

STAFF RECOMMENDATION



NCPC File No. 6686

ANACOSTIA STREETCAR INITIAL LINE SEGMENT
South Capitol Street and Firth Sterling Avenue, SE,
between Bolling Air Force Base and Anacostia Metro Station
Washington, DC

District of Columbia Department of Transportation

January 25, 2007

Abstract

The District of Columbia Department of Transportation has submitted final site and building plans for a 1.3-mile streetcar line with four stops between South Capitol Street and the Anacostia Metro Station. The Commission reviewed and approved a proposal for a demonstration streetcar project submitted by the Washington Metropolitan Area Transit Authority at its November 2004 meeting. In that proposal, the CSX right-of-way was used. The current route uses city streets for the rails, and reduces the number of stops and the length of the route.

Commission Action Requested by Applicant

Approval of preliminary and final site and building plans pursuant to 40 U.S.C. §8722(b)(1)

Executive Director's Recommendation

The Commission:

Approves the final site and building plans for the Anacostia Streetcar Initial Line Segment, a demonstration project for streetcar service in the District of Columbia.

Finds that:

- The Commission recognizes the value of a seamless transit system and supports the District's investigation of transit that will complement Metrorail and Metrobus operations throughout the city. The Anacostia segment will complement transit operations near the Anacostia Metro Station.

- DDOT intends the Anacostia segment as a demonstration project, with the possibility of route expansion elsewhere in Washington, including routes within the City of Washington (the original L'Enfant Plan area of the city).
- The use of streetcars with overhead wires entails the installation of infrastructure to support the wires--including regularly spaced posts with support arms cantilevered over traffic lanes--that would change the historically open character and appearance of Washington's streets.
- Since the late nineteenth century, there has been a legal prohibition against overhead wires within the City of Washington (L'Enfant city) and Georgetown, resulting in rights-of-way that are free of electric wires and that were free of overhead wires when streetcars were previously in use.
- The Commission has a federal interest in retaining and protecting the nationally recognized and significant open vistas of the rights-of-way of the L'Enfant Plan, which is protected by listing in the National Register of Historic Places and in the D.C. Inventory of Historic Sites.
- The recommended approval of the demonstration project does not connote the Commission's acceptance of a future streetcar system that uses an overhead contact system within the L'Enfant City and Georgetown.
- DDOT should return to the Commission for review of every segment of a streetcar system.
- Both the District of Columbia government and the National Capital Planning Commission share the goals of protecting the integrity of Washington's characteristic open streets and of meeting public transit service needs. These goals should be weighed together and a streetcar system should be considered as a whole before irrevocable decisions are made concerning one segment.

Requests that DDOT:

- Return to the Commission for review of the elements associated with a city-wide streetcar system, such as pylons, signs, and passenger shelters, prior to DDOT's making a final decision about the design of these elements.
- With the collaboration of other relevant District of Columbia and federal agencies, including the Commission, continue to investigate transit alternatives to a streetcar system that uses overhead wires with supporting infrastructure before it proceeds with plans to expand the route beyond the Anacostia Initial Line Segment. Transit modes and technologies should meet the transit goals of both the District of Columbia government and the Commission, as well as our mutual mandates to protect Washington's historically open right-of-way vistas and to comply with federal laws.

