, entertainment, and specialty retail space; 1.5 million square feet of office space; and 500,000 square feet of industrial/light manufacturing space, which will increase employment on the peninsula. The Recommended Preferred Alternative will provide better access and mobility to those new jobs, as compared to the No-Build Alternative.

C. Tax Base

The No-Build Alternative includes the approved Port Covington redevelopment and would not directly impact properties that contribute to the tax base. The No-Build Alternative would not mitigate future increases in traffic which may limit increases to tax base from additional future development/redevelopment opportunities in the area.

The Recommended Preferred Alternative would temporarily affect tax revenue because, current tax-generating properties are directly affected, since they will be acquired for right-of-way. The total displacement of the Howard Uniform Company, Systems Furniture Instillation Company, and ARLOC, would temporarily reduce tax revenue in the SETR study area. However, the Recommended Preferred Alternative supports the already approved Port Covington redevelopment that would increase the City's future tax base.

2.2.3.3 Displacements and Property Acquisitions

No residential or business displacements would occur under the No-Build Alternative. The Recommended Preferred Alternative would require the acquisition of approximately 13.2 acres of right-of-way from industrial properties. All right-of-way impacts are entirely to industrial use properties. Partial acquisitions account for approximately 7.0 acres, while the total acquisition of the industrial property at 1915 Annapolis Road is approximately 6.2 acres. This acquisition would displace three industrial tenants, the Howard Uniform Company, Systems Furniture Installation, and the Annapolis Road Library Operations Center (ARLOC).

The Howard Uniform Company manufactures and distributes uniforms and accessories for law enforcement, fire, public safety, military school, transit, yacht club, and industrial uniforms. Its estimated annual revenues are approximately $2.8 million and employs approximately 23 people[11].

The Systems Furniture Installation Company, operates primarily in the Office Furniture Installation business/ industry within the Construction - Special Trade Contractors sector. It has been in operation for approximately 24 years. Systems Furniture Installation is estimated to generate $1.5 million in annual revenues, and employs approximately 15 people at this location.

ARLOC consists of a 40,000 square foot warehouse space leased by the Enoch Pratt Free Library to temporarily store books from its Central Library while the building is renovated. Renovations are expected to begin in 2018.

Property acquisition activities, including relocations, will be performed in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (*Uniform Act*),

[11] Dun & Bradstreet (www.dandb.com)

as amended and all applicable Maryland State laws that establish the process through which MDTA may acquire real property through a negotiated purchase or through condemnation.

Displaced persons and businesses within the area needed for the Project may be eligible for benefits under Maryland's Relocation Assistance Program. Benefits could include advisory services, moving and reestablishment costs, and other payments and services as provided by law.

All activities related to acquisitions and displacements would be conducted in conformance with the following:

- *Uniform Relocation and Real Property Acquisitions Policies Act of 1970* (42 United States Code [USC] 4601), as amended (*the Uniform Act*), and *Public Law 105-117*. These statutes mandate that certain relocation services and payments be made available to eligible residents, businesses, and nonprofit organizations displaced as a direct result of projects undertaken by a federal agency or with federal financial assistance. *The Uniform Act* provides for uniform and equitable treatment for persons displaced from their homes and businesses, and it establishes uniform and equitable land acquisition policies.
- *The Real Property Article of the Annotated Code of Maryland*, Title 2, Section 2-112 and Titles 12, Subtitle 2, Sections 12-201 to 12-212 govern relocation and assistance for displacements associated with state actions.

Anticipated property acquisitions and temporary construction easements are listed in Table 2-13.

