



III. AFFECTED ENVIRONMENT

A. Social Environment

A socio-economic inventory was conducted as part of the Section 100 study. This inventory involved the identification of communities, community facilities, and commercial and industrial facilities within the study area.

In addition, data regarding population, ethnicity, economics, and other demographics, which were available through the United States Census Bureau's *Census 2000*, were compiled and evaluated. Data were collected at the Census Tract level. The Census Tracts that encompass the study area are depicted on *Figure III-1*.

1. Population and Housing

Population statistics for the State of Maryland, Baltimore County, Baltimore City, and the Section 100 study area are shown in *Table III-1*. The population of the study area has characteristics most similar to those of Baltimore County. The number of males and females in the study area, as well as the State, Baltimore County, and Baltimore City, is relatively evenly distributed. Approximately 13 percent of the population in the study area is over age 65. Like the County and the State, the study area's population is comprised mostly of persons classified as White (73 percent) or African American (22 percent). Additional details regarding population and housing can be found in the *Section 100: I-95, I-895(N) Split North of MD 43 Socioeconomic Technical Report* (Authority, 2004) prepared for this project.

Table III-1. Population Characteristics

Characteristic		Maryland	Baltimore County	Baltimore City	Study Area
Total Population		5,296,486	754,292	651,154	51,166
Projected Population for the Year 2020 ¹		6,122,925	795,200	661,100	N/A
% Male/% Female		48%/52%	47%/53%	45%/55%	48%/52%
% Population 65 Years and Older		11%	14.6%	13.2%	13.1%
Racial Distribution	White	64%	74%	31%	73%
	African-American	28%	19%	64%	22%
	American Indian/Alaskan Native	<1%	<1%	<1%	<1%
	Asian/Pacific Islander	4%	3%	2%	3%
	Other	2%	<1%	1%	1%
	Two or More Races	2%	1%	1%	1%
% Population of Hispanic Origin ²		4%	2%	2%	2%
Source: Census 2000 ¹ Population projections provided by the Maryland Department of Planning State Data Center, October 2002 ² Population of Hispanic Origin can be of any race.					



2. Communities Within the Study Area

Communities located in the vicinity of the Section 100 study area were identified during the field investigations conducted for this project (*Table III-2*). A total of 47 communities are distributed throughout the Section 100 study area. These communities consist of various types of residences including apartments, condominiums, townhomes, and single-family homes. The locations of the communities and their counterparts are depicted on *Figure III-2*. The number of existing units within the townhome, apartment, and condominium communities was obtained through coordination with property managers and community associations. However, this information was not readily available for all of the communities.

3. Environmental Justice and Title VI of the Civil Rights Act

Executive Order (EO) No. 12898 of 1994: *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*, requires that federal agencies be responsible for reviewing their programs and other activities to identify and address any disproportionately high and adverse effects on the human environments in low-income or minority communities. EO 12898 is implemented through several different regulations including the environmental justice orders of the United States Department of Transportation (USDOT) and the Federal Highway Administration (FHWA). The USDOT strategy ensures that the provisions of EO 12898 are integrated into the relevant existing guidelines used in the project planning and public participation processes. FHWA's order requires that specific research and related data collection be conducted to provide information on environmental justice concerns.

Title VI of the Civil Rights Act of 1964 was developed to protect persons from being discriminated against based on their race, color, or national origin by a federally financed program or activity. Title VI extends to prohibiting a federally financed project or program from use of land that intentionally or non-intentionally discriminates against a person based on race, color, or national origin.

To comply with EO 12898 and related Federal statutes, regulations and guidelines, any readily identifiable group of low-income or minority persons living within the geographic vicinity of the project alternates was inventoried. Identification of low-income and minority populations was based on existing census demographics, field research, and written correspondence with local planning officials (*Appendix C*).



Table III-2. Residential Communities in the Vicinity of the Study Area

Community	Address	Housing Type	# of Units¹
Amberly of Kings Court	King Avenue	Townhomes	Not Available
Batter Brook ²	Rossville Boulevard	Single Family	Not Applicable
Bayhill	Burnham Woods Court	Townhomes	Not Available
Berry Hill	Featherhill Road	Townhomes	Not Available
Bluegrass Heights	Bluegrass Road	Single Family	Not Applicable
Brantwood at White Marsh	<i>Stillwood Circle</i>	Townhomes	Not Available
Cambridge Court	Franklin Square Drive	Apartments	544
Castle Creek	Franklin Square Drive	Townhomes	Not Available
Castle Stone	Spotswood Road	Single Family	Not Applicable
Cedar Lane Farms	Rossville Boulevard	Single Family	Not Applicable
Chesaco Heights	Hamilton Avenue	Single Family	Not Applicable
Darryl Gardens	Carrington Drive	Single Family	Not Applicable
Daybreak Estates	Twilight Court	Townhomes	Not Available
Devonshire	Franklin Square Drive	Condominiums	Not Available
Equestrian Acres	Philadelphia Road	Single Family	Not Applicable
Fields of White Marsh ²	Cowenton Avenue	Single Family	Not Applicable
Fontana Village	Orion Court	Townhomes	356
Forge Acres	Winkler Street	Single Family	Not Applicable
Forge Heights	Bangert Drive	Single Family	Not Applicable
Forge Landing	East Joppa Road	Single Family	147
Garden Village	St. Regis Road	Townhomes	764 – Apts.; 641 - Townhomes
Glenside Farms	New Gerst Road	Single Family	Not Applicable
Hamiltowne	Hamiltowne Court	Single Family	Not Applicable
Highpoint Addition	Weyburn Court	Single Family	Not Applicable
Hazlewood Village	Wintergreen Place	Townhomes	Not Available
Hillbrook	Neighbors Avenue	Single Family	Not Applicable
Holland Hills	Lelden Road	Townhomes	Not Available
Honeygo Falls ²	East Joppa Road	Single Family	13
Honeygo Ridge	Philadelphia Road	Single Family	Not Applicable
Honeygo Village Center ²	Honeygo Boulevard	Townhomes	Not Available
Lawrence Hill	Silver Spring Road	Single Family	Not Applicable
Lenning's Crossing ²	Lenning's Lane	Single Family	Not Applicable
Lincoln Woods	Lincolnwood Way	Apartments	204
Moore's Meadow ²	East Joppa Road	Single Family	62
Moore's Orchard ²	Joppa Road	Single Family	Not Applicable
Park East	Kelbourne Avenue	Apartments	220
Perry Hall Farms	Forge Road	Single Family	Not Applicable



Table III-2. Residential Communities in the Vicinity of the Study Area

Community	Address	Housing Type	# of Units ¹
Powder Brook	Rossville Boulevard	Single Family	Not Applicable
Quail Ridge	Titagel Court	Apartments	192
Sylvania Mobile Home	Philadelphia Road	Mobile Homes	Not Available
Tartan Hill	Silver Spring Road	Single Family	Not Applicable
Tempor Farm	Forge Haven Drive	Single Family	Not Applicable
Towns Court	Towns Court	Townhomes	Not Available
Town and Country	Gum Spring Road	Apartments	600 +
Weyburn Park	Weyburn Road	Single Family	Not Applicable
Williams Fields ²	Cowenton Avenue	Single Family	Not Applicable
Willow Hill	Tarpley's Circle	Single Family	Not Applicable

¹ Information is provided only if it was available and applicable.
² Residential communities currently being developed

a. Low-Income Populations

Information obtained from the Baltimore County government’s website (2003) indicated that *Fontana Village* and *Garden Village* are two low-moderate income communities within the study area. As referenced in **Table III-2**, Fontana Village has 356 townhome units and Garden Village has 764 apartment units and 641 townhome units. The Public Health and Welfare, 42 U.S.C., (Chapter 69 §5302), provides definitions of low and moderate income persons. A person of low income has a household income that does not exceed 50 percent of the median income of the area involved. Moderate income refers to those persons whose household incomes do not exceed 80 percent of the median income of the area involved.

The Department of Health and Human Services (DHHS) categorizes low-income as a household having an income at or below the DHHS poverty guidelines. DHHS poverty guidelines vary from year to year based on results of the United States Census Bureau poverty thresholds. The DHHS poverty threshold for 2000 is \$14,150 for a three-person family unit. Census 2000 data reports that the median household income for the study area is \$49,109, which is well over the DHHS poverty threshold. Baltimore County and City, in comparison, have median household incomes of \$50,667 and \$30,078, respectively. The study area median household income is slightly below the county median, but well above the DHHS poverty thresholds. In addition, all Census Tracts within the study area have a median household income that is well above the DHHS poverty threshold.



b. Minority Populations

The Executive Order 12898 defines minority persons as:

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

The racial distribution in 2000, as identified in *Table III-1*, reveals that 73 percent of the population in the study area is classified as White, and that approximately 27 percent of the population within the study area is classified as minority.

According to Census 2000 and correspondence with the Department of Planning for Baltimore City (*Appendix C*), four Census Tracts within the study area show a substantially higher presence of minority populations. Among these four Census Tracts, approximately 95 percent of the population for combined Census Tracts 2604.02 and 2604.03 is minority. Census 2000 data revealed that the population of census tract 4410, bordered by Philadelphia Road, I-95 and Redhouse Run, is 63 percent minority. Similarly, tract 4407.01, which encompasses sections of the I-95/I-695 Interchange and King Avenue, has a 44 percent minority population. (*Figure III-1*).

As evidenced by the correspondence in *Appendix C* the Baltimore County Office of Planning also identified two specific populations within the study area that have a presence of low-income/minority communities. The first area identified is located along Gilley Terrace, between Gum Spring Road and Rossville Boulevard. The other low-income/minority population identified by the Baltimore County Office of Planning is located along Lloyd Avenue. Lloyd Avenue is located just south of New Forge Road, which is the northeastern-most point of the study area. Based on readily available existing census data, both of these communities have been identified as minority communities. Impacts to these communities will be evaluated in compliance with the environmental justice executive order to ensure that impacts are not disproportionately high and adverse.



