

Legend

- Pennsylvania Avenue Alignment
- Proposed Stop Zones
- Potential Storage Facilities
- Water Bodies
- Corridor Location
- Roads
- Metro Lines
- Green
- Orange
- Existing Rail
- M Metro Stations

Environmental Justice Impact *

- Meets Environmental Justice Threshold
- 000123 Census Block Group ID

* Census blockgroups were created on a smaller scale and may be shifted from their true location on the map.

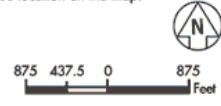


Figure 3-10

**Proposed Action
Environmental Justice
Census Block Groups**



**Anacostia Corridor
Demonstration Project**

Transportation Planning Board Vision (1998). The vision provided the framework for the financially constrained long-range transportation plan (CLRP). It supports transportation choices, economic development, and ease of understanding and use. One of the stated goals is as follows: “The Washington metropolitan region will develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a strong and growing economy throughout the entire region, including a healthy regional core and dynamic regional activity centers with a mix of jobs, housing and services in a walkable environment.”

Metropolitan Washington Transportation Improvement Program. The 10-Year Capital Improvement Program addresses the region’s needs to adequately re-capitalize the transportation system, keep its assets in a state of good repair, increase rail and bus capacity to meet demand and serve new markets, and expand fixed guideway service to portions of the region that are not adequately served by public transportation at present.

District of Columbia Comprehensive Plan for the Nation’s Capitol (1999). The adopted Plan describes the major goals and objectives of the District, outlines a long-term vision for the community, and coordinates activities between federal and local jurisdictions in the National Capitol Region while establishing policies for future development. The Plan seeks to improve the nation’s Capitol by promoting adequate transportation for residents, workers, and visitors, and enhancing cultural and recreational opportunities. The Plan outlines a number of economic development and redevelopment strategies for the Demonstration Project study area (Wards 7 and 8) and describes them as areas that warrant special resource concentrations to support land use and economic development goals.

District of Columbia Strategic Neighborhood Action Plan (2002): One of the Plan’s overall goals is to “provide for a balanced transportation network incorporating all modes of transportation including mass transit, private automobiles, bicycling, and walking.” The Plan recommends future mixed-use development opportunities on a portion of the St. Elizabeths Hospital complex (Cluster 39); revitalizing Martin Luther King Jr. Avenue and Good Hope Road. (Cluster 28); future development and recreation opportunities along the Anacostia waterfront (Cluster 28); the potential for recreational uses to be developed at Poplar Point and the potential for a new Smithsonian Museum facility to be located within the Anacostia neighborhood (Cluster 37).

National Capitol Planning Commission, Extending the Legacy: Planning America’s Capitol for the 21st Century (1997). As described in Section 1.4, the Plan emphasizes the importance of creating transit centers or “crossroads” where passengers can transfer easily to the subway, and showcasing the waterfront of the Anacostia and Potomac rivers for urban vitality and sensitive design.

Anacostia Waterfront Initiative Draft Framework Plan (May 2003). As described in Section 1.4, the Plan outlines a vision for major redevelopment of the waterfront and nearby neighborhoods, and reconnecting neighborhoods to the river. An integral part of the Plan is incorporating a rail transit corridor on both the east and west sides of the river that connect to existing Metrorail stations at Minnesota Avenue, Anacostia, Navy Yard, and Waterfront. The plan identifies several potential stations and alignments, but specifically recommends stops at W Street SE and 16th Street SE be included in the alternatives analysis study.

WMATA Transit System Expansion Plan (1999). This plan recommends that future service expansions: enhance quality of service; plan and advance new fixed guideway routes; improve access to the rail system; support core area growth; and design and plan transit projects and programs to: create a sense of place; use transit as a catalyst for downtown and neighborhood renewal; create opportunities for local economic development; improve safety and amenities; make communities accessible and convenient; and shape community growth.

Washington Metropolitan Area Transit Authority, District of Columbia Transit Development Study (2002). The Study examined the feasibility of passenger rail transit corridors based on 1997 *Transportation Vision, Strategy, and Action Plan* for the Nation’s Capitol Corridors and WMATA Board of Directors 1999 *Transit Service Expansion Plan*. As described in Section 1.4, the Study identified a

potential starter line within in the Demonstration Project corridor that would incorporate segments that are common to several of the proposed corridors for rail transit in the District.

WMATA 10-year Capital Improvement Plan (2002). This plan recommends that future Metro service accomplish the following: increase service and system capacity to relieve overcrowding and better serve existing markets; serve new markets for which there is no transit today; enhance feeder service to rail and express bus service; and provide new fixed-guideway services that connect with existing Metrorail lines and with each other to provide seamless service and travel choices throughout the region.

East of the River Redevelopment Planning, Marketing, and Implementation Development Strategy Study: This Plan, developed by the District Office of Planning in conjunction with the Department of Housing and Community Development, encourages neighborhood economic development, expanding job opportunities, improving housing and increasing opportunities for homeownership, strengthening the infrastructure and raising the quality of life for residents east of the Anacostia River.

Poplar Point Target Area Plan (2003). This Plan was prepared in conjunction with the Anacostia Waterfront Initiative. The Plan envisions Poplar Point serving as the “symbolic front door to the Anacostia Waterfront”, with an interconnected and efficient multi-modal transit system linking to the Anacostia Metrorail Station. The Plan identifies improved access to the park and waterfront as a driving force for realizing the Plan.

South Capitol Street Urban Design Study (2003). The Study was a cooperative effort between the District’s Office of Planning and the National Capitol Planning Commission. This Study looked at revitalizing the stretch of South Capitol Street from the Capitol Mall south to Suitland Parkway. A grand urban boulevard is envisioned from Anacostia to the Capitol and would be achieved by revitalizing bridges, creating open space, improving sidewalks, installing street trees, and other improvements designed to define this gateway to the Capitol. The Study calls for selecting transportation investments with ample options for future transit improvements and improved east/west connectivity across South Capitol Street.

3.6.1 Impacts

3.6.1.1 No-Build Alternative

The No-Build Alternative is not consistent with the policies in District, regional, and neighborhood plans. These plans call for improved high capacity transit improvements. No new transportation facilities or services to meet these needs are provided under the No-Build Alternative.

3.6.1.2 Initial Build Alternatives

The Demonstration Project initial Build Alternatives are compatible with each of the key plans meant to guide development in the study area. In many of these plans, both the Demonstration Project and passenger rail transit are identified as important elements in successfully implementing transportation plan goals and policies.

3.6.1.3 Proposed Action

The Proposed Action is compatible with each of the key plans meant to guide development in the study area. It is also more consistent with local plans because it includes the addition of two stop zones at Barry Farms and 16th Street/Fairlawn.

3.6.2 Mitigation

As the Demonstration Project is consistent with local plans, no mitigation measures have been identified at this time.

3.7 Transportation

This section discusses existing and future transportation conditions in the vicinity of the Demonstration Project and quantifies the expected transportation impacts of the No-Build Alternative, the initial Build Alternative, and the Proposed Action.

3.7.1 Roadway System

Existing Highway-Rail Grade Crossings

The roadway network in the vicinity of the Demonstration Project is comprised of local collectors, minor arterials, and principal arterials. Table 3-7 lists the existing intersections with grade crossings within the corridor. Each of these intersections is described below.

**Table 3-7
Existing Grade-Crossing Intersections**

Intersection No.	Roadway/Intersections
1	South Capitol Street (500' West of the intersection of South Capitol Street and Firth Sterling Avenue)
2	Firth Sterling Avenue at Stevens Road
3	Firth Sterling Avenue at Sumner Road
4	Firth Sterling Avenue at Suitland Parkway
5	Firth Sterling Avenue at Howard Road
6	Good Hope Road (Between I-295 Overpass and Martin Luther King Jr. Avenue)
7	Nicholson Street at Fairlawn Avenue
8	Pennsylvania Avenue at Fairlawn Avenue

South Capitol Street (South of Firth Sterling Avenue) - South Capitol Street is a five-lane, approximately 55-foot wide, minor arterial that connects to I-95 and I-295 via Route 210 to the Frederick Douglas Memorial Bridge. The road carries an Average Annual Daily Traffic (AADT) volume of approximately 16,300 vehicles. In the area near the Demonstration Project, the Anacostia Naval Annex and I-295 border the roadway. The existing rail corridor traverses the roadway at an approximate 120-degree angle from southwest to northeast. The signalized intersection at South Capitol Street and Firth Sterling Avenue is approximately 500 feet north of the existing railroad tracks.

Firth Sterling Avenue at Stevens Road - The intersection at Firth Sterling Avenue and Stevens Road is located approximately 600 feet east from the South Capitol Street intersection. Firth Sterling Avenue is a four-lane minor, 48-foot wide arterial roadway with an AADT of 9,500 vehicles. Stevens Road, a minor collector road for an adjacent residential area, is a two-lane roadway that creates a T-intersection at Firth Sterling Avenue. Currently, traffic accessing Stevens Road must traverse inclined tracks at the corridor crossing and enter a stop controlled intersection prior to entering the residential area.