Table 2-13: Property Acquisitions and Easements by Neighborhood

Site	Neighborhood	Acres Acquired	Temporary Construction Easements (Acres)
51	Port Covington	0	0.07
56	Port Covington	4.85	1.52
68	Locust Point Industrial Area	0.18	1.17
75	Locust Point Industrial Area/Port Covington	1.52	0.09
86	Westport	0.36	0
87	Westport	6.18	0
91	Carroll Camden Industrial Area	0.02	0.07
92	Carroll Camden Industrial Area	0.05	0.31
93	Carroll Camden Industrial Area	0	0.01
94	Locust Point Industrial Area	0	0.30
95	Locust Point Industrial Area	0	0.03
	Total	**13.16**	**3.57**

2.2.3.4 Potential Effects on Environmental Justice Populations

Eighteen of the 23 Census Block Groups (78.3%) – located in the Saint Paul, Morrell Park, Spring Garden Industrial Area, South Baltimore, Riverside, Locust Point, Locust Point Industrial Area, and Port Covington did not meet the criteria for an "EJ area" based on the threshold calculations. However, these areas were reviewed for the presence of minority and low-income populations as

defined by USDOT and FHWA to determine approximate locations and to consider potential effects. The Locust Point Industrial Area and Port Covington areas were determined not to have residential dwellings within the analysis area. Potential impacts to EJ populations located in the five "EJ" areas (Carroll Park, Carroll Park Industrial Area, Mount Winans, Westport and Wilhelm Park) are discussed as applicable in the environmental consequences section. As used in this section, the term "non-EJ" does not imply the absence of EJ populations living in that area. The distinction between EJ areas and non-EJ areas is used in this report only as one tool for assessing the potential for disproportionate impacts on EJ populations.

The analysis presented in this section uses an conservative approach to determine potential effects to populations. The analysis is based upon potential effects as identified for the following disciplines in addition to the consideration of direct effects occurring within ½- mile of the LOD and the full study area as appropriate:

- Property Acquisitions
- Community and Neighborhood Cohesion and Isolation
- Transportation
- Visual Character
- Community Facilities and Services
- Air Quality
- Noise
- Contaminated Materials

A. Effects from Property Acquisition

Property impacts are assessed by determining if a transportation improvement requires the purchase of land outside of existing public right-of-way or includes easement on the property. Any property that is acquired in full, or a property whose access is eliminated as a result of the construction or operation of a project is considered a displacement. The No Build Alternative would not require infrastructure investment therefore no business displacements or property acquisitions would be realized. The Recommended Preferred Alternative would require no property acquisitions that result in residential displacements. A total of one displacement and six partial property acquisitions totaling 13.16 acres are required. Of the six partial acquisitions required, two properties are located in EJ areas. These two partial acquisitions account for less than an acre of land and do not impact business operations or structural components of a business. The affected properties are within or immediately adjacent to transportation rights-of-way.

During the acquisition process impacts to minority business owners would be determined and addressed. Property acquisition activities would be performed in accordance with the USDOT Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) as amended and all applicable Maryland State laws that establish the process through which MDTA may acquire real property through a negotiated purchase or through condemnation.

B. Effects on Community and Neighborhood Cohesion and Isolation

Impacts associated residential displacements, the acquisition of neighborhood gathering and meeting spaces, loss of physical access to neighbors and overall social connectivity as well as the

cumulative effects of physical and psychological division of neighborhoods inform the assessment of potential effects to neighborhood cohesion and the creation of isolation to EJ populations. The No Build Alternative would not create change the day to day connectivity of in neighborhood quality of life and interpersonal relationships. The Recommended Preferred Alternative would not result in adverse effects to community cohesion or cause isolation. Under the build year condition, access to planned development in the Port Covington peninsula would be improved through two key elements, construction of the bicycle and pedestrian and an enhanced transportation network via new ramps and an improved grid network. As a result, the Recommended Preferred Alternative would improve existing community cohesion and encourage more pedestrian and bicycle travel in the study area. In addition, the transportation network under the Recommended Preferred Alternative would support the redevelopment efforts now occurring in the study area neighborhoods, including new housing (market rate and affordable), commercial development (employment and retail) and recreational opportunities. The increased access to entertainment, recreation spaces and adjacent neighborhoods within and beyond the study area is consistent with the community revitalization and economic development goal expressed in the master plans for several EJ areas and are considered a benefit to neighborhoods to the west and south of the study area.