4. Community Facilities and Services

Community facilities and services located within or serving the study area include: schools; places of worship; cemeteries; parks and recreational areas; healthcare facilities; post offices; libraries; police, fire, and rescue services; and transportation facilities. **Figure III-3** shows the locations of the community facilities within and near the study area.

a. Schools

Ten schools are located within or near the Section 100 study area. Seven of these are elementary schools, one is a middle school, one is a high school, and one is a community college. Public schools within the study area include:

- Red House Run Elementary School
- McCormick Elementary School
- Elmwood Elementary School
- Shady Spring Elementary School
- Chapel Hill Elementary School
- Joppa View Elementary School
- Fullerton Elementary School
- Golden Ring Middle School
- Overlea High School
- Community College of Baltimore County Essex Campus

Two future school sites are also located in the vicinity of the Section 100 study area, including the Ridge Road Elementary School site and the Nottingham Middle School site (**Figure III-3**).

b. Places of Worship

The following places of worship are located within or near the study area:

- Camp Chapel United Methodist Church
- New Life Baptist Church
- Hazelwood Baptist Church
- 7th Day Adventist Church
- Central Christian Academy
- Lamb of God Lutheran Church
- Mount Pleasant Baptist Church
- Church of Annunciation
- Pentecostal Holiness Church
- Holland Hills Park Annunciation



c. Cemeteries

The following cemeteries are located to the south of I-695, in the vicinity of the Section 100 study area:

- Gardens of Faith Memorial Garden
- Mickro Kodesh Cemetery
- Petrachtikvah Cemetery
- Shaarei Zion Cemetery

d. Parks and Recreational Facilities

Sixteen public parks and recreational facilities are located within or near the study area. Many of these facilities are local playgrounds. However, there are several large parks also serving the study area. The largest park in the vicinity of the study area is Gunpowder Falls State Park, a facility located north and northeast of the northern study area limit and serving the entire region. This park is approximately 18,000 acres in size and provides a multitude of recreational opportunities including bicycling, boating, cross-country skiing, fishing, hiking, hunting, picnicking, and swimming. Honeygo Park is another large facility serving the study area. This park is approximately 206 acres in size and provides ball fields, playground equipment, a sand volleyball court, picnic areas, pavilions, and walking paths. *Table III-3* describes the amenities, size, and jurisdiction of each park or recreational facility.

e. Healthcare Facilities

Franklin Square Hospital/Eastern Regional Health Center is the closest hospital to the study area. Other medical facilities within (or near) the study area include Kaiser Permanente, Johns Hopkins at White Marsh, and the Fuller Medical Center.

f. Post Offices

Three post offices serve the study area. The White Marsh Post Office is located in the northern end of the study area, east of I-95. The Nottingham Post Office is also located in the northern half of the study area, west of I-95. The Rosedale Post Office is located in the southern portion of the study area, east of I-95.

g. Libraries

Two public libraries are located in the vicinity of the study area. The White Marsh Library is located in the central portion of the Section 100 study area, on Honeygo Boulevard. The Rosedale Library is located in the southern portion of the study area, on Kenwood Avenue. Both of these facilities are branches of the Baltimore County Public Library system.



Table III-3. Public Parks/Recreational Areas Within the Study Area

Name of Park	Amenities	Size (Acres)	Jurisdiction
Gunpowder Falls State Park	Biking trails, boat launch, boat rentals, cross-country skiing, interpretive programs, food and beverages, fishing, flatwater canoeing, hiking trails, historic interest, hunting, picnicking, playgrounds, equestrian trails, picnic shelters, swimming, whitewater canoeing, boardsailing lessons and equipment rental	18,000	State of Maryland
Cowenton Avenue Park	Undeveloped	25.0	Baltimore County
Honeygo Park	Ball fields, playground, sand volleyball court, picnic area, pavilion, walking path	206.0	Baltimore County
Nottingham Park	Ball fields, athletic fields	35.3	Baltimore County
Golden Ring Park	Playground, fishing, restrooms, trails	13.5	Baltimore County
Linover Park	Picnic area, playground, restrooms, athletic fields	13.8	Baltimore County
Rosedale Park	Pavilions, picnic area, playground, ball fields, restrooms	19.8	Baltimore County
Holt Park	Parkland area, nature trails	13.2	Baltimore County
Holland Hills Park	Playground	6.5	Baltimore County
Belmar Park	Playground, ball field, restrooms	7.1	Baltimore County
Hazelwood Park	Undeveloped	7.0	Baltimore County
Cedonia Park	Parkland area	2.5	Baltimore County
Hamiltowne Local Open Space	Picnic pavilion, picnic tables, playground equipment/tot lot equipment	1.7	Baltimore County
Garden Village Park	Pavilion, picnic areas, playground, multi-purpose court	5.5	Baltimore County
Moores Run Park	Informal paths	35.0	Baltimore City
Herring Run Park	Recreational center, playground, ball fields, trails, tennis courts, picnic area, fishing, basketball courts	72.0	Baltimore City
Source: Maryland Department of Planning Baltimore County Department of Planning			



h. Police, Fire, and Rescue Services

The White Marsh Precinct #9 is located in the central portion of the study area, on Perry Hall Boulevard. Three fire and rescue companies are also located in the vicinity of the study area. Golden Ring Company 16 is located in the southeastern portion of the study area, on Golden Ring Road. Fullerton Company 8 is located in the central portion of the study area, to the west of I-95 on Rossville Boulevard. Cowenton Company 20 is located in the northern portion of the study area, on Ebenezer Road.

i. Transportation Facilities

The White Marsh Park-and-Ride and the Gardenville Park-and-Ride are located near the Section 100 study area. The White Marsh Park-and-Ride is a 409-space lot owned by the Maryland Transit Administration (MTA). It is located on Honeygo Boulevard, near the White Marsh Mall. The Gardenville Park-and-Ride is also owned by the MTA and has 88 spaces available. This facility is located in the southern portion of the study area, on US 1 (Belair Road).

j. Other Community Facilities and Services

Several other miscellaneous community facilities exist within the vicinity of the Section 100 study area, including:

- Maryland State Game and Fish Protective Association of Baltimore
- YMCA of Central Maryland
- Greater Baltimore Crisis Pregnancy Center
- Garden Village Precinct - Community Outreach Center
- Boumi Temple
- American Legion Post #130
- Eastern Regional Health Center
- Loreley Community Center

5. Visual Quality

The aesthetics along I-95 Section 100 vary greatly between remnant forested areas, residential areas, and commercial areas. Visual characteristics vary because of the different land use and development types along this section of I-95, which range from urban to undeveloped. (Additional details regarding land use are provided in Section III-C.)

The land use at the southern end of the study area, from the I-95/I-895(N) split to the Hazelwood Avenue overpass, is primarily residential. The roadsides in these areas are lined with sound barriers, which help attenuate highway noise for nearby residents, and help to visually buffer nearby residents from views of the highway.



The I-95 highway roadsides north of Hazelwood Avenue become more naturalized, lacking sound barriers that would limit views. The area from the I-695 Interchange to the King Avenue underpass consists of remnant forests within an urban/suburban setting. Larger remnant forest tracts are preserved inside the interchange gores and along the highway roadsides. Several buildings can be seen from the highway through gaps in the forest; however, these buildings are not highly visible.

The I-95 study area becomes more urban between King Avenue and the MD 43 Interchange. There are no sound barriers and very limited vegetation, so the views are wide and open to the surrounding development. Several major shopping centers and multi-story buildings abut the highway, and are highly visible by the highway users. The highway is also visible from the surrounding developments.

The highway roadsides through the MD 43 Interchange and north to the study limit at the Baltimore County Urban-Rural Demarcation Line (URDL) consists of remnant forest areas, interspersed with a several new suburban developments. This portion of Section 100 does not have sound barriers, so the viewshed is mostly open to the remnant forest areas and suburban development. Most of the adjacent development is medium or low density, and is not highly visible along the roadsides.

B. Economic Environment

1. Income

Table III-4 shows Census 2000 income data for the State of Maryland, Baltimore County, Baltimore City, and the Section 100 study area. Baltimore City showed the lowest median household and median family income levels. Within the study area, the median household and median family income (\$49,102 and \$55,737, respectively) were slightly less than in Baltimore County, but still higher than in Baltimore City.

Per capita income, which describes the average income per person, for the study area falls below that of the State and the County, but at \$22,379, is still higher than that of Baltimore City (\$16,978). Additional details can be found in the *Section 100: I-95, I-895(N) Split to North of MD 43 Socioeconomic Technical Report* prepared for this project.



Table III-4. Income Characteristics

Characteristic	Maryland	Baltimore County	Baltimore City	Study Area
Median Household Income (1999) ¹	\$52,868	\$50,667	\$30,078	\$49,109 ²
Median Family Income (1999) ¹	\$61,876	\$59,998	\$35,438	\$55,737 ²
Per Capita Income	\$25,614	\$26,167	\$16,978	\$22,379

Source: Census 2000

¹ A household is defined by the U.S. Census Bureau as a place (structure) where one or more persons reside on a regular basis. A family is defined as two or more persons related by birth, marriage, or legal adoption that occupy a place (structure) on a regular basis.

² Figures shown were determined by calculating the average of the Median Household Income or Median Family Income values for each Census Tract in the study area.

2. Employment

a. Employment Characteristics

The top industries in Baltimore City and Baltimore County include:

- Educational, health, and social services
- Professional, scientific, management, administrative, and waste management services
- Retail trade
- Public administration
- Finance, insurance, real estate, and rental and leasing.

As shown in **Table III-5**, the majority of employed County, City, and study area residents have occupations that fall into the Management, Sales/Office, or Government categories. **Table III-5** also shows that Baltimore City's unemployment rate of 10.7 percent is more than twice that of both Baltimore County (4.2 percent) and the study area (3.8 percent).

Table III-5. Occupational Characteristics

Characteristic	Baltimore County	Baltimore City	Study Area
Primary Occupations of Residents	Management – 40% Sales/Office – 29% Government – 18%	Management – 32% Sales/Office – 27% Government – 22%	Sales/Office - 31% Management - 29% Government - 18%
Percent of Labor Force Unemployed	4.2%	10.7%	3.8%

Source: Census 2000



The Section 100 study area traverses the Rosedale, Rossville, Overlea, and White Marsh Census Designated Places (CDPs) (*Figure III-4*). A CDP is defined by the U.S. Census Bureau as “a geographic entity that serves as the statistical counterpart of an incorporated place for the purpose of presenting Census data for an area with a concentration of population, housing, and commercial structures that is identifiable by name, but is not within an incorporated place.”

