

CITY OF BOWIE,
MARYLAND

THE BOWIE HERITAGE TRAIL

This report provides recommendations regarding the design and implementation of a proposed Bowie Heritage Trail in the Old Town section of Bowie, Maryland. It was developed by Toole Design Group, LLC on behalf of the City of Bowie Planning Department, using resources provided by the Transportation/Land-Use Connections Program operated by the Metropolitan Washington Council of Governments' Transportation Planning Board. This study comprises Phase II in the concept planning process for the Bowie Heritage Trail, previously known as the Railroad Avenue Hiker/Biker Trail. Phase I was completed by Toole Design Group in July 2008. An engineering feasibility study was completed by AB Consulting in 2007.

Acknowledgements:

The City of Bowie Police Department and Department of Community Services

The residents and business owners of Old Town Bowie and others who provided input.

The Huntington Heritage Society

The Huntington Community Center (Maryland National Capital Park and Planning Commission)

The Metropolitan Washington Council of Governments



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INTRODUCTION

In the spring of 2009, the City of Bowie received an award from the Transportation/Land Use Connections program to conduct a follow-up study for the Railroad Avenue Hiker/Biker Trail in Old Town Bowie. The Phase II study focused on:

Segment C (Zug Road to 10th Street) was selected as the focus of the Phase II study (see map in Figure 1). Objectives for the Phase 2 study include the following:

- Providing opportunities for input from residents, Old Town business owners and public officials on various trail design issues;
- Developing a set of visual images for the potential trail alignment between Zug Road and 10th Street which illustrate the recommended design solutions;
- Creating a trail advisory committee, trail vision, implementation strategy and name.

Segment C is approximately 1000-feet long and located wholly on the Railroad Avenue right-of-way. It passes the end of the 13th Street ROW, the end of 12th Street, crosses 11th Street, passes through the Railroad Museum grounds, passes under MD 564 and connects to 10th Street at a cul-de-sac adjacent to Amtrak's northeast corridor (high speed rail line).

The Phase II study was conducted between April and August 2009, and it included five public meetings, to which a diverse set of project stakeholders were invited. Meetings were held at the Huntington Community Center and on the grounds of the Railroad Museum. More than 30 different people participated, including the Director and Historic Properties Manager of the Department of Community Services, the Bowie Chief of Police, a representative from the Maryland-National Capital Park and Planning Commission staff, a representative from the Prince George's County Department of Public Works and Transportation, and a representative from Councilmember Ingrid Turner's office (Prince George's County). Participants also included a number of Old Town residents who own property adjacent to the Railroad Avenue ROW as well as a number of business owners from both sides of the railroad tracks. Some people participated in multiple meetings, which was encouraged.

The meetings were structured to address a series of design-related issues; however the agenda for each meeting was modified to meet the needs of the audience. Following is a list of meeting dates and scheduled topics for discussion:

- Meeting 1, Thursday, May 7--Project history and goals; goals for the study
- Meeting 2, Wednesday, May 20--The Railroad Museum area, the MD 564 underpass, the 10th Street cul-de-sac, and railroad history.
- Meeting 3, Saturday, June 6--Adjacent property owners, trail access, personal security and policing, fencing, and lighting.
- Meeting 4, Tuesday June 16--Aesthetic treatments, paving styles, walls, railings, landscaping, stormwater management and drainage issues, parking and community programming.
- Meeting 5, Saturday June 27--Formation of an advisory committee

BACKGROUND

In 2008, the Phase 1 study focused on potential trail alignments and resulted in identification of a recommended route for connecting Old Town with Bowie State University (BSU), the BUS Maryland Area Rail Commuter Train (MARC) Station and future mixed-use development slated for the area just north of the station (see Figure 1). A number of recommendations from this study were adopted by the City Council in the autumn of 2009 as an amendment to the Bowie Trails Master Plan.

A key recommendation of the study was that the scope of the proposed trail should be enlarged to include a connection between the Washington Baltimore and Annapolis (WB&A) Trail near High Bridge Road and Old Town Bowie. Also, alternative alignments along the Amtrak corridor were included in the Master Plan amendment to ensure that if development along these alignments occurred, the City would be in a position to require developers to build the trail in this area, making a more direct and convenient linkage between Old Town and BSU. In addition to formal adoption of the alignment recommendations, the study identified three strategies for action including:

- Forming a trail advisory group to support and guide development of the trail.
- Considering the development of a trail implementation plan; and
- Focusing on near-term trail planning and development activities.