Firth Sterling Avenue at Sumner Road - The intersection at Firth Sterling Avenue and Sumner Road is located approximately 870 feet east from the Stevens Road intersection and has similar physical and volume characteristics as described above. Sumner Road, a minor collector road for an adjacent residential area, is a two-lane roadway that creates a four-leg intersection with Firth Sterling Avenue.

Firth Sterling Avenue at Suitland Parkway - The signalized intersection at Firth Sterling Avenue and Suitland Parkway is located approximately 500 feet east of the Sumner Road intersection. Firth Sterling Avenue is a four-lane, 48-foot wide, minor arterial roadway with an AADT of 11,800 vehicles. Suitland Parkway, a four-lane principal arterial connects to the Frederick Douglas Memorial Bridge and has an AADT of 45,400 vehicles.

Firth Sterling Avenue at Howard Road - The signalized intersection at Firth Sterling Avenue and Howard Road is located approximately 550 feet east of the Suitland Parkway intersection. Firth Sterling Avenue is a

four-lane, 48-foot wide, minor arterial roadway with an AADT of 11,800 vehicles. Howard Road, a four-lane minor arterial with an AADT of 8,700 vehicles provides access to the Anacostia Metrorail Station. Traffic accessing the intersection from the south must traverse the railroad tracks before entering the intersection.

Good Hope Road - Good Hope Road is a 2-lane, approximately 30-foot wide, minor collector that is located between I-295 overpass and Martin Luther King, Jr. Avenue and connects Anacostia Drive to the central business district in Anacostia. The road carries an average daily volume of 8,000 vehicles. The intersection of Good Hope Road and Martin Luther King, Jr. Avenue is approximately 200 feet from the railroad tracks.

Nicholson Street at Fairlawn Avenue - The intersection at Nicholson Street at Fairlawn Avenue is located approximately 650 feet west from the Pennsylvania Avenue intersection. Fairlawn Avenue is a two-lane, 30-foot wide, minor collector with an AADT of 8,500 vehicles. The intersection has five approaches, as there is a terminus of 22nd Street at the intersection. The intersection is controlled by a stop sign on the Fairlawn Avenue and 22nd Street approaches.

Pennsylvania Avenue at Fairlawn Avenue - Pennsylvania Avenue at Fairlawn Avenue is a six-lane principal arterial roadway with an AADT of 93,000 vehicles. Traffic accessing the intersection from the north must traverse the existing tracks before entering the intersection. Vehicles entering the I-295 northbound on-ramp from both directions of Pennsylvania Avenue must also traverse the railroad tracks. The intersection is controlled by a traffic signal; northbound Pennsylvania Avenue stops while southbound left turns receive a protected phase to turn onto I-295 on-ramp. Left turn vehicles currently queue over the railroad tracks. Southbound Pennsylvania Avenue is free flow; however, traffic queues from the upstream signal to the existing railroad tracks.

Accident Review

Consultation and accident data for the at-grade intersections from the District Department of Transportation (DDOT) indicate that there were numerous accidents, including eight fatalities since 1993, at the intersection of Suitland Parkway and Firth Sterling Avenue. Currently, DDOT has the intersection targeted in its Safety Improvement Study initiative that will evaluate a range of improvements such as signing, striping, and revised signal timings to reduce accidents at this intersection.

Existing Level of Service

Table 3-8 summarizes the existing peak hour Level of Service (LOS) and traffic volumes for the eight intersections evaluated. LOS, as defined by the 2000 *Highway Capacity Manual (HCM)* published by the Transportation Research Board, uses quantitative measures that characterize the operational conditions of an intersection and along roadway segments. Each LOS defines these conditions by factors such as speed, travel time, delay, capacity, and volume. There are six classification levels (A to F). Each LOS represents a range of operating conditions and the driver's perception of those conditions. Safety is not included in the measures that establish service levels. LOS A represents the best operating conditions and LOS F the worst. Levels B and C are generally acceptable conditions. Level D represents moderate delay. Levels E and F are extremely congested conditions and usually signify major delays.

**Table 3-8
2003 Existing Intersection LOS and Volume**

Intersection	AM Peak Hour LOS	PM Peak Hour LOS	AM Peak Hour Volume	PM Peak Hour Volume
South Capitol Road⁺				
South Capitol Street NB	B	A	1236	361
South Capitol Street SB	A	B	460	1448
Firth Sterling Avenue at Stevens Road^{**}				
Firth Sterling Avenue EB	A	A	222	419
Firth Sterling Avenue WB	A	A	479	416
Stevens Road NB	C	C	32	38
Firth Sterling Avenue at Sumner Road^{**}				
Firth Sterling Avenue EB	A	A	191	373

**Table 3-8
2003 Existing Intersection LOS and Volume**

Firth Sterling Avenue WB	A	A	379	467
Sumner Road NB	B	C	71	66
Firth Sterling Avenue at Suitland Parkway				
Firth Sterling Avenue EB	C	C	303	402
Firth Sterling Avenue WB	C	E	82	319
Suitland Parkway NB	B	A	2542	989
Suitland Parkway SB	B	D	1011	1947
Firth Sterling Avenue at Howard Road				
Firth Sterling Avenue EB	A	B	691	781
Howard Road NB	B	C	343	807
Howard Road SB	D	A	502	408
Good Hope Road⁺				
Good Hope Road NB	A	A	23	42
Good Hope Road SB	A	A	78	93
Nicholson Street at Fairlawn Avenue^{**}				
Nicholson Street NB	A	A	28	5
Nicholson Street SB	A	A	111	65
Fairlawn Street EB	A	A	0	33
Fairlawn Street WB	A	A	9	30
22 nd Street SB	A	A	69	37
Pennsylvania Avenue at Fairlawn Avenue[*]				
Pennsylvania Avenue NB	B	B	4436	1871
Pennsylvania Avenue SB	F	F*	2471	4140*

* - Due to queuing at the adjacent intersection of Pennsylvania Avenue and L'Enfant Square, southbound volumes caused major queuing and increased delay at the intersection. LOS analysis will show LOS levels better than actually observed.

** - This intersection was analyzed as an unsignalized intersection.

+ - A highway analysis was utilized for the 2003 Existing condition.

3.7.2 Public Transportation

The Washington Metropolitan Area Transit Authority (WMATA) provides public transportation in the vicinity of the Demonstration Project corridor by operating Metrorail and Metrobus services. The existing public transportation services are summarized below.

Metrorail Service

Figure 3-11 displays the Metrorail System. Metrorail service within the study area is the Green Line that extends from the Greenbelt Station to the Branch Avenue Station. The Anacostia Metrorail Station near the intersection of Firth Sterling Avenue and Howard Road serves the study area. Access to the Anacostia Metrorail Station facilities is on the north side of I-295.

Metrobus Service

The U2 and W9 bus routes operate 24-hour service within the study area. The U2 Route connects the Minnesota Avenue Metrorail Station to the Anacostia Metrorail Station via Good Hope Road, Martin Luther King, Jr. Avenue, and Howard Road. The W9 Route runs in a counter clockwise direction in the AM and a clockwise direction in the PM that connects the Anacostia Metrorail Station to the Anacostia Naval Annex utilizing Firth Sterling Avenue, South Capitol Street, Malcolm X Avenue, Martin Luther King, Jr. Avenue and Howard Road. The route takes approximately 24 minutes to complete. Average daily ridership on the U2 is 2100; 400 of these trips are inside the corridor. Metrobus routes within the study area are illustrated on Figure 3-12.

3.7.3 Parking

The existing public park-and-ride facility at the Anacostia Metrorail facility has a capacity for up to 808 cars. Since the opening of the Branch Avenue park-and-ride lot further south on the Green Line, parking demand at the Anacostia Metrorail Station has dropped, such that the lot rarely exceeds 80% capacity.

3.7.4 Pedestrian/Bicycle Transportation Systems

Two pedestrian crossings are located in the project vicinity. One is at the intersection of Firth Sterling Avenue and Suitland Parkway, and the other at Firth Sterling Avenue and Howard Road. The Suitland Parkway Trail is approximately 2 miles long, extending from the intersection of Howard Road and Martin Luther King, Jr. Avenue, SE to Southern Avenue at the District boundary with Prince Georges County.

3.7.5 Impacts

The methodology used to estimate “future year” traffic volumes used a growth-factoring process. The traffic growth factor was based on data obtained from the DDOT and WMCOG. Based on the data, the study corridor area is projected to experience a 0.4 percent increase in traffic growth per year or a 1.012 percent future growth rate in year 2006 when compounded annually.

The following describes the assumptions applied to each alternative:

No-Build – The No-Build Alternative assumes conditions in year 2006 without the Demonstration Project. The No-Build Alternative includes existing traffic and roadway conditions for a year 2003 as a baseline, and traffic volumes projected to grow by 0.4 percent per year to 2006.