Approximately 60 and 65 percent of the population 16 years and older in Rosedale and Overlea, respectively, are employed, while 73 percent of the residents in both Rossville and White Marsh are employed. The mean travel time to work for residents within the CDPs is approximately 25 to 30 minutes, which is similar to that of Baltimore County (28 minutes) and Baltimore City (31 minutes). The majority of workers within the CDPs drive to work alone (74 to 88 percent), while a much smaller percentage (8 to 12 percent) carpool. Public transportation and walking are not common, representing only about four percent (maximum) and one percent of the working population, respectively. A comparison of the employment characteristics for Baltimore County, Baltimore City, and the study area is provided in *Table III-6*. Additional information regarding employment characteristics can be found in the *Section 100: I-95, I-895(N) Split to North of MD 43 Socioeconomic Technical Report* prepared for this project.

b. Commercial and Industrial Facilities

Major employers and business areas within the study area are identified on *Figure III-5*. Primary industrial centers include the Rosedale Industrial Park, Rossville Industrial Park, Pulaski Industrial Park, and East Business Industrial Park. Large business areas include healthcare facilities such as Franklin Square Hospital, Johns Hopkins at White Marsh Hospital, and Kaiser-Permanente Hospital, and business centers such as the White Marsh Business Community. In addition, there are a large number of schools and retail areas that support the business economy of the area.

C. Land Use in the Study Area

1. Existing Land Use

The Section 100 study area is dominated by residential land use from the I-95/I-895(N) split to the I-695 Interchange. North of the I-695 Interchange, the study area is dominated by a mix of forested, residential, and commercial land use, with some sparsely scattered areas of open space and industrial land use. The following is a summary of the land use types and their general locations, as depicted on *Figure III-6*. Additional details regarding land use can be found in the *Section 100: I-95, I-895(N) Split to North of MD 43 Socioeconomic Technical Report* prepared for this project.



Table III-6. Summary of Employment Characteristics

	Baltimore County	Baltimore City	Study Area*
Population 16 years and Older Employed	67 %	50%	60-73%
Mean Travel Time To Work	28 min.	31 min.	25-30 min.
% Population Drives Alone to Work	80%	55%	74-88%
% Population Takes Public Transportation to Work	4%	20%	4%
% Population Carpools To Work	11%	15%	8-12%
% Population Walks To Work	2%	7%	1%
* Range depicts differences in CDPs within the study area			

2. Future Land Use

The Section 100 study area begins in Baltimore City and heads north into Baltimore County. According to the *Baltimore City Economic Growth Strategy*, future development in the study area within Baltimore City consists mainly of re-urbanization and renewal of blighted neighborhoods. Therefore, future land use would remain similar to existing land use.

The Baltimore County's *Master Plan 2010* (Baltimore County Council, 2000) incorporates the designation of two land management areas – the urban area and the rural area. The boundary separating these two land management areas is called the Urban Rural Demarcation Line (URDL) (**Figure I-2**). The urban areas have public water and sewer infrastructure, thereby accommodating development such as employment, retail, and residential uses. The rural areas rely on private wells and septic systems, which limit development and encourage maintenance of the agricultural and low-density residential uses. Growth management, land use policies, and proposed roadway improvements within the *Master Plan 2010* are designed to focus growth within the URDL.



The URDL also serves as the boundary of the Baltimore County-designated and State-certified Priority Funding Area (PFA). PFAs are existing communities and other locally designated areas as determined by local jurisdictions in accordance with Maryland's Smart Growth Priority Funding Areas Act of 1997. Baltimore County's PFA was established in accordance with the guidelines set forth in this legislation, whose initiatives formally took effect on October 1, 1998. The intent of the Smart Growth Priority Funding Areas Act is to direct State funding for growth-related projects to PFAs. The Section 100 study area is located entirely within the State-certified PFA and is, therefore, consistent with the Smart Growth initiatives.

Another feature of the *Master Plan 2010* is the designation of "growth areas" within Baltimore County. One of these designated growth areas is the Perry Hall – White Marsh Growth Area. This growth area is designed to provide a self-sustaining, planned community, including housing, employment, and full commercial and public service.

The Perry Hall – White Marsh Growth Area encompasses approximately half of the study area, and is about 18.8 square miles in size (*Figure III-7*). The center of the growth area is located at White Marsh Mall. Three primary sections within the growth area are designated for business development, including the White Marsh Business Community, the Philadelphia Road Corridor, and the proposed Fitch Avenue Industrial Area. Based on existing plans, the White Marsh Business Community, which is currently a commercial area, would maintain its current use by providing mixed office and light industrial development. The Philadelphia Road Corridor would provide industrial and other types of development, transforming an area of primarily residential use to industrial use.

The Fitch Avenue Industrial Area provides an industrial district within the Growth Area. This area currently consists of a mix of industrial, commercial, and residential uses. By designating the area as an Industrial Area, additional development will be focused on expanding the industrial and commercial land use that currently exist there. Finally, an area known as Honeygo, located just north of the White Marsh Business Community, is planned for residential land use associated with the growth area businesses. New development is rapidly occurring in this area. *Figure III-7* provides a summary of the proposed land use subdivisions within the Perry Hall – White Marsh Growth Area. Overall, the Perry Hall – White Marsh Growth Area would focus commercial and industrial growth in areas that already contain such uses, expanding them slightly in more urban areas.



To assist in the development of the Perry Hall – White Marsh Growth Area, several roadways are proposed for improvements, including:

- Realigning Ebenezer Road to Cowenton Avenue,
- Widening the Baltimore Beltway from I-83 to I-95,
- Constructing Honeygo Boulevard from Ebenezer Road to Belair Road,
- Constructing Campbell Boulevard from Philadelphia Road to Pulaski Highway,
- Widening Philadelphia Road from Campbell Boulevard to Cowenton Avenue,
- Upgrading White Marsh Road from Bucks School House Road easterly, and
- Widening Perry Hall Boulevard from Rossville Boulevard to Honeygo Boulevard.

Baltimore County has also planned several additional park sites in the Honeygo area. In addition, to further accommodate the development in this area, Baltimore County has acquired land to allow for the construction of several new schools, should it become warranted. These sites include the Nottingham Middle School site and the Ridge Road Elementary School site.

With the advanced planning provided in *Master Plan 2010*, future land uses outside of the Perry Hall – White Marsh Growth Area (as well as growth areas elsewhere in the County) are anticipated to remain relatively unchanged, as development is focused.

D. Cultural Resources

Cultural resources include historic and archaeological properties protected under Section 106 of the National Historic Preservation Act, as amended. Section 106 requires that, prior to approval of a project by a federal agency, the agency involved must consider the project's effects on any district, site, building, structure or object that is included or eligible for inclusion in the National Register of Historic Places (NRHP), and give the Advisory Council on Historic Properties an opportunity to comment with regard to the project. Properties of national, state, or local significance may be determined eligible for the NRHP. Archaeological sites that meet certain criteria may also be included on the NRHP.

Pursuant to Section 106, resources listed or potentially eligible for the NRHP that are within the Area of Potential Effect (APE) of a project must be evaluated for potential effects due to the project. Measures to minimize or mitigate adverse effects must be developed in consultation with the State Historic Preservation Officer (SHPO) and other interested parties and may be memorialized in a Memorandum of Agreement (MOA).



Cultural resource surveys were conducted in accordance with relevant State and Federal regulations, including: the USDOT Act of 1966, as amended; the National Historic Preservation Act of 1966, as amended; 36 Code of Federal Regulations (CFR) Part 800 – Protection of Historic Properties; EO 11593; and the Maryland Historical Trust (MHT) Act of 1985 (Article 83B, §§ 5-607, 5-617 to 5-619, and 5-623 of the Annotated Code of Maryland). All work was conducted in accordance with relevant guidelines from the MHT (viz. Maryland Historical Trust 2000; Shaffer and Cole 1994), as well as relevant Federal guidelines (viz. National Park Service, 1983).

The cultural resource surveys included background research and field surveys to identify historic properties. Background research included a review of previous planning and research studies, a review of existing inventories of historic properties, and an analysis of historic maps and documents. Data repositories consulted included the library of the MHT, the Baltimore County Historical Society, and the Baltimore City Commission for Historical and Architectural Preservation. Field identification efforts included a survey of all standing structures within the APE and various forms of archaeological sub-surface testing.

1. Historic Structures

The historic architectural survey included the identification of all resources more than 50 years of age in the APE, the assessment of the significance of these resources, the completion of appropriate survey forms for these resources, and the evaluation of impacts that the project may have on significant historic resources. Archival and cartographic research was conducted to help determine the age and significance of identified resources.

The historic architecture APE for this project, as concurred upon by the SHPO (*Appendix C, November 26, 2003*), consists of a broad corridor along Section 100, approximately 1,000 feet in width (500 feet on either side of the existing centerline of I-95). The APE expands in the interchange areas to accommodate proposed interchange improvements.

A total of 90 resources more than 50 years old were identified within the APE. Of these, 75 resources were documented on Short Forms for Ineligible Properties and 15 were documented on Determination of Eligibility (DOE) forms (including two neighborhood groupings). Prior to the Section 100 survey, no determinations of eligibility had been conducted for any of the properties within the APE.

The resources evaluated were primarily single-family houses dating from the first half of the twentieth century. Common building types within the study area include modified I-houses, American Foursquares, and bungalows. Minimal-Traditional and Cape-Cod cottages dating from the World-War-II era comprise the majority of resources and are generally grouped together in unplanned suburban neighborhoods. Almost all of these



residences have undergone various degrees of alteration, most commonly the application of siding and the replacement of original windows.