For further details about the 2008 study, see *TDG Recommendations for Proposed Railroad Avenue Hiker/Biker Trail*, on the City of Bowie website.

CONCEPT VISION

As a result of the public meetings conducted in Phase II, a consensus vision of the Bowie Heritage Trail emerged. This vision includes a name for the trail - Bowie Heritage Trail, suggested and confirmed at the June 27 meeting, and a purpose. The goal for the trail is creation of a railroad heritage greenway that serves non-motorized transportation and recreational trips between the WB&A Trail, Old Town Bowie, BSU and other points along the way, such as Tanglewood Park, Adnell Woods, Jericho Park, the BSU MARC station, and planned new town center.

Key themes that emerged from this planning effort included:

- Segment C of the Bowie Heritage Trail (Railroad Avenue) should be designed and developed as a destination in and of itself.
- A railroad heritage greenway offering experiential learning opportunities will support the educational mission of the Railroad Museum, serve children, youth and families and attract the types of visitors sought by Old Town.
- In addition to railroad history the trail presents an opportunity--
 - To interpret the history and heritage of educating African American youth and the role of BSU as a Historic Black College, and
 - Demonstrate and educate about environmental best practices for dealing with stormwater runoff, often referred to as low impact development (LID).

CONCEPT DESIGN FOR RAILROAD AVENUE

To illustrate the vision for Segment C of the Bowie Heritage Trail, this report provides a closer look at three sub-segments, presented from north to south:

1. The Railroad Museum Area (10th Street cul-de-sac, Underpass of MD 564, the Railroad Museum Grounds, and the crossing of 11th Street)
2. The 12th and 13th Street Area
3. 13th Street to Zug Road Area

Within each sub-segment, an illustrated plan view or perspective drawing is provided. Following (or accompanying) the primary graphic are smaller illustrative drawings or “precedent” photographs that show potential features of the trail or exemplify the proposed character of the trail. After illustrating each of the three sub-segments, key trail design elements are addressed in greater detail, including-- 1) fencing, 2) landscaping & low impact development treatments (LID)¹, 3) integrating art on walls and “street” furniture, 4) trailheads, waysides, and historic interpretation, and 5) intersection safety treatments. The report concludes with a brief discussion of phasing, funding and implementation strategies.

THE RAILROAD MUSEUM AREA

This area consists of a publicly owned parcel of land at the west end of 10th Street, the Railroad Museum Area, and the Railroad Avenue ROW to 11th Street.

THE 10TH STREET CUL DE SAC

Activate the west end of 10th Street by eliminating the cul-de-sac and introducing a playground, rain gardens, an informational kiosk and a small amount of trailhead/playground parking.

- Install a railroad themed playground structure, oriented to children ages 3 to 11.
- Install an information kiosk that interprets the site as well as the history of education for African American youth in Bowie from reconstruction to the present.
- Install a rain garden to better address stormwater runoff from 10th Street and the entire area that currently drains on to the railroad ROW.
- Install a wood chip path and educational signs woven into the rain garden explaining the advantages of bio-retention treatments (LID) and describing the plants used for such treatments.
- Design the trail and gardens to retain Amtrak’s maintenance truck access to the railroad corridor.
- Connect the trail to the existing path allowing access to the sidewalk along MD 564 on the bridge. Also connect the path to 10th Street.
- Include of a small amount of parking near the playground, including required ADA spaces.



¹ Low Impact Development – reducing runoff volume by infiltrating rainwater and minimizing runoff into to closed sewer systems.

The small parking lot can also be designed to serve as dead end turn around for personal vehicles and emergency equipment.

- Provide lighting from 10th Street to 11th Street, for increased personal security. Design lighting so that it does not intrude on nearby residences.