* * *

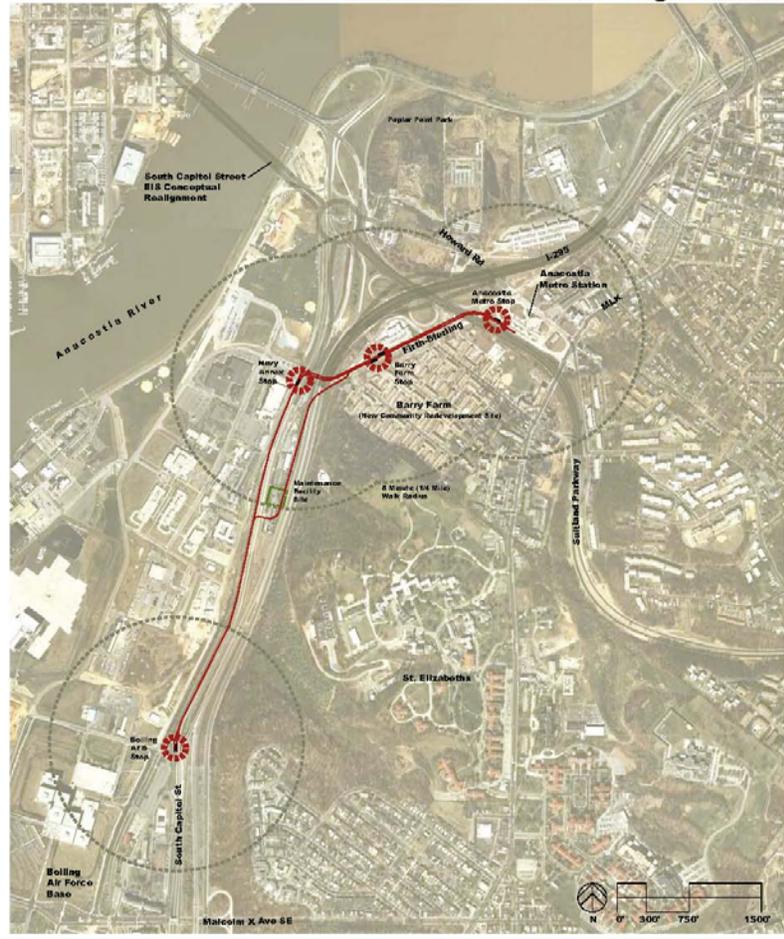
PROJECT DESCRIPTION

Site

The Anacostia streetcar segment runs for a distance of 1.3 miles with four stops: the Defense Intelligence Agency Gate at Bolling Air Force Base and the Navy Annex on South Capitol Street, Barry Farms on Firth Sterling Avenue, SE, and across Suitland Parkway to the west side of the Anacostia Metro Station.

Background

At its November 2004 meeting, the Commission approved a concept for Anacostia light rail transit, requesting further information about both function and design. The project was submitted by the Washington Metropolitan Area Transit Authority. At that time, the segment was 2.7 miles in length—from Bolling Air Force Base to Pennsylvania Avenue, SE at the Sousa Bridge. It had six station stops and a yard and shop facility. The segment route did not run on streets but, rather, within the CSX right-of-way between South Capitol Street and Interstate 295. In contrast, the proposed current route runs on city streets.



Proposal

The proposed installation of a streetcar route includes the construction of tracks in a single dedicated transit lane along the west shoulder of South Capitol Street and in double transit lanes on Firth Sterling Avenue (in both directions) crossing Suitland Parkway at grade and terminating at the west entrance to the Anacostia Metro Station. A short spur from South Capitol Street would lead to a maintenance facility; the route map provided by DDOT indicates a longer spur that parallels South Capitol Street and connects to Firth Sterling Avenue, SE, but the spur extends only as far as the maintenance facility, a brick-faced concrete building with bi-fold doors to allow streetcars to enter the building on tracks. The project uses District funds.

The proposal also includes the installation of passenger platforms and shelters with sign pylons, posts between 24 and 34 feet in height with cantilevered arms to carry the overhead wires. The poles along the Anacostia segment will be spaced 80 to 100 feet apart. Related streetscape features and amenities such as 20-foot teardrop streetlights will also be installed. The platforms will be elevated to allow for accessible boarding of the vehicles. The platform shelters are constructed of stainless steel and glass and are light in character and contemporary in style. The double-articulated streetcars, which DDOT has purchased, are 8'1" in width and 66 feet in length, with a capacity of 100 passengers per vehicle. The familiar Circulator graphic will be used on the vehicles. The length of the streetcars is similar to that of articulated Metrobuses. The Circulator vehicle is 40 feet in length.

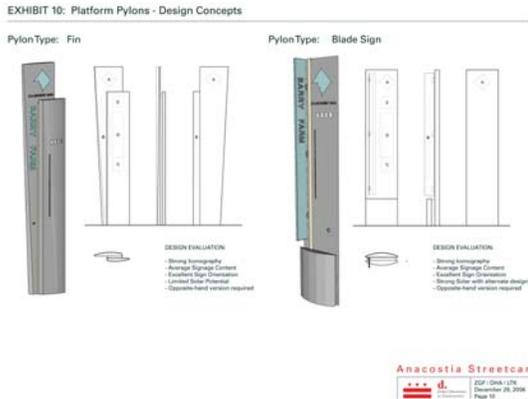
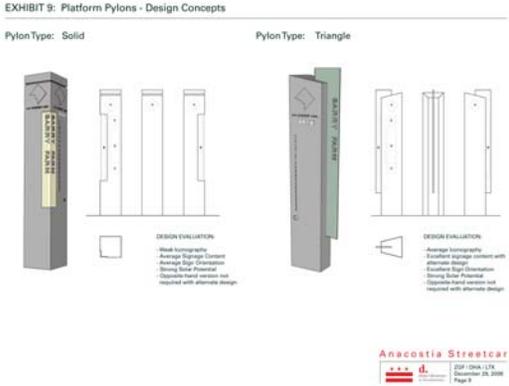
DDOT has submitted four sign pylon designs and has not yet selected one. Staff requests that streetcar elements to be used in a city-wide system--such as pylons, shelters and signs--be reviewed by the Commission before they are selected. The pylon, for example, should be iconic and simple, like the Metro station pylon, particularly if the pylon is intended for future use in a denser, more urban setting. The range of shelter designs appears suitably light in material and style.