Within the historic structures APE, one property, located at 11204 Lilac Lane (BA-3141), was determined eligible for listing in the NRHP. This property is located in the northeastern quadrant of the Joppa Road/I-95 overpass (*Figure III-8*). Constructed of uncoursed, uncut fieldstone laid with irregular mortar courses, the architecture of 11204 Lilac Lane has its roots in some of the earliest building traditions in northeastern Baltimore County. Although the exact date of construction has not been determined, a review of historic maps indicates a construction date prior to 1850.

The residence at 11204 Lilac Lane is eligible for the NRHP under Criterion C as an example of an early fieldstone house in Baltimore County. Residences such as these were constructed during the late-eighteenth and early-nineteenth centuries. Although the house has two small additions, the property still retains a high degree of integrity. The additions are small in size and do not compromise or obscure the original features of the house. Furthermore, 11204 Lilac Lane still retains much of its site integrity. Although other houses have been constructed in the vicinity, a substantial amount of open space surrounds the residence. Although I-95 has been constructed in reasonably close proximity to the residence, a substantial buffer zone of deciduous trees exists and visually shields the residence from the intrusion.

This resource was identified and documented in the *Section 100: I-95, I-895(N) Split to North of MD 43 Historic Context and Determination of Eligibility and Effects Report* (Authority, 2004) prepared for this project. The SHPO's formal eligibility determination is documented in **Appendix C**. The remaining surveyed resources within the APE were determined not eligible for the NRHP because these buildings fail to meet NRHP criteria due to a lack of historical and architectural significance and a lack of integrity, particularly relating to setting, feeling, and materials. The two neighborhood groupings—35th Street and Kenwood Avenue—lack a cohesive design or plan and developed gradually and arbitrarily over a relatively long period of time.

2. Archaeological Resources

The archaeological APE for this project consists of a narrow corridor of variable width along I-95, which follows the maximum proposed right-of-way for the Build Alternates. An archaeological survey of the APE was completed in January 2004, with the exception of stormwater management (SWM) areas and areas of planned temporary easements such as staging areas. Completion of archaeological testing of these areas will be done during later stages of the project development process, in accordance with the MOA prepared for this project.



The MOA was signed by the SHPO and other signatory agencies on XXX, 2004. A copy of the MOA is included in **Appendix D** (*MOA has been submitted. Text written as intended for circulation. The MOA must be signed prior to circulation, and a copy will be included in Appendix D when available.*).

One potentially significant archaeological property has been identified within the APE. This property, known as the Smith Site (18BA516), is located in the southwest quadrant of the I-695 Interchange. The site is a precontact era site of unknown age and function, approximately 0.47 acre in size. This resource was identified and documented in the *Section 100: I-95, I-895(N) Split to North of MD 43 Phase I Archaeological Survey* (Authority, 2004) prepared for this project. The SHPO's formal eligibility determination is included in **Appendix C**. Phase II survey plans for the site, as well as possible mitigation of the site, have been documented in the MOA (**Appendix D**).

Three ineligible archaeological resources were identified in the Section 100 APE, including the Fountain Pen Site (18BC160), Martins Refuse Bottle Dump (18BA514), and the Martin's Farm Site (18BA515). The Fountain Pen Site is an early twentieth-century site containing brick, other architectural debris, and fountain pen fragments. The site does not appear to possess substantial research potential and is not considered a significant resource.

Similarly, Martins Refuse Bottle Dump Site is a bottle dump. The bottles at this site were sampled during the survey and found to date principally to the early-to-mid-twentieth century. This resource type is relatively common in the region and the site is not considered significant.

The Martin's Farm Site is an early-twentieth century site, related to a two-story residence that was demolished as part of the original construction of I-95 in 1963. Historic map analysis of the area suggests that the residence was constructed at some point after 1877. Two possible precontact artifacts were recovered from the Martin's Farm Site. Given that the residence associated with the Martin's Farm Site was demolished as part of the original construction of this portion of I-95, the research potential of the site is limited, and the site is not considered a significant resource.

The Phase I survey further established that previously identified resources within the APE no longer exist, or do not exist where indicated in the site files (MHT/Maryland Archaeological Site Survey). Eight sites (18BA44-51) were recorded in the Section 100 APE, all of which were identified in a survey of I-95 conducted in the early 1960s (Hunt et al. 1964). Recent testing of these site areas yielded no cultural materials related to the sites (some modern roadside debris was recovered). Apparently the sites identified in the earlier survey did not survive the original construction of I-95 in 1963, and/or the subsequent residential and commercial development of the study area.



E. Natural Environment

1. Physiography/Topography and Geology

The study area lies along the fall zone between the Piedmont Plateau Province and the Coastal Plain Province, and consists primarily of nearly level to gently rolling topography. Topography within the study area ranges from 15 feet (at Moores Run under I-95), to approximately 150 feet (at the intersection of Cowenton Avenue and I-95).

Based on the *Geologic Map of Baltimore County, Maryland* (Crowley et al., 1976), geology in the vicinity of the study area originated from the Early Paleozoic – Late Precambrian and Cretaceous periods. Baltimore Gabbro Complex (Early Paleozoic – Late Precambrian period) consists of hypersthene gabbro with subordinate amounts of olivine gabbro, norite, anorthositic gabbro, and pyroxenite. The Baltimore Gabbro Complex deposit exists in the areas at the crossing of Rossville Boulevard and I-95, I-95 and I-695, and New Forge Road and I-95. In all other parts of the study area, geology is from the Cretaceous period, and consists of the Potomac Group, which is interbedded quartzose gravels; protoquartzitic to orthoquartzitic argillaceous sands; and white, dark gray and multicolored silts and clays (Maryland Geologic Survey, 1968).

2. Soils

According to the *Soil Survey of Baltimore County, Maryland* (Natural Resources Conservation Service (NRCS), Soil Conservation Service (SCS), 1976), there are 30 soil series and 82 soil mapping units located within the study area. Soil series and other mapping units located within the study area are depicted on **Figure III-9**, as are their Prime Farmland Soils/Soils of Statewide Importance designations. Actual soil types throughout the study area may differ from what is shown on the soil survey, as the study area has undergone extensive development/disturbance. Much of the original soils in the area (primarily north of I-695 to MD 43) have been graded, filled, paved, or removed since publication of the soil survey in 1976.

Three soil series (Fallsington, Lenoir, and Leonardtown) are listed on the *Hydric Soils of the United States* (US Department of Agriculture (USDA), NRCS, 1995). Alluvial Land and Fluvents are secondary hydric soils found within the study area (USDA, NRCS, 1995). Secondary hydric soils are specific to localized and/or man-induced conditions which differ from traditional soil taxonomy. The soil units Alluvial Land, Fallsington, and Leonardtown are listed on the *Hydric Soils List of Baltimore County* (USDA NRCS, 2002).



The entire study area is within the State-certified PFA (as discussed previously). Since PFAs are designed for growth, thereby discouraging urban sprawl in other less developed areas, they would be considered areas committed to urban development. Prime Farmland Soils and Soils of Statewide Importance located within the study area would therefore be exempt from Farmland Protection Policy Act of 1981 (FPPA) coordination. Detailed descriptions of the characteristics of the soil associations in the study area can be found in the *Section 100: I-95, I-895(N) Split to North of MD 43 Natural Environment Technical Report* (Authority, 2004) prepared for this project.

3. Water Resources

a. Surface Water

There are two watersheds located within the study area; the Patapsco River Watershed and the Gunpowder River Watershed (**Figure III-10**). The only sub-watershed of the Patapsco River Watershed within the study area is the Back River, of which Redhouse Creek and Stemmers Run 3rd Order Watersheds are included (**Table III-7**). Two sub-watersheds within the Gunpowder River Watershed include the Bird River and the Gunpowder River Sub-Watersheds. The Bird River Sub-Watershed is made up of two 3rd order watersheds within the study area, including the Bird River and the White Marsh Run Watershed. The Lower Gunpowder 3rd Order Watershed is within the Gunpowder River Sub-Watershed (within the study area).

Water quality criteria specific to Designated Use is defined by Code of Maryland Regulations (COMAR) 26.08.02.03. The Designated Use for all waters within the study area and their watershed hierarchy is shown in **Table III-7**.

Criteria for Use I Waters include maintaining water contact recreation and protection of aquatic life. In-stream work is prohibited during the period between March 1st and June 15th during any year for Use I Waters. Criteria for Use IV Waters include maintaining recreational (stocked) trout waters, water contact recreation, and protection of aquatic life. In-stream work is prohibited in Use IV Waters during the period between March 1st and May 31st during any year.

b. Water Quality

Water quality standards are provisions of the State or Federal law, which consist of a Designated Use or Use for the Waters of the United States, and water quality criteria for such waters are based upon such uses. Water quality standards have been established to protect public health or welfare and enhance the quality of the water (40 CFR 131.3).



Table III-7. Water Resources Within the Study Area

Watershed	Sub-Watershed	3 rd Order Watershed	Water Body	Designated Use Within Study Area
Patapsco River	Back River	Redhouse Creek	Moores Run	Use I
			Redhouse Creek	Use I
		Stemmers Run	Stemmers Run	Use I and Use IV (Use IV north of I-95)
Gunpowder River	Bird River	White Marsh	South Fork (White Marsh Run)	Use IV
			White Marsh Run	
			Honeygo Run	
	Bird River	Bird River	Use I	
Gunpowder River	Lower Gunpowder	Gunpowder tributary	Use I	

Sampling sites have been selected using best professional judgment, in combination with existing data acquired from Baltimore County and the Maryland Biological Stream Survey. Water quality samples will be tested for pollutants, nutrients, and biological parameters. The testing will include checking for the 13 metals identified in the Clean Water Act as Priority Pollutants. These will be analyzed using the Environmental Protection Agency’s (EPA) *Recommended Fresh Water Quality Criteria* (EPA 822-Z-99-001) and EPA Nutrient Guidance: Rivers and Streams (EPA, 2000). *(Test results will be included here upon receipt)*

c. Waters of the United States (WUS)

The study area lies in a fall zone between the Coastal Plain and Piedmont Physiographic Provinces, and as a result, the geomorphology of fluvial systems is varied. The study area encompasses the headwater region of the Bird River and Gunpowder River tributaries. These areas exhibit typically Coastal Plain characteristics, as the streams start in gently rolling or nearly level topography. The substrate is mostly fine-grained gravel, sand, and finer particles. Redhouse Creek and Stemmers Run exhibit characteristics of upper perennial Piedmont streams with a steeper grade, and meander within a narrow floodplain. The substrate contains primarily cobble and low coarse gravel.