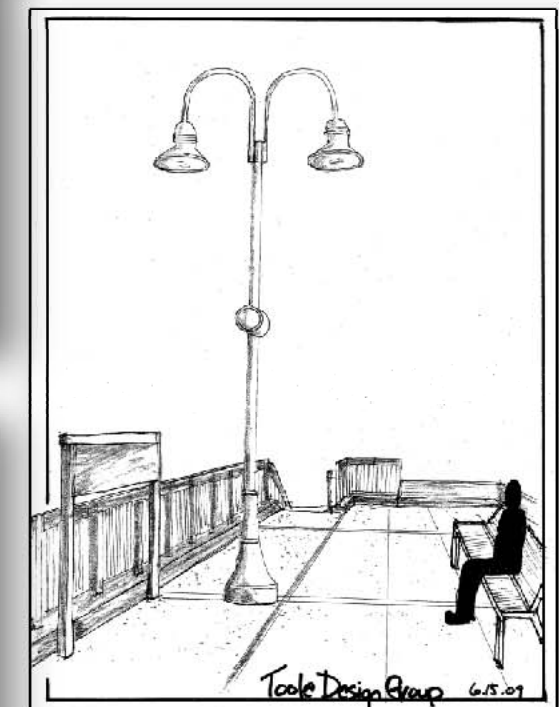
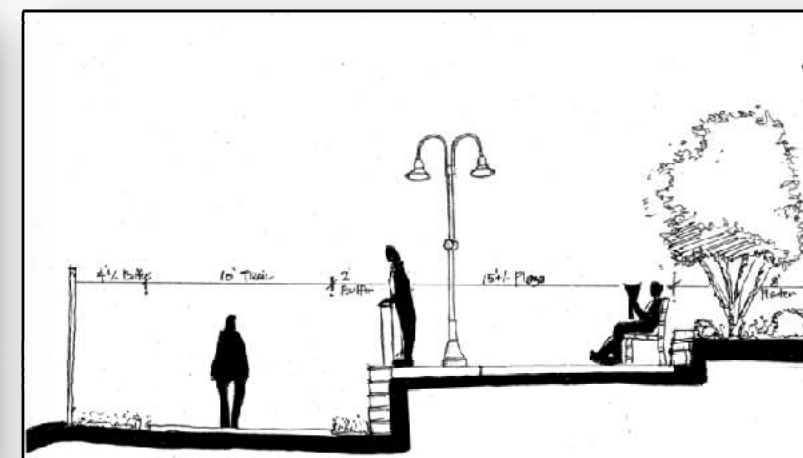
THE MD 564 UNDERPASS

- Installation of an 11-14-foot wide trail under the MD 564 Bridge; approximately 15-18 feet of SHA ROW may be available for the supporting wall and trail. Design the trail so that it can be safely used as both a train viewing area and a bicycle and pedestrian passageway.
- Make the surface of the path under MD 564 fairly high off the existing grade and use railings and (plexi-glass type material) to secure the trail area from the high speed trains.
- Use the plexi-glass, bridge abutment face, and/or traditional exhibit panels to provide information about the formation of Amtrak, its Northeast Corridor, and the future of High Speed Passenger Rail service in the United States. Seek a partnership with AMTRAK to secure funding for the AMTRAK story.



THE RAILROAD MUSEUM GROUNDS

- Along the north edge of the museum site set the trail off of the existing fence line by 3 or more feet, based on space available.
- Relocate the caboose to create space for constructing a viewing area fashioned after a typical passenger station platform.
- Install a train viewing area with benches, lighting and historical information exhibits in the current location of the caboose.
- Use LID designs to better manage stormwater runoff from the parking lot and address existing erosion issues.
- If more hardscape surface is desired consider developing a round plaza west of the tower. It could be designed with elements that suggest an engine/railcar turntable.



11TH 12TH AND 13TH STREET AREA

CROSSING 11TH STREET

- As part of trail construction, repair storm drains and piping that passes under 11th Street. Preserve existing wetlands adjacent to the CSX freight line. Use LID techniques to improve the management of stormwater drainage in this area.
- Use landscaping and fencing to delineate the trail ROW from adjacent yards and homes.
- The 11th Street crossing may provide an opportunity for to create an

experiential learning setting that teaches children about safety at at-grade railroad crossings. This might be done by installing reduced scale railroad crossing gates that are activated by trail users.

END OF 12TH STREET

- Route the trail over the outlet stream of the existing retention pond outlet stream using a culvert and fill. Continue use of LID techniques to manage stormwater drainage.
- Use landscaping and fencing to delineate the trail ROW from adjacent yards and homes.
- Consider creating a wayside with a bench and interpretive information.