Photo simulation of the Navy Annex stop, looking north along South Capitol Street.



PLATFORM VIEW - LOOKING ALONG FIRTH STERLING TOWARD BARRY FARM



DDOT is considering four design concepts for the platform pylons. Staff recommends the “solid” pylon—shown in the photo simulation above and as the upper left pylon of the four design concepts at left. Staff believes it is the most iconic and simple of the forms and would be most suitable if the streetcar system were expanded and the pylons installed on sidewalks in dense, urban contexts.

The photo simulation also shows the lightness of one in the suite of shelters proposed by DDOT.

EXHIBIT 3: Streetcar Vehicle

STREETCAR VEHICLE - GRAPHIC DESIGN AND COLOR SCHEME



STREETCAR VEHICLE - CONSTRUCTION IMAGES



PROJECT ANALYSIS

Staff recommends approval of the final site and building plans of the Anacostia streetcar Initial Line Segment.

Staff advises DDOT that it does not support the implementation of a streetcar system using an overhead contact system on streets within the L'Enfant city and Georgetown.

Staff commends DDOT for its commitment to expanded transit service. The demonstration project is a test of the viability of streetcar service in the District of Columbia, its acceptance by the public, and the use of another transit mode to augment Metrorail and Metrobus service.

The route will connect the Anacostia Metro Station with Bolling Air Force Base and the Navy Annex, which are now separated by high-speed roads. The proposed route is not now urban in character or compatible with pedestrian use. The demonstration route will provide service via Firth Sterling Avenue to the Barry Farms neighborhood, which is also considered a community redevelopment site.

The choice of paving materials, shelter design, improved street lighting, accessible design, and other amenities will be welcome in the South Capitol and Firth Sterling corridors. Staff commends DDOT for this public space project, which uses District funds for design and

construction. Staff requests that DDOT return for review of all elements associated with streetcar routes—shelters, pylons, signs—before selecting final designs for a future streetcar system. The “solid” pylon form is the simplest and most iconic of the four forms under consideration. DDOT has selected a suite of shelter designs to use at various stops depending on the context; all are constructed of glass and stainless steel and are light in character and contemporary in style.

DDOT has purchased the streetcars for this route and plans to begin construction of the route in April 2007.

The possible extension of the streetcar system in its currently proposed form and technology within the City of Washington (the original L’Enfant City), and the use of the current technology in its expansion is of concern to the staff. *See DDOT’s map for the first phases of a proposed city-wide expansion at the end of this report.* If streetcar lines were constructed in denser, more urban areas, the infrastructure of the system, especially the poles with cantilevered arms extending across traffic lanes, would affect the historically open appearance and vistas of the streets within the L’Enfant City.

Streetcars were introduced to Washington during the Civil War. At first drawn by horses, streetcars propelled by electricity were introduced before the end of the nineteenth century. At that time, only two cities in the country used the new practice of placing their systems’ trolley wires underground: New York City (Manhattan) and Washington (the City of Washington and Georgetown). The new and unique technology helped create a distinct, wireless character to the capital city, one that has been protected by federal legislation and in planning doctrine since that time. The use of an underground propulsion system allowed Washington’s city streets to be clear of projecting infrastructure and wires, a standard that is also reflected in the absence of aboveground electric wires.

DDOT’s proposed streetcar system, as currently planned, includes infrastructure that supports overhead wires, which have been prohibited by federal law in the City of Washington and in Georgetown for over a century. The infrastructure that DDOT envisions includes poles with arms extending over traffic lanes to carry overhead wires and also includes installation on the sidewalks of a design suite of additional shelters and sign pylons distinct from those for other transit modes.