Anacostia Alternative, Pennsylvania Avenue Alternative, Proposed Action –Build Alternatives were assessed using the same assumptions. Traffic volume conditions are projected for year 2006 relative to the operation of the Build Alternatives, and in comparison to No-Build conditions. Passenger trains for both alternatives would operate at 15-minute frequencies during the AM and PM peak periods, 20-minute frequencies at midday peak period and 30-minute frequencies during evenings and weekends. The typical morning and late afternoon commuter peak hours were evaluated for each highway-rail grade crossing. Safety conditions were evaluated using professional judgment and guidance provided by the Manual of Uniform Traffic Control Devices (MUTCD), millennium version; and the Institute of Transportation Engineer’s *Light Rail Transit Grade Separation Guidelines* (ITE 1993).

3.7.5.1 No-Build Alternative

The peak-period traffic intersection LOS for years 2003 and 2006 under the No-Build Alternative are presented in Table 3-9. As shown, the LOS would remain unchanged between existing conditions (2003) and future conditions (2006).

Planned improvements to the transportation network by others that are included in the No-Build assumptions have already been approved and programmed for funding. No new transportation opportunities would result from this alternative.

3.7.5.2 Initial Build Alternatives

There are no noticeable operational differences between the LRT/streetcar and DMU vehicle technology alternatives in terms of traffic impacts.

Roadway Operational Impacts

The overall intersection LOS for 2003 existing conditions, 2006 No-Build conditions, and 2006 Build conditions is presented in Table 3-9. Illustration of LOS at intersections is provided in Figure 3-13.



Figure 3-11
Metro rail System

**Anacostia Corridor
Demonstration Project**

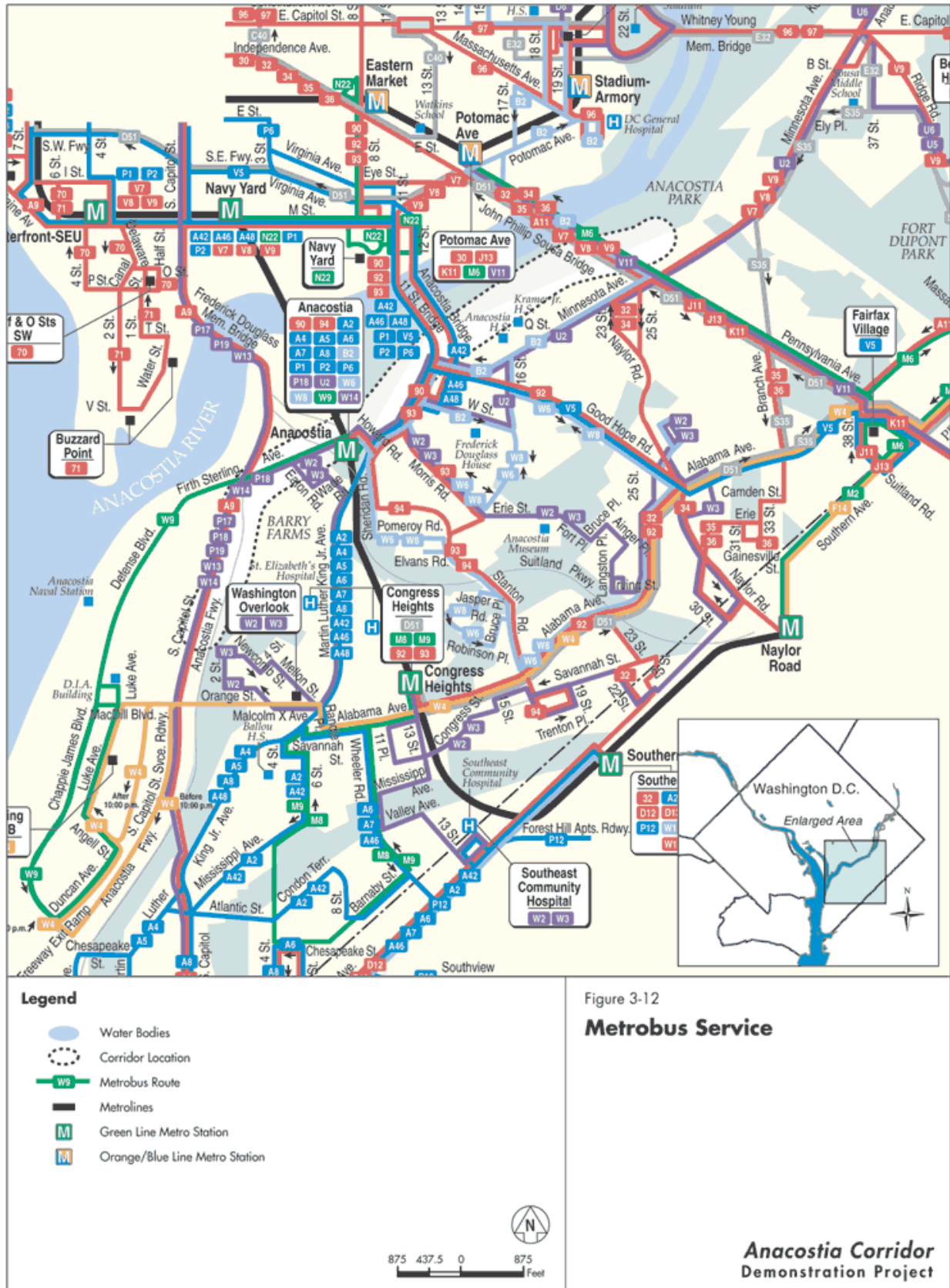


Figure 3-12
Metrobus Service

**Anacostia Corridor
Demonstration Project**

Anacostia Alignment

The Anacostia Alignment would have an effect on the existing transportation system within the study area. The LOS based on delay would decrease at two of the five intersections within the limits of the alignment due to the introduction of the passenger train crossings. As indicated in Table 3-9, in comparison to 2003 existing conditions, LOS would decrease at the Firth Sterling Avenue/Suitland Parkway and at Firth Sterling Avenue/Howard Road intersections. Degradation of LOS below LOS E would occur only at the Firth Sterling Avenue/Suitland Parkway intersection during the PM peak hour. Under this condition, the intersection is forecast to operate at LOS F.

Pennsylvania Avenue Alignment

The Pennsylvania Avenue Alignment would also have an effect on the existing transportation system within the study area. The LOS based on delay would decrease at three of the seven intersections within the limits of the alignment due to the introduction of the passenger train crossings. As indicated in Table 3-9, in comparison with the 2003 existing conditions, LOS would decrease at the Firth Sterling/Suitland Parkway, Firth Sterling/Howard Road, and Nicholson Street/Fairlawn Avenue intersections.

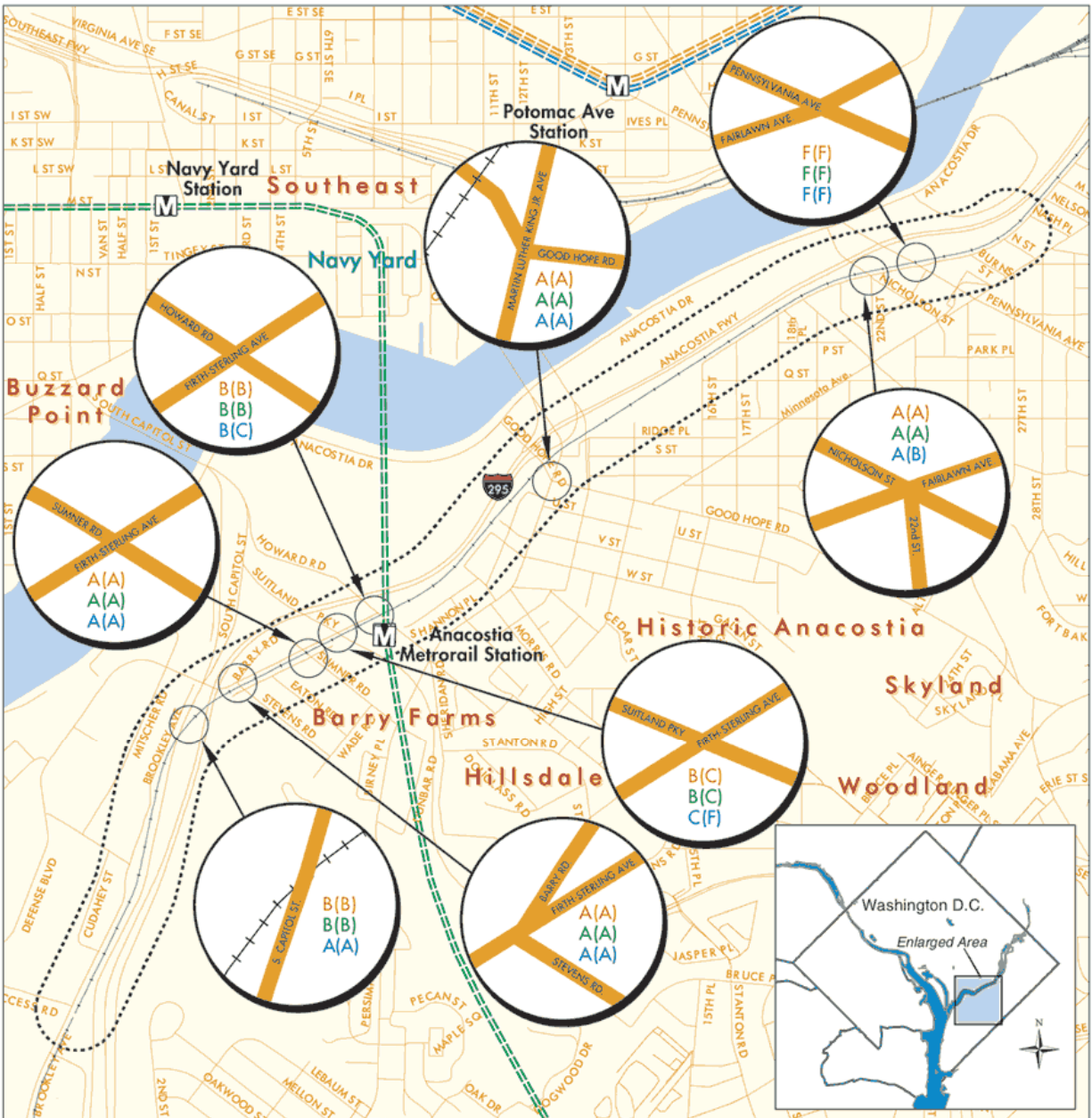
Degradation of LOS below LOS C would occur only at the Firth Sterling Avenue/Suitland Parkway intersection during the PM peak hour. Under this condition, the intersection is forecast to operate at LOS F.