Existing 12th Street public parking serves as a trailhead.

- Of the existing trees and shrubs, protect high quality species wherever possible and clear invasive species from the Railroad Avenue ROW. In keeping with Crime Prevention Through Environmental Design (CPTED) techniques, clear understory to ensure good sightlines.
- There may be potential for the trail to enhance recreation area improvements being undertaken by the Knights of St. John.

END OF 13TH STREET

- Between 12th and 13th the trail can be routed between two rows of large cedars planted by local residents as a screen from industrial activities.



- Continue the engineered bio-swale on the edge of CSX property.
- Simple “split rail” style fencing may also be used between the bio-swale and the trail to further discourage trespassing.
- Continue the engineered bio-swale on the edge of CSX property. This swale will also serve as a linear barrier that discourages trespassing on the railroad ROW.
- To ensure security for adjacent property owners, the ROW of 13th Street should be fenced off and it should not be used as a trail access route.
- Historically, this location was used as a freight depot of various kinds, first as a loading/unloading area for horses being traded in commercial

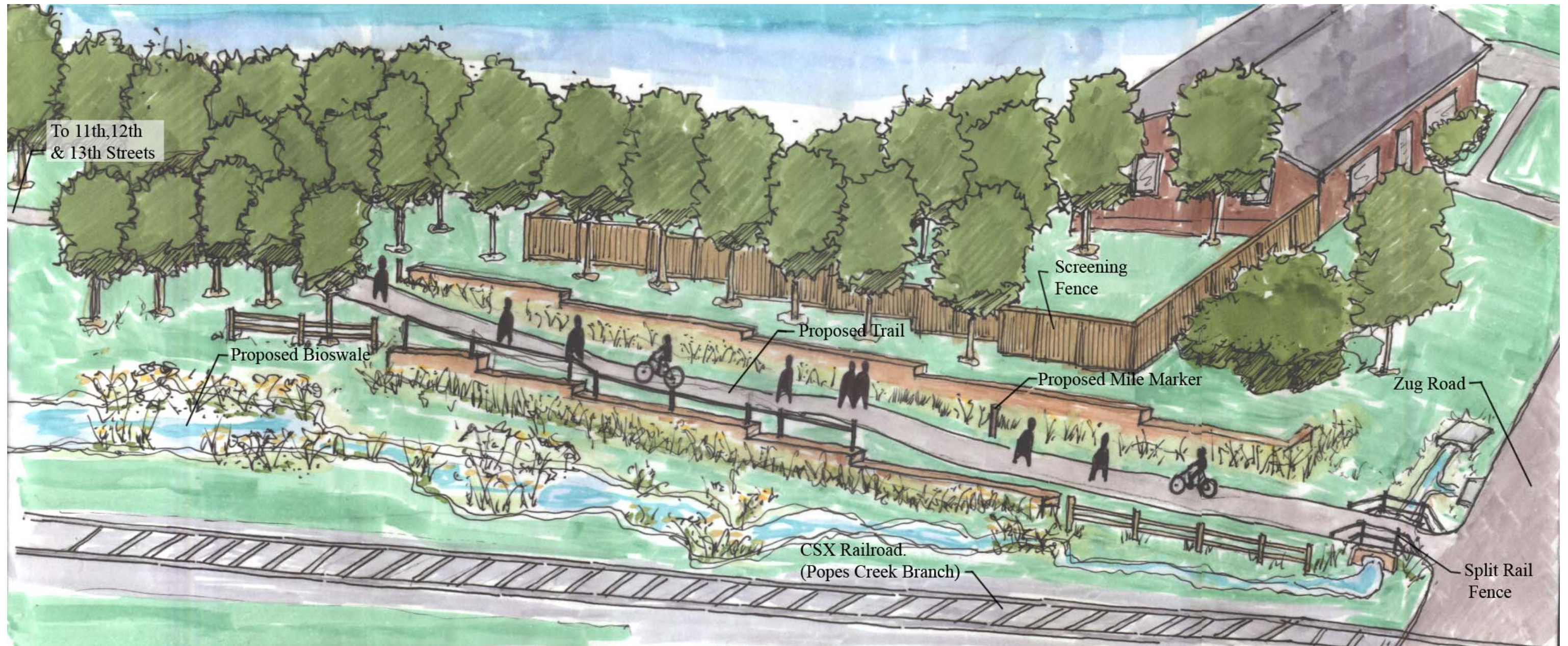
markets, and later as a cement plant. When freight activity along this line was more intense, there were two sidings in this area and railroad movements were noisy and frequent. This story provides possible content for an interpretive exhibit that contributes to the railroad history theme.