Moores Run, White Marsh Run, and the South Fork of White Marsh Run are also within a characteristically Coastal Plain area. Stream gradients are low and typically meander within wide floodplains. Within the study area, Honeygo Run exhibits more characteristics of the Piedmont; its flow is constricted within a valley. **Appendices A and B** illustrate the location of streams/waters of the US within the study area.



d. Wild and Scenic Rivers

Based on a review of Natural Resources Article of the Maryland Code -designated Wild and Scenic Rivers list, and email correspondence with Maryland Department of Natural Resources (DNR) (*Appendix C*, January 28, 2004), there are no Wild or Scenic Rivers (or their tributaries) located within the study area.

e. Water Supply/Groundwater

According to the *Baltimore County Water Supply and Sewerage Plan (1990-2000)* (Baltimore County Office of Planning, 1997), the entire study area is located within the Metropolitan Water System, which is a public water supply secured from three surface water bodies, including the Gunpowder River, the North Branch of the Patapsco River, and the Susquehanna River. The Susquehanna River is used only on an emergency basis.

Groundwater in the study area is obtained from the Piedmont and Coastal Plain provinces in Baltimore County. The Piedmont wells supply domestic and commercial demands due to small individual well yields (1 to 100 gallons per minute (GPM)). Crystalline rocks, including schist, gneiss, gabbro, granite, and marble are the chief aquifers. The Coastal Plain sub-area contains large quantities of groundwater in artesian (or semi-artesian) or water table conditions. Well yields vary from a few GPM to as much as 1,000 GPM. Sand and gravel are the major aquifers, which are separated by impervious confining clay layers.

f. Floodplains

The Federal Emergency Management Agency (FEMA)-designated 100-year floodplains within the study area occur along Moores Run, Redhouse Creek, Stemmers Run, White Marsh Run, Honeygo Run, and Gunpowder Falls (*Table III-8*). The locations of floodplains within the study area are depicted on *Figure III-10*.

4. Ecological Conditions

a. Terrestrial Habitat

Woodlands: The majority of wooded acres within the study area include patches of remnant forests within urban or industrial land, abandoned land that is returning to forest, and hedgerows disturbed by human interference. These areas are characteristically disjunct, non-contiguous narrow stands of trees comprised of early successional and/or introduced species. These stands occur in narrow strips between I-95, residential communities, and commercial or industrial properties.



Table III-8. Floodplains Within the Study Area

Floodplain	Length/Crossing and Description
Moore's Run	This floodplain is 400 feet wide where I-95 crosses the stream (<i>Appendix A Plate 1 and Appendix B Plate 27</i>), and extends east and west outside of the study area. The land within this floodplain is forested.
Redhouse Creek	This floodplain is 200 feet wide where I-95 crosses the stream (<i>Appendix A Plate 6 and Appendix B Plate 32</i>), and extends east and west outside of the study area. The land within this floodplain is forested.
Stemmers Run	This floodplain is approximately 700 feet wide. Both I-95 and I-695 cross the floodplain (<i>Appendix A Plate 11 and Appendix B Plate 37</i>), which extends east and west outside of the study area. The land within this floodplain is forested.
White Marsh Run	This floodplain is 600 feet wide where I-95 crosses the stream (<i>Appendix A Plate 18 and Appendix B Plate 44</i>), and extends east and west outside of the study area. The land within this floodplain is forested.
Honeygo Run	This floodplain is 150 feet wide where I-95 crosses the stream (<i>Appendix A Plate 22 and Appendix B Plate 48</i>), and extends east and west outside of the study area. The land within this floodplain is forested.
Unnamed tributary to Gunpowder Falls, just north of New Forge Road	This floodplain is 200 feet wide where I-95 crosses the stream (<i>Appendix A Plate 26 and Appendix B Plate 52</i>), and extends east and west outside of the study area. The land within this floodplain is forested.

Forest associations were mapped based on species composition, and boundaries were drawn around forested areas of homogeneous species composition (Brush, Lenk and Smith, 1980). All forests within the study area have been disturbed through mankind either directly by logging or agriculture, or indirectly through reduced water quality and severity of flow in riparian areas.

Two forest associations are located within the study area (*Figure III-11*):

- A disturbed form of the sycamore, green ash, box elder, silver maple association is found along the bottomlands of Moore's Run, Redhouse Creek, and Stemmers Run.
- A disturbed form of the tulip poplar association is found in the forests around the headwaters of an unnamed tributary to Bird River and an unnamed tributary to Gunpowder River.



Forest Interior Dwelling Species (FIDS): Under the Maryland Nongame and Endangered Species Conservation Act (Md. Code Ann., Nat. Res. II § 10-2A-02) it is the policy of the State to conserve species of wildlife for human enjoyment, for scientific purposes, and to ensure their perpetuation as viable components of their ecosystems. Forest Interior Dwelling Species (FIDS) are an important part of Maryland’s natural heritage and their habitat is monitored by DNR Heritage and Wildlife Service. FIDS act as an “umbrella species” which are used to indicate the quality and benefits from functions and values of forests ecosystems.

Based on initial correspondence with DNR, no FIDS areas were identified within the study area. However, additional field investigations revealed two forested areas within the study area that meet FIDS habitat requirements (**Figure III-11**), which, according to *A Guide to the Conservation of Forest Interior Dwelling Birds in Chesapeake Bay Critical Area*, include: 1) contiguous upland forests of 50 acres or greater; 2) riparian forests greater than 300 feet in width that border a stream for at least 600 feet; 3) riparian forests at least 150 feet wide and connected to one of the above; or 4) forest patches 10 acres or larger and within 300 feet of the first two definitions. (Please refer to **Appendix C** for copies of the DNR coordination letters.) These forests buffer the headwaters of an unnamed tributary to the Bird River (BRBR-WUS1 and tributaries) and are mixed with tulip poplar, red maple, and oaks as dominant canopy species. Coordination will continue throughout the project planning process to identify/confirm FIDS habitat within the study area.

Large/Significant Trees: A large and significant tree survey was conducted within the study area during July-September 2003. Only one significant tree (red maple) was found within the study area. This tree is located on the east side of I-95, and has a diameter at breast height (DBH) of 55 inches, and is in the 80th percentile of the State champion tree. Additionally, 83 large individual trees were found throughout the study area. Locations of large and significant trees within the study area can be found in **Appendix A and Appendix B**.

b. Aquatic Habitat

Aquatic habitat in the study area will be assessed by evaluating water quality parameters indicative of the health of aquatic systems. These parameters will include potential of hydrogen (pH), dissolved oxygen (DO), conductivity, temperature, turbidity, and Fish and Benthic Indices of Biotic Integrity (IBI). COMAR has specific standards for each stream use classification. **Table III-9** provides the COMAR regulations/parameters.



Table III-9. Water Quality Parameters for Aquatic Habitat

Parameter	Description	
	Use I	Use IV
pH	Not less than 6.5 or greater than 8.5	Not less than 6.5 or greater than 8.5
Dissolved Oxygen (DO)	May not be less than 5 mg/l	May not be less than 5 mg/l
Temperature	May not exceed 90F or 32C	May not exceed 75F or 23.9C
Turbidity	Not greater than 150 turbidity units	Not greater than 150 turbidity units
Source: COMAR 26.08.02.04		

Sampling sites have been selected using best professional judgment, in combination with information from Baltimore County and the Maryland Biological Stream Survey (MBSS). Water quality samples were tested for the parameters listed in **Table III-9** in March 2004. Analyses results are provided in Chapter IV: *Environmental Consequences*.

c. Wetlands

Section 404 of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States without a permit. Under the Clean Water Act, “waters of the United States” include, among other things, wetlands that are connected to navigable rivers and streams. The agency with permitting authority under Section 404 is the U.S. Army Corps of Engineers (USACE). In making permit decisions, the USACE must follow guidelines issued by the EPA under Section 404(b)(1) of the Clean Water Act. The Section 404(b)(1) guidelines establish several requirements that must be met in order for a Section 404 permit to be issued. One key element of the Section 404(b)(1) guidelines is the requirement that a Section 404 permit can be granted only for the practicable alternate that has the least impact to the aquatic ecosystem, unless that alternate has other significant adverse environmental impacts. This requirement is commonly known as the requirement to select the ‘least environmentally damaging practicable alternate’ (LEDPA).

Wetlands within the study area can be classified as either isolated, headwater, or floodplain wetlands. The isolated wetlands are typically less than one quarter-acre in size, occurring in areas of human disturbance throughout the study area. The source of these wetlands can include the underground water table or ephemeral channels.

Floodplain wetlands occur along the streams within the study area, and are hydrologically connected through locally high groundwater (in relation to the various streams in the study area) and large tracts of fine-grained and organic soils.



Wetland identification and delineation efforts were conducted from May to October 2003 in accordance with the *Army Corps of Engineers Wetland Delineation Manual*, Technical Report Y-87-1 (USACE Waterways Experiment Station, 1987). Wetland functions/values were assessed following *The Highway Workbook Supplement: Wetland Functions and Values – A Descriptive Approach* (USACE, New England Division, 1993). The *Wetland Delineation Report for Section 100: I-95, I-895(N) Split to North of MD 43* (Authority, 2004) details the findings of the wetland delineation and wetlands functional assessment. **Appendix A and B** illustrate the locations of wetlands within the study area.

Wetland Jurisdictional Determinations (JDs) were held on the following dates: November 18, 19, and 21, 2003; January 14, 2004; and XXX, 2004. Detailed meeting minutes from the JDs are included in **Appendix E** of the Environmental Assessment (EA) (2004 JDs have not occurred yet. Text was prepared as it will appear prior to circulation).