C. Effects on Transportation

In general, the overall transportation improvements and specific traffic effects of the Recommended Preferred Alternative as compared to the No Build Alternative is positive. The Recommended Preferred Alternative would facilitate vehicle operations at similar or improved LOS for the majority of intersections in the study area. There are no permanent impacts to existing transit or water taxi routes as a result of implementation of the project. Transit dependent populations within the SETR study area would maintain access to transit routes throughout the study area. The transit services are described in detail in Section 3.1 of the *I-95 Access Improvements from Caton Avenue to Fort McHenry Tunnel EA*, provide a variety of options to transit dependent populations living and working in, near or surrounding the SETR study area. The Recommended Preferred Alternative includes the construction of a new bicycle and pedestrian path under I-95 to connect Port Covington to south Baltimore neighborhoods. The path would provide improved bicycle and pedestrian would also enhance connection to EJ neighborhoods north and south of SETR study area. Additional development by private entities could potentially result in the need for expanded transportation facilities within the SETR study area in the future. However, these private development improvements would follow the Baltimore City process for addressing traffic impacts. The Recommended Preferred Alternative would not adversely impact EJ populations in the study area.

D. Effects in Neighborhood Visual Character

Twelve viewsheds were selected to determine the potential for impacts to visual character. None of the viewsheds within the SETR study area are located in EJ areas. It is important to note that neither the No-Build nor the Recommended Preferred Alternative are anticipated to have adverse effects on the visual character of the study area, therefore no disproportionate impacts to environmental justice populations are anticipated.

E. Effects on Community Facilities and Services

The Recommended Preferred Alternative would not displace any community facilities. All major routes providing access to these community facilities and service locations or routes would remain open after the completion of the project.

F. Effects on Air Quality

The predicted differences in air quality between the No-Build Alternative and the Recommended Preferred Alternative are not significant. In addition, The Recommended Preferred Alternative is not predicted to increase emissions when compared to the No-Build Alternative, nor cause or exacerbate a violation of the National Ambient Air Quality Standards (NAAQS); this takes into account the pollutants for which the area is in moderate nonattainment or maintenance including ozone and its precursor molecules, fine particulate matter ($PM_{2.5}$), and carbon monoxide. The project is not expected to measurably increase MSAT or greenhouse gas emissions over the No-Build Alternative. No long-term mitigation measures are proposed.

As the project's construction is not anticipated to last more than five years in any location, construction impacts are considered to be temporary and would be limited to fugitive dust and mobile-source emissions. State and local regulations regarding dust control and other air quality emission reduction controls would be followed, short-term mitigations measures such as watering construction areas and tarping materials during dry or windy periods to prevent fugitive dust from entering the air. Overall, the project is not expected to result in impacts to EJ populations.

G. Effects on Noise

Detailed noise analyses, including traffic noise-level projections, were performed for the project. The noise analysis is documented in Appendix D, "Noise Technical Report. " The project was divided into eight Noise Sensitive Areas (NSAs) to assess and report potential effects. One of the eight NSAs is located in an EJ area. Noise modeling was completed for Existing (2016) and Future Build (2040) conditions. It was determined that local traffic is the primary source of noise in this EJ area under existing conditions. Under the build year scenario predicted noise levels would decrease at three noise receptor locations in the rage of -0.5 to -0.4 and would increase at three additional noise receptor locations in the range of 1.0 to 1.3. The three predicted increases are below the threshold of 10 dB(A) over existing noise conditions. Therefore, the construction of the Recommended Preferred Alternative would not cause permanent impacts.

Construction related noise are expected to have a short-term effect on noise levels related to the operation of bulldozers, trucks, graders and compressors. It is anticipated that construction efforts would occur during daytime hours. Should night work be required the conditions outlined in the Noise Ordinance for Baltimore City would be applied.