ZUG ROAD SEGMENT

- The trail can be routed on an old road bed that served as an unpaved access road for the historic commercial and industrial uses in this area. This will put the trail among the trees along the western edge of the forested area. Using the old road will raise trail’s elevation to the top of

a small embankment. Engineering will be required to descend back to railroad grade at Zug Road.

- It is likely that walls will be needed to address both the linear elevation changes and cross slopes. The walls and railing provide an opportunity for interpretive art addressing the railroad theme, and can provide the framework for other gateway elements to be incorporated into the design at Zug Road.
- Consider low level, or user activated lighting for section from 11th Street to Zug Road



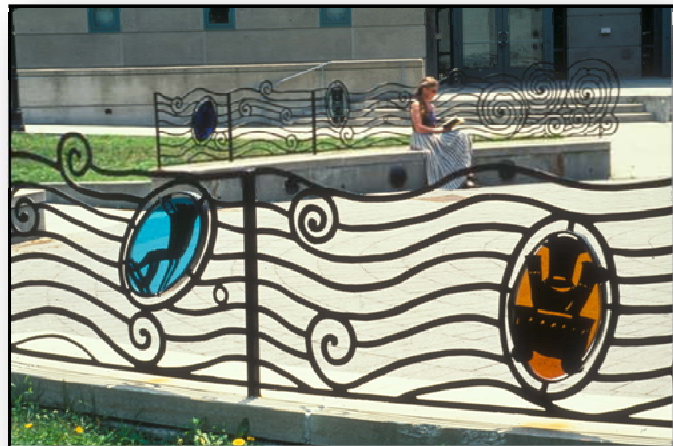
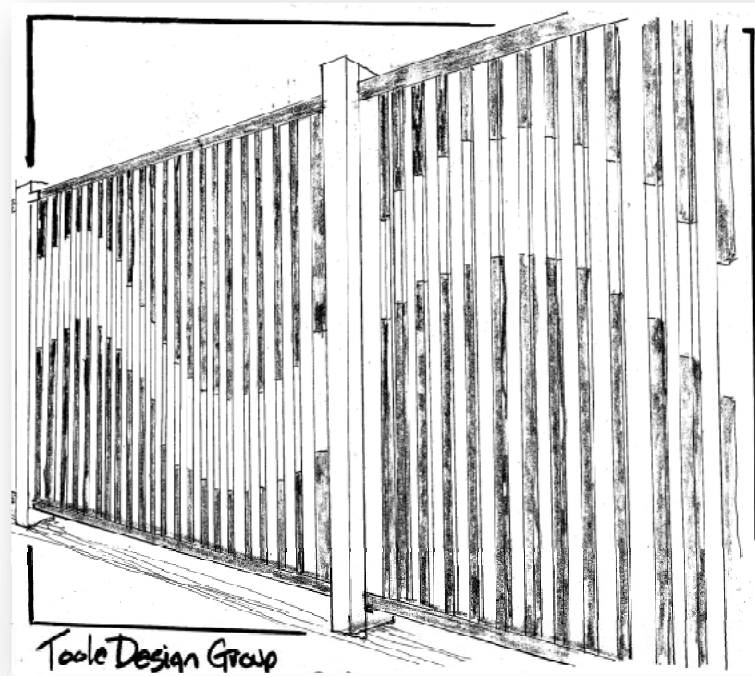
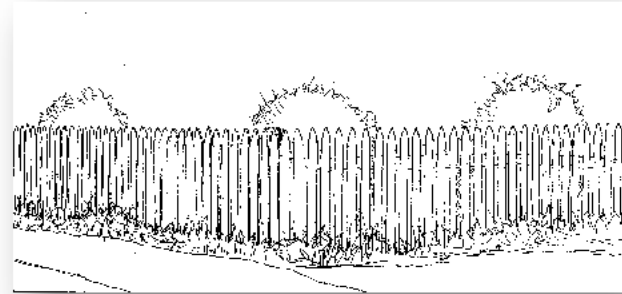
DESIGN CHARACTER

During the meetings with community members, the following topics were identified as key features that will define the character of the Bowie Heritage Trail. The design approaches described represent the perspective around which there was general consensus among the stakeholders involved.