Wetlands within the Moores Run 3rd Order Watershed fall into two main hydrologic groups; slope/depression wetlands and riverine wetlands. Slope/depression wetlands function by discharging water due to vertical fluctuation of the water table, and are located at or near the headwaters of streams.

Wetlands within the Redhouse Creek 3rd Order Watershed include headwater wetlands and floodplain wetlands. The headwater wetlands have been degraded due to development (including the original construction of I-95 in 1963). The majority of floodplain wetlands in this watershed have been altered or filled due to development.

Wetlands within Stemmers Run 3rd Order Watershed are headwater and floodplain wetlands that have historically been degraded. Most of the headwater wetlands have been filled, shifted, relocated, or otherwise altered by the construction of I-695, I-95, and surrounding developments. These wetlands are presently connected by ephemeral or concrete channels. The floodplain wetlands within the Stemmers Run watershed have been filled or altered (primarily by drainage channels) in the area of the I-95/I-695 Interchange. Floodplain wetlands south and east of this interchange have sporadic hydroperiods because of the flashy flows of Stemmers Run and the entrenchment of the stream itself. A flashy flow occurs when urbanized watersheds change the flow regime of a stream to include a higher frequency of faster, increased volume, low duration flows.

Wetlands within the White Marsh Run 3rd Order Watershed consist mostly of headwater wetlands and a few floodplain wetlands. The Bird River and Gunpowder River 3rd Order Watershed wetlands are headwater wetlands. Some disturbed wetlands within the existing right-of-way of I-95 have been cut off from a hydrological source, but the majority are inter-connected through storm water pipes or ephemeral streams.



d. Terrestrial Wildlife

A field investigation including observation by sight, song, call, and sign indicated that there are numerous bird species inhabiting various landscapes of the study area. These landscapes include residential, industrial, agricultural, commercial, marshland, forested, and open space. **Table III-10** summarizes the bird species and the habitat(s) where they were observed.

Evidence of terrestrial wildlife, both mammals and herpetiles, was found throughout the study area, primarily within forested areas, waterways, and wetlands. Observed signs of mammals and herpetiles include observed tracks and scat, roadkill, sightings, dwellings, and breeding calls. The following provides a list of the wildlife observed during the studies:

- White tail deer (*Odocoileus virginianus*)
- Eastern chipmunk (*Tamias striatus*)
- Gray squirrel (*Sciurus carolinensis*)
- Little brown myotis (*Myotis lucifugus*)
- Deer mouse (*Peromyscus maniculatus*)
- Eastern cottontail (*Sylvilagus floridanus*)
- Spring peeper (*Pseudacris crucifer*)
- American toad (*Bufo americanus*)
- Black racer (*Coluber constrictor*)
- Snapping turtle (*Chelydra serpentina*)
- Raccoon (*Procyon lotor*)
- Opossum (*Didelphis marsupialis*)
- Woodchuck (*Marmota monax*)
- Red fox (*Vulpes fulva*)
- Green frog (*Rana clamitans*)
- Gray tree frog (*Hyla versicolor*)
- Garter snake (*Thamnophis sirtalis*)
- Wood frog (*Rana sylvatica*)
- Black ratsnake (*Elaphe obsoleta*)

e. Endangered and Threatened Species

Section 7 of the Endangered Species Act requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) regarding the potential impacts of a federal action on federally listed threatened and endangered species (16 U.S.C. §§ 1531-1544). The first step in the Section 7 consultation process is a request to the USFWS for a list of the federally listed threatened and endangered species that may be present in the action area for the project. If the USFWS identifies species that may be present, additional informal or formal consultation is needed. Such consultation may involve preparation of a Biological Assessment and issuance of a Biological Opinion. However, if the USFWS determines that there are no federally listed threatened or endangered species in the action area, no further consultation under Section 7 is required.

In addition to the federal requirements established under the Endangered Species Act, actions within Maryland also are protected under state law. Species that are not protected under the federal law may still be protected under the state law. The Maryland Nongame and Endangered Species Conservation Act (Md. Natural Resources Code Ann. § 10-2A-01 et. seq.) requires the protection of listed State threatened and endangered species. The same measures of protection as the Federal Endangered Species Act are required.



Table III-10. Bird Species Observed in the Study Area

Bird Species Observed in the Study Area		Industrial	Commercial	Residential	Agricultural	Forested	Marshland	Open Space
Common Name	Scientific Name							
House sparrow	<i>Passer domesticus</i>	X	X	X				
Black capped chickadee	<i>Parus atricapillus</i>			X		X		
Hairy woodpecker*	<i>Picoides villosus</i>			X		X		
American robin	<i>Turdus migratorius</i>			X	X	X		
European starling	<i>Sturnus vulgaris</i>	X	X	X				
European rock dove or pigeon	<i>Columba livia</i>	X	X	X				
Northern mockingbird	<i>Mimus polyglottos</i>			X	X			X
Blue jay	<i>Cyanocitta cristata</i>			X		X		
Slate colored junco	<i>Junco hyemalis</i>			X		X		
Northern cardinal	<i>Cardinalis cardinalis</i>			X		X		
Morning dove	<i>Zenaida macroura</i>			X	X		X	X
Northern flicker	<i>Colaptes auratus</i>				X	X		X
American crow	<i>Corvus brachyrhynchos</i>		X	X	X	X		
Sharp-shinned hawk	<i>Accipiter striatus</i>					X		
Rufous-sided towhee	<i>Pipilo erythrophthalmus</i>				X			X
Killdeer	<i>Charadrius vociferus</i>		X					X
Red winged blackbird	<i>Agelaius phoeniceus</i>			X	X		X	
Common grackle	<i>Quiscalus quiscula</i>			X	X		X	
Red-tailed hawk	<i>Buteo jamacensis</i>				X	X		
Turkey vulture	<i>Cathartes aura</i>			X	X	X		
Chimney swift	<i>Chaetura pelagica</i>			X				
Eastern kingbird	<i>Tyrannus tyrannus</i>			X	X			X
Mallard	<i>Anas platyrhynchos</i>		X				X	
Phoebe	<i>Sayornis phoebe</i>				X	X		
Belted kingfisher	<i>Ceryle alcyon</i>						X	
Eastern wood-pewee	<i>Conotopus virens</i>					X		
American gold finch	<i>Carduelis tristis</i>			X	X	X		
Song sparrow	<i>Melospiza melodia</i>				X		X	
Blue-winged warbler	<i>Vermivora pinus</i>				X			
Brown-headed cowbird	<i>Molothrus ater</i>				X	X		
Tufted titmouse	<i>Parus bicolor</i>			X		X		
Tree swallow	<i>Tachycineta bicolor</i>						X	X

* Forest Interior Dwelling Species (FIDS)



According to the USFWS (*Appendix C*, September 25, 2003), “except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the study area.”

Correspondence with the DNR Wildlife and Heritage Division (*Appendix C*, January 6, 2004) identified the known presence and location of a Least Tern (*Sterna antillarum*) colony and the potential presence of four plant species of concern within the study area. *Table III-11* provides a summary of the species identified by DNR, their general habitat, and the appropriate survey period in which to conduct species surveys.

Table III-11. Threatened and Endangered Species Recorded Within/Near the Study Area

Species	State Status	Habitat Requirements	Field Survey Period
Least Tern (<i>Sterna antillarum</i>)	Threatened (breeding)	Known to occur on the gravel rooftop of an industrial park within the study area.	Breeding season – 15 April through 31 July (field survey will verify the presence of this species at the identified location)
Dwarf Iris (<i>Iris prismatica</i>)	Endangered	Bogs, marshes, shores, swamps, and moist meadows	Flowering period – May through July
Canada Burnet (<i>Sanguisorba Canadensis</i>)	Threatened	Bogs, wet meadows, spring-fed herbaceous marshes, and streamside fields	Flowering period – June through October
Velvety Sedge (<i>Carex vestita</i>)	Endangered	Sandy woods and swamps; low woods; usually dry, sandy soil of woods and shaded edges; glades; and borders of streams	Flowering and fruiting periods – flowering is March through April, fruiting is May through June (fruiting is the best period for identification)
Ostrich Fern (<i>Matteucia struthiopteris</i>)	Rare	Rich or bottomland-thickets or woods in alluvium, and calcareous soil	Spring to late summer - Fruiting period is in late summer; fronds are well developed from spring to late summer.



Additional habitat requirements for these species are being identified through the review of taxonomic keys, scientific journals, and websites, in addition to ongoing coordination with DNR. Field surveys of known species locations will be performed (during the appropriate survey period) for use as a reference habitat. These habitat surveys will be performed during the breeding season for the Least Tern, and during the fruiting and flowering periods for the plant species (late spring and fall). Habitat information will then be compared with potentially suitable habitats within existing and proposed right-of-way limits for the proposed project. If suitable habitat(s) are identified within the study area, additional coordination with DNR will be undertaken to determine the need for a species survey(s). The Authority will continue to coordinate with DNR throughout the project planning process regarding the presence and habitat requirements of these species.

f. Unique and Sensitive Areas

Unique, sensitive, and aesthetic areas generally include resources that have unique ecological or geological characteristics which are sensitive to adverse environmental impacts, or which provide unique aesthetic value to the public. Unique, sensitive, and aesthetic areas include, but are not limited to: wildlife refuges; natural parks and preserves; waterways protected under the Maryland Scenic and Wild Rivers program; Maryland Environmental Trust Lanes; Chesapeake Bay Critical Area Lanes; scenic waterfalls or bridges; and unique geologic formations.

Based on correspondence with resource and regulatory agencies (*Appendix C*) as well as detailed environmental studies, no areas within the study area were identified as unique or sensitive.

5. Existing Noise Conditions

a. Noise Sensitive Area Description

Twenty-three Noise Sensitive Areas (NSAs) were identified in the study area. Individual noise receptor locations were selected to represent each of the noise sensitive communities potentially affected by project improvements. A total of 72 receptors were identified to represent noise sensitive land uses within the 23 NSAs. Individual noise receptor locations are shown on *Figure III-12*. *Table III-12* describes each NSA. Additional details regarding the NSAs can be found in the *Section 100: I-95, I-895(N) Split to North of MD 43 Noise Quality Technical Report* (Authority, 2004) prepared for this project.