Storage Facility Sites

Neither the Sanitation and Storage Yard site nor the Coal Spur site alternatives would have an impact on study area roadways or intersections. Use of the Pennsylvania Avenue Storage Facility site would, however, impact an additional intersection: Pennsylvania Avenue at Fairlawn Avenue.

Pennsylvania Avenue at Fairlawn Avenue already experiences LOS E and LOS F in the existing condition. The intersection will continue to exhibit unacceptable LOS in 2006 under all conditions. However, choice of the Pennsylvania Avenue Storage Facility site could further exacerbate delay at this intersection since rail vehicles would need to traverse the intersection in order to access the storage facility. Intersection delay is forecast to increase minimally since crossing of the intersection would occur during off-peak times when the intersection operates at LOS better than F.

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Legend

- Water Bodies
- Corridor Location
- Roads
- Level of Service**
- A(A) 2003 AM (PM)
- A(A) 2006 AM (PM) No Build
- A(A) 2006 AM (PM) Build
- Metro Lines**
- Blue
- Green
- Orange
- Existing Rail
- Metro Stations



Figure 3-13
Levels of Service 2003 and 2006 AM and PM Peak Hours

**Anacostia Corridor
 Demonstration Project**

Pedestrian/Bicycle Transportation System

It is anticipated that all grade intersections would be signalized and that pedestrian crossings would be included in the signal timings. Because the intersections of Firth Sterling Avenue and Suitland Parkway, as well as Firth Sterling Avenue and Howard Road have experienced numerous pedestrian fatalities over the past few years, special precautions such as audible pedestrian signals or illuminated crosswalks should be considered to provide safe pedestrian access to the Anacostia Metrorail Station for those individuals disembarking the train. Accessibility to local pedestrian/bicycle facilities and trails including the Suitland Parkway Trail would be enhanced.

3.7.5.3 Proposed Action

The Proposed Action would have an effect on the existing transportation system similar to that identified for the Pennsylvania Avenue Alignment, LRT/streetcar vehicle technology and Sanitation and Storage Yard site. The addition of two more stop zones at Barry Farms and 16th Street/Fairlawn would not result in further degradation of LOS at the identified intersections. Degradation of LOS below C would occur only at the Firth Sterling Avenue/Suitland Parkway intersection during the PM peak hour. Under this condition the intersection is forecast to operate at LOS F. The Sanitation and Storage Yard site would have no impact on study area roadways or intersections. Illustration of LOS at intersections is provided in Figure 3-14.

The Proposed Action would also affect transit services in a similar manner to that identified in the Pennsylvania Avenue analysis. However, ridership increases on Metrorail would be greatest with the Proposed Action because it provides the most access to neighborhoods, potential transit users, and employment centers. The Proposed Action would also duplicate, and most likely replace, the Metrobus service on route W9.

As was recommended for the Pennsylvania Avenue alignment, in combination with the LRT/streetcar vehicle technology and Sanitation and Storage Yard site, the Proposed Action would consider special precautions at grade crossings to provide safe pedestrian access from neighborhoods, sidewalks, and other transit facilities. It would also increase access to local pedestrian and bicycle facilities by providing a stop (16th Street/Fairlawn) adjacent to the Anacostia Riverfront Park pedestrian bridge.

3.7.6 Mitigation

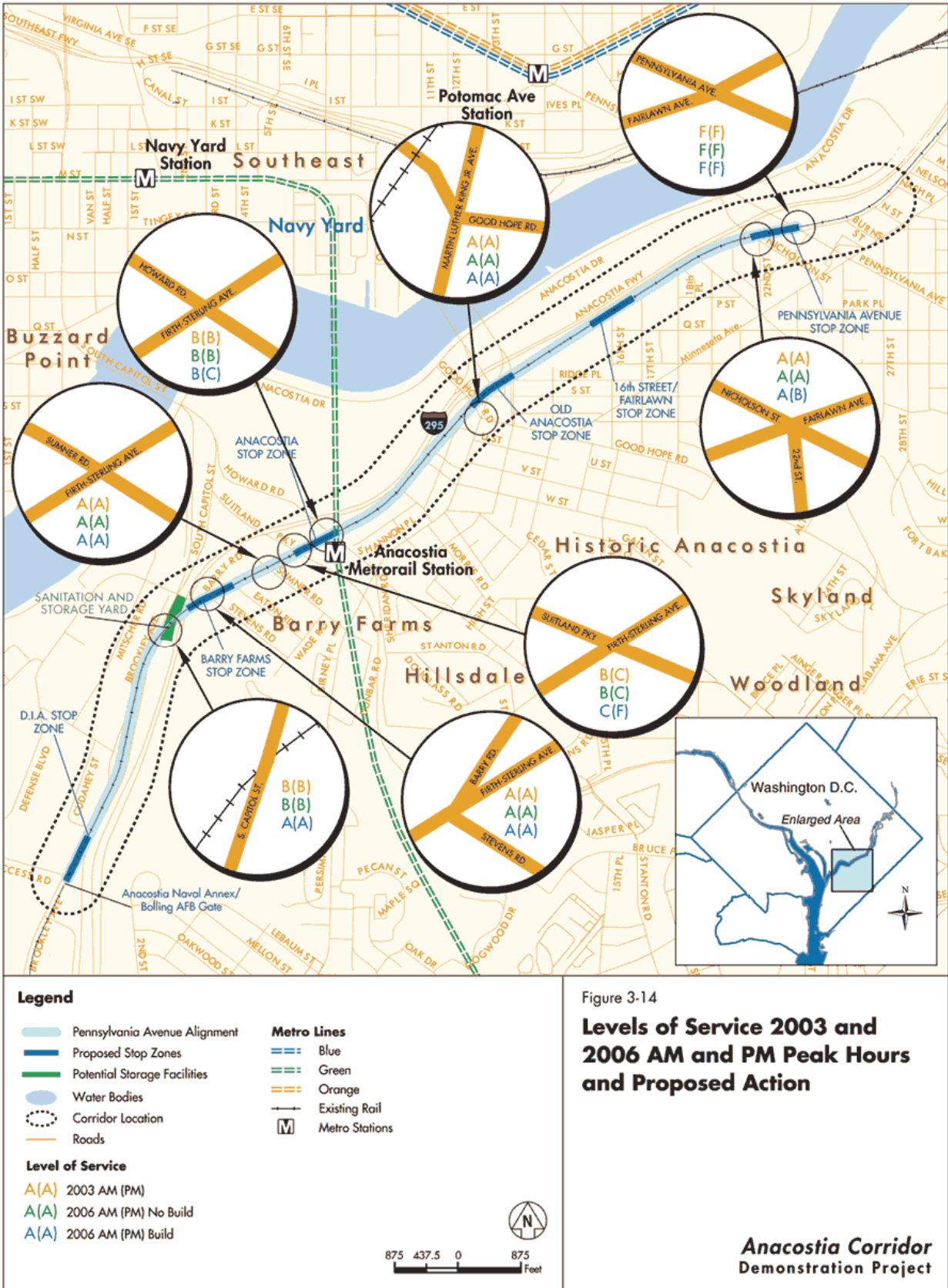
No-Build Alternative

No planned new major transportation project or infrastructure improvements would be operational by year 2006. Because the only new facilities associated with the No-Build Alternative are minor and already programmed for implementation by year 2006, they represent no impact on existing traffic conditions and no deterioration in LOS, consequently no need for mitigation is anticipated.