H. Contaminated Materials

An Initial Environmental Site Assessment (ESA) of the proposed construction limits of disturbance within the project study area. The ESA included a windshield survey, review of current and historic activities and conditions of the select parcels located in the study area, review of local, state, and federal regulatory database records, review of historical records, and a survey of the adjacent

land uses, The predominate land use was industrial and commercial facilities and several residential uses. None of the 8 parcels selected for more detailed study are located in EJ areas. However, for the purposes of assessing exposure to workers in the areas of the ESA study findings were further reviewed. It was concluded that there is some risk of subsurface contamination on several parcels due to the historical development and documented cases of environmental contamination at select properties. A Phase II ESA has been recommended.

During construction of the project, contaminated soil and materials would be removed from affected areas. Additional investigations would be conducted to further define the type and extent of contamination as well as short-term and long-term remediation requirements to protect public health and worker safety. The project would not result in direct effects to the general population, including EJ populations.

I. Construction Effects and Mitigation

Potential impacts related to construction activities are presented in Section 3.12 of the *I-95 Access Improvements from Caton Avenue to Fort McHenry Tunnel EA*. Potential impacts considered as include the effects of mobile source emissions, fugitive dust air, noise, light pollution and a delay in transit service for transit dependent populations. The potential impacts are short-term in nature and would not result in any permanent effects. Implementation of the planned mitigation measures would lessen impacts on residents and travelers traversing the construction area.

Assessment of Potential for 'Disproportionately High and Adverse Effects' on Minority and Low-Income Populations

a) Standards For Evaluating Effects

The US Department of Transportation has defined a "disproportionately high and adverse effect" on minority and low-income populations as an adverse effect that:

- "Is predominantly borne by a minority population and/or a low-income population; or
- "Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non low-income population."

The identification of a disproportionately high and adverse effect on EJ populations does not preclude a project from moving forward. USDOT Order 5601.2a states that a project with disproportionately high and adverse effects on EJ populations may be carried out under the following conditions:

- Programs, policies, and activities that would have a disproportionately high and adverse effect on minority populations or low-income populations would only be carried out if further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effects are not practicable. In determining whether a mitigation measure or an alternative is "practicable," the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects would be taken into account.

- Programs, policies or activities that would have a disproportionately high and adverse effect on populations protected by Title VI ("protected populations") would only be carried out if:

  (1) A substantial need for the program, policy or activity exists, based on the overall public interest; and

  (2) Alternatives that would have less adverse effects on protected populations (and still satisfy the need identified in subparagraph (1) above) have either:

  (a) adverse social, economic, environmental, or human health impacts that are more severe; or

  (b) would involve increased costs of an extraordinary magnitude.

Determinations of whether a project will have disproportionately high and adverse effects must take into consideration "mitigation and enhancements measures that will be taken and all offsetting benefits to the affected minority and low-income populations…" USDOT Order, Section 8.b.

b) Evaluation of Effects

Potential adverse effects on EJ populations in the study area would not result from the Recommended Preferred Alternative, but has the potential to cause minimal effects on EJ populations as related to temporary construction effects. Temporary effects include limited access and lane closures during construction in the Westport and Mount Winans neighborhoods. These temporary construction effects can be mitigated through the development and implementation of construction staging plans, standard practice in field construction measures and the use of restricted work times and zones during morning and afternoon rush hours. The Recommended Preferred Alternative would maintain or improve existing LOS within the transportation network and address increased demand due to planned and approved investment the Port Covington. Two of the EJ areas that would be most directly affected include the Westport and Mount Winans neighborhoods; these specific neighborhoods would benefit from a reduction in cut through traffic, through the improved transportation network for travelers. The project is also consistent with master plans to help to promote economic growth and the removal of blight and brownfield sites. The proposed site acquisition of a facility that house three business has been identified. However, those business relocations and their effects on minority business owners or employees will be documented following standard relocation processes in the future.

Taking all of these factors into account, MDTA and FHWA have concluded that the Recommended Preferred Alternative as a whole would not cause "disproportionately high and adverse effects" on EJ populations.