Table III-12. Summary of Noise Sensitive Areas and Represented Resources

NSA	Receptors Located Within the NSA	Represented Resources	Distance From Roadway
1	Receptor 1-1	80 single-family residences, 38 single-family townhomes	125 ft.
2	Receptor 2-1	5 single-family residences (two story)	290 ft.
3	Receptors 3-1 to 3-7	150+ single-family residences	200 to 400 ft.
4	Receptors 4-1 to 4-3	50+ single-family residences	200 to 350 ft.
5	Receptors 5-1 to 5-5	50 single-family residences	190 to 425 ft.
6	Receptors 6-1 to 6-5	75 single-family residences	180 to 500 ft.
7	Receptors 7-1 to 7-8	100+ single-family residences	150 to 500 ft.
8	Receptors 8-1 to 8-3	20+ apartment buildings	125 to 450 ft.
9	Receptors 9-1 to 9-3	3 single-family residences, 1 church	100 to 400 ft.
10	Receptors 10-1 and 10-2	14 single-family residences	100 to 125 ft.
11	Receptors 11-1 and 11-2	6 single-family residences	200 to 120 ft.
12	Receptor 12-1	Part of Essex Community College Campus	210 ft.
13	Receptors 13-1 and 13-2	14 single-family residences, community park	325 to 350 ft.
14	Receptors 14-1 to 14-4	100+ single-family townhomes	150 to 340 ft.
15	Receptors 15-1 to 15-5	130+ single-family residences, 150 single-family townhomes, 10 apartment buildings	160 to 360 ft.
16	Receptors 16-1 to 16-3	19 single-family residences, 1 daycare	150 to 350 ft.
17	Receptor 17	2 single-family residences	240 ft.
18	Receptor 18-1	2 single-family residences	160 ft.
19	Receptors 19-1 and 19-2	3 single-family residences	105 to 300 ft.
20	Receptors 20-1	3 single-family residences	240 ft.
21	Receptors 21-1 and 21-2	9 single-family residences	440 to 460 ft.
22	Receptors 22-1 and 22-2	130+ single-family residences	160 to 220 ft.
23	Receptors 23-1 to 23-6	90+ single-family residences, 1 church	290 to 470 ft.



b. Existing Noise Conditions

Background: Noise monitoring for this study was conducted on Tuesdays, Wednesdays, and Thursdays to ensure that peak periods were accurately evaluated. Field measurements of ambient noise levels were performed to determine existing (2003) noise levels and to calibrate FHWA's Traffic Noise Model (TNM) Version 2.1. Noise measurements were performed during worst-case noise hours using Metrosonics dB 3080 Noise Monitors.

Four twenty-four hour noise-monitoring sessions were conducted from 2:00 PM on July 29, 2003 to 2:00 PM July 30, 2003 at the following locations:

- 1020 Flintshire Road (Between Receptor 6-5 and 7-1)
- 11 Glendower Court (Receptor 8-2)
- Essex Community College (Receptor 12-1)
- 5501 Loyd Avenue (Receptor 23-3)

The purpose of the twenty-four hour measurements was to determine the diurnal characteristics of the traffic noise in the study area, and to identify peak noise hours. Based on the twenty-four hour analysis, it was determined that short term measurements taken between the hours of 6:00 AM and 6:00 PM would best represent the peak noise conditions for Section 100.

Short-term measurements of 15 minutes were conducted at each NSA on Tuesdays through Thursdays between July 31 and August 19, 2003 to measure the current noise conditions. Traffic classification counts, along with vehicle speeds, were also recorded during monitoring periods.

Existing Noise Levels: Short-term monitoring results are shown in **Table III-13**. Short-term noise levels were adjusted by determining the difference between the 24-hour peak hour noise level and the 24-hour short-term measurement period noise level, and adding this value to the measured short-term noise level to approximate peak hour noise levels. The resultant adjusted peak hour noise levels are presented in column seven of **Table III-13**. Measured noise levels ranged from 51 decibels (dBA) (Receptor 15-1) to 73 dBA (Receptor 11-2). Variations in noise levels are attributable to three factors:

- Traffic flow conditions (volume, speed, and percentage of trucks) during the measurement period,
- Distance from receptor to noise source, and
- Shielding effects from intervening terrain, structures, and vegetation.



Table III-13. Short Term Monitoring Noise Levels

NSA	Receptor No.	Receptor Location	Time	Measured Noise Level Leq (dBA)	Peak Hour Adjustment Factor ¹	Adjusted Peak Hour Noise Level Leq (dBA) ²
1	1-1	5701 Hamilton Avenue	10:00 AM	64	0	64
2	2-1	5200 McCormick Avenue	10:00 AM	63	0	63
3	3-1	5533 Lanham Way	9:00 AM	61	0	61
	3-2	5306 Dew Garth	9:00 AM	63	0	63
	3-3	5633 Daybreak Terrace	12:00 PM	60	1	61
	3-4	5305 Zangs Lane	9:00 AM	65	0	65
	3-5	519 Lanham Way	11:00 AM	64	1	65
	3-6	5536 Lanham Way	11:00 AM	58	1	59
	3-7	5626 Daybreak Terrace	12:00 PM	57	1	58
4	4-1	5203 Horst Avenue	10:00AM	58	0	58
	4-2	8111 Callo Lane	10:00AM	61	0	61
	4-3	8120 Callo Court	10:00AM	53	0	53
5	5-1	1608 Weyburn Road	11:00AM	61	1	62
	5-2	7 Weyhill Court	11:00AM	60	1	61
	5-3	20 Weyfield Court	11:00AM	62	1	63
	5-4	9 Weyburn Court	11:00AM	54	1	55
	5-5	17 Wyfield Court	10:00AM	58	0	58
6	6-1	1701 Commons Court	12:00PM	60	1	61
	6-2	6201 Commons Road	12:00PM	60	1	61
	6-3	1828 William Court	12:00PM	57	1	58
	6-4	6205 Commons Road	12:00PM	53	1	54
	6-5	1821 William Road	12:00PM	58	1	59
7	7-1	5902 Kenwood Avenue	10:00AM	66	0	66
	7-2	8 Clayfield Court	1:00PM	66	1	67
	7-3	10 Chriswell Court	1:00PM	60	1	61
	7-4	22 Chriswell Court	1:00PM	60	1	61
	7-5	5903 Sandy Spring Road	1:00PM	65	1	66
	7-6	9025 Tarpleys Circle	1:00PM	57	1	58
	7-7	15 Chriswell Court	1:00PM	51	1	52
	7-8	5 Travis Court	1:00PM	53	1	54
8	8-1	7400 Meadow Branch Court	11:30AM	67	0	67
	8-2	11 Glendower Court	11:30AM	65	0	65
	8-3	7421 Kimbark Court	11:30AM	54	0	54
9	9-1	7501 Gilley Terrace	11:15AM	63	1	64
	9-2	7401 Gum Spring Road	11:15AM	65	1	66
	9-3	7403 Gum Spring Road	11:15AM	58	1	59
10	10-1	8601 Trumps Mill Road	11:15AM	64	1	65



Table III-13. Short Term Monitoring Noise Levels

NSA	Receptor No.	Receptor Location	Time	Measured Noise Level Leq (dBA)	Peak Hour Adjustment Factor ¹	Adjusted Peak Hour Noise Level Leq (dBA) ²
	10-2	8600 Trumps Mill Road	11:15AM	67	1	68
11	11-1	7410 Rossville Boulevard	1:15PM	65	1	66
	11-2	4934 Babikow Road	1:15PM	72	1	73
12	12-1	Essex Community College	1:15PM	65	1	66
13	13-1	5116 King Avenue	2:00PM	60	1	61
	13-2	13-2 Nottingham Park	10:45AM	57	1	58
14	14-1	5010 Castlestone Drive	2:45PM	65	1	66
	14-2	5010 Bridgeford Circle	2:45PM	67	1	68
	14-3	5013 Bridgeford Circle	2:45PM	68	1	69
	14-4	5003 Bridgeford Circle	2:45PM	64	1	65
15	15-1	5035 Clifford Road	2:00PM	51	0	51
	15-2	5105 Clifford Road	2:00PM	59	0	59
	15-3	5129 Clifford Court	2:00PM	57	0	57
	15-4	8600 Lawrence Hill Road	10:00AM	53	0	53
	15-5	5130 Clifford Way	2:00PM	55	0	55
16	16-1	8615 Winding Way	11:45AM	66	0	66
	16-2	8650 Winding Way	11:45AM	64	0	64
	16-3	8610 Winding Way	11:45AM	59	0	59
17	17-1	5206 Silver Spring Road	3:00PM	67	0	67
18	18-1	8900 Cowenton Road	2:00PM	69	0	69
19	19-1	8836 Cowenton Avenue	10:00AM	67	0	67
	19-2	8939 Cowenton Avenue	12:00PM	67	0	67
20	20-1	5323 Joppa Road	11:00AM	63	0	63
21	21-1	5423 Joppa Road	11:00AM	61	0	61
	21-2	11229 Lilac Lane	11:00AM	62	0	62
22	22-1	5501 Kathryns Court	3:00PM	66	0	66
	22-2	5212 Cobbler Court	3:00PM	68	0	68
23	23-1	5502 Madge Court	3:45PM	66	0	66
	23-2	5512 Madge Court	3:45PM	65	0	65
	23-3	5501 Lloyd Avenue	3:45PM	64	0	64
	23-4	18 Sylvania Mobile Park	11:00AM	60	0	60
	23-5	5501 New Forde Road	3:45PM	59	0	59
	23-6	5507 Madge Court	3:45PM	58	0	58

Noise levels approach or exceed impact criteria.

1. The peak hour adjustment factor was determined by the difference in noise levels between the peak hour and the actual measurement hour as identified by the 24-hour measurement.
2. Noise levels and adjustments were calculated to 0.1 decibel and then rounded to the nearest whole integer. Some minor differences in adjusted peak hour noise levels are due to rounding.