Initial Build Alternatives

The initial Build Alternatives would require some mitigation actions to offset the decrease in LOS at intersections. Some mitigation options include crossing protection for at-grade intersections through high level warning devices and active devices identifying an oncoming train by flashing lights, bells, and lowering gates across the intersection. Use of gates has the advantage of providing the train with exclusive right-of-way, thereby eliminating potential conflicts and the need for the passenger rail vehicle to slow at the crossing. Passive devices such as signs and pavement markings would also be used at all crossings.

Pedestrian and bicycle crossings would be allowed at protected grade crossings. This would limit pedestrian activity to areas where the passenger train operator is expecting potential conflicts. A number of measures would be considered by DDOT to enhance safety for pedestrians and bicyclists at train-street grade crossings: pedestrian warning signs at crossings; channeling pedestrian traffic through a “z” crossing that requires pedestrians to face both directions along the track prior to crossing; and manual gates that open toward the pedestrian.



Improvements at Pennsylvania Avenue would only occur if the Pennsylvania Avenue Storage site is chosen.

Proposed Action

The Proposed Action would also require mitigative actions to offset potential decreases in level of service at intersections. Mitigation features would be similar to those described above for the initial Build Alternatives. Some additional mitigation in the vicinity of Stevens Road (Barry Farms Stop) and 16th Street (16th Street/Fairlawn Stop) will also be necessary to insure adequate vehicular and pedestrian access and circulation around these stops.

3.8 Utilities

3.8.1 Existing Environment

Existing utilities are present within the Demonstration Project corridor. Known utilities within the corridor include: combined sewer, electric, sanitary sewer, storm sewer, gas, and water lines. Multiple owner/operators have been identified and will continue to be identified as the Demonstration Project progresses. Survey and mapping of all utilities will occur as part of the design/build phase of the project.

3.8.2 Impacts

3.8.2.1 No-Build Alternative

The No-Build Alternative represents a “status quo” relative to the Shepard Industrial Spur corridor; thus, the existing corridor would remain as it currently exists. Planned improvements to the transportation network by others that are included in the No-Build assumptions have already been approved and programmed for funding. No new impacts to utilities would result from this alternative.

3.8.2.2 Initial Build Alternatives

Based on information acquired to date, there is a wide distribution of the various utilities within the Demonstration Project corridor. Nevertheless, it is likely that the Anacostia Alignment will encounter the same number and type of utilities as the longer Pennsylvania Avenue Alignment, though the number and breadth of potential relocations will be lower due to the shorter alignment length. It is also anticipated that fewer perpendicular utility crossings will be encountered for the shorter Anacostia Alignment as compared with the Pennsylvania Alignment.

Vehicle Technology

Vehicle technology choice will not affect existing utility impacts because construction techniques are the same for both technologies with the exception of the OCS required for LRT/streetcar vehicles. Installation of OCS will require connection to electrical service, but will not affect existing utilities within the corridor.

Storage Facility Sites

Utility location information acquired to date has indicated that underground utilities are likely to be present at the Sanitation and Storage Yard site. The presence of these utilities could result in difficulty when siting buildings on this location. No measurable differences exist in the number or size of utility features on any of the other storage facility sites under consideration for the Demonstration Project.

3.8.2.3 Proposed Action

The Proposed Action will require connection to electrical service (to power the OCS), and will also potentially cross utility lines within the corridor. However, the Proposed Action will not affect existing utilities within the corridor differently than as described for the initial Build Alternatives. Although utilities are likely to be present at the Sanitation and Storage Yard facility, impacts can be avoided by siting the buildings appropriately.

3.8.3 Mitigation

To the extent possible utilities and their potential relocation will be avoided. Clearing of the railroad right-of-way and the removal and reconstruction of ballast and track are anticipated to require minimal subsurface disturbance. Nevertheless, it is anticipated that some relocation of existing utility features will be necessary as part of the Demonstration Project construction process.

All necessary utility relocations will be conducted based on coordination with utility owners and will incorporate standard industry practices for placement and safety requirements during construction.

3.9 Visual and Aesthetic Qualities

Visual and aesthetic conditions in the corridor have been assessed for the Build Alternatives versus the No-Build Alternatives. This assessment has included identification of existing corridor conditions and review of changes that would occur as a result of the introduction of new transit elements.

3.9.1 Existing Environment

As described in Section 3.3.1 above, the corridor passes through a number of residential and non-residential areas. All of these areas have experienced active freight rail activity on the corridor up until activity ceased approximately two years ago. Freight rail activity consisted of diesel locomotives pushing or pulling short and long trains, made up of container and other storage cars, to and from the military installations south of Anacostia. Operations occurred on an as-needed basis 24 hours a day, 7 days a week. Since operations ceased, the corridor has been maintained but unused by CSX. Vegetation along and within the corridor right-of-way varies from a few trees to a thick vegetated barrier in many cases including a substantial amount of non-native, invasive vegetation species.

The land uses along the corridor embody a variety of visual and aesthetic qualities:

Federal/Military Lands and Sanitation and Storage Yard: This area is primarily industrial and military in nature and separated from residential areas by the Anacostia Freeway. Vegetative growth within and adjacent to the corridor right-of-way provides minor to no visual buffering of the military facilities.

South Capitol Street is visually buffered by successional growth on the east side of the corridor, including the following dominant vegetation: tree-of-heaven (*Ailanthus altissima*), black birch (*Betula lenta*), black cherry (*Prunus serotina*), common reed (*Phragmites communis*), Virginia creeper (*Parthenocissus quinquefolia*), common ragweed (*Ambrosia artemisiifolia*), Canada thistle (*Cirsium arvense*), and poison ivy (*Toxicodendron radicans*). Vegetation is intermittent on the west side of the corridor and provides limited visual screening of nearby Brookley Drive. The corridor is slightly higher in elevation than Brookley Drive, and South Capitol Street is slightly higher in elevation than the corridor.

Barry Farms and Hillsdale: Land use to the east of the corridor is primarily residential. Within Hillsdale, light industrial uses are present adjacent to the corridor. Land use west of the corridor includes the Anacostia Freeway and light industry. No vegetative buffer is found in or adjacent to the corridor between the Firth Sterling Avenue intersection with South Capitol Street and just north of Howard Road. The dominant vegetation in this area is turf grass. The corridor is at approximately the same elevation as the surrounding area.

Minor intermittent vegetative cover is found in the corridor from just north of Howard Road to Anacostia. Dominant vegetation in this area includes American elm (*Ulmus Americana*), black cherry, black locust (*Robinia pseudoacacia*), tree-of-heaven, Virginia creeper, golden rod (*Solidago* sp.), crown vetch (*Coronilla varia*), and Queen Anne's lace (*Daucus carota*). The corridor is slightly below the elevation of adjacent properties.

Anacostia: The corridor is abutted to the east by residential, commercial, and light industrial uses and to the west by the Anacostia Freeway and light industry. Minor vegetative cover is found in the corridor in Anacostia. Dominant vegetation in this area includes American elm (*Ulmus Americana*), black cherry, black locust (*Robinia pseudoacacia*), tree-of-heaven, Virginia creeper, golden rod (*Solidago* sp.), crown vetch (*Coronilla varia*), and Queen Anne's lace (*Daucus carota*). The corridor is at or slightly below the elevation of adjacent properties.

Fairlawn, Randle Highlands, and Dupont Park: To the east of the corridor, land uses include light industry, schools, residences, and commercial areas. West of the corridor is the Anacostia Freeway and part of the Anacostia Riverfront Park. A substantial vegetative buffer is found on the west side of the corridor between Anacostia and Nicholson Street. However, minor vegetative cover is found on the east side of the corridor. Dominant vegetation in this area includes American elm, tree-of-heaven, bristly foxtail (*Setaria faberi*), chicory (*Cichorium intybus*), Virginia creeper, and summer grape (*Vitis aestivalis*). The corridor is at or slightly below the elevation of the adjacent properties.

No prominent visual resources were identified within the study area.

3.9.2 Impacts

3.9.2.1 No-Build Alternative

The No-Build Alternative represents the current condition and would not result in new impacts to visual or aesthetic qualities.

3.9.2.2 Initial Build Alternatives

To ensure that the project adequately respects viewer sensitivities, the Demonstration project has coordinated with the DC Commission on Fine Arts in the location and design of project facilities. Visual impacts of the Demonstration Project were examined by assessing the visibility of the change, the viewer, the sensitivity of the viewer, and classifying the overall impact. Three classification categories were used: substantial, less than substantial, and no visual impact.

Substantial impacts could result from introducing new elements to existing views, which would obstruct existing views or notably change those views. Impacts could also result from removing most or all existing vegetation, though removal of vegetation would primarily be limited to the rail corridor as part of any Build Alternative. Viewer types would be primarily residential and their sensitivity would be moderate to high. Less than substantial impacts could result from introducing new elements to existing views, but the elements would not obstruct existing views. Viewer types would be primarily non-residential and their sensitivity would be low to moderate.