Full and Fair Access

Full and fair access to meaningful involvement by low-income and minority populations in project planning and development is an important aspect of environmental justice. Meaningful involvement means the project team invites participation from those groups typically under-represented, throughout all the project stages. It is important to advise EJ populations of the project development steps and listen to their feedback. Residents are an important source for

local history, special sites, and unusual traffic, pedestrian or employment patterns relevant to the project. This information is used in the design and evaluation of alternatives, to avoid negative impacts to valued sites, and to support the development of safe, practical, and attractive transportation options that are responsive to the environmental justice population's concerns.
The full and fair participation by minority and low-income populations in the transportation decision-making process was achieved by implementing a range of tools and techniques to engage minority and low-income populations in addition to the general public and they include the following:

- Development of limited English proficiency (LEP) Procedures
- Grassroots outreach efforts that included Grocery Store and Ministerial Outreach in Westport, Mount Winans, Cherry Hill and Sharp-Leadenhall
- Small Group Meetings and Presentations

Public involvement activities during this phase have included: public open houses, small group meetings, and the distribution of various project publications. In addition, non-traditional targeted outreach efforts which included grocery store outreach, door-to-door canvassing, ministerial outreach, and social media campaigns were employed to provide a comprehensive program to reach stakeholders and more specifically traditionally underserved populations such as minority, low-income, elderly, and disabled populations.

Other outreach activities include:

- Virtual Meeting
- Project Webpage
- Publications – including print advertisements, fact sheets, fliers, and postcard mailings

A detailed account of all public involvement activities for the project is included in Chapter 5 of the *I-95 Access Improvements from Caton Avenue to Fort McHenry EA*.

2.3 Visual Character

The section describes the existing and future visual character within the SETR study area, potential effects to visual evirons and measures to avoid, minimize, and mitigate visual effects that could occur with the Recommended Preferred Alternative when completed, or during its construction.

2.3.1 Regulatory Context and Methodology

Visual effects associated with the I-95 Access Improvements Project would depend on the viewshed, viewer's proximity, and the degree of contrast with the surrounding environment. A visual impact assessment (VIA) is conducted when a project has the potential to alter the current visual environment to resources that are sensitive to changes in their surrounding environ such that they require visual screening to maintain existing visitor experience. The FHWA Guidelines for the Visual Impact Assessment of Highway Projects (FHWA-HEP-15-029) were used to identify the visual resources within the study area or that would have a view of the project area, and to determine potential effects. For this project, the analysis focuses on the publicly accessible natural and cultural resources with potential views of the proposed improvements.

The VIA methodology and evaluation for this study are summarized below:

1. **Define Project Viewshed/Physical Limits of Visual Environment:** The project "viewshed" is the surface area within which the project site would be visible to a person. The viewshed for this assessment is represented by the area within which the proposed improvements under the Recommended Preferred Alternative, are visible. Because the project is located in an already developed urban setting with buildings and other vertical structures blocking views toward the project site, the viewshed comprises areas in close proximity (generally within 200 feet) to the site of the Recommended Preferred Alternative, as well as more distant, across the Middle Branch of the Patapsco River to the south, up to approximately one mile from the project site. Visual resources, such as publicly accessible parks and open space, as well as historic resources, were identified within this viewshed.

2. **Identify Viewer Groups:** Viewer groups associated with each of the visual resources, such as park users, were identified and their likely sensitivity to visible changes at the project site considered.

3. **Identify Key Viewpoints and Views and Assess Visual Quality:** Visual resources including public open spaces and natural resources within the viewshed were identified for further evaluation. These viewpoints represent locations that allow for visual connectivity, referred to as a "view corridor," between a particular vantage point at a visual resource (such as within a park) and the project site. Field surveys were conducted to identify views toward the project site, and to determine where views were blocked by trees or other structures. Twelve key viewpoints from within the seven visual resources in the viewshed were identified for assessment and are shown on Figure 2-8.
4. **Analyze changes in Existing Visual Resources and Viewer Response:** The extent to which the Recommended Preferred Alternative would be visible and perceptible to viewer groups was considered in order to determine whether changes to the view corridor might affect the localized experience of publicly accessible parks and other visual resources.

5. **Depict Visual Appearance with the Project:** This step in the VIA considers the project components, such as changes to existing and new elevated infrastructure.