Staff believes that both the District of Columbia and the National Capital Planning Commission share in common the goals of protecting the integrity of Washington’s characteristic open streets and meeting public transit service needs. These goals should be weighed together.

As a planning matter, NCPC advises DDOT against developing a streetcar system powered by overhead contact wires with related infrastructure for any part of the streetcar system within the L’Enfant City and Georgetown. Implementation would affect viewsheds that have been protected from such overhead elements since Washington was developed as a modern city in the nineteenth century. The anticipated infrastructure would introduce an element into streetscapes that has been intentionally avoided and prohibited for over a century.

Although the implementation of streetcar routes with an overhead system could meet transit goals stated in the Federal and District elements of the Comprehensive Plan for the National Capital, it would also contradict mutually shared planning guidance to protect right-of-way viewsheds within the L'Enfant City that are also stated in the Federal and District elements of the Comprehensive Plan. Additionally, the L'Enfant Plan rights-of-way have protection through listing in the District of Columbia Inventory of Historic Sites and in the National Register of Historic Places.

Federal law supports this planning guidance. The statute specific to the prohibition of overhead contact rail wires is an 1889 statute that applies to "Washington City" and Georgetown. A series of federal statutes from the 1880s through the turn of the century continues this prohibition of overhead wires and can also be seen as part of more comprehensive planning direction, supported by Congress, to ensure that Washington remain a city of open vistas.

The staff is concerned that implementation might also disregard or preclude emerging streetcar technologies that might better suit Washington's unique natural, cultural and historic landscape. The technology to propel streetcars without overhead wires is available, although there are no applications in the United States. Several European cities, most notably Bordeaux, are protecting their views and street aesthetics around important historic areas by developing and installing surface technology. The concept is that electric energy is provided through a surface line where the center rail is electrified only as the streetcar passes over it, removing concerns about public access to an electrified at-grade rail.

Like many new technologies, there is limited experience with it to date and, according to those knowledgeable with the new technology, the system is more expensive to construct and operate. In addition, there are some differences between the Bordeaux and Washington environments and between the types of vehicles used.

There were serious drainage problems with the Bordeaux system several years ago that apparently have now been resolved, and the city is demonstrating its confidence in the technology by planning the expansion of the route from 21 to 43 kilometers by the end of this year. The French cities of Reims and Angers are also installing new streetcar systems using this surface technology.

Because the system used in Bordeaux is installed near the surface of the pavement, DDOT and Commission staffs believe that if this technology were used here, the roadbed could be saw cut and the power system could be installed without the disruption of completely reconstructing the street and without affecting the rails that may be already installed.

At a time when other cities are considering the use of new surface contact streetcar systems and the removal of overhead wires and the related pole infrastructure in order to restore views in visually or historically sensitive areas, staff is concerned about the proposed introduction of an overhead contact system in Washington.

Staff requests that DDOT continue discussions with NCPC and involve other agencies, entities, and the public in seeking the best transit modes and technologies to meet the transit policies and

goals of both the District of Columbia and the Commission, as well as mutual interests in and mandates to protect Washington's historic streets and vistas and to comply with federal law.

In conclusion, staff recognizes the value of a seamless city-wide transit system, and supports the District's investigation of systems to augment current modes. If the transit system is to include streetcars, it is preferable that they run on routes that connect areas inside as well as outside the original L'Enfant city and Georgetown. The earlier streetcar system routes in Washington were designed that way and changed power sources accordingly. DDOT's map of initial routes shows the same kind of comprehensive routes. Therefore, since the Anacostia segment would be operating with already-purchased vehicles that run on an overhead contact system before the rest of a future expanded system would be constructed, DDOT should explore ways to retrofit streetcar vehicles to switch from overhead to surface power sources. Such systems, which change from one power source to another while the streetcar is at a passenger stop, are in use in Europe.

CONFORMANCE

Comprehensive Plan for the National Capital

The Federal Elements of the Comprehensive Plan for the National Capital contain policies that support the expansion of transit services as well as policies that protect the right-of-way viewsheds of the L'Enfant Plan.

Among the policies for Commuter Rail, Rail Transit, and Bus Transit in the Transportation Element, the federal government should support:

5. The design and implementation of new, expanded, and innovative transit services that supplement existing transit and fill unmet transit needs (e.g., Downtown Circulator, Busway, Bus Rapid Transit projects, light rail, trolley).
6. The development of intermodal transit centers that provide greater transit access and improved interconnectivity for federal commuters.