No visual impact is defined as no change to existing views.

Alignment

Re-using the corridor for surface transit would result in some changes in the appearance of the corridor due to the clearing of right-of-way, construction of new track, stops, and related infrastructure.

Anacostia Alignment

Viewers from military, transportation, and non-residential uses have low visual sensitivity to the Demonstration Project elements. The visual impact to these viewers is less than substantial. Residential viewers in Barry Farms, Hillsdale, and Anacostia have moderate sensitivity to the Demonstration Project elements. However, given the nature of visual elements in the study area, the minimal amount of vegetation present, and historic use of the corridor for rail transportation, the impacts to viewers are less than substantial. Additionally, the clean up of the rail corridor associated with construction of this alternative would result in a visual benefit for residents of the area.

Pennsylvania Avenue Alignment

Viewers from military, transportation, and non-residential uses have low visual sensitivity to the Demonstration Project elements. The visual impact to these viewers is less than substantial. Residential viewers in Barry Farms, Hillside, Anacostia, Fairlawn, Randle Highlands, and DuPont Park have moderate sensitivity to the Demonstration Project elements. However, given the nature of visual elements in the study area, the minimal amount of vegetation present, and historic use of the corridor for rail transportation, the impacts to viewers are less than substantial. Additionally, the clean up of the rail corridor associated with construction of this alternative would result in a visual benefit for residents of the area.

Vehicle Technologies

For both the LRT/streetcar and DMU vehicle technologies, viewer sensitivity is low and the overall visual impact would be less than substantial.

With the exception of the OCS structure in the electric powered LRT/streetcar vehicle, the visual impacts of the two vehicles are similar. Visual differences between the LRT/streetcar and DMU are mainly in the vehicle dimensions. Overall, the DMU is a somewhat taller and larger vehicle.

Although the LRT/streetcar vehicle body is somewhat shorter than the DMU, the electrical equipment mounted on the vehicle rooftops makes up the height difference. Thus, the potential visual differences between the vehicles are minimal.

Unlike the DMU, the LRT/streetcar vehicle technology would include OCS consisting of overhead wires and supporting structures. The Demonstration Project would require a simple, single service OCS with minimal overhead wire and limited structure to convey the wire. Viewer sensitivity to visual change in the corridor ranges from low to moderate. However, as the extent of OCS would be minimal, a less than substantial visual impact would occur.

The presence of Demonstration Project vehicles in the corridor is considered a less than substantial impact. The rationale for this determination is the presence, until recently, of freight rail activity on the corridor. The proposed passenger transit Demonstration Project is similar to the previous use in that both are surface rail activities.

Storage Facility Sites

Sanitation and Storage Yard Site - The Sanitation and Storage Yard site is located in non-residential areas adjacent to transportation uses. Project elements would include removing minor vegetation and introducing transit vehicles and infrastructure. Viewer sensitivity is low and the overall visual impact would be less than substantial.

Coal Spur Site - The Coal Spur site is situated on an existing rail corridor in a non-residential area adjacent to a transportation use. The Coal Spur site is forested, and adjacent properties are forested. The Coal Spur site is lower in elevation than adjacent properties. Project elements would include removing vegetation and introducing transit vehicles and infrastructure. Forest vegetation on adjacent properties will remain. Viewer sensitivity is low and the overall visual impact would be less than substantial.

Pennsylvania Avenue Site - The Pennsylvania Avenue site is situated within the corridor adjacent to a mixed use area and a sliver of parkland. Minor vegetation cover is found in the corridor. Project elements would include removing vegetation and introducing transit vehicles and infrastructure. Viewer sensitivity is low to moderate. However, given the nature of visual elements in the study area, the minimal amount of vegetation present, and historic use of the corridor for rail transportation, the impacts to viewers are less than substantial.

3.9.2.3 Proposed Action

The visual effects of the Proposed Action are similar to those discussed for the Pennsylvania Avenue Alignment. Although two additional stops are included in the Proposed Action, these stops would not be located in visually-sensitive areas, nor would they obstruct views of sensitive resources for area residents. The installation of OCS wires and structures along the corridor is expected to change viewer sensitivity from low to moderate, though the visual impacts are expected to be less than substantial. Viewer sensitivity is low around the Sanitation and Storage Yard and the visual impact of introducing new elements is expected to be less than substantial. As with the initial Build Alternatives, the District of Columbia Commission on Fine Arts will continue to be consulted in the design of project facilities.

Summary

Table 3-10 summarizes the visual and aesthetic impacts of the Demonstration Project. The table is organized by alignment and geographic area. As indicated in the discussions above, the visual appearance of the LRT/streetcar and DMU vehicles are similar with the exception of the OCS for the electric-powered LRT/streetcar technology and the size differential. Thus, the assessment findings for the two vehicle technologies are presented together. The impact of the OCS power supply for LRT/streetcar technology is set apart in the table using italic text.

Table 3-11 summarizes the visual and aesthetic impacts of the Proposed Action.

**Table 3-10
Visual and Aesthetic Impacts**

Physical Changes	Visibility From	Types of Viewers	Viewer Sensitivity	Visual Impact
Military Federal Lands and Sanitation Yard (Anacostia and Pennsylvania Avenue Alignments)				
Removal of vegetation and re-grading of site to allow for installation of new tracks	Military facilities and South Capitol Street	Motorists, transit riders	Low	Less than substantial
<i>LRT/Streetcar: OCS</i>	<i>Military facilities and South Capitol Street</i>	<i>Motorists, transit riders</i>	<i>Low</i>	<i>Less than substantial</i>
Traffic control devices on South Capitol Street	South Capitol Street	Motorists, transit riders	Low	Less than Substantial
Re-grading, structure, and pedestrian scale lighting for D.I.A. stop	Military facilities and South Capitol Street	Motorists, transit riders	Low	Less than substantial
Presence of the transit vehicles	Military facilities, South Capitol Street, and Anacostia Freeway	Motorist, transit riders	Low	Less than substantial

**Table 3-10
Visual and Aesthetic Impacts**

Physical Changes	Visibility From	Types of Viewers	Viewer Sensitivity	Visual Impact
Barry Farms and Hillsdale (Anacostia and Pennsylvania Avenue Alignments)				
Removal of vegetation and re-grading of site to allow for installation of new tracks	Barry Farms Residential Development and Recreation Area	Residents and motorists	Moderate	Less than Substantial
<i>LRT/Streetcar: OCS</i>	<i>Barry Farms Residential Development and Recreation Area</i>	<i>Residents and motorists</i>	<i>Moderate</i>	Less than Substantial
Traffic control devices on Stevens, Summer, and Howard Roads	Connecting roadways	Motorists and residents	Moderate	Less than substantial
Presence of the transit vehicles	Barry Farms Residential Development and Recreation Area, connecting roadways	Motorist, transit riders, residents	Low	Less than Substantial
Anacostia (Pennsylvania Avenue Alignment)				
Removal of vegetation and re-grading of site to allow for installation of new tracks	Limited	Motorist and local businesses	Low	Less than Substantial
<i>LRT/Streetcar: OCS</i>	<i>Anacostia Freeway and local industrial area</i>	<i>Motorists and local businesses</i>	<i>Low</i>	Less than Substantial
Re-grading, structure, and pedestrian scale lighting for Anacostia Stop and connection to existing Metrorail station	Connecting Roadway	Motorists, transit riders, local residents	Moderate	Less than Substantial
Presence of the transit vehicles	Connecting roadways	Motorist, transit riders, residents	Low	Less than Substantial

**Table 3-10
Visual and Aesthetic Impacts**

Physical Changes	Visibility From	Types of Viewers	Viewer Sensitivity	Visual Impact
Fairlawn, Randle Highlands, and Dupont Park (Pennsylvania Avenue Alignment)				
Removal of existing vegetation and re-grading of site to allow for installation of new tracks	Local neighborhood, Anacostia High School, Kramer Junior High School, pedestrian bridge and Anacostia Freeway	Motorists, transit riders, local residents	Moderate	Less than substantial
<i>LRT/Streetcar: OCS</i>	<i>Local neighborhood, Anacostia High School, Kramer Junior High School, pedestrian bridge and Anacostia Freeway</i>	<i>Motorists, transit riders, local residents</i>	<i>Moderate</i>	<i>Less than Substantial</i>
Re-grading, structure, and pedestrian scale lighting for Pennsylvania Avenue Stop and Old Anacostia Stop	Local neighborhood, Anacostia High School, Kramer Junior High School, pedestrian bridge and Anacostia Freeway	Motorists, transit riders, local residents	Moderate	Less than Substantial
Presence of the transit vehicles	Local neighborhood, Anacostia High School, Kramer Junior High School, pedestrian bridge and Anacostia Freeway	Motorist, transit riders, residents	Low	Less than Substantial
Sanitation and Storage Yard Storage Facility Alternative				
Removal of vegetation, re-grading, and infrastructure installation for storage facility	Military facilities and South Capitol Street	Motorists, transit riders	Low	Less than substantial
<i>LRT/Streetcar: OCS</i>	<i>Military facilities and South Capitol Street</i>	<i>Motorists, transit riders</i>	<i>Low</i>	<i>Less than substantial</i>