6. **Assess the Project's Visual Impacts:** The VIA considered the ways in which the Recommended Preferred Alternative would alter view corridors, as they are expected to exist in the future with the full build-out of the Port Covington Master Plan. Consideration was given to visibility of the Recommended Preferred Alternative project elements, as well as to determine whether these changes to the corridor would be perceived by respective user groups, and if so the degree to which their experience would be altered.

2.3.2 Existing and Future Conditions

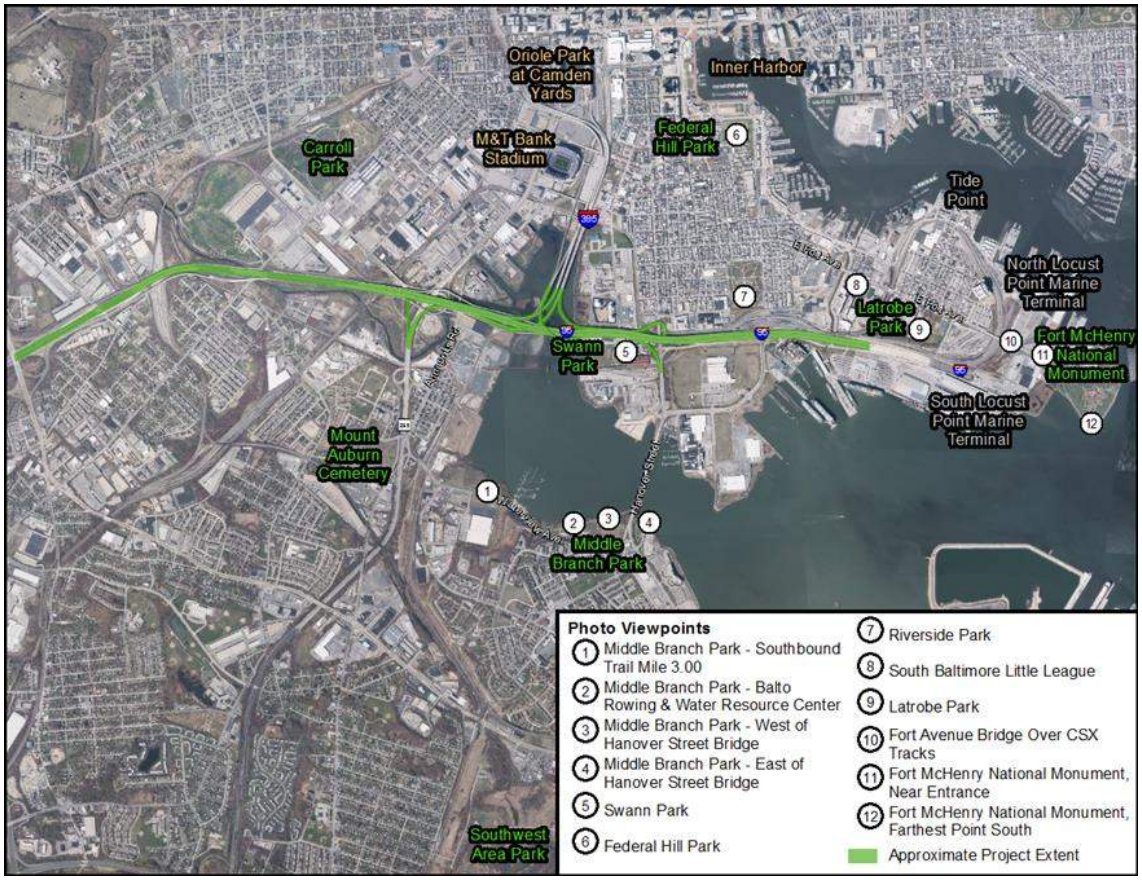
The SETR study area's visual environment is urban, with land uses consisting primarily of industrial, residential and transportation/parking. The study area also contains some natural areas/parks/recreation, and institutional and commercial land uses. The SETR study area includes a significant amount of waterfront with the Patapsco River surrounding the Port Covington peninsula.