FENCING

Fencing, to delineate public and private property and provide security from trespassing, is a high priority for the owners of adjacent residential properties, as well as for the railroad companies. Three or four types of fencing will meet the needs of various situations and settings; in some locations, landscaping can be used in conjunction with fences to provide additional screening:

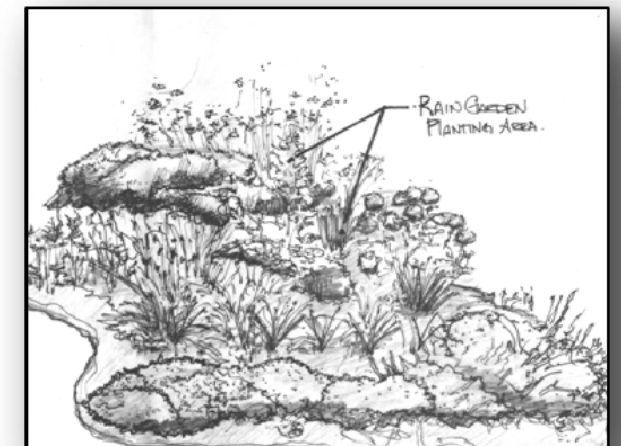
- Unpainted cedar pickets adjacent to residential yards.
- Wood slat fencing where privacy is needed.
- Open fencing, such as painted metal or wrought iron between
- The trail and railroad tracks and in the area of the RR Museum and 10th Street cul de sac.
- Split rail fencing in conjunction with bioengineered swales and associated plantings (See Zug Road, page 8)
- Soon after a trail opens many adjacent residents decide that they need a gate or a stair to provide their own convenient access to the trail.



LANDSCAPING / DRAINAGE

The lay of the land in the Railroad Avenue ROW makes it a prime opportunity for application of low impact development techniques such as bioswales and rain gardens. These drainage designs provide filtration of pollutants from runoff and greater levels of water infiltration at the source. Erosion is minimized, downstream flooding potential is reduced and natural resource habitats are supported. Other recommended approaches to landscape design include the following:

- Preserve existing trees where possible.
- Emphasize preservation of native species and trees that provide appropriate levels of shade and or screening.
- Clear invasive species and understory to enhance sightlines and a sense of security.
- Use types of landscaping that preserve openness and sightlines. Follow standard Crime Prevention Through Environmental Design guidelines.



INTRODUCE ART WITH FURNITURE, WALLS OR RAILINGS

Integrate railroad theme artistic elements into wall surfaces, railings, benches, fencing or treatments that hide unappealing utilities such as man holes, signal boxes, utility poles and support wires or railroad equipment.



WAYSIDES, GATEWAYS & TRAILHEADS

- Trail heads provide starting and ending pints for use of the trail, and locations where motor vehicle and bicycle parking are provided. 10th Street, the Railroad Museum and 12th Street will serve as trailheads for Segment C.
- Waysides provide places to stop and rest along the way as well as locations where people and events that are important to the community can be remembered. They can include benches, seat walls, bicycle parking racks, informative exhibits, water fountains, and sanitation resources for pet owners or other features. 10th Street, the Railroad Museum and 12th Street will serve as waysides for Segment C.
- Gateways indicate transitions such as entering or exiting a community or a special place such as a park or historic site. A gateway treatment that introduces the Bowie Heritage Trail should be considered for the Zug Road area. The 10th Street area will serve as a gateway to the trail at the north end.
- A series of historical interpretation panels should be located at waysides and trailheads, and can be located at other places along the trail where appropriate. These exhibit panels should tell the story of Old Town’s railroad history and evolution as a community. These exhibits can also tell stories about the local population and should introduce three additional themes-- the education of local African Americans at Bowie State University, the history of BSU as a historic black college and how new best practices in stormwater management can improve the health of our natural environment.
- Waysides and trailheads are also appropriate locations for other types of information, such as a bulletin board of current community events and a map of Old Town, its businesses and the trail system.