**Table 3-10
Visual and Aesthetic Impacts**

Physical Changes	Visibility From	Types of Viewers	Viewer Sensitivity	Visual Impact
Presence of the transit vehicles	Military facilities, South Capitol Street, and Anacostia Freeway	Motorist, transit riders	Low	Less than substantial
Coal Spur Storage Facility Alternative				
Removal of existing vegetation, re-grading, and infrastructure installation for storage facility	Anacostia Freeway (I-295)	Motorists, transit riders	Low	Less than substantial
<i>LRT/Streetcar: OCS</i>	<i>Anacostia Freeway (I-295)</i>	<i>Motorists, transit riders</i>	<i>Low</i>	<i>Less than substantial</i>
Presence of the transit vehicles	Anacostia Freeway (I-295)	Motorist, transit riders	Low	Less than substantial
Pennsylvania Avenue Storage Facility Alternative				
Removal of vegetation, re-grading, and infrastructure installation for storage facility	Local neighborhood residents park Anacostia Freeway	Motorist, residents, and park users	Moderate	Less than Substantial
<i>LRT/Streetcar: OCS</i>	<i>Local neighborhood residents and the Anacostia Freeway</i>	<i>Residents, motorists, and park users</i>	<i>Moderate</i>	<i>Less than Substantial</i>
Traffic control devices on Pennsylvania Avenue	Pennsylvania Avenue	Motorists	Low	Less than Substantial
Presence of the transit vehicles	Pennsylvania Avenue, local neighborhood park, and the Anacostia Freeway	Motorist, residents, and park users	Low	Less than Substantial

Note: Italicized notations indicate issues that apply only to the LRT/streetcar vehicle and not to the DMU vehicle.

**Table 3-11
Proposed Action Visual Effects**

Physical Changes	Visibility From	Types of Viewers	Viewer Sensitivity	Visual Impact
Military Federal Lands and Sanitation Yard				
Removal of vegetation and re-grading of site to allow for installation of new tracks	Military facilities and South Capitol Street	Motorists, transit riders	Low	Less than substantial
Traffic control devices on South Capitol Street;	South Capitol Street	Motorists, transit riders	Low	Less than substantial
Re-grading, structure, and pedestrian scale lighting for D.I.A. stop	Military facilities and South Capitol Street	Motorists, transit riders	Low	Less than substantial
Removal of vegetation and re-grading of site to allow for installation of storage facility	Military facilities and South Capitol Street	Motorists, transit riders	Low	Less than substantial
OCS	Military facilities, South Capitol Street, Anacostia Freeway	Motorists, transit riders	Low	Less than substantial
Presence of the transit vehicles	Military facilities, South Capitol Street, Anacostia Freeway	Motorists, transit riders	Low	Less than substantial
Removal of vegetation and re-grading of site to allow for installation of new tracks	Barry Farms Residential Development and Recreation Area	Residents and motorists	Moderate	Less than substantial
Traffic control devices on Stevens, Sumner and Howard Roads	Connecting roadways	Residents and motorists	Moderate	Less than substantial
Re-grading, structure, and pedestrian scale lighting for Barry Farms stop	Barry Farms Residential Development and Recreation Area, connecting roadways	Residents and motorists	Moderate	Less than substantial

**Table 3-11
Proposed Action Visual Effects**

Physical Changes	Visibility From	Types of Viewers	Viewer Sensitivity	Visual Impact
OCS	Barry Farms Residential Development and Recreation Area, connecting roadways	Residents and motorists	Moderate	Less than substantial
Presence of the transit vehicles	Barry Farms Residential Development and Recreation Area, connecting roadways	Residents and motorists	Moderate	Less than substantial
Anacostia				
Removal of vegetation and re-grading of site to allow for installation of new tracks	Limited	Motorist and local business	Low	Less than substantial
Re-grading, structure, and pedestrian scale lighting for Anacostia Stop and connection to existing station	Connecting roadway	Motorists, transit riders, local residents	Moderate	Less than substantial
OCS	Anacostia Freeway, connecting roadways and local industrial area	Motorists and local businesses	Low	Less than substantial
Presence of the transit vehicles	Connecting roadways	Motorists, transit riders, residents	Moderate	Less than substantial
Fairlawn, Randle Highlands, and Dupont Park				
Removal of vegetation and re-grading of site to allow for installation of new tracks	Local neighborhood, Anacostia High School, Kramer Junior High School, pedestrian bridge and Anacostia Freeway	Motorists, transit riders, local residents	Moderate	Less than substantial

**Table 3-11
Proposed Action Visual Effects**

Physical Changes	Visibility From	Types of Viewers	Viewer Sensitivity	Visual Impact
Re-grading, structure, and pedestrian scale lighting for 16 th Street/Fairlawn Stop; Old Anacostia Stop and Pennsylvania Avenue Stop and connection to existing station	Local neighborhood, Anacostia High School, Kramer Junior High School, pedestrian bridge and Anacostia Freeway	Motorists, transit riders, local residents	Moderate	Less than substantial
OCS	Local neighborhood, Anacostia High School, Kramer Junior High School, pedestrian bridge and Anacostia Freeway	Motorists, transit riders, local residents	Moderate	Less than substantial
Presence of transit vehicles	Local neighborhood, Anacostia High School, Kramer Junior High School, pedestrian bridge and Anacostia Freeway	Motorists, transit riders, local residents	Moderate	Less than substantial

3.9.3 Mitigation

As the project continues to develop, DDOT will examine means to minimize visual impacts as well as consider the feasibility of mitigating less than substantial impacts through the use of best management practices such as replanting vegetation. Any proposed mitigation measures will be coordinated with the community.

3.10 Cultural Resources

State and federal legislation requires government agencies to consider the impacts of proposed projects on historic and archaeological resources. Four pieces of federal legislation provide protection for these resources and stipulate the requirements of federal agencies prior to executing a proposed undertaking.

United States Department of Transportation Act of 1966—Section 4(f). Section 4(f) of the United States Department of Transportation Act of 1966 (49 USC 303) provides protection for public parks and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f) stipulates that the Federal Transit Administration will not approve any program or project which requires the use of any publicly-owned park, recreation area, or wildlife or waterfowl refuge, or any land from a historic site of national,

state, or local significance unless there is no feasible and prudent alternative to the use and all possible planning to minimize harm resulting from such use is included.

National Historic Preservation Act of 1966. The National Historic Preservation Act of 1966, as amended in 1992, requires that when a proposed Federal undertaking could affect any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP), the responsible agency must take into account the effect of such action. Section 106 of the National Historic Preservation Act (36 CFR Part 800) dictates that the Federal agency shall comply with the procedures for consultation and comment issued by the Advisory Council on Historic Preservation. The responsible agency also must identify properties within the Area of Potential Effect (APE) of the proposed undertaking that are potentially eligible for listing in the NRHP, usually through consultation with the state historic preservation officer (SHPO).

National Environmental Policy Act (NEPA) of 1969. The National Environmental Policy Act of 1969, as amended, requires that federal decision-making include consideration of the potential impacts of a proposed project and its alternatives on the natural and human environment, including architectural and archaeological resources.

Archeological and Historic Preservation Act of 1974. The Archeological and Historic Preservation Act of 1974 states that if an activity may cause irreparable loss or destruction of significant scientific, prehistoric, historic, or archeological data, the responsible agency is authorized to undertake data recovery and preservation activities, in accordance with implementing procedures promulgated by the Secretary of the Interior.

Identification of cultural resources was prepared according to the requirements of 36 CFR 800 of Section 106, and the Section 106 process has been initiated with the D.C. Historic Preservation Division (which serves as the SHPO for the District of Columbia). As stipulated in Section 800.8, Section 106 can be coordinated with the requirements of NEPA. Preparation of this Environmental Assessment is being conducted to meet both NEPA and Section 106 compliance.

Area of Potential Effect (APE) Definition

In order to identify cultural resources that could be potentially impacted by the proposed undertaking, the area within which archaeological and historic resources would be affected or likely to be affected must be determined. As defined by 36 CFR 800.16(d) of Section 106 of the National Historic Preservation Act, the Area of Potential Effect (APE) represents the “geographic area or areas within which an undertaking could cause changes in the character or use of historic properties, if any such exists.” In delineating the APE, factors taken into account include the elements of the proposed project, the existence of buildings, vegetation and terrain with respect to potential visual or audible impacts, and construction activities necessary for the proposed project.

The APE for archaeology includes the area where archaeological resources might be directly impacted by construction or construction staging activities. The APE for archaeology is defined as 200 feet from the centerline and within the footprint of proposed storage yards. For architectural resources, the APE was expanded to 500 feet from the centerline to include areas where potentially historic architectural resources might be subject to visual or audible impacts. Figure 3-15 shows the APE for both architecture and archaeology.