Within the SETR study area, I-95 runs on structure with numerous elevated ramps located throughout, as shown on Figure 2-7. This photo was taken from Swann Park and represents a typical view within the project area.

Figure 2-7: Project Vicinity View of I-95 from Swann Park

Source: STV October 2016

Figure 2-8: Photo Viewpoints from Visually-Sensitive Resources



2.3.3 Analysis of Potential Visual Effects

A digital single lens reflex (SLR) camera was used to photograph the viewpoints on JPEG Normal mode and consistent with the guidance for field reconnaissance techniques contained in Appendix E of the *Guidelines for the Visual Impact Assessment of Highway Projects*[12] in order to set the camera to the 50mm equivalent focal length (zoom). This configuration is the de facto standard that approximates the average view cone and magnification of the human eye. Interpretation of the existing visual character is based on data collection and field visits conducted in October 2016 on clear, sunny days with limited visual atmospheric conditions such as fog or precipitation that could obstruct visibility.

The project would only be visible from two of the existing visual resources, Middle Branch Park and Swann Park. From all four of the viewpoints located at Middle Branch Park the project area is only visible at extreme distance (approximately one mile) across the Middle Branch of the Patapsco River. Patrons may be exploring trails, engaging in water activities, or playing on park facilities; therefore, they are expected to be more focused on their immediate surroundings than the project area in the distance. Currently, Swann Park is located within close proximity (within 200 feet) to the project. However, according to the Port Covington Master Plan Redevelopment Plan the park will be relocated in 2027. This relocated Swann Park, or otherwise re-named park, would be approximately 26 acres, extending along the majority of the peninsula's western waterfront. Though no detailed site plans for the relocated Swann Park are currently available, as contemplated in the Port Covington Master Plan, it would include a network of roads, walkways, and pedestrian ways.

In addition to the relocation of Swann Park, most of the Port Covington peninsula will be redeveloped pursuant to the Port Covington Master Plan (described in the Purpose and Need). That development is expected to include buildings and structures that will block views of the project area from Middle Branch Park. The existing ramp over the Middle Branch of the Patapsco River will still be visible but at a great distance. The future location of Swann Park, or a newly named park, would be located further away from the project and views to the project area would likely be blocked by other new buildings developed on the peninsula with the full build-out of the Port Covington Master Plan. Table 2-14 lists the twelve viewpoint locations, provides a brief summary of each and includes representative photographs.

Table 2-14: Project Vicinity Viewpoints from Public Areas

View-point	Location	View	Visual Resources	Is the Project Vicinity Observable?	Representative Photo
1	Middle Branch Park – Southbound Trail Mile 3.00	Looking north east across the Patapsco	Patapsco River, marina, Downtown Baltimore cityscape, bridge, natural areas	Yes, barely visible (approximately 1-mile away via line of sight)	

[12] Guidelines for the Visual Impact Assessment of Highway Projects, FHWA. January 2015. (Document No. FHWA-HEP-15-029)

View-point	Location	View	Visual Resources	Is the Project Vicinity Observable?	Representative Photo
2	Middle Branch Park – Baltimore Rowing & Water Resource Center/Aquatics Division	Looking north and north east across the Patapsco River	Patapsco River, open space areas, Downtown Baltimore cityscape, bridge	Yes, barely visible (approximately 1-mile away via line of sight)	
3	Middle Branch Park – West of Hanover Street Bridge	Spanning view N-NW to NE across the Patapsco River	Patapsco River, bridges, stadiums, Downtown Baltimore cityscape, industrial areas	Yes, barely visible (approximately 1-mile away via line of sight)	
4	Middle Branch Park – East of Hanover Street Bridge	Spanning view N-NE to E across the Patapsco River	Patapsco River, industrial area, bridge, Fort McHenry National Park, Downtown Baltimore cityscape, marina	Yes, barely visible (approximately 1-mile away via line of sight)	
5	Swann Park	Spanning a near 360 degree view near the entrance of Swann Park	Patapsco River, bridges, sports fields, Downtown Baltimore cityscape, industrial areas,	Yes, visible (in close proximity)	
6	Federal Hill Park	Looking south and south west from Federal Hill Park	Park and open space areas, historical buildings, residential	No	
7	Riverside Park	Looking south and south west towards Port Covington	Open space, sports fields	No	