Noise Abatement Criteria: Noise Abatement Criteria (NAC) for various land uses have been established by the FHWA in Title 23 of the Code of Federal Regulations, Part 772 (23 CFR, Part 772) *Procedures for Abatement of Highway Traffic Noise and Construction Noise* and the Maryland State Highway Administration (SHA) *Sound Barrier Policy* (SHA, 1998). These categories and criteria are presented in **Table III-14**. The noise abatement criterion for most land uses occurring in the project study area (Category B) is 67 dBA Leq. However, Receptor 12-1 falls under Category C, which has a criterion of 75 dBA Leq.

According to the procedures described in 23 CFR, Part 772, noise impacts occur when predicted traffic noise levels for the design year approach or exceed the NAC prescribed for a particular land use category, or when the predicted noise levels are substantially higher than the existing ambient noise levels. The SHA *Sound Barrier Policy* defines the term “approaches” as 66 dBA for Category B and as 74 dBA for Category C, and defines a 10 dBA increase above existing noise levels as a substantial increase.

Existing Noise Impacts: As identified in **Table III-13**, existing noise levels at 13 NSAs (NSAs 7, 8, 9, 10, 11, 12, 14, 16, 17, 18, 19, 22 and 23) approach or exceed the Leq impact criterion (**Figure III-12**).

Table III-14. Noise Abatement Criteria (NAC), 23 CFR, Part 772: Hourly A-Weighted Sound Level in Decibels (dBA) *

Activity Category	L _{eq} (h)	L ₁₀ (h)	Description of Activity Category
A	57 (Exterior)	60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties or activities not included in Categories A or B above
D	--	--	Undeveloped lands
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

* Either L_{eq}(h) or L₁₀(h) (but not both) may be used on a project.

Note: These sound levels are only to be used to determine **impact**. These are the absolute levels where abatement must be considered. Noise abatement should be designed to achieve a substantial noise reduction - not the noise abatement criteria.



6. Existing Air Quality

The Clean Air Act regulates emissions of six criteria pollutants that pose a danger to human health and the environment. The six criteria pollutants are: lead, carbon dioxide, particulate matter, sulfur dioxide, nitrogen dioxide, and ozone. Under the Act, a system of health-based national ambient air quality standards, called “NAAQS” is established. Each NAAQS represents the amount of a particular pollutant that can be emitted into the ambient air, i.e., the air we breathe, without causing adverse health effects. Air quality control regions across the country are each given one of three designations: attainment, nonattainment, or maintenance.

The Section 100 study area is located within the Metropolitan Baltimore Intrastate Air Quality Control Region. The region is designated a maintenance area for carbon monoxide (CO) and an attainment area for the following pollutants: nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), and particulate matter (PM₁₀). It is, however, designated as a severe non-attainment area for ozone (O₃). Because of this non-attainment designation for ozone, the region is subject to the implementation of reasonably available control measures, such as the Vehicle Emissions Inspection Program (VEIP).

In addition, projects in maintenance and non-attainment areas are subject to the transportation conformity provisions of the Clean Air Act. Transportation conformity is the link between transportation planning and decision-making and the emissions budget. Conformity requires that transportation plans, programs, and projects in nonattainment and maintenance areas be demonstrated to “conform” to the mobile source emissions budgets in the SIP. Conformity is demonstrated based on the metropolitan constrained long-range plan (CLRP) and Transportation Improvement Program (TIP). In addition, projects located in CO maintenance or non-attainment areas are subject to micro-scale or “hot-spot” air quality analyses. FHWA cannot grant approvals or award funding for a project that has not been found to conform.

The Authority is currently coordinating with the Baltimore Metropolitan Council (BMC) regarding inclusion of the Section 100 project into the new cycle for the Baltimore Region TIP 2005-2009. Conformity determination for the 2005-2009 TIP is scheduled for July 2004. Section 100 is currently included in the 2001 Baltimore Regional Transportation Plan for illustrative purposes. It is anticipated that the Section 100 project will be included in the new long-range plan, Transportation 2030, which is scheduled for federal approvals in February 2005. The conformity status of the long range plan will be determined concurrently with the conformity for the TIP in July 2004. Upon inclusion in the regional TIP, the project will also be incorporated into the statewide State Implementation Plan (SIP).



A detailed micro-scale air quality analysis has been performed to determine the impact of each of the proposed Section 100 alternates on CO levels. The location of air quality sensitive receptors and the intersection analysis receptors (hot spots) used to assess each of the Build Alternates is shown on *Figure III-12*, and summarized in *Table III-15*.

Table III-15. Air Quality Receptor Locations

Receptor	Location	Description	Receptor	Location	Description
D-1	WB MD 43 @ Ramp G	Open Space	E-1	EB MD 43 @ Ramp C	Open Space
D-2	WB MD 43 @ Ramp G	Open Space	E-2	EB MD 43 @ Ramp C	Open Space
D-3	WB MD 43 @ Ramp G	Open Space	E-3	EB MD 43 @ Ramp C	Open Space
D-4	EB MD 43 @ Ramp G	Open Space	E-4	WB MD 43 @ Ramp C	Open Space
D-5	EB MD 43 @ Ramp G	Open Space	E-5	WB MD 43 @ Ramp C	Open Space
D-6	EB MD 43 @ Ramp G	Open Space	E-6	WB MD 43 @ Ramp C	Open Space
D-7	SB Ramp G @ MD 43	Open Space	E-7	NB Ramp C @ MD 43	Open Space
D-8	SB Ramp G @ MD 43	Open Space	E-8	NB Ramp C @ MD 43	Open Space
D-9	SB Ramp G @ MD 43	Open Space	E-9	NB Ramp C @ MD 43	Open Space
SR-1	62nd Street	Residential	SR-19	Pentecostal Holiness Church	Church
SR-2	62nd Street	Residential	SR-20	Meadow Branch Court	Residential
SR-3	62nd Street	Athletic Field	SR-21	Brushfield Road	Residential
SR-4	Hamilton Avenue	Residential	SR-22	Town & Country Apartments	Residential
SR-5	Langdon Lane	Church	SR-23	YMCA	Commercial
SR-6	Daybreak Estates	Residential	SR-24	Central Christian Academy	School
SR-7	Overlea High School	Athletic Field	SR-25	North of Rossville Boulevard	Open Space
SR-8	Kenwood Avenue	Residential	SR-26	North of Rossville Boulevard	Open Space
SR-9	East Avenue	Residential	SR-27	Campbell Boulevard	Open Space
SR-10	Trumps Mill Road	Residential	SR-28	Campbell Boulevard	Open Space
SR-11	Trumps Mill Road	Residential	SR-29	Quail Ridge Apartments	Residential
SR-12	Park East Apartments	Residential	SR-30	Lawrence Hill	Residential
SR-13	Kenwood Avenue	Residential	SR-31	Lawrence Hill	Residential
SR-14	Shandy Springs ES	Athletic Field	SR-32	White Marsh Childcare	Commercial
SR-15	Willow Hill	Residential	SR-33	Spring Road	Residential
SR-16	Willow Hill	Residential	SR-34	North of Joppa Road	Open Space
SR-17	Trumps Mill Road	Residential	SR-35	North of Joppa Road	Open Space
SR-18	Trumps Mill Road	Residential	SR-36	New Life Baptist Church	Church

SR = Sensitive Receptor D and E = Hot Spot Location



The analyses included predictions of CO concentrations at 36 sensitive receptor locations in the No-Build Alternate and the Managed Lanes Alternate. Eighteen additional receptor locations related to the proposed signals at the I-95/MD 43 Interchange were added to the General Purpose Lanes Alternate, for a total of 54 receptor locations for that Alternate.

The results of the air quality analysis are summarized in Chapter IV: *Environmental Consequences*. Additional details on air analyses can be found in the *Section 100: I-95, I-895(N) Split to North of MD 43 Air Quality Technical Report* (Authority, 2004) prepared for this project.

F. Hazardous Materials

An *Initial Site Assessment* (ISA) Report (Authority, 2004) was prepared for the Section 100 Project. This report identified a total of 72 potential waste sites within and/or adjacent to the study area. Background research, including a database search of State and/or Federal waste site inventories, a file review at the Maryland Department of the Environment (MDE) and the Baltimore County Department of Environmental Protection and Resource Management (DEPRM), and a search of the EPA ENVIROFACTS website, was conducted for the study area.

Based on an environmental database search (InfoMap Technologies Inc/Environmental First), no Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) sites, CERCLIS No Further Remedial Action Planned (NFRAP), or Maryland Priorities List (SPL) sites were identified within the study area. Resource Conservation and Recovery Act Generator (RCRA-GEN), Emergency Response Notification System (ERNS), Solid Waste Landfill (SWL), Registered Underground Storage Tank/Aboveground Storage Tank (UST/AST) facilities, and Leaking Underground Storage Tank (LUST) facilities occur at various locations throughout the study area. A field reconnaissance was also conducted, which identified evidence of hazardous materials including fuel dispensers, 55-gallon drums, hydraulic equipment that could potentially contain polychlorinated biphenyls (PCBs), service garages, solid waste debris piles, ASTs, and USTs. Detailed results of the background research and field reconnaissance can be found in the ISA Report prepared for this project.

Of the 72 existing sites identified during the ISA, on-property or telephone interviews were conducted for several sites of concern in an attempt to gather additional information about the property. Each site in the ISA was assigned a potential contaminant value of high, medium, or low based on property operations, presence of USTs, and/or listing on the environmental database. Five sites within the study area are classified as having a high potential contaminant value: McCormick Place/Ayres Property (5200 McCormick



Avenue), Exxon gasoline station (1771 Chesaco Avenue), BP Express (5250 Campbell Boulevard), Honeygo Run Reclamation Center (10710 Philadelphia Road), and Trailer Park/Honeygo Run Reclamation Center (Polecat Lane/Silver Spring Road). Thirty-five sites with a medium potential contaminant value and 32 sites with a low potential contaminant value were also identified.

Depending on the project impacts to the five sites identified as high potential contaminate value, additional investigations on these properties may be necessary. *Figure III-13* illustrates the location of these five sites in relation to the study area. Chapter IV: *Environmental Consequences* details the results of the investigations and addresses recommendations for additional studies.