INTERSECTION TREATMENTS

Segment C does not have any crossings of streets with large or speeding traffic volumes. As such intersection treatments can be simple and may include the following:

- Yield or stop signs for the roadway,
- Trail surface treatments to alert trail users of an approaching street, and
- A combination of boulders and bollards to prohibit inappropriate motor vehicle traffic from entering the trail.



PHASING, FUNDING AND IMPLEMENTATION

It is recommended that the Bowie Heritage Trail be designed and constructed in phases. There are a variety of reasons for phasing, including the status of ROW control and property ownership, whether or not the segment will use existing neighborhood streets or involve creation of a new path separate from the road, opportunities presented by the advancement of related development projects (transportation, park or otherwise), and the cost and engineering level of effort that may be required. For initial planning purposes, the segments can be defined and ordered as follows.

Phase 1 – Railroad Avenue Segment, from Zug Road to 10th Street Cul-de-sac.

Phase 2 – Sewer Line ROW segment from the east end of 7th Street to 4th and Myrtle. And the Myrtle Street segment in the Adnell Woods community, from 3rd to Crutchfield.

Phase 3 – Chestnut Avenue Segment, from MD 564 Bridge to 7th Street

Phase 4 – Tanglewood Park Segment from Zug Road to Old Fletchertown Road, including a section through a planned residential development.

Phase 5—Historic Interpretive Program, this phase focusing on development of a series of interpretive sign kiosks for location throughout the Bowie Heritage Trail.

Phase 6 – High Bridge Road Segment from Old Fletchertown Road to the WB&A Trail

Phase 7—Jericho Park Segment, from Falling Water Court to Maryland 197

Phase 8—Bowie State MARC Station Community Center and linkage to BSU Campus

Phase 9—Bowie State University Cross-Campus Trail and link to WB&A Trail/East Coast Greenway

Phase 10—Trail Accommodations (bridge) over AMTRAK railroad line at MD564

The precise segmenting of the phases should remain somewhat flexible until the first few phases are implemented. Likewise the timing and order of phase implementation will be determined by opportunities and constraints, many of which cannot be directly controlled by a trail implementation plan. The availability of local and state funding, the timing of related development actions, the schedules for road and bridge improvements are all factors that can influence the implementation timing for a phase of the trail.

For successful implementation, it is important that City staff and local trail advocates closely track a variety of ongoing planning and budgeting processes, to ensure that an opportunity is not missed to dovetail design and construction of a trail segment with other development activity, whether public or private in nature. Following is a list of key planning and resource allocation processes.

- M-NCPPC development review process
- M-NCPPC Bowie State MARC Station Sector Plan
- M-NCPPC trail development and park development programs

- Prince George’s County Department of Public Works capital road improvement budget
- City of Bowie capital and maintenance budgets for streets, parks, museums, and economic development
- Maryland State Highway Administration roadway and bridge maintenance and capital improvement programs
- Bowie State University budget
- Amtrak, CSX, WSSC, PEPCO, and BGE line maintenance and capital improvement programs

FUNDING STRATEGIES

The Bowie Heritage Trail is a multi-faceted facility and as such can effectively draw upon a variety of funding programs, including those related to any of the following topics: bicycle and pedestrian transportation, recreation, general community development, stormwater management best management practices (LID), historic preservation, federal fiscal stimulus funding, livable communities/smart growth programs, developer proffers, impact fees or provision of public facilities, foundation funding, privately raised funds from the community, mitigation funding, or education funds.