View-point	Location	View	Visual Resources	Is the Project Vicinity Observable?	Representative Photo
8	South Baltimore Little League Entrance	Looking south and southwest, near McHenry Row.	Residential and commercial buildings	No	
9	Latrobe Park	Looking south to south west towards Port Covington	Sports fields, Playground, Open space/natural areas	No	
10	Fort Avenue Bridge over CSX Tracks	Looking southwest towards Port Covington	Industrial areas, CSX tracks, marina/cruise ship terminal	No	
11	Fort McHenry National Monument	Looking south to south west from Fort McHenry entrance	Buildings and industrial areas	No	
12	Fort McHenry National Monument	Looking west and W-SW across the Patapsco River	Patapsco River, Open space, industrial area, marina/cruise ship terminal	No	

2.3.4 Probable Consequences

Visual effects occur when a project alters the existing visual environment of resources that are sensitive to, or require, visual screening to maintain the existing visitor or user experience. The future No Build condition consists of the existing road network, as well as the planned and programmed improvements in the approved master plan. No new visual impacts related to the project and its components would occur.

The Recommended Preferred Alternative would not be visible from seven of the twelve viewpoints and only the reconstructed ramps over the Middle Branch of the Patapsco River would

be visible in the extreme distance (approximately one-mile) from the four Middle Branch Park viewpoints. These portions would also likely be visible from parts of the relocated Swann Park.

Because the Recommended Preferred Alternative would comprise reconstruction of the existing highway infrastructure in approximately the same locations and with similar heights, vertical profile and appearance, the new alignments, ramps, and interchanges would generally resemble existing conditions. As such the visual character of the Recommended Preferred Alternative would be similar to the existing highway infrastructure and its contribution to view areas would also be similar

Visual character of the study area would not be substantially altered with the Recommended Preferred Alternative. Therefore the Recommended Preferred Alternative though perceptible from either Swann Park or Middle Branch Park, would not be expected to alter the localized viewer experience.

Table 2-15 lists the anticipated changes to the way transportation infrastructure would look following construction of the Recommended Preferred Alternative.

Table 2-15: Potential Visual Effects of Proposed Project Elements

Project Elements	Description
Element A1 *(Spurs from Russell and I-395)*	New Ramps, will not be higher than I-95 or existing ramps
Element A2 *(McComas)*	Relocated Ramp, will not be higher than existing I-95. The proposed I-95 will be higher where the new ramp begins compared to where the existing ramp begins.
Element B	New Ramp, will not be higher than existing I-95.
Element C	New Ramp, will not be higher than existing I-95.
Element D	Relocated Ramp, will not be higher than existing I-95.
Element E	There is no construction associated with this element
Element F	Portions will be higher than the existing McComas Street, however, the street grades will be raised during the build out of the Port Covington master plan, before construction of Element F.
Element G	New Shared-Use Path, will “thread the needle” above the CSX tracks and below the I-95 structure, and would not be higher than existing I-95, but will be elevated over the CSX tracks.

Introduction of various construction activities, including heavy equipment, trucks, protective fencing or walls, signage, and additional vehicles surrounding proposed construction and staging areas, as well as fugitive dust, would create a temporary visual and aesthetic effect to surrounding or adjacent areas where these activities would occur. Given the temporary and intermittent occurrence of construction activities, their visibility would not cause adverse impacts to either Swann Park or Middle Branch Park.

Therefore, the proposed project will not create adverse impacts to the aesthetic character of visual resources or their environs, and the proposed project would not affect the limited views that park users may have of the project area from Middle Branch Park, Swann Park (existing

location), or the approximate future location of Swann Park. As there would be no adverse impacts, no mitigation is necessary.

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