Historic Properties Identification

Efforts to identify resources within the APE that are listed in or eligible for listing in the NRHP included a review of the records on file at the District of Columbia Historic Preservation Division (DCHPD) and the National Register of Historic Places. A review of pending landmark applications for inclusion on the D.C. Inventory of Historic Sites and areas proposed by DCHPD for further architectural survey were also examined.

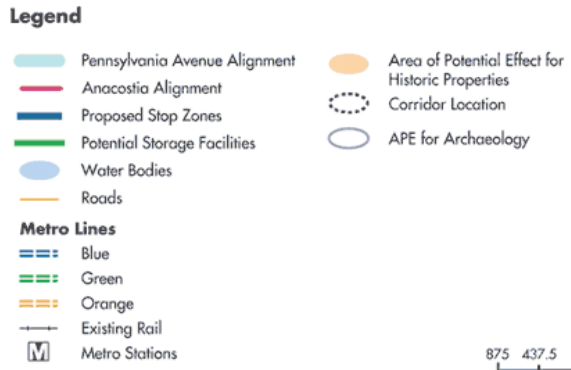
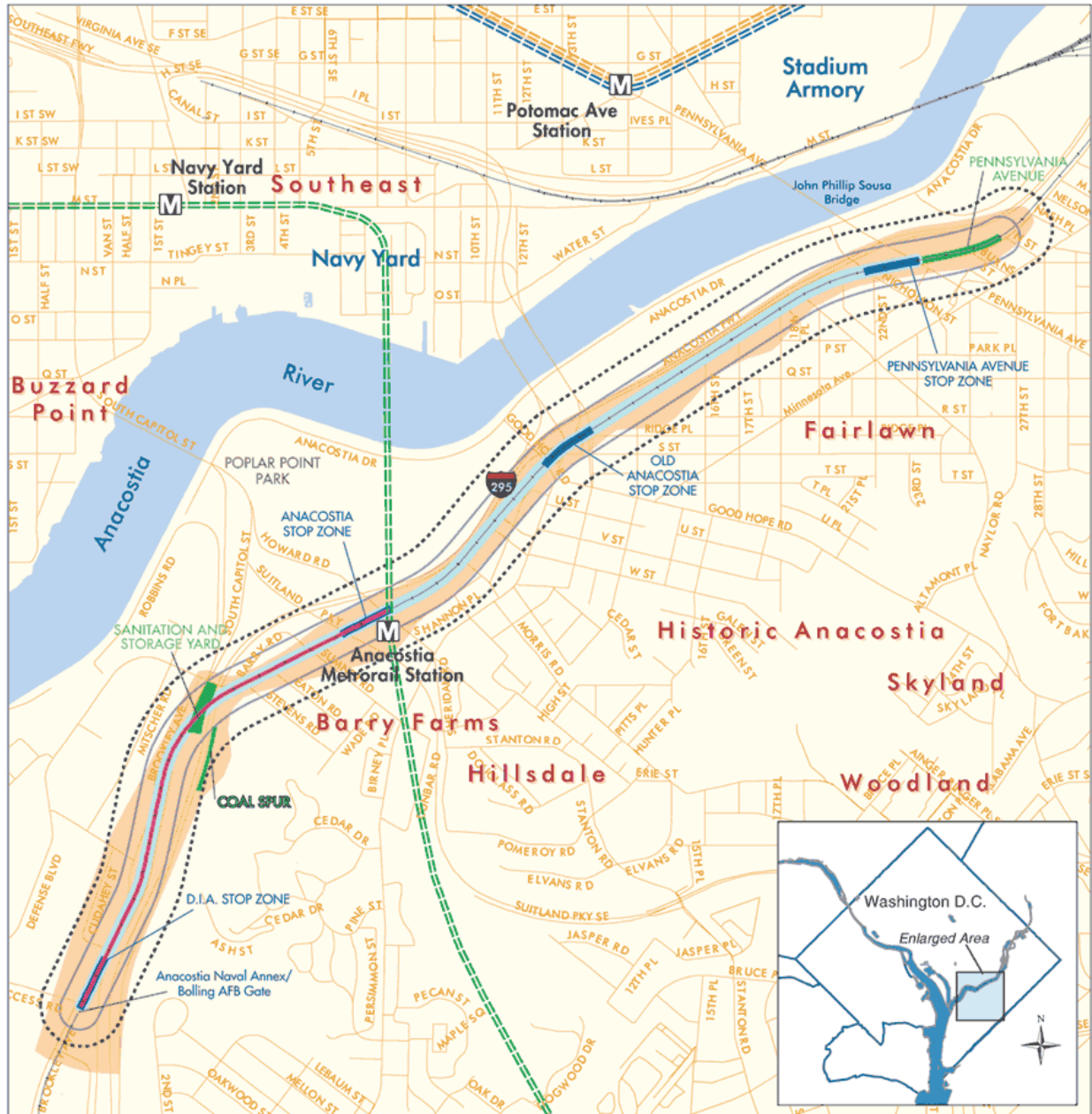
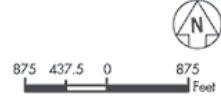


Figure 3-15
Area of Potential Effect (APE)



**Anacostia Corridor
Demonstration Project**

Prehistoric and Historic Context

Abundant water sources and proximity to the Fall Line, the boundary between the Piedmont and Coastal Plain where human populations are able to exploit the biological diversity offered by these two distinct ecological settings, made the Washington, D.C. area attractive to Native American settlement. The oldest evidence of Native American presence in the region dates to approximately 12,000 B.C., during the Paleo-Indian Period. The subsequent Archaic Period lasted from about 7,000 B.C. to 1,000 B.C. and is characterized by seasonal population migration, hunting and gathering subsistence, and small-scale egalitarian social systems. The Archaic Period is followed by the Woodland Period, which begins with the first evidence of the introduction of ceramic technology and ends with European contact. As the Woodland Period progressed, the size and complexity of village and settlement systems increased. Evidence of Native American utilization of the Anacostia River area has been recovered dating to all three time periods.

During the period of initial European contact, the banks of the Anacostia River were inhabited by the Necostin Indians. John Smith's 1608 map shows the village of Nacochtanke just below the confluence of the Potomac and Anacostia rivers. By the 1660s, European settlement reached the vicinity of the future site of Washington, D.C. The European settlers who established themselves near the headwaters of the Potomac River and the Eastern Branch brought with them the tobacco plantation system, which had already developed in southern Maryland and Virginia. By the end of the seventeenth century, pressure from expanding European settlement had forced most of the native populations to retreat south, to below the Rappahannock River.

By the mid-1700s, a north-south road on the eastern side of the Anacostia River linked Bladensburg, Maryland with Piscataway, the nearest significant Potomac River port. The federal City of Washington was created on lands ceded from Maryland and Virginia in 1791. Pierre L'Enfant's plan for the city included a Navy Yard, an arsenal, and a hospital on the western side of the Anacostia River. L'Enfant had no formal street plan for the land east of the Anacostia, which remained as dispersed agricultural settlements for the first half of the nineteenth century. The first bridges across the Anacostia River, the Upper and Lower Bridges, were completed in 1795 and 1797. The Good Hope Road led east from the Lower Bridge on the Anacostia River to the Good Hope settlement established in the 1820s.

The town of Uniontown (now part of Historic Anacostia) was established in 1854 across the Anacostia River from the Navy Yard, mainly to provide housing for the Navy Yard workers. The Baltimore & Ohio Railroad Company constructed the Washington and Potomac Branch (also known as the Alexandria, or Anacostia, Branch) rail line in the late 1860s. The single-track line branched off of the B&O mainline at Hyattsville, Maryland and continued southwest along the Anacostia River, ending at Shepherd's Point on the Potomac River. From there the B&O company contracted for a car ferry to carry the freight cars and passenger trains to Alexandria, Virginia, where the line continued on the Southern Railway tracks. Once Union Station in the District of Columbia was completed, the branch to Shepherd's Point was used less and primarily for local freight.

A streetcar line was constructed in 1875 across the Anacostia River by the Anacostia and Potomac River Railroad Company. The horse-drawn streetcars traveled from 7th Street SW and M Street SW, along M and 11th streets, and crossed the Navy Yard (11th Street) Bridge to Uniontown (now Historic Anacostia). The route then led down Nichols Avenue (now Martin Luther King Avenue) to V Street SE. A car barn and stables were maintained by the company at Nichols Avenue and V Street SE. The Capital Railway Company brought the first electric railway line to Anacostia in the 1890s, over a newly-constructed bridge at Pennsylvania Avenue. By 1902, the streetcar line had been extended along Nichols Avenue to Congress Heights, ending at Upsal Street. By 1935, the Anacostia-Congress Heights streetcar line was replaced by bus service.

3.10.1 Existing Archaeological Resources

Examination of the District of Columbia's *Inventory of Historic Sites* found no archaeological sites in the study area. However, the corridor is located in an area having potential archaeological significance. The Anacostian Indians, who had a substantial village in this area, originally settled Anacostia. European