In March 2007, city staff prepared a thorough report discussing many of these funding programs. Following are highlights of the most important funding sources recommended for one or more segments of the Bowie Heritage Trail. These highlights also note the most appropriate phase(s) to which each source might be applied:

- Transportation Enhancements (Maryland State Highway Administration)—Phases 1 and 5 of the trail are very well suited for this program. Maryland’s TE program is focused on trail development however; this trail also has elements that relate to a number of the other eligible funding categories, including historic preservation, historic transportation museums, preservation and operation of historic railroad structures and equipment, landscaping and runoff mitigation. Applications are typically received on an annual basis in the spring. The TE program is an ongoing funding source that should be considered for funding Phases 4, 7, 9 and 10 as well.
- The National Recreational Trails Program (Maryland State Highway Administration) is ideal for small projects, such as Phase 2 and/or Phase 3, or Phase 5.
- CBDG funding would be an appropriate source for Phase 3.
- The National Targeted Watershed Grant Program, 319 Nonpoint Source Reduction Funds, may be good sources of funding for the LID components of Phase 1.
- The Environmental Education program of EPA may be a good source of funding for developing the child and youth education component related to the rain gardens and stormwater best management practices.
- Program Open Space and Community Parks and Playgrounds (Maryland) are two state programs that could fund the playground component of the project and a variety of other aspects. It would be most appropriate for components of Phase 1.
- Community Legacy Grant Program
- The Maryland Historic Trust is an appropriate source of funding for aspects of the trail that relate to historic preservation, education and interpretation, such as in Phases 1 and 5. For example, the costs of moving the Caboose, developing interpretive signs, building a platform for train viewing would all be eligible for one or more of their five grant programs.
- The P.G. County Neighborhood Improvement Grant Program could fund a variety of small components of Phase 1, Phase 2, or Phase 5. The key is that the project must be driven by a local community-based organization. For

example, the Adnell Woods Home Owners Association could get a grant to build the few feet of trail needed to connect 3rd Street with Crutchfield along the Myrtle Avenue ROW. Additionally, the Huntington Heritage Society could receive funds to do interpretive signs about the education of African American children, and the use of BSU for training black teachers and educating local black youth, for location at the 10th Street cul-de-sac.

- The National Railway Historic Society could be a source of funds for components of Phases 1 or 5.
- Prince George's County Department of Public Works is the most likely funding source for Phase 6.
- Private developers should be tapped to fund a portion of Phase 4 and Phase 8.
- Any of the portions of trail adjacent to, or on the transportation or utility company's ROW could be advanced as mitigation if these companies engage in capital or major maintenance activities that include unavoidable negative impacts on the community.

Finally, it is important to note that for any of the higher cost phases, such as Phases 1, 4, 6, 7,8, 9 and especially 10, the City should look to have its state and federal elected officials consider these phases for special funding or earmarks in the state budget, or in federal legislation.

NEXT STEPS

To keep the Bowie Heritage Trail project moving forward the following next steps are recommended:

- 1) Formation of a Bowie Heritage Trail Task Force, or Advisory Committee. This group should be convened by invitation of the City Staff. It should include invited representatives of key stakeholders in the project, including:
 - a. Bowie Community Services Department
 - b. Bowie Museum Programs
 - c. Bowie Police Department
 - d. A Bowie City Council Member
 - e. Adjacent property/home owners in Old Bowie and Adnell Woods
 - f. The business community in Old Bowie
 - g. The Huntington Heritage Society
 - h. The bicycle/trails advocacy community
- 2) Preparation of an Application for Funding for Phase 1, from the Maryland SHA TE program.
 - a. This may include preparation of 10-30 percent design plans; however the AB Consultants feasibility Study may meet this requirement.
- 3) Development of a comprehensive trail master plan
 - a. To successfully secure funding for the trail from a variety of sources it is essential to compile the various components of work already completed for this trail into a single document. Doing so will enable the public, the advisory committee and stakeholders, elected officials at all levels, and those who will be reviewing requests for funding, to fully understand the project and know that their contribution to it will be money well spent.
 - b. This document will provide answers to all of the typical questions that arise with trail projects. It will fully address the following topics and should be formally adopted by the City Council of Bowie.
 - i. Trail Vision and Purpose
 - ii. Trail Location and Extent

- iii. Trail Users, Design and Facility Types
- iv. Engineering, Drainage, Structures, Lighting, etc.
- v. Placemaking, Trail Amenities, Furniture, Art, Historic Interpretation
- vi. Public Safety and Security
- vii. Ongoing Management, Maintenance, Programming and Partnerships
- viii. Adjacent Property Owners
- ix. ROW and Property Ownership
- x. Phasing, Funding and Implementation
- xi. Coordination with Agencies and Stakeholders
- xii. Coordination with Related Development Projects