The policies for the Historic Plan of Washington, DC in the Preservation and Historic Features Element are not applicable to the Anacostia segment route as currently proposed, but are relevant to the development of a city-wide streetcar system. The policies state that the federal government should:

2. Promote continuity in the historic design framework of the nation's capital by protecting and enhancing the elements, views, and principles of the L'Enfant Plan. Both the federal and the District of Columbia governments should adhere to these principles in any improvements or alterations to the historic framework.
8. Protect and control the visual and functional qualities of L'Enfant rights-of-way.

9. Protect the open space of the L'Enfant streets. The exceptional width and openness of the street rights-of-way constitutes public space that helps to define the character of the city.

National Environmental Protection Act (NEPA)

As part of the project planning process, a District of Columbia transportation consultant prepared an environmental assessment, issued in April 2004, in compliance with the District of Columbia Environmental Policy Act and the National Environmental Policy Act. The Federal Transit Administration was originally the lead federal agency for the proposal but no longer is directing funding for the project.

Staff has reviewed the information submitted by DDOT. NCPC does not have a separate NEPA responsibility, since the project lies outside the Central Area.

The submission notes that two hazardous material sites exist near the project's rail alignment but only one may be affected by construction activities. The Environmental Health Administration of the DC Department of Health will review and implement its permitting and clean-up protocols for any potentially impacted location, in coordination with the District Department of Transportation. Similarly, all site materials and contamination found to be present would be remediated and removed in accordance with all District and federal regulations to a managed disposal location outside the District of Columbia.

Potential pedestrian circulation crossing points exist in the environment of the rail alignment at three locations. All grade crossing points that currently are identified in the design will be signalized and pedestrian crossings would be included in the signal timings. At potential pedestrian conflict crossings, special precautions will be implemented to provide audible pedestrian signals and possibly illuminated crosswalks. Current crossing technology includes such items as flashing signal lights with gates, audible warning sounds that are triggered by approaching rail vehicles, and channeling pedestrians through a "z" crossing that requires the user to face both directions along the track prior to crossing.

Traffic level of service for roadway vehicles within the road network of the project vicinity is projected to degrade at only one location, Firth Sterling Avenue/Suitland Parkway in the afternoon traffic volume peak only. This result is the outcome of grade crossing delays during normal rail vehicle operations. None of these delays are identified by District of Columbia traffic authorities as significant. The proposed project will require some mitigation actions to offset the decrease in LOS at intersections. These mitigation actions include crossing protection for at-grade intersections through high-level warning devices and active devices identifying an oncoming train by flashing lights, warning signal, 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 at the crossing.

National Historic Preservation Act (NHPA)

Since District of Columbia funds are used throughout the project, and since the Commission has advisory review because the project is outside the Central Area, the National Historic Preservation Act does not apply.

CONSULTATION

Coordinating Committee

The Coordinating Committee at its January 10, 2007 meeting reviewed the proposal and forwarded it to the Commission with the statement that the project had been coordinated with all agencies represented. The participating agencies were: NCPC, the District of Columbia Office of Planning, the National Park Service and the General Services Administration.

Commission of Fine Arts

DDOT has not yet submitted the project to the Commission of Fine Arts for its review.

Other Consultation

DDOT has coordinated its planning and design with the General Services Administration, the National Park Service, and with the Navy for the Navy Annex and Bolling Air Force Base. GSA has determined that the streetcar route as currently proposed would not serve the needs of future commuters to St. Elizabeths if it were to become the site of the headquarters of the Department of Homeland Security. The capacity and headtimes of the streetcars would not be adequate for the projected volume of employees. Future commuters would be accommodated in other ways, including shuttles from the Anacostia Metro station. Therefore, there is no connection or passenger stop for St. Elizabeths along the current route. However, the route of the proposed access road to St. Elizabeths and its intersection with Firth Sterling Avenue has been accommodated in DDOT's planning. Furthermore, as shown on DDOT's map, a related route along Malcolm X Avenue to serve the St. Elizabeths campus might be considered. The National Park Service has responded by correspondence to DDOT, stating no objections to the Anacostia segment and cautioning DDOT against the use of overhead wires across the National Mall. The locations of the two stops to service Bolling and the Navy Annex were developed in coordination with the Navy; the route and stations are not on property in the jurisdiction of the Navy or Air Force.

